



TWO BELLS

**The occasional newsletter of the
Operations Department of the
Pennsylvania Trolley Museum**

March 2009

What's that website?

<http://ptmops.org>

Operations Schedule
Museum Calendar
Operating Policies & Procedures
Operating Orders
Operations Department Forms

Updated every Sunday!

Road Closures Page 3

<http://www.pa-trolley.org>

This is the website for the museum. Bruce Wells has done a great job in bringing it up to date.

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How fast will that streetcar go?

Average includes the total time from point a to point b. How fast a car has to go to maintain an average is probably about twice the average. But that varies with load factors, stop dwell times, passenger turnover, terminal dwell times, etc. Many companies adjusted running times so that the schedule frequencies were comprehensible, i.e. every hour, every 30 minutes, every 12 minutes, every 5 minutes...something that repeats every hour. The running times required operators to run more rapidly or slowly depending on the padding built into the schedule for a particular route. Motormen also adjusted schedules to make their own day easier (never harder)...it was great if you could run fast so that you (and your conductor if there was one) had less to do because you were running on the heels of your leader. Needless to say, the companies frowned on this.

Approximate maximum speeds:

NOPSI 832 - 5326	20-25 MPH
4398	37 MPH
66	40 MPH
PCC	42 MPH
3756	50 MPH
14-78	55 MPH

Our running times are printed on the back of the timetable and we expect you to observe those speeds. They are also hung from the overhead. We also expect you to follow the times listed in the timetable during regular operating conditions.



You cannot get here from there.

Arden Bridge

The Arden Bridge will be undergoing replacement this summer, beginning in May and will last through the summer. Traffic is expected to be maintained. This bridge is located along North Main Street between Museum Road and the North Main/Oak Grove Road split.

I-79 Exit 41

Racetrack Road will be closed between Interstate 79 and Pike Street for replacement of the bridge that carries the road over Chartiers Creek. The closure will start March 9 and is expected to continue until July 1.

Those of you traveling south from Pittsburgh should get off at Exit 43, route 519. Turn left at the stop sign and follow 519 into Houston. Turn left on Pike Street and follow it past Chartiers Houston High School to where Pike Street intersects at Allison Hollow. The rest of the route is the same.

Those of you who travel down route 19 should follow the posted detour.

Those of you coming from the south should be affected.

You should follow the same route in reverse to go home.

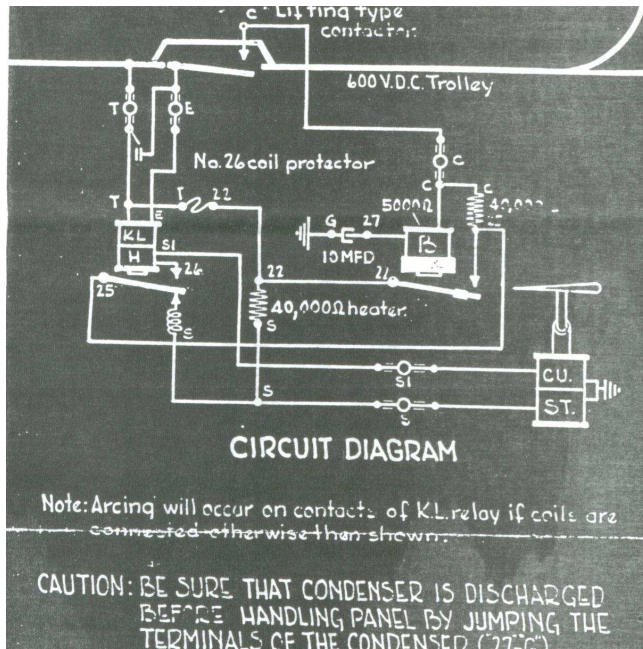
Learn the detours to assist our guests.



The Electric Track Switch

(adapted from Two-Bells, Oct-Nov 1995)

According to a Pittsburgh Railways film, the concept of electric track switches goes back to the very early 1900's--meaning if you were one of the first operators of 3487, you would have been expected to twirl the handles on the B-type controller to guide the lumbering car through the maze of special track work that wove the city together.



The diagram to the left appeared in most of the switch contactor boxes throughout the system. We currently have two electric track switches: one at Arden Spur, which is deactivated and plugged, and another inbound at Museum Road crossing.

Here is the official accompanying explanation: “As the trolley wheel advances onto the contactor, the moveable runner with 600v DC thru the KL coil is connected thru the C contact to operate relay B as the 10 MF capacitor charges. Relay B is slow to release, and its contact (22) thru the unoperated KL/H relay, operates the ST winding of the switch for the straight track.

With relay B operated, if the trolley has sufficient load to ground, relay KL/H operates through its KL winding. KL/H relay contact 25/26 then applies 600 volts to the CU winding of the switch motor solenoid to set the switch for the curved track.

The 10 MF capacitor is in series with the relay B coil so that in case the trolley wheel stops on the runner of the contactor, relay switch B will eventually release after the capacitor discharges thru its coil to prevent overheating the switch motor solenoid.”

Our switch at Museum Road is opposite of Pittsburgh Railways standard operating procedure. If you want to go into the yard, you apply more load (power) as the trolley wheel goes through the wire contactor. You can do this by simultaneously applying about 10 pounds of air and a point of power. (Yes it can even be done with PRT 5326) Once the switch throws, notch off the controller and release the air to minimize the jolt on the car and riders. PCC cars have the track switch button on the dash which drops a resistor into the circuit, causing the additional load to throw the switch to go straight. **NEVER GO FASTER THAT 5 MPH WHEN APPROACHING THE CONTACTOR NOR THROUGH THE SWITCH.**

To stay on the mainline, you coast through the contactor. PRCo employees were taught you were in the contactor when you were 12 feet from the switch point. We have yellow painted ties to assist you.