

## **Harrisburg Railroad Tower/Switch House Nomination Completed**

### **Doug Reynolds**

A nomination to the National Register of Historic Places has been completed for the old Pennsylvania Railroad Harris Switch Tower in Harrisburg. The nomination was prepared by the fall 1993 historic preservation class at Harrisburg Area Community College, with assistance from the Tower's current owner, the Harrisburg Chapter of the National Railway Historical Society. The Tower is located southeast of Pennsylvania's Capitol Complex and immediately south of the west end of the Soldiers and Sailors Memorial Bridge.

Harris Switch Tower is a symbol of the day-to-day operation of the Pennsylvania Railroad, and is a monument to the railroad employees who manned it for nearly sixty years. At the time the Harris Tower was built, in 1929, and for several decades after, the Pennsylvania Railroad was one of the largest railroads in the world and one of the largest employers in the nation. In Harrisburg, the Pennsylvania Railroad's rail yards stretched the length of the city. With both the Pennsylvania and Reading Railroads servicing Harrisburg, railroading was the largest industry in town, employing some 8,000 employees of the 21,000 potential wage earners of the city's 80,000 population.

Harris Tower remains an excellent example of the function of an interlocking tower. The function is to provide control over a junction of track switches and lineside signals, the former controlling course and direction, and the latter controlling speed. The term "interlocking" was derived from a safety feature of the equipment the building housed by which line signals and track switches linked in such a way that routing choices for a train on a course which conflicted with that of another were automatically locked out. The term "interlocking" quickly came to describe not only this process, but the building itself. The switch tower thus became the "interlocking" tower.

The earliest of these switching mechanisms consisted of shoulder-high levers that moved long rods connected to the track switches, physically governing the position of rails and thus controlling the direction of train movement. The size of the track area that could be controlled by one of these systems was restricted by friction in the linkage and the limitations of human strength. Later systems were power-assisted electro-pneumatic, in which small levers changed the flow of air in pipes and moved the track switches, and electro-mechanical, in which small levers caused electric motors to perform the same function. These power-assisted systems allowed the control of larger areas, since the limiting element -- human strength -- was mostly removed from the physical linkage.

The Harris Tower, commonly known as a "switch tower" or simply "tower," is a two-story, 27' x 37' brick structure put into full use on April 26, 1930. In 1946, there were almost 550 switch towers lining the Pennsylvania Railroad's vast network of tracks, and 4,400 in the nation. The majority of America's interlocking towers in the United States controlled a small number of switches and signals, but Harris handled all east-west

traffic on the Pennsylvania Railroad, thus it was busier than most. The trackage that it controlled necessitated a large interlocking machine (115 levers), making it one of the largest of the railroad towers.

During Harris Tower's busiest times in the 1930s and 1940s more than 100 passenger trains and about 20 freight trains passed the Tower in each 24-hour period. At this level of activity, with 59 switches and 43 signals to control, the tower's staff was rarely idle. In the tower, a "controller" received communication regarding train arrivals and departures. He relayed that information to the "leverman" who controlled the levers on the interlock machine. The "model board" above the interlocking machine, with its representation of the yard's trackage, would light up when the tracks were occupied. The tower's controller also announced arrivals to the Pennsylvania Station through the public address system.

The Tower's mechanisms remain intact. In the center of the second floor room is the interlocking machine, a green metal box 6'6" wide, by 24'10" long, and by 4'4" high. The machine contains the mechanical equipment that was needed to operate switches which controlled the track sections that lies just east of the building. The front of the machine (east side) has 115 levers that used to control the settings of the machinery inside the box.

Nearby, mounted on pipes that run from floor to ceiling, made to be easily visible to an operator of the machine, is the "model board." It is as long as the interlocking machine, about 4'4" high, and nine inches in thickness. On the surface of the board is a representation of track sections in the Harrisburg yard that were controlled from the building. The board also incorporates colored lights that indicate the status of signals and switches as well as occupancy of different tracks by trains. The track representation on the board has been revised to reflect modifications of the railroad's track layout.

To the east of the interlocking machine is a long wooden desk. Communications equipment is mounted on the desk, some original and some more modern. The front of the desk faces the machine, and behind the desk is the projecting bay, which is composed of three windows on its east elevation, and on its north and south sides. The bay projects about four feet from the building and affords an easy view along the tracks in all directions.

Listing Harris Tower on the National Register of Historic Places will better recognize this industrial gem, and help open funding opportunities for conservation and interpretation of the Tower. The State Historic Preservation Board will review the and vote on the nomination at its June, 1994 meeting. If approved, the Bureau for Historic Preservation will submit the nomination to the National Park Service for listing on the National Register of Historic Places.

---

*Penndustry* is the biannual newsletter of the Pennsylvania Historical and Museum Commission's Industrial Survey of Pennsylvania. Anyone who would like to publish an article on Pennsylvania's industrial preservation and heritage should submit no more than 750 words to Doug Reynolds, Pennsylvania Historical and Museum Commission, Box 1026, Harrisburg, PA 17108-1026. Additions to the *Penndustry* mailing list are also welcome. Please send names and addresses to Reynolds at the same address.

Reprinted by permission of Mr. Doug Reynolds.

*The name of the Harrisburg Chapter, NRHS in paragraph 1 is corrected in this copy.*