



History that connects us.

PENNSYLVANIA TROLLEY MUSEUM

Visitor Services Training Manual

Revised 2025

Mission Statement: The mission of the Pennsylvania Trolley Museum is to preserve and perpetuate its collection of historic transportation equipment, artifacts and archives and utilize the collection and other resources to provide an unparalleled immersive experience that brings the technology and culture of the Trolley Era alive through entertaining, educational and diverse programming.

Vision Statement: The vision of the Pennsylvania Trolley Museum is to enhance the knowledge of transportation technology and culture to educate and inspire future generations of innovators.

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Welcome Aboard!

The Pennsylvania Trolley Museum (PTM) is a nonprofit educational organization and nationally significant trolley museum. We are dedicated to sharing the compelling story of Pennsylvania's Trolley Era to more than 45,000 visitors annually through preservation, interpretation, special events, and educational programs. Daily visitors can enjoy a scenic 4-mile round-trip ride on an antique trolley, take a guided tour of our Trolley Display Building, explore our interactive exhibits, and watch an award-winning short film about what it was like to ride Pittsburgh's trolleys. We also offer an abundance of programs and activities including field trips, behind-the-scenes tours, holiday events, birthday parties, and trolley operation experiences.

We have more than 180 dedicated volunteers who serve the Museum in every capacity. From the maintenance, restoration, and operation of trolleys to work regarding our special events, tours, and archives, there are many ways to get involved. Without our volunteers, our museum would not be around today. In fact, the Museum started out with only volunteers running it. We have experienced tremendous growth in the last 10 years, culminating in the opening of our Welcome and Education Center in November of 2023. Its new exhibit halls, theater, museum store, classroom, and events spaces will hopefully allow us to share the Trolley Era with even more people every year. And we're not done yet. Something new is happening at PTM every day, and with your help, we'll be ready for anything that the future holds.

Our Volunteer Team

Of all the volunteer opportunities here at PTM, the two jobs that interact most frequently with our visitors are our Operators and Museum Guides. By operating our antique trolleys and sharing their history, these individuals are the ones who lead visitors back in time to the Trolley Era. All volunteers are welcome to take on these positions (training classes are offered throughout the year), and we encourage any volunteer serving in one of these roles to try the other!

Operators and Guides should please review the entirety of this manual so that they can learn the best practices for interacting with visitors, understand their responsibilities, and become familiar with our collection's history. Other volunteers are also welcome to read this manual so that they can help make each visitor's experience at PTM the best one possible.

Please note that, as integral parts of our team, all volunteers are considered and referred to as museum staff members alongside the employees that are part of our paid staff.

Pennsylvania Trolley Museum History

The streetcar or 'trolley' played a vital role in the growth of 20th century American cities and suburbs. This high-speed and efficient form of transportation transformed culture, society, and technology until the success of the automobiles brought an end to the Trolley Era. As trolleys were phased out of cities and towns, organizations nationwide were formed to house, operate, and preserve trolleys.

The Pittsburgh Electric Railway Club was formed in 1946 and, between the years of 1949 and 1953, it acquired three trolley cars. 1953 also saw this club re-organize as a nonprofit with the goal of preserving the rich heritage of the Trolley Era to future generations. In 1954, the Pittsburgh Railways Company assisted the club in motoring these three cars on their own power to the future site of the Pennsylvania Trolley Museum in Washington County.

Over the next seven decades, the museum grew into a nationally significant trolley museum and heritage site. PTM now boasts a collection of more than 50 trolleys (about 20 of which are fully operational for passengers), a Trolley Display Building, a maintenance and restoration shop, and state-of-the-art Welcome and Education Center. The Museum depends on a dedicated team of employees and volunteers who are committed to enhancing the knowledge of transportation technology and culture to inspire the next generation of innovators.

Pennsylvania Trolley Museum Timeline

- **1940** - The local chapter of the National Railway Historical Society makes an initial attempt to establish a museum to preserve the legacy of the Trolley Era, but the project comes to an end due to members' war time responsibilities. The first car acquired for the "collection" is lost due to vandalism and scrap drives.
- **1946** - The Pittsburgh Electric Railway Club is formed by trolley enthusiasts who had spearheaded the earlier preservation effort.
- **1949-1952** The group acquires historic streetcar M1 in 1949 and West Penn 832 in May of 1952, both stored at the Ingram Car House.
- **1953** - Pittsburgh Railways Company announces plans to abandon its Washington and Charleroi interurban lines. The club selects a 2000-foot segment of track for the demonstration museum line, including a 900-foot passing siding that intersects the abandoned right-of-way of a coal mine branch on which additional track can be built. The Pittsburgh Electric Railway Club is reorganized as a nonprofit corporation and begins planning for a permanent home for the collection.
- **1954** - The first two cars (M1 and West Penn 832), and a third one just purchased (3756), are moved to the site operating under their own power, the final movement over the abandoned interurban line.
- **1963** - Washington County commissioners officially dedicate the Arden Trolley Museum on June 23 and rides are offered to the public.
- **1992** - The name of the museum is changed to Pennsylvania Trolley Museum to better reflect the collection's scope.
- **1994-1995** - The museum's line is extended to a loop near the village of Arden Mines and the first turning loop is completed at Arden in 1995.
- **2003- 2004** - A line extension adds a half-mile of track that largely follows the original interurban line back toward Pittsburgh and a second loop (McClane) is completed.
- **2005** - A 28,000 square-foot Trolley Display Building (TDB) that houses more than 30 cars in a protective environment opens to the public.

- **2007** – A state-of-the-art substation is completed to provide a stable power supply and electricity cost savings.
- **2011**—The West Campus Events Room is constructed next to the Car barn to serve as a space for rentals and special events.
- **2013**—The Artifact Preservation Building (APB) is constructed as a storage area.
- **2015**—The historic building once known as Wexford Station arrives at PTM.
- **2017**—Wexford Station, its appearance now restored back to a trolley station, opens to the public as an exhibit space located adjacent to the TDB.
- **2018**—PTM announces the *On Track for the Future* capital campaign to construct an immersive heritage complex, which includes an 18,000 square-foot Welcome and Education Center, Volunteer Boulevard, Barry Stout Park, and an expanded parking lot.
- **2020**—PTM purchases 320 Reliance Drive to serve as archival, maintenance, office, and storage space.
- **2023**- PTM’s Welcome and Education Center opens to the public after more than 2 years of construction and decades of planning.

Pennsylvania Trolley Museum Core Values

Customer First Orientation: We make decisions and measure every outcome based on how well it meets our customers’, members’, and/or visitors’ needs.

We achieve this when we create, communicate, and articulate a clear WHY statement; make low-cost performance key to survival; analyze customer wants and needs. This will provide positive customer feedback, both internal and external.

Teamwork and Collaboration: We achieve more and greater success when we collaborate and work together.

We achieve this when we think and work as one team; cooperate; build bridges across departments and teams. This will cause us to trust increasingly in ourselves and in one another.

Effective Communication and Listening: We understand that communication starts by listening and understanding different perspectives.

We achieve this when we understand that communication starts by listening and understanding different perspectives. We should get all information before deciding; solicit help; obtain counsel; do not gossip; value different views; ask for clarification; seek buy-in; participate in meetings; repeat key messages. Increasingly hear and you will then be heard.

Proactive Leadership: Do the right thing while achieving success by enabling others.

We achieve this when we hire and assign tasks carefully; provide training; model learning behavior; agility; relentlessly pursue success; innovation; reward and recognize; focus on quality; encourage creativity; do not blame for mistakes; simple measures. You will know you are succeeding when you can fully integrate continuous improvement into your everyday work life.

Respect: We value everyone and treat people with dignity and professionalism.

We achieve this when we understand self-worth; seek self-knowledge; show concern; support and appreciate others; never bully; adhere to ethics; recognize life responsibilities; see the lighter side; accept challenges. Following this rule and we will increasingly recognize our own and others' self-worth.

Trust: We believe in each other and do what we say we will do.

We achieve this when we seek and share truth; rely on others; understand self-worth; seek self-knowledge; exercise proactive leadership; serve those who serve you; relationships build trust and with trust comes loyalty. Likewise, this will cause us to increasingly recognize our own and others' worth.

Visitors are our priority!

We want to ensure that all visitors have an enjoyable and rewarding educational experience. As a volunteer, you can help the museum achieve that goal! We acknowledge that our visitors come from all walks of life and bring different interests, motivations, and prior knowledge to their museum experience. Our visitors range from those who have never ridden a trolley to trolley enthusiasts and rail fans. Anticipate and be prepared to respectfully address the various needs of our visitors.

Remember that, as a volunteer, you represent the Pennsylvania Trolley Museum. Your words, actions, and behaviors, both positive and negative, impact the visitor experience and reflect upon the museum. A visitor's experience can determine whether or not they will return in the future. Some key things to consider when interacting with visitors:

1. Avoid all political conversations. There is no place or time where speaking politics with the public is necessary. Whether a visitor says something that you agree or disagree with, nicely redirect the conversation. Remember, you are representing the Museum, not your own personal views, when you interact with visitors.
2. Another topic to be avoided is religion. Small jokes could greatly anger a visitor or fellow staff member. Always remember to be considerate of others.
3. If a comment or gesture could be perceived in a way that could be misconstrued as (or blatantly is) sexual harassment, AVOID IT. These things should never take place in front of visitors, towards visitors, or with other volunteers or employees.
4. Refrain from negative answers. For example, instead of saying "I don't know," say "I don't know, but let's find out!" and help find the answer or direct the asker to a resource (an employee's business card [found at the front desk], a book in the gift shop, our website, etc.).
5. Prioritize visitors. We all get busy, and sometimes the first thing you want to say is "I'm busy right now." This is not a good response. Someone is asking you a question or needs help and has recognized you as some type of authority. Best practice is saying something like, "I'm currently busy, but I would be happy to get you someone that can assist you properly." That being said, this should only be used when the project you are working on is critical and you are unable to stop what you're doing.

6. When confronted by a visitor with a conflict, do not dismiss the issue by saying “it’s not my problem” or “it’s not my fault.” Furthermore, do not make up excuses for the issue. Even if you think the visitor is incorrect, apologize and help solve the issue.
 - a. For example: Susan was walking Timmy to the restroom. As they are walking, Timmy trips on a wheel chock that was left on the sidewalk. Susan brings this to your attention.
 - i. What NOT to do: “Well, we use those to prevent the Trolleys from rolling back. Sometimes we put them there when we are ready to move the trolley. You need to watch where you are going!”
 - ii. What you SHOULD do: “Thank you for bringing that to our attention, is your child OK? We will move that off the sidewalk to prevent others from potentially tripping.” *Please note: after any incident that resulted in an injury, no matter how minor, you should fill out an Incident Report. See the following section for additional instructions about this.
7. Avoid using insider lingo such as “TDB” (Trolley Display Building). Be descriptive as visitors don’t know as much about the museum as volunteers do.

Keeping Visitors Safe

The first priority of volunteers at all times is ensuring the visitor’s safety in a friendly, helpful way. It is important to bear in mind that the museum includes an active railway. As with any active railway, one should expect equipment and cars to be moving at any time. In addition, there are trip hazards, weather hazards, open pits, and other obstacles that the volunteers should be aware of at all times. Volunteers are responsible for leading visitors around or away from these hazards or cautioning visitors about them whenever necessary. In order to ensure the safe operation of our programs and help ensure that visitors are not surprised by the elements of our unfamiliar environment, be mindful of the following:

1. Visitors are welcome to explore the Trolley Display Building (TDB) without the direct supervision of a guide. However, there must always be a PTM volunteer or employee in the building while visitors are inside.
2. Caution visitors about potential hazards, including trip hazards, moving equipment, dirt, noise, and the age of the cars.
3. Try to place yourself between tour groups and obstacles such as drop-offs, curbs, pits, exposed electrical and mechanical equipment, and active tracks.
4. When leading or talking to a group of visitors, advise them to stay with the group, especially when visiting behind-the-scenes areas or areas near track in use.
5. Seek safe shelter for your tour participants in the event of an electrical storm.
6. If you see visitors engaged in unsafe activity such as climbing on equipment, fooling with mechanical gear, or getting too close to electrical equipment, respectfully but firmly ask them to stop at once.
7. In any operating environment, volunteers must defer to the dispatcher or operating crew in order to ensure everyone’s safety. Elsewhere on the grounds, volunteers should defer to

employees or to volunteer department managers, especially during special events and emergency situations.

First Aid: Please take note of the locations of the First Aid Kits in the Trolley Display Building (on the wall to the right of the front door) and in the Welcome and Education Center (under the desk across from the theater).

Fire Extinguishers: Please also take note of the locations of the fire extinguishers in the hallway leading to the Welcome and Education's breakroom and the ones at every regular-sized door in the Trolley Display Building.

Incident Reports: These must be submitted after any situation that represents a deviation from normal operating procedures regarding the safety or comfort of staff or visitors. They may be found [online](#) or at the store counter.

The following list illustrates when it is necessary to complete and submit an Incident Report:

- A child trips on Volunteer Boulevard and scrapes his knee. In the case of a non-emergency injury like this one, please complete an Incident Report no matter how minor the injury might be. Even if a visitor or their parent declines your offer to help or retrieve a bandage, a report must be submitted.
- A senior visitor stumbles deboarding a trolley, falls, and cannot get up. In emergency situations, your first priority should be calling 911 (with the permission of the visitor or his companions) and tending to the visitor's needs. However, an Incident Report should still be submitted by another staff member or by you after the visitor's departure.
- Two visitors get into a shouting match in the Display Building, and they are asked to leave the building. They comply but seem dissatisfied. This conflict should be described in an Incident Report for the museum's future reference.
- You are raising poles in the Display Building and a retriever falls onto your foot, bruising it. In addition to filing a **car condition report** (found in the West Campus Substation) to alert the Maintenance Department to the car's malfunction, please fill out an Incident Report as this incident involved injury to a person.

In these examples, it would **NOT** be necessary to submit an Incident Report:

- A visitor approaches you and asks for a bandage for an injury that occurred off-site. In the situation where you are asked for a bandage without further details, you may ask, "Are you OK?" to determine whether the visitor was just hurt. Do not pry if the visitor seems unwilling to share details, but if there is no indication that the injury took place at PTM, an Incident Report is not needed.
- A window on a car is jammed and will not shut. No volunteer, employee, or visitor was harmed due to this malfunction, so an Incident Report is not necessary. Please fill out a **car condition report** so that the Maintenance Team can attend to this problem.

As a reminder, visitors may refuse to provide information for Incident Reports. Please fill out your report to the best of your ability in this scenario.

As our new Safety Committee works to develop Standard Operating Procedures around safety and emergency situations, we will provide you with those SOPs.

Visitor Expectations

When visitors come to the Museum, their expectations are set by many factors. Things like our website, social media, advertisements, and interactions at our admissions counter help to ensure visitor expectations are accurate. However, depending on a visitor's previous interactions with the Museum, stories of other people's visits, and their own preconceived notions, visitors may have expectations that not only are vastly different from what they will actually experience, but also vary from person to person. As a visitor experience volunteer at the Museum, you can help adjust those expectations by clearly communicating with them and ensuring they are aware of all we have to offer.

Expectations of visitors will also continue to change as their visit progresses. For example, some visitors may start by watching *Last Chance Trolley*, our introductory film about the trolley era in Pittsburgh. Other visitors may not watch it until later in their visit, and some may not watch it at all. The 20th Century Electric Railway Theater also plays a short video summary of the construction of the Welcome and Education Center and an overview video of the Terrible Trolley project. These videos may alter visitor expectations as they may expect to see the Terrible Trolley, or they may have questions about the Welcome and Education Center (including questions about our solar energy system).

Understanding the complexity of these expectations can help you to create a positive and memorable experience for our visitors.

Communication (Language-Barriers and Visitors with Disabilities)

Fifty-seven million Americans have mobility, sensory, neurological, intellectual, or another type of disability. In addition, over sixty-seven million Americans speak a native language other than English. These visitors are just as important as other visitors and deserve the same amount of respect and attention. Please keep the following points in mind while volunteering:

1. **Treat everyone as a valued visitor.** People with disabilities are not to be pitied, and people who speak different languages are not to be discriminated against.
2. A **mobility device** is considered part of an individual's personal space; do not lean on it or move it without permission.
3. When you offer assistance, wait for an individual to respond; **don't make assumptions**, listen, ask for instructions, and respect the individual's wishes.
4. **Speak directly** to an individual with a disability; don't avoid eye contact or speak only to their companions. Be patient and give your full attention to individuals who may have difficulty communicating; some people need more time to express themselves.
5. If you don't understand someone, **don't pretend** you do; ask questions that will help you understand.
6. When speaking with a person who is deaf or hard of hearing, speak clearly, face the person, and don't cover your mouth. You should **not shout or yell**. This also goes for people who

speaking different languages. If speaking through an interpreter, direct your attention to the individual, not to the interpreter.

7. Keep **paper and pen** handy for exchanging notes with individuals who are deaf, hard of hearing, have speech disabilities, or other disabilities that affect communication. For visitors who speak other languages, consider using a **translation app**. If you do not have a smartphone or the ability to use your own device - please ask an employee to borrow an iPad from the Education Department.
8. When speaking with a person who is blind or has low vision, identify yourself and others who are with you, and let the person know if you are leaving. **Use specific words** to give information or directions (remember the person may not be able to see you pointing, nodding, etc.) and offer to read printed material out loud if necessary.

Nonverbal Communication

Non-verbal communication by volunteers is important as it puts emphasis on the things being said. It also allows you to make a visitor relaxed and open to having a good time. Non-verbal communication on the part of visitors lets you better understand their thoughts about their experience. We can use social cues to infer if they are enjoying their visit or if they are unhappy. The following suggestions can help you interpret and use non-verbal communication:

1. There is nothing like a **smile** and pleasant face to greet a visitor, especially if they have a complaint. A smile and polite conversation can immediately disarm a disgruntled visitor. Facial expression sets a positive tone before you even begin speaking. A relaxed or pleasant facial expression is ideal most of the time.
 - a. You should also consider your facial expressions when a visitor asks a question or makes a comment that you may consider silly or off-topic.
2. Make **eye-contact** with visitors while you are speaking. This creates better engagement.
 - a. Pay attention to where a visitor is looking. They might look at the item you are talking about, but they will also make eye contact. If they do not, they are likely uninterested, and you should consider switching topics.
 - b. Please do not force eye contact if a visitor is hesitant to make it, as some individuals, including those who are neurodivergent, may feel uncomfortable doing so.
3. **Personal hygiene** has a big impact on your visitors. Dirty hands, messy hair and poor dress can mean the loss of an otherwise happy visitor. When interacting with visitors, you should follow the dress codes set forth by the operations and guiding departments.
4. When listening to a visitor, use your body language to engage in **active listening** techniques. For example, you may slightly lean towards your visitor and nod your head ever so slightly to indicate you are listening.
5. **Body Language** can be very important in interactions with visitors. Crossing your arms or looking disengaged is very off-putting. Slumping in a chair or leaning against a wall while interacting with a visitor are sure signs you are not interested in them. Your pose or posture should express attention, friendliness, and openness. Use hand movements to emphasize what you say and to emphasize your feelings.

- a. You can also learn about a visitor's feelings by their body language. If they are shifting their weight back and forth or crossing their arms - they might be disengaged, and you should consider switching topics.
6. Consider a scenario where a stranger approaches you and invades your **personal space**. You would automatically move back without thought because you are uncomfortable. Be sure to leave adequate distance between you and visitors so that they feel secure and safe.

Disengagement

It might seem counterintuitive, but it is sometimes necessary to disengage from an individual so that you can best serve the needs of all visitors. If you are rushed to get to lunch or a break, you might miss that break or feel rushed all day. This will lead to you being unable to be at your prime. A successful disengagement from a visitor often involves responding to them in a way that partially answers their question and also encourages them to engage with the museum in another way (i.e. our website, social media, etc.). This allows us to retain them as fans/visitors for a longer time. Ways to politely disengage from someone include:

1. While talking, **interrupt yourself** instead of interrupting them. If you can wait to excuse yourself from people until you're the one talking, they don't feel like you cut them off.
 - a. Example: "This car was built in 1932 by the Brill Company - oh, I am so sorry, I just saw the time - I need to go give so-and-so a lunch break."
2. **Tell the truth**. People understand that you deserve a break too.
 - a. Example: "I would love to chat some more, but I have GOT to step away to drink some water."

Keep in Mind: It is important to be polite - disengaging is not about being rude as it can be done nicely. It is important to be flexible - some visitors require more attention than others. Your job is to provide an engaging experience for all our visitors, not just the ones most interested in conversing with you. Please keep in mind the following tips for disengaging:

1. You **set the focus** for the conversation.
 - a. Example: A visitor that is monopolizing a group tour asks a question about the trolleys of Toronto. Even if you are knowledgeable about this topic, you can disengage from this tangent by quickly answering the question, mentioning that this museum mostly focuses on trolleys from Pennsylvania, and then getting back to the topic at hand.
2. Answer questions in a **close-ended** manner.
 - a. Example: You are headed for your lunch break when a visitor stops you and asks: "What year did trolleys stop running in Pittsburgh?"
 - i. A factually-correct but unwise answer would be something like this: "Trolley service ended in Pittsburgh in 1999, but the modern light-rail system is very similar." This might encourage the visitor to ask about the light-rail system.
 - ii. The best response would be to say "1999," or something similarly short and direct the visitor to an unoccupied volunteer or employee nearby.
3. **Give resources** to direct visitors away from yourself.

- a. Example: A visitor asks a question about the collection; you can inform them that we have a great section on our website describing each car (patrolley.org/collection).
- b. You can hand out our social media cards or employee business cards (found at the store counter) whenever you need to disengage.

De-escalation

While it is unlikely that we will have a lot of angry or upset visitors, there is always a possibility of scenarios like this. You should be prepared on how to handle those situations. If the visitor is violent, you or another volunteer or employee should call the police. If you do not feel the police are needed but you feel afraid or uncomfortable, find another volunteer or staff member to assist you. You should follow these instructions when de-escalating a situation:

1. **Move to a private area.** If it seems safe to do so, it may be helpful to move the visitor away from other visitors.
2. **Be empathetic and non-judgmental.** Focus on understanding the person's feelings. Whether or not you think those feelings are justified, they're real to the other person.
3. **Respect personal space.** Allowing personal space tends to decrease a person's anxiety and can help prevent acting-out behavior. Do not block exits. When people are upset, their personal space boundaries tend to expand.
4. **Keep your tone and body language neutral.** The more a person loses control, the less they hear your words – and the more they react to your nonverbal communication. Relax your body and keep your hands in front of you.
5. **Avoid overreacting.** Remain calm, rational, and professional. While you cannot control the person's behavior, how you respond to their behavior can affect whether the situation escalates or defuses. Empathize with their feelings despite their behavior.
6. **Ignore challenges to your authority.** Responding to these challenges often results in a power struggle. Try to direct their attention to the issue at hand.
7. **Set boundaries.** If the person's behavior is belligerent, defensive, or disruptive, give them clear, simple, and enforceable limits. Offer concise and respectful choices and consequences.
 - a. For example, if you are trying to get a shouting visitor out of the Display Building, you could say the following: "I want to help you with your concern. Do you want to talk outside or over at the Welcome and Education Center?" This question gives them a choice instead of making them feel they are being forced out of the building. However, if they don't answer your question or don't begin to exit, then being more direct with a statement like "you need to please step outside" may be necessary.
 - b. **Choose boundaries wisely.** Carefully consider which rules are negotiable and which rules are not. You should never risk the safety of yourself or others to appease a visitor.
8. **Allow silence and time for decisions.** By letting silence occur, you are giving the person a chance to reflect on what's happening and how to proceed. When a person is upset, they may not be able to think clearly. Give them a few moments to consider what you've said.

Dealing with Diverse Audiences

Mixed interest/age groups:

- Consider the visitors' *experience* as opposed to age.
 - An adult who has never seen a trolley has no more experience than a child who has never seen one. Conversely, some children are extremely knowledgeable about transportation and their experience should not be discounted.
 - Allow small children to be excited about the trolleys, even if they call it a train. You can gently explain the difference without diminishing their excitement.
 - Similarly, **remember to be polite when correcting any visitor**. Sometimes, it's best to let an inaccuracy go for the sake of hospitality. For example, an older visitor reminiscing that they rode a certain trolley to an inaccurate location does not need to be corrected. Simply thank them for sharing their story.
- Both individuals need the basics first. Adults will understand explanations designed for children, but the reverse may not be true. When in doubt, go with a simple explanation and then elaborate for adults who may be interested in learning more.

Children:

- Remember that even the littlest visitor is part of the tour.
- Engage with children and make direct eye contact. Ask questions to help draw them in, such as: "What color is this trolley" or "Can you read this number for me?" If they ask a question, you can lower your body to their level and make eye contact.
- The younger the child (especially those under 4) the more they learn by *doing*. They can board the trolley, ring the bell, and answer simple questions like "Have you ridden a trolley before?"
- Older children and teenagers still like to do things but can also handle more complicated questions. Talk to them like young adults but do not insist on their participation. They may be listening intensely even if it doesn't look like it.

Rail Fans:

- A persistent rail fan may "know" everything, or only be interested in a specific car, or may try to monopolize a tour. If it becomes a problem, offer to talk with them afterward, or, if another volunteer is available, offer them a separate conversation.
- Encourage them to come to a rail fan event at the Museum, such as the West Penn Trolley Meet, or to schedule a behind-the-scenes tour.

Additional Notes:

- Visitors may check out Sensory Bags at the front desk for use during their visit. These have noise-cancelling headphones, fidget toys, and other items that might be useful for neurodivergent visitors. Be careful not to stereotype a visitor by assuming they might need this accommodation. It's best to wait until someone asks you if a service like this is available.

Operator Responsibility Outline

During training, operators will receive many instructions about operating procedures including rules about dress, opening and closing procedures, and safety measures. The following is a short outline of procedures specific to interacting with visitors.

1. **Trolley Display Building:** After arriving at the East Campus with the day's cars, please ensure that the TDB and Wexford are ready for visitors. Unlock and disarm the buildings if these tasks have not been completed yet. Please offer to help the guide on duty raise the trolley poles on the cars with open doors (and offer to help lower them at the end of the day). See the Guide Responsibility Outline in the next section for more details on how to do these tasks.
2. **Ride Times:** On normal operating days, City Trolley Rides (to McClane Loop and back) occur at the 15-minute mark of every hour and Interurban Trolley Rides (to Arden Loop and back) occur at the 45-minute mark of every hour.
3. **Boarding the car:** If waiting for a car to arrive, ensure that passengers are in safe areas, away from tracks, and away from any moving equipment.
 - b. Assist those who need it during boarding and deboarding. Trolley steps are sometimes higher than normal steps, so please remind visitors to use caution. Avoid assuming the level of help needed and never place hands on a visitor without their consent. **Offer an arm instead of a hand.**
 - i. On 1758 (open car), BOTH operator and conductor should assist with boarding and unloading of passengers
 - c. Ways to Assist in Boarding/deboarding
 - i. Metal one-step stepstool
 - ii. Wooden angled three steps
 - iii. Manual wheelchair lift
 - iv. Offer a forearm/elbow to help steady a visitor
 - d. Important to note: The conductor is always the last one to board the trolley and the first one to deboard in order to assist with these processes.
4. **Safety Speech:** Mandatory talk given BEFORE the ride begins.
 - a. Remain seated at all times while the car is in motion. The operation team will let passengers know when it is safe to stand and exit the trolley.
 - b. Keep your body and personal items inside the trolley at all times. Windows may be open to provide air. Please advise visitors not to close or open any window without assistance.
 - c. 1758 (Open Car) safety measures:
 - i. Keep your body and personal items inside the open sides of the trolley at all times. Don't be funny about the safety speech. We want visitors to take it seriously. Also, don't get graphic.
 - ii. Young children must be accompanied by an adult and sit in the middle of the bench with adults sitting on the outside of the bench.

5. **Trolley Ride:** You will not be able to address passengers as a group while the trolley is in motion due to the noise, but you should be friendly and available to answer questions if needed. Before the ride please do the following:
 - a. Introduce the operations team. If time allows, feel free to say a sentence about the difference between a motorman and a conductor.
 - b. Share a few interesting facts about the car: where it came from, what type of car it is, distinguishing features, etc.
 - c. If applicable, you may punch tickets before or during the trolley ride. If you like, explain to each group that each conductor had their punch, like a signature, with its own pattern.

After the ride, thank the group for visiting and remind them that tickets are good for rides all day. Encourage them to visit the Trolley Display Building and Wexford during their visit.

Guide Responsibility Outline

1. **Starting your Day:** Morning guides should please arrive by 9:45 AM, and afternoon guides should please arrive by 12:45 PM. You may park in the Welcome and Education Center parking lot. Sometimes, on special event days, we'll instruct you to park elsewhere at the East Campus to free up spots for our visitors.

Museum Guides have no prescribed dress code, but you should dress neatly and appropriately when interacting with visitors. Please wear your PTM name tag, and if you don't have one yet, you can borrow a volunteer lanyard from the shelf outside the breakroom. Guides who also plan to operate during a given day should follow the dress code for operators.

After you've completed your training, you'll receive keys that will give you access to the Trolley Display Building, Wexford Station, and the Welcome and Education Center (specifically the front and back glass doors and the dispatcher's office on the back of the building). You'll most likely only need to use these keys if you arrive before 9:45 AM. Otherwise, the TDB and the back glass doors of the W&EC will most likely be unlocked. At 10:00 AM, the front glass doors will also be unlocked.

Feel free to put your lunch or snacks in the breakroom or its fridge. Other items can also be left here, but please be advised that you leave them at your own risk. If you'd like, you can grab a voice amplifier and a radio (to talk to the operating crew) from the shelf outside the breakroom.

2. **Opening Up:** If you are a morning guide, you should make sure the TDB and Wexford are ready for visitors. These buildings should be unlocked, disarmed, and prepared for the day by an employee by the time you arrive, but if they are not, you can either complete these tasks yourself or ask for help doing so. If you can, watch someone go through these steps during your shadowing days. **Please note- you must unlock and disarm the TDB before going into Wexford as both buildings are on the same alarm system and Wexford does not have a way to turn it off.**
 - a. After unlocking and disarming the TDB, turn the lights on and grab the key hanging on a metal string next to the light switch. Insert the key into the opening on the doors' bars and twist while pushing the bars in. This should lock the bars in place and allow visitors to open the doors more easily from the outside.
 - b. You should prepare 4-6 trolleys for boarding by visitors.
 - i. These should be passenger cars that have doors facing the main aisles and are safe to board. Some trolleys that fit these first two requirements but not the third are **101** (horse car), **3487** (high-floor car), **94** (Shaker Heights), **739** (orange car that was previously a

- home), **274** (the combine car), and **350** (Johnstown). These should not be boarded by visitors, except for 350, which you can take people on during a tour, but should not leave open. Please ask someone if you're not sure which cars to open on a given day!
- ii. Open the doors and put the poles up on these trolleys. **(It's a good idea to wear gloves while working with the trolley poles and their ropes.)** Make sure that their controls are roped off. If you need extra ropes, you can find them in the cardboard box near the side door that leads out to Falconi Plaza (the fountain).
 - iii. If you notice that any bulbs inside the trolley are burnt out, lower the trolley's pole, and close its doors. Please fill out a car condition report, found under the desk near the TDB's main entrance. Then, turn it in by placing it in the basket in the hallway outside the breakroom.
 - iv. Then, rearrange the stanchions (safety barriers) so that visitors have access to the open trolleys and are blocked from walking on the tracks between the aisles.
 - v. Feel free to ask for help with poles from other volunteers or employees! We do not want anyone to hurt themselves. Additionally, if you cannot seem to open a door on a trolley, do not force it. Please seek assistance from an operator.
- c. Wexford's back door is the only one that can be unlocked from the outside. After doing so, turn the lights on. These are controlled by the three knobs on the wall closest to the TDB. Then, make sure the digital picture frames are plugged in. For the one located on the same wall as the knobs, open the closet door, and plug the cord into the outlet that's inside. For the frame on the opposite wall, plug the white cord traveling down the wall into the outlet near the floor.
 - i. Also in Wexford, make sure the left-most door facing Volunteer Boulevard is unlocked. It has deadbolts at its top and bottom.
 - d. Finally, walk around the TDB and make sure things look presentable for visitors. This is also a good time to take note of which trolleys are in the building. A broom and dustpan should be to the left of the doors if you need to use them. Please tell an employee if the trash and recycle bins near the front doors are full.
3. **Greeting Visitors:** Welcome all visitors who enter the TDB. Ask them if they would like a tour, and if they don't, remind them that you are here to answer any questions that they might have.

You may also choose to briefly introduce yourself and the collection, depending on the group. A group of adults might like to hear that we have about 20 of our 50 trolley

cars in the building or that most of them run, but a group with young children might be eager to explore the trolleys that they already can see.

However, please make sure to remind all groups of our most important safety rules before they start exploring:

- Visitors may board trolleys that have their lights on and doors open.
- Ask that visitors please use caution boarding or deboarding the trolleys.
- Ask that visitors please do not touch operator controls in any of the trolleys.

If necessary, please also remind visitors of the following rules:

- No food or drink is allowed on the trolleys.
- Children must stay in the sight of their parents at all times and refrain from running. We also recommend that parents hold their children's hands when boarding or deboarding a trolley.

4. **Tours:** Currently, we have no official tour schedule. This is likely to change, and Museum Guides will be informed of new procedures when they are put into practice. When a group says yes to a tour, feel free to kick one off.

As you continue through the collection, if you notice visitors that are not on the tour paying attention, encourage them to join up with the group. Also be aware that some individuals on your tour might break away from the group while it's in progress. This is totally normal, especially in larger groups. Just because something else caught their attention does not mean that they did not enjoy other parts of your tour.

In between tours, please walk around the building every so often to check on our visitors. If you see visitors that you missed when they came in, greet them and offer to give them a tour or answer their questions. Remind visitors that they can visit Wexford and tell them when the next trolley ride is (ask the operators at your shift's beginning). Also, please keep an eye out for any safety hazards and report them if necessary to the employees on duty.

5. **Breaks:** If you are scheduled to guide all day, a museum employee or volunteer will relieve you for your lunch break. Guides may take other breaks as needed, but please make sure there is someone to take over if you plan to be gone for more than 5 minutes. Non-messy snacks and beverages may be consumed in the TDB while you are off the trolleys and not interacting with visitors. When there are no visitors in the TDB, you are permitted to read a book or use a mobile device, but please do not do so when there are visitors around.

6. **Closing the Museum:** At the end of the day, you should put all the trolley poles in the Trolley Display Building down (again, please ask for help if you require it). Ensure that there are no visitors left in the TDB and Wexford, turn off all lights, unplug the digital picture frames, and then lock and arm the buildings (or inform a staff member that they are ready to be locked). Please return radios, voice amplifiers, and volunteer lanyards to their home. **Remember to lock Wexford before activating the TDB alarm so that it doesn't sound when you enter Wexford.**

Tips for Being a Great Guide

1. **Be personal.** No matter how much we love streetcars, it's a fact that people connect with people. So, it's good to have a few personal anecdotes ready, even if they're just about past tours you've done. You'll build a more personal connection to your group and create a memorable experience.
2. **Tell a story.** Make sure you have a few fun and compelling stories to tell about what you're looking at. People are more likely to feel engaged when they are listening to a story, rather than a list of dates and names.
3. **Don't worry about being perfect.** People don't expect you to be perfect. Be receptive to visitors who offer a correction about something or extra facts about a topic. (However, do not let one trolley fan monopolize the tour!) The more interactive the tour is, the better.
4. **Do some research.** Check your information often. You are the face of the museum, and visitors will look to you as an authority and ask questions. It is great to shadow more experienced tour guides, but we encourage you not to simply copy from them. Take the time to ask them about their sources and experiences. It is so easy to simply say something because you heard someone else say it. The game "telephone" (where everyone repeats the sentence in a whisper to each other and then at the end it's an entirely different sentence) happens a lot in museums.
5. **Tell the Truth!** This is an acceptable answer: "I am sorry, I don't know the answer to your question, but let's try to find out!" It is better to admit you don't know than to be caught making it up. The visitor deserves the truth, and will forgive you for not knowing it, especially if you are willing to help them find out.
6. **Chat them up a bit.** Before a tour starts, talk to people about where they are from or what interested them in visiting. People love to talk about themselves, and it gives you a chance to do some callback later. For example, if a visitor tells you they are from Cleveland, you can make sure to specifically talk about the Shaker Heights car.
7. **End on time.** (Or try very hard to.) Try like crazy to end on time. Nobody wants to feel like they are in tour jail. Tours on paper always seem too short and on the ground are always too long. A lot of visitors ask how long it is going to take because they have other plans or are unsure they can withstand a long tour.
8. **Be Flexible.** If you find that visitors are disinterested or are asking questions that disrupt your normal order of information, feel free to change up the original plan for that tour. Go see trolleys that you think they might be most interested in. You can always end the tour

early and tell your visitors they are free to explore and you'll be around if they have any questions.

Key Skills to Utilize

As the true backbone of any museum, guides bring the magic and keep the visitors coming. However, it's not a job that just anybody can do. It's a unique position that requires a good memory, the ability to engage and read an audience, and, of course, a little bit of theatrics. While it's true that no two tours are the same, there are some common traits which help a tour really stand out.

1. **Communication:** A good guide is articulate, easy to understand, has the physical capabilities to command attention and project their voice across potentially large groups of people. They should also be able to communicate one on one, answer questions calmly, and remain approachable even when under pressure. It's a big ask, but these qualities are what really determine how memorable your tours will be.
2. **Energy:** Positivity breeds positivity and negativity breeds negativity. Maintaining a high energy level and a positive outlook throughout the day keeps visitors interested and involved.
3. **Passion:** Visitors will not remember all the specific facts you tell them, but they will remember how they felt when you told them. Similarly to the point about energy, demonstrating that you care deeply about the stories you present, will encourage visitors to care as well. This can be accomplished through a high-energy level and the inclusion of personal anecdotes or opinions (ex: "I love the color of this trolley, this model is just so beautiful!")
4. **Sense of Humor:** Your visitors might be there for the history, but anyone can lose interest when the facts are presented in a dry and humorless way. A little humor brings life to any tour, dramatically increases enjoyment levels, and helps to relax your visitors into their experience.
 - a. There is a caveat here that not all visitors will appreciate your jokes or candor. Make sure you pay attention to non-verbal clues that show your visitors are uncomfortable.

The Basics of Tours at PTM

Objectives:

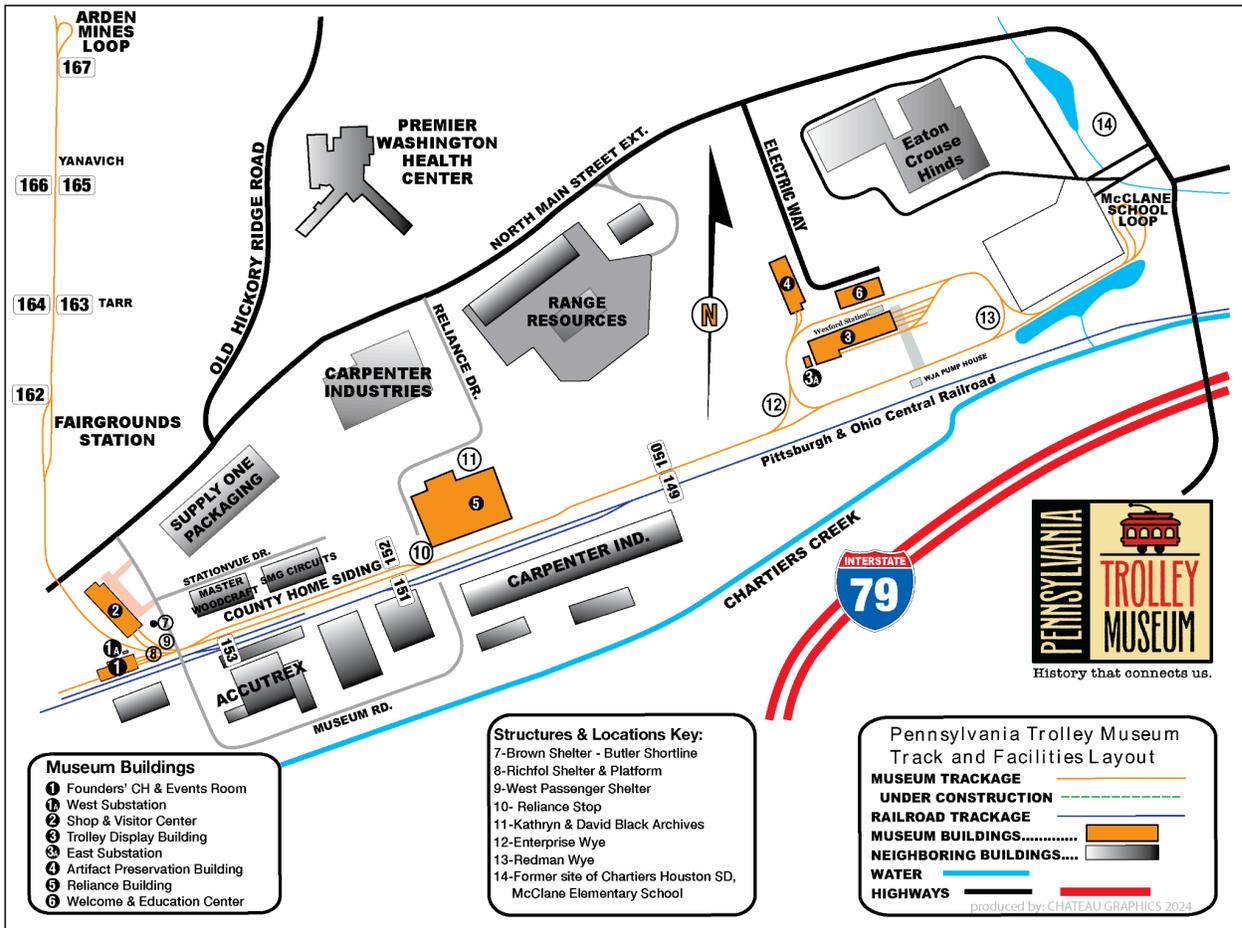
- Keep our visitors safe!
- Ensure the public enjoys themselves.
- Provide a brief yet informative tour about the Trolley Era.

Types of Tours:

- **Standard Tour:** This is the tour that the average visitor receives. To sign up to give any of the special tours described below, guides can use the "Charter Ops/Guide" column on the Ops Schedule. A Standard Tour provides an overview of the Trolley Era utilizing the collection of trolleys in the TDB and should last about 25 minutes.

- **Standard Tour Theme: Trolleys were a technological development that changed the landscape and culture of 20th century America.**
 - Trolleys played a vital role in the growth of 20th century American cities and suburbs.
 - Trolleys were a high-speed and efficient form of transportation that transformed culture, society, and technology until the success of the automobiles brought about a decline in trolley popularity.
 - Trolleys were a part of everyday life and people depended on trolleys to get to work, school, and entertainment, visit family, go shopping, etc.
- **Group Tours:** The Museum offers a private tour for groups of 20 or more. All group tours are pre-registered and are listed on the operation schedule. These tours could be standard tours or focus on a specific topic or cars based on the interests of the group. These tours should last about 30 minutes but can occasionally go a little longer or shorter depending on the group's time restraints.
- **Extended Tour/Deluxe Tour:** These tours include an extended tour of the Trolley Display Building. It can also include a look into the maintenance areas. These tours are by reservation only. These tours should last about 60 minutes but can occasionally go a little longer or shorter depending on the group's time restraints.
- **Student Groups:** The Education Department books educational programs and tours for student groups. The length of these tours and programs vary. If you are interested in helping with field trips, scout programs, summer camps, or other youth programs, please reach out to Jocelyn at jfarrell@patrolley.org.
- **Large Groups:** If a group tour or field trip is exceptionally large, they will be divided into smaller groups and there will be a planned rotation to ensure that everyone has a positive experience.

Campuses and Buildings



The West Campus is the oldest part of the Museum. This area has the Founder’s Car House, the West Events Room/Volunteer Lounge, the Reynolds S. Galbraith Maintenance & Restoration Shop, and three trolley shelters: Richfol, West, and Brown. It also used to be the home of our old Visitors Center.

The East Campus is now the main hub of the Museum. This area has the Welcome and Education Center, the Trolley Display Building, the Artifact Preservation Building, and Wexford Station.

We also have a Middle Campus that is referred to as Reliance.

West Campus

Founder’s Car House/Barn: This is the oldest building that the Museum owns. It holds about nine streetcars and often contains some of the operating service cars as many operators begin and end their day at this end of the railway. If volunteers wish to show a group this space, visitors must stay on the black rubber mats for safety. The track furthest from the restoration shop (Track 11) was the Pittsburgh Railways interurban line to Washington until 1952.

West Events Room/Volunteer Lounge: The room attached to the Founder's Car House was once the only events room for the Museum. Once the new Welcome and Education Center opened, this room became a space for volunteers. Volunteers can use this space for a gathering at no charge. These events must be reserved through the Volunteer Coordinator to ensure that there is no double booking. Additionally, on a regular day, volunteers are welcome to use this space as a place to relax away from visitors. Restrooms, showers, and a fridge are available here for volunteer use.

Reynolds S. Galbraith Maintenance & Restoration Shop: The restoration shop is the primary area for all trolley maintenance and restoration. This is not a public space! Volunteers who wish to show interested visitors the restoration shop must check with shop volunteers or be familiar with the space. Good views of ongoing work are also available during the summer when the large doors are open at the end of the building.

Shelters: Shelters were often placed at trolley stops that were farther away from city streets to protect waiting passengers from the weather.

- **Richfol Shelter:** Constructed around 1909, this shelter served workers of the Standard Tin Plate Company in Canonsburg. It was historically located on Adams Avenue across from present day Sarris Candy. Located now at the loading platform.
- **Brown Shelter:** Of very distinct construction, this shelter was constructed for the Pittsburgh & Butler Street Railway (Butler Short Line). Based on initials carved into the woodwork, the shelter dates from at least 1910. Located next to the parking lot.
- **West Shelter:** Built in 1908, this shelter was located on and named for the West family farm. It served the northern district of Pittsburgh on the Pittsburgh, Harmony, Butler, and New Castle Railway. Located across from the loading platform.

East Campus

Welcome and Education Center: This new "front-door" to the Pennsylvania Trolley Museum opened in November of 2023 after more than two years of construction and decades of planning. Visitors to the W&EC can explore its two exhibit halls and museum store, participate in educational programs in its classroom space, and enjoy its spacious event and the 20th Century Electric Railway Theater. This building is also the location of the offices for many of the Museum's paid staff, in addition to the **Tony DeSensi Break Room**, which volunteers are encouraged to use.

The Trolley Display Building (TDB): The Trolley Display Building opened to the public in 2005. It houses more than 30 cars in a protected environment and is the location for all regular tours. The museum has been operating on solar power since 2009. A bank of solar panels atop the roof of the Trolley Display Building feeds electricity back into the power company system, reducing the museum's electric bill and making us more eco-friendly at the same time. An exhibit inside the Trolley Display Building explains to visitors in simple terms how this system works.

Wexford Station: This 1908 interurban station is an extremely rare survivor of the Trolley Era. Built for the Pittsburgh, Harmony, Butler, and New Castle Railway, Wexford station was an important stop for the railway, situated a short distance west of Perry Highway. The original station was divided into three sections; a station agent in the center of the building sold tickets to passengers who waited on one side while freight shipments were handled on the other side. Shippers relied on horse drawn wagons, and later motor trucks, to get materials to and from the station whereas passengers walked or rode their horse. The railway closed in 1931 and station agent William P. Brooker purchased the building, moving it up the hill into the heart of Wexford where it served as the post office until 1964. Following that, it served as an antique shop, and finally as the Wexford Post Office Deli from 1983 to 2014. The late Trudy Brooker Purvis, granddaughter of William Brooker, managed the building for many years. She championed for the Pennsylvania Trolley Museum to acquire the station when it could no longer be a revenue-producing property to preserve the building's historical integrity. When the last deli owner ceased operation in 2014, the Brooker heirs donated the building to PTM and sold the land it had occupied for 82 years. The station came to the museum in 2015 and was placed on a new concrete foundation with heating and air conditioning systems added to the building. Volunteers, employees, and contractors worked to restore the building and transition it to an exhibit space. The interior features two 1898 mahogany waiting room benches from the Pittsburgh Train Station, now known as the Grand Concourse Restaurant in Station Square Plaza.

Reliance

In December of 2020, PTM acquired 320 Reliance Drive. This 66,000 square-foot building provides many current and future opportunities for the Museum. Upstairs, there are several offices as well as the **Kathryn and David Black Transit Archives**. In the warehouse area, there are additional rooms for archival storage along with four 30-foot wide bays, each 400-feet long. These bays are used for supply storage, the manufacture of parts, and the storage of our mobile equipment. Some sections of the warehouse are leased to help pay the bills. In the future, the Museum hopes to install tracks and transform a portion of the warehouse into a trolley maintenance area.

- **Alison Shelter:** With a similar style to Richfol, it was built around 1909 and was located on Pike Street, near today's Race Track Road in Meadow Lands. It serviced passengers on the interurban line from Washington to Pittsburgh. Currently, the public cannot view Alison as it is being stored inside Reliance.

Trolley Era Transportation Timeline

- 1832: Horsecar era begins in cities, debuting in New York.
- 1840: First omnibus in Pittsburgh.
- 1858: Pennsylvania's first horsecar service begins in Philadelphia
- 1859: Pittsburgh's horsecar service opens in August along Penn Avenue.
- 1869: Pittsburgh boasts 22.7 miles of horse-powered street railway lines.
- 1870: The Monongahela Incline, Pittsburgh's first, opens.
- 1873: The world's first cable car opens in San Francisco.
- 1886: Pennsylvania's first electric street railway opens in Scranton.
- 1888: The first cable cars in Pittsburgh operate along Fifth Ave.
- 1888: Frank Sprague opens the first successful electric railway system in Richmond, Virginia. Trolleys are eventually used in 850 American towns and cities.
- 1890-1: Successful electric railway service opens in Pittsburgh. There are approximately 114 miles of street railway tracks – horse, cable and electric – in the Pittsburgh area.
- 1893: The first interurban line opens in Oregon, connecting major cities to towns.
- 1896: Cable car operation closes in Pittsburgh.
- 1898: The Monongahela Street Railway Company opens Kennywood Park.
- 1907: Pennsylvania allows trolley freight service. The U.S mail, ice cream, produce, bread, macaroni, caskets, petroleum, mail, and newspapers are some of the goods transported.
- 1908: Henry Ford begins selling his Model T.
- 1909: Interurban line connecting Pittsburgh and Washington completed.
- 1914: The first motor low-floor cars enter service in Pittsburgh.
- 1918: With over 600 miles of city and interurban track serviced by almost 2,000 streetcars, the Pittsburgh Railways Company (PRCo) is experiencing the peak of the Trolley Era.
- 1923: The last Pittsburgh horse-drawn streetcar – the Sarah Street line in the South Side – closes; it was one of the last animal-powered railways in the U.S.
- 1927: Last order for low-floor cars for Pittsburgh is received.
- 1936: PCC cars, streamlined and updated trolleys, arrive in Pittsburgh.

- 1941: Freight service is discontinued in Pittsburgh.
- 1950s: Pattern of steady decline of streetcar use.
- 1951: The last production of PCC streetcars in the U.S. signal the end of an era.
- 1953: Washington County interurban streetcar lines are abandoned.
- 1964: Port Authority Transit (PAT) takes over from the Pittsburgh Railways Co. and independent bus companies.
- 1985: First phase of the Light Rail Transit (LRT) opens.
- 1999: Drake Line in the South Hills is taken out of service along with PCC cars.
- Today: PAT is now called PRT (Pittsburgh Regional Transit) and operates bus lines and limited light rail service throughout Pittsburgh and its neighborhoods.

The Trolley Era and the Electric Age

Written and edited by volunteer Archivist Emeritus Edward Lybarger

The invention of electric motors, electric lighting, the telephone, electric generation and distribution systems, and the electric streetcar in the late nineteenth century marked the start of the “Electric Age.” The early growth and development of electricity and the street railway industry were tightly intertwined and had great impact on the lives of Americans.

The Time Before Trolleys

Prior to electricity, travel was an ordeal done only when it was unavoidable because mud roads were the norm, and often impassable at certain times of the year. During the 1850s horse railways were huge improvements over early mode of travel, as the rails made passage independent of the road surface. Boston had a fleet of 8000 horses and in 1858 Pennsylvania’s first horsecar service opened in Philadelphia. Pittsburgh’s horsecar service opened in August of 1859 along Penn Avenue and by 1869 boasted 22.7 miles of horse powered street railway tracks. The use of animal power created a serious waste problem and contributed to disease. Horses were expensive due to the cost of acquisition, care and food, not to mention the limited daily use of each animal.

Cable car technology offered relief from these expenses. In 1873 Andrew Hallidie opened the world’s first cable car in San Francisco and the technology was adopted in numerous large cities including Pittsburgh. Beginning in 1888 the first cable cars in Pittsburgh began operating along Fifth Ave. During this era, lines ran 5-6 miles out from the city center.

In the Beginning

The electric streetcar was an experimental proposition until 1888 when Frank Sprague put everything together in the right way in Richmond, VA. But it took several years of operation to prove that Sprague was right and the others wrong. As a consequence, some of the competitors remained in the business into the early 1890s. Edward Bentley and Walter Knight were a Cleveland team commissioned in 1888 by the Observatory Hill Passenger Railway Company to

electrify a route in the City of Allegheny (now Pittsburgh's North Side, annexed in 1907). The Bentley and Knight system used underground (conduit) power collection using a slot in the street. The propulsion system and conduit used to move these cars were not efficient and this system was replaced with the proven Sprague technology.

One of the vital forces in the development of American cities was the arrival of the electric streetcar at the end of the nineteenth century. Its quiet, efficient propulsion was far ahead of the transport of the time, and its higher speeds made it possible for people to live much farther from their work than when they had to depend on walking or on the slow horse and cable cars of that era. In 1890 electric railway service as we know it opened in Pittsburgh.

The beginning of the mobile America we know today has its roots in the trolley, and trolley cars ushered in the Electric Age. Cities expanded along the streetcar routes built out from their centers. Local examples of this expansion are the communities of Beechview, Brookline, Dormont, Mt. Lebanon, Forest Hills and West View. Bradford Woods is an example of a community founded by the trolley company itself.

Also, in Pennsylvania, trolleys connected many of the mining communities with nearby towns and were extended to industrial facilities near the cities. Because much of the labor for the mills and mines came from the nations of Eastern Europe, the trolleys became a veritable rolling melting pot and helped to expedite that process known as Americanization.

Through this vital time, the trolley blended cultures and people on a daily basis. As the telephone came into popular use during this time, people could arrange impromptu visits with relatives and friends while merchants could phone an order to city suppliers for immediate shipment via the trolley company's freight service. The farmer could ship his milk to market on those same freight cars, too. Advertisements in the trolleys here at the Pennsylvania Trolley Museum let us catch a glimpse of America of yesterday with the trends and prices.

Trolleys became a way of life during the early 1900s. Automobiles, no longer a novelty, were still not practical for everyday urban travel as roads, parking and costs were still a deterrent. The trolley was the preferred means of getting around, and ridership was still growing. Theaters, amusement parks, schools, and stores were served best by the trolley, as were the industrial plants that provided so many jobs. In 1898 Kennywood Park opened and is still in operation today, as is Dorney Park near Allentown. Cascade Park in New Castle, Luna Park in Scranton, and West View Park in West View are other examples of electric trolley parks.

By the 1920s though, things began to change. The advent of radio, which kept people home at night, and the growing popularity of the auto led very quickly to a falloff in non-work-related travel. The street railways' early construction shortcomings became horribly evident, as the 20-year track built with 50-year financing fell apart. Cities began paving streets for the growing pack of automobiles. Many transit operators faced with declining patronage and increased maintenance costs began to convert to buses or go out of business. The Great Depression beginning in 1929, made a grave situation even worse, killing off most of the interurbans and many of the small-town systems. It was during this time that urban operators banded together to develop a genuinely modern streetcar.

Birth of the PCC

During the early years of the Great Depression, leaders of trolley companies across the country realized that they needed truly modern vehicles if they were to compete in any way with the automobile. They formed what was known as the Presidents' Conference Committee to develop that vehicle, which in its ultimate form came to be universally known as the PCC car.

Pittsburgh Railways was an enthusiastic supporter of the project. One of its engineers, Dan Bell, was granted the patent for the body design. The company was the first to haul passengers in one. Before the car entered regular service early in 1937, it was taken around the town for demonstration rides on many of the company's routes.

World War II

The wartime years and beyond brought temporary prosperity to the electric railway industry, largely due to government rationing of fuel and especially rubber. Employment boomed, and this meant heavily increased traffic for transit companies. Motormen shortages led to the employment of women as "motorettes." Transit systems strained to handle the demands, which continued after the war's end until autos, gasoline and tires again became available.

Impressed that passenger counts on its interurban routes to Charleroi and Washington were as high in 1945 as they were in the mid-1920s, Pittsburgh Railways ordered 25 new streamlined PCC type streetcars fitted for interurban service. By 1949, however, enough automobiles were available, mine employment was down, and the volume of passengers carried on the interurbans dropped precipitously. In 1953, with the new cars only four years old, the company abandoned all service south of Library and Drake and reassigned the cars to Pittsburgh suburban service.

The Decline of the Trolley

Many trolley systems were simply worn out by the time World War II ended. Most often cities bought fleets of cheap new buses, since the industry was again having trouble meeting the costs of new track and paving. From the mid-1950s, the thrust of transportation development was directed at expressways, shopping malls, and fast-food outlets – all things which seemed to require an automobile. New appliances and entertainment media – especially television – added to the spectrum of recreational life, but again caused significant declines in non-rush hour transit riding. The number of North American cities retaining the use of trolleys as a means of public transport was reduced to eight.

Renaissance

From the 1980s it was recognized that due to so many automobiles that roads were becoming hopelessly clogged and the air in urban areas dangerously polluted from the overabundance of personal transportation, and urban planners began to recognize the merit in reviving trolley technology – now calling it light rail. Cities such as Boston and Toronto modernized their trolley lines, leading other cities such as Pittsburgh and Philadelphia to follow suit. Computer technology has dramatically speeded up our lives and is now extensively used in light rail technology.

Summing it up

The streetcar served well through two world wars and a depression. Around the beginning of the twentieth century, when a person saw an electric streetcar for the first time, it was most likely also the first time that person saw electric lights, felt electric heat, or saw any vehicle moving along quietly that wasn't pulled by an animal or powered by a loud, chugging, smoking steam engine. Thousands of people relied on the trolley to get to work every day as well as to visit friends in nearby towns or to spend a Sunday afternoon at an amusement park.

Key Cars in the Collection

Please note that cars are frequently moved and cars that you plan on discussing during your tour may be in another location, in another building, or in operation for the day. For more information on the cars in our collection, please visit patrolley.org/collection.

- Pittsburgh 101 – Horse car
 - First street railway vehicles—adapted from omnibuses, horse drawn carriages that provided mass transit in cities. The horsecar put the omnibus on rails, making them easier for the animals to pull, and allowed cities to grow beyond normal walking distance (an hour's walk, 3-4 miles).
 - Most major U.S. cities had horsecar lines by the 1850s. No. 101 likely dates to the 1870s, just prior to the introduction of the first practical electric railways.
- Pittsburgh 3487 – Early Double-truck Trolley; High-floor car
 - Represents early two-truck cars; large, but still mostly wood except for plate steel sheathing added later to appear modern & safe.
 - Cars like it were purchased because the city pushed for more capacity.
 - It is called a high-floor car, so called since Pittsburgh hills called for larger-than-average motors, requiring bigger trucks and a high floor to clear them. These cars could go about 15 mph.
 - Built 1905, this was the type of car that opened service on the Charleroi interurban route
- Pittsburgh 4145 and M200 (formally -4140) –High-floor car
 - These are the same basic style as 3487 but are all steel, making a sturdier, lighter car that cost less to run and could still pull trailers for more capacity.
 - High floor cars made boarding very difficult due to the high step, leading to their replacement.
 - Eventually became work cars. M200 remains in this form as a town car; past owners restored 4145 as a passenger car. These two cars illustrate common reuse and adaptation strategies.
 - Both cars built in 1911
- Cincinnati 2227
 - Built in 1919, features the same early, two-truck body style as 3487, 4145, and M200.
 - It is the only complete streetcar left from Cincinnati.
- Pittsburgh 3756 and 4398 – Low-floor city and interurban cars

- Low-floor cars were designed to be more user friendly and popular than the high floor cars by making boarding easier. The first low-floor cars were trailers pulled by high-floor cars. The trailers usually filled up first, so the company bought new ones with motors.
- These cars had smaller motors and trucks that were made powerful enough for the hills, a lighter body, and an aisle that sloped toward the center doors.
- Because they were easier to board, they reduced the amount of time that each stop took, thus making each trip faster and reducing labor costs.
- Known as “safety cars” due to additional safety features including a deadman (brake on the floor that activates if the motorman takes his foot off).
- 4398 built in 1917
- 3756 built in 1925 (3756 featured in the iconic trolley image with Fred Rogers hanging in the Welcome & Education Center).
- Rio De Janeiro 1758 – Open Car or Picnic Cars, Breezers
 - Companies sought to earn fares in off-peak hours. Many built amusement parks to earn weekend fares, serving them with open-air cars in the summer.
 - While open cars disappeared in the late 1920s in U.S. cities due to safety concerns, Brazil used open cars into the 1960s.
 - Built in 1911
- Jersey Shore 3 and Mon Val 274 –Interurban Combines
 - Companies realized that trolley technology could also be applied between cities. The theory was to provide a low-cost alternative to trains, or to serve areas not accessible by train, roughly equivalent to today’s intercity buses.
 - Most interurban cars came as standard models from specialized builders.
 - Many interurban cars also included a compartment for passenger baggage, as well as small freight shipments, making them combines. Sometimes a farmer would take his milk or eggs to town to sell by interurban. In this area, many of them linked small coal company towns to the outside world.
 - Jersey Shore 3 built in 1905 and Mon Val 274 built in 1918
- Toledo – Private Interurban Cars
 - Most interurban cars were marginally profitable and short lived due to factors like automobile competition, but in the Midwest the spacing of medium-sized cities on a relatively flat landscape made them more profitable than most, and more popular. Some lines felt justified in purchasing luxurious cars.
 - The Toledo is an example of a trolley company executive’s private car, and is outfitted appropriately with parlors, kitchen, and bathroom.
 - Built in 1906
- New Orleans 832, Philadelphia 5326, and Johnstown 350 – Double end 1920s city cars
 - Double-end cars were flexible, because they could be used on lines where turning loops were either unavailable or impractically located. Philadelphia used them on lines that were too short to make loops cost effective.

- The arch-roof design was made possible by better ventilation devices and lighting. Older cars used a monitor for light and ventilation, which made the cars much heavier and thus more expensive to maintain and operate.
- They exhibit a state-of-the-art car body style that was cheap to build and maintain and that looked very modern at the time that they were introduced.
- 5326 was featured in 1983, aired in 1984, Mister Rogers Neighborhood episode. Fred Rogers learned to operate 5326 alongside PTM volunteer Joe Brandtner. The episode can be viewed online at:
<https://www.misterrogers.org/episodes/a-visit-to-the-trolley-museum/>
- Red Arrow 66 –Center Door cars
 - Represents the same car body style and construction as a double end 1920s city car but also includes innovations that enabled faster loading.
 - The large, center doors made loading and unloading faster. These cars were larger than city cars to handle heavy rush hour suburban crowds and could be run in multiple-unit fashion for even greater capacity. They outlasted many newer cars because their size and weight made them useful in heavy snows and for large group charters.
 - Built in 1926
- West Penn 832 and Philadelphia and West Chester 78 – Lightweight cars
 - Automobile competition cut into trolley revenues, so companies saved costs with one-person cars. The PA Public Service Commission began allowing one-person operation on the condition that cars had dead-man controls.
 - Autos also gave new urgency to comfort, a consideration management often overlooked in competition’s absence. Both cars reflect increased attention to comfort: designed lighting, picture windows, and leather-upholstered seats.
 - Each car was built using new technologies that made them extra-lightweight. 832 uses curved sides that reduce material while adding strength. No. 78 is made of aluminum, a much lighter metal than steel. Like previous weight-cutting innovations, these advances saved money by using less electricity.
 - Both cars increased speeds, especially 78 – its top speed is around 50 mph.
 - WP 832 built in 1930; 78 built in 1932
- Pittsburgh 1467– Early PCCs
 - The Electric Railway Presidents’ Conference Committee met in the late 1920s to save the street railways business, and decided they needed a radical new car to compete with the comfort and speed of the automobile.
 - The resulting car, named “PCC” (the committee’s initials), incorporated many refinements that made it friendlier to passengers. Hand-crank windows, upholstered seats, and quiet propulsion were just some of the advances.
 - The PCC was quickly adopted in many cities that still had streetcars. In 1936 Pittsburgh was the first to put one into regular service. This pre-1946 car features single, tall passenger windows, and air brakes.
 - Built in 1941

- Pittsburgh 1711 and 4004; Philadelphia 2711; Shaker Heights 94 – Late PCCs
 - PCCs were popular and successful in preserving many streetcar companies at least through the end of World War Two. In 1946, the design was updated to include windows for standees, a more curvaceous body, and electric brakes to make them more competitive against postwar demand for automobiles.
 - They were popular enough that some lines ordered them with appliances for suburban and interurban routes; no. 94 ran to Cleveland’s Shaker Heights.
 - Pittsburgh Railways president Tom Fitzgerald foresaw much suburban growth after World War Two and purchased cars like 1711 to meet the expected demand. However, most new suburbanites chose auto trips instead of trolley trips. The line closed only four years later after business collapsed.
 - PCCs were popular, durable, and easy to maintain, so they were often long-lived. No. 1711 became a city car after the Washington line closed and served until 1988 – nearly 20 years beyond its planned lifespan. Most Philadelphia cars were retired in the 1990s. Pittsburgh 4004 was overhauled in the late 80s and ran until 1999. PCCs still run in transit service in some cities.
 - Pgh 1711 built in 1949, 2711 built in 1947; Shaker Heights built in 1948
- Red Arrow 14 and 24 – PCC-inspired cars
 - The PCC was licensed to car builders. The largest builder, J.G. Brill, was not a licensee, and developed its own design called Brilliner to compete with the PCC, approximating many of its refinements. It did not sell well, and patent infringement suits stopped production.
 - Red Arrow liked the PCC concept, and asked licensee St. Louis Car Co. to develop a car with similar refinements, but better suited to their operations. Cars like 14 & 24 resulted, with PCC appearance and comfort, but double-ended, able to run in trains, and with a drive found on other Red Arrow cars.
 - Built in 1949
- City of Philadelphia 606 – Rapid Transit Car
 - Early subway and elevated railroad lines were steam-powered, but they cost a lot to run, and city residents often vociferously opposed smoke and noise. Electric traction and multiple-unit control made them cheaper and cleaner.
 - Rapid transit outlasted street railways because it served dense areas where driving was impractical, didn’t get caught in traffic, and had higher capacity.
 - No. 606 was/is built of stainless steel, which saved on maintenance costs.
 - Built 1960
- Snow sweepers, dump cars, cranes, tow cars/locomotives – Work Equipment
 - Maintenance equipment kept the line running reliably and economically. Unlike rubber-tired vehicles on public streets, trolley companies had to maintain their own track and infrastructure with no public support. Street maintenance jobs like snow removal were often required for a franchise.

FAQs

Why are they called trolleys? This name for electric streetcars originated from the verb “troll,” which means both “to cause to move round and round” and to engage in the method of fishing in which one lets their fishing line slowly move through the water behind a boat. One can easily see how the connection between the trolley pole and the electrified wire brings to mind these images.

Where did people ride the trolleys? The same places we go to today: work, school, church, appointments, shopping, amusement parks, and visiting friends and family!

How fast can a trolley go? That depends on how the cars were built, track condition, or a city car vs. an interurban car. A trolley in the city with traffic may average speeds of 5-15 mph.

How much did it cost to ride the trolley? It depends on the time period and how far one went. Trolley fares in the early days were a nickel; many people still remember ten-cent fares or three for a quarter. There were also Ride-All-Day Sunday passes.

Do the terms trolley, streetcar and interurban all mean the same thing? In many places, trolley and streetcar are used to mean the same thing. An interurban is a car that traveled between two towns (ex: Pittsburgh to Washington, PA).

Who are the workers on a trolley? Cars with two-man crews had a motorman and a conductor. The motorman ran the car and the conductor collected the fares. A one-man crew is responsible for all duties. Female operators, or motorettes, worked on the cars during WWII and beyond.

How do you operate a hand control trolley? The left hand is on the controller and the right is on the brake. There is also a “key” that must be in place.

How do you operate a foot control trolley? The right pedal is the accelerator, the middle is the brake, and the left is the deadman. The car will stop if this last pedal is not pushed down.

What do the different bells mean? One bell means stop. Two bells means go. Three bells means reverse. You may hear repeated rings or horn blasts if going over a road crossing.

What are ad cards? The trolleys have ad cards above the seats. Companies paid to have their ad cards placed in the trolleys, providing visibility for their products and good sources of revenue for the trolley companies.

What is that noise? Often the potentially loud and startling noise the visitor is referring to is the air compressor that is compressing air for the brake system.

Why is the loop named McClane? The site is named for the McClane family farm located nearby at the turn of the 20th century. The original path of the interurban and the station stop were located within the loop site until 1953 when the line was abandoned. McClane School also stood nearby.

Why is the loop named Arden? The village of Arden Mines was a thriving coal patch at the beginning of the 20th century. The community also had company houses, a company store, and a post office. The path of the trolley line follows the railroad access to the mine. In the 1920s, the mine was closed when there was no more coal.