SANDY OREGON

February 23, 2022
RFP #ITS2022

TECHNICAL PROPOSAL

INTELLIGENT TRANSPORTATION SYSTEM PROJECT

PASSIO TECHNOLOGIES

PREPARED FOR

City of Sandy, Oregon
Andi Howell
Transit Director
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PREPARED BY

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February 23, 2022
RFP #ITS2022

City of Sandy, Oregon
Andi Howell
Transit Director
16610 Champion Way
Sandy, OR 97055
(503) 489-0925
ahowell@ci.sandy.or.us

Hello Andi,

Passio Technologies, Inc. is pleased to present our response to RFP #ITS2022 for an Intelligent Transportation System to The City of Sandy, Oregon. Passio Technologies has indicated our understanding and willingness to work with each requirement as stated in the scope of work and proposed contract.

That compliance and understanding are included in this proposal response. We have outlined an accurate and reliable Intelligent Transportation System (ITS) solution designed specifically for City of Sandy. As President of Passio Technologies, Inc., I am fully authorized to represent the company in negotiations and will sign any contracts as required. We look forward to your review and are available to answer any questions or provide further clarification if needed. This proposal and associated pricing will be valid and binding for 120 days from the date February 23rd, 2022.

Passio Technologies, LLC is a wholly owned subsidiary of Transit Technologies, LLC. and is headquartered in Atlanta, GA. I cofounded Passio in 2010 with Scott Reiser, current CTO and officer, and I also presently serve as President and officer. Passio has 24 full-time employees, has no debt, and has been profitable since its inception. Passio will confirm that we have the financial resources to fulfill all contractual requirements.

We want your riders to see how seamless public transportation can be, and our ITS solutions will help do just that. It should also be noted that we currently integrate with CTS Software as part of our mobility alliance. Passio's aggressive research and development program has positioned us to offer you industry-leading technology contained in this proposal. Our hands-on approach coupled with timely support sets us above the rest and will ensure our solutions and service exceed your expectations.

Addendums received: 1/25/2022 Addendum 1 (Q&A) & 1/31/2022 Addendum 2 (Inventory)

Thank you,

Mitch Skyer, President
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QUALIFICATIONS AND EXPERIENCE

Passio is proud to share our recent successes. Passio Technologies has been named to Inc. Magazine's top 5,000 fastest growing companies for both 2018 and 2019, and was named one of Georgia's 40 fastest growing technology companies in 2018. Passio's Executive Team serves on the boards of the Georgia Parking and Transit Association, the Mid South Transportation and Parking Association, the Technology Association of Georgia Transit Technology Society, GRAC Mobility, Bike Walk Greenville, Non Emergency Medical Transportation Accreditation Commission (NEMTAC), and as a committee member of the International Parking and Mobility Institute. The company's memberships also include the American Public Transit Association (APTA), National Association of College and University Auxiliary Services (NACAS), the Community Transit Association of America (CTAA), and numerous state transit associations.

Passio develops much of its technology in-house and uses its customers' needs and input to guide future innovation. We operate on an open integrator model that allows them to seamlessly connect with other strong industry suppliers such as TranSign, Twilio, Hella, Zonar, and of course Amazon. We are adding to this list consistently by integrating, partnering, or building when the solution identified best meets our customer's needs. Passio is committed to keeping our programmable API fully documented for consumption and integration with any other system providing an API. After our acquisition of ParaPlan Software (scheduling & dispatching products for transit since 1999), we have grown our customer list to over 250 agencies utilizing our transit technology solutions!

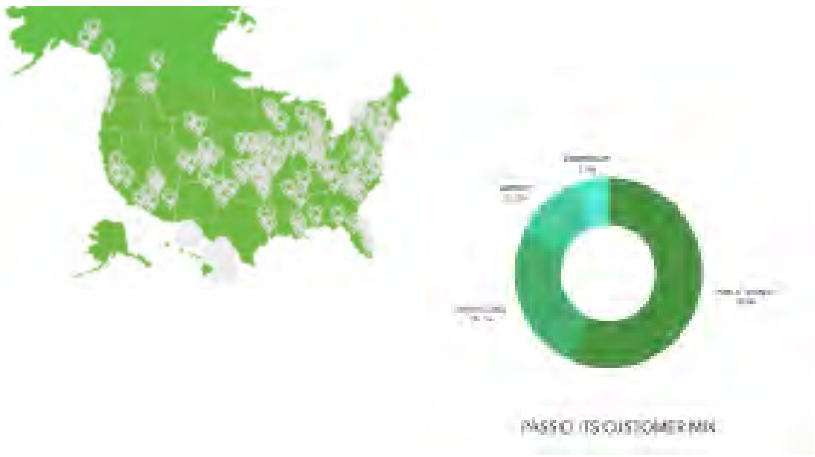
As stated, the origins of Passio Technologies came from a demonstrated need within the world of transit consulting for accurate and actionable data. The problem we identified, and then solved, was that there was no good way to capture data simply and inexpensively and put that data into an easily reviewable format. As the company developed, we identified that the passenger experience was just as important to the successful operation of the system as understanding the resources and utilization. Our top distinctions as a technology company are:

Network Simplicity

We use uncomplicated software and hardware configurations that are easy for the operators to manage, simple for maintenance to exchange and service, and quick to replace and upgrade. The system is designed to install quickly and for an operator to up and running within minutes of seeing the program for the first time

Data Usability

All complicated hardware and software is useless if the end user cannot point to the report they need, click run, and see the results. Everything presented within Passio is designed to 'make sense'. Our reporting is intuitive and user friendly, and the data is presented in the same format as it is collected. Counting is done at the stop, by a driver, on a bus, and that is how you see it in the reports.



Customer Relationships

"Making every passenger" count" is Passio's motto." Every customer at Passio is a" reference, that is our working" model, and how we conduct" all of our business. Each" customer has a unique" approach to how they manage" their passenger's experience," and how they want to provide" value to their riders.

Our mission is to provide the information to both the operations staff and the passenger so that their experience is comfortable, informative, and effective. We don't begin and end with simply providing the answer to a question, but we look at the reason for the question. We always look to identify opportunities to develop newer and better reports and more effective interfaces to provide our customers with the experience they desire. By using this end user-centric approach we learn more from our customers every day, and our products and services are more valuable to our entire customer base.

Passio builds modular and scalable technology solutions for transit customers in the municipal, government, university, healthcare, aviation, corporate, residential and hospitality industries. We harness real time Passenger & Dispatch Information Systems through GPS tracking using Passio GO, Automated Voice Announcements, and on-board LED Smart Signs. These solutions are coupled with our Automated Passenger Counting and CAD/AVL systems to provide detailed visibility and comprehensive insight into any transit system.

Operations management, reporting and analytics are provided by Passio Navigator and Passio OpsView. Providing instant alerts such as speeding, off route, out of boundary, and idling, where dispatch and management can address transit issues in real time, correcting issues before they escalate. Our latest technology addition is Passio Connect, which powers our on-demand transportation software solution. This powerful new platform was built mobile first, integrating our core CAD/AVL features with our real-time routing algorithms to give agencies a new offering for their riders.

SCOPE HIGHLIGHTS

Passio's comprehensive response to the specifications are provided in the Scope Matrix in Supporting Information.

PASSIO TECHNOLOGIES

Unlike many other 'solution' providers, Passio Technologies ITS framework was built specifically to support public transit operations. We have built each new module from the same initial framework designed for transit agencies. This architecture is easy to upgrade and scale, providing a modular and connected framework of hardware and software built in a single alignment. Our dedication to ambitious standards was built on the latest managed development environments.

Our proposed Passio ITS solutions for all agencies are 100% cloud-based using minimal hardware. On board cabling is done efficiently, using high-quality materials and connectors designed to limit the chance of interfering with any other vehicle systems.

Passio will work side-by-side with City of Sandy (SAM), Clackamas County (MHX/TRP/LMS), City of Canby (CAT), and South Clackamas Transit District (SCTD) to ensure your new system exceeds the specifications outlined in this RFP. We are 100% committed to a new partnership and environment of collaboration with each agency. Passio Technologies will provide a dedicated team of transportation experts, installers, technical staff, and customer success managers to ensure the goals of this project and others to come set the bar for excellence in transit.

Passio will help each project successfully launch a new mobile app and other technology to your communities. We are proud to offer a customized Transit Marketing Guide to each agency at no extra cost, which includes step-by-step guidelines to inform, engage, and excite the public. This plan is tailored to each agency and is modular, just like our transit solutions. The goal of this guide is to assist you with a successful launch of the Passio GO™ app.

Our system is intuitive and gives your ridership peace of mind with real-time location information. When riders feel safe everyone wins. Our mobile app is designed to take the guesswork out of waiting for the bus and to put control back into the hands of the public. We want the public to see how convenient transportation can be and our mobile app allows them the freedom they crave. Our best value arises as riders and dispatchers are granted back the greatest gift of all, their time.

Passio Business Analytics

...will be your new comprehensive operations reporting module. It gives you a comprehensive insight into your transit operations with minimal keystrokes.

Why it matters: Our flexible Business Intelligence tools are always at your fingertips in Passio Navigator. Make temporary or permanent changes to improve your system's performance.

Real-Time Passenger Load

...will be visible on each vehicle for all riders and dispatchers. Display the number of riders on-board each vehicle as a total count or percentage full.

Why it matters: This information gives riders and dispatchers the power to make informed adjustments to their plans.

Notifications & Favorites

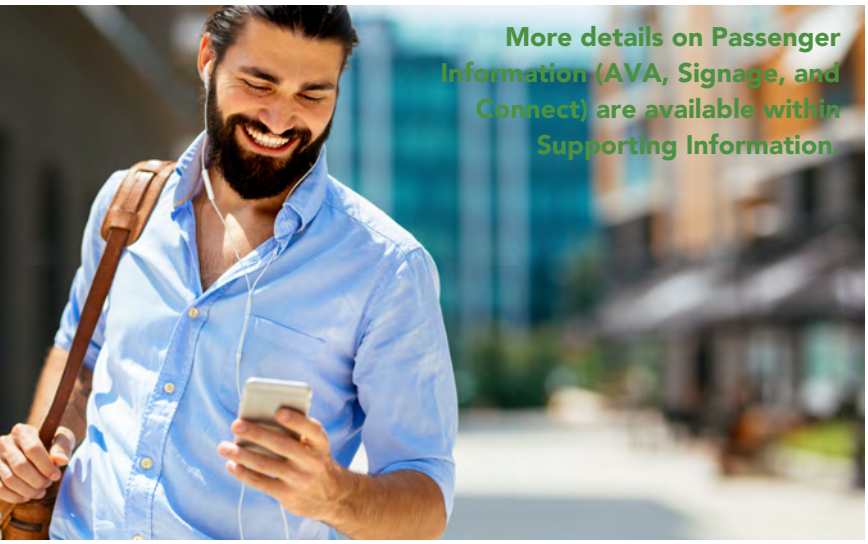
...will be immediately available to your riders where they can 'save' their favorite routes and stops for quick access in our app. Riders receive alerts/notifications when the bus is 'x' minutes away from any favorite stop.

Why it matters: These tools let your transit system work FOR your riders. Let your system send out real-time data, so your riders don't have to look it up. Passio helps you make an immediate impact.

Focused Drivers

...will be created using our Passio Transit MDT where reliable information about their service and route is automatically displayed to them.

Why it matters: Operators won't have to worry about technology and can focus on providing great service. Automatic stop sequencing, dispatch messaging, passenger counting, and incident reporting all within arm's reach.



Passenger Information

...gives your riders immediate visual and audible tools to navigate your service. Using on-board announcements, interior/exterior signs, and our on-demand rider app, Passio puts SAM, MHX, TRP, LMS, SCTD, and CAT front and center for all new and existing users.

Why it matters: Passio's real-time passenger information is available from multiple interaction points within your community. You can publish your data anywhere as you see fit using our Open API or GTFS-RT feeds.

A full project schedule is included in the Project Schedule section of this RFP showing key milestones, including beta-testing of components, and expected "go live" dates of each of the components listed in the Scope of Work.

SOLUTIONS OVERVIEW

Passio builds modular and scalable technology solutions for transit customers in the municipal, government, university, healthcare, aviation, corporate, residential and hospitality industries. We harness real time Passenger & Dispatch Information Systems through GPS tracking using Passio GO, Automated Voice Announcements, and on-board LED Smart Signs. These solutions are coupled with our Automated Passenger Counting (APC) and CAD/AVL systems to provide detailed visibility and comprehensive insight into any transit system

BusBuzz is our unique text and mobile web application for Passenger Feedback. Passio Gateway validates passengers and limits boarding access to authorized users using Tap, Swipe, or Scan Technology. Our Active Route Management (ARM) solution solves the issue of bus-bunching and headway management, keeping buses evenly spaced out on your routes. We also provide Wi-Fi on board, vehicle inspection apps, driver time clock tools, pre-trip yard activity monitoring, and transit tools for the visually impaired.

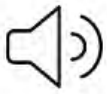
Operations management, reporting and analytics are provided by Passio Navigator and Passio OpsView. Providing instant alerts such as speeding, off route, out of boundary, and idling, where dispatch and management can address transit issues in real time, correcting issues before they escalate. Passio Inspector is our comprehensive Pre/Post trip inspection module. All of these systems are complemented by Passio ParaPlan, our comprehensive booking, scheduling, dispatching, and demand response management software for Paratransit/NEMT service. Our latest technology addition is Passio Connect, which powers our on-demand transportation software solution. This powerful new platform was built mobile first, integrating our core CAD/AVL features with our real-time routing algorithms to give agencies a new offering for their riders.

Passio's solutions are 100% ADA compliant, even going a step further to integrate with technologies that allow for not only compliance, but empowerment. For example, we integrate with FAR, a wayfinding app for the visually impaired. Our LED signage and Automatic Voice Announcements are also compliant.

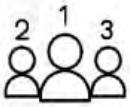
We also continue to develop our COVID-equipped transportation support by facilitating food delivery to homebound vulnerable populations, passenger load alerts for social distancing, enhanced rider communication and feedback, as well as tech-enabled contact tracing using Passio Gateway among passengers and drivers across the nation.

Furthermore, our Passio API allows us to interface with just about anything.

Passio Technologies Available Solutions



AVA
GPS (or other) triggered automated stop announcements



APC
Automatic passenger counting and reporting

PASSIO GO + REQUEST & GO
Real-time rider-focused app for vehicle tracking and information + optional app add-on for ride requests

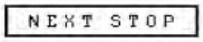
GATEWAY & CONTACT TRACING
Tap and swipe passenger validation and demographics reporting – optional contact tracing add on

PARAPLAN
Paratransit/NEMT scheduling software for dispatchers and drivers – our on-demand software

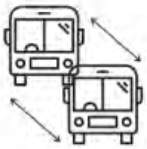
WI-FI
On-board Wi-Fi for riders

EPC
Electronic passenger counting & rider categorization

PASSIO TRANSIT
CAD/AVL Mobile Data Terminal operator assigns routes for onboard dispatch, 2-way messaging, and operator input



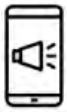
SMARTSENSE LED
Integrated LED Signage displaying GPS triggered route and stop information



ACTIVE ROUTE MANAGEMENT
Bus UN-bunching solution for headway management

SCHEDULE ADHERENCE
The visual indicator on MDT of Stop schedule for operator

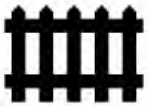
BUSBUZZ
Allows for instant customer feedback and direct management response



FORESIGHT AUGMENTED REALITY
Integration with the FAR wayfinding app for blind or visually impaired

INSPECTOR
Pre/Post-trip inspection module

DRIVER TIME CLOCK
Tracks drivers time operating the vehicle for payroll



YARD MANAGER
Driver based activity prior to beginning route service

PASSIO CONNECT
Mobile and web-friendly source to quickly deploy on-demand and flexible route service for your riders

PASSIO VISION
On-Board cameras and live video feeds.

NAVIGATOR REPORTS
GPS, fleet, passenger counting, & dashboard data

CUSTOMER SERVICE
Unlimited remote support & commitment to excellence

REFERENCES

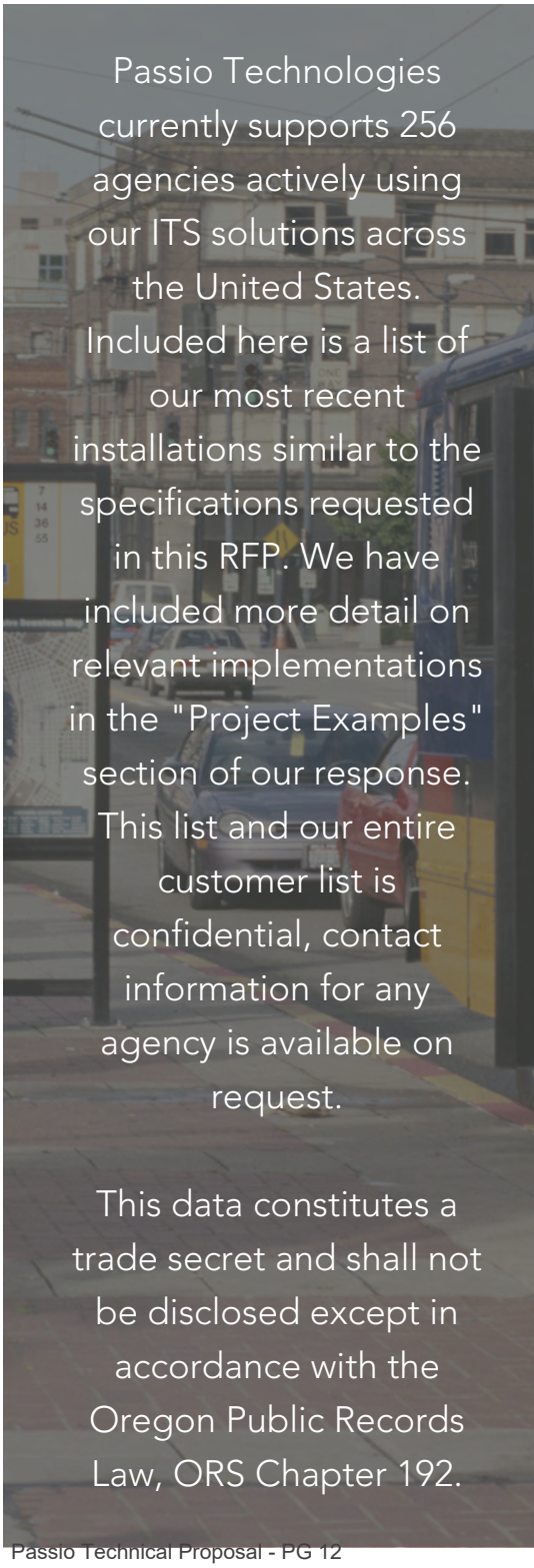
Attached is a list of our most recent installations similar to the specifications requested in this RFP. We have included more detail on relevant implementations in the "Project Examples" section of our response.

PASSIO TECHNOLOGIES

CURRENT INSTALLATIONS

Listing of Passio customers similar to this project and implemented within the last 5 years:

Northwestern University
Georgia Insitute of Technology
Radford Transit
Rutgers University
Mid-Ohio Valley Transit Authority (MOVTA)
Georgia State University
Eastern Panhandle Transit Authority
University of Toledo
Oakland International Airport
Toledo Area Transit Authority (TARTA)
New York University
University of Connecticut
Ozark Regional Transit
Franklin Transit
Connect Douglas
9 Town Transit
Citrus Connection
Concord Kannapolis Area Transit (Rider Transit)
Miller Transportation
Roger Williams University
Tulane University
Montachusett Regional Transit Authority (MART)
Kootenai County Transit
Apple Country Transit
University of New Mexico Transit
MOOver! (Southeast Vermont Transit)
Corpus Christi Regional Transportation Authority (CCRTA)
Seneca Transit System
Brockton Area Transit Authority (BAT)
Delta Airlines (ATL, DTW, LGA)
Housatonic Area Regional Transit (HARTransit)
Hendry County Transit System
Birmingham-Jefferson County Transit Authority (BJCTA)
Escambia County Area Transit (ECAT)
Dolphin Transportation (FGCU)
University of South Florida
Cascades East Transit (COIC)
Johns Hopkins University
University of Texas - El Paso
City of Watertown CitiBus
Port Authority of New York and New Jersey
Central Transportation
Windham Region Transit District



Passio Technologies currently supports 256 agencies actively using our ITS solutions across the United States. Included here is a list of our most recent installations similar to the specifications requested in this RFP. We have included more detail on relevant implementations in the "Project Examples" section of our response. This list and our entire customer list is confidential, contact information for any agency is available on request.

This data constitutes a trade secret and shall not be disclosed except in accordance with the Oregon Public Records Law, ORS Chapter 192.

PASSIO TECHNOLOGIES

PROJECT UNDERSTANDING

PASSIO TECHNOLOGIES

CITY OF SANDY (SAM)

We admire your mission to create safe, courteous, and efficient transportation, and we want to help you enhance that mission with innovative tools and just-in-time information. We believe we can combine your vision with our expertise to build a reliable future for your riders. Our powerful but straightforward tools and analysis will assist City of Sandy in delivering on its new mission.

We want SAM's passengers to see how seamless public transportation can be, and our ITS solutions will help do just that. Passio will help you reshape the rider experience while connecting them with the people they want to see and places they need to go. Whether a Gresham family is hopping on the Gresham Express for a visit to Wippersnappers, or a Sandy High student is catching the Shopper Shuttle for an afterschool shift at Safeway, Passio will help you make their journey easier and more enjoyable.

Passio Technologies is proposing a flexible and dynamic system for SAM with premier hardware and software in a single, integrated ITS System. Passio's building blocks for your solution include:

PASSIO GO
comprehensive passenger information system with tracking, ETAs, and alerts

PASSIO TRANSIT
touchscreen MDT application with routes, stops, alerts, & announcements

PASSIO NAVIGATOR
CAD/AVL configuration, communication, & reporting management tool

AUTOMATED VOICE ANNOUNCEMENTS (AVA)
multilingual, geofence announcement system

NTD REPORTING
compliance assistance and reporting module

Optional
PASSIO INSPECTOR
pre/post trip inspection module

Optional
INFOTAINMENT
onboard and outdoor LCD displays

NEXT STOP *Optional*
SIGN INTEGRATION
LED displays integrated to display geofence triggered stop and route information

Optional
AUTOMATIC PASSENGER COUNTING
boarding/alighting tracking with Hella 3D sensors

Optional
TRIPMASTER by CTS
turnkey demand response scheduling solution

Our Passio ITS solution provides a state-of-the-art approach that sets us apart from our competitors. All of our solutions are scalable and capable of growing over time with your needs, meaning the value of our platform continues well after the date of deployment. All software and version updates, including new standard features and capabilities, are made available to our customers at no additional cost. You will also receive 24/7/365 access to all of your data, superior customer service, and the most innovative cloud-based technology on the market.

If successful, Passio Technologies will be the prime contractor for all work. We have provided detailed answers for accomplishing the services described in the RFP. To support your RFP, our comprehensive system comprises several core technologies from a firm with more than 20 years of experience in the transportation industry and a presence across 250+ transit customers in over 40 states. Our team will dedicate their expertise to delivering City of Sandy with reliable and responsible transit solutions while maximizing value, safety, and rider experience across each service mode offered.

SOUTH CLACKAMAS (SCTD)

We want SCTD's passengers to see how seamless public transportation can be, and our ITS solutions will help do just that. Passio will help you reshape the rider experience while connecting them with the people they want to see and places they need to go. Whether a student is headed to class on the Clackamas Community College bus, or a Molalla parent is catching the city bus loop with their children to visit the library, Passio will help you make their journey easier and more enjoyable.

Passio Technologies is proposing a flexible and dynamic system for SCTD with premier hardware and software in a single, integrated ITS System. Passio's building blocks for your solution include:

PASSIO GO
comprehensive passenger information system with tracking, ETAs, and alerts

PASSIO TRANSIT
touchscreen MDT application with routes, stops, alerts, & announcements

PASSIO NAVIGATOR
CAD/AVL configuration, communication, & reporting management tool

AUTOMATED VOICE ANNOUNCEMENTS (AVA)
multilingual, geofence announcement system

NTD REPORTING
compliance assistance and reporting module

Optional
PASSIO INSPECTOR
pre/post trip inspection module

Optional
INFOTAINMENT
onboard and outdoor LCD displays

NEXT STOP *Optional*
SIGN INTEGRATION
LED displays integrated to display geofence triggered stop and route information

Optional
AUTOMATIC PASSENGER COUNTING
boarding/alighting tracking with Hella 3D sensors

Optional
TRIPMASTER by CTS
turnkey demand response scheduling solution

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CLACKAMAS COUNTY (MHX)

We want MHX's passengers to see how seamless public transportation can be, and our ITS solutions will help do just that. Passio will help you reshape the rider experience while connecting them with the people they want to see and places they need to go. Whether skiers from the City of Sandy want a quick and safe way up to Timberline, or visitors at a Welches vacation rental are catching the Mount Hood Express on their way to explore Government Camp's trails, Passio will help you make their journey easier and more enjoyable.

Passio technologies is proposing a flexible and dynamic system for Mount Hood Express (and optional additions for the Transportation Reaching People and Last Mile Shuttle Programs) with premier hardware and software in a single, integrated ITS System. Passio's building blocks for your solution include:

PASSIO GO
comprehensive passenger information system with tracking, ETAs, and alerts

PASSIO TRANSIT
touchscreen MDT application with routes, stops, alerts, & announcements

PASSIO NAVIGATOR
CAD/AVL configuration, communication, & reporting management tool

AUTOMATED VOICE ANNOUNCEMENTS (AVA)
multilingual, geofence announcement system

NTD REPORTING
compliance assistance and reporting module

Optional
PASSIO INSPECTOR
pre/post trip inspection module

Optional
INFOTAINMENT
onboard and outdoor LCD displays

NEXT STOP *Optional*
SIGN INTEGRATION
LED displays integrated to display geofence triggered stop and route information

Optional
AUTOMATIC PASSENGER COUNTING
boarding/alighting tracking with Hella 3D sensors

Optional
TRIPMASTER by CTS
turnkey demand response scheduling solution

If successful, Passio Technologies will be the prime contractor for all work. We have provided detailed answers for accomplishing the services described in the RFP. To support your RFP, our comprehensive system comprises several core technologies from a firm with more than 20 years of experience in the transportation industry and a presence across 250+ transit customers in over 40 states. Our team will dedicate their expertise to delivering Clackamas County with reliable and responsible transit solutions while maximizing value, safety, and rider experience across each service mode offered.

CITY OF CANBY (CAT)

We want CAT's passengers to see how seamless public transportation can be, and our ITS solutions will help do just that. Passio will help you reshape the rider experience while connecting them with the people they want to see and places they need to go. Whether a Canby resident is commuting to Woodburn on Route 99X, or a family from Northeast Canby is headed to a movie at Canby Cinema 8 on the City Circulator, Passio will help you make their journey easier and more enjoyable.

Passio Technologies is proposing a flexible and dynamic system for CAT with premier hardware and software in a single, integrated ITS System. Passio's building blocks for your solution include:

PASSIO GO
comprehensive passenger information system with tracking, ETAs, and alerts

PASSIO TRANSIT
touchscreen MDT application with routes, stops, alerts, & announcements

PASSIO NAVIGATOR
CAD/AVL configuration, communication, & reporting management tool

AUTOMATED VOICE ANNOUNCEMENTS (AVA)
multilingual, geofence announcement system

NTD REPORTING
compliance assistance and reporting module

Optional
PASSIO INSPECTOR
pre/post trip inspection module

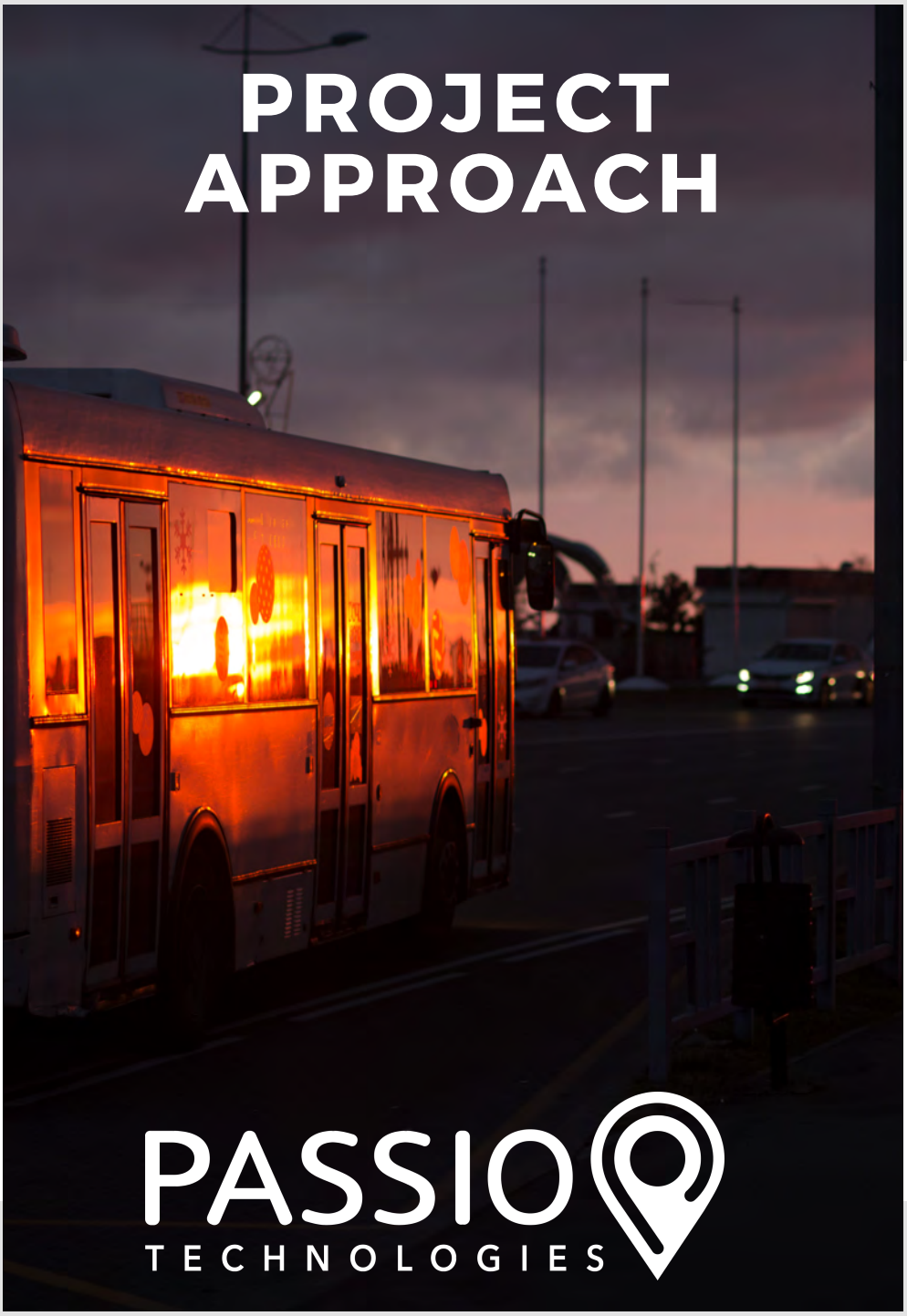
Optional
INFOTAINMENT
onboard and outdoor LCD displays

NEXT STOP *Optional*
SIGN INTEGRATION
LED displays integrated to display geofence triggered stop and route information

Optional
AUTOMATIC PASSENGER COUNTING
boarding/alighting tracking with Hella 3D sensors

Optional
TRIPMASTER by CTS
turnkey demand response scheduling solution

If successful, Passio Technologies will be the prime contractor for all work. We have provided detailed answers for accomplishing the services described in the RFP. To support your RFP, our comprehensive system comprises several core technologies from a firm with more than 20 years of experience in the transportation industry and a presence across 250+ transit customers in over 40 states. Our team will dedicate their expertise to delivering the City of Canby with reliable and responsible transit solutions while maximizing value, safety, and rider experience across each service mode offered.


PROJECT
APPROACH
PASSIO
TECHNOLOGIES

TECHNICAL APPROACH

BRINGING COMMUNITIES CLOSER TOGETHER

Our experience and passion described above will bring a unique value to your agency. Passio works hard to exceed the expectations of our customers. We achieve this through a combination of personal attention and reliability.

PASSIO TECHNOLOGIES

Running complex transit systems is challenging, especially when you're required to be efficient with limited resources while managing so many working parts. Passio simplifies every piece of this puzzle. Passio creates innovative ways to meet your goals in the areas of safety, mobility, efficiency, economic growth, environmental stewardship, security, and accessibility. We believe that everyone deserves the independence and accessibility that public transportation provides. Our solutions are specifically designed to improve the efficiency of public transportation services, improve the customer experience, scale to the size and needs of any system, and are agile to integrate and adapt to the changing landscape and advancements in technology over time. We believe that public transit is an integral part of a healthy, thriving community, and we innovate to help transit agencies operate more efficiently to bring people together. We exist to help our clients become more successful. This has always been our cornerstone.

PASSIO'S TECHNICAL APPROACH HELPS BRING COMMUNITIES CLOSER TOGETHER THROUGH SMARTER TRANSIT.

In choosing Passio, your team is hiring true partners in transit. In addition to our suite of over 20 integrated transit solutions, the Passio leadership team has over 125 years of combined experience in transit. Your knowledge in conjunction with ours yields countless possibilities. We have implemented transportation solutions with over 250 agencies with multiple modes of transit operations and varying service models, allowing us to compliment your local knowledge with new industry trends. We can help formulate best practices, targeted operational plans, and processes to improve operations. Successful reporting and management focuses on evaluating trends that can be analyzed using Passio software.

Our experience and passion described above will bring a unique value to your agency. Passio works hard to exceed the expectations of our customers. We achieve this through a combination of personal attention and reliability. As a smaller company, Passio also brings new innovations to the market faster. We build modular and customizable technology solutions for transit customers in over 40 states. Our commitment to industry standards makes interoperability easy with other platforms. Passio develops much of their technology in-house and uses their customers' needs and input to guide future innovation. We operate on an open integrator model that allows them to seamlessly connect with other strong industry suppliers such as TranSign, Twilio, Hella, Zonar, ATTI, Instamapper, Firebase, and of course Amazon. We are adding to this list consistently by integrating, partnering, or building when the solution identified best meets our customer's needs. Passio is committed to keeping our programmable API fully documented for consumption and integration with any other system providing an API. Passio develops much of their technology in-house and uses their customers' needs and input to guide future innovation. Passio supports integration with third party apps via GTFS-RT and our API. We currently integrate with The Transit App and Customer Specific Apps at approximately 20 agencies and universities.

We truly want transportation to be easily accessible to all, so we have focused on supporting blind and low vision riders through our integration with FAR. Foresight Augmented Reality (FAR) GPS tools and beacons make bus stops and common locations accessible to the blind and visually impaired. Adding the integrated FAR application with GPS for direct wayfinding is optional and may be added at any time. Foresight Augmented Reality (FAR) gives a voice, description and orientation to the sighted world for blind and low-vision users. FAR also uses Passio bus tracking information to allow riders to easily track their bus with audio cues. Passio stop announcements are also played within the FAR app to make getting around a bit easier for blind and low vision riders.

PASSIO ADDS PERSONAL ATTENTION IN EVERYTHING WE DO.

This attention begins with our onboarding process throughout the life of the contract. When onboarding a new ITS customer, Passio has a proven methodology in place to transfer project information and goals from sales to our customer success team. We use 2 project management tools (Insightly.com & Monday.com) to help facilitate this. We also use a series of online forms (Formsite.com) in collaboration with the new customer to ensure all required information is complete.

All project tasks will be implemented by a Senior Project Manager, Systems Engineer, Customer Success Supervisor, Account Manager, and a Passio Installation Technician. During the project implementation and ongoing operations, Passio leaders and project managers will coordinate on-site evaluations and strategic meetings to ensure maximum utilization of all technology solutions. These meetings will include maintenance, operations, and the agency's corporate management as required.

Passio typically provides a combination of remote and on-site training for new customers. On-site training is performed by expert Passio implementation staff. All customers are provided access to Passio’s training documents, FAQs, knowledge base articles, Powerpoint presentations, and training videos for their appropriate solutions. Passio hosts webinars to provide documentation and training to our customers. Passio also provides searchable electronic media to provide documentation and training to our customers. You will be given access to our online knowledge base and multi-media training tool. This is a dynamic tool that is consistently updated as new features and functionality are added to the Passio platform. More details on our complete training program and modules can be found in our attached Training section. Yes, recorded video training is available permanently. Remote training is free and available anytime during the life of the contract.

Level one support is provided from our support phone hotline, which is 24x7x365, or via our support@passiotech.com email. Issues are evaluated when received and escalated to the senior technical support team if needed, and then to the development team if systemic issues are determined. We provide unlimited remote support. Passio will have dedicated resources available to work on "critical issues" during your contractual hours until resolved.

Another value Passio brings is our custom Agency Marketing Guide at no extra cost, which includes step-by-step guidelines to inform, engage, and excite your riders. In order to help you get the word out about your new rider tools and ensure a successful launch, we've put together a comprehensive marketing plan. This plan is modular, just like our transit solutions. Feel free to pick and choose what works best for your transit operation.

We have included generic materials that are ready to be used as is. Wording and images may be adjusted as needed, with the exception of the Passio Technologies logo. Our services and collateral offered include App Handout Cards, Flyers, and targeted Social Media Ads. We will work with your agency to craft a comprehensive launch of new services. Along with our agency marketing guide, we can provide various marketing materials designed to stand out and meet your riders where they are.

Detailed information on our proposed technical solutions are presented in our Solutions section.

IMPLEMENTATION PLAN

Implementation Plan

Passio's overall project approach engages in a policy of consistent feedback and continual updates on progress. At each major milestone of the project timetable, we will schedule a confirming conference call, review any open items, and develop a strategic plan to address and correct issues. Our customers will have the opportunity to review those corrections and confirm that they are complete. Client satisfaction is met by the combination of focusing on the planned implementation schedule and constant and open communication. Passio's Implementation Plan consists of the following 5 components:

Determine all key stakeholders, contact information, and roles. Define communications process. Gather location data for installation and identify vehicle availability

Create schedule updates and milestone confirmations process. Define critical dates and identify potential barriers to success. Gather and confirm configuration data from customer

Determine initial installation schedule and pre-install fleet evaluation, schedule installers. Order equipment and document expected delivery timeline. Software setup and initial program testing

Test software deployment with customer configuration. Track, review, and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes. Conduct field testing, make adjustments from feedback, confirm updates

Conduct final testing with customer representatives. Confirm installation documentation and update Conduct training and review of operational items

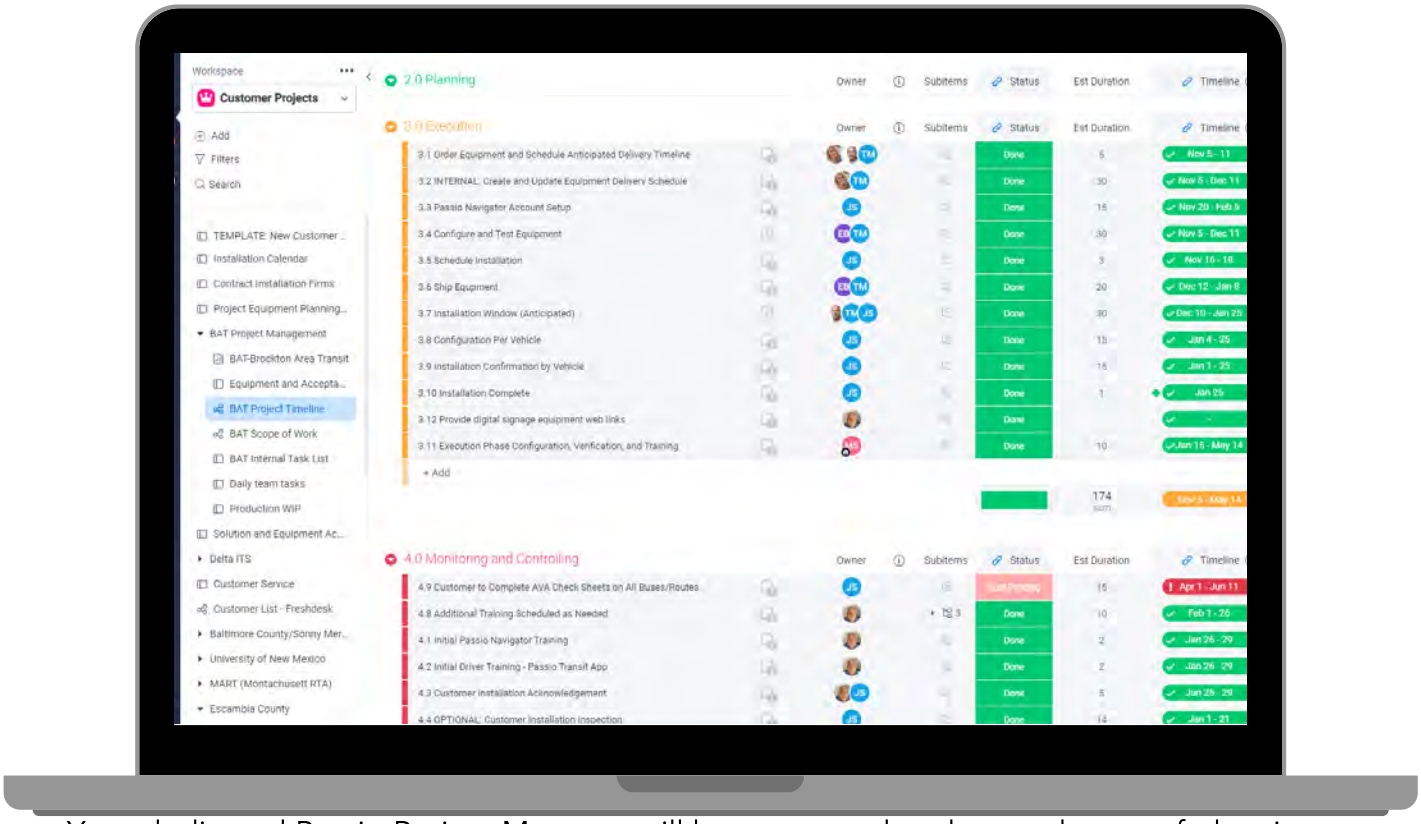
Agency Requirements and Tasks

- Coordination of vehicle availability and interaction with the installation team.
- Coordination of training schedule and identifying key staff members requiring access to the system.
- Identifying a minimum of two contacts who are trained to be system coordinators. These individuals will coordinate troubleshooting efforts and implement support items when remote support is initiated.
- Providing feedback and suggestions to enhance the utilization of the system.

Passio Promise

- Our Passio ITS solution provides a state-of-the-art approach that sets us apart from our competitors. The value of our platform continues well after the date of deployment and is easily expandable by taking future demands into consideration.
- All software and version updates, including new standard features and capabilities, are made available to our customers at no additional cost.
- We provide free marketing materials including designs for cut-out cards, posters, banners, and social media posts to help promote your new system to your riders.
- Passio's platform is completely modular and is capable of working with a variety of hardware.
- Passio provides an integrated, web-based user guide for training and system use.
- By choosing Passio as your transit technology provider, you will receive 24/7/365 access to all of your data, superior customer service, and the most innovative cloud-based technology on the market.

COLLABORATIVE (SHARED) CLIENT PROJECT MANAGEMENT EXAMPLE:



Your dedicated Passio Project Manager will keep you updated on each step of planning, installation, implementation, and training using our collaborative online project management website. Each Passio customer will have a dedicated project board where they can see progress, make comments, and participate in the plan with our project team

PROJECT MANAGEMENT PLAN

PASSIO TECHNOLOGIES

Role of the Project Manager

Passio's Project Manager for will have multiple responsibilities, but first and foremost their role is to manage the resources to meet project milestones and communicate with your The City of Sandy's team. The project manager is the focal point, they are the primary contact for both Passio resources and our customer. By having a clear 'chain of command' we are able to effectively avoid confusion, uncertainty, and mixed instructions that can occur in a complex deployment.

We also understand that the project manager is only as strong as the processes they use and the team behind them. The project manager is constantly reporting to the executive sponsor at Passio to ensure that all resources needed are available, and if issues arise, they can be escalated and quickly resolved. For more complex deployments, an assistant project manager is also assigned. This person works side by side with the PM to support them and step in if a substitution is needed in rare cases. Each of the teams at Passio (equipment setup, configuration, customer acceptance testing) are assigned team leads, and these leads report to both the assistant and senior project manager.

Quality assurance and The City of Sandy's goals are one in the same from the standpoint of project management. Several key components and stages are used to ensure quality, and those stages are based on the stated objectives for The City of Sandy's project, as well as Passio's focus on excellence for each project deployment.

Pre-Installation Protocols

- Passio will supply wiring diagrams to customers.
- Customers are provided five working days to review, ask for clarification, or request changes.
- Passio will provide an equipment list with the specifications of each device.
- Customers should supply installation instructions including a power source for each component, sensor locations (if applicable), sensor trigger (power or ground), connector requirements, device locations (if necessary), and wiring requirements within 5 (five) working days.
- Instructions to be provided by vehicle type and year for all vehicles.

On-Site Installation and Acceptance Responsibilities

- Passio will install each component to the pre-installation specifications.
- Passio will document each installation using our installer software tool.
  - This documentation will be available to the customer.
- Installation of each component is subject to change as required when the installer begins physical work on the vehicle.
  - Standard or minor changes will be documented during the installation process.
  - Material or significant changes will be discussed with the customer and approved, in writing by the customer.
- Installation is deemed complete and accepted when the following criteria are met.
  - VLU, APS/APC, and Cellular Router receives communications, returns active information to the server, and registers in Passio Navigator Configuration Page in the devices tab
  - Destination Sign Connection and Internal Sign Connection – display changes when MDT goes out of service or changes route, receives configuration updates via over the air protocols
  - MDT – Passio Transit app loads on startup and connects to customer account. Registers in Passio Navigator Configuration Page. Configuration updates are confirmed to be received, and communication to server confirmed.
- On-Site Installation and Acceptance Responsibilities
- Passio will install each component to the pre-installation specifications.
- Passio will document each installation using our installer software tool.
  - This documentation will be available to the customer.
- Installation of each component is subject to change as required when the installer begins physical work on the vehicle.
  - Standard or minor changes will be documented during the installation process.
  - Material or significant changes will be discussed with the customer and approved, in writing by the customer.
- Each component is tested for power, communication with the server (if applicable), communication with internet (if applicable), and successful data transfer to the server (if applicable)

- Passio certifies to the customer that the above installation protocols are met
- Customer Installation Inspection - Customers are encouraged to review the installation during the period when the installer is on-site and provide feedback to Passio support in real-time as needed.
    - Customers are encouraged to field test installation and equipment communication by driving vehicles on routes for 30-90 minutes post initial installation.

Solutions Acceptance

Solutions are the core of the Passio deliverable. It is our goal and objective to ensure that solutions are set up correctly and operate to specifications at the highest level of reliability. Solutions include the combination of device software, configuration, user interfaces, and server programs.

- Acceptance criteria are set for each individual solution
- Individual solution acceptance test window is typically up to thirty working days
- Customer Acceptance Monitoring
    - Customers will identify any gap or interruption in the solution and report them to Passio as soon as possible after observation.
        - Information needed includes the date, time, vehicle number, assignment information, the observed gap in the solution, length of time gap lasted, and any troubleshooting steps taken
        - All discontinuities are investigated. One-time breaks are often nonissues, and may be the result of incorrect assignments or require a one-time reset of equipment.
        - Recurring, consistent, or replicable gaps will be managed until corrected to achieve acceptance status.
- The amount of testing done on each vehicle for solutions is at the customer's discretion and does not change the acceptance window.

Solutions Acceptance Criteria

- CAD/AVL vehicle and information appear on Live Map 2 (LM2) and reflect updated route assignments
- Passio GO – Vehicle appears on correct active route when assigned
- LEDx Integration – Destination sign display changes when MDT goes out of service, changes route, and displays correct timed message(s)
- AVA – audible announcements are clearly made incorrect order at configured GPS locations on the route
- APC – system daily accuracy of counts exceeds 95%
- Public Wi-Fi – non Passio device connects to Wi-Fi SSID when onboard vehicle and can access public internet websites

INSTALLATION

Creating Passio's proposed installation plan begins before the project kick-off meeting, during our internal handoff to the Project Implementation team. Our Implementation team reviews each project specification, requirement, and customer need with our sales team. Based on our historical lessons learned and best practices, we comprise a set of discussion points surrounding any questions or concerns we may have. These serve as the main agenda items with your agency team during the kick-off meeting.

Our goal is always to perform the installation work without impacting operations. Together, we will determine the optimal days and times for installation work, including daytime, nighttime, and weekends, and build in a communication and coordination plan that meets the needs of the project and the ongoing operations.

From the kick-off meeting discussion, our implementation team will draft an equipment and logistics timeline, conduct discussions with the Installation Technician(s) who will be performing the installation, and draft an installation plan that will be shared with your agency and reviewed during our weekly project check-in meeting. Once the plan is finalized it will be added to the Monday.com project plan board. By adding the plan to the project board, it will be visible to all the project stakeholders, for both your agency and Passio. Monday.com creates a powerful and visual real-time collaboration tool for tracking project progress, tasks, assignments, and milestones. This online board will be shared exclusively with your team and available anytime for status updates and comments.

Your agency is not expected to provide equipment for the installation. We will want to coordinate closely with your team members who have responsibility for fleet maintenance and operations to optimize bus availability, and to ensure that the installation work does not adversely impact operations.

Pre-Installation Protocols

- Passio will supply wiring diagrams to customers.
- Customers are provided five working days to review, ask for clarification, or request changes.
- Passio will provide an equipment list with specifications of each device.
- Customers should supply installation instructions including power source for each component, sensor locations (if applicable), sensor trigger (power or ground), connector requirements, device locations (if necessary), and wiring requirements within 5 (five) working days.
- Instructions to be provided by vehicle type and year for all vehicles.

On Site Installation and Acceptance Responsibilities

- Passio will install each component to the pre installation specifications.
- Passio will document each installation using our installer software tool.
  - This documentation will be available to the customer.
- Installation of each component is subject to change as required when the installer begins physical work on the vehicle.
  - Standard or minor changes will be documented during the installation process.
  - Material or significant changes will be discussed with the customer and approved, in writing by the customer.
- Installation is deemed complete and accepted when the following criteria are met.
  - VLU, APS/APC, and Cellular Router receives communications, returns active information to server, and registers in Passio Navigator Configuration Page in the devices tab
  - Destination Sign Connection and Internal Sign Connection – display changes when MDT goes out of service or changes route, receives configuration updates via over the air protocols
  - MDT – Passio Transit app loads on startup and connects to customer account. Registers in Passio Navigator Configuration Page. Configuration updates are confirmed to be received, and communication to server confirmed.
- Installation of component is completed using the accepted wiring and installation protocols
- Each component is tested for power, communication with server (if applicable), communication with internet (if applicable), and successful data transfer to server (if applicable)
- Passio certifies to customer that above installation protocols are met
- Customer Installation Inspection - Customers are encouraged to review the installation during the period when the installer is on site and provide feedback to Passio support in real time as needed.
  - Customers are encouraged to field test installation and equipment communication by driving vehicles on routes for 30-90 minutes post initial installation.

Solutions Acceptance

Solutions are the core to the Passio deliverable. It is our goal and objective to ensure that solutions are set up correctly and operate to specifications at the highest level of reliability. Solutions include the combination of device software, configuration, user interfaces and server programs.

- Acceptance criteria are set for each individual solution
- Individual solution acceptance test window is typically up to thirty working days

QUALITY ASSURANCE

QUALITY ASSURANCE FROM THE PASSIO TEAM

Quality Assurance & Continuous Improvement

Passio is proud to present our commitment to quality in this section. We have invested heavily in Quality Assurance (QA) with the most current releases of core products Passio Navigator, Passio Transit, Passio ParaPlan, and Passio Connect. Our dedication to high standards was based on the desire to utilize the latest managed development environments. These technologies have allowed us to enhance our code unit testing, experience testing, and implementation procedures.

Unit Testing

We are continually working to make our test cycles fast and partially automated. By breaking releases into much smaller components and testing as early in the iteration as possible, we bring updates to the market faster. Short cycles allow enhancements to reach customers much sooner, so our QA team is constantly pushed to enhance their processes to stay on-cycle with development. Unit testing, the simulation of incomplete components with service visualization, allows Passio to run simultaneous tests, rather than wait until the end of a cycle.

Functional testing

Functional testing verifies that our applications work how they are intended. It's implemented in a target environment by conducting manual user tests according to specific plans, considering the needs and requirements of our end users. Functional testing includes the following tests:

- Browser compatibility test to check app performance in various browsers.
- Regression test for every release, minor update, integration, or data migration.
- Automated functional and regression tests.
- Outcome-based user testing on all new feature sets.
- Reliability test to find app weaknesses and reduce the number of failures during deployment.
- Passio eventually uses actual user data to improve testing and user experience.

Performance Testing

By performing load tests, the Passio QA team can determine our ability to handle unsteady loads and find the maximum supported levels. From there, the team can move on to endurance testing which tests the system under continuously high load. Endurance testing is a method for detecting memory leaks and identifying at what point performance degradation occurs. It can also show how the system copes under high demand for long periods of time. We test our solutions with various loads, including ones that exceed normal operating conditions. These techniques are primarily done manually, but we are working to improve Passio Performance Testing with new automated testing tools.

Furthermore, our failure and recovery tests check the system for functional disaster recovery after simulation of various crashes both internal (software) and external (internet connection, power cuts, etc.).

Compatibility Testing

- The Passio QA team tests against the following:
- Browsers (Chrome, Firefox, Safari, Edge)
- Desktop Operating systems (Windows, macOS)
- Mobile devices (iOS, iPadOS, Android)
- Hardware versions

While these configurations are numerous, we always consult with each client to ensure our solutions work as expected on their hardware.

Maintenance Testing

Maintenance testing is performed by both our QA and Tech Support teams. They are responsible for ensuring the correct performance of applications and customer service workflows. Passio uses Freshdesk.com and Monday.com to help this team track and analyze potential problems.

Continuous Improvement

Besides these new development testing KPI's, we have implemented new Process Controls and Workflow Tools for onboarding new customers and ongoing technical support. This attention begins with our onboarding process throughout the life of the contract. When onboarding a new ITS customer, Passio has a proven methodology in place to transfer project information and goals from sales to our customer success team. We now use 2 project management tools (Insightly.com & Monday.com) to help facilitate this. We also use a series of online forms (Formsite.com) in collaboration with the new customer to ensure all required information is complete.

We are continuously adding content to our online user community/KB/FAQ on Freshdesk and updating training videos for our solutions. We are committed to comprehensive training done both remotely and on-site. Passio uses electronic media and also hosts quarterly webinars to provide documentation and training to our customers. Passio tracks support tickets internally via Freshdesk (https://passiotech.freshdesk.com).

All project tasks will be implemented by a Senior Project Manager, Systems Engineer, Customer Success Supervisor, Account Manager, and a Passio Installation Technician. During the project implementation and ongoing operations, Passio leaders and project managers will coordinate on site evaluations and strategic meetings to ensure maximum utilization of all technology solutions.

Cost Control

Passio is proud to present our commitment to quality. Details of our Functional, Performance, Compatibility, and Performance testing programs are outlined above. Our proposed ITS solution is 100% cloud-based using minimal hardware to keep costs down. We have performed extensive research on multiple on-board ITS components to land on the perfect combination of quality, reliability, and affordability in this proposal. Please refer to our Hardware Section for more information on our proposed components. We will work with your agency to finalize the hardware requirements of this solution to recommend the best options and pricing during contract negotiation.

CONTRACTOR EXPERIENCE

PASSIO TECHNOLOGIES

PASSIO

COMPANY OVERVIEW

The transit industry has consistently demanded reliable and actionable data to efficiently allocate resources and provide passengers with real-time information. This technology is critical to manage costs, operate within budget, and most importantly, deliver superior service.

HISTORY

In the summer of 2010, Co-Founders Mitch Skyer and Scott Reiser started Passio Technologies to fill this sizable gap within the industry. As the company developed, we identified that the passenger experience was just as important to the successful operation of the system as was understanding the resources and utilization.

ORGANIZATION

Our organizational structure is flat and customer-focused. We assign multiple project and account managers to each customer for redundancy and cross-training.

Our mission is to provide information to both the operations staff and the passengers so that everyone's experience is comfortable, informative, and effective. We move beyond simply answering support questions to find out the reason behind each question.

These answers help drive the direction of our development and innovation to ensure that the needs of our customers are being met. Passio has been in business for over 10 years and has 24 full-time employees.

The majority of Passio's support and management employees are located in Atlanta, GA. Members of our senior technical support and sales teams are located in Kansas City, KS and Greenville, SC. Passio does not discriminate in any way, shape, or form for hiring, raises, and promotions. All Passio employees and clients are treated equally. Passio is growing, we've increased our staff by 40% over the past 3 years.

- Passio Technologies, LLC is registered in the State of Georgia.
- Founded on August 13, 2010
- Federal Tax ID Number: 27-3307668
- Dun and Bradstreet ID (DUNS #): 068972279
- E-Verify Company ID: 713911. Passio actively verifies all employees to ensure they are authorized to work in the United States.
- SAM Registration CAGE Code: 7NTZ6
- SIC Codes: 7373 COMPUTER INTEGRATED SYSTEMS DESIGN
- NIGP Codes:
  - 208 Computer Software For Microcomputers, Systems, Including Cloud-based (Preprogrammed)
  - 209 Computer Software For Mainframes And Servers, Preprogrammed
  - 918 Consulting Services
  - 920 Data Processing, Computer, Programming, And Software Services
- NAICS Codes:
  - 5415 Computer Systems Design and Related Services
  - 5416 Management, Scientific, and Technical Consulting Services

FINANCIAL STANDING

All commercial banking is done through Webster Bank. Mitch Skyer, President and Scott Reiser, CTO, are both officers of Passio. Passio currently has no debt and has been profitable since its inception. Passio will confirm that we have the financial resources to fulfill all contractual requirements. Passio Technologies has never been subject to litigation associated with project performance and/or professional liability. If further information is needed, Passio commits to meeting those requests.

Passio Technologies maintains the following standard insurance coverage:

- Public Liability $2,000,000 each occurrence
- Product Liability $4,000,000 aggregate to include all vehicles and equipment owned or used on this contract
- Property Damage $1,000,000 each occurrence, $3,000,000 aggregate
- Bodily Injury Liability $1,000,000 each occurrence, $3,000,000 aggregate
- Cyber Liability Deductible $2,000,000 Limit

If awarded this contract, Passio Technologies will secure all required coverages and provide a COI. Our current Certificate of Insurance (COI) will be provided.

Passio has followed a smart and steady growth path, allowing us to expand our team from 3 to 24, while maintaining the focus on our customers. We continue to offer new and innovative solutions through an aggressive research and development program, coupled with an unparalleled commitment to customer satisfaction and service support. By growing steadily and efficiently, we have not just kept pace with the transit industry's ever-changing needs, but have focused on advancing our integrations and capabilities to ensure we're always one step ahead of the curve.

We continually develop our technology, integrating with hardware and internal/external software packages while improving every step of the way. Our core methodology was built to address the needs of both the passenger and the operator, born from our decades of experience in the transit industry.

Our integrated solution provides our customers with a single platform for support, hardware integration, on-board connectivity, and reporting.

ParaPlan Software became part of the Passio family in May 2019. We joined forces to provide expertise in demand response to our team, and to our customers who encounter growing needs for diversified transit services. This technology is the backbone behind Passio Connect, our on demand solution. We have the entire ParaPlan technical team working in tandem with Passio and our sister companies CTS and Ecolane, who also partner with Passio to provide turnkey demand response solutions. We share the core belief that mobility is a universal right, and we are proud to now offer the most comprehensive transit solution in the industry.

MITCH SKYER
PRESIDENT & CO-FOUNDER

mitch.skyer@passiotech.com
(678) 825-3456 ext. 106

Mitch has been President and Co-Founder of Atlanta-based Passio Technologies since 2010. He's actively been a part of the transit and parking industry since 2002. Prior to founding Passio, he was the President and Founder of Solstice Transportation Group, a transportation consulting operation.

He is an active member of many transportation groups and also serves on the board of several. He received his undergraduate degree from Binghamton and an MBA from University at Buffalo.

SCOTT REISER
CTO & CO-FOUNDER

scott.reiser@passiotech.com
(678) 825-3456 ext. 105

Scott has been Chief Technology Officer and Co-Founder of Atlanta-based Passio Technologies since 2010. He's actively been a part of the technology industry since 1994.

Prior to founding Passio, he was the President and Founder of Adapting Technologies, a full service IT solutions provider.

He has been involved in the Atlanta Business Alliance and the Buckhead Business Association for over nine years and he received his B.S. in International Affairs from University of Colorado-Boulder.

OUR PARTNERSHIP WITH CTS SOFTWARE

TripMaster by CTS Software

Introduction to CTS Software

TripMaster gives multiple demand response scheduling tools to the Passio platform. CTS supports transit operations with user-friendly solutions. CTS Software offers automated scheduling, custom reporting, voice response, mobile solutions, automated vehicle locators, and a web-based portal.

Why CTS Software?

CTS Software offers affordable solutions that allow demand-based transit agencies to stick to their budget while still being able to handle rider intake smoothly, manage schedules, and more. Use CTS's detailed reporting to make educated decisions about current offerings, and utilize assets to the fullest.

The Partnership

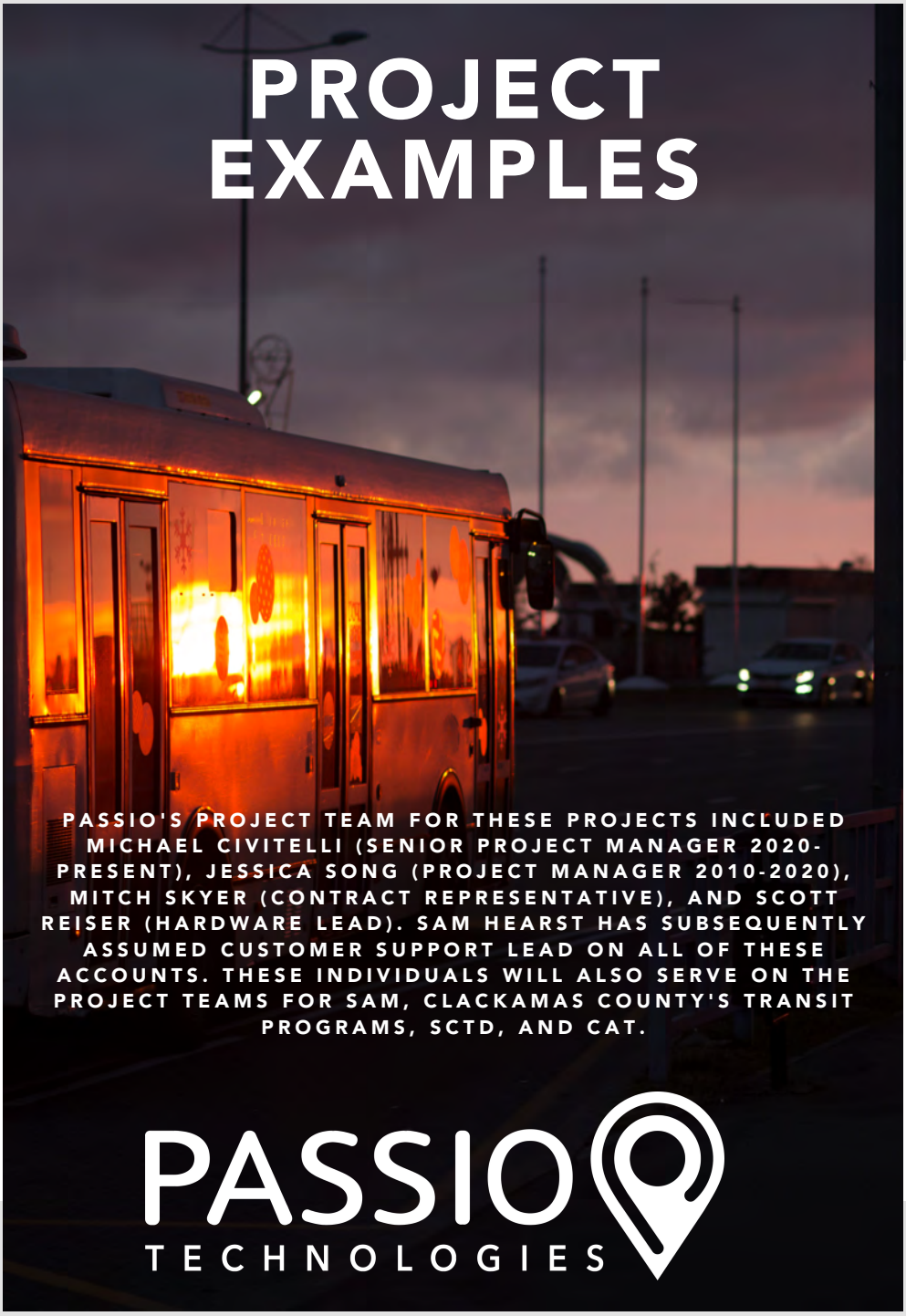
Passio Technologies is proud to join CTS Software as a Transit Mobility Alliance Partner. Our collaboration is paramount to offering our clients the best options possible to fit their exact transit needs. Since Passio offers modular solutions, we are able to easily include solutions by CTS Software, which is owned and operated by the same parent company.

CTS Software's Offerings

TripMaster is the supreme all-encompassing solution for transit on-demand, offering agencies automated scheduling and dispatching, route mapping, billing, resource management, and even payroll tracking. Their suite of demand response tools are easy to use and manage.

How Integration works

CTS Software and Passio Technologies work together in every aspect to deliver the services at the highest quality to our shared clients. Through weekly meetings and daily conversations with the CTS Software team, we are able to ensure all needs of our clients are met. Our platform integrates with TripMaster to provide seamless support for both fixed route and NEMT/Paratransit operations.


PROJECT
EXAMPLES
PASSIO'S PROJECT TEAM FOR THESE PROJECTS INCLUDED MICHAEL CIVITELLI (SENIOR PROJECT MANAGER 2020-PRESENT), JESSICA SONG (PROJECT MANAGER 2010-2020), MITCH SKYER (CONTRACT REPRESENTATIVE), AND SCOTT REISER (HARDWARE LEAD). SAM HEARST HAS SUBSEQUENTLY ASSUMED CUSTOMER SUPPORT LEAD ON ALL OF THESE ACCOUNTS. THESE INDIVIDUALS WILL ALSO SERVE ON THE PROJECT TEAMS FOR SAM, CLACKAMAS COUNTY'S TRANSIT PROGRAMS, SCTD, AND CAT.
PASSIO
TECHNOLOGIES

IDAHO CITYLINK TRANSIT KOOTENAI COUNTY

The Client:

Citylink is an organization run by two separate transit entities, one transit system in Kootenai County and a separate transit system in Benewah County. Citylink in Kootenai County is a small urban system serving multiple areas.

Project Details:

Project Value	$110,513
Custom Features	National Transit Database (NTD) Reporting
Software Installed	Automated Passenger Counting, Passio GO, AVA, Interior LED signs
Service Dates	October 2020 to Present
Contract Type	60 month MSA
Location	2400 W Riverstone Dr., Coeur d'Alene, ID 83814

Main Contact:
Chad Ingle
Fixed Route Services
(208) 446-2102
cingle@kcgov.us

EASTERN PANHANDLE TRANSIT AUTHORITY (EPTA)

The Client:

EPTA had been looking for years for a better solution, one that ideally, would come from one company whose solutions would allow them to manage both their fixed routes and their demand-response transit needs, and give their drivers the flexibility to easily switch back and forth between the two solutions, if needed. That ideal solution also needed to deliver greater accuracy and efficiency in the three problem areas: passenger counting, voice announcement, and on-demand scheduling. Just as importantly, as Deputy Director, Amanda Sink, recalls, "We had to make sure it was both cost-effective for the organization to implement and easy for drivers to learn and use." Doing extensive research, they explored a variety of solutions. Finally, it was at the APTA trade show that they met Passio's president, Mitch Skyer, who took the time to educate them on Passio's offerings, and how they could, in fact, address EPTA's two distinct requirements. It was clearly a fit, and in (date), they made the decision to partner with Passio.

By choosing Passio, EPTA becomes the company's first client to combine Passio & ParaPlan products. Passio acquired ParaPlan in the summer of 2019. The merging of the three solutions paved the way for vast improvements on many levels.

Project Details:

Project Value	$196,519
Custom Features	National Transit Database (NTD) reporting. Upgraded reporting suite for transits using federal funding
Software Installed	Electronic Passenger Counting, 2-way dispatch & messaging, AVA, Passio GO
Service Dates	May 2018 to Present
Contract Type	60 month MSA
Location	446 Novak Drive, Martinsburg, WV 25405

Main Contact:
Elaine Bartoldson
Director
(304) 263-0876 ext. 8455
ebartoldson@eptawv.com

RADFORD TRANSIT

The Client:

Passio has developed an outstanding relationship with the town of Radford, Virginia for almost three years. They have our full suite of services, including AVA, Passio Navigator, OpsView, Automatic Passenger Counting (APC), GPS/AVL, Passio Gateway, and Passio GO. To date, they operate 20 vehicles with these Passio products on-board.

Project Details:

Project Value	$276,669
Custom Features	National Transit Database (NTD) Reporting
Software Installed	Automated Passenger Counting, Gateway card swipe passenger counting, AVA, Passio GO
Service Dates	February 2018 to Present
Contract Type	60 month MSA
Location	801 East Main St., Radford, Virginia 24142

Main Contact:
Trevor Sakry
Director
(540) 831-5911
tsakry@nrvcs.org

9 TOWN

The Client:

9 Town Transit operates seventeen buses on four flexible routes (fixed stops with deviations) throughout the southern Connecticut region, including connections to New Haven, New London & Middletown.

Over the past seven years, the District has seen tremendous growth in both services provided and used. 9 Town Transit now travels approximately 550,000 miles annually, operates on a $1.8 million budget, and provides over 100,000 passenger trips annually.

A little bit over 3 years ago, 9 Town Transit implemented ITS technology from Passio. These solutions included Passio GO, Automatic Passenger Counting, and GTFS-Realtime. Passio made this transition easy through integrations with existing technologies like Zonar and Token at ETD.

These integrations and new technologies gave their passengers the real-time information they had been craving and ridership is growing. To meet this new demand, 9 Town is soon adding 10 more vehicles to their fleet to improve transit for the region. Additionally, they are adding Passio Request & GO to support flex route service and expanding their coverage area.

Project Details:

Project Value	$110,269
Custom Features	National Transit Database (NTD) Reporting
Software Installed	APS (Hella On-board signage), Passio GO, GTFS Real-Time
Service Dates	June 2019 to Present
Contract Type	60 month MSA
Location	17 Industrial Park Rd, Centerbrook, CT 06409, USA

Main Contact:
Joe Comerford
Centerbrook, CT


PROJECT
TEAM
EXPERIENCE
PASSIO
TECHNOLOGIES

KEY PERSONNEL

For over 20 years, Michael has worked in the transit industry managing new projects and clients. His specialty is client communications. Michael is a member of the Project Management Institute, has a B.A. from the State University of New York and attended the Executive Leadership Program at Seattle University. Michael is based in Austin, TX and will devote a minimum of 20% of his time towards your project during the planning and implementation phases.

SENIOR PROJECT MANAGER
MICHAEL CIVITELLI

michael.civitelli@passiotech.com
(678) 825-3456 x124

DIRECTOR OF OPERATIONS
JESSICA SONG
jessica.song@passiotech.com
(678) 825-3456 ext. 104

Jessica has been the Director of Operations of Atlanta-based Passio Technologies since 2010. She has a Master's degree in Urban Transportation from the University of Illinois at Chicago and worked for Solstice Transportation Group as well. She manages all project implementation and customer support and she evaluates, develops, and manages transit solutions. Jessica is located in Atlanta, GA and will devote a minimum of 20% of her time towards your project during the planning and execution phases.

Courtney functions as our Training & Client Care Specialist, with almost 20 years of experience working directly with clients to create the best experience possible. She makes it a daily goal to ensure they are taken care of in a quick and positive way, making it her priority that they have the best Passio experience possible. Courtney is located in Forth Smith, AR and will devote approximately 10% of her time towards your project dependent upon solutions offered and client needs.

TRAINING AND IMPLEMENTATION MANAGER
COURTNEY HALL
courtney.hall@passiotech.com
678.825.3456 x 116

Sam is our Customer Operations Manager, with over a decade of experience in managing customer service teams. He ensures the analysis and quick resolution for customer feedback, watching over our clients' projects throughout the lifetime of their systems. Sam is based out of our headquarters in Atlanta, GA and will devote time to your project on an as-needed basis following implementation & training.

CUSTOMER OPERATIONS MANAGER
sam.hearst@passiotech.com

678.825.3456 x 129

Other members of our proposed project team include:

Wayne Manis, Installation Technician"
Carly Valcheff, Data Analyst

SUBCONTRACTOR PERSONNEL - CTS SOFTWARE

PASSIO TECHNOLOGIES

BIOGRAPHICAL SKETCHES

Adam Fox has a bachelor's degree in Business Administration from The University of North Carolina at Wilmington with a double major in Management and Marketing. He has been with CTS since 2002, where he has focused on developing strong customer relations as well as training and technical support. Because of his daily one-on-one contact with clients, Adam was put in charge of overseeing the development of TripMaster. Since the inception of this project, he has worked hard to keep the simplicity that the users of previous versions love while adding technical aspects that today's paratransit operators require. He is also a certified trainer for all of CTS' products and will be one of the multiple project managers should CTS be selected through this bid.

Chief Executive Officer

Elizabeth Magra has a bachelor's degree in Marketing Management and Communications from Grove City College. She has focused her career on business creation and growth, particularly in the healthcare consulting arena. Based on this background, Elizabeth is very team and client-focused, understanding people are at the heart of making any business successful and exceeding clients' expectations. Her roles include developing teams and driving strategies to produce results that will strengthen and grow CTS' and customers' businesses.

Chief Operating Officer

Derek has an Associate's degree in Business with a primary focus on communication studies. Through his work in the transit industry, he has developed a multi-faceted knowledge of operations, including dispatching, management, marketing, and sales. Derek has been with CTS since 2010 and is a key player in sales, marketing, and support. His deep understanding of client needs is crucial to customer support and on-site training, and his dedication and positive attitude reflect not only the CTS brand but also the customers experiencing the software in their operation. He is also a certified trainer for all of CTS' products and will be one of the multiple project managers, should CTS be selected through this bid.

Director of Business Development

BUILDING RELATIONSHIPS:

"I want to compliment CTS for the excellent service. Their training team worked long hours with each of our staff members, ensuring they all were comfortable & such service builds great working relationships."
- Big Bend Transit

Jon holds a BBA in Management Information Systems from The University of North Carolina at Wilmington and joined CTS in 2011 as a technical support specialist. He has an encyclopedic knowledge of TripMaster and ParaScope, and he is likely the first voice customers hear when calling in with questions and feedback. Before coming on board with CTS, he worked with SellEthics Marketing Group, Inc. as a route management account representative, and with FedEx's Ground Delivery division. He will be the lead tech support manager for your organization, should CTS be selected through this bid.

Jon Hooks

Lead Technical Support

Jon has a bachelor's degree in Computer Science from Ball State University and joined CTS in 2009 as a developer and software architect, bringing more than a decade of experience as a software developer. Before joining CTS, he owned and managed a consulting company for 10 years, placing and managing over 40 developers in software projects throughout Indianapolis, IN, and surrounding communities. Prior to starting his consulting company, Jon worked for an array of software consultancies in Indianapolis.

Jon Cooper–Director Software Development

Amie joined CTS in 2013 as the company's finance director and manages accounts receivable and payable, all aspects of payroll and human resources, provides backup customer phone support and maintains customer files and administrative communications. Amie is the administrative glue that binds CTS together. She brings a 25-year history of accounting, business administration, and sales with an array of industries, and is expertly knowledgeable about the administrative intricacies of small- to medium-sized businesses. Amie's precision and integrity exemplify CTS's focus on strong customer relationships.

Amie Green–Finance Director

Jesse has been responsible for many of the recent implementations in the state of NC. His roles here at CTS include onsite TripMaster training, software testing, and upkeep of TripMaster's online training resources. His experience in training and dedication to customer service translates to high-level results and satisfied customers. For this project, Jesse will lead the technical training phase.

Jesse Ellis–Lead Trainer

SUPPORT

ORGANIZATIONAL CHART

FOUNDERS

MITCH SKYER
PRESIDENT
mitch.skyer@passiotech.com

SCOTT REISER
CTO
scott.reiser@passiotech.com

LEADERSHIP TEAM

KYLE ARCHER
DIR OF BUSINESS DEV
kyle.archer@passiotech.com

JESSICA SONG
DIRECTOR OF OPS
jessica.song@passiotech.com

TIM HIBBARD
VP, INNOVATION
tim.hibbard@passiotech.com

CUSTOMER ENGAGEMENT

ALEXANDRA FULTON
MARKETING MANAGER
alexandra.fulton@passiotech.com

LUCY LEE
BUSINESS MANAGER
lucy.lee@passiotech.com

SCOTT MCLAREN
DIRECTOR OF SALES
scott.mclaren@passiotech.com

SAM TUPMAN
BIZ DEV MANAGER
sam.tupman@passiotech.com

JESSIE BILL
PROPOSAL COORDINATOR
jessica.bill@passiotech.com

KEVEN IZEN
BIZ DEV MANAGER
keven.izen@passiotech.com

CUSTOMER SUCCESS

MICHAEL CIVITELLI
SENIOR PROJECT MGR
michael.civitelli@passiotech.com

COURTNEY HALL
TRAINING/IMPLEMENTATION MGR
courtney.hall@passiotech.com

BRETT CALE
CUSTOMER SERVICE REP
brett.cale@passiotech.com

SAM HEARST
OPERATIONS MANAGER
sam.hearst@passiotech.com

EVAN BLITZER
CUSTOMER SERVICE REP
evan.blitzer@passiotech.com

CARLY VALCHEFF
DATA ANALYST/CSR
carly.valcheff@passiotech.com

TY MARTIN
CUSTOMER SERVICE REP
ty.martin@passiotech.com

SCOTT SHELTON
CUSTOMER SERVICE REP
scott.shelton@passiotech.com

WAYNE MANIS
INSTALL TECHNICIAN
wayne.manis@passiotech.com

DEVELOPMENT

RAMI GOLDENBERG
SYSTEMS ENGINEER
rami.goldberg@passiotech.com

DENIS ANOHKIN
APP PROGRAMMER
denis.anohkin@passiotech.com

AFANASII KURAKIN
LEAD PROGRAMMER
afanasii.kurakin@passiotech.com

PROJECT TEAM

For purposes of adhering to the brevity requested, full resumes have only been included in the Supporting Information section of this RFP and will provide qualification details and background on Key Personnel.

PROJECT MANAGER & DOCUMENTATION LEAD: Michael Civitelli – Senior Project Manager
Michael has been managing new projects and clients in the transit industry for over 20 years. Michael will be your main point of contact for this project.He is responsible for all task-specific approvals and will lead all project meetings and communications during the planning, testing, and implementation phases of the project.

CONTRACTUAL REPRESENTATIVE: Mitch Skyer – President & Co-Founder at Passio Technologies
Mitch has been President and Co-Founder of Passio Technologies since 2010.Mitch is responsible for ultimate decision-making for contracts with City of Sandy and other agencies. Please contact him regarding any negotiations or contract approvals.

SOFTWARE LEAD: Tim Hibbard – VP of Innovation and Development
Tim brings over 20 years of professional programming experience to the Passio team. Tim is responsible for leading our team of internal programmers to ensure that the project solution is optimized to meet your agency's needs.

PROJECT ENGINEER: Jessica Song – Director of Operations
Jessica is skilled in providing transit parking operations solutions and recommendations. She will lead our implementation team, working closely with Michael to evaluate and develop transit solutions for City of Sandy and its partnering agencies. In the event of a possible system issue, Jessica will work with our customer support team and promptly find the best resolution to keep your system up and running.

TRAINING LEAD: Courtney Hall – Training and Implementation Manager
Courtney is responsible for ensuring successful handover and training to your agency. Following completion of installation, she will provide full training for your team on the Passio Navigator System and support your team during project handover to our customer support team.

INSTALLATION LEAD: Wayne Manis, Install Technician at Passio Technologies
Wayne leads Passio's installation, bringing over a decade of experience in the GPS industry. Wayne is experienced and skilled in GPS fleet installation and hardware installation, and will conduct onsite training for your team on your system's hardware.

HARDWARE LEAD: Scott Reiser – CTO & Co-Founder
Scott has been Chief Technology Officer and Co-Founder of Passio Technologies since 2010. Scott is integral to internally advising our team's approach to building each customized solution for our clients.

CUSTOMER SUPPORT LEAD: Sam Hearst – Customer Operations Manager
Sam leads our Customer Support team which offers full remote support to answer questions and resolve any issues quickly.

TECHNICAL SUPPORT

PASSIO ONE TRAINING AND USER GUIDE

Level one support is provided from our support phone/chat/email/social, which is 24x7x365. Passio provides immediate tech support (acknowledgment within 30 minutes for any critical issue) during our office hours of 7 AM - 6 PM Eastern Time, Monday through Friday. Issues are evaluated when received and escalated to the senior technical support team if needed, and then to the development team if critical systemic issues are determined. All issues submitted can be tracked and referenced using our Freshdesk Ticketing CRM portal. Most common issues are resolved on the same day. The typical resolution time for 90% of issues not resolved within one working day is"" three (3) working days. Technical support is always included for the life of any Passio agreement.

Customer calls or emails are reviewed and acknowledged within one working day or less of receipt. Most common issues are resolved within that time period. The typical resolution time for 90% of issues not resolved within one working day is three working days.

Passio's systems can be updated via the administrator portal for some key configuration settings. Additionally, web conference software is used to share screen information. Implementing major upgrades or patches are typically done over weekends and in the early AM hours. Testing of upgrades is also done during this period. All major upgrades and patches are included in the standard service agreement and do not incur additional charges.

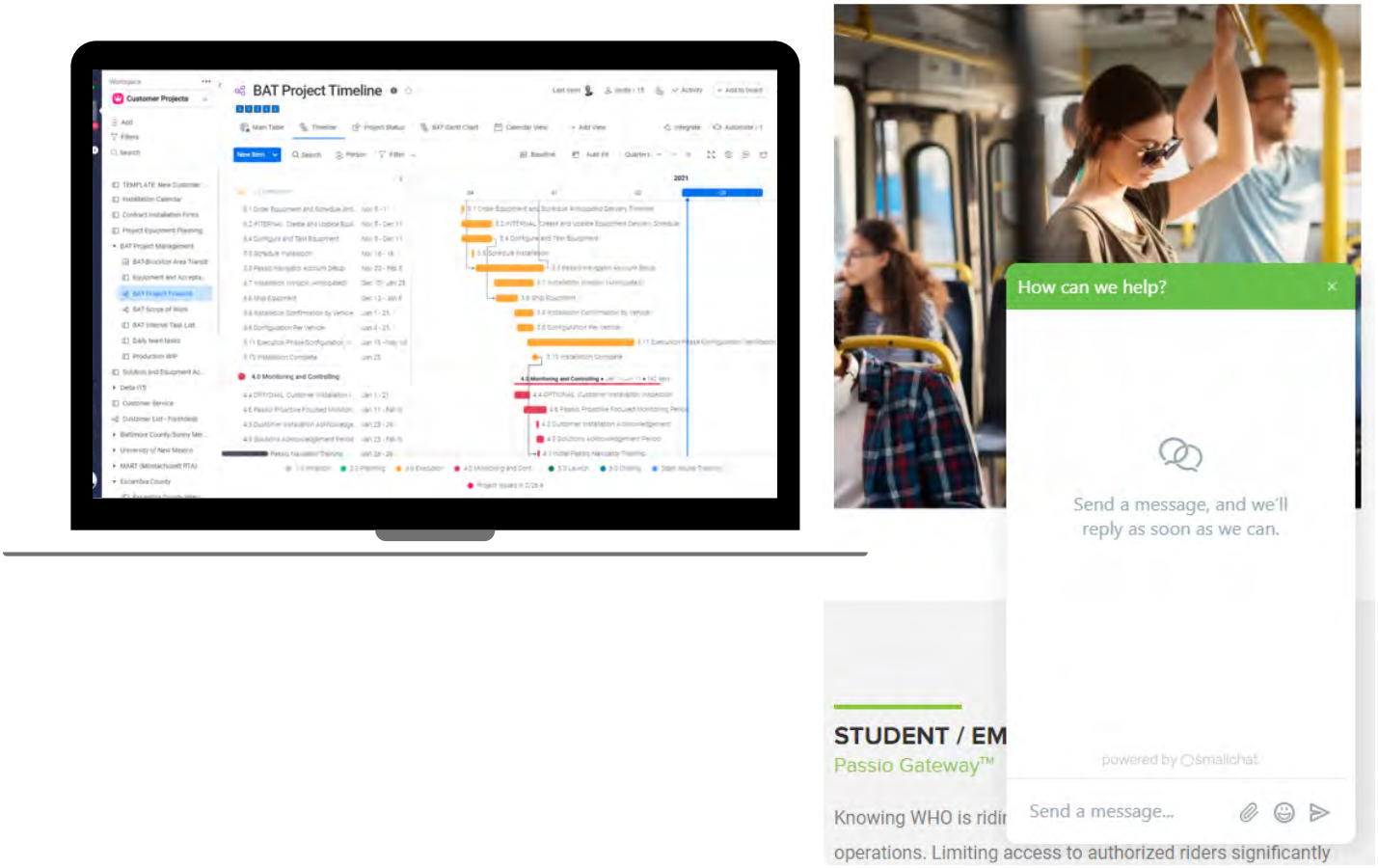
Server-side upgrades do not require any customer staff involvement. Passio has developed the capability to upgrade software versions via remote server trigger command. If an update does require a configuration that is not possible to conduct 'over the air' the customer will be provided with complete instructions and pre-scheduled remote support to upgrade on board devices.

Passio Tech Support:
Phone 678.825.3456
Email support@passiotech.com
Web https://passiotech.freshdesk.com
Chat https://passiotech.com/#

Passio maintains an online user management and training tool for all active customers.

PASSIO OFFERS QUICK AND EASY WEB CHAT FOR QUESTIONS, COMMENTS, AND CONCERNS DIRECTLY THROUGH OUR WEBSITE AT PASSIOTECH.COM

We make it easy for riders, clients, and any other interested parties to ask us questions using a live chatbox on our website. Chats are answered in real-time, answering any questions we receive about our solutions, app, and more!



Your dedicated Passio Project Manager will keep you updated on each step of planning, installation, implementation, and training using our collaborative online project management website. Each Passio customer will have a dedicated project board where they can see progress, make comments, and participate in the plan with our project team

Passio Preferred Payment Schedule
- Invoice #1 = 100% Setup fees & Software licenses (Billed after Kick-Off call)
- Invoice #2 = 100% Hardware & Shipping (Billed upon shipment)
- Invoice #3 = Installation Fees (Billed after the equipment is installed, amount based on vehicles completed)
- Recurring Invoices = Go-Live (Billed every year on the anniversary of 1st recurring invoice)

Note: Passio is willing to adjust this schedule based on agency requirements.

WARRANTY & MAINTENANCE

All Passio software can be updated in the field over the air. Additionally, the ITS Hardware itself may be re-calibrated in the field. Each configuration is extensively monitored and tested during the initial rollout period, and account managers periodically confirm the configuration and make updates through the life of the contract. Software updates will be provided at no additional charge for the life of the agreement.

Passio's approach to the equipment warranty and ongoing maintenance has been realigned to change the way the industry approaches this challenge. Our goal is to maximize our customer's independence, eliminate downtime, and avoid extra costs that are not necessary when equipment and service are designed with the end-user in mind.

The Passio solution is designed to be self-managed. Our design reduces scheduling time delays and empowers our customers to resolve modest issues quickly, efficiently, and at a lower cost to the transit agency while enjoying full remote support. When situations arise that demand a hands-on approach, company-trained technicians can be dispatched to handle repair or replacement on an hourly or daily basis.

All on-site service will incur additional charges, and be subject to minimum service call amounts. At our customer's requests, Passio will coordinate and schedule post-install on-site service. Customers will be charged with applicable trip charges and hourly fees for services on-site. Service calls are typically charged a three-hour minimum but may be higher based on location. Passio will remotely support customers who use internal employees to conduct on-site repairs for no additional fees.

FIRST 30 DAYS - All new equipment, wiring, and system setup MUST be working as promised. All Passio customers can expect us to ensure equipment is installed properly, is tested, and the software/systems are functioning as outlined in our agreement.

WARRANTY PERIOD - All customers, whether they have a standard one-year warranty or have purchased the extended warranty agreements, can expect immediate attention and equipment exchanges or repairs processed as quickly as possible from the initial request, avoiding delays.

ON-SITE/ON-BOARD REPAIRS - Our equipment is designed to be diagnosed in minutes, software updates can be done with minimal disruption to operations, and replacements are fast and simple. We provide unlimited remote support for the life of our client's contracts with us. In the limited instances where an on-site tech is needed, in addition to our staff installation team, we have a nationwide network of installers chosen for their knowledge, professionalism, and value-based pricing.

EQUIPMENT WARRANTY

1. All equipment is sold with a standard one-year manufacturer's warranty.
2. Equipment Warranty covers all equipment failure due to normal wear and tear or manufacturer's defect. Equipment warranty does not cover theft, damages sustained from an accident or vehicle malfunction, vandalism, or damage due to neglect by a driver, passenger, or other individuals.
3. Extended warranties may be purchased in 12 (twelve) month increments up to a maximum of 48 (forty-eight) additional months, for a total of 60 (sixty) months. Warranty fees must be received with initial order payment, or no later than 30 (thirty) days after initial equipment is delivered to the customer.

WARRANTY PRICING

Warranty Costs - Per Vehicle			Warranty Coverage Period (Months)				
Item		Manufacturer	12 Months	24 Months	36 Months	48 Months	60 Months
MDT		Passio	Included	$135.00	$225.00	$337.50	$487.50
APC		Hella	Included	$35.00	$89.78	$149.63	$209.48
VLU		CalAmp	Included	$25.00	$56.25	$131.25	$168.75
LED Sign		TranSign	Included	Included	Included	Included	Included
WiFi Modem/Router		Pepwave	Included	$50.00	$115.00	$315.00	$495.00
AVA Connect System		Ducking System	Included	$45.00	$60.00	$110.00	$135.00

1. SPARES - Passio recommends a minimum spare ratio of 5% for all equipment.
2. Warranty payment made at time of purchase, covers parts only, no labor included. Customer is responsible for shipping costs.
3. Component Loaner Program for extended warranty repair items.
4. Out of warranty equipment will either be repaired or replaced with the same or compatible upgraded model, whichever is more cost effective for the customer.

On Site Service Fees

1. On site service fee - $350 for up to 2 hours. Additional hours - $150.00 per hour. Rate is subject to change.
2. Additional trip charges, travel expenses, and mileage fees are site specific and may apply.

Service and Maintenance Plans

Passio does not typically provide service and maintenance plans, remote support will normally resolve the majority of issues. In some cases quarterly, semi-annual, or annual inspection plans may be valuable to the customer. The costs for these plans vary based on the number of vehicles, availability of vehicles for inspection, and the amount of equipment onboard vehicles. The costs for these plans are currently based on $1,200 per day plus trip charges and travel expenses.

NON WARRANTY REPAIRS:

- All costs for repair or replacement of units not covered by warranty will be billed at cost for equipment and time. Shipping fees are billed as incurred.
- On-site and/or internal service is billed hourly, current rate is $150.00 per hour, plus travel costs (if required). Rate is subject to change.

ON-SITE SERVICE AND REPAIR

The Passio solution is designed to be self-managed to a great extent. This reduces scheduling time delays and empowers our customers to resolve modest issues quickly, efficiently, and at lower costs to the agency, while enjoying full remote support. When situations arise that demand a 'hands-on' approach, company trained technicians can be dispatched to handle repair or replacement on an hourly or daily basis.

- All on-site service will incur additional charges, and be subject to minimums.
- Passio does not automatically provide on-site personnel post-installation but will coordinate and schedule on-site service requested by customers.
- Customers will be charged with applicable trip charges and hourly fees for on-site service. On-site service calls are typically charged a three (3) hour minimum but may be higher based on location.
- Passio will remotely support customers who use internal (customer) employees to conduct on-site repairs for no additional fees.

CUSTOMER SYSTEM MANAGEMENT

- The Customer understands and accepts that the technology solutions offered by Passio are dynamic and require designated on-site contact(s) to update software, confirm connectivity, and troubleshoot hardware and system issues.
- The Customer has the option to provide configuration updates such as routes, drivers, and stops to Passio for updates, typically within 2 (two) working days for standard updates. The Customer may, at their option, self-update configuration information.
- Passio will provide remote support for connectivity, configuration, and hardware troubleshooting. The Customer shall not rent, sell, assign, lease, or sublicense the Services. The Customer shall not use the Services in a service bureau, outsourcing, or another arrangement to process or administer data on behalf of any third party.
- Customer shall not knowingly access, store, or transmit via the Services any material that (i) is unlawful, harmful, threatening, defamatory, obscene, infringing, harassing or offensive; (ii) facilitates illegal activity; (iii) is discriminatory; or (iv) causes damage or injury to any person or property.
- Customer shall not violate or attempt to violate the security of Passio's networks, including (i) accessing data not intended for Customer; (ii) accessing a server or account that Customer is not authorized to access; (iii) attempting to scan or test the vulnerability of a system or network or to breach security or authentication measures; or (iv) attempting to interfere with the availability or functionality of the Services, including by means of submitting a virus, overloading, flooding, spamming, mail bombing or crashing.

Customer acknowledges and agrees...

- that the Services are an information tool only and is not a substitute for competent management and oversight of Customer's Vehicle Fleet, transportation system, and personnel;
- that the Services depend upon data being transmitted over the internet, Customer's network, GPS satellites, and third-party carrier networks, and that, Passio has no control over the functioning of the internet, Customer's network, GPS satellites, or the network of a carrier; and
- that Customer alone is responsible for acquiring and maintaining Customer's Vehicle Fleet, Customer's network, Customer's internet access, and the rest of Customer's physical and technological infrastructure.


PROJECT
COST
PASSIO
TECHNOLOGIES

Price Proposal Form – City of Sandy and Clackamas County MHX

All Prices Inclusive of Applicable Taxes and Duties

Proposer:

PLEASE INDICATE WITH AN * IF THE COST IS SUBSCRIPTION.

LS = Lump Sum; EA = Each

BASE EQUIPMENT, MATERIALS, AND SERVICES				
Item/Description	**Quantity**	**Unit**	**Unit Price**	**Total Price**
PART 1: PROJECT SERVICES				
Project Management, Schedule, Reporting	1	LS	INCL	INCL
Central System Design and Integration	1	LS	INCL	INCL
Onboard System Design and Integration	1	LS	INCL	INCL
Documentation Development/Finalization	–			
Design Documentation	1	LS	INCL	INCL
Testing Documentation	1	LS	INCL	INCL
Installation Documentation	1	LS	INCL	INCL
Training Documentation	1	LS	INCL	INCL
Software Service, Maintenance and Support Plan	1	LS	INCL	INCL
Maintenance and Operations Support Plan	1	LS	INCL	INCL
User Manuals	1	LS	INCL	INCL
As-Built Documentation	1	LS	INCL	INCL
All Other Documentation	1	LS	INCL	INCL
Marketing & Branding Materials	1	LS	INCL	INCL
			SUBTOTAL PROJECT SERVICES	$ 0

PART 2: CENTRAL SYSTEM				
Hosted Central System Software and Licensing for Fixed-Route/Deviated Fixed Route (Accounts for BOTH agencies)	1	LS	$ 4,095.00	$ 8,190.00
Desktop Display Application	1	LS	INCL	INCL
Central System Testing Environment	1	LS	INCL	INCL
Central Site Systems Installation & Commissioning	1	LS	INCL	INCL
Dispatcher CAD Console Hardware per Workstation	1	EA	INCL	INCL
			SUBTOTAL CENTRAL SYSTEM	$ 8,190.00

PART 3: ONBOARD EQUIPMENT (including equipment, accessories, cabling, installation, and related materials and services required for a complete and functional onboard system)				
Vehicle Logic Unit (VLU) and Associated Equipment, Materials, and Services	20	EA	$ 225.00	$ 4,500.00
Mobile Data Terminal (MDT) and Associated Equipment, Materials, and Services	20	EA	$ 695.50	$ 13,910.00
Automated Stop Announcement (ASA) and Associated Equipment, Materials, and Services	20	EA	$ 420.00	$ 8,400.00
Power over Ethernet network switch to connect all network ready devices to central bus network	20	EA	N/A Devices update real time while running	
Contractor-provided Voice Communication Devices and Associated Equipment, Materials, and Services including cellular Data Cards, Configuration, and Activation	20	EA	INCL	0
Required Software Licenses	1	LS	$ 744.85	$ 14,897.00
Equipment Installation	20	EA	$1,130.00	$ 22,600.00
Credit if applicable for current equipment (MDT, ASA, LED)	18	EA	N/A	0
SUBTOTAL ONBOARD EQUIPMENT				$ 64,307.00

PART 4: VOICE AND DATA COMMUNICATION				
Contractor-provided VoIP Central System Solution	1	LS	(Disregard Per Q & A)	
Central Site Equipment for VoIP Solution	1	LS	(Disregard Per Q & A)	
CAD/AVL System Integration	1	LS	(N/A All Pricing Above)	
VoIP Software & Licensing	1	LS	(Disregard Per Q & A)	
SUBTOTAL VOICE AND DATA RADIO COMMUNICATION				0

PART 5: TRAINING COURSES				
Dispatcher User Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Traveler Information/Customer Service Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
In-Vehicle Bus Operator Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Reporting and Data Warehouse Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Maintenance Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Administrative Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
			SUBTOTAL TRAINING	

PART 6: SPARE PARTS				
Vehicle Logic Unit (VLU) and Associated Equipment, Materials, and Services	2	LS	$ 225.00	$ 450.00
Mobile Data Terminal (MDT) and Associated Equipment, Materials, and Services	2	LS	$ 695.50	$ 1,391.00
			SUBTOTAL SPARE PARTS	$ 1,841.00

PART 7: REAL-TIME PASSENGER INFORMATION SYSTEM				
GTFS-Realtime Feeds and Associated Equipment, Materials, and Services	1	LS	INCL	INCL
Android and iOS App	1	LS	INCL	INCL
			SUBTOTAL REAL-TIME PASSENGER INFORMATION SYSTEM	0

Annual Recurring Software & Services Costs $ 16,160.00

Subtotal (Required Parts 1 through 7)

GRAND TOTAL $ 90,498.00

Starting in Year 2 through 3, Annual Recurring Software & Services = $16,160.00 per year.

OPTIONAL EQUIPMENT, MATERIALS, AND SERVICES				
Item/Description	Quantity	Unit	Unit Price	Extended Price
OPTION 1: DESTINATION SIGN INTEGRATION (including equipment, accessories, cabling, installation, and related materials and services required for complete and functional onboard electronic signs)				
Integration with External Electronic Destination Sign	14	EA	$ 999.35	$ 13,990.90
Hanover or similar External Electronic Destination Sign	14	EA	$ 5,000.00	$,70,000.00
Integration with Internal Electronic Destination Sign	14	EA	$ 999.35	$ 13,990.00
Internal Destination Sign	14	EA	$ 2,044.00	$ 28,616.00
TOTAL DESTINATION SIGN INTEGRATION				$126,596.00

OPTION 2: DEMAND RESPONSE				
Call/text Appointment Reminders	1	LS	1	$ 61,910.00
Customized branded Android and iOS App	1	LS	INCL	INCL
Real-Time Bus Arrival Map and Notification for Customers	1	LS	INCL	INCL
Customer Portal (web/phone) for Ride Scheduling	1	LS	INCL	INCL
(Annual Recurring Costs added to TOTAL $ 19,620.00)	TOTAL DEMAND RESPONSE			$ 81,530.00

OPTION 3: AUTOMATED PASSENGER COUNTERS (including equipment, accessories, cabling, installation, and related materials and services required for a complete and functional onboard system)				
Automated Passenger Scanning Equipment (per bus)	20	EA	$1,791.07	$ 35,821.40
Equipment Installation	1	LS	1	$ 16,000.00
Required Software	1	LS	1	$ 13,993.00
(Annual Recurring Costs added to TOTAL $ 11,088.00)	TOTAL DEMAND RESPONSE			$ 76,902.40

ADDITIONAL NOTES

Passio Technologies does not provide person-hour rates/totals for our solutions. Total costs for these services are embedded within each line item presented in Attachment A. Note that unlimited remote training is provided for all Passio solutions and on-site training is available as an option for additional costs.

Pricing is discounted as if all agencies will purchase all options and will still apply if only two agencies purchase, so no further discounts will be given as they are already applied.

Discount for 1 “optional add” program:
Discount for 2 “optional add” programs:
Discount for 3 “optional add” programs:
Discount for 4 “optional add” programs:

Price Proposal Form – Clackamas County Transportation Reaching People Price

All Prices Inclusive of Applicable Taxes and Duties

Proposer:

PLEASE INDICATE WITH AN * IF THE COST IS SUBSCRIPTION

LS = Lump Sum; EA = Each

BASE EQUIPMENT, MATERIALS, AND SERVICES				
Item/Description	**Quantity**	**Unit**	**Unit Price**	**Total Price**
PART 1: PROJECT SERVICES				
Project Management, Schedule, Reporting	1	LS	INCL	INCL
Central System Design and Integration	1	LS	INCL	INCL
Onboard System Design and Integration	1	LS	INCL	INCL
Documentation Development/Finalization				
Design Documentation	1	LS	INCL	INCL
Testing Documentation	1	LS	INCL	INCL
Installation Documentation	1	LS	INCL	INCL
Training Documentation	1	LS	INCL	INCL
Software Service, Maintenance and Support Plan	1	LS	INCL	INCL
Maintenance and Operations Support Plan	1	LS	INCL	INCL
User Manuals	1	LS	INCL	INCL
As-Built Documentation	1	LS	INCL	INCL
All Other Documentation	1	LS	INCL	INCl
Marketing & Branding Materials	1	LS	INCL	INCL
			SUBTOTAL PROJECT SERVICES	0

PART 2: CENTRAL SYSTEM				
Hosted Central System Software and Licensing for Fixed-Route/Deviated Fixed Route	1	LS	$ 4,095.00	$ 4,095.00
Desktop Display Application	1	LS	INCL	INCL
Central System Testing Environment	1	LS	INCL	INCL
Central Site Systems Installation & Commissioning	1	LS	INCL	INCL
Dispatcher CAD Console Hardware per Workstation	1	EA	INCL	INCL
			SUBTOTAL CENTRAL SYSTEM	$ 4,095.00

PART 3: ONBOARD EQUIPMENT (including equipment, accessories, cabling, installation, and related materials and services required for a complete and functional onboard system)				
Vehicle Logic Unit (VLU) and Associated Equipment, Materials, and Services	5	EA	$ 225.00	$ 1,125.00
Mobile Data Terminal (MDT) and Associated Equipment, Materials, and Services	5	EA	$ 695.50	$ 3,477.50
Automated Stop Announcement (ASA) and Associated Equipment, Materials, and Services	5	EA	$ 420.00	$ 2,100.00
Power over Ethernet network switch to connect all network ready devices to central bus network	5	EA	N/A Devices update real time while running	
Contractor-provided Voice Communication Devices and Associated Equipment, Materials, and Services including cellular Data Cards, Configuration, and Activation	5	EA	INCL	
Required Software Licenses	1	LS	$ 744.85	$ 744.85
Equipment Installation	5	EA	$1,130.00	$ 5,650.00
Credit if applicable for current equipment (MDT, ASA, LED)	N/A	EA	N/A	0
SUBTOTAL ONBOARD EQUIPMENT				$ 13,097.35

PART 4: VOICE AND DATA COMMUNICATION				
Contractor-provided VoIP Central System Solution	1	LS	(Disregard Per Q & A)	
Central Site Equipment for VoIP Solution	1	LS	(Disregard Per Q & A)	
CAD/AVL System Integration	1	LS	(N/A All Pricing Above)	
VoIP Software & Licensing	1	LS	(Disregard Per Q & A)	
SUBTOTAL VOICE AND DATA RADIO COMMUNICATION				0

PART 5: TRAINING COURSES				
Dispatcher User Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Traveler Information/Customer Service Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
In-Vehicle Bus Operator Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Reporting and Data Warehouse Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Maintenance Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Administrative Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
			SUBTOTAL TRAINING	0

PART 6: SPARE PARTS				
Vehicle Logic Unit (VLU) and Associated Equipment, Materials, and Services	2	LS	$ 225.00	$ 450.00
Mobile Data Terminal (MDT) and Associated Equipment, Materials, and Services	2	LS	$ 695.50	$ 1,391.00
			SUBTOTAL SPARE PARTS	$ 1,841.00

PART 7: REAL-TIME PASSENGER INFORMATION SYSTEM				
GTFS-Realtime Feeds and Associated Equipment, Materials, and Services	1	LS	INCL	INCL
Android and iOS App	1	LS	INCL	INCL
			SUBTOTAL REAL-TIME PASSENGER INFORMATION SYSTEM	0

Annual Recurring Software & Services Costs $ 4,040.00

Subtotal (Required Parts 1 through 7)

GRAND TOTAL $ 23,073.35

OPTIONAL EQUIPMENT, MATERIALS, AND SERVICES				
Item/Description	**Quantity**	**Unit**	**Unit Price**	**Extended Price**
OPTION 1: DESTINATION SIGN INTEGRATION (including equipment, accessories, cabling, installation, and related materials and services required for complete and functional onboard electronic signs)				
Integration with External Electronic Destination Sign	5	EA	$ 995.35	$ $4,976.75
Hanover or similar External Electronic Destination Sign	5	EA	$ 5,000.00	$ 25,000.00
Integration with Internal Electronic Destination Sign	5	EA	$ 995.35	$ 4,976.75
Internal Destination Sign	5	EA	$ 2,044.00	$ 10,220.00
			TOTAL DESTINATION SIGN INTEGRATION	$ 45,173.50

OPTION 2: DEMAND RESPONSE				
Call/text Appointment Reminders	1	LS	1	$ 37,455.00
Customized branded Android and iOS App	1	LS	INCL	INCL
Real-Time Bus Arrival Map and Notification for Customers	1	LS	INCL	INCL
Customer Portal (web/phone) for Ride Scheduling	1	LS	INCL	INCL
(Annual Recurring Costs added to TOTAL $ 10,770.00)			TOTAL DEMAND RESPONSE	$ 48,225.00

OPTION 3 : AUTOMATED PASSENGER COUNTERS (including equipment, accessories, cabling, installation, and related materials and services required for a complete and functional onboard system)				
Automated Passenger Scanning Equipment (per bus)	5	EA	$ 1,791.07	$ 8,955.35
Equipment Installation	1	LS	1	$ 4,000.00
Required Software	1	LS	1	$ 3,498.25
(Annual Recurring Costs added to TOTAL $ 2,772.00)			TOTAL DEMAND RESPONSE	$ 19,225.60

Price Proposal Form – Canby Area Transit

All Prices Inclusive of Applicable Taxes and Duties

Proposer:

PLEASE INDICATE WITH AN * IF THE COST IS SUBSCRIPTION

LS = Lump Sum; EA = Each

BASE EQUIPMENT, MATERIALS, AND SERVICES				
Item/Description	**Quantity**	**Unit**	**Unit Price**	**Total Price**
PART 1: PROJECT SERVICES				
Project Management, Schedule, Reporting	1	LS	INCL	INCL
Central System Design and Integration	1	LS	INCL	INCL
Onboard System Design and Integration	1	LS	INCL	INCL
Documentation Development/Finalization				
Design Documentation	1	LS	INCL	INCL
Testing Documentation	1	LS	INCL	INCL
Installation Documentation	1	LS	INCL	INCL
Training Documentation	1	LS	INCL	INCL
Software Service, Maintenance and Support Plan	1	LS	INCL	INCL
Maintenance and Operations Support Plan	1	LS	INCL	INCL
User Manuals	1	LS	INCL	INCL
As-Built Documentation	1	LS	INCL	INCL
All Other Documentation	1	LS	INCL	INCL
Marketing & Branding Materials	1	LS	INCL	INCL
			SUBTOTAL PROJECT SERVICES	0

PART 2: CENTRAL SYSTEM				
Hosted Central System Software and Licensing for Fixed-Route/Deviated Fixed Route	1	LS	$ 4,095.00	$ 4,095.00
Desktop Display Application	1	LS	INCL	INCL
Central System Testing Environment	1	LS	INCL	INCL
Central Site Systems Installation & Commissioning	1	LS	INCL	INCL
Dispatcher CAD Console Hardware per Workstation	1	EA	INCL	INCL
			SUBTOTAL CENTRAL SYSTEM	$ 4,095.00

PART 3: ONBOARD EQUIPMENT (including equipment, accessories, cabling, installation, and related materials and services required for a complete and functional onboard system)				
Vehicle Logic Unit (VLU) and Associated Equipment, Materials, and Services	18	EA	$ 225.00	$ 4,050.00
Mobile Data Terminal (MDT) and Associated Equipment, Materials, and Services	18	EA	$ 695.50	$ 12,519.00
Automated Stop Announcement (ASA) and Associated Equipment, Materials, and Services	18	EA	$ 420.00	$ 7,560.00
Power over Ethernet network switch to connect all network ready devices to central bus network	18	EA	N/A Devices update real time while running	
Contractor-provided Voice Communication Devices and Associated Equipment, Materials, and Services including cellular Data Cards, Configuration, and Activation	18	EA	INCL	
Required Software Licenses	1	LS	$ 744.85	$ 744.85
Equipment Installation	18	EA	$ 1,130.00	$ 20,340.00
Credit if applicable for current equipment (MDT, ASA, LED)	N/A	EA	N/A	0
SUBTOTAL ONBOARD EQUIPMENT				$ 45,213.85

PART 4: VOICE AND DATA COMMUNICATION				
Contractor-provided VoIP Central System Solution	1	LS	(Disregard Per Q & A)	
Central Site Equipment for VoIP Solution	1	LS	(Disregard Per Q & A)	
CAD/AVL System Integration	1	LS	(N/A All Pricing Above)	
VoIP Software & Licensing	1	LS	(Disregard Per Q & A)	
SUBTOTAL VOICE AND DATA RADIO COMMUNICATION				0

PART 5: TRAINING COURSES				
Dispatcher User Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Traveler Information/Customer Service Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
In-Vehicle Bus Operator Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Reporting and Data Warehouse Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Maintenance Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Administrative Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
			SUBTOTAL TRAINING	0

PART 6: SPARE PARTS				
Vehicle Logic Unit (VLU) and Associated Equipment, Materials, and Services	2	LS	$ 225.00	$ 450.00
Mobile Data Terminal (MDT) and Associated Equipment, Materials, and Services	2	LS	$ 695.50	$ 1,391.00
			SUBTOTAL SPARE PARTS	$ 1,841.00

PART 7: REAL-TIME PASSENGER INFORMATION SYSTEM				
GTFS-Realtime Feeds and Associated Equipment, Materials, and Services	1	LS	INCL	INCL
Android and iOS App	1	LS	INCL	INCL
			SUBTOTAL REAL-TIME PASSENGER INFORMATION SYSTEM	0

Annual Recurring Software & Services Costs	$ 14,544.00
Subtotal (Required Parts 1 through 7)	
GRAND TOTAL	$ 65,693.85

OPTIONAL EQUIPMENT, MATERIALS, AND SERVICES				
Item/Description	**Quantity**	**Unit**	**Unit Price**	**Extended Price**
OPTION 1: DESTINATION SIGN INTEGRATION (including equipment, accessories, cabling, installation, and related materials and services required for complete and functional onboard electronic signs)				
Integration with External Electronic Destination Sign	18	EA	$ 995.35	$ 17,916.30
Hanover or similar External Electronic Destination Sign	18	EA	$ 5,000.00	$ 90,000.00
Integration with Internal Electronic Destination Sign	18	EA	$995.35	$ 17,916.30
Internal Destination Sign	18	EA	$ 2,044.00	$ 36,792.00
			TOTAL DESTINATION SIGN INTEGRATION	$ 162,624.60
OPTION 2: DEMAND RESPONSE				
Call/text Appointment Reminders	1	LS	1	$ 46,490.00
Customized branded Android and iOS App	1	LS	INCL	INCL
Real-Time Bus Arrival Map and Notification for Customers	1	LS	INCL	INCL
Customer Portal (web/phone) for Ride Scheduling	1	LS	INCL	INCL
(Annual Recurring Costs added to TOTAL $ 15,060.00)			TOTAL DEMAND RESPONSE	$ 61,550.00
OPTION 3 : AUTOMATED PASSENGER COUNTERS (including equipment, accessories, cabling, installation, and related materials and services required for a complete and functional onboard system)				
Automated Passenger Scanning Equipment (per bus)	18	EA	$ 1,791.07	$ 32,239.26
Equipment Installation	1	LS	$ 14,400.00	$ 14,400.00
Required Software	1	LS	$ 12,593.70	$ 12,593.70
(Annual Recurring Costs added to TOTAL $ 9,979.20)			TOTAL DEMAND RESPONSE	$ 69,212.16

Price Proposal Form – South Clackamas Transit District

All Prices Inclusive of Applicable Taxes and Duties

Proposer:

PLEASE INDICATE WITH AN * IF THE COST IS SUBSCRIPTION

LS = Lump Sum; EA = Each

BASE EQUIPMENT, MATERIALS, AND SERVICES				
Item/Description	**Quantity**	**Unit**	**Unit Price**	**Total Price**
PART 1: PROJECT SERVICES				
Project Management, Schedule, Reporting	1	LS	INCL	INCL
Central System Design and Integration	1	LS	INCL	INCL
Onboard System Design and Integration	1	LS	INCL	INCL
Documentation Development/Finalization				
Design Documentation	1	LS	INCL	INCL
Testing Documentation	1	LS	INCL	INCL
Installation Documentation	1	LS	INCL	INCL
Training Documentation	1	LS	INCL	INCL
Software Service, Maintenance and Support Plan	1	LS	INCL	INCL
Maintenance and Operations Support Plan	1	LS	INCL	INLCL
User Manuals	1	LS	INCL	INCL
As-Built Documentation	1	LS	INCL	INCL
All Other Documentation	1	LS	INCL	INCL
Marketing & Branding Materials	1	LS	INCL	INCL
			SUBTOTAL PROJECT SERVICES	0

PART 2: CENTRAL SYSTEM				
Hosted Central System Software and Licensing for Fixed-Route/Deviated Fixed Route	1	LS	$ 4,095.00	$ 4,095.00
Desktop Display Application	1	LS	INCL	INCL
Central System Testing Environment	1	LS	INCL	INCL
Central Site Systems Installation & Commissioning	1	LS	INCL	INCL
Dispatcher CAD Console Hardware per Workstation	1	EA	INCL	INCL
			SUBTOTAL CENTRAL SYSTEM	$ 4,095.00

PART 3: ONBOARD EQUIPMENT (including equipment, accessories, cabling, installation, and related materials and services required for a complete and functional onboard system)				
Vehicle Logic Unit (VLU) and Associated Equipment, Materials, and Services	6	EA	$ 225.00	$1,350.00
Mobile Data Terminal (MDT) and Associated Equipment, Materials, and Services	6	EA	$ 695.50	$ 4,173.00
Automated Stop Announcement (ASA) and Associated Equipment, Materials, and Services	6	EA	$ 420.00	$ 2,520.00
Power over Ethernet network switch to connect all network ready devices to central bus network	6	EA	N/A Devices update real time while running	
Contractor-provided Voice Communication Devices and Associated Equipment, Materials, and Services including cellular Data Cards, Configuration, and Activation	6	EA	INCL	0
Required Software Licenses	1	LS	$ 744.85	$ 744.85
Equipment Installation	6	EA	$ 1,130.00	$ 6,780.00
Credit if applicable for current equipment (MDT, ASA, LED)	N/A	EA	N/A	0
SUBTOTAL ONBOARD EQUIPMENT				$ 14,367.85

PART 4: VOICE AND DATA COMMUNICATION				
Contractor-provided VoIP Central System Solution	1	LS	(Disregard Per Q & A)	
Central Site Equipment for VoIP Solution	1	LS	(Disregard Per Q & A)	
CAD/AVL System Integration	1	LS	(N/A All Pricing Above)	
VoIP Software & Licensing	1	LS	(Disregard Per Q & A)	
SUBTOTAL VOICE AND DATA RADIO COMMUNICATION				0

PART 5: TRAINING COURSES				
Dispatcher User Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Traveler Information/Customer Service Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
In-Vehicle Bus Operator Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Reporting and Data Warehouse Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Maintenance Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
Administrative Training and Associated Equipment, Materials, and Services	2	LS	(Unlimited remote online training included, Onsite training at additional costs.)	
			SUBTOTAL TRAINING	0

PART 6: SPARE PARTS				
Vehicle Logic Unit (VLU) and Associated Equipment, Materials, and Services	2	LS	$ 225.00	$ 450.00
Mobile Data Terminal (MDT) and Associated Equipment, Materials, and Services	2	LS	$ 695.50	$1,391.00
			SUBTOTAL SPARE PARTS	$ 1,841.00

PART 7: REAL-TIME PASSENGER INFORMATION SYSTEM				
GTFS-Realtime Feeds and Associated Equipment, Materials, and Services	1	LS	INCL	INCL
Android and iOS App	1	LS	INCL	INCL
			SUBTOTAL REAL-TIME PASSENGER INFORMATION SYSTEM	0

Annual Recurring Software & Services Costs $ 4,848.00

Subtotal (Required Parts 1 through 7)

GRAND TOTAL $ 25,151.85

OPTIONAL EQUIPMENT, MATERIALS, AND SERVICES				
Item/Description	Quantity	Unit	Unit Price	Extended Price
OPTION 1: DESTINATION SIGN INTEGRATION (including equipment, accessories, cabling, installation, and related materials and services required for complete and functional onboard electronic signs)				
Integration with External Electronic Destination Sign	6	EA	$ 995.35	$ 5,972.10
Hanover or similar External Electronic Destination Sign	6	EA	$ 5,000.00	$ 30,000.00
Integration with Internal Electronic Destination Sign	6	EA	$ 995.35	$ 5,972.10
Internal Destination Sign	6	EA	$ 2,044.00	$ 12,264.00
TOTAL DESTINATION SIGN INTEGRATION				$ 54,208.20

OPTION 2: DEMAND RESPONSE				
Call/text Appointment Reminders	1	LS	1	$ 38,150.00
Customized branded Android and iOS App	1	LS	INCL	INCL
Real-Time Bus Arrival Map and Notification for Customers	1	LS	INCL	INCL
Customer Portal (web/phone) for Ride Scheduling	1	LS	INCL	INCL
(Annual Recurring Costs added to TOTAL $ 11,100.00)	TOTAL DEMAND RESPONSE			$ 49,250.00

OPTION 3 : AUTOMATED PASSENGER COUNTERS (including equipment, accessories, cabling, installation, and related materials and services required for a complete and functional onboard system)				
Automated Passenger Scanning Equipment (per bus)	6	EA	$ 1,791.07	$ 10,746.42
Equipment Installation	1	LS	$ 4,800.00	$ 4,800.00
Required Software	1	LS	$ 4,197.90	$4,197.90
(Annual Recurring Costs added to TOTAL $ 3,326.40)	TOTAL DEMAND RESPONSE			$ 23,070.72


PROJECT
SCHEDULE
PASSIO
TECHNOLOGIES

Passio ITS Project & System Implementation Timeline

Automated Passenger Counter, Passenger Information Display System and Computer Aided Dispatch/Automatic Vehicle Location System

Listed below is a snapshot of our proposed schedule built in our project management software (Monday.com). Passio will share this dynamic schedule with selected SAM/MHX staff for real-time access and influence over tasks and milestones during the implementation process.

Initiation (Week 1 - Week 2)

Name	Status	Start	End	Target Date	Task Type
Notice to Proceed and PO Issued	Pending				Critical Path
Handoff from Sales to Project Implementation Team	Pending				Normal
Schedule Kickoff Call	Pending				Normal
		3/14/2022	3/23/2022		

Planning (Week 2 - Week 5)

Name	Status	Start	End	Target Date	Task Type
Conduct Kickoff Call	Pending				Milestone
Subitems **Name**					
1. Determine all key stakeholders, contact information, and roles					
2. Set Weekly update call schedule					
3. Scope discussion for project implementation					
4. Review project timeline					
5. Vehicle availability discussion					
6. Discuss any potential barriers to success					
Clarify Outstanding Issues	Pending				Normal
Passio to send customer configuration forms and instructions	Pending				Normal
Schedule Weekly or Bi-weekly Project Progress Meetings	Pending				Normal
Project Schedule: update and customize	Ongoing				Normal
Vehicle and Solution Specific Installation Discussions	Pending				Normal
SAM/MHX to Provide Account Updates and Information As Needed	SAM/MHX				Critical Path
Send Equipment List and Specifications to SAM/MHX	Pending				Normal
Create Wiring Diagrams for the project	Pending				Normal
Passio to send wiring diagrams to SAM/MHX	Pending				Normal
Design and Configuration Feedback provided by SAM/MHX	SAM/MHX				Normal
Design and Configuration	Pending				Milestone
Subitems **Name**					
Create Wiring Diagrams and system Design Doc					
Review System Design Doc with SAM/MHX					
SAM/MHX to Confirm Installation Plan Provided by Passio	SAM/MHX				Critical Path
		3/23/2022	4/8/2022		

Hardware Related Activities (Week 2 - Week 4)

Name	Status	Start	End	Target Date	Task Type
Complete a Review of Existing Hardware and Identify Any Rewire Items	N/A				Critical Path
Equipment Setup & configuration per scope	N/A				Normal
		3/23/2022	4/1/2022		

Execution (Week 5 - Week 8)

Name	Status	Start	End	Target Date	Task Type
Order Equipment and Schedule Anticipated Delivery Timeline	N/A				Critical Path
Generate Hardware Picklist	N/A				Normal
Passio Navigator Account Setup or Updates					Normal
Subitems **Name**					Normal
Create Navigator Account					Normal
Add in Solutions					Normal
Add Vehicles	N/A				Normal
Add Drivers					Normal
Add Stops					Normal
Create Routes					Normal
Create AVA/LED Audit Form					Normal

Determine Installation Window	N/A				Normal
Configure and Test Equipment	N/A				Normal
Schedule Installation	N/A				Normal
Ship Equipment	N/A				Critical Path
Add Installation to Passio Installer App & Calendar	N/A				Normal
Mini Fleet Pilot Test	N/A				Milestone
Create and Update Routes if Applicable	N/A				Normal
Activate Customer Access to Navigator	N/A				Normal
Conduct Route Review If Applicable	N/A				Normal
Configuration Per Vehicle					Normal
Subitems **Name**	N/A				Normal
3.8.1 Execution Phase Configuration, Verification, and Training					Normal
3.8.2 APC Configuration					Normal
Installation Confirmation by Vehicle	N/A				Normal
Installation Complete	N/A				Normal
Full Fleet Installation and Training	N/A				Milestone
Send Spare Parts per Contract (if applicable) and Confirm Receipt	N/A				Normal
		4/11/2022	5/4/2022		

Monitoring and Controlling (Week 8 - Week 10)

Name	Status	Start	End	Target Date	Task Type
Confirm All Account Settings/Solutions Are Accurate and On	N/A				Normal
Initial Passio Navigator Training	N/A				Normal
Initial Driver Training - Passio Transit App	N/A				Normal
Customer Installation Acknowledgement	N/A				Critical Path
Notify Accounting to Update the Account Solutions	N/A				Normal
Test APC Count Accuracy	N/A				Normal
Testing and Go-live Readiness Period	N/A				Milestone
Passio Proactive Focused Monitoring Period	N/A				Normal
Marketing, Communications, and Social Media Information Shared as Needed	N/A				Normal
Additional Training Scheduled As Needed					Normal
Subitems **Name**					Normal
4.8.1 Maintenance Training	N/A				Normal
4.8.2 Navigator Refresher Training					Normal
4.8.3 Train the Trainers - Passio Transit					Normal
		5/4/2022	5/20/2022		

Launch - Go Live and Phase 1 Acceptance (Week 9 - Week 11)

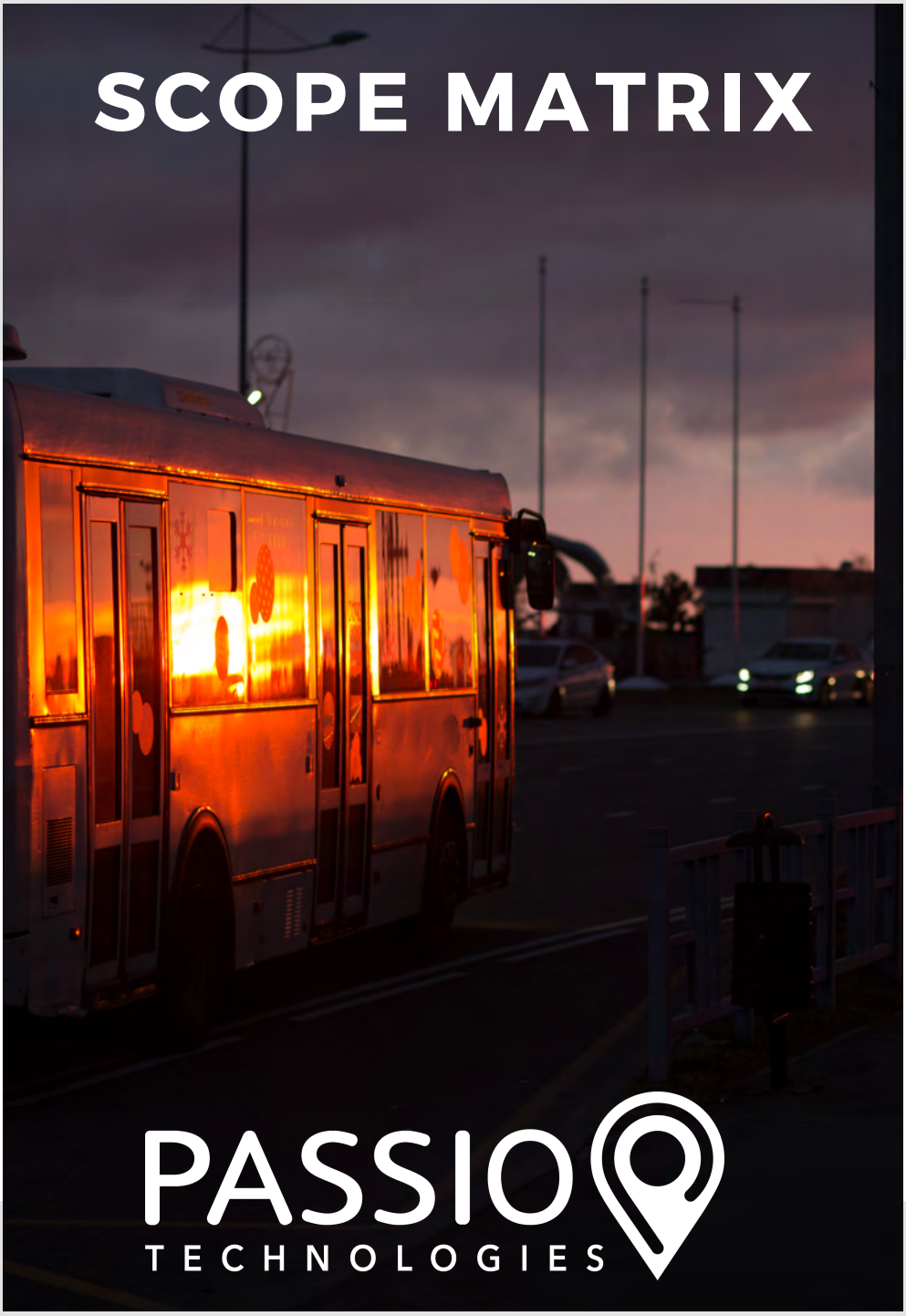
Name	Status	Start	End	Target Date	Task Type
Official Go Live Date	N/A				Milestone
Two Weeks Deep Monitoring	N/A				Normal
Reports Review	N/A				Normal
		5/9/2022	5/27/2022		

Closing (Week 11 - Week 12)

Name	Status	Start	End	Target Date	Task Type
Handoff from Implementation to Customer Success	N/A				Normal
Customer Success Team Interaction - Post Launch	N/A				Normal
Customer Configuration training - customer request	N/A				Normal
Delete test/training data at customer request	N/A				Normal
Lessons Learned Notes	N/A				Normal
		5/27/2022	6/1/2022		

These project tasks will be implemented by a Senior Project Manager, Systems Engineer, Customer Success Supervisor, Account Manager, and a Passio Installation Technician.

SUPPORTING INFORMATION



City of Sandy, Oregon | Sandy, OR			
OAR 137-047-0260 Intelligent Transportation System Project			
III. Scope of Work Matrix by Passio Technologies			
#	**Specification**	**Y/N/P**	**Comment**
III.1 Objective			
The Contractor will provide all of the following in an integrated, open-source application programming interface (API), cloud-based system:			
III.1.1	Automated Vehicle Locator (AVL) for operations staff to track on-time performance and provide reports.	**Y**	Our proposed Passio GO solution complies with this requirement. Passio GPS refresh rates for each vehicle are updated 1-5 seconds on-board and every 3 seconds on screen for dispatch information. Passio provides High Sensitivity GPS Location Accuracy of 7-16 feet (from our CalAmp Fleet Tracker) in good environmental conditions. Our solution includes on-time performance reports supported by our Passio Business Analytics Reporting solution. Agencies use Passio Navigator to measure multiple KPIs for each route in service for any requested time period. Passio Reporting is segmented in 5 groups: Business Intelligence, Ridership Metrics, Route Performance, GPS/AVL Activity, and our optional NTD Reporting Module.
III.1.2	Computer Aided Dispatch (CAD) for operations staff to effectively and efficiently dispatch fixed route systems and push information (manifests, maps, route changes, canned messages, etc.) to operators in real-time. Please specify if system has the capability to include the demand response systems, including creating customer profiles and scheduling demand response trips. The integration of the demand response systems is not required and is considered an optional add.	**Y**	Passio Navigator™ provides customers with full access to manually update routes, route blocks, schedules, time points, stop locations, geofences, announcements, and fleet information on a digital map. There is no waiting requirement for updates, edits, or deletions to your base system structure. Dispatchers can also create detour routes on the fly, deploy test routes, and pre-set new routes for immediate cut over. Route updates are available instantly and pushed over the air to each vehicle within the fleet. The Passio ITS framework is 100% web enabled to allow for real time remote service updates from dispatch. Furthermore, Passio Technologies integrates with several demand response/microtransit solutions, we are proud to join TripMaster (by CTS Software) as Transit Mobility Alliance Partners. Since we are all owned by the same parent company, we can easily include and scale products from CTS into our ITS framework. Passio has demand-response experts on staff due to our acquisition of ParaPlan Software in 2019.
III.1.3	AVL for customer/passenger tracking of vehicles on an application available on IOS and Android devices, as well as available on all standard desktop PCs (via publicly available URL, etc.).	**Y**	Passio GO smartphone applications are available, at no cost, on both the Apple App Store (iOS) and Google Play (Android). In addition to smartphone applications, an interactive mobile web view is available for use on personal computers, tablets, and is optimized for mobile viewing (responsive) on any mobile operating system/device. This web/browser view displays your fleet on a Google Map and can be embedded within your agency website.
III.1.4	Application for staff use for uploading current routing, blocking, stops, etc., and producing General Transit Feed Specifications real-time (GTFS-RT).	**Y**	This requirement is understood and supported by Passio Technologies. Complete GTFS static file imports and exports are supported. Passio can also provide a GTFS Realtime (GTFS-RT) feed to application developers. Passio supports all GTFS-RT feeds for Trip Updates, Service Alerts, and Vehicle Positions. Passio also provides a companion real-time transit application programming interface (API), documentation, and JSON output for customers. The Passio API includes real-time location data and the estimated time of arrival, as well as other system information such as real-time passenger load.
III.1.5	Application for importing and editing bus stop inventory data (location, Americans with Disabilities Act (ADA) access, type of amenities at stop, etc.).	**Y**	Passio Technologies supports all stop data provided from GTFS static file imports. Passio will work with each agency to recommend/determine the best options for data importing during the planning phase.
III.1.6	Automated stop annunciation for ADA and general customer information with application for importing announcements.	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution. Our ADA-compliant AVA system includes 5 English speaking voices and provides over 130 languages, including both English and Spanish. New stops are typically entered into Passio AVA by simply typing the text directly in Passio Navigator by selecting the route+stop combination (text-to-speech). Each agency will have access to add/update stops, routes, geofences, and announcements at any time. Our AVA system also supports .mp3 file uploads.

III.1.7	Customer arrival predictions/schedule adherence calculations.	**Y**	Customer-facing arrival predictions are supported by our Passio GO solution. The core of our proprietary "ETA Prediction Algorithm" is real-time AVL data, schedule accuracy, and historical ETA data. The analysis utilizes stop recognition, edge cases, arriving data, just arrived data, dwell recognition, associated empirical dwell data, fast departing recognition, route contour fingerprinting, and historical late/hurry time smart calculations. For dispatchers, Passio Navigator Live Map displays the color coded routes and vehicle bus icons. Conditional adherence formatting is available in Passio Navigator. This specification is supported by our real-time Passio Navigator 'Adherence' column located in the Dispatch Pane (table view). For drivers, our MDT interface within the Passio Transit app helps drivers keep up with their own schedule to see if they are behind, ahead, or perfectly on time. If the time clock is shown as white, then the driver is on time, blue means behind schedule, and yellow would mean ahead of schedule. Furthermore, using Passio OpsView, the leadership team and operators can work quickly to improve performance in real time.
III.1.8	An open API that allows approved third-party developers to receive a live data stream directly from Contractor at no additional cost for any use, including but not limited to creating mobile apps, connecting to electronic readers, etc.	**Y**	Passio provides real-time transit application programming interface (API), documentation, and JSON output for customers. The Passio API includes real-time location data and the estimated time of arrival, as well as other system information such as real-time passenger load as an option (for our EPC/APC customers). Passio is committed to keeping our programmable API fully documented for consumption and integration with any other system providing an API. We operate on an open integrator model that allows them to seamlessly connect with other third-party suppliers.
III.1.9	Ability to display live information on bus station electronic/digital signage or work with the City to share information to third parties.	**Y**	We offer Passio GO Kiosk Mode™ using LiveDisplay.TV™ is included for all Passio GO customers at no additional charge. These solutions can be immediately used with any existing internet ready display. Agencies have the option to configure and customize public views of their vehicle route activity at an unprecedented level on any smart display using a standard web browser in full screen mode. Passio also provides a GTFS Realtime (GTFS-RT) feed and our OpenAPI to application developers. Real-time location data, transit system information, ETAs, and current passenger load can be shared to third parties. As an option, Passio Technologies can provide wayside digital signage using our preferred partner, Message Point Media (http://mpmedia.tv/). Together with MPM, we can provide equipment, content management, and installation services.
III.1.10	Ability to track/count passenger boardings, using automated passenger counters or through driver interaction with MDT. Passenger counts will be available, at a minimum, by passenger type, route, stop location, time of day, day of week, and customizable by time period.	**Y**	This specification is met by our proposed Passio APC solution. Our APC solution is 100% cloud-based using minimal hardware. Hella sensor data is transmitted directly to our AWS database using the Pepwave router and M2M (Machine to Machine) data transmission. Passenger load (and % full) is reported in real-time and immediately uploaded via data connection to network servers for representation in Passio Navigator OpsView for viewing and reporting. The Hella Advanced People Sensor APS-B is designed to count boarding and alighting passengers with the highest accuracy available in the market, typically better than 98%. Every count will be stamped with the location, stop, vehicle, door, date, time and route information, which can be filtered in our reports.
III.1.11	The system will be cloud-based, open API, turnkey, and maintained by the Contractor. The proposal should include Contractor-provided training of City(s) and Operations Contractor staff on how to use the equipment, software, and all other related tools. Once staff are trained, all system failures are to be considered the responsibility of Contractor, with the exception of routine, correctible problems and/or improper log-in by operators. For clarity, the purpose of this requirement is to avoid situations where Contractor claims user error and the City does not understand how to fix a given problem, resulting in a loop of inaction and product malfunction. The Proposal must clearly demonstrate that the Contractor shall provide all labor, needed equipment, materials, and installation required for all vehicles.	**Y**	This requirement is understood and accepted. Our ITS management tool (Passio Navigator) is 100% web-based and supports all common browsers (Chrome, Edge, Safari, and Firefox). We harness real time Passenger & Dispatch Information Systems through GPS tracking using our Passio GO™ framework. This solution is directly coupled with our MDT, AVA, LED, and APC systems to form a modular and turnkey CAD/AVL platform. Your dispatchers, supervisors, administrators, and maintenance technicians will receive comprehensive training on all Passio hardware and software products. Your technicians will receive the following training: Wiring and installation overview, Hardware testing and management, Cleaning and general maintenance procedures, Alignment and calibration procedures, and Accessing on board data. We provide unlimited remote support once your system goes live. Passio will have dedicated resources available to work on “critical issues” during your contractual hours until resolved. We use Freshdesk, an online cloud-based customer service software, to manage helpdesk support. This interactive service allows customers to track when issues have been escalated and expected resolution timeframe. More detail can be found in our Implementation, Training, and Support descriptions within our proposal.

III.2Platform/Database			
III.2.1	The central system should be a web-based platform/database that will allow City staff to perform many functions. The web-based platform/database will have a customer platform and a City staff platform. The customer platform will allow customers to view buses traveling along routes in real-time with stop amenities and route schedules. The City staff platform, or central system, will allow City staff to perform many functions without Contractor support by managing vehicles, routes, and overall operations. The central system of the successful Contractor will provide the following:	**Y**	This requirement is understood and accepted. Passio uses secure internet-based database hosting with Amazon EC2, a trusted cloud-based computing platform. We use secure internet-based database hosting in Microsoft SQL Server on Amazon EC2. Both our public website (Passio GO) and our in-office workstation CAD/AVL tool (Passio Navigator) are 100% web-based and support all current and common browsers (Chrome, Edge, Safari, and Firefox). Passio Navigator is our management platform, designed for independent use by city staff without need for contractor support in day-to-day operations or updates. Passio GO is our customer-facing app and is publicly available and free to use on a smartphone app, web browser (PC, tablet, mobile phone), kiosk, or smart TV. Riders can easily access information on their bus location, direction, ETA, current passenger load, and even % full capacity. Riders can plan trips, get walking directions, set arrival times, and view system alerts.
III.2.2	Support use of City assigned user roles and passwords, including a logon, logoff feature that is password protected and shall allow a user to logon to a specific user access level. These access levels shall be configurable by City staff. User types that may be configured by the City include the following: • System administrator; • Dispatcher; • Read-only user; and • Supervisor.	**Y**	Passio Navigator™ controls access to system features for each individual user with multi-layered security features. There is no limit to the number of Navigator users. We use a permission-based user management system that can assign Read, Write, none permissions per user based on their role. Example roles include Dispatcher, Manager, Supervisor, and Administrator, but we can be very granular with page level access. New users are easily added with permission-based security along with bank-grade encryption, SSL-256, which restricts access to authorized personnel as well as secures the data while in transit.
III.2.3	The City shall have full capability to add, delete, or modify users, groups, or roles in any systems and shall have full administrative rights to do so. The system shall have the flexibility to support existing and future operations including changes in user roles, services, and fleet.	**Y**	This requirement is understood and supported by our user management system in Passio Navigator.
III.2.4	City shall have the ability to edit route lines, stop locations, vehicle announcements, end of line points, and other standard functions of a transit system.	**Y**	Passio Navigator™ provides customers with full access to manually update routes, route blocks, schedules, time points, stop locations, geofences, announcements, and fleet information on a digital map. There is no waiting requirement for updates, edits, or deletions to your base system structure. Dispatchers can also create detour routes on the fly, deploy test routes, and pre-set new routes for immediate cut over. Route updates are available instantly and pushed over the air to each vehicle within the fleet. The Passio ITS framework is 100% web enabled to allow for real time remote service updates from dispatch.
III.2.5	The system shall have the ability to import a database of stops from spreadsheets (CSV, Excel, Google Sheets), including multiple characteristics such as location, amenities at stop (shelters, benches, bike racks, cart corrals, etc.), and ADA accessibility. This database includes latitudes and longitudes for geo-locating stops and other significant facilities and amenities.	**Y**	Passio Technologies supports all system data provided from GTFS static file imports. Passio will work with each agency to recommend/determine the best options for data importing during the planning phase.
III.2.6	Ability for City staff to create geo-fences for speed, boundaries, bus stops, and announcements.	**Y**	All customers have access to add/update stops, routes, AVA geofences, and announcements at any time. Our automated AVA solution uses pre-configured GPS-based geofence trigger locations (at a stop or any digital geofence). Passio Navigator provides full control to create new announcements and changes to existing announcements at any time. Customers have the ability to create custom geofences. Furthermore, each bus stop radius can be set by dragging the geofence on the map or simply typing in the radius field. This feature allows the user to control entrance and exit triggers for each geofence to deliver pop up alerts for a variety of actions or activities including, idling, dwell time, off route deviations, speeding, or geofence activities.
III.2.7	Manage all fleet vehicles in real-time with built-in features, including live traffic updates to maintain on-time performance and make informed rerouting decisions.	**Y**	Our proposed Passio Navigator solution complies with this requirement. Passio provides your dispatchers with real-time bus tracking, traffic, arrival predictions, arrival times, and departure times for each stop. Passio Technologies uses Google Maps for public facing map displays and Mapbox (OSM) for internal map displays. Mapbox Traffic is a vector tileset that provides congestion information that is updated every 3-5 minutes for dispatch consumption. Our Live Map also allow dispatchers to save views and zooms levels including layers and the following map types/options: Streets, Traffic, Outdoors, Light, Dark, Satellite, Satellite Streets, Navigation Day, and Navigation Night.

III.2.8	The bus moving on a route (as is typical of Google or Apple maps), with routes, bus stop schedules, and other amenities available for customers to view via mobile app and desktop PC.	**Y**	Our proposed Passio GO™ solution complies with this requirement. GPS data is collected every second on the vehicle and GPS refresh rates are pushed every 3-5 seconds for dispatch and public consumption. Movement, change in heading/direction and speed is reported in real-time and immediately uploaded via data connection to network servers for representation on public views, website maps, and smartphone applications. Our bus motion display algorithm shows your buses 'driving' their routes. Passio GO is publicly available and free to use on a smartphone app, web browser (PC, tablet, mobile phone), kiosk, or smart TV.
III.2.9	Customer alert and announcement options for texting, email, mobile app, and City website.	**Y**	Our Passio GO mobile app has two levels of communication within the application, Alerts and Announcements. Alerts are designed for immediate notification and highlighted viewing (scrolling on top of app screen), whereas Announcements are displayed for general passenger information (indicated by a badge notification).
III.2.10	Web-based customer platform shall have the capability to be integrated into the City/SAM/MHX website.	**Y**	Passio GO's interactive mobile web view is available for use on personal computers, tablets, and is optimized for mobile viewing (responsive) on any mobile operating system/device. This web/browser view displays your fleet on a Google Map and can be embedded within your agency website.
III.2.11	Produce reports on system-wide, route, and stop boardings and alightings, segments where on-time performance is challenging, ridership by time of day, and other patterns relevant to the efficient operations of a transit system.	**Y**	This specification is supported by our Passio ITS and adherence reporting framework. System managers and operators are given real time schedule adherence data (arrival and departure) by Driver, Route, Route Block, and/or Stop and/or Stop group. Passio Reporting is segmented in 5 groups: Business Intelligence (Dashboard Reports, Analytics, QA Dashboard, All Reports, Admin Report); Ridership Metrics (Boardings & Alightings by Date/Time/Span, Vehicle, Driver, Route, Route group, Route Block, Stop, Stop Group, Passenger Type, and Rider Profile); Route Performance (On-time Performance (OTP), Route Transit, Headway, In/Out of Service, Schedule Adherence); GPS/AVL Activity (Incident Logs, Boundary & Speed, Vehicle Activity, Vehicle Idle, Stop Dwell, Trips, Vehicle Assignment); and our NTD Reporting Module. Passio also provides metrics on stop groups (inbound/outbound, north/south, etc.) which also help fulfill these requirements. More information regarding our reporting solution within Business Analytics is provided in our proposal.
III.2.12	Get data output in ASCII, or similar format, with compatibility to Microsoft Office Suite and Portable Data Format (PDF). Files should be compatible with Excel and such files should be fully legible when exported as Excel (columns and rows should appear very similar if not identical to a PDF export, etc.).	**Y**	Our proposed Passio Navigator Reporting solution complies with this requirement. The Passio Business Intelligence Platform data is available for export into common formats such as CSV (to XLS) and PDF.
III.2.13	Track and report operational data needed for the Federal Transit Administration (FTA) National Transit Data (NTD) reports (most current requirements), including tracking of passenger miles traveled, on time performance,	**Y**	Passio offers customized NTD reporting that will calculate and extract the metrics required for compliance. The Passio APC solution will provide all 'Actual' data (passenger miles and stop counts) required for NTD reporting. Your account manager will work with you to set up your personalized NTD sampling schedule and Passio will support your certification process. Our integrated Hella 3D APC has been granted NTD Certification Approval. Furthermore, our NTD Certification process and maintenance plan includes procedures to calibrate APCs every year after the initial benchmark year using a modified validation plan to ensure the upkeep of the agency's certification. More information can be found in our NTD Certification & Reporting section of our proposal.
III.2.14	User-friendly ad-hoc reporting tools to customize reports by varying criteria, available in multiple formats including CSV and PDF.	**Y**	Our proposed Passio Navigator Reporting solution complies with this requirement. Passio Navigator offers a unique dashboard view where the client can create a variety of ad-hoc reports (bar graph, line graph, summary table, heat map, pivot table, pie chart, etc.) for viewing, printing, sharing, and exporting. Reports include a graphical interface for display and presentation. All reports can be filtered by custom or pre-set time periods. Users can group reporting data for presentation by quarter, month, week, day or by time (hour or ¼ hour) and select operational detail levels such as routes, stops, trips, drivers, and buses. Route reporting is available at three levels (block, route name, combined route). The Passio Business Intelligence Platform data is available for export into common formats such as CSV (to XLS) and PDF.

III.2.15	The system should be programmable with blocking from the runcut so buses will move between routes without requiring City operations staff to adjust which buses are assigned to a given route, while accounting for layovers and interlining routes and service types (fixed-route and demand response).	**Y**	This specification is supported by our Passio Navigator SysOps solution. Passio SysOps is a powerful "job-centric" view of your bus operations. It allows dispatchers to see what Jobs need to be filled today and for days in the future. Dispatchers can then assign both vehicles and drivers to those jobs, gaining visibility into which vehicles or drivers are not available. Passio SysOps allows agencies to preassign both "drivers to vehicles" and "vehicles to routes" in advance and presents the data visually for the user. Dispatchers can quickly find and fill holes in service using our SysOps dashboard. Passio CAD supports interlining as well. The Passio team will work with associated agencies to finalize the requirements of this solution to recommend the best options and pricing during contract negotiation. Note that Passio integrates with Optibus, a leader in runcutting and driver scheduling solutions, which can be made available as an option.
III.2.16	Public mobile app (iOS and Android) that is user-friendly, determined by City staff, that allows customers to track buses, see schedules, and find bus stops. Will also be available via desktop PC.	**Y**	Passio GO is our customer-facing app and is publicly available and free to use on a smartphone app, web browser (PC, tablet, mobile phone), kiosk, or smart TV. Riders can easily access information on their bus location, direction, ETA, current passenger load, and even % full capacity. Riders can plan trips, get walking directions, set arrival times, and view system alerts.
III.2.17	The mobile app should allow customers to sign up for “next bus” alerts and show real time arrival of all buses on route.	**Y**	Passengers can use Passio GO to designate routes as favorites or store favorite stops to receive alerts/notifications when the bus is 'x' minutes away from any favorite stop.
Preferred Features:			
III.2.18	Customizable App that is branded with City logos, determined by City staff.	**Y**	Passio Technologies complies with this requirement. Passio GO displays the color coded routes and vehicle bus icons. Users have multiple colors and icons to choose from. Vehicle icons are displayed by color, then either by route, vehicle, or driver. All Passio Public Viewers can be customized and branded with agency colors and logos, as well as advertising and marketing information.
Optional addition to the list above:			
III.2.19	City of Sandy and Clackamas County requests Contractor to provide a full Demand Response CAD solution for the dial-a-ride services SAM rides and Transportation Reaching People (TRP) program. In addition to the above requirements, a Demand Response platform will also include:	**Y**	We are recommending TripMaster by CTS Software to meet the demand response requirements of the SAM rides and TRP programs. TripMaster gives multiple demand response scheduling tools to the Passio platform. CTS supports transit operations with user-friendly solutions. CTS Software offers automated scheduling, custom reporting, voice response, mobile solutions, automated vehicle locators, and a web-based portal. CTS software data is hosted in the Microsoft Azure Cloud will provide each agency with a minimum 99.9% uptime with multiple fail safes in play to ensure you have access when needed. Passio Technologies is proud to join CTS Software as a Transit Mobility Alliance Partner. Our collaboration is paramount to offering our clients the best options possible to fit their exact transit needs. Since Passio offers modular solutions, we are able to easily include solutions by CTS Software, which is owned and operated by the same parent company.
III.2.20	CAD to maintain multiple Demand Response programs, including operator scheduling, vehicle scheduling, retaining customer profiles, and creating customer reservations.	**Y**	This specification is supported by our CTS TripMaster solution. For detailed information on this solution, please visit our Demand Response section in this proposal.
III.2.21	Electronic manifests with real-time changes communicated to MDTs.	**Y**	This specification is supported by our CTS TripMaster solution. TripMaster, interfaced with ParaScope MDT software application, brings an immeasurable amount of value to any transportation department. While drivers are performing pickups and drop-offs throughout the day, the daily schedule screen is updating in real-time. With each status update TripMaster is capturing the arrival time, boarding time, drop-off time, and odometer readings automatically. This will eliminate the need for manual data entry to validate a driver's schedule and provide extreme accuracy for billing and reporting purposes. ParaScope’s turn-by-turn directions are provided through whatever default mapping being used on that specific device. Navigation provides multiple route options, ETA’s and real-time traffic. When the driver arrives at a destination, the navigation screen automatically closes, and client pickup or drop-off is displayed on the device for the driver to perform the job.

III.2.22	Automated ride scheduling, including by program, customer type, and zone.	**Y**	This specification is supported by our CTS TripMaster solution. TripMaster's Auto Scheduler automatically batches all bookings for a travel day. The system is based on actual street networks in the service area by x- and y- coordinates, parameters associated with network segments as established in the GIS system, physical barriers, speed parameters, time of day, and appropriate dwell times for the boarding and alighting of passengers. Each agency will create "Schedule Profiles" to be used when running the Auto Scheduler. These profiles define, among other factors: •How long a passenger can be on the vehicle •How early a passenger can be dropped off prior to their appointment •How long a passenger can wait for pickup after an appointment •How much time to designate for boarding preparation •Additional time windows to load passengers with special assistances or mobility methods. The Auto Scheduler allows the end user to schedule trips with filter options; for example, assigning first scheduling priority to wheelchair assignments or specific accounts. TripMaster will provide the end user with the ability to re-schedule trips in a particular way to optimize schedules differently. When selecting one of the options, the system will display comparable statistics to review the before and after picture.
III.2.23	The system shall accommodate all CAD users. Users shall be able to work in CAD without creating data conflicts with or overriding actions by other users.	**Y**	This specification is supported by our CTS TripMaster solution.
III.2.24	The computer software system for CAD and reporting for Clackamas County's Transportation Reaching People program shall be located at Clackamas County offices. The dispatcher workstation shall include a map showing each route, stop location, time point, real-time bus location, driver assignments, schedule adherence status and alerts. Also included is the display of the activation of an on-board panic alarm.	**Y**	This specification is supported by our CTS TripMaster solution. TripMaster's AVL system displays demand response vehicles in real-time and will soon be integrated to Passio Live Map. The system also provides many tools on the Daily Schedule screen for quick reference including; Vehicle location, Vehicle Speed, On or Behind Schedule, Current Load, Next Schedule Job time, and more.
Preferred Features Include:			
III.2.25	Call/text reminders to customers of upcoming trips.	**Y**	This specification is supported by our CTS TripMaster solution. The Interactive Voice Response module will notify the passenger of their upcoming trips via outbound notification. The outbound notification will verbally notify the passenger of the name of the responsible transportation provider, as well as the phone number to call if needed. The Interactive Voice Response module will notify the passenger when the driver is "on the way". This call out feature can be turned off or turned on for a particular passenger indefinitely or per reservation. For detailed information on this solution, please visit our Demand Response section in this proposal.
III.2.26	AVL application for Demand Response customers to view bus arrival in real-time.	**Y**	This specification is supported by our CTS TripMaster solution.
III.2.27	Web and/or phone based customer portal for creating and submitting applications and making and canceling reservations.	**Y**	This specification is supported by our CTS TripMaster solution.
III.2.28	These preferred features lists are not exhaustive. The greater the functionality of the system, the more favorable a Contractor's proposal will be assessed.	**Y**	This specification is supported by our CTS TripMaster solution.
III.3Vehicle Logic Unit (VLU)			
III.3.1	The VLU shall act as the central processor, data storage, and device manager for all onboard devices.	**Y**	This specification is supported by our Passio ITS (VLU + MDT) solution.
III.3.2	The VLU shall integrate as necessary all in-vehicle ITS functions and hardware, including the GPS receiver.	**Y**	This specification is supported by our Passio ITS solution.
III.3.3	The VLU shall allow the vehicle operator to logon by entering their operator identification and block information on the Mobile Data Terminal (MDT).	**Y**	Our interactive, touch screen MDT with Passio Transit software enables operators to securely login and select their route/block.
III.3.4	The VLU's GPS receiver shall be installed as a replaceable/upgradeable card. The VLU shall compute the vehicle position, speed, and direction based on multiple positioning systems and inputs, including the GPS receiver and a secondary position system consisting of an odometer interface or other dead-reckoning device.	**Y**	This specification is supported by our Passio ITS solution. Passio can provide secondary and even tertiary GPS positioning systems if required as an option. The Passio team will work with associated agencies to finalize the requirements of this solution to recommend the best options and pricing during contract negotiation.
III.3.5	The VLU shall compute and update onboard vehicle position information every two (2) seconds or less, and shall provide that position information to other onboard devices as needed.	**Y**	Passio GPS refresh rates for each vehicle are updated every (1) second on-board each vehicle and every 3 seconds for on-screen for dispatch information. Our data service is provided by Verizon and included with our proposed system for M2M (Machine to Machine) data transmission.

III.3.6	Location data shall be sufficiently precise to accurately and reliably identify the location of each vehicle on the street network. At a minimum, vehicle location shall be accurate to within ten feet (10') ninety-five percent (95%) of the time.	**Y**	This specification is supported by our Passio ITS solution. Passio GPS refresh rates for each vehicle are updated every second on-board the vehicle and every 3 seconds on-screen for dispatch and public consumption. Passio provides High Sensitivity GPS Location Accuracy of 7-16 feet (from our CalAmp LMU-2631) in good environmental conditions.
III.3.7	The VLU shall provide location reports to the central system as follows:		
III.3.7.1	Routine location reports shall be provided every thirty (30) seconds or less while the vehicle is in operation, regardless of whether it is logged-on or not.	**Y**	This specification is supported by our Passio ITS solution. Vehicle status icons change color according to 'in service', off-route , and off schedule vehicles. Out of service vehicles are also displayed in gray to make them quickly identifiable.
III.3.7.2	Event-based location reports shall be provided every time the vehicle departs from, or passes by, a stop or time-point so that real-time passenger information systems can be cleared after the vehicle has departed.	**Y**	The specification is met by our Passio Navigator solution. Unique geofence service alerts may be configured within Passio Navigator. This system provides pop-up alerts/incidents which include speed infraction, entering or exiting a geofence, timepoint, vehicle idling, dwell time, off route deviations, location, and 'vehicle out of contact'. Alerts are scheduled using the calendar function found in Passio Navigator. Passio Navigator includes the ability to deliver pop up alerts and/or incidents which are recorded for reporting and can be emailed and/or texted.
III.3.7.3	At transit centers and park and rides, position reports shall be provided when the vehicle enters and departs the transit center or park and ride.	**Y**	The specification is met by our Passio Navigator solution. Our system provides pop-up alerts/incidents when entering or exiting any geofence. Alerts are scheduled using the calendar function found in Passio Navigator.
III.3.8	The system shall indicate any vehicle that is not reporting its status and location within a configurable time period.	**Y**	Passio Navigator includes the ability to deliver pop up alerts for a variety of actions including equipment status, which is available through our device manager and IoT dashboard. Connected devices are continually monitored for an 'electronic heartbeat'. That status is available within Passio Navigator to visually represent when a vehicle is running and equipment is connected.
III.3.9	The VLU shall connect with available onboard circuits including front door open, rear door open, lift/ramp deployment, Bicycle rack, and “Stop Requested” light activation. The VLU shall record date, time, and location when the onboard circuit events occur.	**Y**	These specifications are supported by our Passio ITS solution. Passio will interface with and report on rack/lift/ramp sensor deployments if available.
III.3.10	The VLU shall periodically check for and download bulk data files containing service, operator assignment, and other information from the central computer system. Capacity shall be provided to allow for storage of at least two full bus service schedule changes of data.	**Y**	The Passio ITS framework exchanges and uploads data in real-time over the cellular network, WLAN and bulk upload is not required. We can provide bulk upload via API if required.
III.3.11	The VLU shall have sufficient non-volatile memory capacity to store at least thirty (30) days’ of data, assuming up to eighteen (18) revenue hours per day.	**Y**	These specifications are supported by our Passio ITS solution. Our proposed VLU can store nearly 20 years of GPS data.
Other optional VLU features include:			
III.3.12	The VLU interface with the City’s existing and future Luminator, Hanover, and Twin Vision electronic destination signs to automatically program the signs based on vehicle route and location.	**Y**	Our proposed Passio solution complies with this requirement using the destination sign controllers by Luminator, Hanover, and Twin Vision. This integration can be supported by Passio Technologies provided that each headsign has the most current updated firmware and version and must be J1708/J1939 compatible. We will work with each agency to recommend/determine the best options and integrations during the project planning phase.
III.3.13	The VLU shall allow the operator (using the MDT) or dispatcher (using the central software) to manually override the destination sign.	**Y**	This manual override feature will be supported by Passio Technologies. Our proposed Passio solution complies with this requirement using the destination sign on-board controller and an A/B switch. It can be used at any time to 'override' the Passio MDT.
III.3.14	The VLU interface with future onboard electronic signs or displays.	**Y**	Passio's AVA solution can include new interior, passenger facing LED signs (if desired) or integrate with existing LED/LCD signs. Passio Technologies can provide real-time announcement and other transit data for LED or LCD display screens on-board by integrating with strong industry suppliers like Message Point Media (http://mpmedia.tv/) who can provide such equipment, content management, other media, and installation services.
III.4 Mobile Data Terminal (MDT) Display			
III.4.1	In the event the MDTs are necessary for recording passenger demographics upon boarding, MDTs will be required. The display (a tablet or screen in view of the coach operator, aka mobile data terminal) should be an industry-proven, open-architecture technology that is easy to replace when damaged and made to withstand the rigors of fixed-route and demand response transit service vehicles including, but not limited to, minivans, cutaways, trolleys, and heavy duty buses up to 40’ coaches. All upgrades to technology, both hardware and software, should be part of the per-bus contract cost to avoid unforeseen costs in the future.	**Y**	At the heart of our CAD/AVL system is the Passio Transit MDT, an android-based, rugged, touch-screen driver interface. This single-connection, modular and swappable device natively connects to other onboard devices for the control and collection of data. Electronic Passenger Counting (EPC) using the Passio MDT also supports customizable preset passenger types such as wheelchair, senior, disabled, bike, etc. Operators simply press to count as riders board and exit the vehicle, if required. Multiple boardings and alightings are easily created by pressing the GRP button on the MDT. Passenger and fare types can also be entered from a list of customizable preset options. Our MDT features customized ABS material with IP64 rating and 360 degree protective components to cope with shock/vibration in complex industrial/transit environments. Passio hardware devices are typically wired to the ignition as well as the battery of the vehicle.

III.4.2	Please specify if current MDTs (Getac ZX70) in use on SAM and MHX can be utilized and if credit is applied for current equipment.	**N**	Passio is recommending new MDT hardware for SAM and MHX. It has been our experience that integrating older equipment can be problematic and not scalable. The Passio MDT is Android-based, but built specifically for Passio ITS on-board integrations (especially AVA) within a rugged transit environment. We have found that while most integrations can be accomplished, the integration lifespan is extremely limited. As exciting new Passio features are rolled out to our customers, agencies with older legacy hardware may not be capable of using them. The updating process with legacy equipment is difficult to keep updated with our new enhancements. If the agency truly needs a uniform, reliable, and sustainable ITS package, then installing the latest equipment will guarantee it. New hardware will significantly reduce unnecessary downtime as desired.
At a minimum, the display should show:			
III.4.3	Ability to use tablet for both fixed route and Demand Response services.	**Y**	Mixed use vehicles can use the Passio MDT for both fixed route operations and CTS TripMaster digital manifest. Vehicles dedicated to demand response transportation only can use any Android-based tablet for the CTS TripMaster digital manifest.
III.4.4	The MDT shall be designed to operate in a transit environment with appropriate durability to operate in extreme hot and cold temperatures and absorb shock from driving. The MDT shall be equipped with a touch-screen display that meets the following requirements:	**Y**	The Passio MDT is a transit grade 7" LED backlit multipoint capacitive touch-enabled all-in-one Android system. Our proposed MDT features customized ABS material with IP64 rating and 360 degree protective components to cope with shock/vibration in complex industrial/transit environments. Our proposed VLU has the following environmental specifications: Temperature -30° to +75° C (connected to primary power) and -40° to +100° C (storage), Humidity 95% RH @ 50° C non-condensing, Shock and Vibration U.S. Military Standards 202G, 810F, SAE J1455, ESD SAE J1113, and Weatherproof. Further component information is presented in our Hardware Section.
III.4.4.1	Able to be used by operators wearing gloves.	**Y**	This specification is supported by our Passio Transit MDT solution.
III.4.4.2	Readable by operators wearing polarized lenses.	**Y**	Our MDT is readable by operators wearing polarized lenses and offers low-glare setting for night operation. The unit has brightness and contrast controls for the operator.
III.4.4.3	Sufficient brightness to be readable in direct sunlight.	**Y**	Our MDT is readable by operators in direct sunlight and offers low-glare setting for night operation. The unit has brightness and contrast controls for the operator.
III.4.4.4	Dimmed or night mode operation that will automatically reset for daytime operation.	**Y**	Our MDT and associated Transit software offers a low-glare setting for night operation.
III.4.4.5	A minimum size of seven (7) inches as measured diagonally.	**Y**	The hardware supporting our CAD/AVL solution is our Mobile Data Terminal, a 7-inch custom designed Android tablet, is installed within arm's length of the driver, and our transit-grade Vehicle Logic Unit.
III.4.4.6	A minimum resolution of 640x480 pixels.	**Y**	The screen resolution on our Mobile Data Terminal is 800x480.
III.4.4.7	The MDT shall contain a speaker and tone generator to be used to provide audio alerts.	**Y**	This specification is supported by our Passio Transit MDT solution.
III.4.5	The MDT display shall include functionality, configured by the City, to display different font, size, icons, buttons, colors, and styles on the screen.	**P**	This specification is partially supported by our Passio Transit MDT software. Our driver interface has been refined and refactored since 2010 to meet the exact needs of fixed route operators. While certain styles such as colors and fonts are not configurable, many icons and buttons are. Our MDT interface is very intuitive and user friendly, meeting the needs of most all transit operators.
III.4.6	The MDT shall communicate with the VLU. The MDT should operate as independently from the VLU as feasible in order to support new MDT technologies that may arise in the future.	**Y**	Our proposed VLU and MDT combination work independently of each other.
III.4.7	The MDTs shall be configured to allow for a managed and controlled shutdown, allowing all active sessions and connections to be closed under control of the firmware during the shutdown process.	**Y**	This specification is supported by our Passio Transit MDT solution. Passio transit hardware devices are typically wired to the ignition as well as the battery of the vehicle. The device goes into a type of hibernation mode where draws very little power from the battery, allowing the in-vehicle system to utilize battery backup to properly shut down when bus battery switch is turned off.
III.4.8	The system shall support allowing vehicle operators to set MDT brightness and volume settings within pre-defined limits. All settings shall return to their default values when a new logon occurs.	**Y**	This specification is supported by our Passio Transit MDT solution.
III.4.9	While in service, the MDT shall be able to display the current system-wide transit time (synchronized to the central system), current block, run, route, trip, next three bus stops, schedule adherence status, text messages, detour information, and data communications system status. The placement and layout of information, touchscreen buttons, and the like shall be configurable.	**P**	This specification is partially supported by our Passio Transit MDT software. While certain styles such as colors and fonts are not configurable, many icons and buttons are. Our MDT displays the last stop, current stop, and next 3 stops. It can also show any upcoming flag stops from riders who requested a ride (as part of our optional Request & GO solution. Interface provides options for electronic passenger counting, group boardings/alightings, passenger load, device statuses, settings, messaging, incidents, and configurable passenger type touch selection menu. More detailed information on the Passio MDT is provided.

III.4.10	While in service, the MDT shall provide the operator with the ability to review the full trip information stop-by-stop and any paddle notes so they can familiarize themselves with their assignments.	**Y**	This specification is supported by our Passio Transit MDT solution. Drivers can scroll thru each stop and view schedules.
III.4.11	The MDT shall include capabilities to disable interactive functions while the vehicle is in motion.	**Y**	This specification is supported by the Passio Transit MDT solution. This option can be toggled on and off through administrative settings.
III.4.12	The MDT shall receive text messages from the central system, alerting the operator with an audible and visual signal when a new message has been received.	**Y**	This specification is met by our Passio Transit messaging interface. The interactive, touch screen MDT with Passio Transit software enables operators to send messages to supervisors and dispatch.
III.4.13	The MDT shall require the operator to send a yes/no response and acknowledgement to “response required” messages received from the central system.	**Y**	This specification is met by our Passio Transit messaging interface. Drivers and dispatch can exchange pre-defined phrases/messages, quick yes/no driver responses, and custom messages. For safety, messaging is only available when the vehicle is at rest.
III.4.14	The MDT shall store pre-defined messages that may be sent by the operator to the central system (Dispatch). All pre-defined messages sent to Dispatch shall include the date, time, and vehicle ID. The pre-defined messages shall be configurable by the system administrator from the central system.	**Y**	This specification is met by our Passio Transit messaging interface. Dispatch and Messaging for CAD/AVL is managed from a single live map screen located within Passio Navigator™. All communications are saved within the dispatch and messaging interface. More information about the Messaging interface is provided in our proposal.
III.4.15	The bus moving on a route (as is typical of Google or Apple maps) with turn directions.	**Y**	This specification is supported by our Passio Transit MDT solution.
III.4.16	Any detours. A detour will be either scheduled in advance (through the scheduling software or the dispatcher’s workstations) or defined in real-time, including the capability of showing last minute detours such as for a collision or emergency road repair.	**Y**	Passio Navigator™ provides dispatchers with full access to create detour routes on the fly, deploy test routes, construction deviations, and pre-set new routes for immediate cut over. Route updates are available instantly and pushed over the air to each vehicle within the fleet. These changes can be put into effect immediately or scheduled for implementation at a later date using Passio Versioning.
III.4.17	On-time performance (early, on-time, late).	**Y**	These specifications are all supported by our Passio Transit MDT solution. Our MDT interface within the Passio Transit app helps drivers keep up with their own schedule to see if they are behind, ahead, or perfectly on time. If the time is shown as white, the driver is on time, blue means behind schedule, and yellow would mean ahead of schedule. Furthermore, using Passio OPS View, the leadership team and operators can work quickly to improve performance in real time. A more detailed description of the Passio MDT interface is included.
III.4.18	The system should be programmable with blocking from the runcut so buses will move between routes without requiring City operations staff to adjust which buses are assigned to a given route, while accounting for layovers and interlining routes and service types (fixed-route and demand response).	**Y**	This specification is supported by our Passio Navigator SysOps solution. Passio SysOps is a powerful "job-centric" view of your bus operations. It allows dispatchers to see what Jobs need to be filled today and for days in the future. Dispatchers can then assign both vehicles and drivers to those jobs, gaining visibility into which vehicles or drivers are not available. Passio SysOps allows agencies to preassign both "drivers to vehicles" and "vehicles to routes" in advance and presents the data visually for the user. Dispatchers can quickly find and fill holes in service using our SysOps dashboard. Passio CAD supports interlining as well. The Passio team will work with associated agencies to finalize the requirements of this solution to recommend the best options and pricing during contract negotiation. Note that Passio integrates with Optibus, a leader in runcutting and driver scheduling solutions, which can be made available as an option.
III.4.19	The MDT shall allow the operator to select which route run, and/or block they are scheduled for.	**Y**	This specification is fully supported by our Passio Transit solution. Our interactive, touch screen MDT with Passio Transit software enables operators to securely login and select their route/block. This information is logged and tracked within Passio Navigator.
III.4.20	The MDT shall allow the operator to indicate that the vehicle is off duty (dead-heading).	**Y**	This specification is supported by our Passio Transit MDT solution. Our driver app provides an "In/Out of Service Status" toggle. This feature is also integrated with revenue hours for billing, route schedule validation, and NTD reporting. Drivers have the following options when going out of service: training, fueling, maintenance, charter, and others. Going back into service is easy, simply tap the service screen, and choose “Start Service”.
III.4.21	The MDT shall allow for a customizable electric passenger on/off counter (MDT) with passenger types and bicycle and mobility device counters configurable by the City.	**Y**	This specification is met by our proposed Passio Transit MDT solution. Electronic Passenger Counting (EPC) using the Passio MDT supports customizable preset passenger types such as wheelchair, senior, disabled, bike, etc. Operators simply press to count as riders board and exit the vehicle, if required. Multiple boardings and alightings are easily created by pressing the GRP button on the MDT. Passenger and fare types can also be entered from a list of customizable preset options. More information on this interface can be found in our Passio Transit MDT solution section.
III.4.22	The tablets/MDTs shall provide a customizable driver interface to allow log in for the bus runs(s).	**Y**	This specification is fully supported by our Passio Transit solution. Our interactive, touch screen MDT with Passio Transit software enables operators to securely login and select their route/block. This information is logged and tracked within Passio Navigator.

III.4.23	The MDT shall allow for reporting on schedule adherence, two-way messaging with the dispatcher, access to prerecorded announcements that can be activated as needed by the driver, and a maintenance interface to the on-board system.	**Y**	The Passio MDT solution allows drivers to activate prerecorded voice announcements as needed and displays color-coded schedule adherence indicators for the driver. Drivers can trigger preset special announcements from the MDT and repeat a stop location for ADA compliance. Announcements can include route, destination, next stop, driver names and other announcements. Passio Transit messaging interface facilitates two-way messaging with dispatch. Dispatchers using Passio Navigator can send/receive operator messages, access schedule adherence reports, and configure settings for operator-initiated prerecorded messaging. Interface provides options for electronic passenger counting, group boardings/alightings, passenger load, real-time on-board device status alerts, settings, messaging, incidents, and configurable passenger type touch selection menu.
III.4.24	The MDT shall allow for manual data input used for special demographic counts including passenger type such as youth, disabled, elderly, payment type (pass).	**Y**	This specification is met by our proposed Passio Transit MDT solution. Electronic Passenger Counting (EPC) using the Passio MDT supports customizable preset passenger types such as wheelchair, senior, disabled, bike, etc. Operators simply press to count as riders board and exit the vehicle, if required. Multiple boardings and alightings are easily created by pressing the GRP button on the MDT. Passenger and fare types can also be entered from a list of customizable preset options. More information on this interface can be found in our Passio Transit MDT solution section.
III.4.25	The MDT shall allow for driver input on service exceptions for unforeseen circumstances such as train delays, accidents, construction detours, equipment failure, etc.	**Y**	This specification is met by our proposed Passio Transit MDT solution. Drivers can input service exceptions using our flexible incidents interface for relay to dispatch. Dispatchers can also input service exceptions using Passio Navigator.
Additional Demand Response option:			
III.4.26	The MDT shall have a unique operator/manifest log-in.	**Y**	This specification is supported by our CTS TripMaster ParaScope MDT solution. For detailed information on this solution, please visit our Demand Response section in this proposal.
III.4.27	Live manifest of daily run that can be edited by dispatch in real-time with notification of changes and required operator response/confirmation of changes.	**Y**	This specification is supported by our CTS TripMaster ParaScope MDT solution.
III.4.28	The MDT will display hands-free turn-by-turn navigation from manifest or custom entry.	**Y**	This specification is supported by our CTS TripMaster ParaScope MDT solution.
III.5Installations			
III.5.1	All installation shall be professionally completed by qualified installers and final inspections will be conducted and approved by the City.	**Y**	The Passio ITS system will be installed by an expert Passio Installation Technician.
III.5.2	The system will not interfere with any operations of the vehicle and its current systems.	**Y**	This requirement is understood and accepted. On board cabling is done efficiently, using high quality materials and connectors designed to limit any interference with other vehicle systems.
III.5.3	All cables, wiring, switches, and circuits are designed for the heavy-duty operation of the buses.	**Y**	This requirement is understood and accepted.
III.5.4	Mounted hardware should be installed according to industry standards and recommended practices.	**Y**	This requirement is understood and accepted.
III.5.5	All cables, wiring, interconnections, switches, and circuit breakers/fuses will be heavy-duty and specifically designed for their purposes.	**Y**	This requirement is understood and accepted.
III.5.6	The selected wire sizes and insulation will be based on current carrying capability, voltage drop, and flexibility requirements.	**Y**	This requirement is understood and accepted.
III.5.7	All installation will be done with tamper proof fasteners whenever possible.	**Y**	This requirement is understood and accepted.
III.5.8	All equipment provided will be transferable to other transit buses as the need arises.	**Y**	Our VLU, MDT, and AVA hardware can be transferred to other vehicles easily. Our APC system is installed and hard wired to each individual vehicle. Passio can facilitate or conduct the uninstall and reinstall between vehicles if needed. There are no requirements that would stop the system from being transferred from one vehicle to another. Typically, the only new equipment required when transferring is the wiring and mounts.

III.5.9	Training for Fleet staff on installation practices for future onboard hardware installments.	**Y**	This requirement is understood and accepted. By choosing Passio as your transit technology provider, you will receive 24/7/365 access to all of your data, superior customer service, and the most innovative cloud-based technology on the market. Your users will receive comprehensive training on all Passio software products. We will provide training to all dispatchers, supervisors, administrators and maintenance technicians. Your technicians will receive the following training: Wiring and installation overview, Hardware testing and management, Cleaning and general maintenance procedures, Alignment and calibration procedures, and Accessing on board data. Passio provides searchable electronic media to provide documentation and training to our customers. You will be given access to our online knowledge base and multi-media training tool. This is a dynamic tool that is consistently updated as new features and functionality are added to the Passio platform.
III.5.10	Provide spare parts for all Contractor-provided equipment and related materials.	**Y**	Passio has included spares in our pricing.
III.6 On-Board Passenger Information			
III.6.1	Please specify if current equipment in use on SAM and MHX can be utilized and if credit is applied for current equipment.	**N**	Passio is recommending new MDTs for each fixed route vehicle. Our Passio MDT is Android-based and built specifically for Passio ITS on-board integrations within a rugged transit environment. Our customizations extend the device inputs and outputs to meet the requirements of comprehensive fixed route service, allowing for LED signs integrations, AVA, card readers, stop requests, door triggers, and other sensor data collection. The single 44 pin connector allows for a secure but straight forward connection when you need to switch out one MDT for another. If the agency truly needs a uniform, reliable, and sustainable ITS package, then installing the latest equipment will guarantee it. New hardware will significantly reduce unnecessary downtime as desired. Many 'off-the-shelf' Android tablets are not built for transit environments and while cheap, end up costing agencies more money and downtime.
The on-board passenger information will perform, at a minimum, the following functionalities:			
III.6.2	Audio announcements over an internal speaker system.	**Y**	Our on-board AVA systems are integrated with Passio Navigator and updated 100% over the air without any on board actions required. Announcements can include route, destination, next stop, driver names and other announcements. Our solution will trigger preloaded messages to display when a stop geofence is entered along a specific route. The Passio Transit AVA solution meets this requirement by using pre-configured GPS based geofence trigger stop locations. Passio AVA can also integrate with existing LED/LCD signs (where feasible).
III.6.3	Audio announcements over an external speaker system.	**Y**	This specification is met by our proposed Passio AVA solution. Announcements can be performed in the interior and/or the exterior of the vehicle.
III.6.4	Automated Stop Announcements (ASA) System for audio callouts.	**Y**	Operators can trigger preset special/custom announcements from the MDT and repeat a stop location for ADA compliance. Announcements can include route, destination, next stop, driver names and other announcements.
III.6.4.1	The ASA shall have the ability to play both human-recorded and text-to-speech audio files.	**Y**	Our proposed Passio Technologies AVA solution complies with this requirement. New stops are typically entered into Passio AVA by simply typing the text directly in Passio Navigator by selecting the route+stop combination (text-to-speech). Our AVA system includes other features such as: .mp3 file uploads, and the ability to sell announcement air time on your vehicles to local business around your routes, creating an additional revenue stream for your transit.
III.6.4.2	Ability for the City to customize and edit callout locations via geo-fencing or other options.	**Y**	This specification is met by our proposed Passio AVA solution which allows for automated stop announcements initiated by custom geofences, individually configurable per stop. Passio Navigator™ provides customers with full access to manually update routes, schedules, time points, stop locations, geofences, announcements, and fleet information on a digital map. There is no waiting requirement for updates, edits, or deletions to your base system structure. Navigator updates are available instantly and pushed over the air to each vehicle within the fleet. The Passio ITS framework is 100% web enabled to allow for real time remote service updates from dispatch.
III.6.5	The ASA shall include functionality to generate the following messages and provide the City the ability to prioritize the type of ASA messages being announced at any given time:		
III.6.5.1	Internal audible announcements (next stop, customer service, transfers, etc.);	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution.
III.6.5.2	Internal time-based (e.g., reoccurring scheduled message at a time interval) audible customer service announcements;	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution.
III.6.5.3	Internal operator initiated audible customer service announcements;	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution.

III.6.5.4	Location-based customer service announcements; and	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution.
III.6.5.5	External audible bus arrival announcements.	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution.
III.6.6	The external arrival announcements may be set to repeat in a loop while the door is open. If on a repeating loop, the repeat interval shall be set by City staff through configuration data.	**Y**	This requirement is understood and is met by our Passio AVA solution. Stop announcements may be triggered on door open and/or door close for additional accuracy. Each stop can repeat the specified announcement, and can even repeat the announcement in up to 3 different languages if desired.
III.6.7	The ASA system shall provide on-board announcements of upcoming stops through both audio and destination signs.	**Y**	This requirement is understood and is met by our Passio AVA and Passio Sign Integration solutions.
III.6.8	As part of the pre-trip inspection, functionality shall be provided to test the ASA system by playing an audio test message. The VLU shall record all ASA faults and errors and display fatal error conditions during pre-check tests on the MDT.	**Y**	Proposed as an option, this specification is supported by our Passio Inspector solution. Passio Inspector is our Electronic Driver Vehicle Inspection Reporting (E-DVIR) module and is available as an option within our Passio Manager App. This solution will provide digital pre-trip Inspection forms, post-trip inspection forms, and hot swap/mini inspections. Drivers can clearly communicate vehicle damage location using touch point graphics.
III.6.9	Audio messages shall begin playing within one (1) second of being triggered.	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution.
III.6.10	The ASA shall have sufficient memory to store both current and future announcement data for every City stop.	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution.
III.6.11	All ASA log files shall be uploaded to the central system as part of the normal data upload and download process.	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution. All activities are logged in our syslog server and daily backups are performed.
III.6.12	The ASA system shall include an Automatic Gain Control (AGC) circuit to automatically and independently adjust internal volume levels depending on vehicle speed or ambient noise level. Each audio announcement played using AGC shall be played at a consistent volume determined by sampling the AGC immediately prior to playing the announcement.	**P**	Our proposed Passio Technologies AVA solution partially complies with this requirement. You'll get exact pronunciation with the on-board voice synthesizer provides the highest level of sound quality and volume control. The system allows for phonetic spelling of any word to ensure correct pronunciation. Automatic volume adjustment based on speed and/or ambient noise level is currently in development.
III.6.13	Minimum and maximum volumes for internal announcements shall be configurable by the City. The vehicle operator will not be able to manually adjust the volume below or above these levels.	**Y**	This specification is supported by our Automated Voice Announcements (AVA) solution.
III.6.14	The minimum and maximum volumes for external announcements shall include parameter settings to automatically control volume based on: • Geographic region; and • Time of day. The system shall include a minimum of five (5) geographic region and time of day volume level settings for external announcements that can be configured by the City system administrator.	**P**	Our proposed Passio Technologies AVA solution partially complies with this requirement. Automatic volume adjustments based on geographic region and/or time of day are currently in development.
III.6.15	The onboard system shall allow the operator to make manual announcements over the internal and external PA system. Manual announcements will override the ASA until the manual announcement is complete.	**Y**	Our Passio Technologies AVA solution complies with this requirement. Announcements can be changed and updated remotely from your desk, with granular control at the route stop level. The Passio AVA solution also allows drivers to override announcements. PA system overrides such as muting announcements are reported as events and tracked within Passio Navigator. Each stop can repeat the specified announcement in up to 3 different languages.
III.6.16	The ASA system shall disable stop announcements when a vehicle is off-route.	**Y**	Our proposed Passio Technologies AVA solution complies with this requirement. Passio provides automatic off-route notifications based on preset buffers around the actual route path. Announcements are triggered by geofence and 'on-route status'. Announcements automatically stop when a vehicle is off route and will recommence when vehicle is back on route.
III.6.17	ASAs to meet the requirements of ADA to automatically announce recorded information about each stop, major intersection, key locations, transfer opportunities, and route destination in each fixed-route vehicle prior to arriving at that location. The system shall use a sequential list with geo-fencing to announce stops.	**Y**	This specification is supported by our Passio AVA solution. Our automated AVA solution uses pre-configured GPS-based geofence trigger entrance/exit locations (at a stop or any digital geofence). Agencies will have full control to make real-time geofence changes at any time or put those changes into service at any future date/time using Passio Versioning. More information on Passio AVA is provided in our Solutions Section.
III.6.18	The ASA system shall support both English and Spanish language messages.	**Y**	Our proposed Passio Technologies AVA solution complies with this requirement. Our ADA-compliant AVA system includes 5 English speaking voices and provides over 130 languages, including both English and Spanish. Each stop can repeat the specified announcement in up to 3 different languages.

III.6.19	The ASA system shall be supplied with audio amplifiers for the internal and external audio announcements and public address functionality. The Contractor shall assume new speakers, new microphones, and new wiring will be required.	**Y**	Our proposed Passio Technologies AVA solution complies with this requirement. Our AVA Audio Interrupt System has a microphone input for use with new or existing equipment.
III.6.20	A vehicle operator shall not be required to configure the ASA or initialize it in order for it to operate, nor shall the ASA system require any operator input to make any automated announcement. The block that the vehicle is logged into will dictate the automated announcements, and the position of the bus will initiate location-based announcements.	**Y**	Our Passio AVA system complies with this requirement. Our Passio MDT is a single-connection device that natively connects to (and logs into) all other onboard devices for the control and collection of data, including the AVA system. The Passio AVA announcements are triggered automatically using real-time GPS location and geofence triggers.
III.6.21	The ASA system should be able to perform without eliminating radio/music capabilities.	**Y**	Our proposed Passio Technologies AVA solution complies with this requirement. Our AVA Audio Interrupt System allows radio/music capability.
Other preferred features:			
III.6.22	Please specify if current equipment in use on SAM and MHX can be utilized and if credit is applied for current equipment.	**N**	Passio is recommending new MDTs for each fixed route vehicle. Our Passio MDT is Android-based and built specifically for Passio ITS on-board integrations within a rugged transit environment. Our customizations extend the device inputs and outputs to meet the requirements of comprehensive fixed route service, allowing for LED signs integrations, AVA, card readers, stop requests, door triggers, and other sensor data collection. New hardware will significantly reduce unnecessary downtime as desired. Many 'off-the-shelf' Android tablets are not built for transit environments and while cheap, end up costing agencies more money and downtime.
III.6.23	LED displays that are synchronized with ASA.	**Y**	Our proposed Passio Technologies AVA solution complies with this requirement. As an option, this ADA compliant package can include new interior, passenger facing LED signs equipped with SmartSense™ integrated GPS and messaging. The display signs are integrated with Passio Navigator and are updated 100% over the air without any on board actions required. Our SmartSense LED On-board signs are web enabled to allow for real time remote updates to display and change route, destination, next stop, driver names and announcements. Our solution will trigger preloaded messages to display when a stop geofence is entered along a specific route. The Passio Transit AVA solution meets this requirement by using pre-configured GPS based geofence trigger stop locations. Passio AVA can also integrate with existing LED signs (where feasible).
III.6.23.1	The information is pushed on-board to the passengers through visual and audio (Text to Speech based) information or to smart phones when customers use the AVL app.	**Y**	Our proposed Passio Technologies AVA/LED solution complies with this requirement. For Passio AVA users, new/updated stop announcements are entered by simply typing the text directly in Passio Navigator by selecting the route+stop combination (text-to-speech). This information can be announced over the speakers and/or on any interior or exterior sign. Audible and visual stop announcements are also coming soon to riders using our Passio GO app.
III.6.23.2	Passenger information should be automatically updated in real-time to inform travelers about detours on their route or stops that are not served anymore.	**Y**	Passio Technologies understands and accepts this requirement. Our on-board AVA systems are integrated with Passio Navigator and are updated 100% over the air without any on board actions required.
III.6.23.3	When the vehicle is located at a stop, the on-board sign should announce the name of the stop;	**Y**	This specification is supported by our Passio AVA/LED solution.
III.7 Reporting			
The system will allow the City to access a wide variety of standard and ad-hoc reports in a user-friendly and intuitive user interface, determined by the City, to easily access and utilize these reports. Reports shall include, but not be limited to the following:			
III.7.1	Contractor shall provide a data warehouse that serves as an aggregator for all information (data) generated by the system.	**Y**	Our proposed Passio ITS solution complies with this requirement. Passio uses secure internet-based database hosting with Amazon EC2, a trusted cloud-based computing platform. We use secure internet-based database hosting in Microsoft SQL Server on Amazon EC2. Passio Technologies has multiple monitoring systems in place to provide an uptime of 99.5%. More specifically, of the last 78,000 hours, we have had just 8 hours of downtime. We perform nightly backups of all databases using Amazon S3. We can move databases between servers to prevent downtime in the case of server failures. We can also direct nightly backups to any agency's in-house server if required. More information can be found in the Security section provided in our response.
III.7.2	Data storage provided as part of the warehouse shall be sufficient to store ten (10) years of data generated by systems provided under this contract.	**Y**	Our proposed Passio ITS solution complies with this requirement.

III.7.3	Data that is entered into the system shall be easily queried. Data shall be available for query for a minimum of three (3) years, without loading archived data.	**Y**	This requirement is understood and accepted. We maintain an active backup of the data (not including raw video data) and SaaS environment both locally and remotely. User config settings and record-level detail will be stored for a minimum of sixty (60) days. Passio will not share customer specific data and only use that data for the purposes of providing the contracted services and improving system performance as outlined in our terms of service. All activities are logged in our syslog server and daily backups are performed. Passio record-level detail is stored for a minimum of 36 (thirty-six) months and provides count information at the base level which allows for time and individual bus and driver reporting at the stop level. After 36 (thirty-six) months data will be summarized at the route, day, and passenger type level. This data will be available in the dynamic reporting system for a minimum of 5 (five) years. All data archived after 5 (five) years will be made available electronically prior to removal from the dynamic reporting system.
III.7.4	The City shall always maintain ownership and control of the data stored in the data warehouse. No confidential data (network, financial, employee, customer, etc.) shall be hosted on any third-party or vendor system without the express written permission of the City.	**Y**	This requirement is understood and accepted.
III.7.5	The system software suite shall include reporting capabilities to generate both standard reports based on pre-established criteria, as well as customized reports based on a user-definable set of search criteria.	**Y**	The Passio Business Analytics platform allows unlimited report creation with customizable dashboards for any relative time period. These dashboards can be used to directly compare datasets in line to aid schedule optimization. We provide several reports yielding crucial operational data regarding the services provided by your agency. Reports include a graphical interface for display and presentation. All reports can be filtered by custom or pre-set time periods. Users can group reporting data for presentation by quarter, month, week, day or by time (hour or ¼ hour) and select operational detail levels such as routes, stops, trips, drivers, and buses. Route reporting is available at three levels (block, route name, combined route). For more samples and information on reporting, please refer to our Passio Business Analytics section provided in our proposal.
III.7.6	The computer software system (for computer aided reporting but not dispatch at this time) station shall be located at the city of Sandy Operations Center. The dispatcher workstation shall include a map showing each route, stop location, time point, real-time bus location, driver assignments, schedule adherence status and alerts. Also included is the display of the activation of an on-board panic alarm.	**Y**	CAD/AVL operations are managed by dispatch from our OpsView Live Map dashboard and Dispatch Pane (table format) located within Passio Navigator™. With OpsView Live Map dispatchers can use OTP (conditional formatting) analytics and work quickly to improve performance in real time. Passio Navigator Live Map displays the color coded routes and vehicle bus icons. Users have multiple colors and icons to choose from. Vehicle icons are displayed by color, then either by route, vehicle, or driver. Data displayed to dispatch includes vehicle id, driver, current passenger load, route name, block, next stop, ETA, device name, speed, alarms, and last 'seen' data is displayed for dispatchers. Schedule adherence, movement, change in heading/direction and speed is reported in real-time.
III.7.7	At a minimum, the system shall provide the following reporting capabilities to City users as both a dashboard view and a report view: • On-time performance; • Detours and service corrections; • Service monitoring; • Missed trips, including: time of missed trip, in-service miles and hours lost, and the cause of the missed trip; • Daily Operations Summary Report; • Platform hours, including in-service hours, loading, and layover hours; • In-service hours, including revenue hours, loading, layover, and deadhead hours; • Trip-level messenger-miles traveled, schedule recovery time, and schedule deviation; and • Cumulative stop-to-stop and total trip-level mileage for revenue trips.	**Y**	Passio Navigator offers a unique dashboard view where the client can create a variety of reports (bar graph, line graph, summary table, heat map, pivot table, pie chart, etc.) Passio Reporting is segmented in 5 groups: Business Intelligence (Dashboard Reports, Analytics, QA Dashboard, All Reports, Admin Report); Ridership Metrics (Boardings & Alightings by Date/Time/Span, Vehicle, Driver, Route, Route group, Route Block, Stop, Stop Group, Passenger Type, and Rider Profile); Route Performance (On-time Performance (OTP), Route Transit, Headway, In/Out of Service, Schedule Adherence); GPS/AVL Activity (Incident Logs, Boundary & Speed, Vehicle Activity, Vehicle Idle, Stop Dwell, Trips, Vehicle Assignment); and our NTD Reporting Module. More information regarding our reporting solution within Business Analytics is provided in our proposal.
III.7.8	Reports shall be configurable and filterable based upon common criteria in the transit industry, including: • System wide service reports; • Temporal (time window, day, week, month, quarter, year, multiple years); • By service (route, run, block, stop); • By operator ID; • By vehicle ID; and • By operator name.	**Y**	All reports can be filtered by custom or pre-set time periods. Users can group reporting data for presentation by quarter, month, week, day or by time (hour or ¼ hour) and select operational detail levels such as routes, stops, trips, drivers, and buses. Route reporting is available at three levels (block, route name, combined route). For more samples and information on reporting, please refer to our Passio Business Analytics section provided in our proposal.

III.7.9	The system shall provide operator data (set by start/end dates) to summarize: • Operator assignments; • Vehicle assignments; • Block/route/route pattern and trip assignments; • Any incidents and incident types; and • On-time schedule performance.	**Y**	These specifications/reports are supported by our Passio Navigator Reporting solution.
III.7.10	The system shall provide individual vehicle data (set by start/end dates) to summarize: • Vehicle assignment; • Mechanical failures; • Block/run/route/route pattern/trip assignments; • Any incidents and incident types; and • Route group and block number within a time period or date range or both.	**Y**	These specifications/reports are supported by our Passio Navigator Reporting solution. The Passio team will work with associated agencies to finalize reporting requirements during the planning phase for each agency/project.
III.7.11	The system shall provide performance data that summarize on-time performance by: • The system shall provide performance data that summarize on-time performance by: • Block, route, branch, route pattern, and trip; • Operator; • Time of day, day of week, month of year, service or calendar day, and schedule type (e.g. weekday, Saturday, Sunday, holiday); and • Stop, transit center, or other specific locations, including time points not located at stops or transit centers.	**Y**	These specifications/reports are supported by our Passio Navigator Reporting solution. The Passio team will work with associated agencies to finalize reporting requirements during the planning phase for each agency/project.
III.7.12	The system security shall provide features to maintain data integrity, including error checking.	**Y**	Passio utilizes instance status monitoring, where we can quickly determine whether Amazon EC2 has detected any problems that might prevent your instances from running applications. Amazon EC2 performs automated checks on every running EC2 instance to identify hardware and software issues. More information on our security protocol is included in our proposal.
III.7.13	The system shall provide monthly and annual National Transit Database (NTD) reports in NTD report formatting or customized to City staff preference.	**Y**	Passio offers customized NTD reporting that will calculate and extract the metrics required for compliance. The Passio APC solution will provide all 'Actual' data (passenger miles and stop counts) required for NTD reporting. Your account manager will work with you to set up your personalized NTD sampling schedule and Passio will support your certification process. Our integrated Hella 3D APC has been granted NTD Certification Approval. Furthermore, our NTD Certification process and maintenance plan includes procedures to calibrate APCs every year after the initial benchmark year using a modified validation plan to ensure the upkeep of the agency's certification. More information can be found in our NTD Certification & Reporting section of our proposal.
III.7.14	Reports shall provide dwell times by route and by stop (i.e., to see where vehicles may be standing longer than normal).	**Y**	This specification is supported by our real-time Passio Navigator 'Adherence' column located in the Dispatch Pane (table view). Navigator includes the ability to deliver pop up alerts (and associated reports) for a variety of actions or activities including, idling, dwell time, off route deviations, speeding, or geofence activities.
III.7.15	Operators' reports include operator mileage achieved, mileage off route, mileage in detour, mileage achieved versus mileage scheduled, and on-time performance per operator.	**Y**	This report is supported by our Passio Business Analytics Reporting solution.
III.7.16	Arrival and departure time at stop and stop segments.	**Y**	This report is supported by our Passio Business Analytics Reporting solution.
III.7.17	Some key report capabilities are system and driver performance (including route and run compliance and schedule adherence), and a variety of ridership reports, such as boarding, alighting and total. These reports display schedule adherence both numerically, as a percentage and graphically. The system should report runs that are on-time, late, very late and early driver, bus, time of day, stop, run, route, day of the week for any period of time (day, week, month or any portion of these) as selected by the person generating the reports.	**Y**	Passio Navigator offers a unique dashboard view where the client can create a variety of reports (bar graph, line graph, summary table, heat map, pivot table, pie chart, etc.). Passio Reporting is segmented in 5 groups: Business Intelligence (Dashboard Reports, Analytics, QA Dashboard, All Reports, Admin Report); Ridership Metrics (Boardings & Alightings by Date/Time/Span, Vehicle, Driver, Route, Route group, Route Block, Stop, Stop Group, Passenger Type, and Rider Profile); Route Performance (On-time Performance (OTP), Route Transit, Headway, In/Out of Service, Schedule Adherence); GPS/AVL Activity (Incident Logs, Boundary & Speed, Vehicle Activity, Vehicle Idle, Stop Dwell, Trips, Vehicle Assignment); and our NTD Reporting Module. More information regarding our reporting solution within Business Analytics is provided in our proposal.

III.7.18	The ridership data shall also be reported by time period in similar ways to schedule adherence. A replay feature where a period of time in the past can be “replayed” to provide information that can be used to respond to customer or management inquiries, key reporting for the monthly and annual National Transit Database (NTD) reports including ridership data (total ridership, system miles, passenger trip miles, etc.).	**Y**	Our proposed Passio Navigator ‘Replay’ feature complies with this requirement. View breadcrumbs (historical locations and speeds) of each vehicle in your fleet. Date/time range options and multiple playback speeds are available. Use our interactive "Snapshot" tool to view any historical system view for any date and time span. With Snapshot users can see GPS timestamps showing vehicle locations, direction of travel, speeds, passenger load, block, and driver. Our NTD Reporting Module is included as well.
III.7.19	Included in the ridership data provided by the system shall be demographics, ADA lift/ramp activations by route, time and stop and any service exception entered by the driver.	**Y**	All ridership data is supported by our Passio Business Analytics Reporting solution. Our Ridership Metrics include Boardings & Alightings by Date/Time/Span, sensor, Vehicle, Driver, Route, Route group, Route Block, Stop, Stop Group, Passenger Type, and Rider Profile.
III.7.20	Generating the reports will be simple and information can be represented graphically if desired, for easy interpretation. Most of the reports shall be “canned” and accessed using pull-down menu selections.	**Y**	This requirement is understood and supported by our Passio Business Analytics Reporting solution. Reports are customizable but we also include several standard reports which can be set up on the client's dashboard for easy access. Within the dashboard view, the client can create a variety of reports (bar graph, line graph, summary table, heat map, pivot table, pie chart, etc.)
III.7.21	The reports can be available as raw, exportable data (comma, table, or space delimited formats); tables; and pie and bar charts.	**Y**	The specification is met by our Passio Business Analytics reporting solution.
III.7.22	All reports can be shown graphically on the workstation and can be saved as a file and/or printed out.	**Y**	Our proposed Passio Navigator Reporting solution complies with this requirement. Reports include a graphical interface for display and presentation. The Passio Business Intelligence Platform data is available for export into common formats such as CSV (to XLS) and PDF.
III.7.23	The system shall allow the City the ability to review, modify, and correct data within all reporting modules.	**Y**	This requirement is accepted and understood. The Passio system includes data normalization to address key outlying operational situations and the ability to adjust counts and other data accordingly. We will work with each agency to determine the best options for editing during the project planning phase.
III.7.24	Please specify if pre-programmed reports can be configured for automated delivery to specified email addresses on a pre-determined time basis.	**Y**	Automated report scheduling and email distribution is also provided through our integrated Rules Engine.
III.8 Support			
III.8.1	Any changes to the Staffing Plan provided to the City by Proposer prior to this Contract shall be reviewed by the City, and any changes made during implementation must be approved by the City.	**Y**	This requirement is understood and accepted.
III.8.2	The Project Manager shall meet regularly with City staff throughout the duration of this Contract. Meetings will be more frequent during the hardware installation and training period. After the initial installation, meetings will occur regularly on an agreed upon interval by the City and Contractor. Meetings shall happen in-person, by teleconference, or by videoconference.	**Y**	This requirement is understood and accepted.
III.9 System Failure Response Times			
III.9.1	Contractor shall provide 24/7 support when needed in case of severe emergencies. Contractor shall respond to issues in a timely fashion. Contractor is deemed to have responded when it has replied to the City’s initial request. This may be in the form of an email, help desk ticket, or a telephone call, to either provide a solution or request further information.	**Y**	This requirement is understood and accepted. More information on our Support and Maintenance plans are included in our proposal.
III.9.2	Guaranteed response times depend on the severity of the issue and apply during the City’s working hours only.	**Y**	This requirement is understood and accepted.
III.9.3	Guaranteed response times are shown in Table 1.	**Y**	This requirement is understood and accepted.
III.9.4	The severity levels shown in Table 1 are defined below and refer to all mode types.	**Y**	This requirement is understood and accepted.
III.9.5	Fatal: Complete degradation — all users and critical functions affected. Item or service completely unavailable, including but not limited to: • The central system is unreachable by City users. • The central system is accessible, but there is no telematics data being presented to the user.	**Y**	This requirement is understood and accepted.
III.9.6	Severe: Significant degradation — large percentage of users or critical functions affected, including but not limited to: • Public website and/or mobile/native app is unreachable or does not render the map and/or routes.	**Y**	This requirement is understood and accepted.

III.9.7	Medium: Limited degradation — limited number of users or non-critical functions affected. Business processes can continue. These may include but are not limited to the following: • Non-functioning Vehicle Logic Unit (VLU); • Non-functioning Mobile Data Terminal (MDT); and • Non-functioning MDT software module.	**Y**	This requirement is understood and accepted.
III.9.8	Minor: Small degradation —one user affected. Business processes can continue. Any software defect that does not drastically impact critical business functions. Contact/after hour.	**Y**	This requirement is understood and accepted.
III.10 Training and Manuals			
Contractor shall be responsible to train City staff designated personnel according to the requirements specified herein.			
III.10.1	Training shall take place at a City designated facility.	**Y**	This requirement is understood and accepted.
III.10.2	Practical training on equipment shall occupy a significant portion of all training classes.	**Y**	This requirement is understood and accepted.
III.10.3	Instruction shall cover equipment familiarization and systems operation. The minimum training is that which is necessary to bring those employees designated to the level of proficiency required for performing their respective duties.	**Y**	This requirement is understood and accepted. On-site training is optional and performed by expert Passio implementation staff. Your users will receive comprehensive training on all Passio hardware and software products. We will provide training to all dispatchers, supervisors, administrators and maintenance technicians. Your technicians will receive the following training: Wiring and installation overview, Hardware testing and management, Cleaning and general maintenance procedures, Alignment and calibration procedures, and Accessing on board data. More detail can be found in our proposed Project Schedule and Training descriptions within our proposal.
III.10.4	Contractor shall provide experienced and qualified instructors to conduct all training sessions.	**Y**	This requirement is understood and accepted. All project tasks will be implemented by a Senior Project Manager from Passio Technologies. This attention begins with our onboarding process throughout the life of the contract. When onboarding an ITS customer, Passio has a proven methodology in place to transfer project information and goals from sales to our customer success team. We use 2 project management tools (Insightly.com & Monday.com) to help facilitate this. On-site training is performed by expert Passio implementation staff. Your users will receive comprehensive training on all Passio hardware and software products.
III.10.5	Contractor is responsible for ensuring that the instructors teaching these courses are not only familiar with technical information but are able to use proper methods of instruction, training aids, audiovisuals and other materials to provide for effective training.	**Y**	This requirement is understood and accepted.
III.10.6	Contractor is responsible for providing all training materials, training aids, audiovisual equipment, and visual aids for the conduct of these courses.	**Y**	All customers are provided access to Passio's training documents, FAQs, knowledge base articles, PowerPoint presentations, and training videos for their appropriate solutions. Passio hosts webinars to provide documentation and training to our customers. Passio also provides searchable electronic media to provide documentation and training to our customers through Passio University. You will be given access to our online knowledge base and multi-media training tool. This is a dynamic tool that is consistently updated as new features and functionality are added to the Passio platform. More detail can be found in our Training section within our proposal.
III.10.7	Training documentation consisting of applicable equipment operation and maintenance manuals, and supplemental notebooks, consisting of additional drawings, procedures, and descriptive information, shall be provided.	**Y**	This requirement is understood and accepted.
III.10.8	Student guides shall include full topic descriptions, illustrations as needed to enhance content presentation, and common problems with comprehensive solutions given.	**Y**	This requirement is understood and accepted. Student guides will be provided from our comprehensive training suite within Passio University.
III.10.9	All training materials are to become the property of the City at the conclusion of training.	**Y**	This requirement is understood and accepted.
III.10.10	At the request of the City, Contractor shall provide additional training sessions, at the contract price per session, at any time during the duration of this Contract.	**Y**	This requirement is understood and accepted.
III.10.11	Contractor shall submit the Training Curricula, presentations, and materials for review and approval by the City. No training shall commence until these items have been approved by the City.	**Y**	This requirement is understood and accepted. More detail can be found in our Training section within our proposal.
III.10.12	Training curricula shall meet all training requirements and indicate course content, training time requirements, and who should attend.	**Y**	This requirement is understood and accepted. More detail can be found in our Training section within our proposal.
III.10.13	At a minimum, training should be provided in the following areas:		

III.10.13.1	Computer Aided Dispatch Training for Dispatchers/Operations Supervisors;	**Y**	This requirement is understood and accepted.
III.10.13.2	Maintenance Training;	**Y**	This requirement is understood and accepted.
III.10.13.3	Traveler Information/Customer Service Training;	**Y**	This requirement is understood and accepted.
III.10.13.4	In-Vehicle Training for bus operators;	**Y**	This requirement is understood and accepted.
III.10.13.5	Train-the-Trainer training for Operations Supervisors in In-Vehicle Training; and	**Y**	This requirement is understood and accepted.
III.10.13.6	System Administration Training; Reporting and Data Warehouse Training.	**Y**	This requirement is understood and accepted.
III.10.14	Training manuals shall be provided for each training participant at the initiation of each training session. An electronic version of each training manual shall be provided at each training.	**Y**	This requirement is understood and accepted.
III.10.15	Contractor shall provide two Equipment Manuals for each type of unit provided, unless specified otherwise. The manuals shall provide sufficient detailed installation and maintenance instructions to allow the City to properly and safely install, connect, and commission the equipment supplied and to operate and maintain the system.	**Y**	This requirement is understood and accepted.
III.10.16	Contractor shall deliver five (5) complete physical Operating and Maintenance (O&M) manuals in addition to an electronic PDF version to each of the final selected projects. The O&M manuals shall be a detailed presentation and shall include illustrations where applicable. For each unit, it shall include, but shall not be limited to:	**Y**	This requirement is understood and accepted.
III.10.16.1	General description;	**Y**	This requirement is understood and accepted.
III.10.16.2	Functional description;	**Y**	This requirement is understood and accepted.
III.10.16.3	Functional block diagram;	**Y**	This requirement is understood and accepted.
III.10.16.4	Operating instructions;	**Y**	This requirement is understood and accepted.
III.10.16.5	Maintenance and repair procedures;	**Y**	This requirement is understood and accepted.
III.10.16.6	Test procedures;	**Y**	This requirement is understood and accepted. Details of our Functional, Performance, Compatibility, and Performance testing programs are outlined in our Quality Assurance section of this proposal. Passio will also follow our User Acceptance Testing Protocol to mirror Confidence Testing.
III.10.16.7	Schematic drawings and circuit diagrams; and	**Y**	This section is understood and accepted. Detailed schematics will be provided based on the Passio solutions selected by each agency.
III.10.16.8	Parts list.	**Y**	This requirement is understood and accepted.
III.10.17	Each type of maintenance manual shall contain but not be limited to:		
III.10.17.1	Description of operation, including start-up, shut-down, and emergency procedures;	**Y**	This requirement is understood and accepted. Passio will also follow our User Acceptance Testing Protocol to mirror Confidence Testing.
III.10.17.2	Installation procedures;	**Y**	This requirement is understood and accepted.
III.10.17.3	Complete parts identification diagram and list;	**Y**	This requirement is understood and accepted.
III.10.17.4	Troubleshooting procedures;	**Y**	This requirement is understood and accepted.
III.10.17.5	Inspection procedures;	**Y**	This requirement is understood and accepted.
III.10.17.6	Preventative maintenance procedures and program;	**Y**	This requirement is understood and accepted. Your technicians will receive the following training: Wiring and installation overview, Hardware testing and management, Cleaning and general maintenance procedures, Alignment and calibration procedures, and Accessing on board data. More detail can be found in our proposed Maintenance and Training descriptions within our proposal.
III.10.17.7	Repair procedures;	**Y**	This requirement is understood and accepted.
III.10.17.8	Diagnostic procedures including criteria for equipment swap-out;	**Y**	Passio Technologies understands and accepts this requirement. More information can be found in our Warranty & Maintenance section within this proposal.
III.10.17.9	Wiring diagrams;	**Y**	This section is understood and accepted. Detailed wiring diagrams will be provided based on the Passio solutions selected by each agency.
III.10.17.10	Electrical schematics with board and cable identification;	**Y**	This section is understood and accepted. Detailed schematics will be provided based on the Passio solutions selected by each agency.
III.10.17.11	Adjustment procedures;	**Y**	This requirement is understood and accepted.
III.10.17.12	Equipment arrangement and drawings;	**Y**	This requirement is understood and accepted.
III.10.17.13	Names and schedules of all lubricants and cleaners used; and	**Y**	This requirement is understood and accepted.
III.10.17.14	Other consumable materials for the equipment, stating where used, quantity, service intervals, and annual consumption.	**Y**	This requirement is understood and accepted.

III.10.18	A Software User Manual shall be provided for each software application in addition to the electronic version in PDF. The user manual shall include screen captures and easy to follow instructions to assist the user through all of the tasks that they may need to complete. Fault procedures shall be described, as well as procedures for dealing with problems.	**Y**	This requirement is understood and accepted. User manuals will be provided from our comprehensive training suite within Passio University.
III.11 Marketing and Branding			
III.13.1	The City will request that Contractor assist in marketing collateral by providing materials, electronic or otherwise, related to the public's use of the ITS, such as the mobile app, and alert notifications. Contractor will work with the City, or a consultant of the City's choosing, to provide necessary materials for marketing and outreach.	**Y**	This requirement is understood and accepted. Another value Passio brings is our custom Agency Marketing Guide at no extra cost, which includes step-by-step guidelines to inform, engage, and excite your riders. In order to help you get the word out about your new rider tools and ensure a successful launch, we've put together a comprehensive marketing plan. Our services and collateral offered include App Handout Cards, Flyers, and targeted Social Media Ads. We will work with your agency to craft a comprehensive launch of new services. This plan is modular, just like our transit solutions. Feel free to pick and choose what works best for your transit operation.
Marketing materials shall include:			
III.13.2	Posters or poster designs;	**Y**	This requirement is understood and accepted.
III.13.3	Channel cards;	**Y**	This requirement is understood and accepted.
III.13.4	Content for press release and news articles; and	**Y**	This requirement is understood and accepted.
III.13.5	Promotional products.	**Y**	This requirement is understood and accepted.
III.13.6	Reports tracking number of hits or new hits.	**Y**	This requirement is understood and accepted.
III.13.7	Preferred features:	**Y**	This requirement is understood and accepted.
III.13.8	City branded mobile app with use of the City's logo for customers to identify the app with the transit system; and	**Y**	This requirement is understood and accepted.
III.13.9	Web content, including real-time bus information hosted on the City's website.	**Y**	This requirement is understood and accepted.
III.12 Technical Requirements			
III.12.1	The system shall log all outgoing and received data in a historical database in a read-only format.	**Y**	This specification is supported by our proposed Passio ITS solution.
III.12.1.1	The stored data shall be time and date stamped, and shall contain sufficient information to enable selective sorting and retrieval based on user-specified selection criteria.	**Y**	Our proposed Passio Navigator Reporting solution complies with this requirement. All reports can be filtered by custom or pre-set time periods. Users can group reporting data for presentation by quarter, month, week, day or by time (hour or ¼ hour) and select operational detail levels such as routes, stops, trips, drivers, and buses. Route reporting is available at three levels (block, route name, combined route). Passio also provides metrics on stop groups (inbound/outbound, north/south, etc.) which also help fulfill these requirements. The Passio Business Intelligence Platform data is available for export into common formats such as CSV (to XLS) and PDF. Passio also provides a real-time and historical transit application programming interface (API), documentation, and JSON output for customers. Data can be easily retrieved using the Passio API in addition to our data exports from Navigator. SON is typically accessed using the JavaScript jQuery library.
III.12.1.2	All vehicle location and status data transmitted to dispatch shall be maintained online or on removable backup media for a period of three years for future retrieval, display, and printing.	**Y**	This requirement is understood and accepted. Passio record-level detail is stored for a minimum of 36 (thirty-six) months and provides count information at the base level which allows for time and individual bus and driver reporting at the stop level. After 36 (thirty-six) months data will be summarized at the route, day, and passenger type level. This data will be available in the dynamic reporting system for a minimum of 5 (five) years.
III.12.2	MDTs shall power up automatically when the vehicle ignition is turned on and shall power down a programmable time after the vehicle ignition is turned off.	**Y**	This requirement is understood and accepted. Passio transit hardware devices are typically wired to the ignition as well as the battery of the vehicle. This means the position of the vehicle is able to be reported even if the ignition is turned off, or if the vehicle is idling. The device goes into a type of hibernation mode where draws very little power from the battery.
III.12.3	MDTs shall be updated as needed using the data connection provided by the City.	**Y**	All Passio Transit software can be updated in the field over the air. Additionally, the hardware itself may be re-calibrated in the field as well. Software updates will be provided at no additional charge for the life of the agreement. Software maintenance is included in the recurring fees. This maintenance includes updates, bug fixes, and upgrades available to the platform for all purchased solutions. Passio has expert technicians who will come on site if required.
III.12.4	Hardware component items will be generally available in the marketplace.	**Y**	This specification is supported by our proposed Passio ITS solution.
III.12.5	MDTs shall be replaceable as discrete units.	**Y**	This specification is supported by our proposed Passio ITS solution.

III.12.6	The MDT and all other on-board components shall be designed to withstand the vibration and shock forces associated with transit vehicles.	**Y**	Our proposed MDT features customized ABS material with IP64 rating and 360 degree protective components to cope with shock/vibration in complex industrial/transit environments. Our proposed VLU has the following environmental specifications: Temperature -30° to +75° C (connected to primary power) and -40° to +100° C (storage), Humidity 95% RH @ 50° C non-condensing, Shock and Vibration U.S. Military Standards 202G, 810F, SAE J1455, ESD SAE J1113, and Weatherproof. The proposed Hella APC hardware (APS-B) is designed to operate between -25° C and +70° C, with a storage temperature rating of -40° C and +100° C. The proposed APC hardware also meets general SAE specifications for vibration, humidity, electrical tolerance, and particulate matter within a transit environment. The Hella APC is humidity tested according to EN 50155-10.2.4 and 10.2.5 dry heat and damp heat railway standards. For vibration and shock, the Hella APC is tested according to IEC 61373, Item 9 (category 1/class B).
III.12.7	The proposed system must have the capability to capture and transmit vehicle location information on a real-time basis. The system should have an update frequency rate as close to real-time as possible, 2-5 second updates or refresh rates, at a minimum.	**Y**	Our proposed OpsView Live Map dashboard and Drivers Pane located within Passio Navigator™. GPS refresh rates for each vehicle are updated every 3 seconds on screen for dispatch information. Passio provides a GPS accuracy (from our CalAmp VLU) of up to 2-5 meters in optimal environmental conditions.
III.12.8	The system shall offer detailed area and route maps, preferably using familiar maps like Google.	**Y**	Passio Technologies uses Google Maps for public facing map displays and Mapbox (OSM) for internal map displays. Google has listed they update their comprehensive map network at least once a month. Users can also expect satellite imagery to be anywhere from 1-3 years old depending on the area. Mapbox OpenStreetMap supports multiple data import types/layers for display within Passio Navigator and is updated every week. Mapbox Traffic is a vector tileset that provides congestion information that is updated every 5 minutes. Our Live Map also allow dispatchers to save views and zooms levels on the yard including layers and the following map types/options: Streets, Outdoors, Light, Dark, Satellite, Satellite Streets, Navigation Day, and Navigation Night.
III.12.9	The system shall be turn-key and cloud hosted. Proposers should describe their go-live strategy and average release timelines. Proposers must offer full implementation/installation/release in contract specified timeline.	**Y**	Our proposed Passio ITS solution complies with this requirement. Our ITS management tool (Passio Navigator) is 100% web-based and supports all common browsers (Chrome, Edge, Safari, and Firefox). Our Amazon Simple Storage Service (S3) provides a fully redundant data storage infrastructure and all data transmitted is encrypted between the on-board devices and the cloud server. Passio builds modular and customizable technology solutions for transit customers in over 40 states. We harness real time Passenger & Dispatch Information Systems through GPS tracking using our Passio GO™ framework. This solution is directly coupled with our MDT, AVA, LED, and APC systems to form a modular and turnkey CAD/AVL platform. The Passio Transit MDT software supports route assignments, electronic passenger counting (EPC), upcoming stops, navigation, alerts, driver clock, and messaging. More information on our detailed schedule for these implementations can be found in our attached Project Schedule.
III.12.10	Based on configurable thresholds, the system shall use the reported schedule adherence data to designate when vehicles are “early,” “late,” or “on time,” which shall be customizable by the City.	**Y**	This specification is supported by our real-time Passio Navigator 'Adherence' column located in the Dispatch Pane (table view). This view allows users to find and filter the map by vehicle, job status, service status, adherence, passenger load, in/out of service, availability, driver, route, and route block. Adherence thresholds can be configured using Passio Navigator. Passio includes the ability to deliver pop up alerts for a variety of actions or activities including adherence, idling, dwell time, off route deviations, speeding, or geofence activities.
III.12.11	The system shall highlight the vehicle IDs of those vehicles that are operating early, late, or off-route, using map displays to indicate their current schedule and route adherence status. The map display symbols for these vehicles shall use distinct and configurable color codes for early, late, and off-route status.	**Y**	Passio OpsView Live Map displays the color coded routes and real-time vehicle bus locations on an interactive digital map. Passio Navigator includes the ability to deliver pop up alerts for a variety of actions or activities including adherence, idling, dwell time, off route deviations, speeding, or geofence activities. Passio provides automatic off-route notifications based on preset buffers around the actual route path. Customers have the ability to set any custom off-route geofence separately. Vehicle status icons change color according to 'in service', off-route , and off schedule vehicles. Out of service vehicles are also displayed in gray to make them quickly identifiable. Similarly, our Dispatch Pane allows users to find and filter the map by vehicle, job status, service status, adherence, passenger load, in/out of service, availability, driver, route, and route block.
III.12.12	Create and provide GTFS-RT feeds and/or provide the City, City contractors, and interested third parties with GTFS-RT data information.	**Y**	This requirement is understood and supported by Passio Technologies. GTFS static file imports and exports are supported. Passio can also provide a GTFS Realtime (GTFS-RT) feed to application developers. Passio supports all GTFS-RT feeds for Trip Updates, Service Alerts, and Vehicle Positions. Passio also provides a companion real-time transit application programming interface (API), documentation, and JSON output for customers. The Passio API includes real-time location data and the estimated time of arrival, as well as other system information such as real-time passenger load.

III.12.13	A final Scope of Work to be included in the Goods and Services Contract (see Attachment B) will be prepared based on this general Scope of Work and the successful Proposer's Proposal. The City reserves the right to modify the Scope of Work based on the Proposer's Proposal.	**Y**	Passio Technologies understands and accepts this stipulation.
III.13 Work to Be Performed by Proposer			
III.13.1	The Proposer shall perform all work tasks in the delivery, installation, and testing of the complete system except for those tasks specifically identified as tasks to be performed by the City. The Proposer shall perform the following work:		
III.13.2	The Proposer shall deliver the equipment to be installed in accordance with the project schedule.	**Y**	Passio Technologies understands and accepts this stipulation.
III.13.3	The Proposer shall be responsible for all work and expenses relating to the design, delivery, configuration, installation and testing/commissioning to ensure full operation of the system. This work includes development of driver lists, routes, runs, stops, time point, schedules and recorded announcements and any other date required to make the ITS fully functional.	**Y**	Passio Technologies understands and accepts this stipulation.
III.13.4	The Proposer shall make on-site visits and surveys, as determined by the City, as necessary to become wholly familiar with the transit vehicle fleet, dispatch locations and computer/network systems and for troubleshooting problems related to installation and commissioning. Also, familiarity is required for any repairs during warranty period of the system other than for items that can be exchanged without requiring on-site support.	**Y**	Passio Technologies understands and accepts this stipulation.
III.13.5	The Proposer shall provide an installation and implementation team responsible for installing and implementing the entire system in accordance with the Proposer's schedule, as approved by City.	**Y**	Passio Technologies understands and accepts this stipulation.
III.13.6	The Proposer shall supply such materials and supervision as necessary for the proper installation and testing/commissioning of the system. Upon final acceptance of the system by City, the Proposer shall provide full written documentation of the system including system configuration, design, operating and maintenance manual, and system/software training and user's guide.	**Y**	Passio Technologies understands and accepts this stipulation.
III.13.7	The equipment and software, subsequent to testing, shall be suitable for operations and complete in every respect.	**Y**	Passio Technologies understands and accepts this stipulation.
III.13.8	The Proposer shall make available full and competent engineering services to document and correct problems associated with the performance of the equipment in accordance with the schedule.	**Y**	Passio Technologies understands and accepts this stipulation.
III.13.9	The Proposer shall offer a fee schedule that addresses the upgrades, debugging of software and firmware, and repairs of the hardware and other services that would be incurred after the expiration of the warranty period.	**Y**	Passio Technologies understands and accepts this stipulation.
III.14 Work to Be Performed by City			
City shall perform the following work:			
III.14.1	City shall review, approve, disapprove, or make recommendations to the project schedule and work plans and equipment and materials submittals with five working days after submittal.	**Y**	Passio Technologies understands and accepts this stipulation.
III.14.2	City shall make vehicles available Monday through Friday, from 6:15 am to 9:00 pm during the installation period in accordance with the contractor's approved schedule that assures no disruption to the delivery of transit service.	**Y**	Passio Technologies understands and accepts this stipulation.
III.14.3	City shall make appropriate space available to store parts and associated equipment for a maximum of seventy-two hours prior to installation. No material, tools, labor, or facilities will be furnished by City unless otherwise provided for in the solicitations.	**Y**	Passio Technologies understands and accepts this stipulation.
III.14.4	City shall participate with the Proposer in the performance of a design and initial operations test no later than one week after commencement of system operation in revenue service.	**Y**	Passio Technologies understands and accepts this stipulation.

III.14.5	City will participate with the Proposer in the performance of a final acceptance test no later than two weeks after the contractor has released the completed system (all vehicles and supporting infrastructure) for operation in revenue service.	**Y**	Passio Technologies understands and accepts this stipulation.


SOLUTION
DETAILS
PASSIO
TECHNOLOGIES

PASSIO GO

OUR RIDER APP & PASSENGER INFORMATION SYSTEM

Passio GO is our public facing application providing real-time bus locations, stops, routes, arrival predictions, schedules, and current passenger load. The application can be downloaded for free on Google Play and the App Store.

For operators, Passio OpsView functions as its backend management tool, with robust mapping, analytics, and public communication tools

PASSIO TECHNOLOGIES

Solution: Passio GO™

Main Features

Mobile App	Rider Facing Information
Our mobile app is free to use and easy to understand. Riders get a tutorial before using the intuitive app. Riders quickly plan their transit day on a map!	Riders can view routes, stops, driver information, # of passengers on board, and more within the app. Riders can 'favorite' their most used routes and stops.

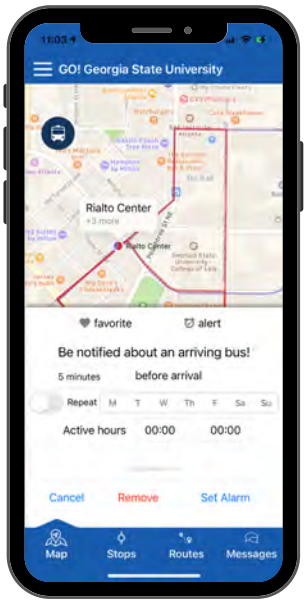
Alerts/Messages	Management
Operators can push out emergency alerts to run across the top of the screen, or send messages to app users. Riders get bus ETAs for any stop they have favorited.	Passio GO information such as stops and route maps can be edited by management through Passio Navigator, our cloud based reporting system.

Other Viewing Options
Passio GO is available as a native app, Public Viewer (live website), or LiveDisplay.TV to be displayed in public places like a library or dispatch office.

Real-Time Data on Arrival and Departure of Transit Vehicles

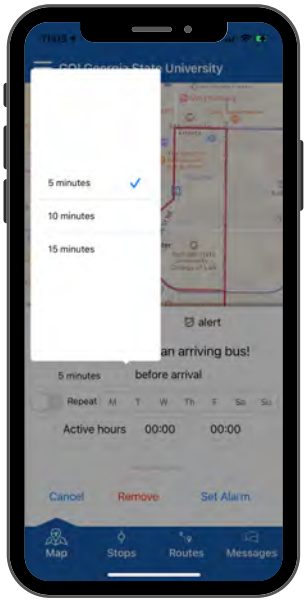
Our app, Passio GO, can provide real-time data app alerts when vehicles arrive or depart a stop.

App users must set up their alerts within the Passio GO App.



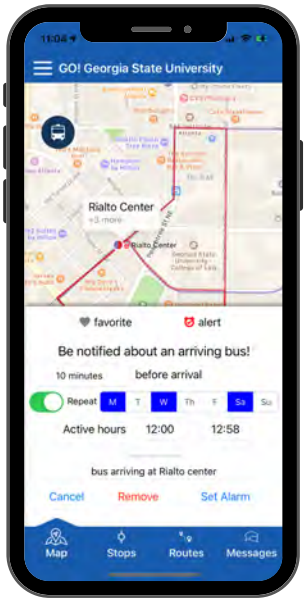
Start in the Live Map

App users start in the Passio GO live map. They can choose a stop then press the "Alert" setting to begin configuring the alert. They can also "Favorite" the stop.



Set Time Based Alerts

Riders are able to choose if they want an alert 5, 10, or 15 minutes before the vehicle arrives at their stop.



Turning Your Alert On

Next, riders choose dates they need alerts, and a time frame they would like alerts. They can even nick-name the alert or add comments.

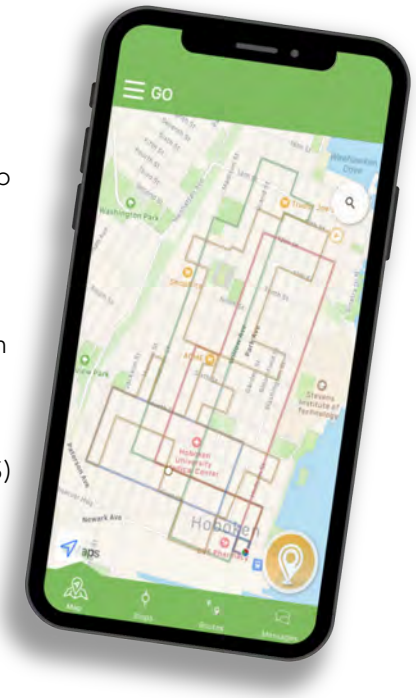
Optional: Passio can also provide a direct SMS service to your passengers to get bus ETAs. This is useful for passengers who wouldn't like to download the app, or who do not have a smartphone.

Passio GO™

Our App represents the next generation of real time vehicle location tools for passengers and CAD/AVL management and reporting tools for system operators. Fully integrating the best visual tools, public viewers, and smartphone applications into the Passio Transit platform provides our customers with unparalleled access to real time updates for routes and stops, while instantaneously evaluating the system's performance from any computer, tablet, or cellphone. Hundreds of hours of testing and consistent customer feedback have produced a tool that is intuitive for passengers, invaluable for daily operators, and indispensable for management and leadership teams.

Passio GO™ Mobile App

The Passio GO mobile application is designed to be intuitive and user friendly. No specific training is required for the end users. Once the application is downloaded to their smartphone, the application leads them to naturally understand how to use the key features such as viewing specific routes, tracking buses in real time, and identifying where they need to go simply by tapping on the home screen.



For users wishing to take advantage of enhanced features such as 'follow my bus' or destination planning, the application has straightforward embedded hints and guidance tools that make the app easy for everyone to use.GPS data is updated in real time, typically every second or less, on board the vehicle. Movement, change in heading/direction and speed is reported in real time and immediately uploaded via data connection to network servers for representation on public views, website maps, and smartphone applications.

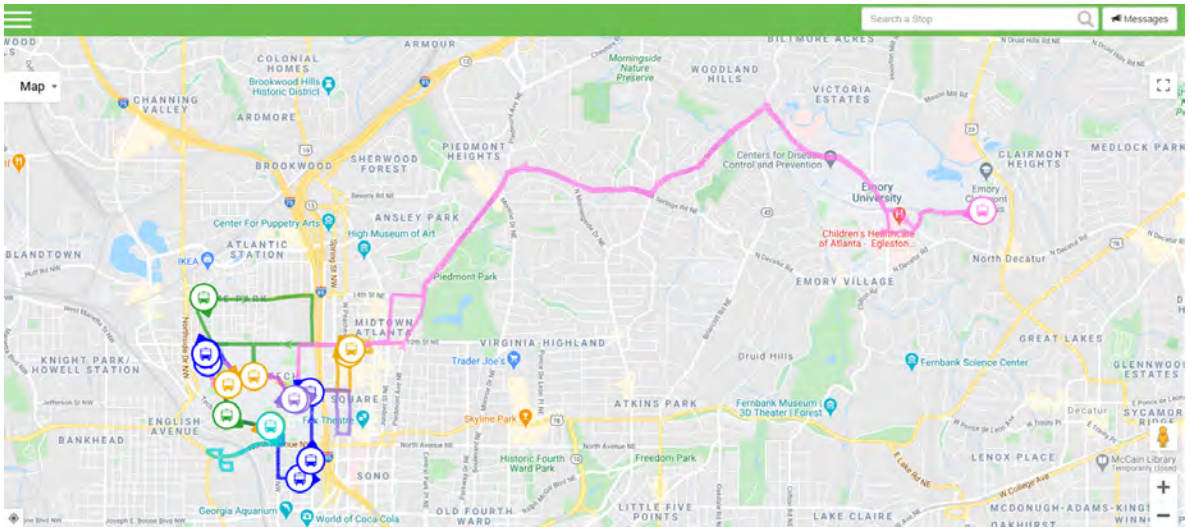
Smartphone applications are available, at no cost, for both Apple (iOS) and Android (Google Play) users. In addition to smartphone applications, an interactive mobile web view is available for use on personal computers, tablets, and is optimized for mobile viewing on any cell phone or mobile device.

Real Time Passenger Load

Passio Transit customers using either Automated Passenger Counting or Electronic Passenger Counting (touch screen counting on the MDT) have the option to view real time passenger load data on both the Passio Navigator Operational Live Map for management as well as the publicly available web viewer, kiosk, and smartphone apps.

Maps and Customized Layers

All public views utilize externally validated map applications for accurate representation of locations, buildings, and streets. Additional layers may be added for tailored information such as alternate building names, key points of interest, and external information.



Passio GO Smartphone Applications™

Free downloads for iPhone (iOS App Store) and Android (Google Play) users are always available for Passio GO. All updates are provided free of charge to both the institutional customer and the end user.

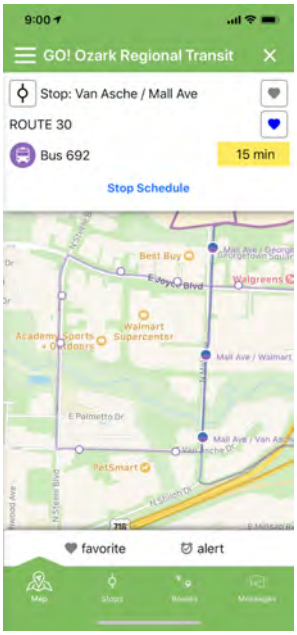
Download on the App Store

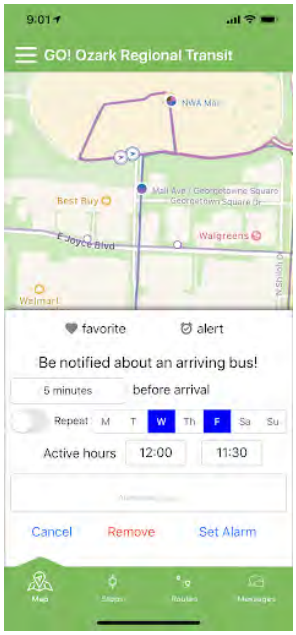
GET IT ON Google Play

Mobile App Features:

- Geo-location button on the home screen allows GPS enabled smartphones to orient the user's location to map view.
- Users have the option to select all, some, or one route. Only active routes are enabled within the application.
- Select individual stops directly from the home screen.
- Application algorithm processes real time vehicle location information for smooth and steady graphical representation.
- Customizable bus icons and easy access to view saved routes and stops.

Passenger Notifications:
(Alerts and Announcements)
The system has two levels of communication within the application: “Alerts” for immediate notification and highlighted viewing and “Announcements” for general information. Alerts scroll above the map and do not require any action by the user to view them.Announcements are indicated by the red message button on the bottom right of the home screen. Users tap on the indicator to view the more detailed announcement information.





Automatic Scheduled Stop Alerts

Smartphone app users have the ability to set an Arrival alert or ‘Favorite’ for any stop within the system.

The user taps on the desired stop to view the Bus and Estimated Time of Arrival (ETA) information. Users can set the stop as a favorite and set alerts for when the bus is 5 minutes away etc.

GTFS-RT

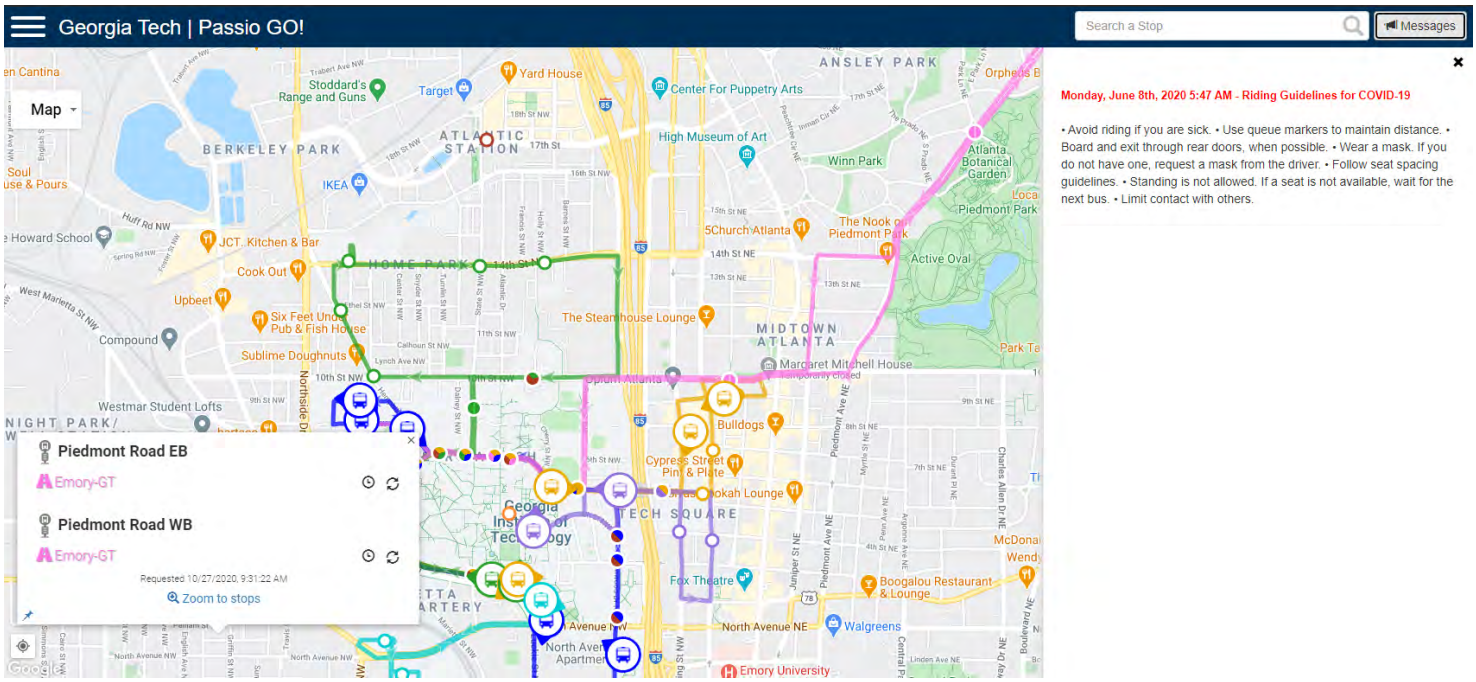
Passio provides GTFS-realtime (GTFS-RT) feed to application developers. Passio exposes GTFS-RT data using the standard three separate feeds called Service Alerts, Trip Updates and Vehicle Positions. Passio also provides a real-time transit application programming interface (API), documentation, and JSON output for customers. The API includes real-time location data and the estimated time of arrival, as well as other system information such as real-time passenger load as an option (for our EPC/APC customers). GTFS static file imports and exports are supported as well.

The Passio GO Interactive Public Viewer

This is our rider-facing application providing real-time location of vehicles, stops, and routes on a public website.

Many customers require the functionality of the smartphone application accessible from any internet-connected PC, tablet, or mobile device. The Interactive Public Viewer includes Optimized Mobile Web View (Public Website) for using the tool on smaller mobile devices such as tablets and smartphones. This ensures that all display features are proportioned correctly for display on smaller screens.

This is our rider-facing application providing the real-time location of vehicles, stops, and routes on a public website. Many customers require the functionality of the smartphone application accessible from any internet-connected PC, tablet, or mobile device.

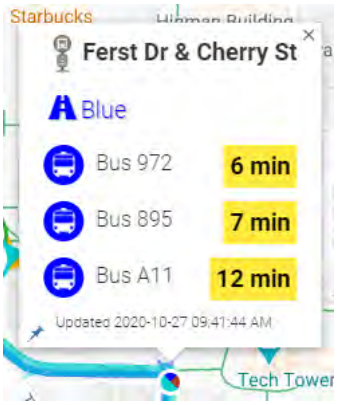


The Interactive Public Viewer includes Optimized Mobile Web View (Public Website) for using the tool on smaller mobile devices such as tablets and smartphones. This ensures that all display features are proportioned correctly for display on smaller screens.

Interactive Public Viewer is accessible via a customer-specific web link.

- There is no additional software to download and the solution is a pure HTML implementation that displays vehicles on a 2-dimensional map.
- The Public Viewer can be customized and branded with colors and logos, as well as advertising and marketing information.
- Vehicle location, passenger load information, and estimated time of arrival (ETA) information is updated automatically without any interaction required from the user.

Vehicle direction is indicated on each bus icon and routes are all drawn in different colors.Bus stops that are shared by multiple routes are clearly indicated through stop design features. Clicking on the bus icon will show the current location, route, and next stop information for the vehicle. Users have access to settings from the primary viewing screen. Tapping on the Select Routes option shows all active routes available.



Users can select one or more of the routes, view the distance from their current location and tag the routes as favorites. On-screen help is available for assisting users with key system components.

Choosing any stop on any route will provide the user with the ETA (Estimated Time of Arrival) information about the next buses scheduled to service that stop.

Passio GO Kiosk Mode – LiveDisplay.TV

With the introduction of Passio GO Kiosk Mode™ using LiveDisplay.TV™, Passio GO customers have access to configure and customize public views of their vehicle route activity at an unprecedented level. Any internet-connected screen from a tablet embedded in a kiosk to a large display monitor at a key transit center or public location can be used to show vehicle and route locations.

The unique configuration design provides options for granular access to the display features. A simple web link is created for each combination of views and options. Once the link is set it can be displayed using standard internet browsers. All vehicle and route information automatically updates and refreshes – no user interaction is required to view data in real time.

Passio GO Stop Code SMS

No smartphone? No problem! Get the word out anyway and offer your riders Passio's Text-ETA Service where they can simply text the stop code to (555) 555-5555 to get real-time ETA information for any stop. Once the rider submits the stop number via text, they will immediately receive an automated text reply containing the ETA of the next bus (or buses) in your system and the routes they are on.

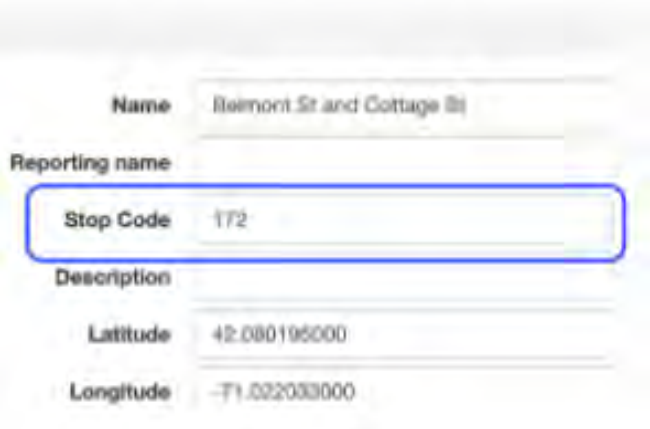
Bus stops in your transit system are each identified by a unique stop code. It is configured by the agency and will be printed on a physical bus stop sign for your riders to see and use. Set up your stop codes easily using Passio Navigator.

Passio Text-ETA response format options include:

ETA for Washington & 5th (Stop 212)
Blue: 5 (10:15 AM) & 65 (11:15 AM) min
Red: 22 (10:32 AM) & 47 (10:57 AM) min

ETA for Washington & 5th (Stop 212)
5 min (10:15 AM) short route: long name...
Red: 22 min (10:32 AM) [SN] Long Name...
Red: 47 min (10:57 AM)
Blue: 65 min (11:15 AM)

ETA for Washington & 5th (Stop 212)
Blue: 5 min (10:15 AM)
Red: 22 min (10:32 AM)
Red: 47 min (10:57 AM)
Blue: 65 min (11:15 AM)



PASSIO TRANSIT MDT

OUR MOBILE DATA TERMINAL TECHNOLOGY

Passio Transit includes software for our Edge MDT (Mobile Data Terminal) which supports route assignments, electronic passenger counting, upcoming stops, navigation, alerts, and driver clock. Transit connects to automatic voice announcements and LED signage if desired. The MDT also sends data to Passio Navigator, our cloud-based reporting and AVL system.

PASSIO TECHNOLOGIES

Solution: Passio Transit MDT

Main Features

Integrations

Our MDT can integrate with APC & AVA systems, LED signage, and Passio GO, building a full customer journey with minimal operator involvement.

Driver Login

Drivers log in to the MDT when beginning their routes, making it easy for managers to see what vehicles and drivers are currently on route.

Training

Vehicle operators are provided with a simple 20 minute training session on the MDT, which uses an intuitive design making it easy to operate while on the road.

Navigator

The MDT works with Passio Navigator to report information back to our cloud-based reporting system. Customers can monitor data in real-time and build custom reports using dashboards and filters.

Connectivity

Passio MDTs use 4G LTE connections and are directly connected to vehicle power. The MDT can function in extreme weather conditions while providing vehicle location, system status, and reporting metrics to Navigator.

Passio Transit MDT

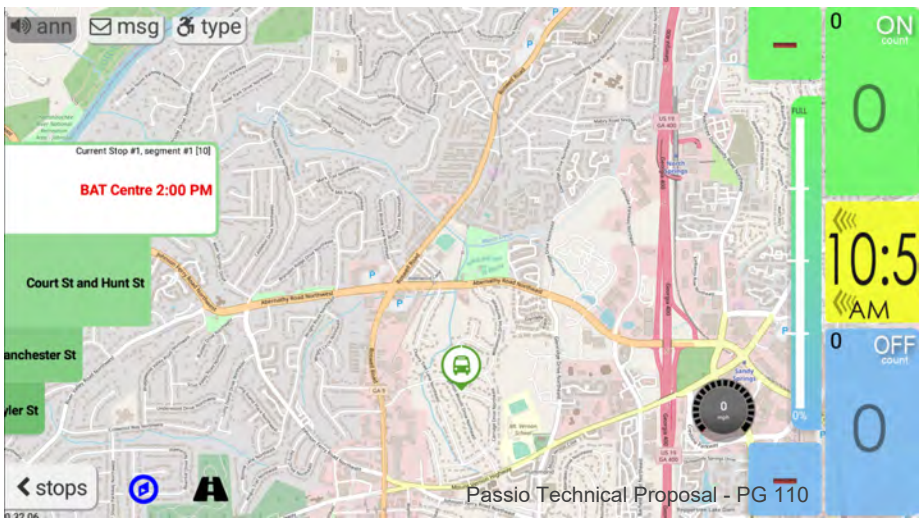
At the heart of the on-vehicle CAD/AVL system is the Passio Transit software and our Edge MDT, an android-based, rugged, touch-screen driver interface. This single-connection, modular and swappable device natively connects to other onboard devices for the control and collection of data. All configuration information, collected data, and communication is handled through our secured web portal with individual logins at central dispatch.

When we think about the edge of something, we often conjure images of cliffs and mountains with endless possibilities and opportunities. In much the same way, the "Edge" in transit technology represents the most current advancements - and even introduces new innovations that may have been previously unheard of. It represents the "Edge" of your technology platform. Transit tech is unique – it does not simply operate with an app and a smartphone. It requires creating serious hardware connections in a very challenging environment. Next to heavy construction and manufacturing and mining, moving vehicles with a variety of power, instruments, and wiring diagrams is one of the toughest environments for hardware and electronics. It is crucial that the ITS solution you choose for your system provides the on-board hardware components that are rugged enough to withstand this environment. The Passio Edge MDT™ showcases the design, connectivity, and interface to elevate your transit system to new heights.

Passio Transit App - MDT Live Maps

Passio Transit Software

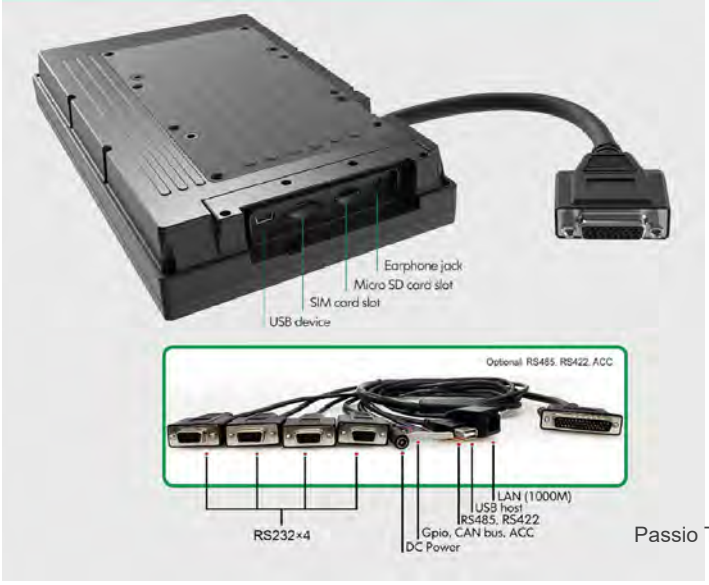
Drivers simply login to Passio Transit and choose their assigned route. The software displays their stops in sequence and they are ready to go.



Hardware Specifications

The Passio Mobile Data Terminal is constructed to meet the requirements unique to transit operations of different sizes and configurations. It is installed to be managed safely and used effectively by operators and is referred to as the intelligent "brain" of the Passio ITS system. It provides location, announcements, and real-time information to passengers, direct and immediate performance metrics to operators, and enables management and agency leaders to gather the data necessary to plan for the future needs of the system.

System configuration	CPU: NXP i.MX 6DualLite 800MHz ARM Cortex-A9 processor
	GPU: 3D Vivante GC880 35Mtri/s 266Mpxl/s Open GL ES 2.0
	Optional: NXP i.MX 6Quad 1.0GHz ARM Cortex-A9 processor
	RAM: 1G DDR3, flash ROM: 8G eMMC
	OS: Android 5.1.1 / Linux Debian 8.0 / WinCE 7.0
Media	Audio: MP3, MP4, WMA, WAV...
	Video decode 1080p30 + D1
	Video encode 1080p30 H.264 BP / Dual 720p
Interface	Micro SD card slot
	USB slave 2.0, USB host 2.0
	Earphone jack
	DC power input
	RS232×4 / RS232×3+RS485×1 / RS232×2+RS422×1+RS485×1
	(optional RS485 / RS422 interface)
	1000M Ethernet (RJ45)
	Gpio input×4, Gpio output×4, CAN bus×2
	Optional: 3G / 4G / Wi-Fi & bluetooth / camera / GPS / ACC
Touch Panel	Multipoint capacitive touch screen
Display	7" LED backlit
Screen Resolution	800×480
Brightness	450cd/m²
Contrast	500:1
Viewing Angle	140°/ 120° (H/V)
Power supply	DC 9-36V
Battery	Built-in 2200mAh (optional)
Working Consumption	≤9W
Charging Consumption	≤24W
Working Temperature	-20℃~60℃
Storage Temperature	-30℃~70℃
Dimension (LWD)	220×132×36.5mm
Weight	740g



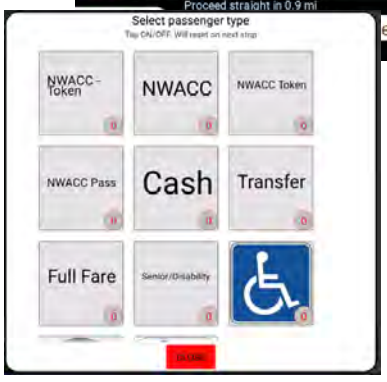
Schedule Adherence - While in service, drivers can keep up with their own schedule to determine if they are behind, ahead, or perfectly on schedule. A clock time in blue indicates the driver is behind schedule, and a yellow clock denotes ahead of schedule. Additionally, passenger counts from the APC unit are displayed to the driver instantly. The top buttons allow the driver to make custom announcements, edit passenger types, and create boarding groups if needed.
In/Out of Service Status - This feature measures revenue hours for billing, route schedule validation, and NTD reporting. Drivers have the following options when going out of service: training, fueling, maintenance, charter, and others.

Going back into service is easy, simply tap the service screen, and choose “Start Service”.

Driver Check In/Out - This optional add on enables driver status reporting, operations management, and time tracking for data that can be matched to payroll. From the shuttle icon on the bottom left of the MDT screen, operators have the option to start service, check in/out, or change route. Several route status updates can be made by the operator within the MDT.
2-way Dispatch Messaging - 2-way dispatch messaging makes it easy to communicate directly with on board operators through custom messages and receipt confirmation.

EPC Interface - Our electronic passenger counting interface allows operators to manually count as riders board and exit the vehicle, if required. The “ON” green button at the top right adds a boarding to the vehicle. Pressing the blue “OFF” denotes a passenger alighting. The yellow counter shows the running total of passengers currently on board. Multiple boardings and alightings are easily created by pressing the GRP button. Passenger and fare types can also be entered from a list of customizable pre-set options.

Passio Transit App - Request & GO add-on



Passio Transit App - Passenger & Fare Types

PASSIO NAVIGATOR

Passio Navigator is our cloud based reporting system. Managers can set up user accounts with permissions, protecting sensitive information. Navigator is easy to use and requires almost no training. Generate reports based on set filters, or create your own dashboard reporting.

PASSIO TECHNOLOGIES

Solution: Passio Navigator

Main Features

CAD/AVL Management

Utilize reporting, live maps, driver schedules, geo-fence locations, and playback histories. Managers can add/edit/remove routes, stops, and drivers. Users can also pull passenger boarding/alighting reports to monitor route daily use.

Reporting Filters

Filter all reports by bus, driver, route, stop, passenger types, and more to create custom dashboard reports.

OpsView

View the live map of all routes in real time. Customers can locate their entire fleet, see if drivers are off route, view schedules, and see current passenger load.

Control and Changes

Management has the ability to control and change all service information via Passio Navigator without assistance. Changes are updated in real time and reflected across Navigator and on the Passio GO app.

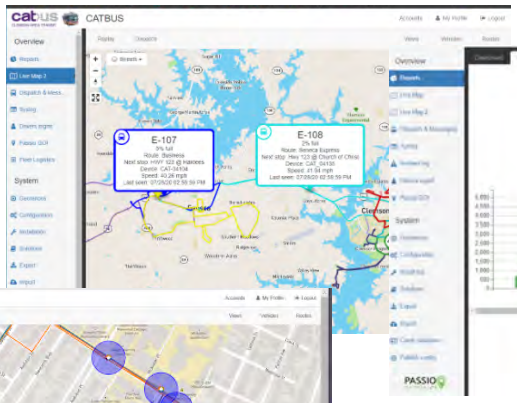
On-Time Performance

Use our preset on-time performance report to see which routes are performing well, and which may need to be changed. Reports can be pulled by hour or day to see if vehicles were early, on time, or late to specific stops.

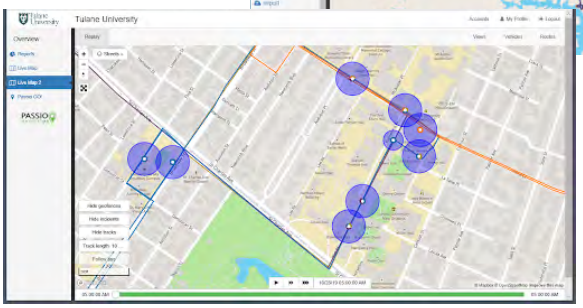
Cloud-Based CAD/AVL Management Solution

Passio Navigator™ is the man behind the curtain, our web application controlling access to system features for each individual user with multi-layered security features. Navigator™ provides customers with full access to configure their system and fleet information. All Passio customers are connected to Passio Navigator™. Each user's view is limited to their products and services. This ensures that the system is easy to learn, training requirements are minimized, and interactions are efficient for all of our users.

Passio Navigator Web App - OpsView Live Map



Passio Navigator - Reporting Module



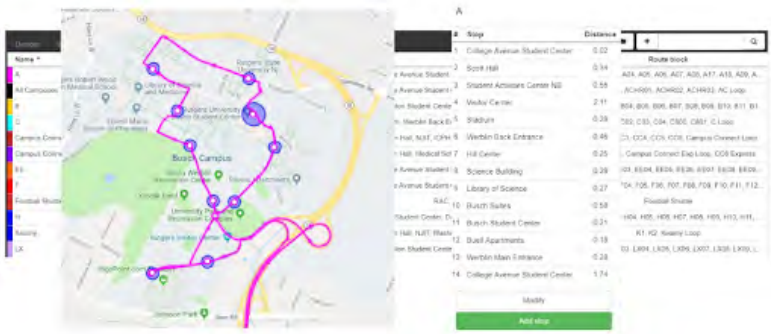
Passio Navigator - Stop/AVA Geofence Map

Access

Visibility to all settings and the ability to make updates in real-time is incredibly valuable for customers. Passio's outstanding account management team is always available to answer questions or make the updates at our customer's requests. This industry leading tool for management and reporting provides customers with unparalleled access to information, while ensuring simple and straightforward access to reports and analytics.Passio has developed an integrated, web-based, user guide for training and system use. It is available to all active customers and is consistently updated by our support team. Users are granted access based on their need to review, update, or evaluate aspects of their system.

Control

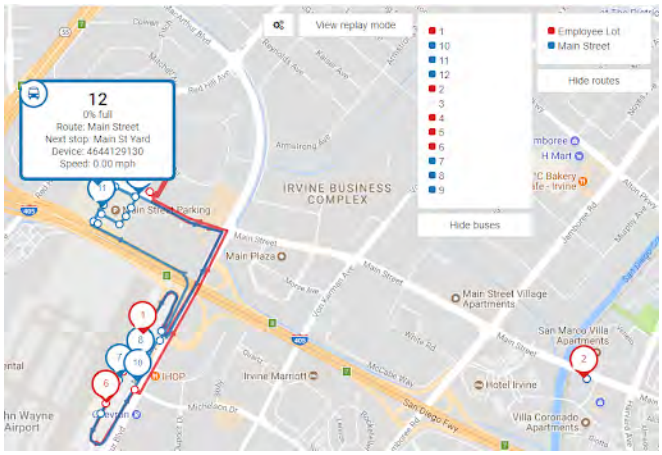
Update configuration details through Passo Navigator™. Add and edit stops, edit drivers, request route edits, and more. If you are unable to make an edit, contact our outstanding account management team for assistance on making changes or to answer any questions you may have.



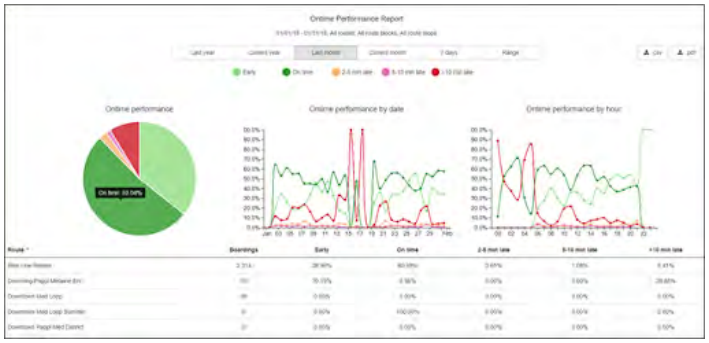
Passio Navigator - Route/Stop Configuration

Operational Live Map

View real time vehicle locations, determine whether vehicles are on or off route, and filter the view by route, or vehicle number.



Passio Navigator - Operational Live Map



Passio Navigator - Dynamic Reporting Module

Passio Navigator™ Reporting Tools

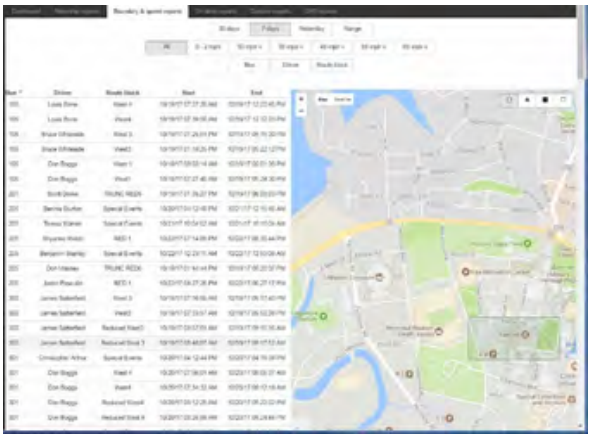
The Passio reporting system is managed through Passio Navigator™. This enables our customers to have a single login with access to all reporting, configuration, and management functions within the Passio Transit Platform. The reporting system is divided between dynamic reporting and dashboard reports. The dynamic reporting tools are designed to allow the end user to build reports using combinations of filters for both specific and general areas of analysis. The full spectrum of components and fields within the database are available for the user to build the view they need with a few simple mouse clicks...

Primary Report Views

- Filter by custom or pre-set time periods
- Group reporting data for by quarter, month, week, day or by time (hour or ¼ hour)
- Select operational detail levels such as routes, stops, drivers, and buses.
- Custom passenger types can be filtered, segmented, and reported
- Switch between passenger boarding and alighting counts for all filter views

Trend Analysis

- Switch between passenger boarding and alighting counts for all filter views
- Compare ridership trends by month, week, day, quarter/semester, weekday, hour, ¼ hourCapture NTD related data such as Passenger Miles Traveled
- Route reporting at three levels (block, route name, combined route)
- Capable of grouping stops in alternate combinations outside of route groupings



Speed Fence Activity

Users have the capability to highlight a specific area on the system map to select all speeding incidents that exceed the threshold set in the report configuration.

Ad-Hoc Reporting

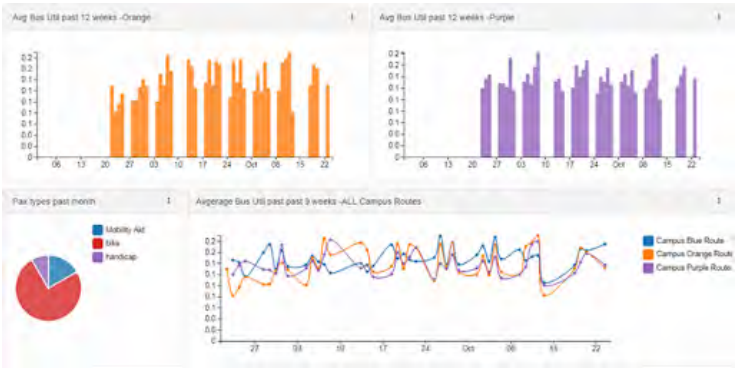
- Data filtered using the dynamic reporting system can be downloaded to CSV/Excel format at summarized level
- Detailed core level data can be downloaded into CSV/Excel format at any time for user analytics using data tools
- As an additional upgradeable feature, the system has the capability to transfer data via programmed API to 3rd party data visualization tool. This system allows for unlimited reports, pivot tables, graphs, charts to be created, saved, and automatically emailed. Additionally, the system has the capability to allow users to write custom SQL queries and create custom reference tables for customer specific reporting needs.

Dashboard Reports

Dashboard reports enable users to design and save reports to their unique specifications. Users tailor reports based on presentation type, data analyzed, filters used, and comparison analytics.

- Fixed Date or Relative Date – set a report period that is fixed from a specific date to a specific date, or create relative date reports (I.e. the last 3 months or previous 14 days)
- Scheduled Auto Email – email individual reports or an entire dashboard to a single email recipient or a group of recipients. Emails can be scheduled at any interval desired.
- Multiple Dashboards – users have the option to create multiple dashboards to group report types by category or target audience.

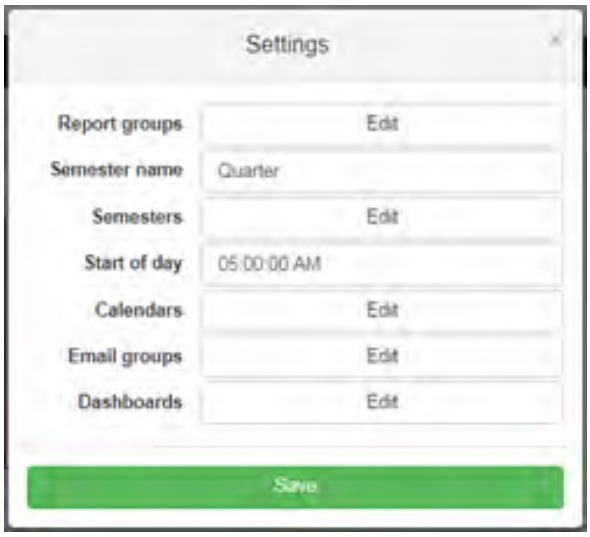
Reports include a graphical interface for display and presentation. The interface allows users to dynamically create bar, line, pivot tables, and pie charts without downloading to third party software. The data is available for export into common formats such as CSV (to XLS) and PDF. The user may create multiple dashboard pages specific to the KPIs that they want to see as well as the ability to email or print individual reports or entire dashboards ad-hoc or create scheduled group emails.



Passio Navigator - Bus Utilization Reporting

Report Time Period Settings

The Passio Navigator module has the capability to group data for reports at both the 'system day' and 'calendar day' level. For example, routes may end after midnight, but should be reported with the previous day's activity. System should allow users to configure reports to begin a day at a particular time and end at a particular time the next day. The 'Start of Day' field is configurable within Passio Navigator to set the start of the 24 hour reporting period.

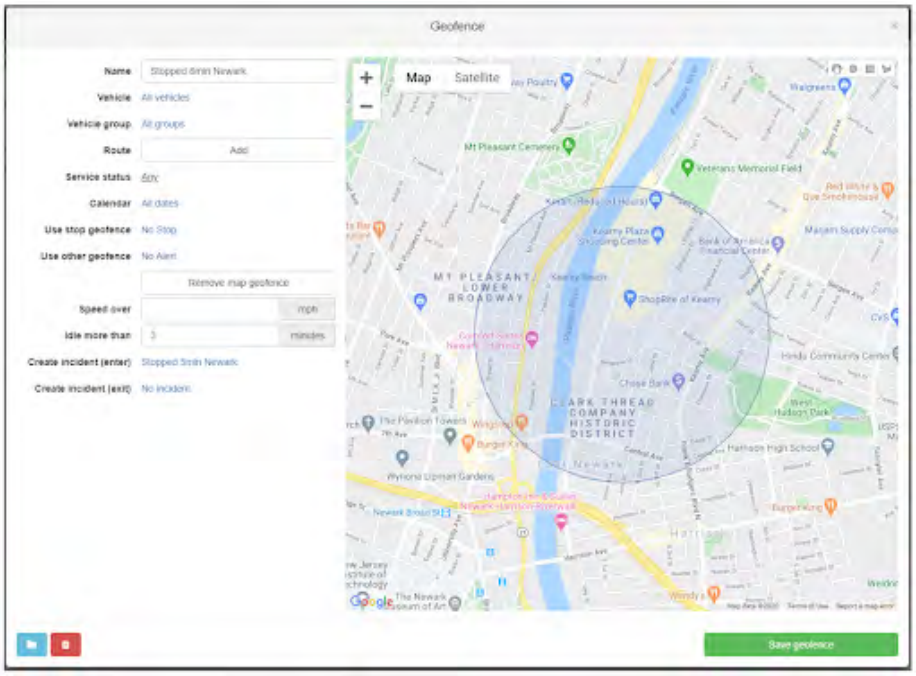


Read/Write Access

Access is controlled at the individual action level, and is customizable for each user. Passio does not limit the number of users who may have access to either Read or Write actions within Passio Navigator™.

Incident and Alerts Reporting

The Passio Transit platform logs and provides reporting on all tracked incidents. These incidents include In and Out of Service status, system alerts such as speeding, off route, and idling, and customer defined alerts. The defined alerts can be tailored for each system and may include customer specific incidents, emergencies, accidents, and/or passenger incidents.
Each incident is tagged with the time, date, latitude, longitude, latitude, route, driver, vehicle number, device number, passenger load, and incident type. If enabled, both audio and photo recordings can be attached to any operator-initiated incident.

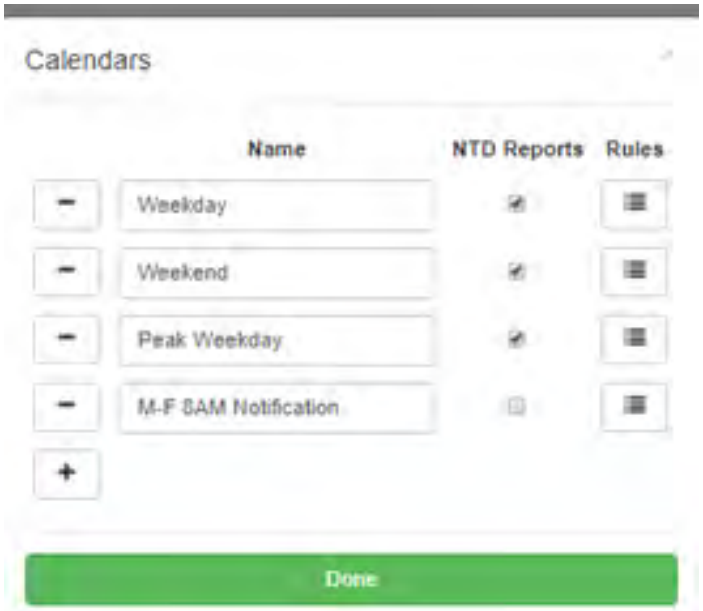


Passio Navigator - Alert Geofence

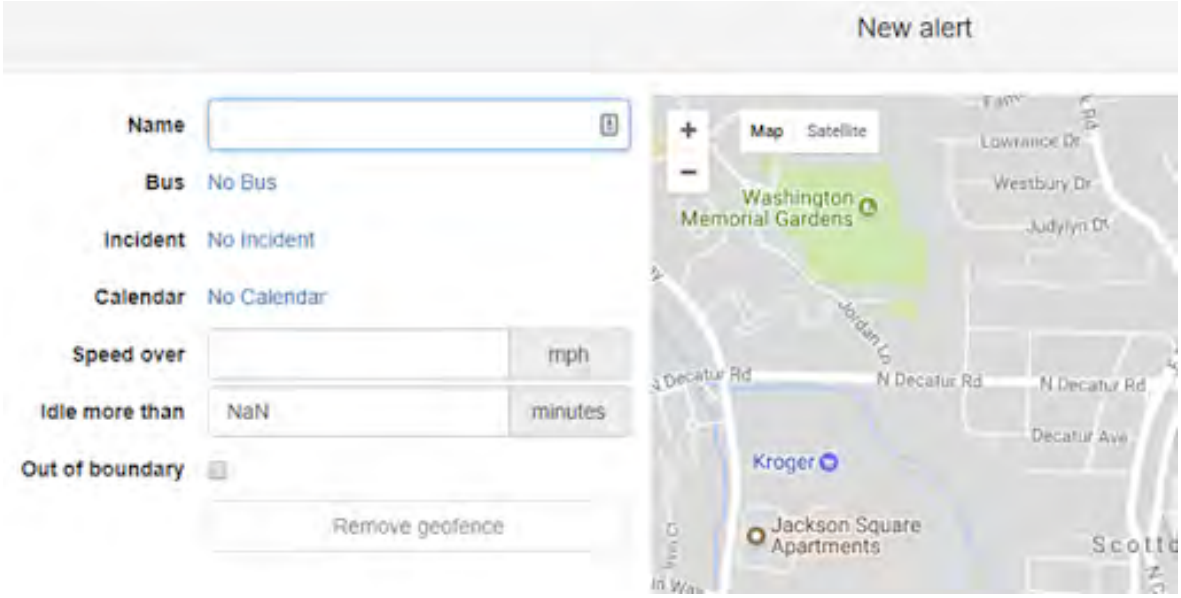
Alerts

Passio Navigator users may configure alerts to be sent to as many as twenty-five email or text recipients at one time. Alerts are configured so that the times and days of the week can be set to make an alert 'active' which will enable the alert to be sent to a specific group.

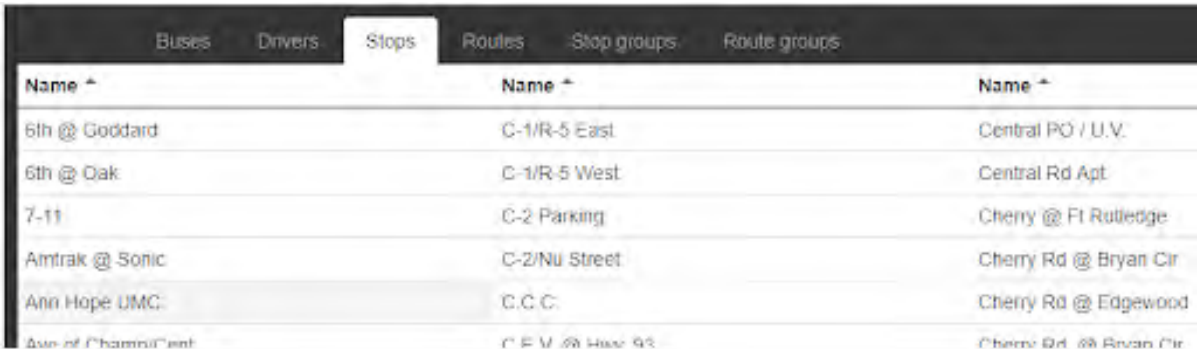
Alerts are scheduled using the calendar function found in Passio Navigator. Multiple calendar options are set using pre-defined business rules and then can be selected for application to each alert individually. Available alerts include speed infraction, vehicle idling, off route, and location.



Setting up new alerts can easily be done by entering a few basic points of information.

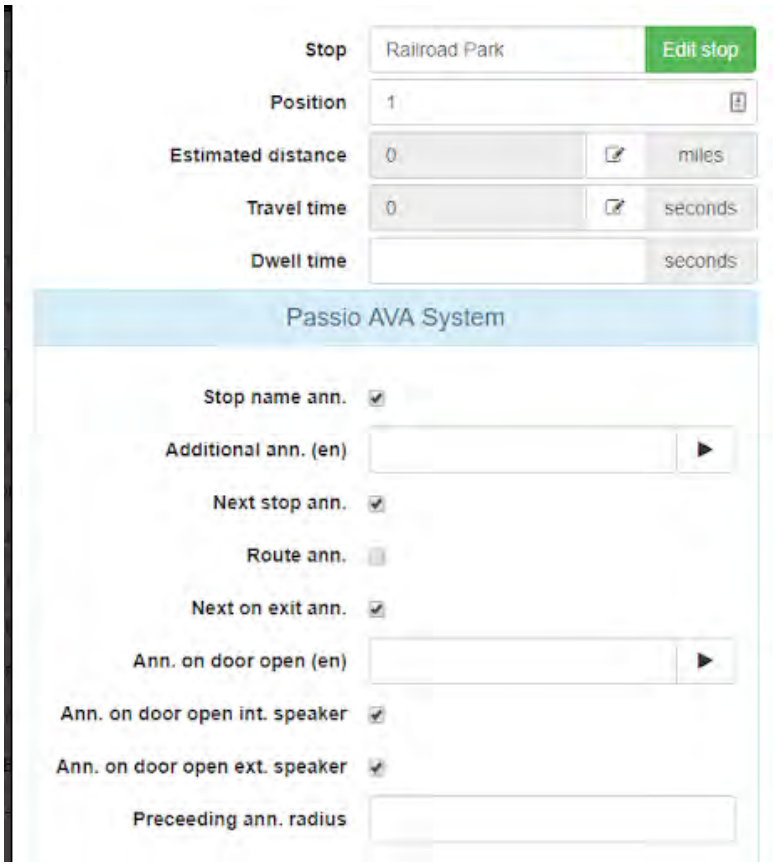


Passio Navigator - Alert Configuration

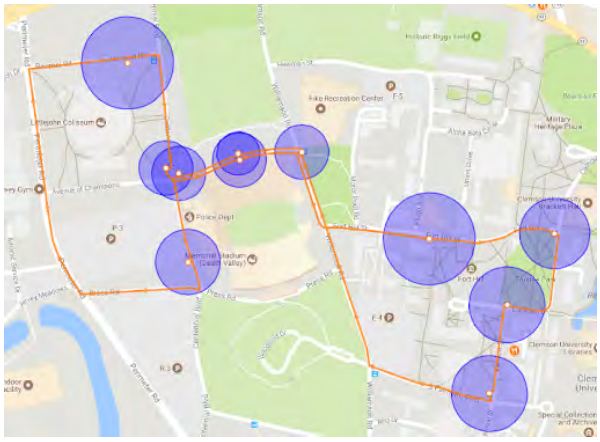


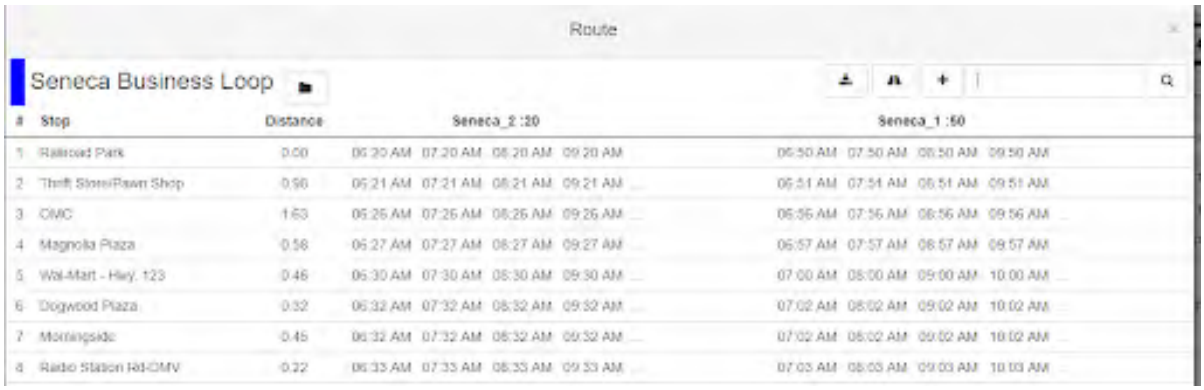
Passio Navigator - Route & Stops Configuration

Access to stop, route, and driver information is a single click from the topline configuration menu bar. Updates are straightforward and intuitive, but also provide a significant amount of control and flexibility for managing the system.

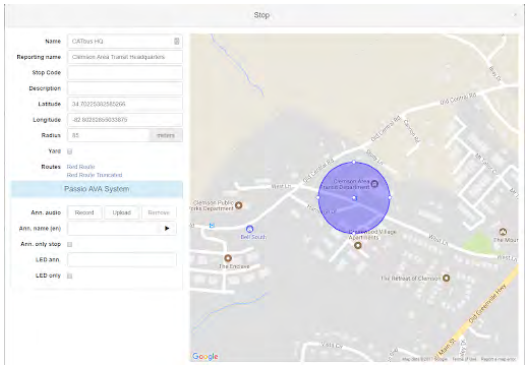


Route blocks, scheduled time points, automated voice announcements, and LED sign controls are all configured within Passio Navigator.



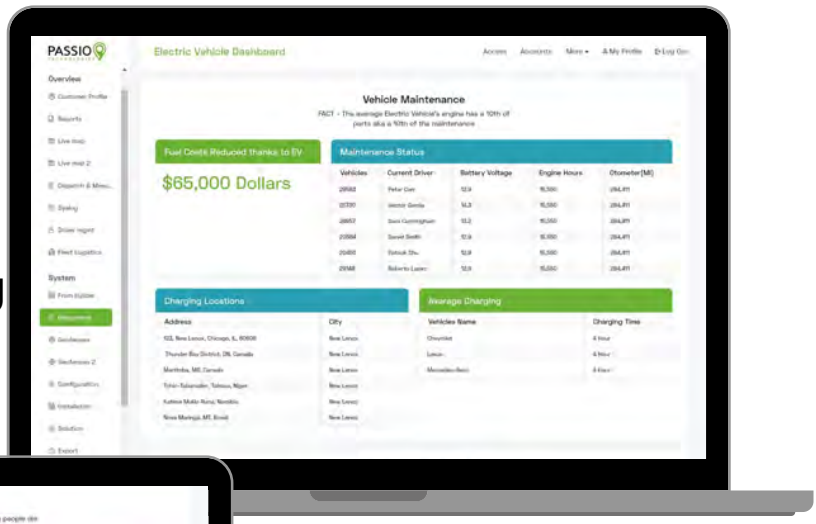


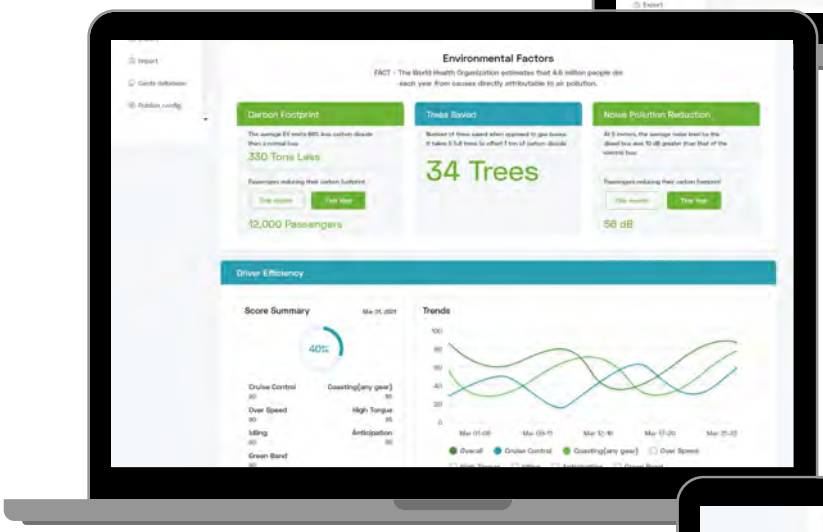
Passio Navigator - Route Timepoint Configuration



Passio Navigator - Stop Configuration

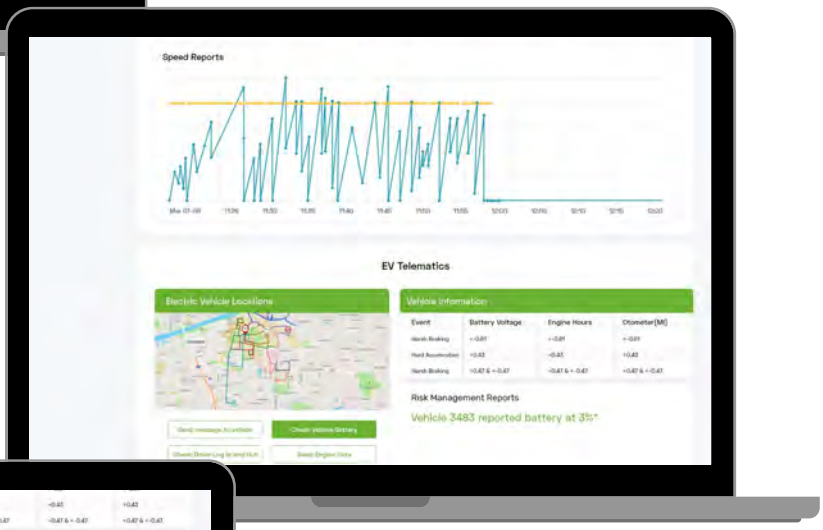
Vehicle (EV) Maintenance: Includes EV maintenance status, money saved, charging locations, charging times, and more.

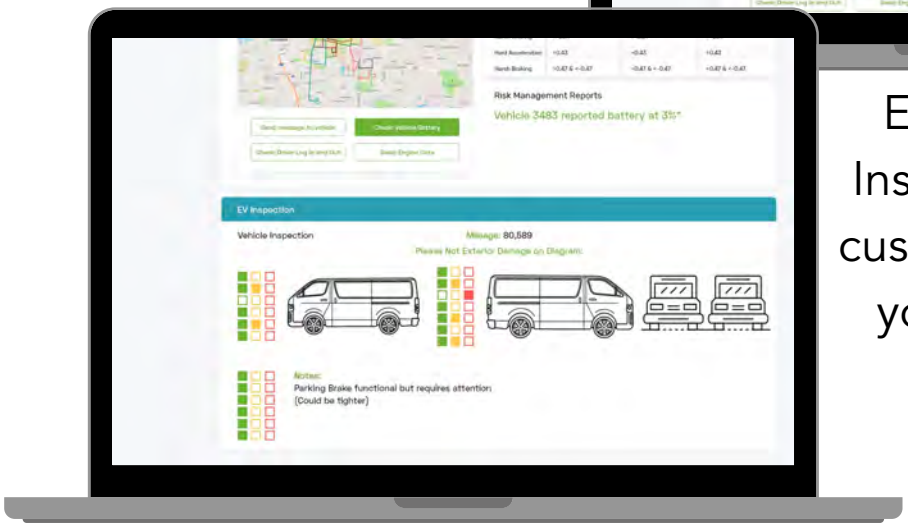




Environmental Factors: Dashboard information including carbon footprint, trees saved, noise pollution, and driver efficiency.

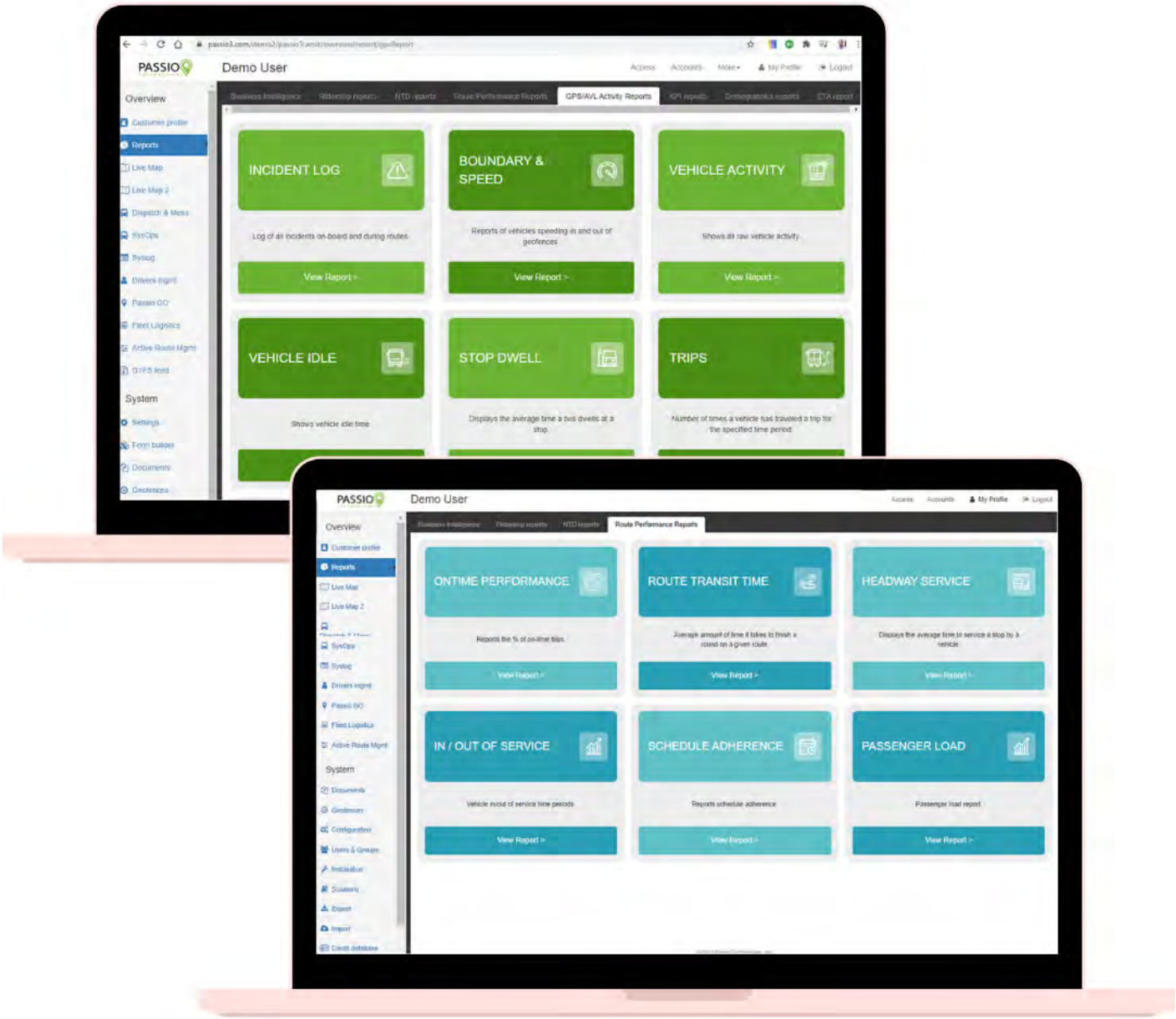
Driver Behavior & Telematics: Monitor speeding, hard braking, idling, acceleration, impact detection, etc.



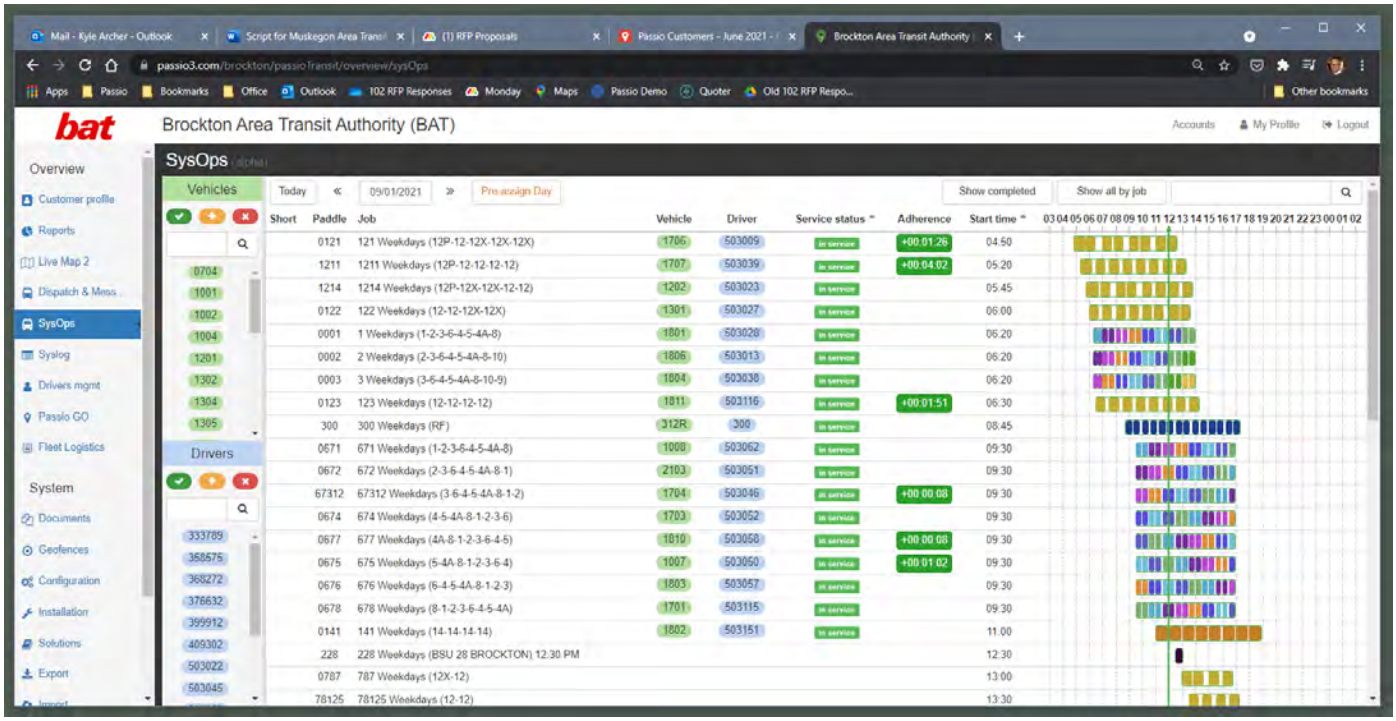


Electronic Driver Vehicle Inspections (eDVIR): Create custom inspection reports of your EVs to monitor their incidents, battery performance, and maintenance.

Passio Navigator - Reports Pages



Passio Navigator - SysOps



Passio SysOps is a powerful "job-centric" view of your bus operations. It allows dispatchers to see what Jobs need to be filled today and for days in the future. Dispatchers can then assign both vehicles and drivers to those jobs, gaining visibility into which vehicles or drivers are not available. Passio SysOps allows agencies to preassign both "drivers to vehicles" and "vehicles to routes" in advance and presents the data visually for the user. Dispatchers can quickly find and fill holes in service using our SysOps dashboard.

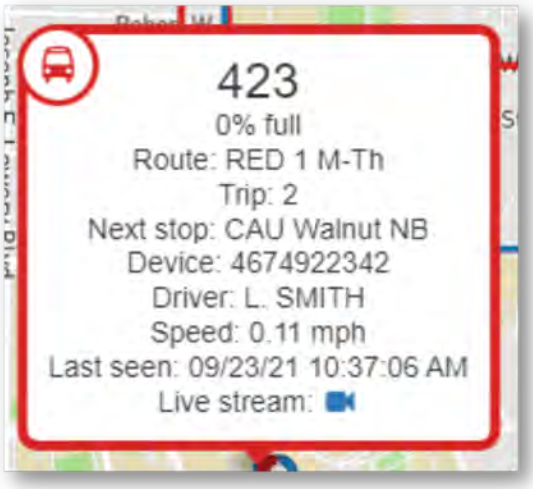
GTFS

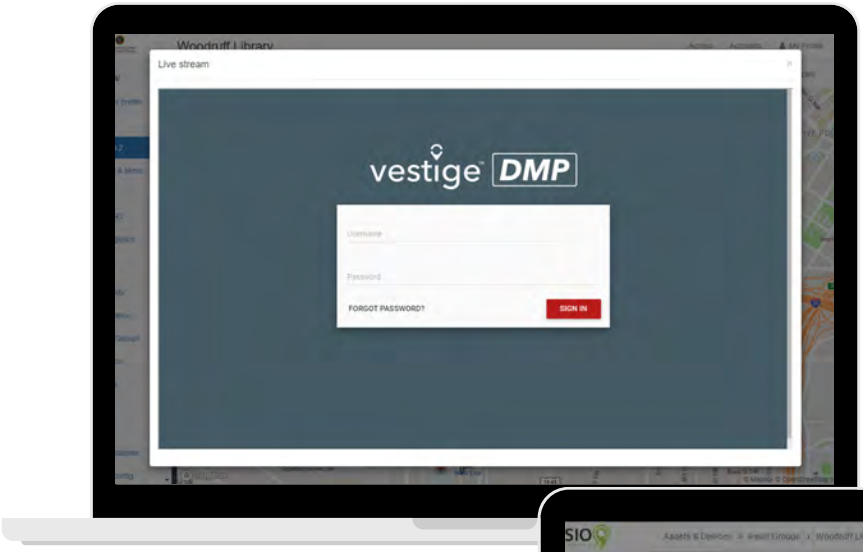
Transit system information can be imported to Passio via GTFS-static data files, other imports (e.g. Trillium), setup manually from GPS coordinates, or performed by Passio staff. If the GTFS import is primarily schedule changes, then it will update the current route schedules, archiving the existing schedules for reporting purposes. If the new GTFS file includes route changes to the stops or paths, then it will be imported as new, but named and displayed the same as the current route. Once Passio has imported raw GTFS data during initial setup, the Passio system can become your active GTFS-static and GTFS-RT provider. All customers have access to update any system entities, such as adding and editing Stops, Routes, and Drivers. Passio Navigator also provides well-formed static GTFS export files for use by any third-party system. Once the system is live, Passio instantly provides all GTFS-RT feeds for Trip Updates, Service Alerts, and Vehicle Positions.

Mobile Video Integration (as an option)

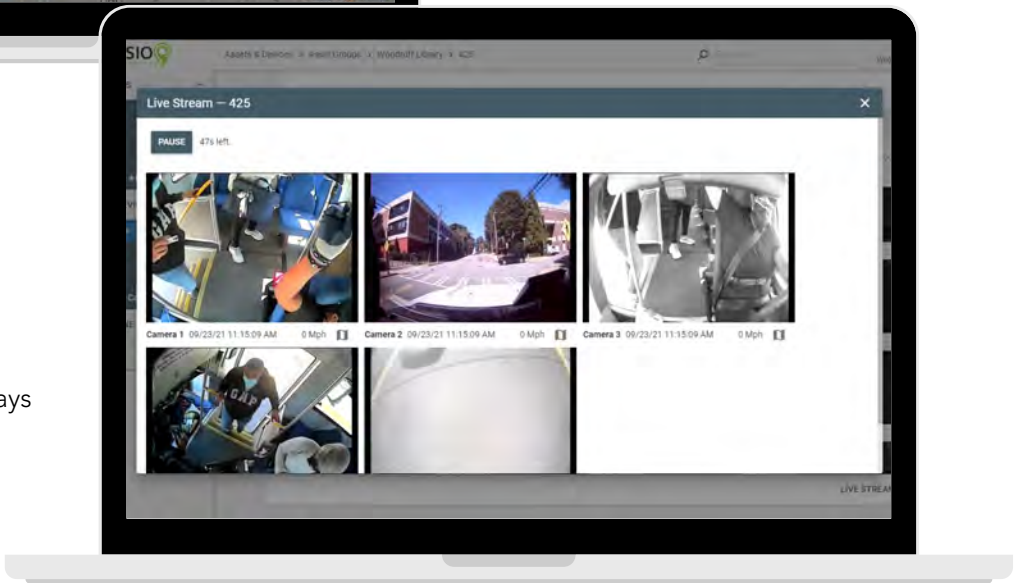
Passio Vision Live Stream

From Passio Navigator Live Map, simply click on a vehicle to view additional information. Then at the bottom of the vehicle info bubble, click on the video/camera icon to begin streaming live. Check in on your drivers and riders any time!





Passio Vision is restricted to those with access. Limit this option to specific agency employees.



Passio Vision Live Stream displays each camera view in real time. Multiple camera layouts and configurations are available to best meet your requirements.

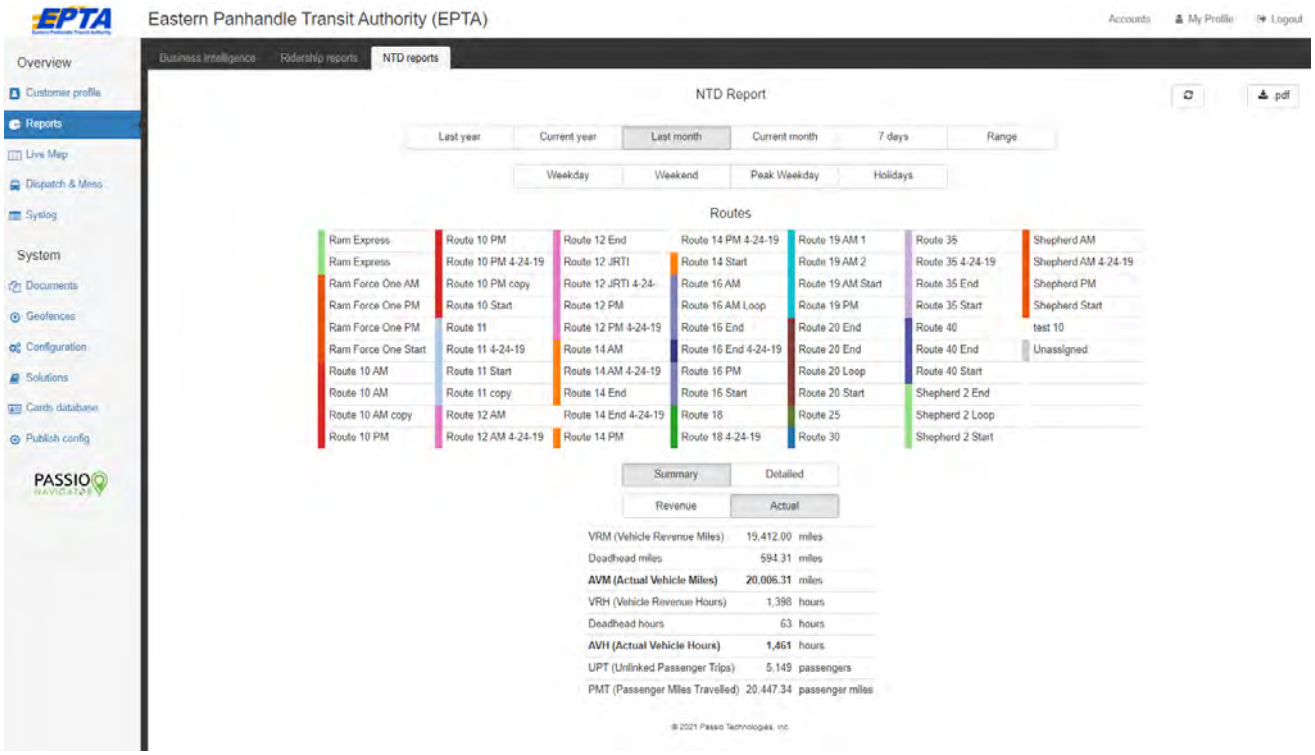
PASSIO NTD REPORTING & CERTIFICATION

PASSIO TECHNOLOGIES

Passio NTD Reporting Samples

Our robust Passio NTD reporting module provides VRM (Vehicle Revenue Miles), Deadhead miles, AVM (Actual Vehicle Miles), VRH (Vehicle Revenue Hours), Deadhead hours, AVH (Actual Vehicle Hours), UPT (Unlinked Passenger Trips), PMT (Passenger Miles Travelled) by time period and by weekday/weekend, etc. Passio offers customized NTD reporting that will calculate and extract the metrics required for compliance. The Passio APC solution will provide all 'Actual' data (passenger miles and stop counts) required for NTD reporting. Your account manager will work with you to set up your personalized NTD sampling schedule and Passio will support your certification process. Our integrated Hella 3D APC has been granted NTD Certification Approval.

Passio NTD Summary Report:

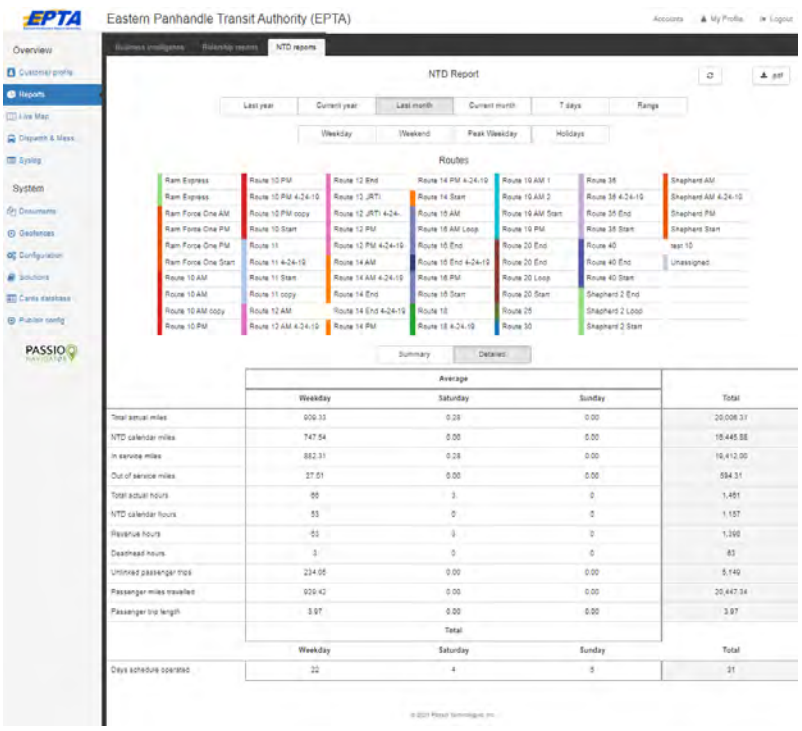


Our NTD Summary Report provides all required NTD summary metrics (both Revenue and Actual summaries are included). These results can be filtered by date range and route(s).

Passio NTD Weekday Route Filter Report:

Our NTD Filter Report provides all required NTD summary metrics by date range, day(s) of the week, and selected route(s).

Passio NTD Detail Report:



The following NTD details (totals and averages) are provided by date range and selected route(s). Metrics include: Total actual miles, NTD calendar miles, In-service miles, Out of service miles, Total actual hours, NTD calendar hours, Revenue hours, Deadhead hours, Unlinked passenger trips, Passenger miles traveled, Passenger trip length, and Days schedule operated.

NTD CERTIFICATION PROCESS

Passio Automatic Passenger Counters (APCs) automatically count passengers as they board and alight using sensors (3D bi-directional electronic imaging) without any interaction from vehicle operators. These counts are tagged with time, date, vehicle, route, latitude, longitude, and stop information for reporting and tracking purposes.

Transit agencies must submit both a benchmarking plan and a maintenance plan to certify the accuracy of their APCs. To certify APCs, manual counts must be made on a cross-section of relevant trips, routes, and vehicles. The manually counted data is compared to the recorded APC counts found in Passio Navigator's reporting tool for accuracy within acceptable thresholds.

Once the initial APC data has been confirmed and submitted, agencies must conduct an annual maintenance study to calibrate the APCs after the benchmark year. Passio has developed a comprehensive certification support process to fully aid and assist our customers with all the steps necessary to support them as they work to certify APC counts under the FTA requirements.

To be certified, the APC system must meet the FTA's 95% confidence and 10% precision levels for count accuracy. The Benchmarking Plan includes the following procedures for the first year an agency uses APC data for NTD reporting purposes.

- A sample of one-way vehicle trips that covers a representative time period, within one year.
- A sample of different vehicle types and, if applicable, different automated passenger counters.
- Comparison of parallel APC data and manual data tested for statistical equivalence.
- Adjustments, if necessary, of UPT (Unlinked Passenger Trips), APTL (Average Passenger Trip
- Length) and PMT (Passenger Miles Traveled) to replicate the data produced by the manual
- check.

The maintenance plan includes procedures to calibrate APCs every year after the initial benchmark year using a modified validation plan to ensure the upkeep of the agency's certification. Ride checkers are assigned to specific routes to collect UPT and PMT data. This data is compared to the APC collected data for comparison of statistical variance between the data sets. The maintenance study is conducted annually following the initial year. Documentation of results of the study are submitted to the FTA annually.

Passio will work with your agency to gather vehicle information such as make, model, year, and number of doors. Passio will document peak versus off peak ridership times and types and quantity of each APC model in use. This information will be analyzed by Passio to create a sampling plan that meets FTA data requirements.

Next, we will provide you with a sampling template that your ride checkers will use to fill out during the sampling trips. This template will include basic information such as route, stop, vehicle, start and end times, number of passengers boarded/alighted, and the odometer readings at each stop. Finally, Passio will provide your agency with an Automatic Passenger Count Certification Checklist.

The checklist includes information such as APC vendor/installation date, process of selecting trips to sample, internal agency procedures, FTA required confirmations, and sample collection methodology descriptions. Once these three steps have been completed your the agency will have all the documentation necessary to submit the APC certification plan to the FTA for review and final approval.

Passio Technologies - NTD Support

AUTOMATIC VOICE ANNOUNCEMENTS

EASY AUTOMATIC VOICE ANNOUNCEMENTS

Automatic Voice Announcements inform riders of the current route, stop, and other programmable information. No action from the operator is required, as AVA can be set up to begin when entering any custom geofence. Specific announcements can be made on exact dates, or scheduled times, like every game day.

PASSIO TECHNOLOGIES

Solution: Automatic Voice Announcements

Main Features

Announcement Abilities

Announcements can be in up to 3 languages at each stop, chosen from 130 different options. Customers can use songs, pre-recorded messages, and a number of different triggers. Use geofence triggers, timed announcements, doors opening sensors, and more.

Geo-Fences

Setting up geofences is easy. Simply edit the geofences using Passio Navigator on the live digital map.

Navigator

Our cloud based solution, Passio Navigator, can be used to manage all AVA announcements. Upload pre-recorded information, or reprogram announcements completely with text-to-speech.

Audio Interrupt

We can also allow for audio to be interrupted on vehicles if there is already existing sound playing, such as a radio.

Hardware Setup

Hardware setup is simple and handled by the Passio Install team. Customers also have the option to add external announcement speakers.

We experience the world through our five senses and the two that we most heavily rely upon are vision and hearing. Passio's AVA solution provides passengers with all necessary information to make their ride as smooth as possible. It is simple to set-up, robust in functionality, and easy for operators to use in the field. AVA announcements are set, maintained, and changed by using the stop profile within Passio Navigator™. There are several customizable options including: announcing current stop, next stop, and next stop on exit of a geo-fence. Our system will also allow customers to include both a route announcement and an additional custom announcement. A good example would be if there is a football game, the system could announce the stop name as well as a shout-out to their team.

Our system meets two specifications for all transit systems: complying with ADA (American's with Disabilities Act) requirements, and providing passengers with an amazing "journey experience." We recognize that passengers need different information depending on purpose and ridership. Therefore, our AVA system has eleven (11) settings which can be customized at each stop on each route. Our standard solution contains this level of custom configuration:

- Ability to announce in over 130 languages
- Announcements in up to three different languages at each stop
- Announcing stop and route name
- Announcing next stop upon entering geofence
- Announcing next stop on existing geofence
- Announcing upon door open on interior speaker
- Announcing upon door open on exterior speaker
- Announcing upon door open in three different languages
- Announcing at a specified radius point
- Playing pre-recorded messages or music at any stop

Customers have full access to make all updates and adjustments to routes, stops, and announcements, but if it's preferred, Passio will manage all edits, updates and adds for our customers at no additional charge. There is no limit to how many stops, routes, or messages can be added, stored, or played using the Passio AVA system and each device has 4GB of data storage on board the bus.

AVA Configuration & Set-up

The entire AVA system is fully managed within Passio Navigator™. Customers have access to stops, trigger points, routes, and vehicles. The interface is flexible and straightforward, and is designed to grow with system needs. Training is simple and support for updates and remote assistance is unlimited and can be requested well in advance for testing and confirmation.The number of stops and announcements that the system can support is unlimited. All stop announcements are triggered by GPS location, route, and time criteria. Trigger points (not at specific stops) may be added to include key connection points and business centers, as well as public service announcements. They can be triggered by route, direction, and GPS location.

Features and Functionality

Variable Stop Radius – each stop radius can be set by the map or simply typing in the radius field. This feature allows the user to control entrance and exit triggers for each stop.

Exact Pronunciation – the on-board voice synthesizer provides the highest level of sound quality and volume control. The system allows for phonetic spelling of any word to ensure correct pronunciation.

Announcement Event Control – announcement behavior can be controlled for each route stop and/or each trigger stop on each route independently of all others. This allows the user to control the information announced to ensure that enough information is provided, while avoiding passenger annoyance and confusion by creating noise overload. Any authorized user can change the stop announcement simply by entering it in Passio Navigator.™

- Announce Current Stop Name (Yes/No)
- Announce Next Stop Name (Yes/No)
- Announce Route Name (Yes/No)
- Announce Next Stop Name on Route Exit (Yes/No)
- Delay Voice Announcement (# Seconds)
- Trigger Stop Only (Yes/No)

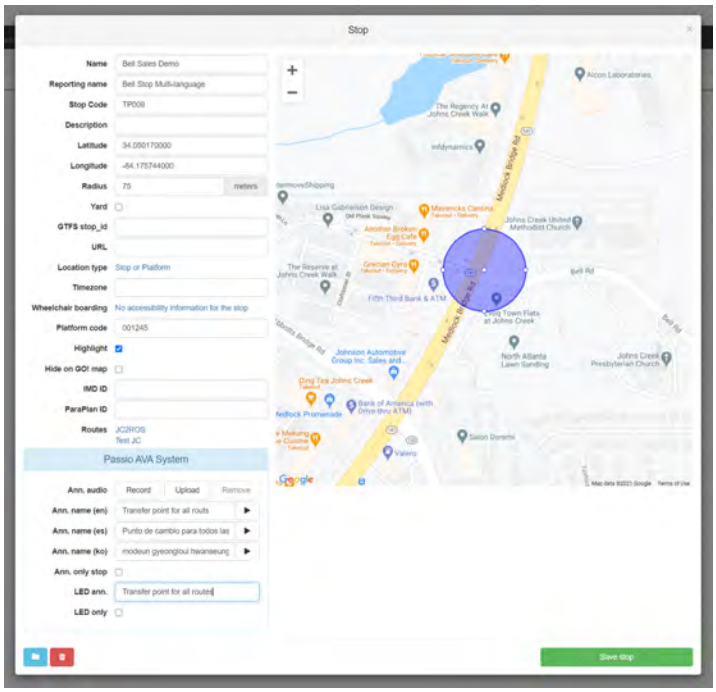
Announcement Scheduling

Each announcement can be scheduled to play on a specific date, day of the week, or during a date and/or time interval. Scheduling control can be applied to a specific stop on a specific route.

Audio Hardware Integration Options

The Passio AVA solution has the capability to integrate and provide audio hardware that enhances the capabilities of your system. For customers requiring these enhanced deliverables, our solution has the following integrated features:

External Speaker Announcements – the system has the capability to detect if a stop is noted as an external announcement stop. It will electronically detect the door open status and send an electronic relay signal to the correct speakers to make an announcement as internal only, external only, or both internal and external.



Audio Interrupt

The Passio AVA system is typically configured to be the primary audio source on the vehicle. The system can be configured to enable an additional audio source such as a radio head unit (AM/FM/CD/DVD player) to be the primary audio source and for the automated voice announcement system to interrupt when making an announcement. This option often requires a replacement of both the existing on-board head unit and the addition of audio control equipment.

Multi-Language Support

Announcements may be made in any available second language using the on-device voice synthesizer.

Sound Files

The Passio AVA system supports the ability for users to upload a sound file to play at a particular route stop or trigger stop. The sound file can be played independently or in addition to the generated stop announcement. Authorized users have the option to record files directly within Passio Navigator™ or to upload independently created files.

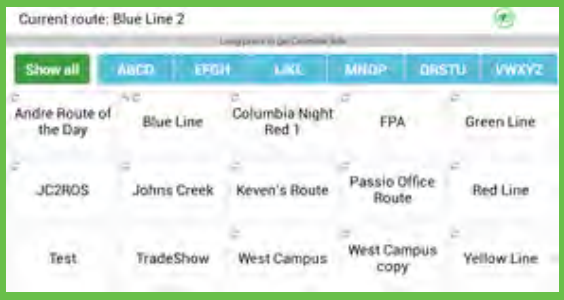
Stop Level Settings - are configurable for each route

On-Board Operation

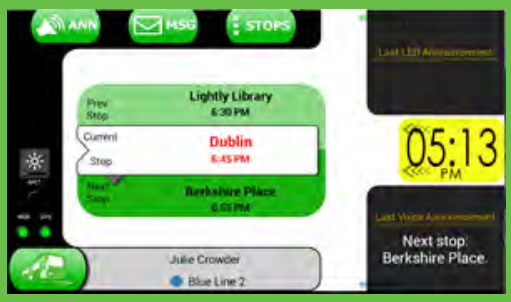
All announcements are automatically triggered by the GPS location of the bus and require no interaction from the operator. Logic is built into the configuration profile to prevent overlapping stop announcements by using stop order/directional algorithms.

Getting Started: Operator selects their name, no complicated codes or mysterious procedures.

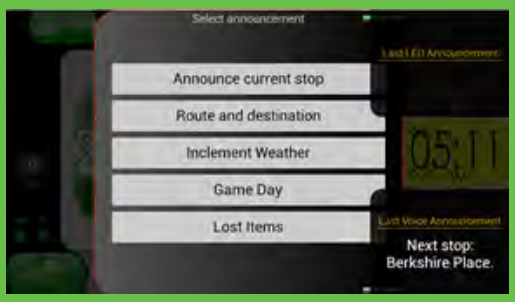
Routes are preset and automatically updated on the device. A simple tap on the screen starts the AVA.



Standard operations screen provides the operator with all of the information required to fully use the AVA system.

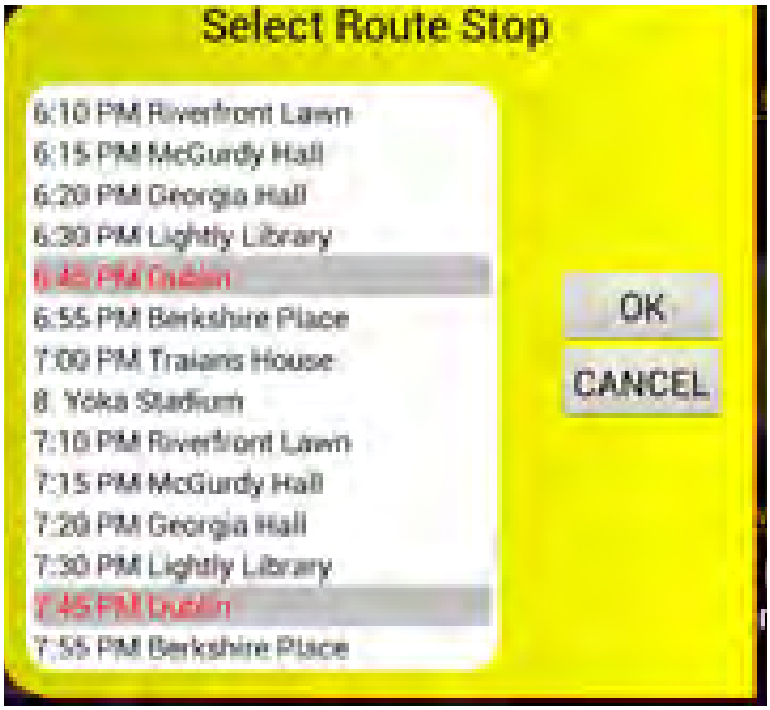


Operators can trigger preset special announcements from the MDT and repeat a stop location for ADA compliance.



Driver Managed Stop Jumps

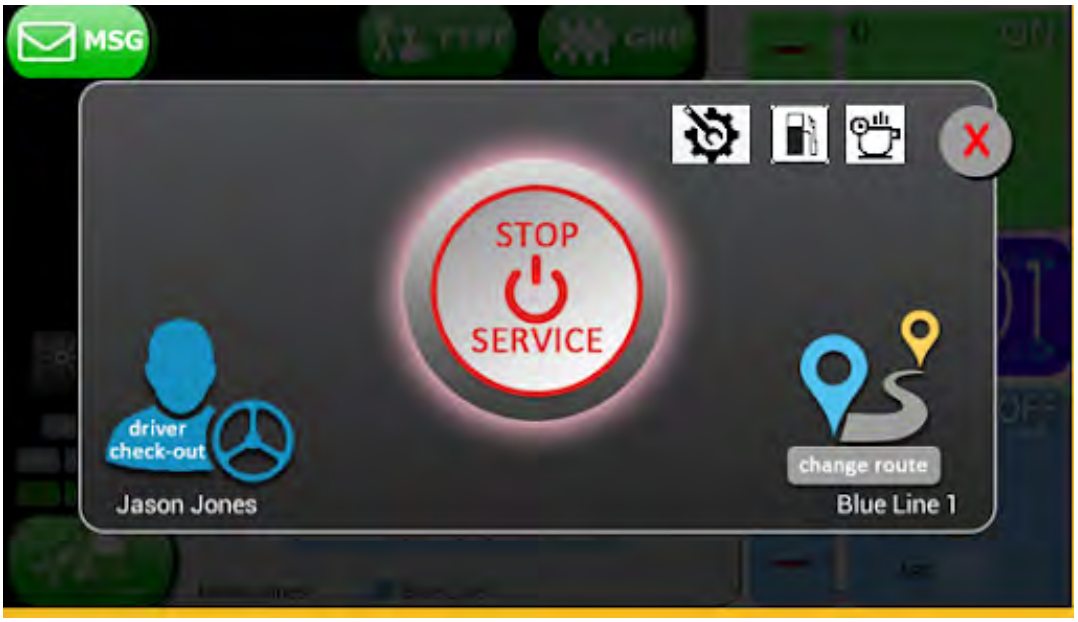
Situations occur where a driver must skip a stop for reasons such as construction, congestion, or blocked routes while on route. Dispatch can adjust routes using the Detour function within Passio Navigator when this information is known. If the driver must make the correction on route, Passio's AVA system offers operators a simple and intuitive method to move around the skipped stops without confusing announcements when driving past skipped stops.



The Passio system provides the mobile data terminal, software, logic, and connectivity to on-board existing audio equipment. Each Mobile Data Terminal (MDT) is outfitted with a cellular data connection that automatically checks for configuration profile updates (or they can be manually downloaded by the operator). These profile updates provide all of the information to trigger automated voice announcement messages.

Out of Service

When the vehicle operator or dispatch places a vehicle out of service, all voice announcement functionality immediately ceases. The action is recorded in the Passio Navigatore Incident log, where time, date, latitude, longitude, driver, route, and vehicle number are tagged to the log. For integrated systems, LED signs will change messages to 'Not In Service' and the vehicle will no longer be viewable on Smartphone applications and public viewers.



PASSIO SIGN INTEGRATIONS

Passio can integrate LED signage with Automatic Voice Announcements, using the Mobile Data Terminals. The combination of signage and announcements enhances the journey and overall experience for all riders. LED signage is triggered by the MDT, which uses geofences, thus eliminating any operator involvement.

PASSIO TECHNOLOGIES

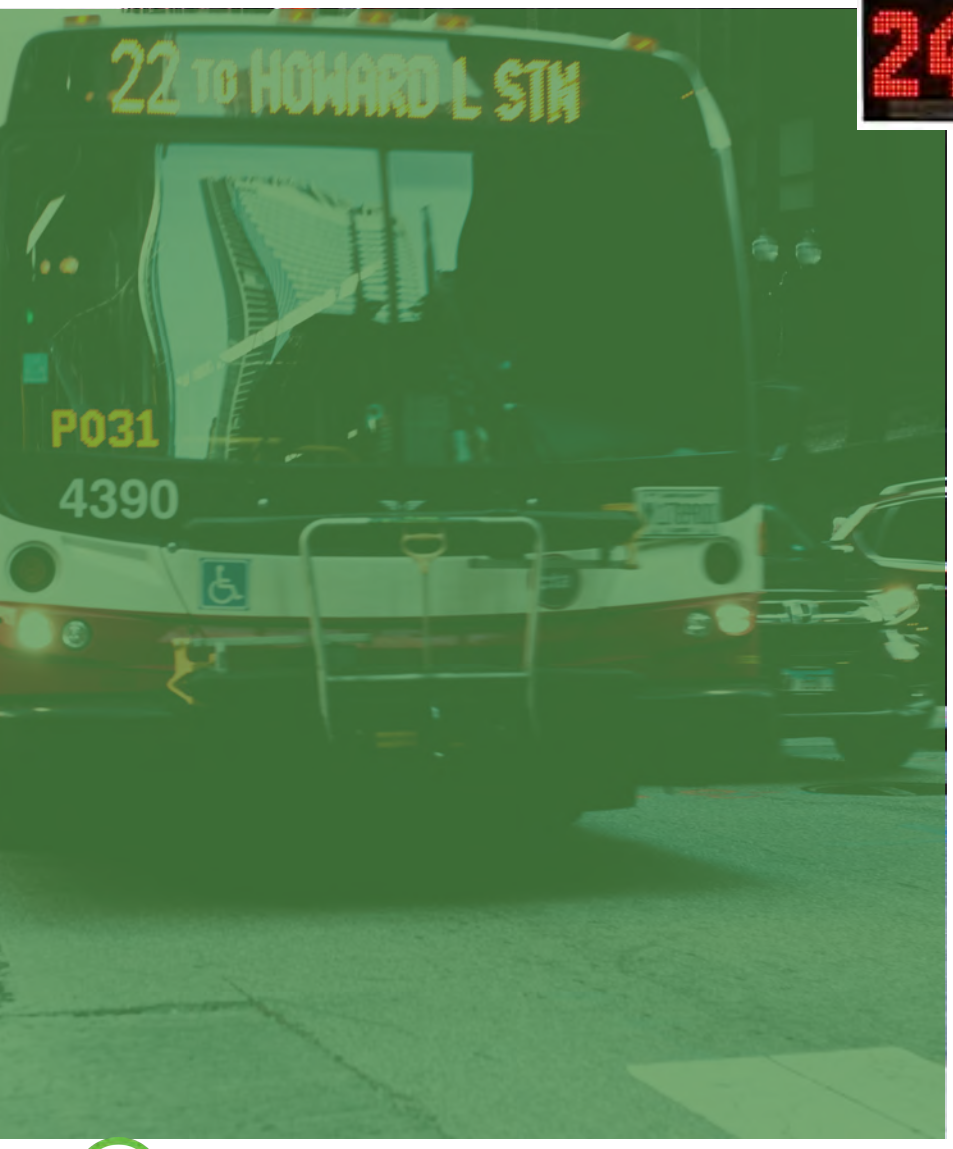
Solution: LED Signage

Main Features

Message Triggers	Field Capabilities
LED sign integrations can be set up to constantly rotate, or be set off when entering and exiting a geofence. Both settings can also overlap one another.	Use fixed and/or dynamic field options to populate information about routes, stops, and points of interest, etc.

Calendar/Schedule	Programing and Set Up
LED Messages can be set according to a calendar schedule. For example, weekend and weekday routes can be completely different.	Customers have full access to edit and customize LED messaging through Passio Navigator.

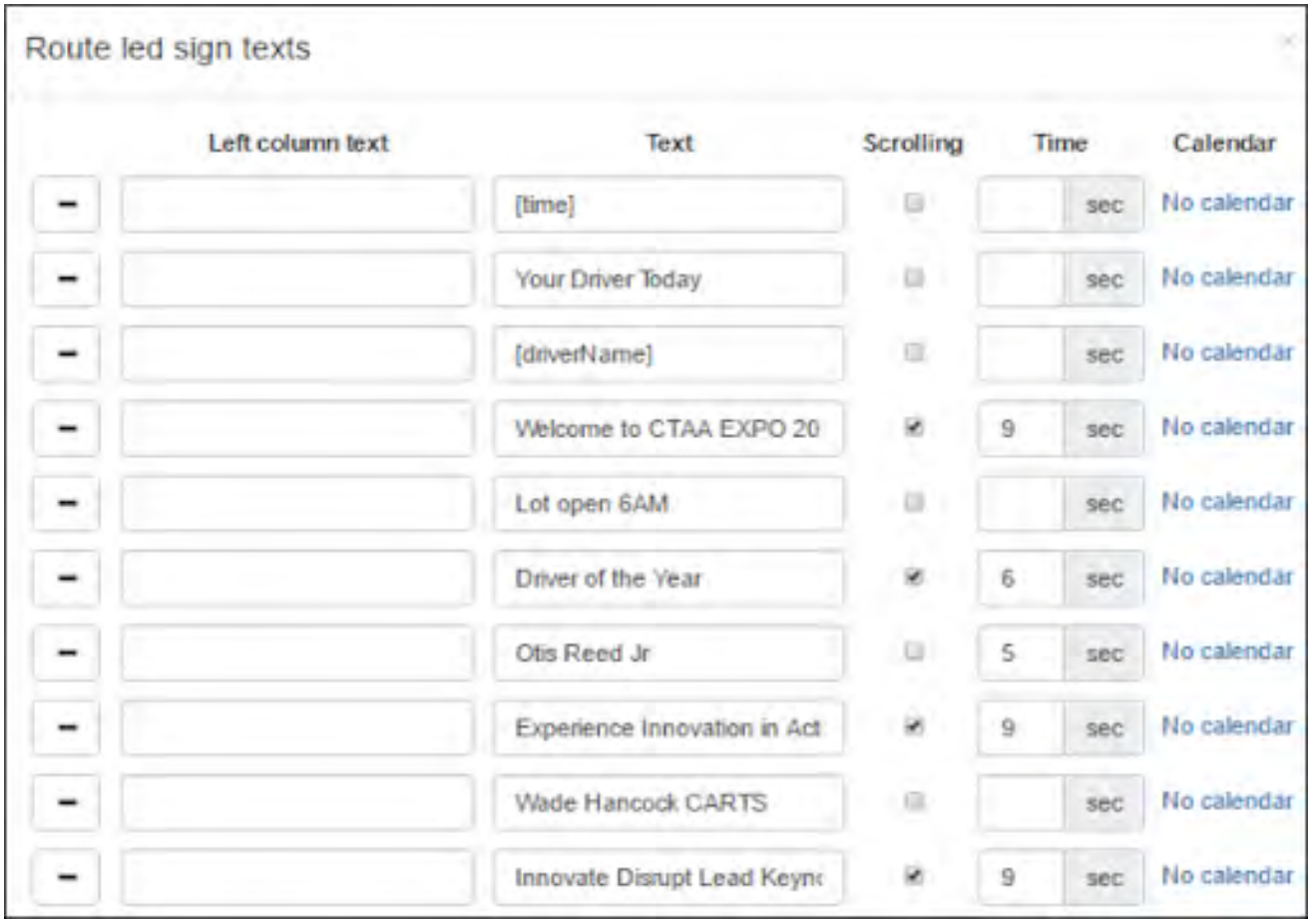
As important as audio is, visual cues are just as crucial to riders. LED signage may be integrated with Passio AVA via serial connection protocols, sending unique command line instructions to each sign within the vehicle's network when using TranSign signs. Other manufacturer signage that accepts J1708/J1939 commands may be triggered by the Passio MDT as well. All commands are generated by the Mobile Data Terminal. The instructions are entered in the customer configuration profile using web-based Passio Navigator™. The information is published and then automatically downloaded via wireless data connection to each MDT on-board the vehicle.



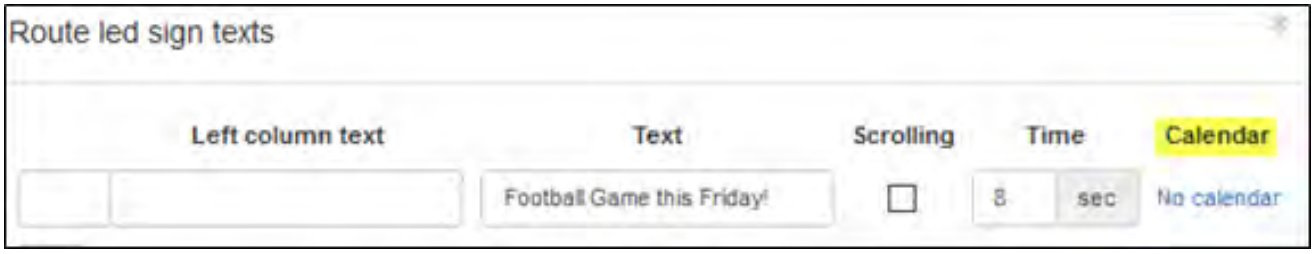
The GPS-based message progression helps to eliminate driver distraction and to encourage safer driving habits. Communication with your riders is integral to your rider experience and when your destination information is clear, accurate, and timely, you are fulfilling your promise to deliver excellence to your passengers. Our system is easy to use and simple to set-up, so even those who are not tech-savvy can schedule announcements in a few clicks.

Multiple LED signs may be configured and controlled within the configuration profile. The screen shot above illustrates how physical signs are added and accessed by the Passio platform and the Mobile Data Terminal.

The sign messaging details are programmed within the 'Text' field in the profile. Data from the Mobile Data Terminal can be passed to the LED sign, as can custom messaging. The message can be fixed or scrolled, and the time the message displays can be set as well. The calendar function allows the system user to schedule specific dates and times for the message to display.



The customer has full access to enter public service announcements and advertisements into the configuration profile for both the LED signs and the AVA system. These messages can be programmed in advance or in near real-time. The LED announcements can also be scheduled using the calendar function within the LED announcement screen.



A visual message is triggered in Passio's integrated solution in one of two ways:

Vehicle enters the geo-fence. The stop name is displayed, along with a fully customizable preceding message, I.e. "Now Approaching" or "Next Stop Is".

Constantly rotating messages. These messages are set at the route level and rotate as long as the vehicle is assigned to the route via the MDT.

Rotating messages can be configured to either interrupt or not to interrupt geo-fence triggered stop announcements.

Any fixed message can be displayed and the amount of time it will be displayed can be set by the message. Whether or not the message scrolls can be independently set.

Have all of the same capabilities as fixed fields, but can dynamically populate the following information: driver name, time, date, next stop, current stop, route, bus number, and the last stop on the route.

Can be calendar controlled as well, meaning they can be scheduled by day, date, or time as to when they will display.

Rear LED Destination Signs (optional)

TRIPMASTER BY CTS SOFTWARE

FOR DEMAND RESPONSE

PASSIO TECHNOLOGIES

SYSTEM ARCHITECTURE/DATA MANAGEMENT

TripMaster is fully hosted, 100% web-cloud based and is optimized for Google Chrome. System data is stored in Microsoft SQL Azure (RTM) relational database, hosted in the Microsoft Azure Cloud for HIPAA compliance as well as ePHI and FIPS encryption. Users are guaranteed a minimum 99.9% uptime with multiple fail-safes; our server architecture incorporates redundant instances, Always-On configuration, and other technologies to ensure you always have access to your software. CTS performs a database backup every 10 minutes, and a full system backup nightly

Demand Response

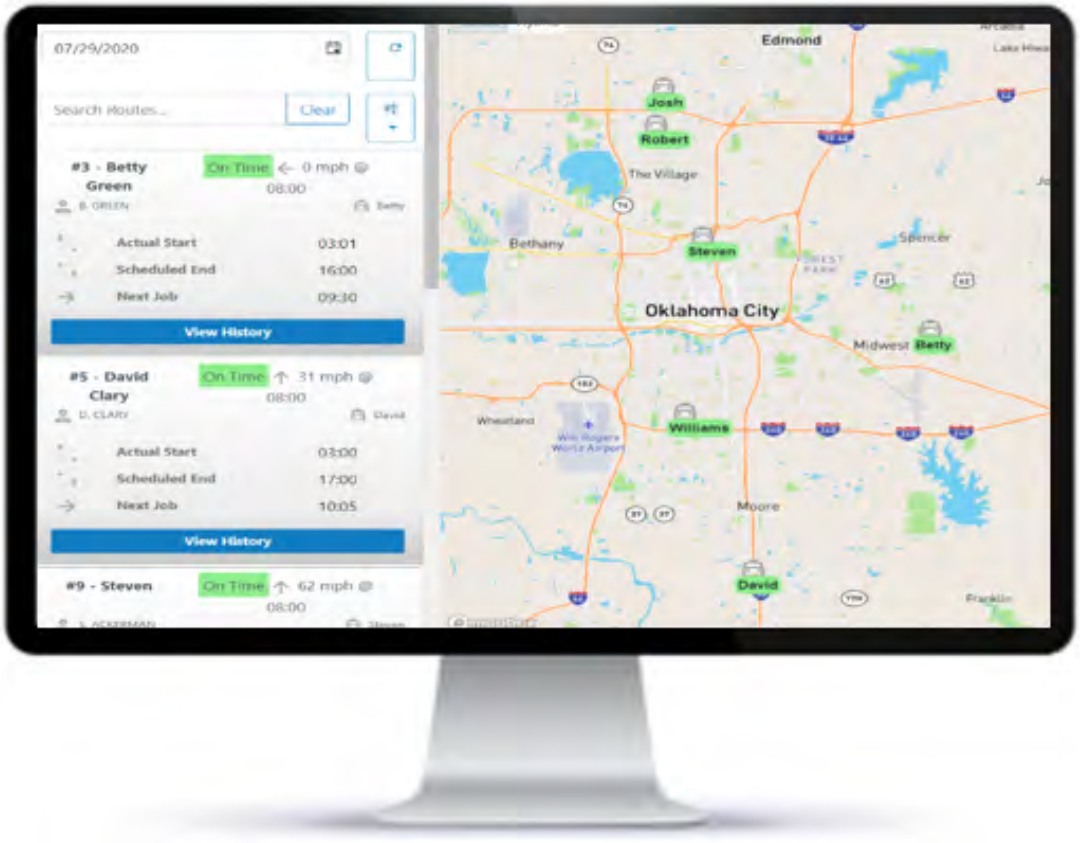
- Automated computer-assisted scheduling and dispatching
- Passenger call reminder interface for night-before and on-the-way calls
- Electronic bus pass ticketing solution (TripPass)
- MDT/AVL tablet Interface (ParaScope)
- Digital, customizable pre-trip and post trip inspections on ParaScope
- Flag stop functionality
- Preventive Vehicle Maintenance Module
- Rider Portal interface for online passenger trip requests (TripPortal)
- Multiple user-definable accounts to accommodate agency invoicing, reporting, etc.
- Operational statistical reporting by agency, driver, vehicle, riders
- Custom reports builder
- Vehicle fuel and fluids reports
- Paper or electronic Medicaid claims
- Vehicle breakdown and accident tracking
- Customizable subscription trips
- Advanced demand-response reservation booking
- No-shows and cancellation tracking
- “Suspend service” feature to temporarily suspend riders without deleting them or their rides
- “Expiration” feature to prevent inadvertent booking without eligible accounts
- Print capability for trip sheets and special instructions for any rider
- Views of ride pickup and drop off sites and planned routes with integrated mapping
- Daily validation audit tool to catch and immediately fix illogical input errors on driver time, odometer readings, etc.
- Trip tracking by purpose, in- or out-of-county, urban or rural
- Special assistance management to ensure that passengers requiring accessibility devices are booked on vehicles capable of transporting them

CAD/AVL and Scheduling

Tripmaster uses MapBox professional series GIS data to power our geolocation-based applications. MapBox updates its dataset at least once a quarter and is considered the leading professional toolset for all serious geo-location and fleet management applications. Tripmaster can import a selection of GIS and SHAPE files from third-party GIS systems. In the example below, a route is selected on the menu tree on the left, and all related services running on that route are displayed in the center list. The green bars are the progress bars for individual buses with the color indicating that the buses are tracking. Trip details for the highlighted bus are displayed in the box beneath the center list.

Our breadcrumb style vehicle location maps are a great help in assessing service deficiencies. Below is a map view of the same performance information as above. Each green circle represents the point where bus GPS coordinates were reported.

As with all map views, the window can be zoomed in and out using a scrolling wheel mouse or the tool bar in the lower right hand of the map window. Determining the current position of all vehicles – either in real time (i.e. now) or a specific period (i.e. between 0600 and 0610) is also done in the context map.



Operator Generated Messges

Operator generated messages can be managed from any authorized internet-enabled device, such as a desktop PC, tablet PC or internet-enabled smartphone.

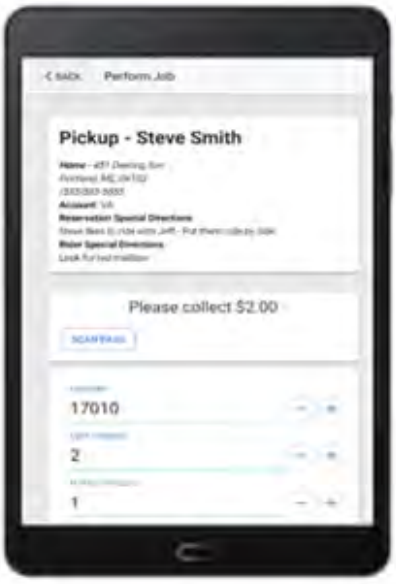
Authorized personnel can select free text messages or a predefined message for transmission to any bus drivers. Text messages will be received by the operator on the MDT or road supervisor with mobile internet-enabled device. We generally limit the text-based messages from the MDT to the dispatch operator to the use of canned messages for safety and operational reasons.

Authorized operators will be able to manage informational messages displayed on wayside electronic signage and the public website from the same proposed application. Individual signs can be selected to provide localized information to the public, such as route detours or upcoming road closures.

Mobile Data Computer (MDC)

Upon review of the specifications contained within the RFP and question and answer documentation, we are confident in stating the Intelligent Transportation System suite of hardware and software is highly compliant with the requirements as detailed.

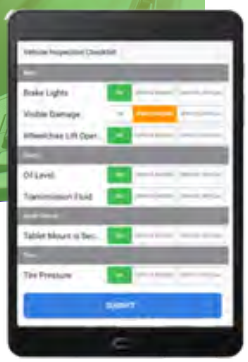
MDTs allow drivers and dispatchers to communicate efficiently in real time, collect information about vehicles, passenger loads, and driver behavior, and GPS information that gets sent back to the office so that dispatchers know these pertinent details about the vehicle. ParaScope acts in part as an electronic manifest, updatable in real time based on changes to trips and rides. Dispatchers can re-assign trips and rides and add and change details of rides and routes that will be updated automatically for the driver.



Drivers can view onscreen maps and receive turn-by-turn navigational prompts, eliminating the reliance on paper maps. Drivers and dispatchers can communicate in real-time via canned or customized text messages so drivers can keep their eyes on the road. Managers can use data collected by this technology to accurately analyze on-time performance and make improvements.

GREAT SATISFACTION WITH PARASCOPE:

"With drivers using tablets, they are more efficient with their schedules and ability to do more trips in a day. Our drivers range from age 25 to 85, and each one has expressed great satisfaction with ParaScope" – BPART, IL.



Electronic Pre and Post-Trip Inspections
As your agency moves in a digital direction, electronic inspections just make sense. When your drivers use ParaScope for inspections, information about vehicle issues is immediately communicated to TripMaster, letting you respond quickly. You can customize your pre- and post-trip inspections as well as acceptable results and hard stops for failed inspection items. The electronic inspection feature is included with ParaScope. There is NO additional charge.

CUSTOMER SERVICE HAS BEEN STELLAR:

"We are extremely pleased that we choose CTS Software. The transition from manual scheduling to automated has gone smoothly. The drivers have transitioned quickly, and the customer service has been stellar" – Winchester Transit, VA.

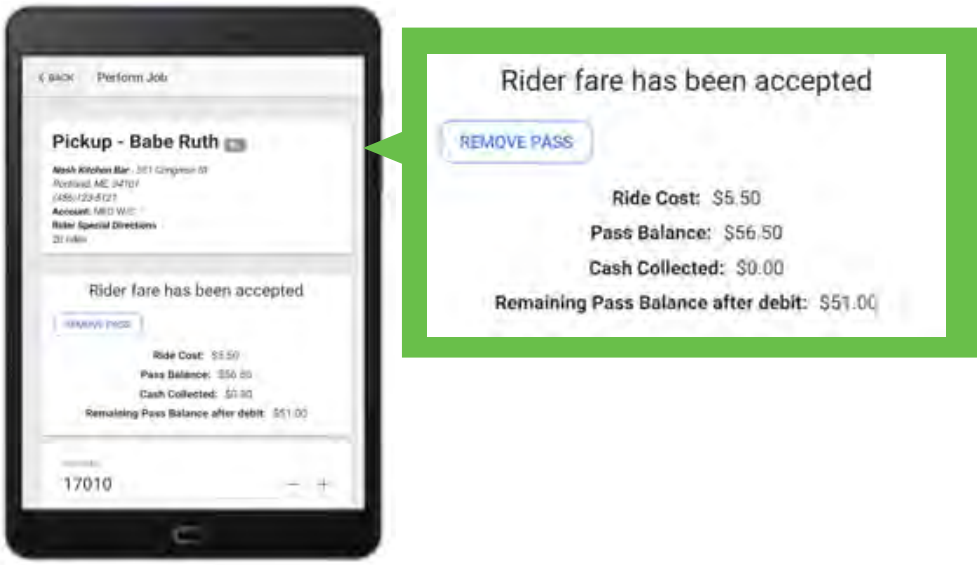
Intelligent Automated Scheduling
TripMaster includes our Auto Scheduler module, allowing users to dynamically batch-schedule all riders for a day at once and/or one at a time for same-day, on-demand trips. This tool optimizes routes for efficiency given your available resources, while following rules/standards for pickup and drop-off windows and ride times created by the licensee.

In all phases of trip optimization, TripMaster's intelligent automated scheduling identifies the best possible solution to improve ridesharing possibilities, decrease deadhead time and miles, increase on-time performance, and provide a positive passenger experience. CTS algorithms coupled with the most up to date map data, street routing, traffic patterns and user controllable settings, TripMaster's intelligent automated scheduling makes highly accurate drive time estimates.

Although a complete automation process is in place, we feel it is extremely important that our customers are always in control of their schedules. For this reason, when running the scheduling wizard, TripMaster will produce three different methods for the end user to review the results with a detailed explanation and make changes that will not be reverted if the scheduling process is ran again.

Electronic Bus Pass/Ticketing Module (TripPass)

Collecting cash fares is time-consuming for drivers and office staff, and a liability to transport and store on vehicles. Eliminate these issues with TripPass from CTS, an optional module to complement ParaScope, our mobile application. Keep better track of fare payments in a way that's safe for your drivers and easy for your riders—they just load a pass at the office or over the phone, your driver scans it when they board, and off they go.



- Save time and stress associated with onboarding case handling
- Reduce the liability of handling and transporting cash in vehicles and in the office
- Increase on-time performance by streamlining driver tasks
- Increase accountability in fare handling
- Track use of passes
- Advertise your agency with professional, custom-designed passes

Mobile App/Online Rider Trip Management

The TripPortal allows interagency communication, letting each agency assign delegates at a coordinating agency who can submit ride requests for certain passengers. The requests are approved or denied by the agency being asked to transport the client. Agency delegates are notified when rides are accepted or denied and given denial reasons. Upon accepting a ride request, a reservation screen appears with all information filled in for final review by the coordinating agency. TripPortal is also designed for online passenger booking of trips.

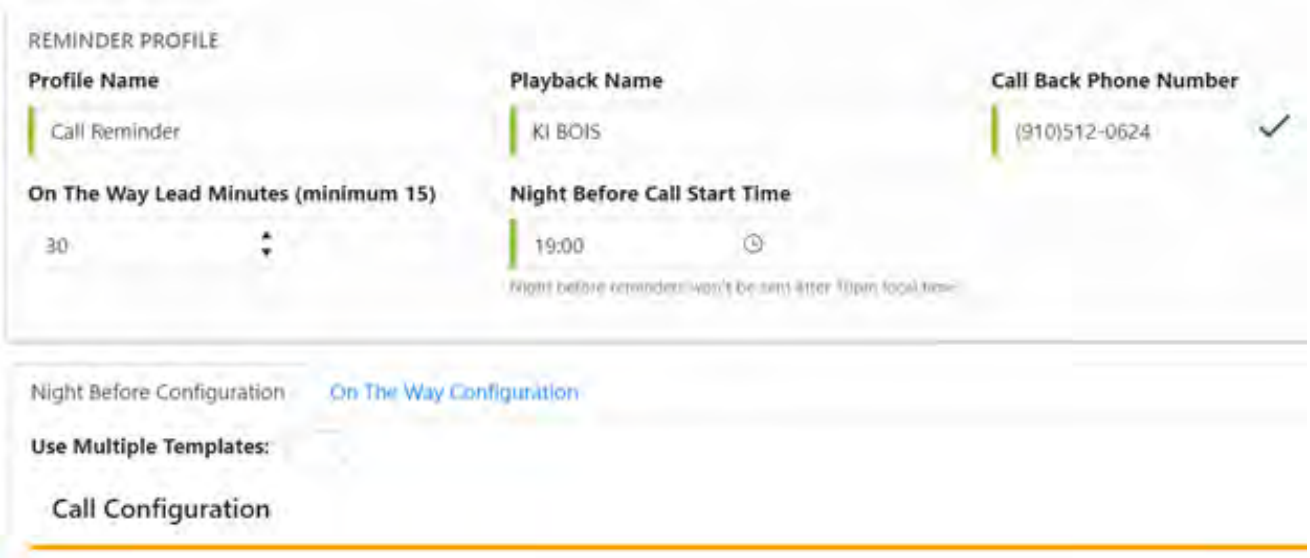
TripReminder (IVR)

With an industrywide annual average of 3.5 percent rider no-shows, we have developed our TripReminder module to help decrease wasted drive time, fuel, and vehicle wear and tear by minimizing this percentage. Your riders can receive a call the night before or shortly beforehand on the day of their pickup, minimizing no-shows and your staff's frustration.

The IVR system requires no effort from your staff—everything is performed seamlessly through TripMaster and remote servers, and because the entire process is web-based, your phone lines remain free the entire time.

FROM 13% NO-SHOWS TO 1%:

"With CTS' Passenger Reminder option, we went from 13 percent no-shows to 1 percent" - Big Bend Transit, FL.



Reporting

A successful ITS platform does not start and end with any one piece. It is important your deployed system relies on extremely strong and powerful hardware, reliable and proven software applications, and road-tested real-time prediction algorithms. However, the true return on investment does not come until all those pieces work successfully together and produce good data.

CTS' TripMaster software is equipped with one of the most detailed, powerful reporting engines in the industry, including customizable pre-designed system reports. The custom reporting module does not require knowledge of Crystal or Ad-Hoc report queries or other reporting methodologies.

SATISFACTION WITH TRIPMASTER:

"Before CTS, I would say, 'give me a couple days.' Not anymore! Choose a report, select your data range and print. We are very satisfied with TripMaster."
- Transportation Plus of Lincoln, NE

Each custom report created can be saved for future use, and there is no limit to the number of custom reports that can be created. All reports are created by queries run, on the back end, through SQL and displayed in Active Reports Web Viewer. All reports and other documents are exportable to formats including Excel, PDF and Word. Our detailed training sessions cover all reports thoroughly.

All state or federally required reports will be added to your TripMaster database at no additional charge. Additionally, we will make an effort during the project management phase to better understand and design reports which might support your agency needs specifically.

Standard reports Include

- Reservation history
- On-time Performance/Live Performance
- Daily Validation
- Revenue data
- Ride data
- Ride status
- No Show
- Ride details
- Ride demand
- Trip data
- Employee payroll
- Vehicle utilization
- Units of service
- National Transit Database (NTD)

A $600 REDUCTION IN EXPENSES A WEEK:

"Since implementing TripMaster at Transit, there has been a reduction in total miles by approximately 300 miles/week and a reduction of 18 hours/week in payroll. That is approximately $600 reduction in expenses a week."- Rutherford County Transit, NC

Vehicle Maintenance Module (Optional)

The Vehicle Maintenance Module includes keeping track of an unlimited number of tasks to help you stay on schedule with your vehicle warranties and other maintenance needs. Set mileage parameters or a duration of time, create vehicle service requests, and add approved vendors for services. From increasing passenger safety, organization and meeting emissions requirements, the seamless interface with TripMaster will streamline your vehicle maintenance.

CTS donates 10% of the monthly maintenance and support fees for every vehicle maintenance purchase to Easterseals, helping support community-based transit and other services for elderly and disabled people across the United States.

TripView - Camera Module (optional)

Liability and poor driving behaviors are unfortunately a source of stress for all transit providers. The use of onboard cameras and accompanying software can drastically reduce this headache. Cameras can help you fight fraudulent or inflated claims and identify driving behaviors that need to be modified. TripView is a complete multi-camera solution that combines quality hardware with the most advanced data monitoring platform to date. In the event of a road incident, you will immediately be alerted and gain access to the event media.

The hardware features include:

- Multi-camera design
- In-demand technology
- 120 degree wide-angle lens
- Various camera options
- Ability to mount an additional camera anywhere
- Video and audio recording
- Tamper-resistant locking cover
- Automated power-up and shutdown
- Compact size

We partner the following software features to complete this camera module:

- Automatic video uploads
- Shock, accident, and driver panic button alerts
- Customizable alerting formulas
- Camera history access
- Live driver feed available 24/7
- Geo-fencing
- Cloud-based video storage

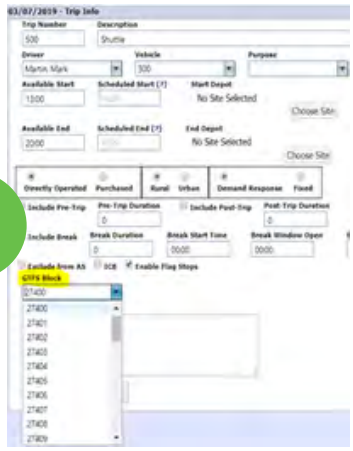
Fixed/Deviated Fixed/Commuter (included with TripPass)

CTS is proposing the fixed/deviated fixed/flag stop module for this project based on the requirements and specifications being requested.

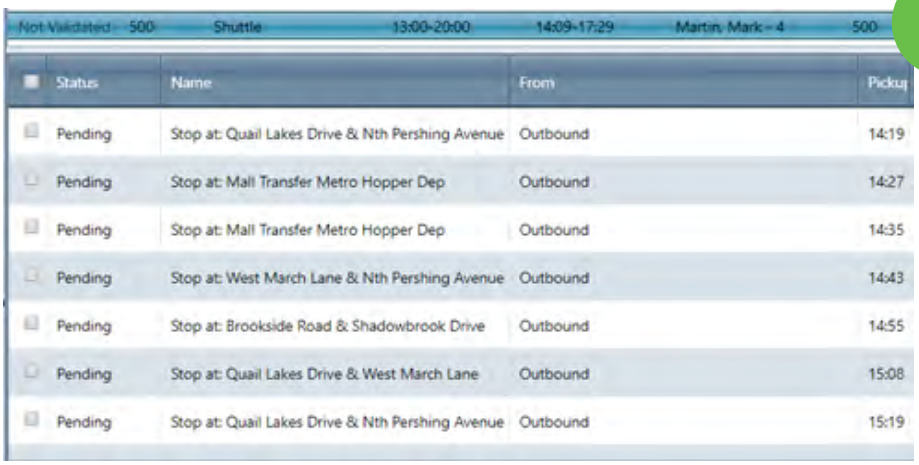
TripMaster combined with ParaScope and TripPass allows agencies the ability to manage their fixed/deviated fixed/shuttle/flag stop services as well as their demand response/paratransit services all in one place...all from one application in the office and in the vehicle.

CTS will import your GTFS data and TripMaster automatically creates a GTFS Block (See figure 1). Once a GTFS Block is selected the stops on that Block are automatically created on your schedule for the timeframe that vehicle/driver is available (See figure 2). For deviated fixed route scenarios, demand response reservations may be scheduled into the Block to maximize efficiency and utilization.

1



2



Status	Name	From	Pickup
Pending	Stop at: Quail Lakes Drive & Nth Pershing Avenue	Outbound	14:19
Pending	Stop at: Mall Transfer Metro Hopper Dep	Outbound	14:27
Pending	Stop at: Mall Transfer Metro Hopper Dep	Outbound	14:35
Pending	Stop at: West March Lane & Nth Pershing Avenue	Outbound	14:43
Pending	Stop at: Brookside Road & Shadowbrook Drive	Outbound	14:55
Pending	Stop at: Quail Lakes Drive & West March Lane	Outbound	15:08
Pending	Stop at: Quail Lakes Drive & Nth Pershing Avenue	Outbound	15:19

Once a driver logs into ParaScope, their schedule for the day appears. Whether they are assigned to a route that has GTFS Blocks or a route that is doing demand response reservations, the option to "Perform Flag Stop" can be available and is customizable per route. Figure 3 below demonstrates the view for a driver with the GTFS Block selected in figure 1 and 2. You will notice Scheduled Stop times with their on-time performance displayed in real-time. You will also see the ability for the driver to perform a flag stop at any time.

Driver view of scheduled fixed stops with the "Perform Flag Stop" option.

3

When a driver chooses to perform a scheduled stop or selects the "perform flag stop" option, they will then either select "onboard pass less" or scan passenger passes which keeps a perfect log of the passenger's information that board and deboard the vehicle for superior data analysis. In figure 4, you will notice that there are different passenger types (60+ and General) that have different fares. Passenger types are customized by your agency and different rates are applied based on your rate structure. Also showing are the total passengers on board as well as how many the driver has selected for this stop.

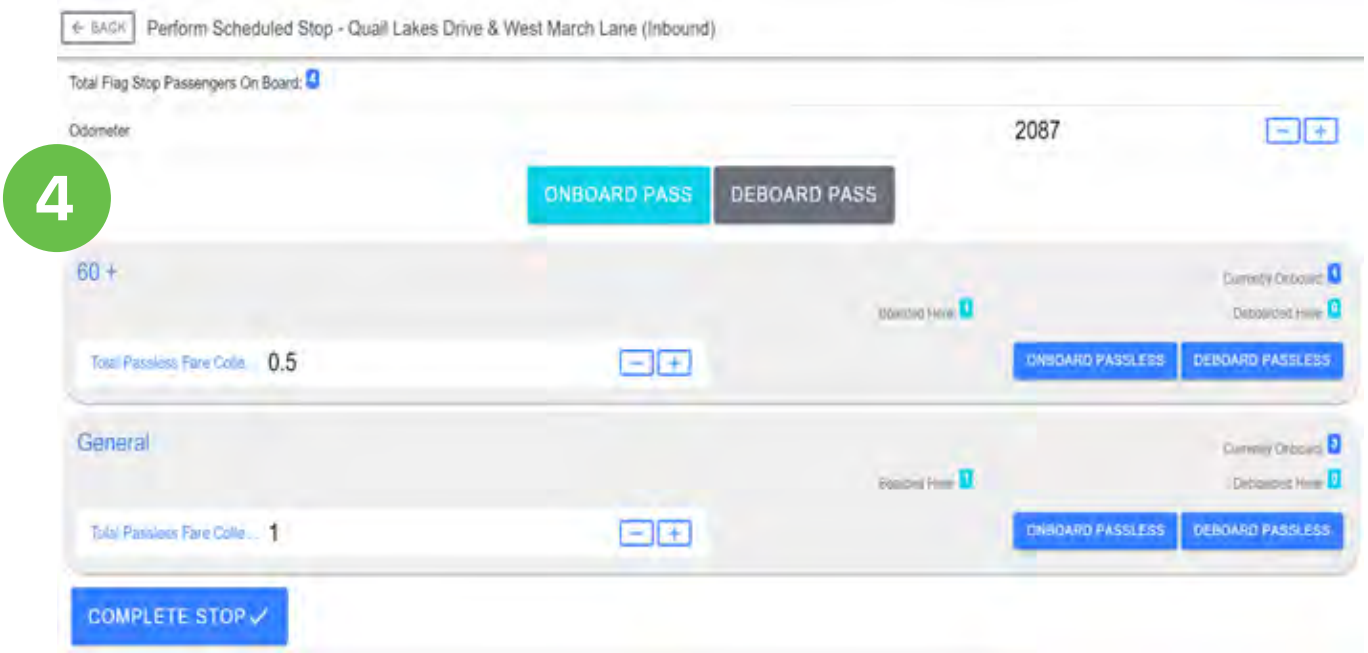
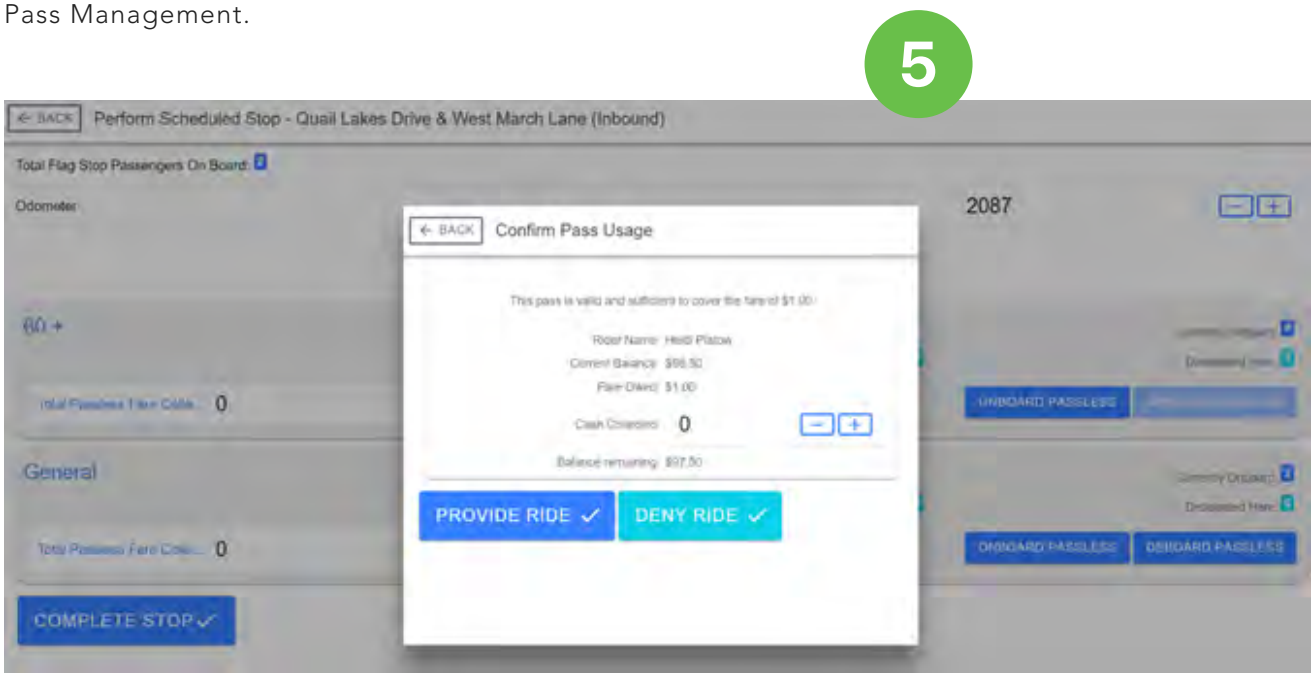
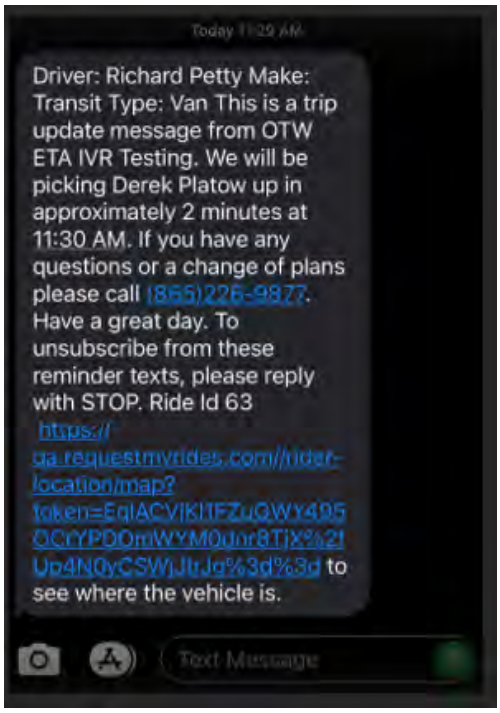


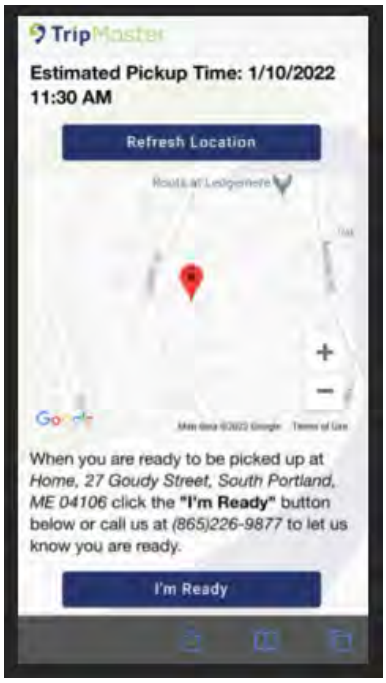
Figure 5 demonstrates the use of a scanning a pass and the screen that populates for the driver and passenger to acknowledge. By scanning the pass, ParaScope identifies the passengers, their balance and their remaining balance. This information is then tracked in TripMaster from within Pass Management.



Where's My Ride

The Where's My Ride feature is an enhancement to the TripReminder module. When the driver clicks the On The Way button within ParaScope, that will trigger a text message to that rider with a hyperlink they can click on. That hyperlink pulls up a snapshot of where the vehicle is on a map, visually, and also provides the rider with a real-time ETA. Additionally, if the rider has a return ride marked as a "Will Call" in the holding pen, there will be a button the rider can select to notify dispatch (TripMaster) that they are ready to be picked up.



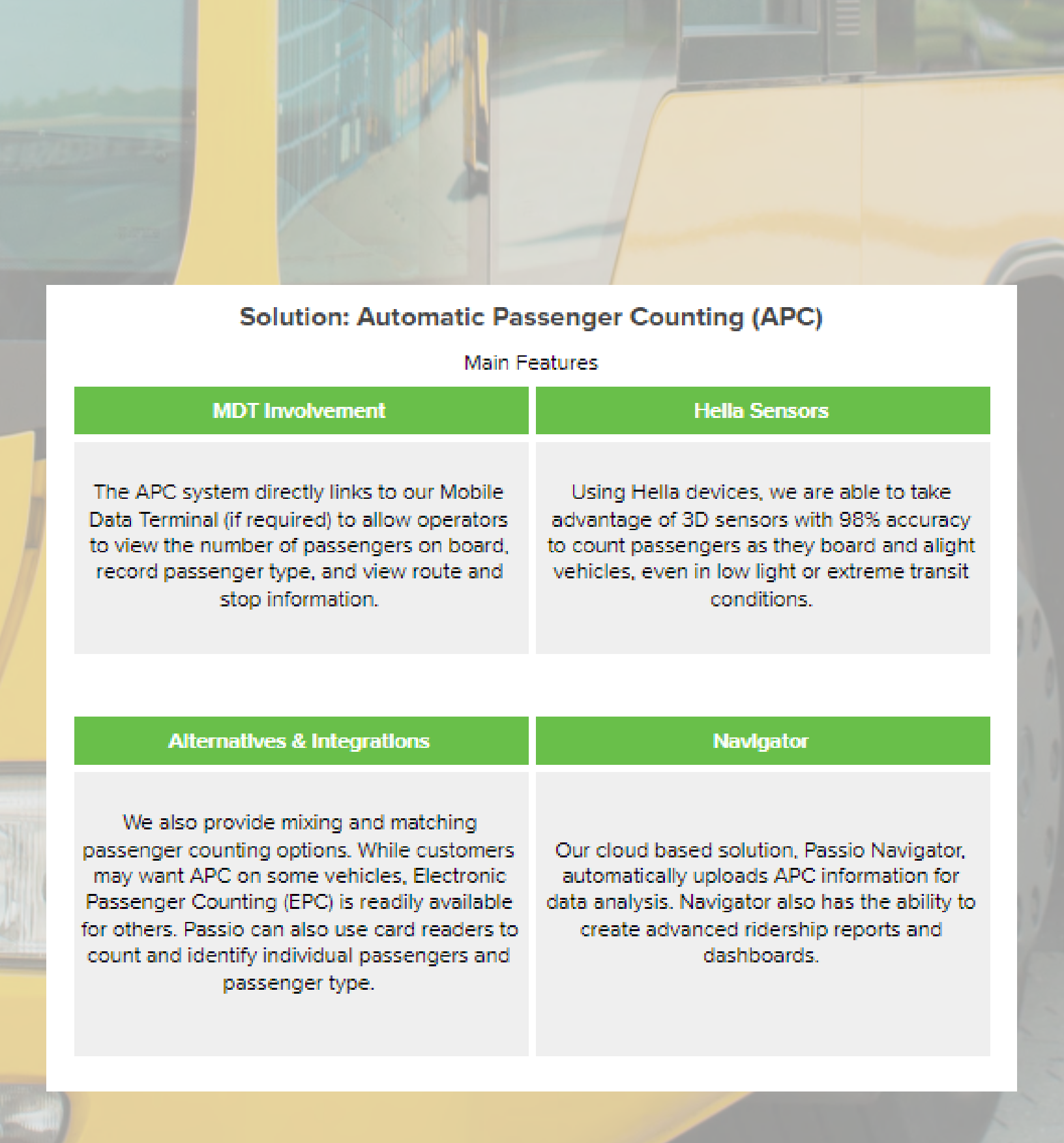


After our research and numerous customer polls centered around downloadable app adoption, the team here at TripMaster determined a text message for vehicle location and real-time ETA would serve as a better tool and more receptive to passengers.

AUTOMATIC PASSENGER COUNTING

Automated Passenger Counting allows customers to easily record all boardings, without any involvement from the vehicle operator. We partnered with Hella to allow for fully automated counting connected to our MDT which can also be used to track passenger types.

PASSIO TECHNOLOGIES



Solution: Automatic Passenger Counting (APC)

Main Features

MDT Involvement

The APC system directly links to our Mobile Data Terminal (if required) to allow operators to view the number of passengers on board, record passenger type, and view route and stop information.

Hella Sensors

Using Hella devices, we are able to take advantage of 3D sensors with 98% accuracy to count passengers as they board and alight vehicles, even in low light or extreme transit conditions.

Alternatives & Integrations

We also provide mixing and matching passenger counting options. While customers may want APC on some vehicles, Electronic Passenger Counting (EPC) is readily available for others. Passio can also use card readers to count and identify individual passengers and passenger type.

Navigator

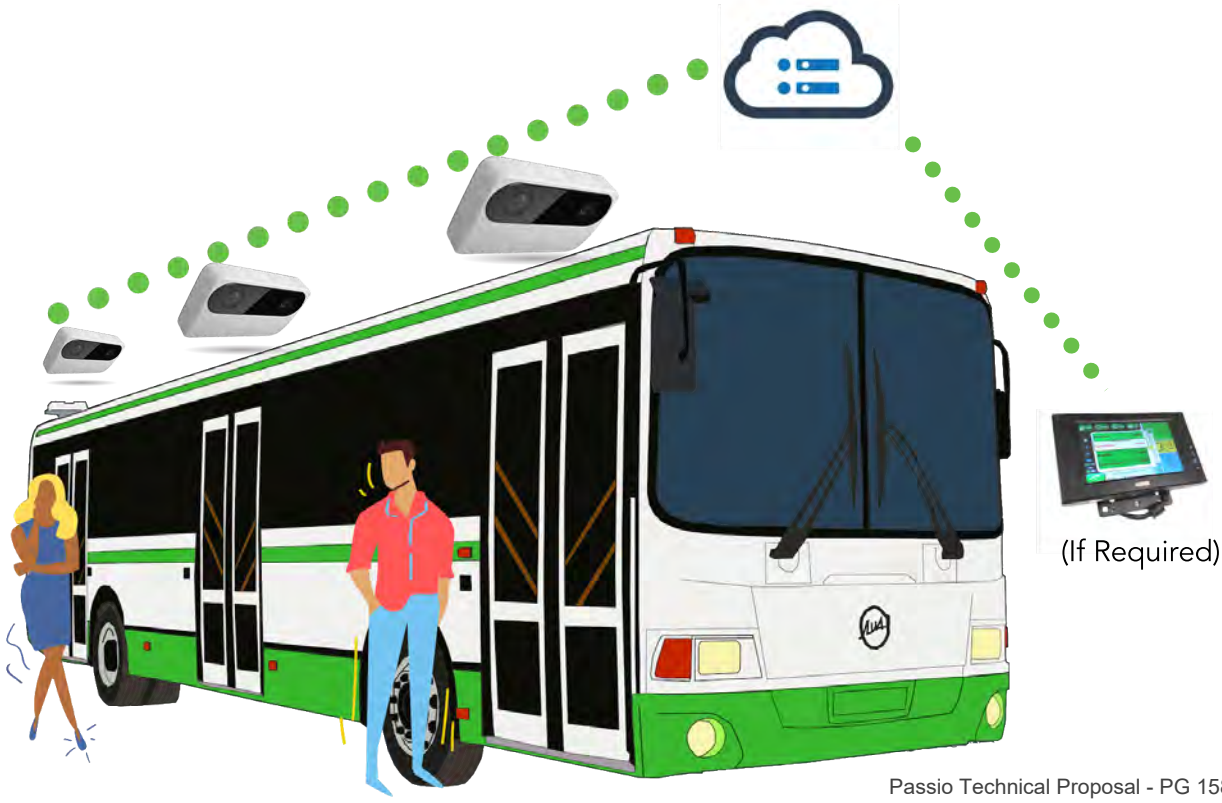
Our cloud based solution, Passio Navigator, automatically uploads APC information for data analysis. Navigator also has the ability to create advanced ridership reports and dashboards.

Customers have the option to integrate APC (Automated Passenger Counting) into their solution. Passio Technologies has adopted the innovative approach of modular technology solutions for our customers. Passio offers three options for entering passenger count data, automatically using APC sensors, Electronically using the Mobile Data Terminal touch screen, or through the Gateway Tap & Swipe system. For example, if you wanted APC's on 30 transit buses, driver managed electronic passenger counting units on 15 buses, and card swipe validation on four special-use vehicles, we can provide the solution. All the data will be reported centrally, and then we are able to deliver high quality passenger data and analytics for the entire system.

APC counting is fully automated, conducted without any operator interaction. Additional features and capabilities include an interactive, touch screen program that enables operators to track special passenger types, track field incidents, and receive communications from supervisors and dispatch. The tracking tools record in-service start and end times, deadhead time and miles, and, if added, the ability to track driver hours.

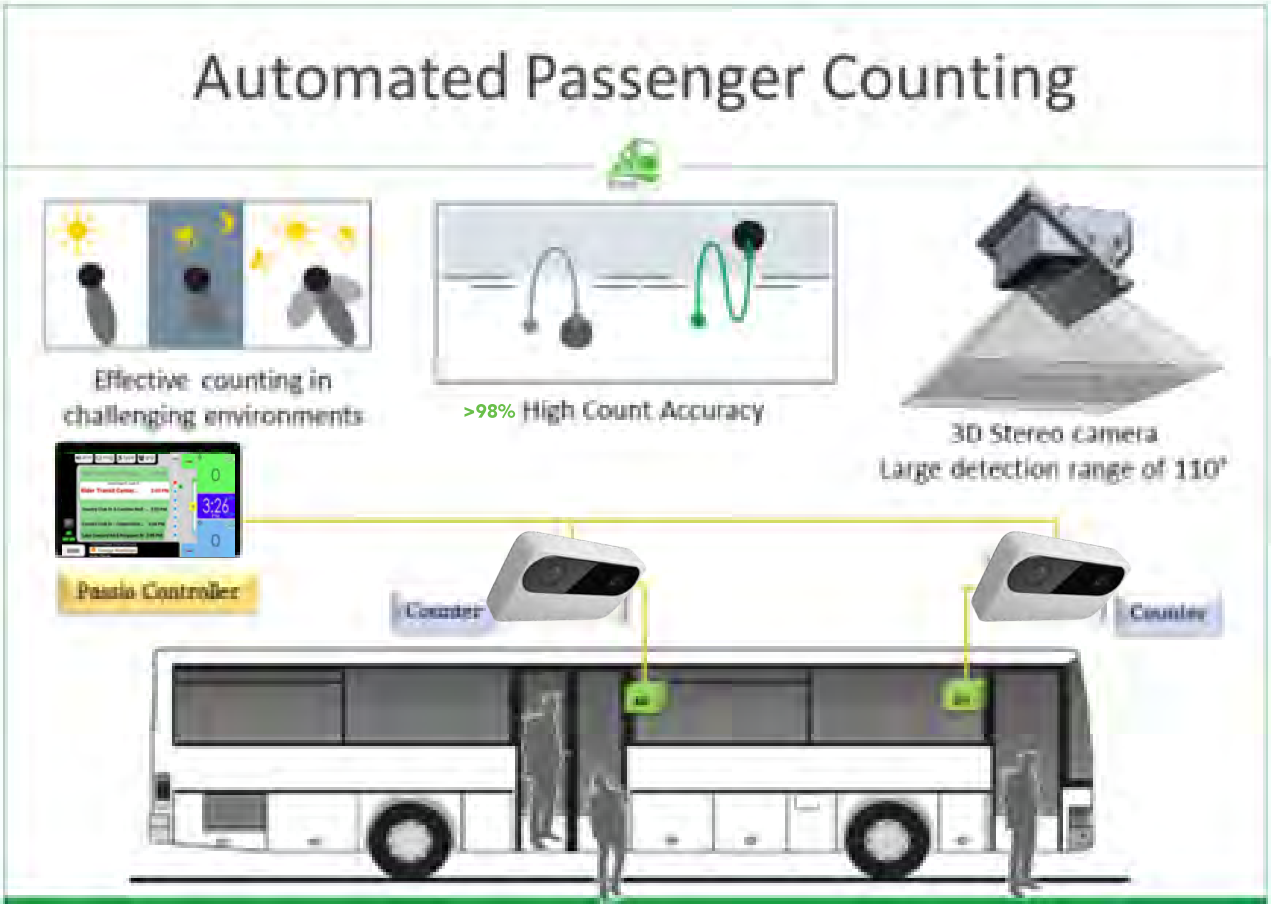
Passio has partnered with Hella to integrate their three-dimensional bi-directional electronic imaging people counting system. With more than 25,000 employees in 30 countries, Hella has been developing and manufacturing automobile technology, chiefly in the areas of lighting and electronics, for more than 100 years. The unit has been designed to work in challenging environments such as variable or low light, multi-level counting fields of vision, and where a large detection range (up to 110°) is needed. The unit is designed to operate from -25° C (-13° F) to +70°C (+158° F) and only draws about 4W of power. The software is specially designed to compensate for passenger movement up and down stairways or on ramps in low floor buses.

The Passio Transit hardware senses passengers from an overhead sensor.



Additional sensors are available to trigger passenger counts when door status (open/closed) is transmitted. The system proposed will cover all entry and exit points of the vehicle. The APC system will create passenger counts without administrator or driver input. The startup will happen with vehicle ignition and does not require any manual input to begin. The system will accurately count passengers as they board and alight and register stops, routes, and runs. The APC system has the capability to distinguish passengers and non-passenger objects and can detect double backs and re-crossings.

The system utilizes 3D camera technology manufactured in Germany by HELLA, which will reliably distinguish passengers and non-passenger objects and can detect double backs and re-crossings.



It will detect how many people enter or leave a vehicle, typically achieving a system counting accuracy of >98%, even under unfavorable conditions such as variable lighting or shadows.

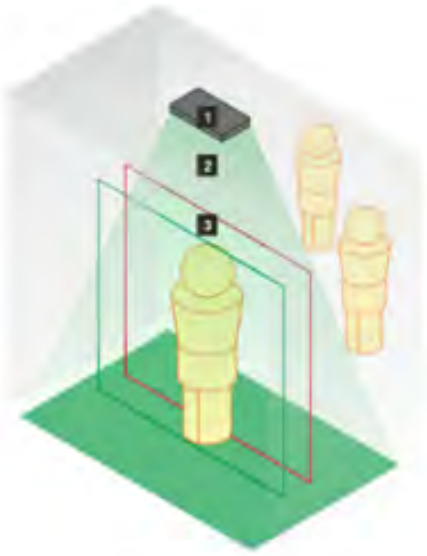


Fig. 4: People counting (schematic illustration)

1 Automatic People Counter (APC)
2 Calibrated visual range
3 Counting gate

The APC continually acquires stereoscopic video images in its visual range.

The integrated software evaluates the stereoscopic images. Persons within the monitored area are recognized automatically and their movements are tracked across the subsequent images.

The APC, therefore, can count the number of persons that enter or leave a vehicle.

The software provides the following functions:

- Bidirectional counting on a defined line
- Tracking persons within a given area
- Video streaming and video recording (optional)

The counting data are transferred via interfaces to the external processing system.

The counting gates represent the thresholds in the visual range which must be crossed by a person in order to trigger an entry or exit count event.

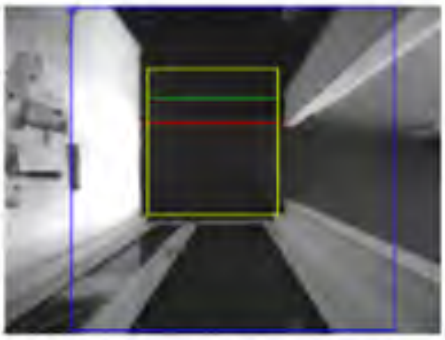


Fig. 5: Straight counting lines/counting gates (example)

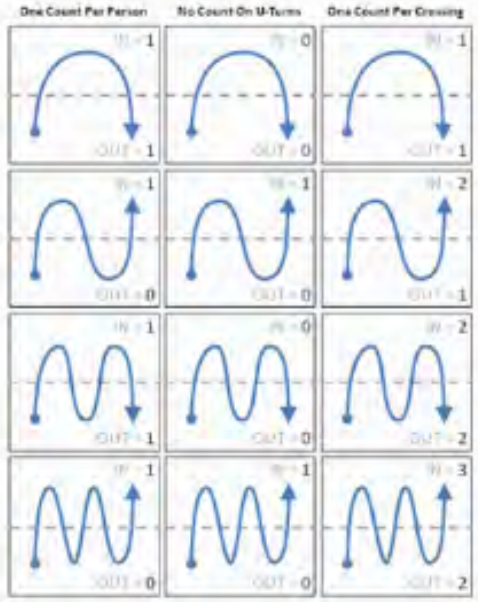
Simple, straight counting lines/counting gates, (Fig. 5) are provided for the simple and fast installation at doors and passageways.

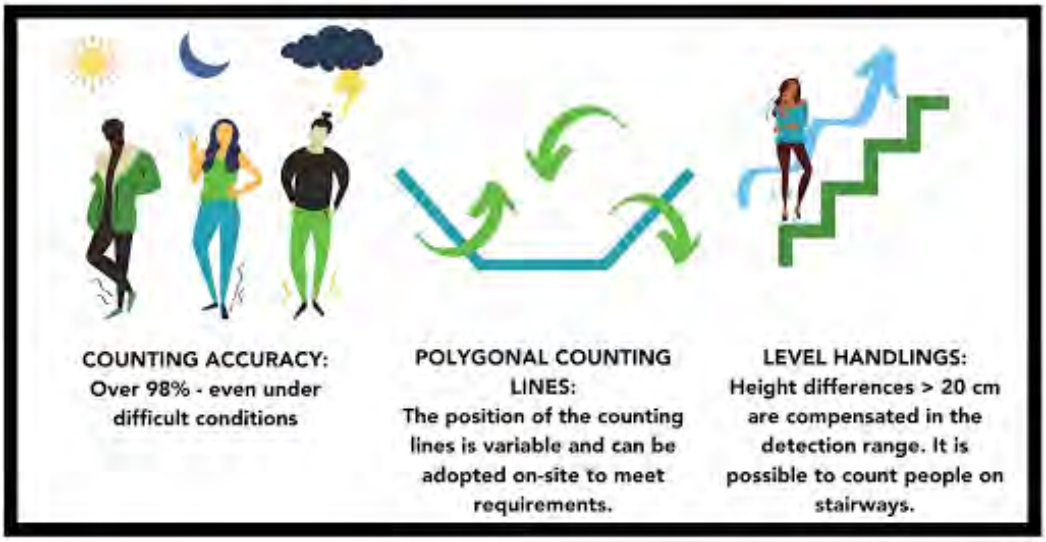
Fig. 10: Three modes for counting those who turn around

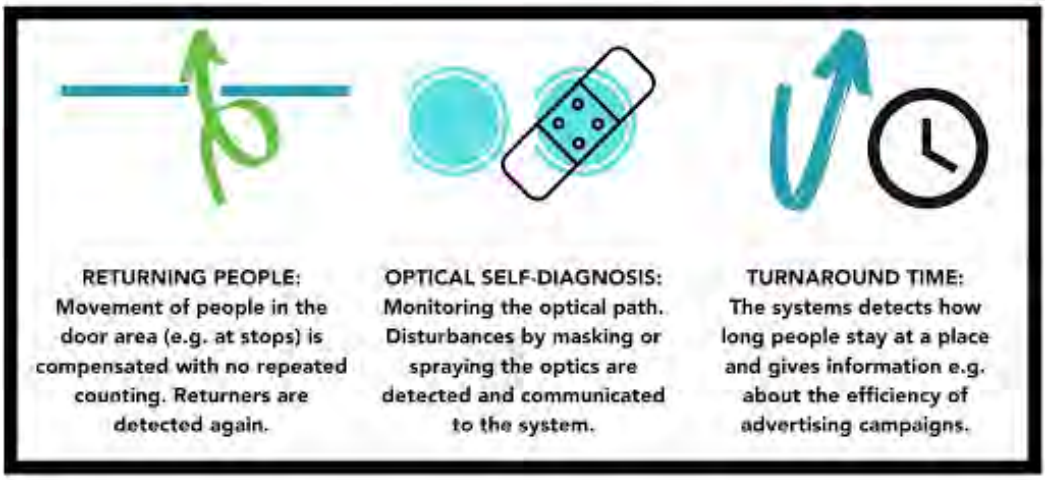
There are three modes (Fig. 10) for counting people who turn around in the monitored area:

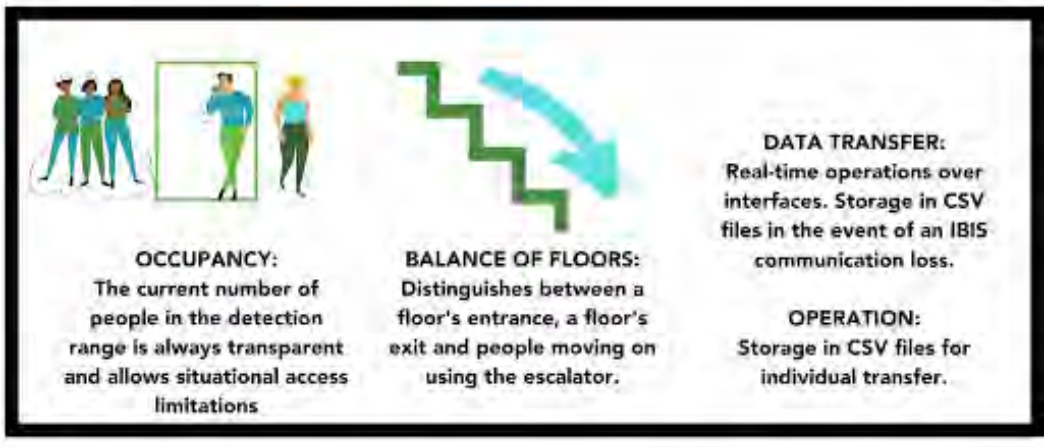
- one count for persons who turn around (*'one count per person'*)
- no count for persons who turn around (*'no count on U-turns'*)
- counting every time counting lines are crossed (*'one count per crossing'*).

Only the counting mode 'one count per crossing' counts immediately by crossing conting lines. Other modes provide the conting data at the time of leaving of the detection area.









APC record-level detail is stored for a minimum of 36 (thirty-six) months and provides count information at the base level which allows for time and individual bus and driver reporting at the stop level. After 36 (thirty-six) months data will be summarized at the route, day, and passenger type level. This data will be available in the dynamic reporting system for a minimum of 5 (five) years. All data archived after 5 (five) years will be made available electronically prior to removal from the dynamic reporting system.

PASSIO BUSINESS ANALYTICS

Make informed decisions about your transportation network at a granular level with Passio Business Analytics. Customizable reporting dashboards highlighting key performance indicators to help improve your service and support your decisions. Note that ridership metrics are provided for our EPC/APC customers only and our Passio NTD Certification services are optional.

PASSIO TECHNOLOGIES

Passio Navigator™ Reporting Tools

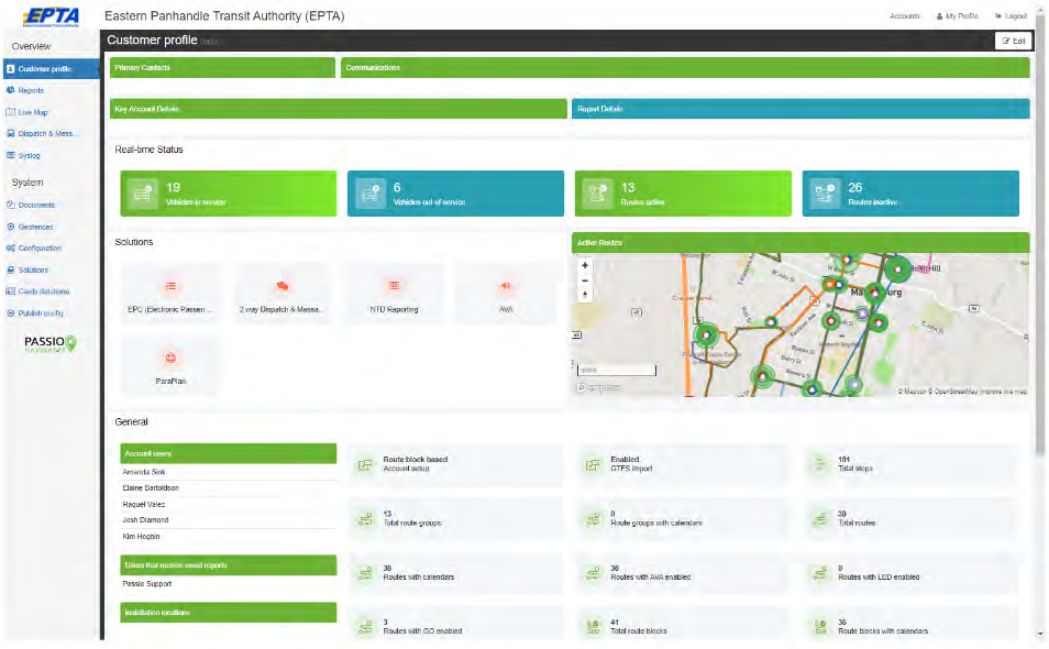
The Passio Business Analytics system is managed through Passio Navigator™. This enables our customers to have a single login with access to all reporting, configuration, and management functions within the Passio Transit Platform. The reporting system is divided between dynamic reporting and dashboard reports. The dynamic reporting tools are designed to allow the end user to build reports using combinations of filters for both specific and general areas of analysis. The full spectrum of components and fields within the database are available for the user to build the view they need with a few simple mouse clicks...

Primary Report Views

- Filter by custom or pre-set time periods
- Group reporting data for by quarter, month, week, day or by time (hour or ¼ hour)
- Select operational detail levels such as routes, stops, drivers, and buses.
- Custom passenger types can be filtered, segmented, and reported
- Switch between passenger boarding and alighting counts for all filter views

Trend Analysis

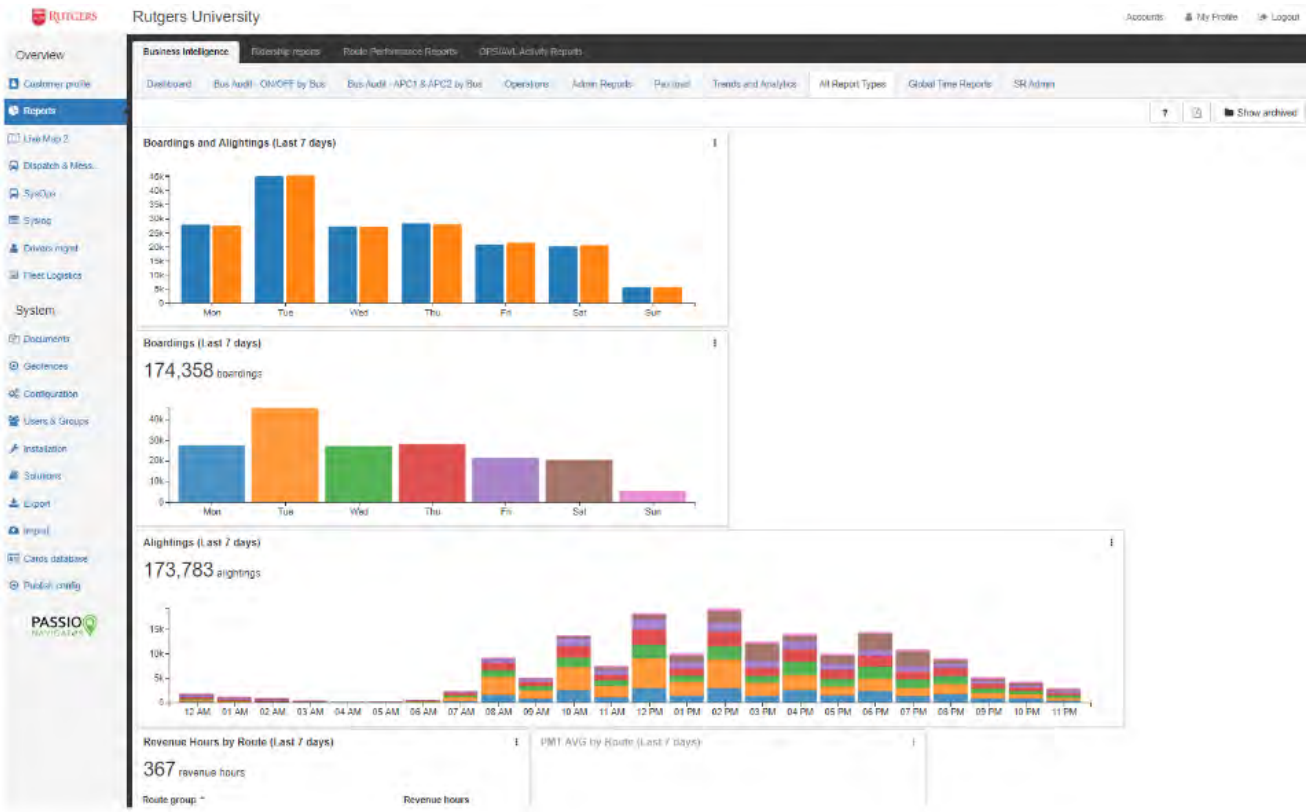
- Switch between passenger boarding and alighting counts for all filter views
- Compare ridership trends by month, week, day, quarter/semester, weekday, hour, ¼ hour
- Capture NTD related data such as Passenger Miles Traveled
- Route reporting at three levels (block, route name, combined route)
- Capable of grouping stops in alternate combinations outside of route groupings



Passio Agency Profile Dashboard

Passio Analytics is segmented into 5 groups:

- Business Intelligence – Provides customizable charts and graphs to provide insight and to help better understand your service trends.
- Ridership Metrics – This collection provides a comprehensive ridership analysis.
- Route Performance – This quite of tool allows users to analyze on-time performance trends and schedule adherence details.
- GPS/AVL Activity – This collection provides custom boundary incident reporting, speed reports, and other vehicle activities.
- NTD Reporting – One-click NTD S-10 reporting with sampling, benchmarking, and certification support from Passio



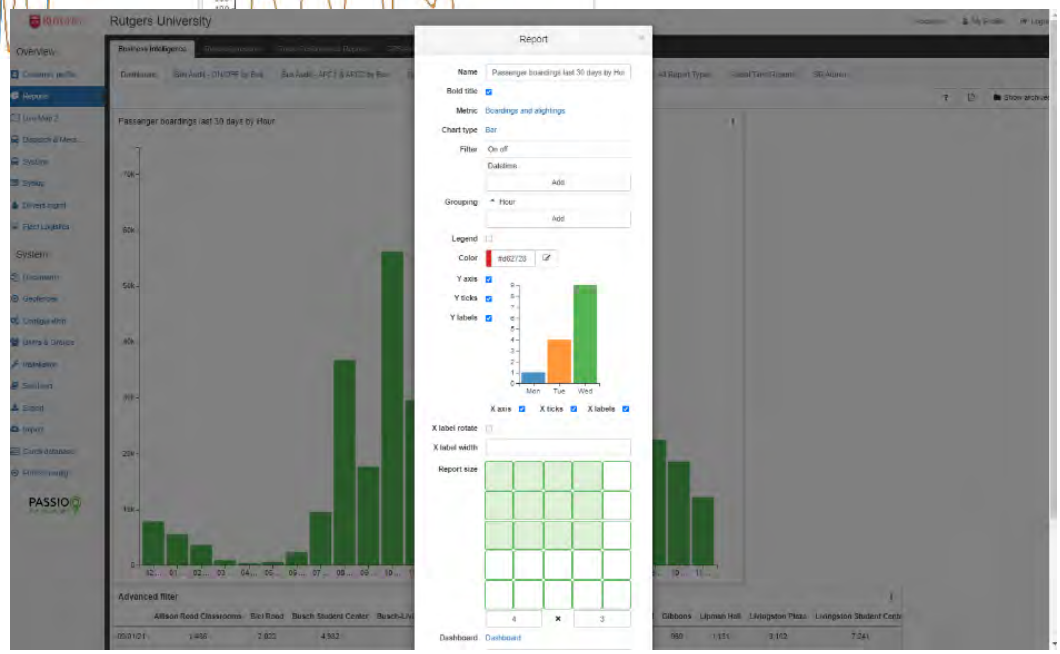
Passio Dashboard Reporting – Boardings & Alightings

Business Intelligence

Provides customizable charts and graphs to provide insight and to help better understand your service trends.

- Bus Audit (ON/OFF)
- Bus Audit (APC)
- Operations
- Passenger Load
- Trends and Analytics
- Global Time Reports
- Admin Reports

Passio Dashboard Reporting – Audit



Passio Dashboard Customization – Ad Hoc Reporting

Dashboard reports enable users to design and save reports to their unique specifications. Users tailor reports based on presentation type, data analyzed, filters used, and comparison analytics.

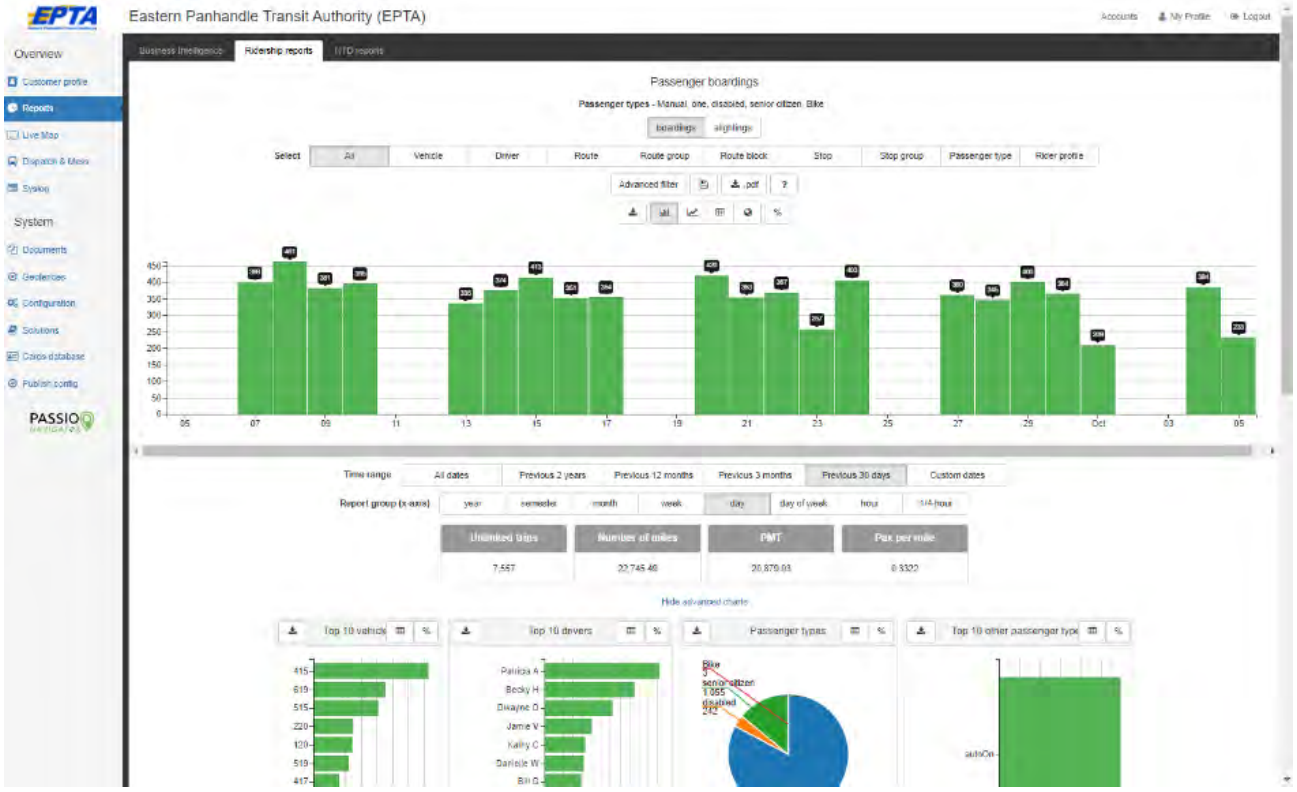
- Fixed Date or Relative Date – set a reporting period that is fixed from a specific date to a specific date, or create relative date reports (I.e. the last 3 months or previous 14 days)
- Scheduled Auto Email – email individual reports or an entire dashboard to a single email recipient or a group of recipients. Emails can be scheduled at any interval desired.
- Multiple Dashboards – users have the option to create multiple dashboards to group report types by category or target audience.

Reports include a graphical interface for display and presentation. The interface allows users to dynamically create bar, line, pivot tables, and pie charts without downloading to third party software. The data is available for export into common formats such as CSV (to XLS) and PDF. The user may create multiple dashboard pages specific to the KPIs that they want to see as well as the ability to email or print individual reports or entire dashboards ad-hoc or create scheduled group emails.

Ridership Metrics

This collection provides a comprehensive ridership analysis.

- Boardings & Alightings by Date/Time/Span for…
  - Vehicle, Driver, Route, Route Group, and Route Block
  - Stop, Stop Group, Passenger Type, and Rider Profile



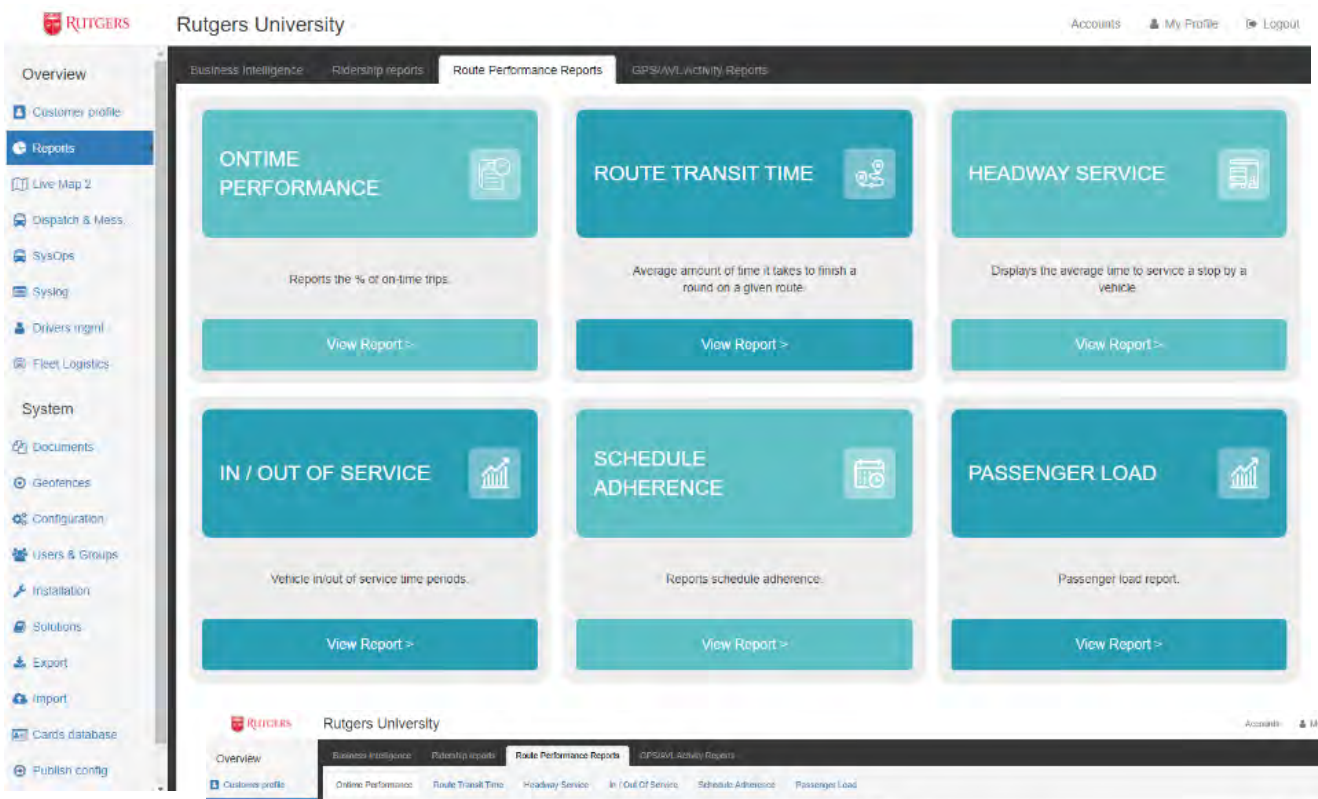
Passio Ridership Metrics

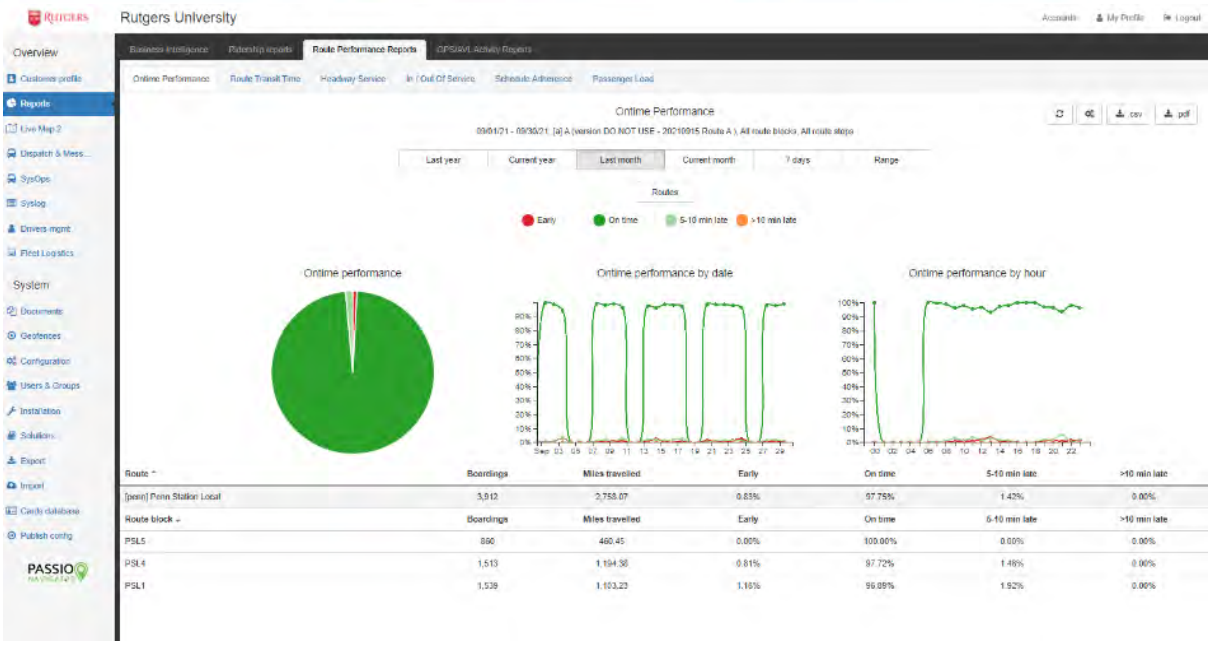
Route Performance

This collection of tools/reports allows users to analyze on-time performance trends and schedule adherence details.

- On-time Performance (OTP)
- Route Transit
- Headway
- In/Out of Service
- Schedule Adherence

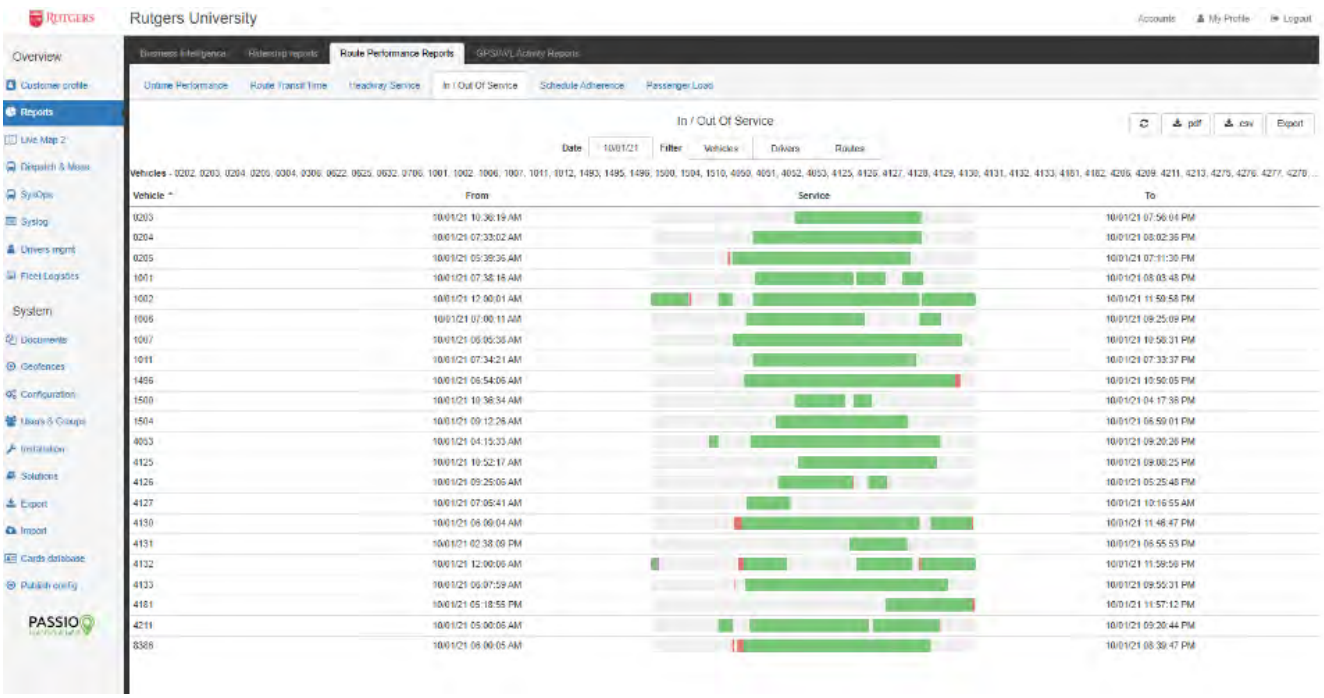
Passio Route Performance Module

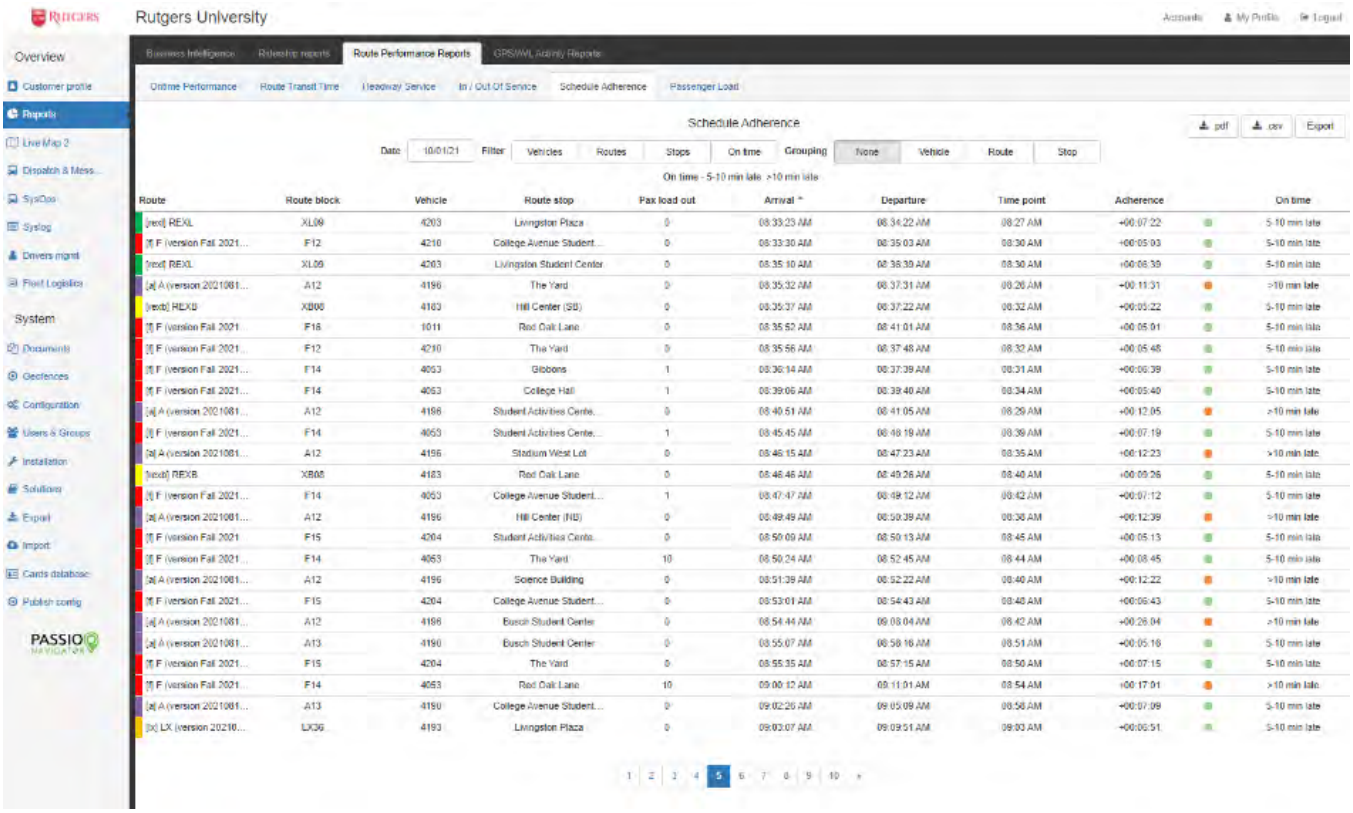




Passio Route Performance Module – On Time Performance

Passio Route Performance Module - Service





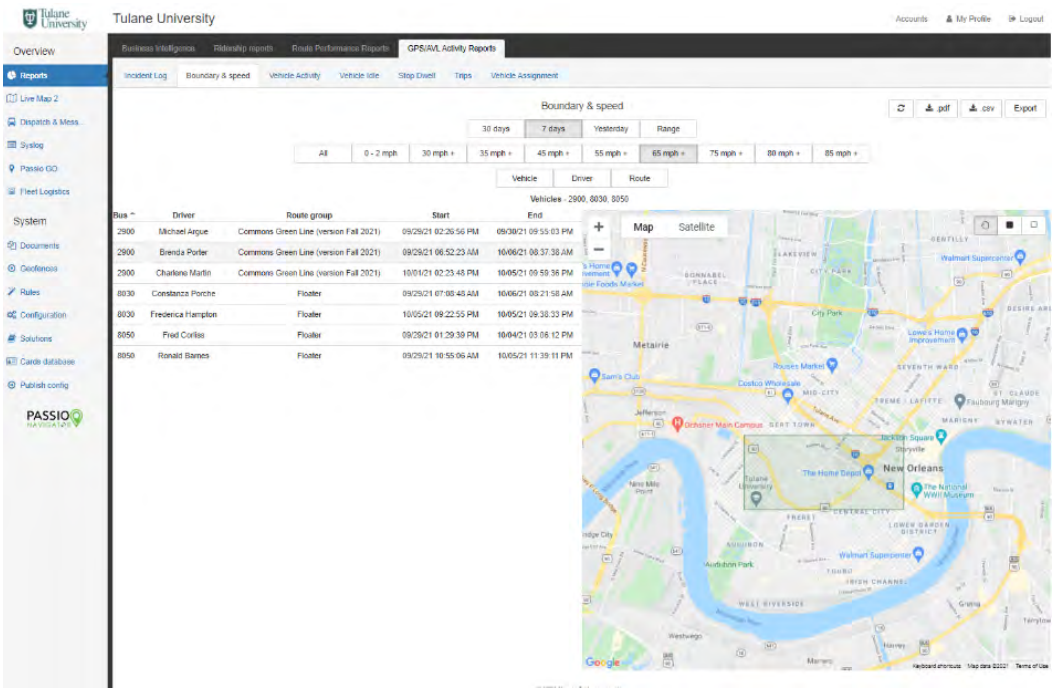
Passio Route Performance Module – Schedule Adherence

GPS/AVL Activity

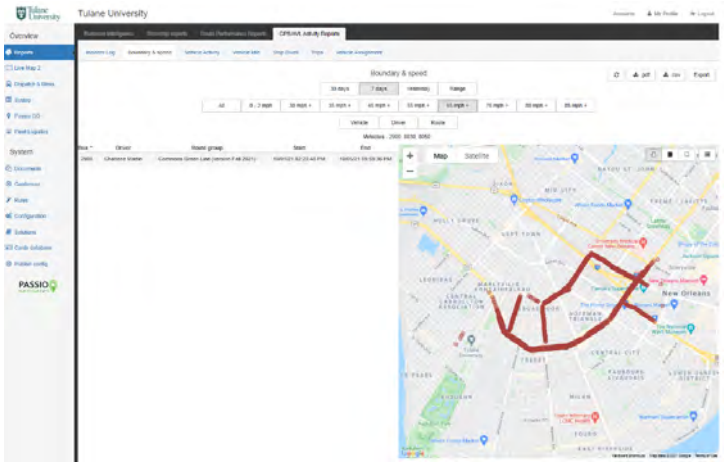
This collection provides custom boundary incident reporting, speed reports, and other vehicle activities.

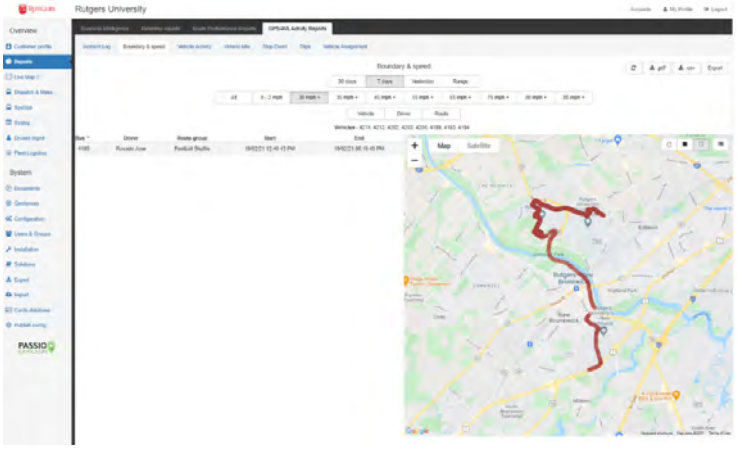
- Incident Logs, Trips, Vehicle Assignment
- Vehicle Activity, Vehicle Idle, Stop Dwell, Boundary & Speed

Passio GPS/AVL Reporting – Boundary Reporting



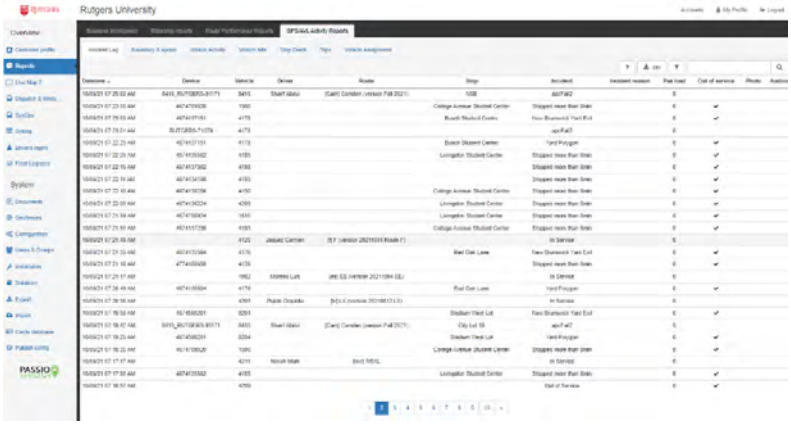
Speed Fence Activity - Users have the capability to highlight a specific area on the system map to select all speeding incidents that exceed the threshold set in the report configuration.



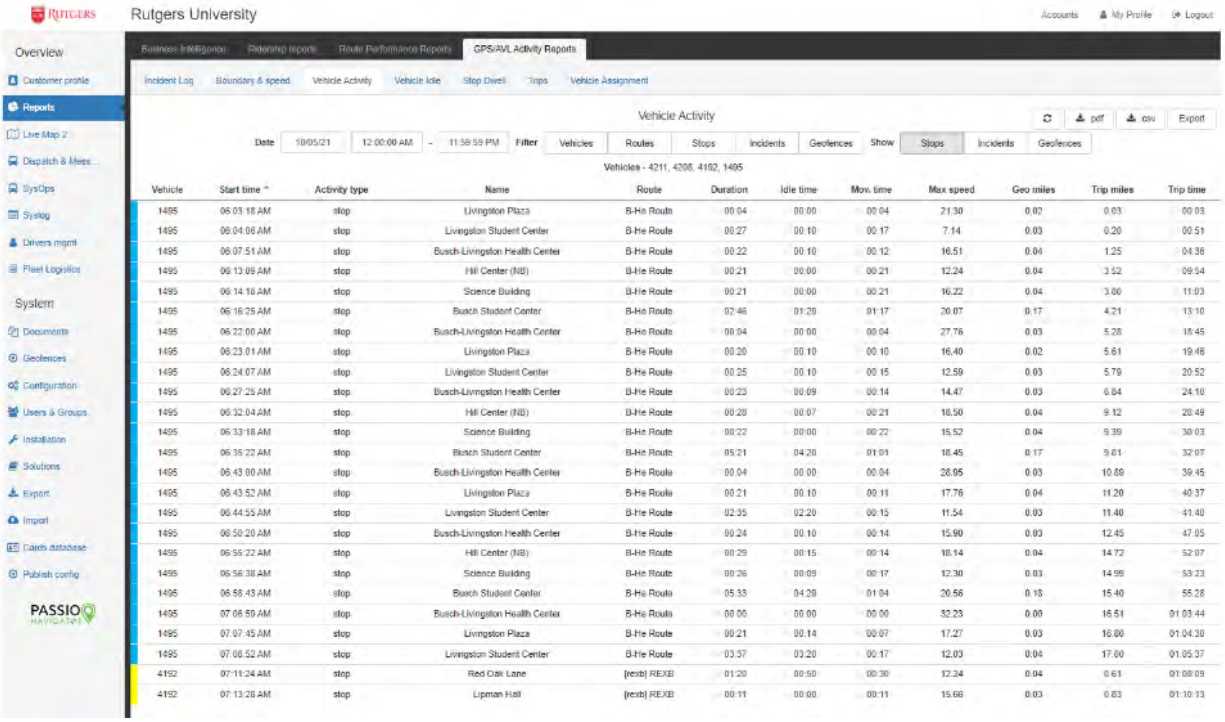


Passio GPS/AVL Reporting – Speed Reporting & Tracking

Passio GPS/AVL Reporting – Incident Logs



Passio GPS/AVL Reporting – Vehicle Activity



NTD Reporting

One-click NTD S-10 reporting with sampling, benchmarking, and certification support from Passio. Our robust Passio NTD reporting module provides VRM (Vehicle Revenue Miles), Deadhead miles, AVM (Actual Vehicle Miles), VRH (Vehicle Revenue Hours), Deadhead hours, AVH (Actual Vehicle Hours), UPT (Unlinked Passenger Trips), PMT (Passenger Miles Travelled) by time period and by weekday/weekend, etc. Passio offers customized NTD reporting that will calculate and extract the metrics required for compliance. The Passio APC solution will provide all 'Actual' data (passenger miles and stop counts) required for NTD reporting. Your account manager will work with you to set up your personalized NTD sampling schedule and Passio will support your certification process. Our integrated Hella 3D APC has been granted NTD Certification Approval.

HARDWARE FOR ITS

PASSIO TECHNOLOGIES

Summary of all Passio equipment available for service implementation. The data collected using this proposed hardware is provided within our attached solution documents (when applicable). Listing of all hardware components available from Passio (or our partners) for ITS deployments:

- Mobile Data Terminals (MDT)
- Vehicle Logic Units (VLU)
- Automatic Passenger Counters (APC)
- Routers (Wi-Fi)
- LED Signs (Interior)
- Front Destination Signs (Exterior Facing)
- Side Destination Signs (Exterior Facing)
- Public Address Systems (PA)
- Video Surveillance Camera Systems
- Wheelchair Lift Deployment Sensors
- Bike Rack Deployment Sensors

We will provide complete tech specifications for each component if requested. The proposed hardware for this project is listed in our itemized Cost Proposal.

Transit MDT

Portable Transit MDT

Pepwave Router

Hella APS-B

CalAmp VLU

Technical Requirements

Our proposed software solutions are 100% web-based and optimized for Chrome and Firefox. Passio Navigator™ is accessible on any device supporting the listed browsers. Recommended Internet Speed should be five (5) Mbps or greater. The technical requirements for any selected options can also be made available prior to installation.

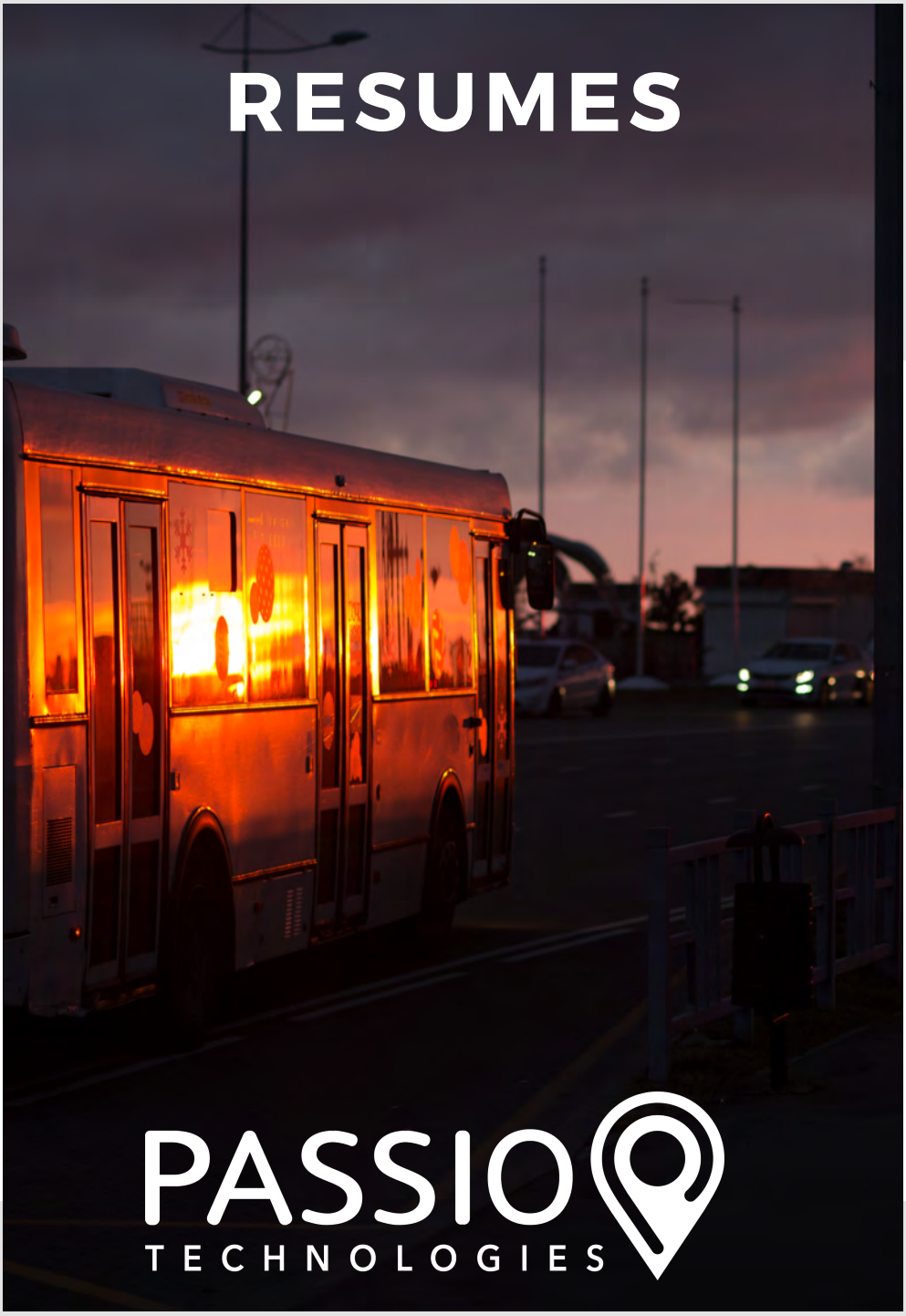
Passio Navigator Minimum Requirements (Workstation)

-Processor: Intel Core i3 or greater, AMD Ryzen 5 or greater, or Apple M1 Processor (CPU). 2.2 GHz or greater.
-OS Windows: Microsoft Windows 10 Home, Pro, Enterprise or Education version (x86 or x64)
-OS Apple: macOS 10.15.X "Catalina" or 11.X "Big Sur."
-Memory/RAM: 8 GB or higher.
-Video/Graphics: Integrated or Discrete graphics processor of 1440 X 900 resolution, or better.
-Monitor: 13″ – 17″ notebook display, 19″ – 27″ desktop widescreen flat-panel display.
-Network Adapter: 802.11ac 2.4/5 GHz wireless adapter.
-Internet Speed: 5 Mbps or greater
-Supported browsers: Chrome, Firefox, Microsoft Edge, & Safari

Passio GO Minimum Requirements (mobile)

-Operating System (OS): iOS 14.4 or newer, Android 5.0 or newer
-Hardware (iPhone): iPhone 7 or newer
-Hardware (Android): Any device running Android 5.0, or greater.
-Data Plan: 1 GB per month per device or greater
-Storage: 32GB or greater

RESUMES



MICHAEL CIVITELLI

Senior Project Manager

CONTACT

michael.civitelli@passiotech.com
(404) 645-7375 x 124

SKILLS

For over 20 years, Michael has worked in the transit industry managing new projects and clients. His specialty is client communications and training, leading project delivery, and ensuring customer success. Specific areas of expertise: project and process management, customer implementations and success, consulting, business development, and technologies for intelligent transportation & parking for municipalities, airports, universities, and private facilities & commercial fleets.

EXPERIENCE

Passio Technologies	
Senior Project Manager	Aug 2021 - PRESENT
Project Manager / Customer Success	Nov 2020 – Aug 2021
Bridgeway Business Services LLC	
Principal	Jun 2020 – Jul 2021
Park Assist	
Regional Account Manager	Sept 2018 – Apr 2020
International Parking & Mobility Institute (IPMI)	
Technology Committee Member	Jan 2016 – Dec 2019

EDUCATION

B.A. from the State University of New York College
Executive Leadership Program at Seattle University
Member of the Project Management Institute

JESSICA SONG

Director of Operations

CONTACT

Jessica.song@passiotech.com
(404) 645-7375 x 104

SKILLS

Aptitude for technology and project management consulting in the transportation arena. Management and consulting with numerous universities, corporations and municipalities providing transit and parking operations solutions and recommendations.

EXPERIENCE

Passio Technologies – Senior Project Manager & Director of Operations	2010 - PRESENT
Regional Transportation Authority, Chicago - Planning Intern	June ‘10 - Nov ‘10
NCS Camera Service, Inc. - Operations MGR	Fall ‘05 - May ‘09

EDUCATION

The University of Illinois at Chicago- M.S. Urban Transportation
The University of Illinois at Urbana- Champaign- B.S. General Engineering

COURTNEY HALL

Training and Implementation Manager

CONTACT
courtney.hall@passiotech.com
(404) 645-7375 x 116

SKILLS
Experienced in customer service and account management. Direct customer facing interaction, organizational skills, sales-minded, & continuous positive attitude.

EXPERIENCE

Passio Technologies –

Training and Implementation Manager	Nov 2021 - PRESENT
Customer Service Representative	Jul 2020 - Nov 2021

Weldon, Williams, & Lick Inc.

Account Manager	Aug 2017 - July 2020
Customer Solutions	Nov 2014 - Aug 2017
Order Clerk	Aug 2008 - Nov 2014
Verifying Department	Aug 2002 - Aug 2008

EDUCATION
Lean Six Sigma Green Belt Course
Effective Communications & Human Relations Course

SAM HEARST

Customer Operations Manager

CONTACT
samuel.hearst@passiotech.com
(678) 682-7370 x 129

SKILLS
Experienced in customer-facing support, specializing in operations and performance. Skilled in collecting and analyzing customer feedback, and serving as both a dynamic leader and the voice of the client.

EXPERIENCE

Passio Technologies
- Customer Operations Manager — Jan 2022 - PRESENT

Unifi at Hartsfield-Jackson Atlanta International Airport
- Operations Performance Manager — Mar 2019 - Jan 2022

Garden Fresh Restaurants
- Assistant General Manager & Production Manager — May 2017 - Mar 2019

Jason's Deli
- Assistant General Manager & Operations Manager — Dec 2013 - May 2017

Air Serv Corporation at Hartsfield-Jackson Atlanta International Airport
- Customer Service Shift Manager — Aug 2007 - Dec 2013
- Office/Payroll Administrator — Jul 2005 – Dec 2013

EDUCATION
Coahoma Community College – Associate's Degree in Business Administration and Management, 2004

WAYNE MANIS

Install Technician

CONTACT

wayne.manis@passiotech.com

SKILLS

Wayne leads Passio's installations, bringing over a decade of experience in the GPS industry. His expertise is in GPS fleet installation, hardware installation, installation technical support, and trainings.

EXPERIENCE

Passio Technologies	
Install Technician	Sept 2019 – PRESENT
H and H Auto Sales	
Mechanic	2017 – Sept 2019
Orbital Installations / Spireon / Sure Trac LLC	
Contracted Installer	2014 – 2017
Passtime USA	
Senior Technician	2007 – 2014
Installer	2005 – 2007

EDUCATION

Gordon Central High School, 2005

THANK YOU

Thank you for taking the time to review our response to your request. Passio Technologies will provide the right team and technology to meet and exceed your expectations. Our advanced transit solutions will impress your riders now and into the future.

If you have any questions, please contact us.

Primary Contact -

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Secondary Contacts -

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KYLE ARCHER
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kyle.archer@passiotech.com