



EAST-WEST GATEWAY
COUNCIL OF GOVERNMENTS
**METROLINK SYSTEM-WIDE
SECURITY ASSESSMENT**
RECOMMENDATIONS



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METROLINK SYSTEM-WIDE SECURITY ASSESSMENT RECOMMENDATIONS

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DOCUMENT REVISION RECORD

REVISION NO.	DESCRIPTION OF CHANGES	DATE
Rev 0	Initial issue	February 15, 2019

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OVERVIEW AND APPROACH

As domestic and international transportation venues experience **crime** and **terrorism**, concern for transportation security is growing across transportation and rail providers as well as their stakeholders. To operate **safely** and **securely**, St. Louis Metro Transit must consider how these security **threats** and **vulnerabilities** manifest locally on the MetroLink **system**.

Throughout this report, terms included in the Definitions & Acronyms section are **bolded** upon first use.

In response to these growing transportation security concerns, the East-West Gateway Council of Governments (EWG) initiated a system-wide security assessment for MetroLink and contracted with a WSP-led team to execute the assessment. During this system-wide security study, leadership at both Metro and Bi-State Development changed: Jessica Mefford-Miller was named Executive Director of Metro in September 2018, Taulby Roach was named the new Bi-State Development President and CEO in December 2018, and in January 2019 Metro announced that it is seeking new senior leadership for the Metro Public Safety Department; a new vision for Metro is already emerging with these changes. The new leadership has actively participated in the assessment along with Metro staff and the three law enforcement partners that police MetroLink. In addition, implementation is already underway of several recommendations that arose out of this assessment and are highlighted throughout this report.

The system-wide security assessment includes:

- Identified existing security conditions through site visits and stakeholder interviews.
- Applying **Crime Prevention Through Environmental Design** (CPTED) principles.
- Outlining applicable security and transit industry best practices.
- Convening a Peer Review Team (PRT) comprised of security representatives from selected peer agencies to perform a peer transit agency review.
- Administering stakeholder outreach and surveys.
- Completing a **Threat and Vulnerability Assessment** (TVA) of MetroLink.
- Providing security recommendations based on findings from the system-wide assessment.

This Recommendations Report draws from all pieces of the system-wide security assessment as described above, including the Existing Conditions Report, Best Practices Report, Peer Transit Agency Review, Stakeholder Outreach and Survey, and the TVA.

This report is organized into the following categories of recommendations:

- 1 Security strategy
- 2 CPTED
- 3 Technology
- 4 Police/security staffing
- 5 Procedures and training
- 6 Fare and fare enforcement

Throughout this report, callout boxes, like this one, highlight various MetroLink security updates, and include **statistics from the study's rider survey** that received over 1,800 responses (summarized in Appendix A).

Recommendations are prioritized in the following three categories. Their implementation considers dependencies, time and resource constraints.

- 1 ● **Urgent** – Complete immediately; critically impacts system security and time-sensitive.
- 2 ● **High Priority** – Begin addressing immediately but defer to urgent needs when resources and capacity require narrower focus; critically impacts system security but less time-sensitive.
- 3 ● **Medium Priority** – Address once resources are freed up from higher priorities; necessary for long-term success but less time-sensitive.

Enhancing MetroLink’s system-wide security requires a layered approach comprised of multiple elements that combine to provide a robust security environment, as described further under Section 1 – Security Strategy. Therefore, the categories of recommendations contained in this report are not provided in isolation but as pieces that combine to create robust, **layered security** for MetroLink.

I SECURITY STRATEGY

The system-wide security assessment found that Metro lacks a defined strategic security direction, **security plan** and over-arching security program. The current security program is also isolated from **emergency** management and safety programs; a strong all-hazards approach to a safe and secure system requires support from all three programs—security, safety, and emergency management.

The top security concerns when riding MetroLink that survey respondents selected are **lack of security presence on trains (71%)** and **passengers disregarding or unaware of ridership rules (60%)**.

A robust security environment on MetroLink requires Metro to develop and implement a layered security program that addresses all elements depicted in Figure 1 and is fully integrated with safety and emergency management. This program should be **risk** based and reflect MetroLink’s operating environment, addressing all elements of the system. The security strategy should be documented in a security plan that defines roles and responsibilities for system stakeholders and delineates a **risk assessment** methodology that guides decision-making under the security program and grows as the system evolves. Table 1 provides and prioritizes specific security strategy recommendations.

Table 1. Security Strategy Recommendations

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Roles & responsibilities	<ul style="list-style-type: none"> Lack of clarity on who is responsible for MetroLink security and their specific roles. Perceived pursuit of in-house transit police disrupts relationships with law enforcement partners. Unclear legal authority for current Metro Public Safety Officers police-style activities and armed (firearm) status. Lack of accountability, transparency, and oversight of Metro Public Safety and PSOs. Unclear requirements for all law enforcement partners. Unspecific requirements for contracted security, including oversight, responsibilities, and engagement. Lack of Metro Public Safety Internal Affairs function. 	<ul style="list-style-type: none"> Establish and communicate roles and responsibilities that support productive relationships among the entities responsible for system security: <ul style="list-style-type: none"> Metro Public Safety, including leadership, staff, and Internal Affairs. Contracted security. Law enforcement partners (MOU agencies and others). Metro leadership. All Metro employees. Clarify legal authority and establish appropriate accountability, transparency, and oversight of security personnel (staff and contracted). Establish accountability, requirements for transparency and oversight within law enforcement contracts.
Strategic security plan	<ul style="list-style-type: none"> Lack of overarching security plan and resulting lack of strategic direction for security at Metro and on MetroLink. 	<ul style="list-style-type: none"> Develop a strategic plan outlining a security program that: <ul style="list-style-type: none"> Establishes a security risk assessment methodology. Is customer centric and risk based. Clearly delineates roles and responsibilities, internal and external. Reflects the transit system as a whole and environment in which it operates. Work with security partners to build support for strategic elements and how policing impacts the security strategy Define security and policing performance metrics and include as criteria in Metro job descriptions and security and policing contracts.

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
All hazards approach	<ul style="list-style-type: none"> Lack of coordination between Metro security (Public Safety Department), emergency management, and safety. 	<ul style="list-style-type: none"> Coordinate security strategy with safety and emergency management programs. Facilitate ongoing connectivity across security, safety, and emergency management programs including strategic coordination, cross-program participation in hazard and risk activities, and data and information sharing.
Security data	<ul style="list-style-type: none"> Lack of data collection, storage, ownership, and analysis and trending. Territorialism impedes data and information sharing among the entities responsible for system security. 	<ul style="list-style-type: none"> Define, collect and analyze crime and incident data at a minimum, with a future goal of adding other types of data, such as customer input, to support system security Establish and implement collaborative data ownership and sharing protocols. Develop a centralized crime reporting database and define access Use data for trending to inform system security and staff/law enforcement deployment.
Communication	<ul style="list-style-type: none"> Siloed communication channels between Metro Public Safety and partner agencies. Inconsistent messaging to external stakeholders about system security and security efforts on MetroLink. Demonstrated prioritization of making another agency “look bad” in the media and focusing on technical issues over working together to enhance security on the system. 	<ul style="list-style-type: none"> Internal to Metro and with partner agencies: <ul style="list-style-type: none"> Finalize the efforts for a shared radio channel for Metro Public Safety and law enforcement that meets the needs of the program. Establish clear protocols for radio use, including immediately addressing issues arising from contracted security. External (i.e., public): <ul style="list-style-type: none"> Improve media relations and present a unified message to stakeholders regarding system security.
Emergency management	<ul style="list-style-type: none"> Lack of integration of emergency response capabilities and training with security increases system vulnerability. Absence of coordination with local emergency response agencies, including joint security related drills and exercises specific to MetroLink. 	<ul style="list-style-type: none"> Integrate an effective Emergency Management program with Security that include: <ul style="list-style-type: none"> Response procedures. Emergency Management Plan highlighting security related emergencies. Training, drills, and exercises focused on security events that are span modes and various security events. Coordination with local emergency response entities, including police and fire, for security related emergency activities.
Politics	<ul style="list-style-type: none"> Political intrusion into Metro security has escalated conflict without supporting change and impacted Metro’s ability to address the issues 	<ul style="list-style-type: none"> De-politicize the conversation about Metro Security. Regional leadership should dis-engage in rhetoric that escalates perceptions and, instead, work with Metro to develop agreed upon metrics to measure security performance.

Figure 1. Elements of Protection



Source: FTA. 2003. The Public Transportation System Security and Emergency Preparedness Guide.

2 CPTED

Construction of the MetroLink system began in 1990 and first opened for revenue service in 1993. Many of the system’s physical **assets**—e.g., the light rail transit (LRT) vehicles, original stations, ticket vending machines (TVMs) and validators, closed-circuit television (CCTV) cameras, etc.—reflect the practices of the 1990s without incorporating the four principles of Crime Prevention Through Environmental Design (CPTED), which include the following:

- 1 **Natural Access Control** – The physical guidance of people coming and going from a space by the judicious placement of entrances, exits, fencing, landscaping and lighting.
- 2 **Natural Surveillance** – The placement of physical features, activities and people in such a way as to maximize safety.
- 3 **Territorial Reinforcement** – The use of physical attributes that express ownership, such as fences, pavement treatment, art, signage, and landscape.
- 4 **Maintenance** – Allows for the continued use of a space for its intended purpose. It serves as an additional expression of ownership, prevents reduction of visibility from landscaping overgrowth and obstructed or inoperative lighting.

Since this study began, Metro has **piloted access control measures** at several test stations to **deter loitering** at stations and station entrances and facilitate **fare enforcement**. There are plans to extend this effort. Metro has also scheduled a station rehabilitation effort to update some of the key MetroLink stations.

As resources become available, the WSP team recommends that Metro enhance physical security on the MetroLink system by incorporating CPTED principles.

Table 2 provides specific CPTED recommendations identified as cost-effective improvements to the system’s physical security.

Generally, security design criteria, that includes CPTED, should be developed that supports safe system development by establishing guidance for design that enhances security.

Table 2. CPTED Recommendations

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Security Design	<ul style="list-style-type: none"> • MetroLink security design was generally inconsistent. 	<ul style="list-style-type: none"> • Develop and implement a security design criteria resource to assist in consistent security design principles and application. (American Public Transportation Association (APTA) standards contain criteria that can be utilized.
Signage	<ul style="list-style-type: none"> • Inconsistent signage in and around MetroLink stations and vehicles results in confusing messaging and suggests the system is disorganized. • Confusing signage negatively impacts customer sense of security. 	<ul style="list-style-type: none"> • Update signage, including content and placement, to clarify how to use the system and the expectations of customers. • Make signage messaging, branding, and placement consistent along the entire system. • Remove unnecessary, redundant, and confusing signage. • Include signage requirements in the security design criteria resource.

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Wayfinding	<ul style="list-style-type: none"> Wayfinding is difficult to understand and it is not uncommon for customers to end up on the wrong line for where they want to go. Station names are difficult to see and read from inside the LRT vehicles and at the ends of platforms. Unclear or insufficient wayfinding contributes to system vulnerability. 	<ul style="list-style-type: none"> Enhance wayfinding with clarified directions at stations and clearer station names. Provide customer service training that covers passenger wayfinding to internal and external MetroLink security personnel.
Lighting	<ul style="list-style-type: none"> Most lighting is adequate, but not optimal for security or passenger comfort. 	<ul style="list-style-type: none"> Replace all remaining non-LED lights to enhance efficiency and color rendering. Implement maintenance program that identifies and replaces lighting without delay. Include lighting requirements for system elements in a security design criteria resource,
Sight Lines	<ul style="list-style-type: none"> Some stations, especially those below-grade, have limited sight lines and contain hidden spaces. Daylight shadows can hide station elements, including elevators. Crowded advertisement panels obscure sight lines. Where public restrooms are provided, the layout does not support natural surveillance. 	<ul style="list-style-type: none"> Further evaluate site lines and implement design fixes where feasible (e.g., replace or relocate bulky station furnishings). Work with Marketing to develop guidelines for advertisement placement strategies to prevent blockage of sight lines. Use supplement lighting to minimize shadows that obscure sightlines and station elements.
Maintenance	<ul style="list-style-type: none"> Out-of-service equipment, including elevators and ticket vending machines (TVMs), negatively impact both real and perceived security. Some temporary signage and passenger alerts are out-of-date and convey a sense of the system not being maintained or cared for. 	<ul style="list-style-type: none"> Continue good maintenance practice, including active vegetation maintenance and graffiti removal, while enhancing focus on equipment maintenance and removing out-of-date messaging. Communicate maintenance efforts with concrete timelines, as possible.
Ownership	<ul style="list-style-type: none"> Loitering and non-transit activities at stations suggest lack of ownership and security of system. Unclear and inconsistent “paid fare zones” create challenges for enforcing fare and discouraging loitering. 	<ul style="list-style-type: none"> Develop and enforce clear and consistent “paid fare zones” by relocating TVMs and validators prior to the fare zone. Minimize or positively activate space around the station platform entrances where loitering might impact customers.

3 TECHNOLOGY

To create an effective, layered security system, Metro must develop and implement a plan to leverage multiple transit system technologies. Table 3 provides specific recommendations for the major categories of technology most relevant to the MetroLink system and are feasible options for using technology to improve the system’s security.

Increased security presence on trains was the most commonly selected **top security measure** respondents would like to see implemented on the system, with **68%** of respondents selecting it.

Table 3. Technology Recommendations

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
CCTV	<ul style="list-style-type: none"> • CCTV camera network was not originally designed or installed for security. • Most cameras are very outdated, low-resolution, and fixed view. • CCTV coverage of station is unclear, but at many stations the cameras appear to miss coverage of key areas such as TVMs. • CCTV footage is only protected from write over for 72 hours. • CCTV network infrastructure and configuration is poor and does not support security. • DVRs on vehicles are beyond their repair life. • Sharing of CCTV footage between Metro Public Safety and law enforcement is an issue. 	<ul style="list-style-type: none"> ● Clearly define how Metro wants to use CCTV and then identify which best practices apply. ● Update the CCTV on MetroLink CCTV network to security standards. Pair CCTV with other technologies such as radio communications and silent alarms to create an effective security system. ● Replace outdated, low-resolution cameras with high-resolution, variable view cameras. ● Develop effective CCTV policies and training to address both safety/security and liability risk of the system, including a privacy policy for managing the use of images and sounds recorded by the system and a policy for video viewing, hard copy sharing, and retention. ● Be proactive with proper education, reference material, ethical vendors, and technology staff. ● Continue to advance efforts to share CCTV access with the appropriate law enforcement agencies that works in conjunction with the transit agency security office.
Passenger Assistance and Emergency telephones (PATs and ETs)	<ul style="list-style-type: none"> • Almost all telephones are analog due to existing “legacy” CAT3 cable, which doesn’t support current technology such as Internet Protocol (IP) phones. 	<ul style="list-style-type: none"> ● Further evaluate the design, placement, and functionality of existing PATs and ETs and how that is influencing their level of effectiveness. Upgrade and add new telephones as needed.
TVMs and validators	<ul style="list-style-type: none"> • Many TVM and validators are located inside “paid fare zones,” which can be confusing for passengers and makes fare enforcement challenging. 	<ul style="list-style-type: none"> ● Support data collection and analysis and audits by tracking revenue and ticket sales by type. ● Update the design, user interface, and placement of TVMs and ticket validators to facilitate fare enforcement.

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Radio	<ul style="list-style-type: none"> • Metro Public Safety’s radio channel is only shared with St. Clair County and contracted security. Other law enforcement partners utilize different radio channels. • Contracted security’s use of Metro’s radio channel, such as to call in breaks, creates noise that decreases the effectiveness of the channel for security purposes. 	<ul style="list-style-type: none"> ● Implement redundant communication system technology, clearly establishing and practicing day-to-day and emergency radio procedures internally and with external partners. ● Finalize and implement the singular shared radio frequency that all safety and security personnel can use. Provide for the unified dispatch for security response. ● Develop communication protocol and standards that are strictly followed and enforced to create an effective and professional communication environment. ● All personnel—internal and external—must be trained to the same standards of use and operation of radio technology.
High-visibility uniforms	<ul style="list-style-type: none"> • The public perception is that there is a lack of security presence on MetroLink. • PSO and law enforcement uniforms are not highly visible and therefore law enforcement and security are not easily identifiable. 	<ul style="list-style-type: none"> ● Update or supplement uniforms with high-visibility components to increase the perception of presence on the system.

4 POLICE/SECURITY STAFFING

The system-wide security assessment found that police and security staffing present some of the most promising areas for improving security on MetroLink and some of the most urgent recommendations. Police and security staffing should reflect the security needs of the system, which is influenced by system size (line miles and boardings), ridership, and surrounding community. Staffing needs can therefore evolve as the agency and the community evolve.

Since the system-wide security assessment began, Metro has already begun to improve its **security staff deployment strategy** to increase staff presence on the system.

On a scale of 1-10 with 10 being best, respondents ranked **how secure they feel riding the MetroLink at an average of 5**. All numbers on the scale were represented in the customer survey responses.

In general, Metro should implement a mix of security staffing sources to cover the MetroLink system and implement effective approaches to establishing and managing the relationships between those security staff. Staffing should be a function of both an evaluation of an agency’s security needs and of the staffing requirements necessary to meet those needs.

Table 4 outlines police/security staffing recommendations based on the system-wide security assessment.

Table 4. Police/Security Staffing Recommendations

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Current Metro security staff	<ul style="list-style-type: none"> The leadership and direction of Metro Public Safety Department is not in alignment with industry best practice for transit security and is not effectively managing security on the system. The focus of the Metro Public Safety Department seems to be policing the system, rather than securing the system. PSO staff focus is competitive to law enforcement, not complementary to law enforcement. 	<ul style="list-style-type: none"> Ensure Metro Public Safety is aligned with refined security strategy. Ensure the Metro Public Safety leadership is focused on relationships with law enforcement partners, understands transit security, and focuses on customer service. Evaluate each member of the Metro Public Safety, including leadership, for alignment with new department direction and focus on securing the system over policing the system. Metro Leadership or a third party should mediate and negotiate contractual relationships with law enforcement partners, to ensure system coverage and strategic deployment. Due to the strained relationships and lack of trust, a neutral third-party may be required to facilitate this process.

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Metro policing and security	<ul style="list-style-type: none"> • Metro Public Safety portrays itself in named rank, title, and presentation as law enforcement, though per statute there is no discernible authority to do so (Missouri Revised Statutes, Chapter 590) nor are Bi-State personnel granted the power of arrest (Missouri Revised Statutes, Chapter 544) or allowed to be armed (Missouri Revised Statutes Chapter 70.378 - <i>The personnel designated by the Bi-State Development Agency under subsection 1 of this section are authorized to use only the equipment that is issued by the agency, and only while in the performance of their duties or while in direct transit to or from a duty assignment on the passenger transportation facilities and conveyances owned, controlled, or operated by the agency. No personnel shall be issued any weapons which can cause bodily harm.</i>) 	<ul style="list-style-type: none"> ● Continue to publicly and privately renounce the pursuit of an in-house transit police force, or achieve appropriate legal authority for having one. ● Re-evaluate weapons of the Metro Public Safety and consider an unarmed status. ● Provide appropriate training for job responsibilities.
Staff planning, budgeting & deployment	<ul style="list-style-type: none"> • The number of visible Metro PSO staff was substantially less than anticipated given the size of the PSO staff and their specific responsibility for the security of the system. • Valuable PSO staff effort was devoted to activities that were not critical to the mission of system security, such as duplicating policing efforts and maintaining limited use K-9 teams. This detracts from the availability of PSOs to perform system security functions, such as riding the system and initiating positive interactions with customers. • A specific deployment strategy does not appear to be coordinated with law enforcement or contracted security, nor is it related to system security trends. 	<ul style="list-style-type: none"> ● Use industry best practices to identify the appropriate number of staff per shift or assignment and determine staffing needs. ● Use high-visibility uniforms for PSOs as a cost-effective method of increasing the perception of security presence on a system. ● Base deployment strategies on good security data and an understanding of the real and perceived security needs of the MetroLink system and its customers and coordinate with law enforcement and contracted security. ● Allocate PSO staff to complement law enforcement, not compete with law enforcement. ● Implement active and effective security staff and contracted security staff oversight. ● Eliminate or phase out Metro K-9 teams, which impacts utilization of PSO staff. K-9 capabilities are available within all law enforcement partner agencies.
Law Enforcement Task Force	<ul style="list-style-type: none"> • Relationships, roles and expectations are not well defined and lack metrics for performance. • Protocols for coordination are not clear. • Law enforcement entities operate and deploy personnel with limited coordination with Metro. • There is no clear reporting, data sharing or performance accountability within the Task Force or between Metro and law enforcement partners. • Level of personnel assigned is not adequate in the City of St. Louis due to City staffing constraints. • Jurisdictional boundaries constrain coverage if a jurisdiction cannot provide adequate coverage. 	<ul style="list-style-type: none"> ● Develop or revise contracts with law enforcement partners that have clear oversight capabilities, performance requirements, deployment coordination, metrics, and data sharing that can be measured for success. ● Emphasize community policing in the contracts, rather than enforcement. ● Define requirements of personnel, including command staff, assigned to MetroLink detail to ensure effective coordination with partners and a focus on community policing. ● Train law enforcement in transit / rail operation and needs to allow better coordination. ● Utilize contract requirements to challenge any assigned law enforcement that is not aligned with Metro security and policing strategies.

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Contracted security	<ul style="list-style-type: none"> Security staff were disengaged, either standing off to the side, above the platform at stairway approaches, on their phone, or seated away from passengers. Weapons are a concern. Contractual requirements limited contracted security staff effectiveness. Fare inspectors were rarely visible or seen inspecting tickets. 	<ul style="list-style-type: none"> Enhance use of contracted security with emphasis on customer service, <u>active</u> security presence and defined purpose to support security goals. Consider de-arming. Increase internal contracted security supervision requirements. Train contracted security for the active support role to complement other security activities.
Relationships	<ul style="list-style-type: none"> There is a disconnect between roles and responsibilities, deployment strategies, and a strategic approach to achieve a secure system. Confusion about roles and goals for the security program, as well as personalities, seems to get in the way of a true working collaboration. Metro security staff relationships with law enforcement are challenging, impacted by territorial issues and conflict around who should fill what role and how to police the system. The conflicts are spilling out into the public realm, which contributes to the perception of a dysfunctional security system. Territorial issues are overshadowing system security. 	<ul style="list-style-type: none"> Continue work to establish positive working relationships among Metro, its internal and contracted security, and the law enforcement partners. Emphasize being a good partner through efforts that respect and support policing and security efforts. Remove ALL conflict from the public realm and deal with differences in closed meetings. Establish roles and responsibilities, appropriate staffing, and collaborative meetings in security plans that facilitate the formation of positive relationships around a common goal.

5 PROCEDURES AND TRAINING

The system-wide security assessment found that much of the Metro security staff training occurring does not focus on the elements important for transit security. Rather than focus on policing and anti-terrorism, which are responsibilities of jurisdictional police departments and federal agencies, Metro security should emphasize security that is proactive and reduces the vulnerabilities of the system and focuses on customer comfort and perception. Table 5 outlines specific procedures and training recommendations.

The most common security measures selected by survey respondents when asked about the **top security measures** they would like to see implemented on MetroLink were: increased **security presence on trains**, more **engaged and active security presence**, **consistent security practice** across the system, and **consistent enforcement** of ridership rules.

Table 5. Procedures and Training Recommendations

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Standard Operating Procedures (SOPs)	<ul style="list-style-type: none"> Though Metro Public Safety has a series of procedures covering a variety of activities, from attendance to use of force, it is unclear how they are enforced or what oversight is provided to confirm adherence. 	<ul style="list-style-type: none"> ● Revise and implement procedures to carry out security operations correctly and consistently. ● Ensure procedures address security issues that may arise and cover both internal and external emergencies. ● Train and enforce the procedures.
Passenger Code of Conduct	<ul style="list-style-type: none"> Only some elements of the “Rules on the Rails” are communicated clearly on LRVs and at stations. Rules are not prominently posted on the system. The code of conduct rules are not consistently enforced. <ul style="list-style-type: none"> - The community-run Facebook page, St. Louis MetroLink Crime Reports, has frequent posts about passengers eating, drinking, smoking, and acting in non-courteous manners. Similar information was gathered through the rider survey. 	<ul style="list-style-type: none"> ● Refresh MetroLink code of conduct that support controlling the safety, security, and quality of life of people while utilizing the transit system. ● Consistently post the updated code of conduct on system vehicles, trains, stops, platforms, and public buildings. ● Back the code of conduct by a civil penalty or arrest and enforced by transit security, transit police, and/or specific security staff who know the code.
Law Enforcement Task Force Procedures	<ul style="list-style-type: none"> Law enforcement partners do not have specific procedures for MetroLink policing activities. 	<ul style="list-style-type: none"> ● Develop discrete transit-specific procedures and training for police to support community policing.

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Training	<ul style="list-style-type: none"> • The focus of Metro Public Safety training is policing and anti-terrorism efforts, not of transit security. <ul style="list-style-type: none"> - Law enforcement partners are trained in policing and anti-terrorism. • PSO training does not emphasize customer service or customer perception of security. 	<ul style="list-style-type: none"> ● Outline a training program in the recommended Security Plan that includes requirements for qualification, requalification, familiarization, and refresher training programs to ensure that employees demonstrate an understanding and proficiency in the application of rules, procedures, and equipment. ● Develop training that covers all aspects of Metro’s security strategy from planning and design to operations and security awareness. ● Establish baseline security awareness training objectives for all transit employees that include behavioral awareness, surveillance, response procedures and self-protection. ● Develop additional training that covers how to deal with different situations that may arise on systems such as mental illness and disorderly persons, emphasizing de-escalation training. ● Provide specific training to contracted security staff and law enforcement partners that reflects the transit environment.

6 FARE AND FARE ENFORCEMENT

Fare enforcement is a central component of system security. The recommendations provided in this section reflect the WSP team’s observation of fare enforcement activities and its review of MetroLink’s contract security agreement. MetroLink fare enforcement SOPs, Key Performance Indicators (KPIs), and activity reports were not available to the WSP team for this report, limiting the ability to provide informed and actionable findings and recommendations. Table 6 outlines recommendations for addressing **fare evasion** by following fare enforcement best practices.

The desire for **consistent fare and rule enforcement** emerged as a common theme in rider survey open-ended comment responses.

Table 6. Fare and Fare Enforcement Recommendations

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Authorization	<ul style="list-style-type: none"> Unclear legal authorization for fare enforcement. 	<ul style="list-style-type: none"> Establish clear legal authorization to create the foundation for fare enforcement that accounts for MetroLink’s proof-of-payment fare collection environment and determine a consistent basis for prosecution (criminal or civil).
Policy	<ul style="list-style-type: none"> Unclear and inconsistent application of fare enforcement policies and application. 	<ul style="list-style-type: none"> Establish and enforce clear, consistent, and transparent policies to create the foundation for fare enforcement and support a safe and orderly environment. Design policies to affirm the legal requirement to pay a fare and to assure fare-paying customers that they and other riders are being treated fairly. Clearly state and consistently enforce policies. Develop fare enforcement policies that reflect MetroLink’s planned introduction of the Gateway Card and mobile ticketing application, including a fare enforcement application.

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Customer experience	<ul style="list-style-type: none"> Lack of engagement with customers does not give the impression of rigorous inspection activity and may send the wrong message to both fare paying customers and fare evaders. 	<ul style="list-style-type: none"> Use Fare enforcement operations to help improve the perception of law and order on MetroLink, increase engagement with customers and use all personnel on the system to assist unfamiliar customers use the system and its ticketing mechanisms. Post signs at every entrance indicating that fares are required within fare zones and on transit vehicles. Note that fares are enforced. Provide training for fare enforcement that leaves room for passenger education and fare purchasing. <ul style="list-style-type: none"> Train fare enforcement officers to speak with customers politely and clearly so they feel confident they will be given an opportunity to provide an explanation and do not feel victimized by fare enforcement officers. Train fare enforcement officers to recognize that sometimes customers without a valid ticket or authority can have a good reason and create policy that gives these riders an opportunity to explain it to a fare enforcement officer. Expect staff to use their de-escalation skills to resolve the issues whenever possible.
Operational approach	<ul style="list-style-type: none"> Security contract only provides broad description of fare enforcement duties. Security contract does not appear to include requirements for regular reports on fare enforcement operations, or KPIs such as the number of inspections performed per specified period. Fare inspection activities do not appear to be coordinated with local law enforcement agencies, a strategy used by other agencies to reduce fare evasion. No apparent organized or routine fare inspection activities, including for issuance of citations and warnings. Observed fare inspector boarding a train with their inspection pad out but not moving through the car or engaging with any passengers. 	<ul style="list-style-type: none"> Use either agency personnel or a mix of agency personnel and contract security officers for fare enforcement. Develop strategy of fare sweeps and de-emphasize targeted enforcement of fare evasion. Evaluate applicability of targeted fare enforcement for MetroLink in areas where transit lines intersect for operational efficiency and/or where data identifies potential target areas for fare enforcement. Consider working with local police in its various jurisdictions to conduct joint sweeps. Establish a desired inspection rate and use it to calculate the number of dedicated fare enforcement agents required to support MetroLink operations. Develop and require initial and refresher fare enforcement training programs that cover conducting fare inspections, providing customer service, and providing security for the system. Evaluate the type and number of hand-held validators needed for fare inspections, including local law enforcement personnel needs.

ELEMENT	AREAS FOR IMPROVEMENT	RECOMMENDATION
Management & measurement	<ul style="list-style-type: none"> No apparent inspection performance standards, which significantly increases the challenge of providing metrics to measure the performance of fare inspection personnel. Unclear if fare evasion warnings are recorded or uploaded to a database that allows the tracking of repeat offenders. Unclear if fare evasion data are collected and used to identify adverse trends and problem areas. 	<ul style="list-style-type: none"> Consider deploying handheld devices used to validate fares. Measure fare evasion through their fare enforcement activities.

7 CONCLUSION

MetroLink is a system in flux. It has a solid foundation of good people motivated to enhance the safety and security of the system, but efforts have often been siloed, lacking consistent direction and strategy, and sometimes counterproductive to each other. It has also suffered from the misdirected actions of a few that detract from system security efforts by focusing and expending resources on activities not critical to the mission of system security.

Many of the issues identified by the system-wide security study can be addressed, at least in part, by developing a comprehensive and coordinated security strategy and program that encompasses and integrates safety, security, and emergency management. This approach provides the necessary foundation for effectively implementing the recommendations outlined in this report, while also recognizing that culture change and changes to internal and external perceptions require both focused leadership and a concerted effort over time as opposed to singular or short-term mandates.

A robust security program is layered and requires strategies that draw from all categories of recommendations: a security strategy that establishes the framework; CPTED principles that use space and human behavior to reinforce a secure environment; technology that enables efficient and effective prevention and response; police/security staffing that collaborates to support system security; procedures and training that enable informed and skilled personnel; and fare and fare enforcement that contributes to positive interactions between the system, security personnel, and customers.

By initiating this system-wide security assessment, East-West Gateway launched a collaborative effort with Metro staff and law enforcement partners—with support from community stakeholders—that is already improving security on MetroLink. Changes already underway include the following:

1. Strengthening relationships between partners
 - Strengthening relationships between Metro and police partners through more frequent communication and recent collaboration;
 - Implementing a shared radio talk group in early 2019;
 - Moving to execute contracts between Metro and police partners.
2. Deploying visible, effective and coordinated personnel across the Metro transit system
 - Beginning in fall 2018, Metro increased the presence of its patrol presence across MetroLink, focusing on targeted onboard patrols;
 - Metro is revising its approach to deploying, supervising, training and supporting contract security to focus on customer service, fare enforcement, and front-line surveillance. Metro will release a request for proposals for these contracted security services in early spring 2019.
3. Creating safer spaces
 - Metro is conceptualizing its vehicles, transit centers, MetroLink stations, and station areas as “Metro neighborhoods” by integrating placemaking and crime prevention through environmental design in ongoing and upcoming capital programs;

- The fall 2018 MetroLink Station Access Pilot Project is being expanded with updated design and equipment to limit access to the North Hanley, Delmar Loop, Forest Park-DeBaliviere, Central West End and Fairview Heights MetroLink Stations. This work will be complete in early spring 2019;
- In early spring 2019 Metro will begin redesigning five original MetroLink Stations (Laclede's Landing, Convention Center, 8th & Pine, Forest Park-DeBaliviere and Delmar Loop MetroLink Stations) with an emphasis on placemaking, crime prevention through environmental design (CPTED), access control and public art.

4. Leveraging technology

- Metro has launched customer-facing tools that deliver more and better transit information, and provide customers with opportunities to reach Metro and law enforcement personnel when they're not feeling safe.
- The Noonlight app allows customers to summon law enforcement discretely via a mobile phone;
- In July 2018 Metro launched a text messaging service that allows customers to discretely text Metro Public Safety dispatch 24 hours a day (314-300-0188).

The above changes are notable steps towards enhancing security on MetroLink and fostering positive, collaborative partnerships between the parties responsible for security on the system. A comprehensive security program for MetroLink will result from continuing the efforts already enacted in combination with on-going organizational and cultural shifts, and implementing the additional security recommendations as prioritized in this report.

DEFINITIONS & ACRONYMS

Table. Definitions

TERM	DEFINITION
Acceptable risk	The level at which further risk reduction measures or additional expenditure of resources will not result in significant reduction of risk.
Assets	People, information, and property for which the transportation system is responsible as legal owner, employer, or service provider, which support the agency’s mission of moving people and goods.
Community policing	A proactive approach to policing that focuses on developing and maintaining relationships between police/security officers and civilians to build mutual trust and respect and collaboratively address crime and change negative behavior.
Consequence	The severity of impact and probability of loss for a given scenario. Consequences may be measured in qualitative or quantitative terms.
Crime Prevention Through Environmental Design (CPTED)	A multi-disciplinary approach to deterring criminal behavior through environmental design. CPTED concepts and strategies use the four interrelated principles of natural surveillance, natural access control, territorial reinforcement, and maintenance.
Crime	An illegal action or omission that constitutes an offense or is considered to be evil, shameful, or wrong.
Critical assets	Those assets required to provide services for the system. Critical assets include people (e.g., passengers, employees, visitors etc.), property (e.g., stations and stops, maintenance facilities and yards, rolling stock, tracks etc.), and information (e.g., operations and maintenance procedures, security procedures and assessments, computer network information etc.).
Defense-in-depth	A concept in which multiple layers of security controls (defense) are placed throughout a system. See Layered security.
Emergency	A sudden, urgent, usually unforeseen event during which injury, death, damage to property or a combination thereof may occur.
Fare evasion	When passengers use transit services without paying their required fare.
Incident	An unforeseen event or occurrence with the potential to cause injury or property damage.
Layered security	A security approach that utilizes measures at several different levels or “layers” throughout a system, and at each facility, to provide greater redundancy and defense-in-depth protection for assets and the system. The concept of layered protection recommends placing the most critical or vulnerable asset in the center of concentric levels of increasingly stringent security measures. This allows multiple opportunities for thwarting or disrupting terrorist and criminal activities and is a key aspect of an effective security management strategy.
Maintenance	Allows for the continued use of a space for its intended purpose. It serves as an additional expression of ownership, prevents reduction of visibility from landscaping overgrowth and obstructed or inoperative lighting.
Natural Access Control	The physical guidance of people coming and going from a space by the judicious placement of entrances, exits, fencing, landscaping and lighting.
Natural Surveillance	The placement of physical features, activities and people in such a way as to maximize safety.
Rail consist	The combination of two or more rail cars to form a unit such as a baggage car, passenger cars, and a diner car.

TERM	DEFINITION
Risk	The likelihood of occurrence of a hazardous event, and the severity of the consequence associated with the hazardous event.
Risk assessment	An analysis that examines and evaluates the assets and operations of the system taking into account possible hazards and consequence.
Safety	Freedom from <i>unintentional</i> harm.
Security	Freedom from <i>intentional</i> harm.
Security plan	A document adopted by the transit agency detailing its security policies, objectives, responsibilities and procedures.
System	A composite of people (employees, passengers, others), property (facilities and equipment), environment (physical, social, institutional), and procedures (standard operating, emergency operating, and training), which are integrated to perform a specific operational function in a specific environment.
Territorial Reinforcement	The use of physical attributes that express ownership, such as fences, pavement treatment, art, signage, and landscape.
Terrorism	Intentionally indiscriminate violence as a means to create terror or fear among masses of people or to achieve a religious or political aim.
Threat	Any intentional action with the potential to cause harm in the form of death, injury, destruction, disclosure, interruption of operations, or denial of services.
Threat and Vulnerability Assessment (TVA)	A security risk assessment that is intended to evaluate the system's susceptibility to security threats and to identify vulnerabilities and potential consequence. The TVA forms the basis for security design measures, plans and procedures that are to be implemented to reduce or mitigate security risk.
Vulnerability	Any weakness, flaw or condition that allows and/or can be exploited, for the successful realization of a potential threat against the system and its assets.

Table 7. Acronyms

ACRONYM	MEANING
APTA	American Public Transportation Association
CCTV	Closed Circuit Television
COPS	Community Oriented Policing Services (US Department of Justice)
CPTED	Crime Prevention Through Environmental Design
EWG	East West Gateway Council of Governments
FTA	Federal Transit Administration
FTE	Full-Time Equivalent
MOU	Memorandum Of Understanding
PRT	Peer Review Team
SOP	Standard Operating Procedure
TCRP	Transit Cooperative Research Program

ACRONYM	MEANING
TRB	Transportation Research Board
TSA	Transportation Security Administration
TVA	Threat and Vulnerability Assessment
TVM	Ticket Vending Machine

APPENDIX

A SUMMARY OF RIDER SURVEY RESPONSES



Metro Security Assessment Rider Survey Summary

February 8, 2019

Submitted To



EAST-WEST GATEWAY
Council of Governments

Prepared By





Overview of Outreach

In 2018, East-West Gateway (EWG) Council of Governments conducted a security assessment of the MetroLink system across the St. Louis region. The 8-month Metro Security Assessment was led by WSP USA, with the W/M/DBE firm Vector Communications consulting on stakeholder engagement. The team took a comprehensive look at the MetroLink system from a security angle including technology, environmental design and human capital deployment.



As part of security assessment, the team created, disseminated, and analyzed an online survey using SurveyMonkey.com for MetroLink riders. The survey was designed so that at the beginning, if a respondent selected that they never ride the MetroLink, they would be taken to the end of the survey and not asked any additional questions.

The survey was released on November 6, 2018 to key stakeholders such as entities whose leadership had been interviewed by the project team or attended briefings. The survey link was emailed with a request that the stakeholders distribute to their employees, team, students, etc. for participation.

The survey was distributed to the general public on November 15, 2018 via website, social media and email blasts. Some of the agencies that promoted the survey include EWG, CMT (Citizen's for Modern Transit), Metro, and Bi-State. Additionally, the survey was sent to all contacts on the Northside-Southside MetroLink study mailing list and posted to the Metro Crime Facebook page run by a member of the public. The survey was available online through December 31, 2018.

In Early December, survey results showed only 8% of respondents identified as Black of African American, which was not representative of the St. Louis region. In an effort to mitigate this disparity, the survey was disseminated again to the African American key stakeholders, as well as Neighborhood Improvement Specialists across the City, with a specific call to help spread the word to minority communities. In addition, two members of Vector's team took iPads with the survey out to MetroLink stations/platforms on Tuesday, December 18 and Wednesday December 19 from Noon to 4:00 pm to obtain more minority feedback. The surveyors went primarily to the stations that had been underrepresented in the data, including Wellston, Jackie Joyner Kersey, Laclede's Landing and Washington Park. After this engagement was complete, the number of respondents who self-selected as Black of African American had gone up to 14%.

More than 1,800 individuals participated in the survey, and 1,669 indicated they are current MetroLink riders.

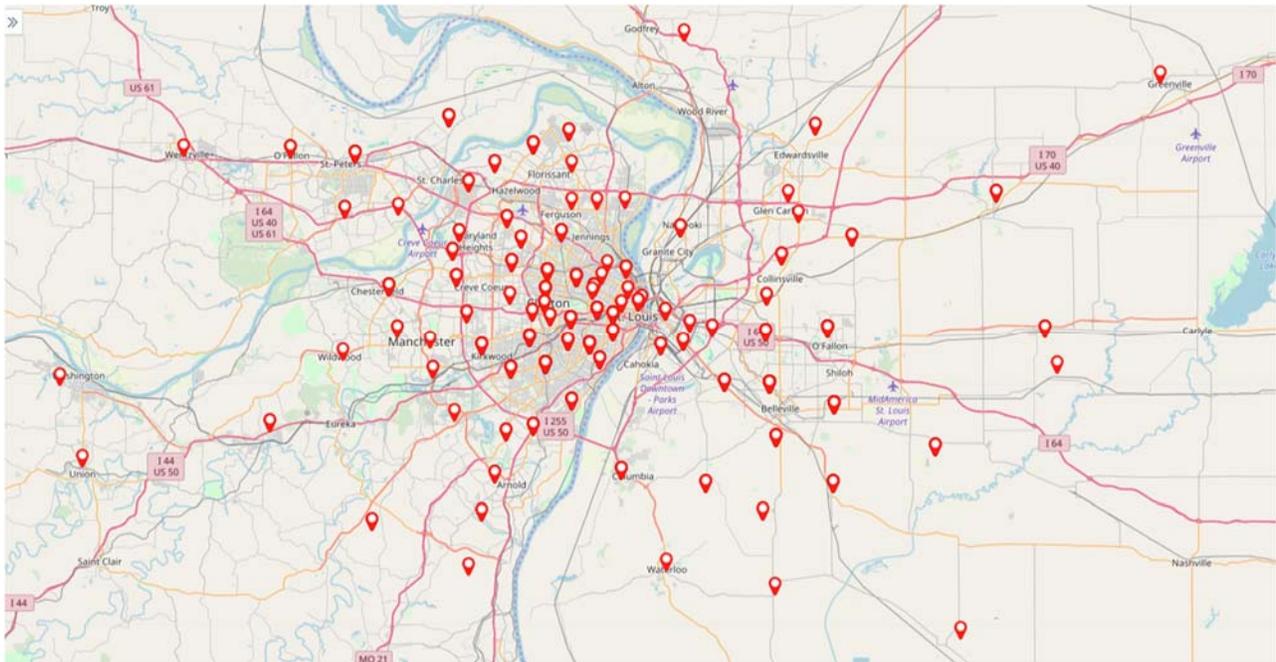


Respondent Demographics

The survey included demographic questions to help ensure the responses were representative of a cross-section of MetroLink riders. A summary of the responses is outlined below.

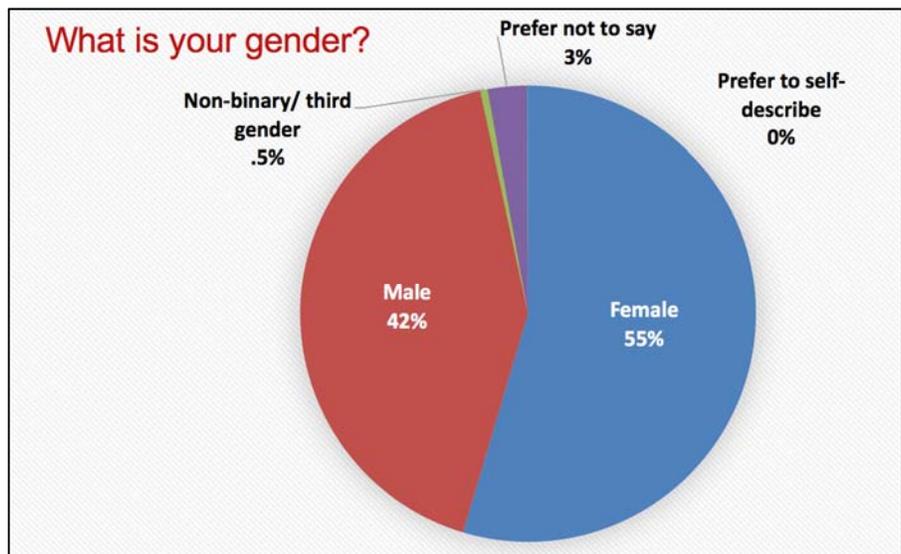
RESIDENTIAL ZIP CODE

The first question asked respondents “In what Zip Code do you live?” Survey respondents represented more than 120 residential zip codes across the bi-state region, specifically concentrated in St. Louis City, County, and the Metro East in Illinois. The map below indicates a sampling of 500 of the more than 1,500 responses to this question.



GENDER IDENTITY

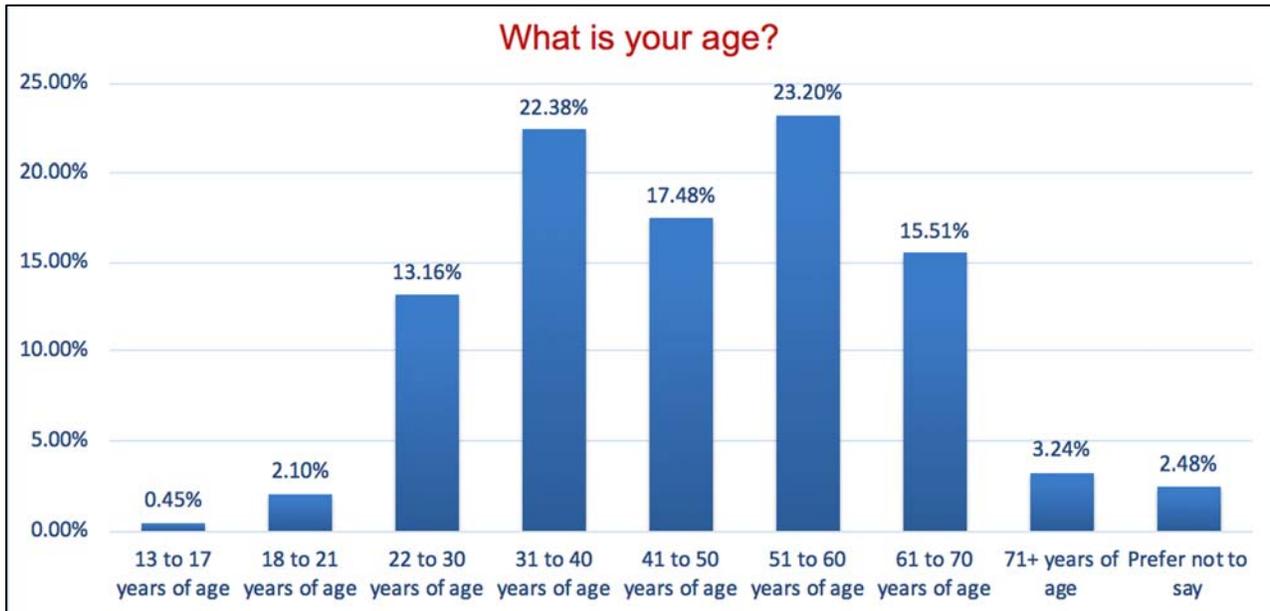
Respondents were asked “As what gender do you identify?” The results indicate that the 1,573 participants who responded self-identified as 54% female, 42% male, .5% non-binary/third gender, and 3% preferred not to say. These demographics are representative of the City of St. Louis, which is currently listed by the state of Missouri to be made up of 94 men to every 100 women.





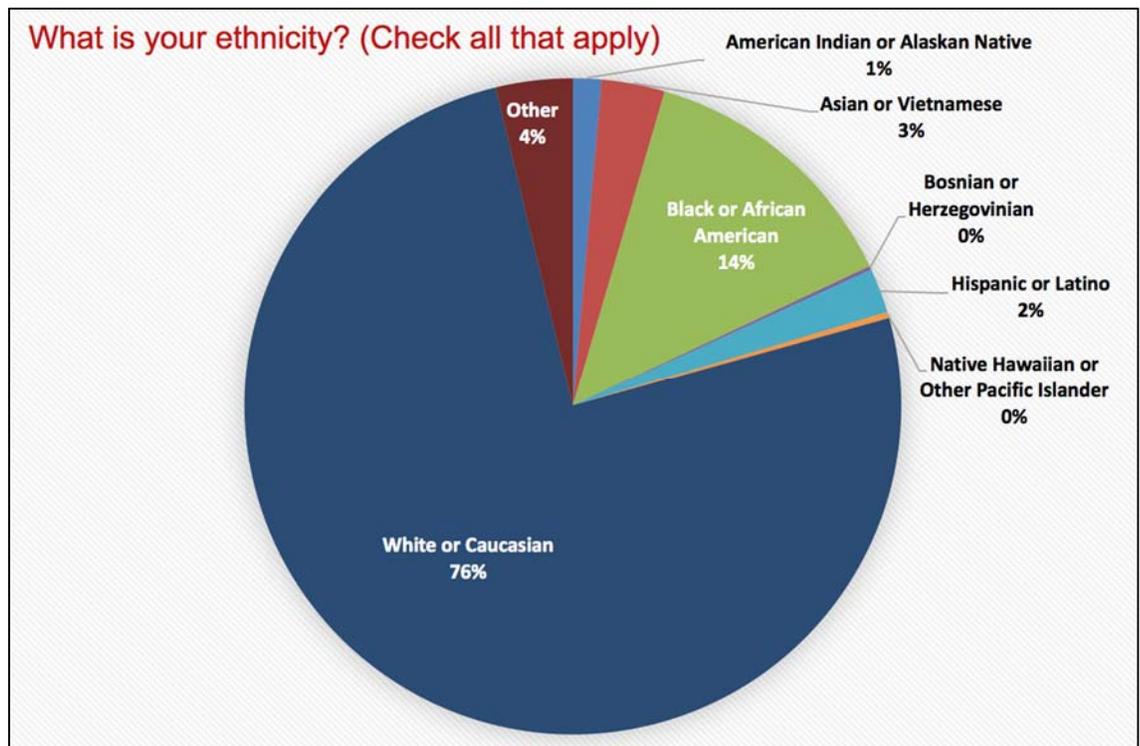
AGE

Survey participants were asked to select their age from options ranging from 13-years-old to 70+. All ages were represented in the survey results with the majority of the 1,573 respondents being between 31 and 60 years of age (63%). Additional information is included in the chart below.



ETHNICITY

The majority of MetroLink riders who participated in the survey (76%) identified as White or Caucasian, followed by Black or African American (14%). The other responses are included in the chart.



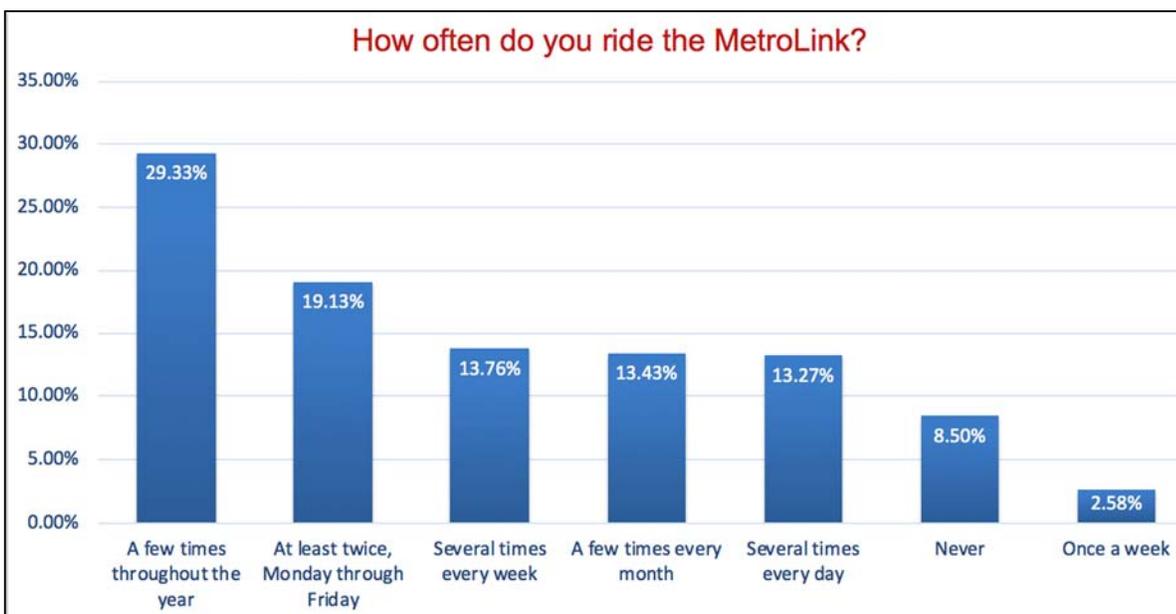


Respondent Ridership

Survey respondents were asked a series of three questions to identify the standard ridership profile of those participating. The results of the responses are outlined below and help inform the security evaluation results.

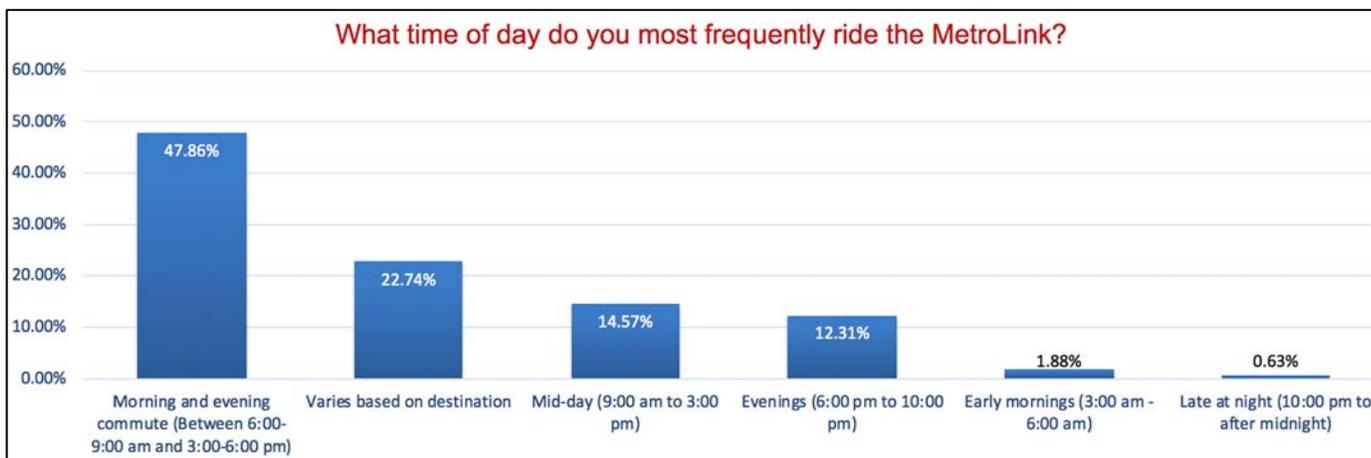
FREQUENCY OF METROLINK USE

All 1,824 survey participants indicated how frequently they utilize MetroLink. The majority of respondents ride at least twice or several times every week (33%), or a few times throughout the year (29%). Responses are outlined in the chart above.



TIME OF DAY

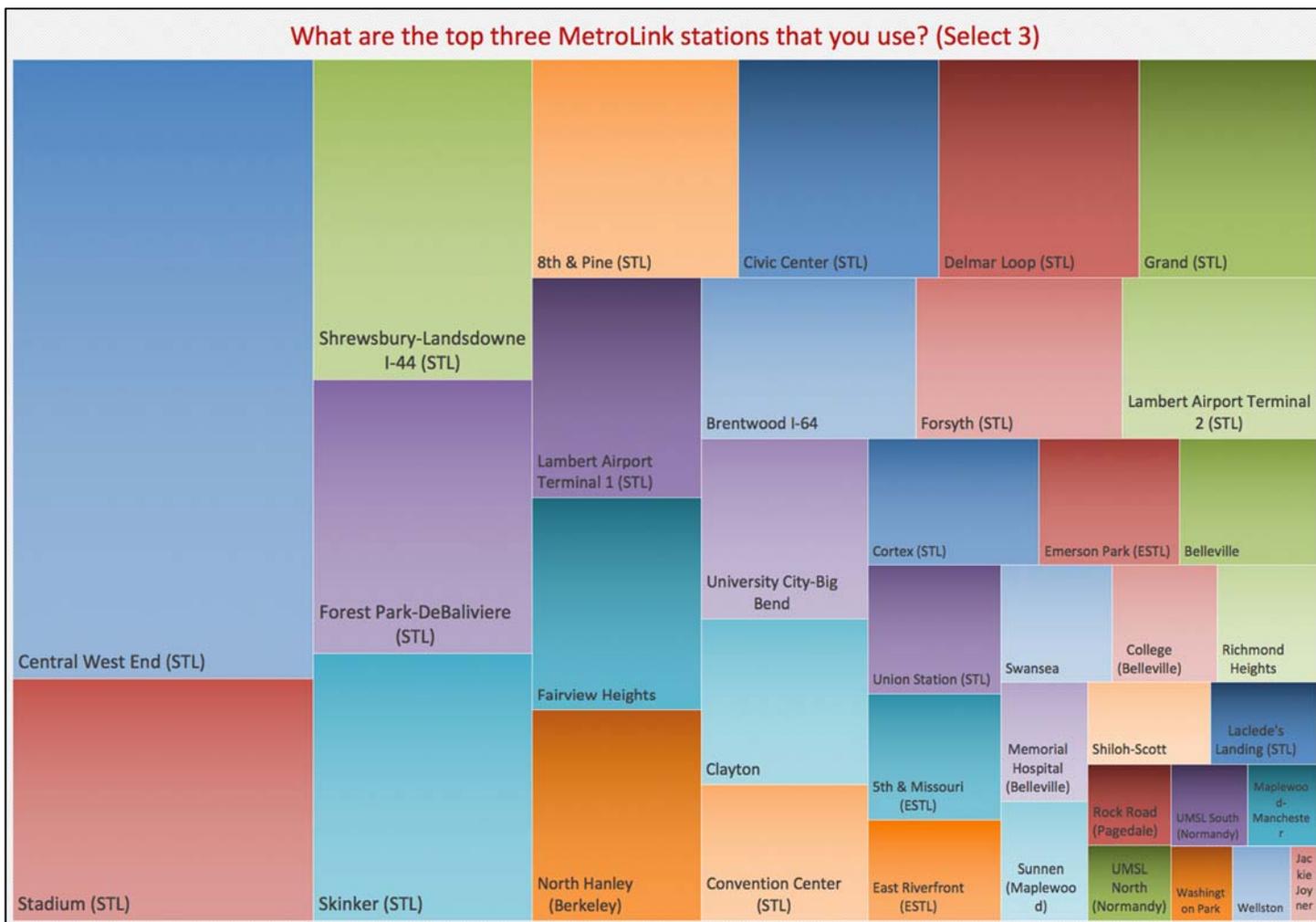
Riders were asked what time of day they typically use the MetroLink for transportation. The majority of the 1,592 respondents most frequently use MetroLink for their morning and/or evening commute (48%), or a variety of times based on destination (23%). The chart below includes an overview of responses.





PRIMARY STATIONS

All MetroLink stations were represented in the responses to the rider survey. Participants were asked to identify the top three stations they utilize most frequently, and 47% of respondents use the Central West Station as one of their primary stops. The chart below is a graphic representation of stations selected by hierarchy of frequency.



Rider Security Evaluation

Three questions were asked of riders to help provide an overview of their feelings and experiences regarding MetroLink Security. The emerging themes in responses to the following questions helped inform the assessment team’s recommendations.

SENSE OF SECURITY

On a scale of 1-10 with 10 being best, 1,591 respondents ranked how secure they feel riding the MetroLink at an average of five (5).

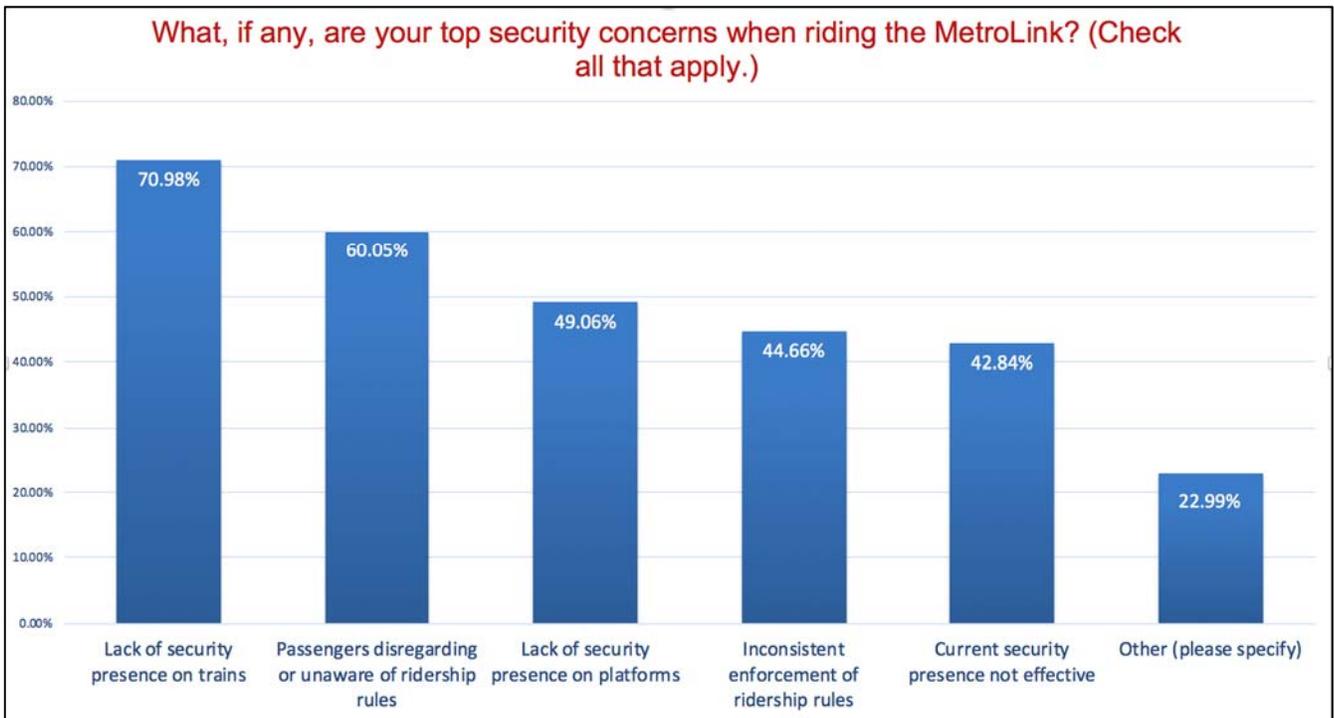


TOP SECURITY CONCERNS

The MetroLink Security Assessment team utilized a variety of research to create a list of public transit riders’ most frequent security concerns. Along with selecting as many options from the multiple-choice answers that they felt applied, respondents were also given an opportunity to write in their additional concerns. The top security concerns the 1,592 respondents selected were:

- a. Lack of security presence on trains (71%); and
- b. Passengers disregarding or unaware of ridership rules (60%).

Additional information is included in the chart below.

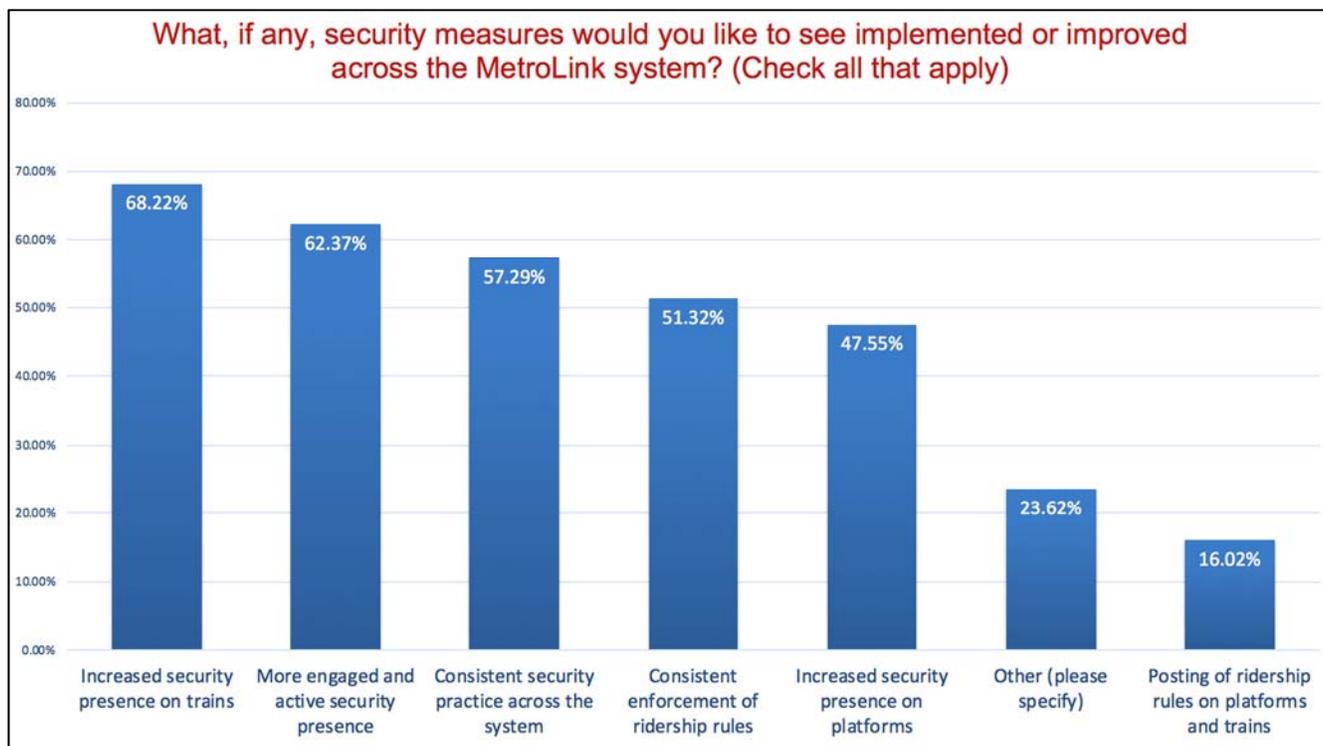


SECURITY MEASURES TO IMPROVE OR IMPLEMENT

Based on best practices worldwide for public transit security, respondents were provided with a list of potential security measures that could be implemented, as well as an opportunity to write in their own. There were 1,592 responses indicated riders would like to see the following improvements on the MetroLink system:

- c. Increased security presence on trains (68% - 1,086 riders)
- d. More engaged and active security presence (62% - 993 riders)
- e. Consistent security practice across the system (57% - 912 riders)
- f. Consistent enforcement of ridership rules (51% - 817 riders)

All responses are outlined in the chart below.



Additional Comments

A random sampling of 150 of the 800+ additional comments was analyzed for emerging themes. The majority of comments (138) were related to the following topics:

# of Comments	Comment Topic
25	Desire More Consistent and Effective Security Measures
14	Desire Increased Fare Enforcement
10	Have Experienced Drugs and/or Theft on Trains
10	Feel MetroLink is Unsafe to Ride
9	Desire to Add Gates / Turnstiles
9	Desire More Security on Trains and/or Platforms
8	Desire for Accessibility / Connectivity (Including North and South County)
7	Have Experience Nuisance Behaviors: Loud Music, Profanity, Urination, Solicitation, etc.
6	Experienced Security Members Not Engaged or Enforcing Policies
5	Desire for One Coordinated Security Force
5	Desire for More Time/Line Options
4	Desire for Coordination with Other Entities and/or Police Agencies
4	Have Ended Ridership
4	Have Seen Recent Increase in Security Presence (Specifically Central West End)
4	See Need for Increased Late Night Security
4	See Need to Improve MetroLink's Image



# of Comments	Comment Topic
4	Pleased with Current Service and/or Security
3	Desire Conceal Carry
3	Feel the Platforms are Unsafe

There were also a number of compliments and/or acknowledgments that the trains consistently run on time, as well as “thank you” notes to Metro and the study team for doing this assessment.

Quotes from Riders

“Occasional panhandlers on train and platforms seems to correlate to when security is not present. I've seen security be very diligent when catching the occasional freeloader (this is good) but also seen them not get involved with passengers over loud music, bad language etc.”

“I know MetroLink is paying for security personnel, but I never see them. I feel unsafe riding it as a criminal element is taking advantage of no security and no enforcement to buy tickets.”

“There has been improvement in the security presence. All police/security personnel ought to be able and consistent in enforcing rules from one end to the other end of the line. County police stance keeps it fractured. One system, one set of security, one set of rules!”

“I believe riding the MetroLink is safe during commuter hours or I would not ride it. Increased patrols during all hours on the trains, especially the second set of joined trains, would raise my feeling of security to a 10.”

“I want “better security” to mean less violent security. I am a patron, not a criminal, and I do not like feeling policed.”

“I feel most uneasy at night when the trains are not as populated.”

“I am very impressed with the general punctuality and cleanliness of trains and platforms. Would love to see fare enforcement. I always feel better when security is on the platforms and I always sit as near the driver as possible for security onboard. The drivers generally enforce the rules on the first car.”

“I think the way local media hypes security issues related to MetroLink creates a public perception that security problems are more serious than they actually are.”

“Other than security concerns, I am happy with Metrolink.”