

# The Atglen & Susquehanna: Lancaster County's Low Grade

*By Frederic H. Abendschein*

**B**y the beginning of the 20th century the Pennsylvania Railroad's territory, traffic levels, and income had grown substantially from 1854, the company's first year. The traffic was putting severe strains on the system and the railroad would have to invest considerable amounts of capital for relief in strategic areas.

Lancaster County, Pennsylvania, was one such critical region. PRR trains headed east from Harrisburg had two routes through the western part of Lancaster County. The first, the Columbia Branch, followed the Susquehanna River to its namesake town where it left the river, climbed a steep grade to Mountville and continued on to Lancaster. There the Branch joined the other route, the Main Line, which, on its way to Lancaster, had climbed almost 200 feet in about seven miles from the Swatara Creek to a point near Elizabethtown.<sup>1</sup> These grades limited train size or required the railroad to add costly helper engines.

Problems existed east of Lancaster, too. Both the Main Line west of Lancaster and the Columbia Branch had two tracks and the Main Line had four east of Lancaster. However, the Conestoga River bridge was only two tracks wide. When the railroad built the bridge it left protruding stones on the south side to mesh with a possible, but never pursued, expansion.

At Gap the railroad had a 0.6% grade<sup>2</sup> compounded by sharp, speed-restricting curves. These and other problems led PRR President Alexander J. Cassatt to the solution of "an essentially new double-tracked railroad for freight only, from a connection with the main line and the Northern Central near Harrisburg on east to Philadelphia."<sup>3</sup>

This solution was not a new one as an earlier PRR president, J. Edgar

Thomson, had a vision of a low grade route stretching from the eastern seaboard to the midwest. The eastern Pennsylvania line would have been part of this bigger scheme.<sup>4</sup>

Keeping such an extensive enterprise concealed was impossible. By late 1902 a report in the *Lancaster Inquirer* described the route as following the west shore of the Susquehanna from the new yards at Fairview (Enola Yards) to a new bridge at Shocks Mill, continuing along the east shore to Creswell where it would start an easy grade to cross southern Lancaster County. The paper projected contractor H. S. Kerbaugh would soon start work near York Haven on the west shore in York County and Shocks Mill in Lancaster County and would employ 1,000 men and 150 horses.<sup>5</sup>

In southern Lancaster County the line would cross, from east to west, Sadsbury, Bart, Eden, Providence, Martic, and Conestoga townships. Work would start at Quarryville and proceed east and west from there. To secure the route, right of way men started visiting local farmers early in 1903 to get releases from them. Naturally, some resisted but the PRR ultimately prevailed.<sup>6</sup>

Some credit (or blame depending on your point of view) for the route has to go to the PRR's Chief Engineer, William H. Brown. Born in southern Lancaster County, Brown got his start by running trial surveys on the narrow gauge Lancaster, Oxford and Southern near his home.<sup>7</sup> After working on the U.S. military railroads at the start of the Civil War, he moved on to the PRR staying there 44 years with 36 of them as chief. He worked on many large PRR projects and often encountered the railroad counsel who would warn him not to do some act because of its questionable legality. He would reply, "But I have done it." Consequently, he became known as "the Supreme Court of The Pennsylvania Railroad Company."<sup>8</sup>

Rockville bridge, completed in 1902, is the best-known of Brown's projects.<sup>9</sup> The low grade line across Lancaster County was Brown's last as he reached the PRR's mandatory retirement age of 70 in 1906 before the line's completion.<sup>10</sup>

One of the first places work started was on the Susquehanna River by construction crews building the Shocks Mill bridge.<sup>11</sup> Work started on December 3, 1902 and by May 1903 workers were building about one pier a week<sup>12</sup> after starting on the first abutment on March 16, 1903 and the first pier on April 26, 1903. The quickest any pier went up was in 5 days and three hours. When the H. S. Kerbaugh Co. completed the bridge in the Fall of 1904 it had 27 piers and 28 arches. The bridge was 2,221 feet long with the top of the coping 61 feet above low water and the keystones 54 feet above the same mark. 12,000 cubic yards of masonry went into the bridge. Into the valleys over the piers went sandy loam on the Lancaster County side and stone ballast on the York County side. First estimates called for two years to pass building the bridge. However, Kerbaugh finished about three months under two years which is impressive considering the company had to suspend work for 121 days during the summer

of 1903 because of high water.<sup>13</sup> Construction was not without its human cost; there were injuries from premature explosions and at least one drowning.<sup>14</sup>

Also, during 1903s summer a potential legal problem surfaced. In July four rafts loaded with lumber came down the Susquehanna and collided with a coffer dam around one of the bridge piers. The rafts had their lumber loads smashed but crewman thrown overboard made it safely to Wrightsville. The raftmen wanted the state to intervene and make the railroad remove one pier to form a safe passageway through the area.<sup>15</sup> However, with William H. Brown, "the Supreme Court of the PRR," in charge, guess who won.

Close by on the York County side, Kerbaugh built another, smaller bridge over the Codorus Creek. Workers began the bridge in the Fall of 1903 and finished it in the Spring of 1904. The bridge, which consumed 12,000 cubic yards of masonry, had six arches with the keystones 43 feet, 6 inches and the bridge top 50 feet, 6 inches above low water.<sup>16</sup> Both the Codorus and Shocks Mill Bridge were similar in appearance to the much better known and more easily accessed Rockville Bridge.

To build the line in York County the PRR faced legal problems as well as physical ones; the railroad's charter did not allow it to build in York County. To overcome this, the company established a railroad, the York Haven and Rowenna Railroad Company, to run between its namesake towns and the railroad lines of subsidiary Northern Central and the Columbia Branch. After the construction crews finished the six miles of railroad, the PRR rolled it and its \$100,000 in stock into the PRR system by buying it on December 27, 1905.<sup>17</sup>

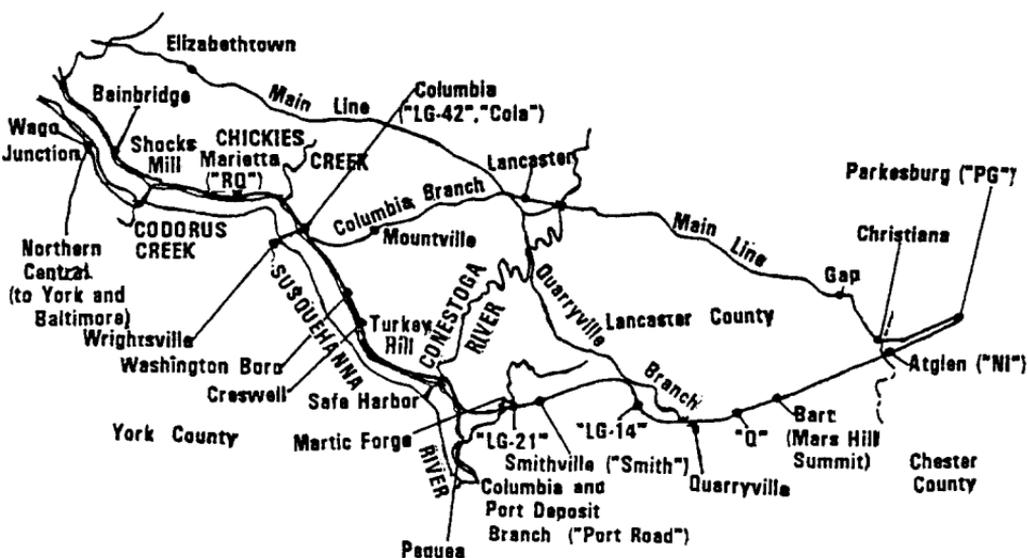
Near York Haven, at Wago Junction, the line connected with the Northern Central whose tracks, newly expanded from two to four, were used by trains traveling the rest of the way to Enola Yards. The PRR and three subsidiaries, the Northern Central, Cumberland Valley, and Philadelphia, each chipped in one quarter<sup>18</sup> of Enola's estimated cost of \$7,000,000.<sup>19</sup> Contractors finished the yard and it went into operation in 1905.<sup>20</sup> When service started Enola's storage capacity was reportedly 20,000 cars but its final capacity was to be over 50,000.<sup>21</sup>

On the Lancaster County side Kerbaugh faced a considerable physical challenge. The contractor had to build a bridge approach more than a mile long. The approach was a fill that grew to 36 feet in height at the bridge and was uniformly 40 feet wide.<sup>22</sup> To supply some fill material Kerbaugh turned to the Vesta iron furnace's cinder banks a few miles downstream at Marietta. The contractor used a temporary narrow gauge railroad to move the cinders from the furnace site to nearer where crews were building the approach.<sup>23</sup> While Shocks Mill Bridge catches the eye, the approach's cost was \$600,000 or \$200,000 more than the bridge.<sup>24</sup>

While Kerbaugh was tackling Shocks Mills bridge in 1903, other construction companies were busy in southern Lancaster County. Ryan & Kelley had their headquarters at Strohm's Mill while Sims & Company's base was at

**PENNSYLVANIA RAILROAD  
ATGLEN and SUSQUEHANNA BRANCH**

Dauphin County



Safe Harbor. John Shields Company and McManus Company headed in opposite directions out of Quarryville. Together these companies had over 3,000 men working.<sup>25</sup>

Because steam shovels could not make fast enough progress in the rocky terrain around Safe Harbor, Contractor Sims asked the PRR to shut the Columbia and Port Deposit so workers could use explosives that had the potential to rain rocks on the Port Road's tracks below the parallel construction. On June 20, 1903 the PRR closed the Port Road between Creswell and Safe Harbor. Turnaround trains continued to use the Port Road south from Columbia to Creswell and north from Perryville, Md., to Safe Harbor. Still, the railroad had to temporarily transfer five freight crews from Columbia to Baltimore.<sup>26</sup>

In the fall of 1903 the PRR stopped work on the Low Grade. One explanation was that the delay in completing Shocks Mill Bridge prevented the line from being useful to the railroad in 1903 and so the company decided to wait until 1904 to continue work. Another explanation was that a Chester County judge ruled that the PRR had no authority to build the line<sup>27</sup> and would have to stop building the line. With William H. Brown, "the Supreme Court of the PRR," in charge, guess who won.

1904 did not open auspiciously. In March ice broke up on the Susquehanna and created jams throughout its length in western Lancaster County. The PRR and Kerbaugh pulled men off the Low Grade construction and put 3,000 to work opening the line between Columbia and Harrisburg.<sup>28</sup> They and six steam shovels<sup>29</sup> attacked the ice that covered the railroad to 30 feet deep at spots. To feed these workers the PRR brought in incredible amounts of food to

feed the workers around Bainbridge: 2250 loaves of bread, 30 hams, two beeves, six hogs, 250 lbs. of coffee, an equal amount of sugar, and 30 gallons of milk per day<sup>30</sup> for about nine days.<sup>31</sup> The ice also damaged the Shocks Mill Bridge requiring later repairs.<sup>32</sup>

1904 also saw the start of preparatory work for an even larger project that would capture not only Lancaster Countians imaginations as the Low Grade had, but all Americans' imaginations -- the Panama Canal. The Canal would end up taking almost three times as long and cost about 19 times as much as the A&S.<sup>33</sup>

1905 did not start any better. On January 5, 1905, steam pipes used to keep Sims & Co. dynamite dry in Christiana overheated and caused an explosion that destroyed the storage building. The 40 cases or one ton of dynamite exploding reportedly damaged every house in town and caused an estimated \$25,000 to \$30,000 in property damage. The explosive force leveled a commercial greenhouse and lifted lathes and drills off their foundations at the Christiana Machine Company.<sup>34</sup>

On February 10, 1905 a special train with General Manager William W. Atterbury and Philadelphia Division Superintendent W. B. McCaleb stopped in Columbia so the two officials and others on board might examine the Columbia Yard. The two had ventured from Philadelphia in an attempt to break up congestion that had 30,000 cars tied up between Jersey City and Pittsburgh with the worst spot being the Philadelphia Division.<sup>35</sup> The congestion and resulting inspection trip stressed how badly the railroad needed the Low Grade.

Throughout the summer of 1905 work proceeded with an increasing human toll as minor and major accidents happened regularly. Headlines such as "Peeked Out Pipe, Skull Crushed,"<sup>36</sup> "Blown Into Atoms His Awful Fate,"<sup>37</sup> and "Three More Killed On Railroad Work"<sup>38</sup> were typical and these all appeared in a span of one week in May.

On July 17 PRR officials including Atterbury held a mysterious conference in Columbia on board his private car. The next day before the train left for a trip down the Port Road, officials refused to talk. Speculation ran rampant with most centering on the meeting being about the Low Grade. Some thought the PRR might expand its operations in Columbia by building new shops.<sup>39</sup> Others were not as optimistic.

The summer of 1905 saw much blasting happening especially along the river between Safe Harbor and Turkey Hill. On July 1 workers started drilling in a headland of rock about one half mile west of Safe Harbor. Drilling finished a month later and workers started filling the holes with 225 tons of explosives. When the explosion went off at what became known as Stigerwalts Cut, it dislodged about 240,000 cubic yards of material.<sup>40</sup>

And the accidents continued... "Awful Fate of Six Men,"<sup>41</sup> "Four Men Torn to Shreds at Highville,"<sup>42</sup> and "Two Men Burned to Death at Safe Harbor."<sup>43</sup>

Again, all three accidents happened within a one week span during late August

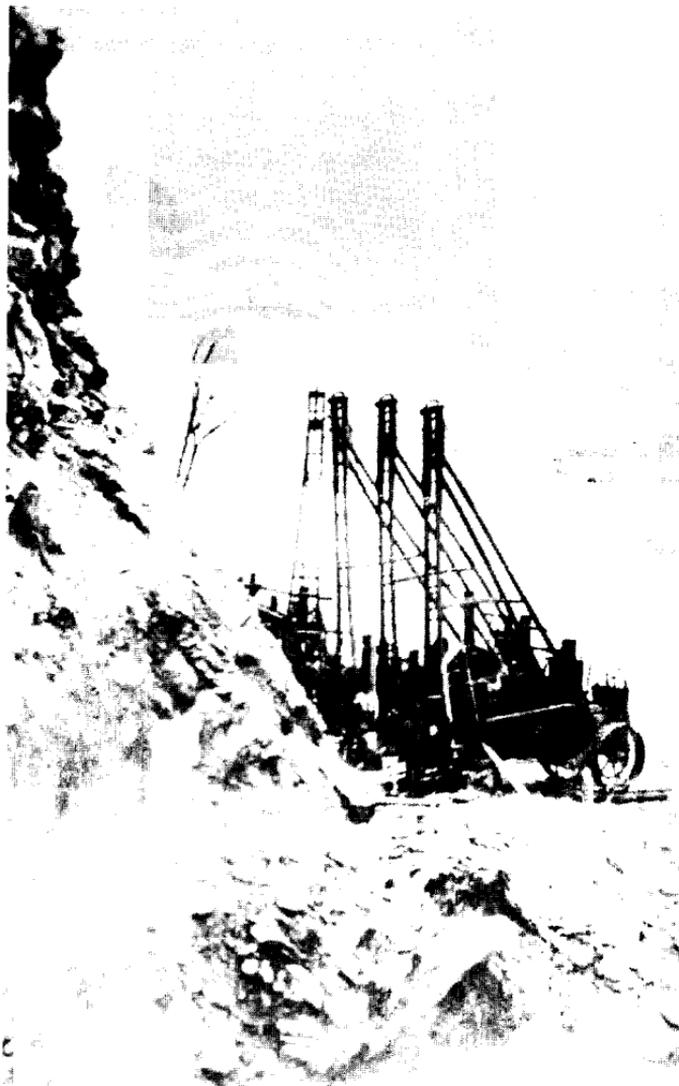
and early September.

While almost all of the Low Grade passed through tranquil townships, the PRR did have to contend with one boisterous borough -- contentious Columbia. There was a special Borough Council meeting on May 6 that came up with a list of demands on the railroad. There was a follow up meeting on August 2 where Council heard the original demands and the recommendations of an Advisory committee. After much discussion Council prepared a new list of seven demands that included subway or overhead road crossings, sewer improvements, and a second deck for vehicular traffic on the Columbia-Wrightsville bridge.<sup>44</sup> With William H. Brown, "the Supreme Court of the PRR," in charge, guess who won.

While Council was debating, contractors were doing preliminary work

in Columbia. One task was to tear down the railroad's brick warehouse at Walnut Street. The Baltimore and Susquehanna had erected the building as its passenger station in Columbia for its line that crossed the Susquehanna to Wrightsville.<sup>45</sup>

On September 21 the Columbia situation heated up when H. S. Kerbaugh workers started to excavate at the foot of Locust Street. This work prompted a visit from the Borough Council President and Borough Engineer who then called for the railroad to halt the work. The local PRR engineer agreed and work on laying the dinkey tracks stopped temporarily. Many unverified rumors circulated but it appeared that the railroad would wait until contractors had



finished more work on either side of the borough.<sup>46</sup>

In the fall workmen started stringing communication and signal wire along the route starting at Martic Forge and heading east.<sup>47</sup> In the same season, the Philadelphia Superintendent made a statement that showed why the PRR needed the Low Grade. He said, "The Philadelphia Division of the Pennsylvania railroad (sic) is growing so rapidly that soon, both in point of tonnage and mileage, it will be the largest railroad division in the entire world."<sup>48</sup>

Borough Council passed on November 1 an ordinance that incorporated many of its earlier demands.<sup>49</sup> However, as the work season was drawing to a close, the railroad did not feel an immediate need to challenge the ordinance.

Fall also brought a smallpox outbreak in Conestoga township. Conestoga Township school board, organized as a health board, met with Kerbaugh officials who agreed to put notices at their camps from Martic Forge to Washington Borough ordering their men to get vaccinated. Company doctors did the vaccinations and they would also vaccinate any poor people who came to the camps.<sup>50</sup>

The railroad started 1906 by taking the water supply from a dozen residents at Creswell for the steam locomotives that would soon be running on the Low Grade. The railroad ordered Kerbaugh to build a tank to draw from a reservoir that would take almost all the water from a small creek near the small Turkey Hill community.<sup>51</sup>

On a brighter note the PRR opened a new low grade freight line between Thorndale and Glen Loch on April 11. With this 12 mile line the PRR linked the Low Grade line through Lancaster County with the Trenton cut-off that bypassed Philadelphia to the north.<sup>52</sup>

Back in Columbia on June 5, J. F. Murray, Assistant Engineer of the PRR, met with Borough Council and asked what Council would do about the railroad ordinance. The railroad would not make any more concessions and Council moved to stop negotiations.<sup>53</sup>

On June 9 one of the worst accidents during the Low Grade construction happened a mile and a half from Pequea when explosions of unknown origin destroyed a dynamite factory owned by G. R. McAbee Powder and Oil Company of Pittsburgh. At 12:40 p.m. 2,500 pounds of dynamite exploded in the punching house where workers filled paper shells with the explosives. Seven minutes later one ton of nitroglycerine stored in a nearby building went up. Eleven men died in the explosion.<sup>54</sup> Relatives could identify only one and the remains of the others, found thrown over a half mile radius,<sup>55</sup> went into a common casket for burial.

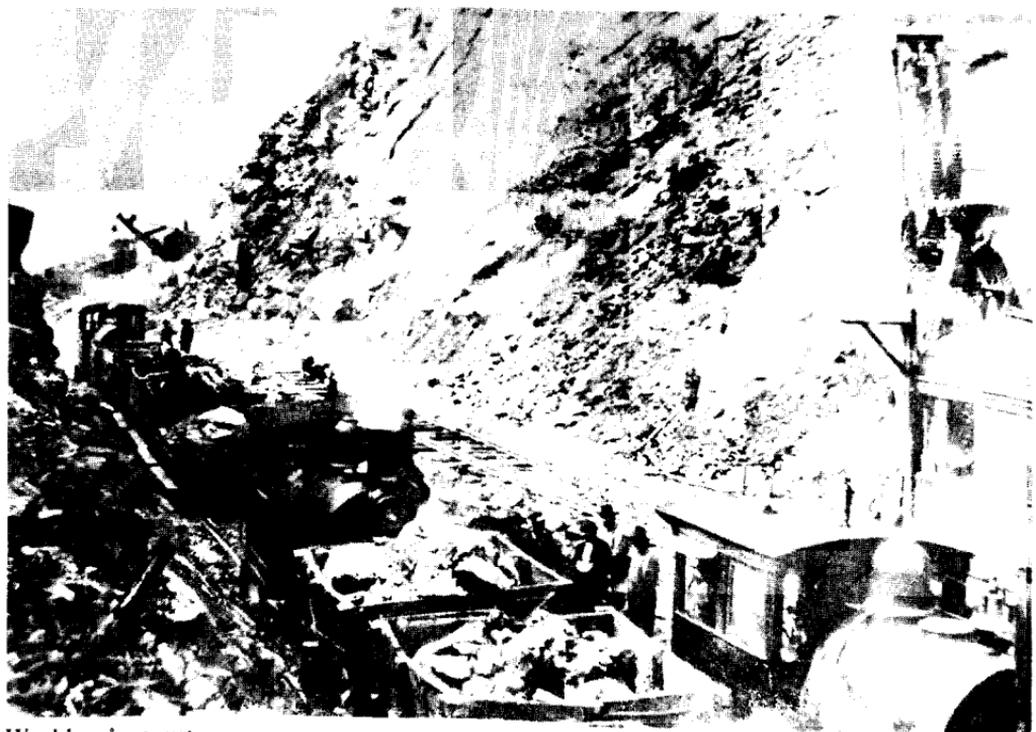
Despite all the accidents, work was fast coming to an end but the Columbia problem remained. The railroad forced the issue by extending the tracks across Locust Street on the morning of June 18.<sup>56</sup> The PRR's logic was that it had bought the right of way from the Philadelphia and Reading over Locust Street and this gave it the right to lay the track. Council disagreed and

directed town workers to remove the tracks and to get help from the fire companies if needed. Soon fire bells rung and factory whistles blew to summon the fire companies. The railroad ran a train back and forth over the new track to protect it. To stop the engine, firemen sprayed the crew with water until another passing train severed the hose. Firemen immediately dug a trench under the tracks for a replacement hose and resumed spraying.

Several thousand citizens soon began tearing up the track despite a heavy rain. The railroad ordered their workers away about the same time the sheriff arrived with an injunction against interfering with the railroad.

Late that night borough officials got an injunction preventing the railroad from relaying the track.<sup>57</sup> With the various injunctions in place, stalemate described the situation. But, although William H. Brown, the PRR's Supreme Court, was retired, he had like-minded successors and, so, guess who won.

Ultimately, the Low Grade made it through Columbia and all the various segments began linking together. The last part finished was the "Deep Cut" near



Working in a cut.

Quarryville where the John Shields Construction Company worked a year blasting and digging through hundreds of feet of almost solid rock to a depth of 90 feet.

The railroad held the dedication ceremony in this cut on July 27, 1906.

John Hendrie, a superintendent for Shields<sup>59</sup>, was the master of ceremony. At noon John W. Hensel, Jr., a prominent Quarryville merchant, swung a silver-plated hammer and with three blows drove in the silver spike. Hensel's father presided over a similar ceremony in May 1875 when the Lancaster and Reading Narrow Gauge Railroad reached Quarryville.

The ceremony's highlight came when Miss Anna Acheson, daughter of J. R. L. Acheson, an assistant superintendent of construction, broke a bottle of champagne over the rail and declared, "I dedicate this enterprise to the uses of humanity and to the glorification of God's chosen country -- the Lower End of Lancaster county."<sup>60</sup>

Finally, after over three and a half years, \$19.5 million<sup>61</sup>, and reportedly more than 200 lives lost<sup>62</sup>, the Pennsy had its freight bypass through Lancaster County. The railroad named the line the Atglen and Susquehanna Branch, but crews and local people would abbreviate it the A&S or call it the Low Grade.

What did the railroad get for its investment? The A&S had two tracks over its 50.6 miles<sup>63</sup> (close to the length of the Panama Canal<sup>64</sup>) from Parkesburg to Wago Junction. Eastbound the ruling grade was only 0.3%, half the Main Line's, while westbound it was 0.6%.<sup>65</sup> On the ruling grades (from near Washington Boro to Atglen) there were no grade crossings to cause engineers to worry about encountering cars or wagons. Divided into 11 sections, the A&S was reportedly the first long route of steam railroad controlled by telephone.<sup>66</sup> These telephones were at 40 locations, or spaced on an average of about 1.26 miles.<sup>67</sup> There were eight train order offices (or block stations) on the A&S where operators could switch trains from one track to the other and give them train orders from the dispatcher in Columbia. They were, from east to west, Parkesburg (MP (Mile Post) 0.0, PG (telegraph symbol)), Atglen (MP 3.2, NI), Quarryville (MP 10.8, Q), Shenks Ferry (MP 22.0, SF), Creswell (MP 33.3, CO), Columbia (MP 37.7, LG-42), Marietta (MP 42.1, RQ), and Wago Junction (MP 50.6).<sup>68</sup>

Notice that the one tower in Columbia is called LG-42; a note of explanation is in order here. The LG represents Low Grade and the railroad assigned the designation LG and a number to key points on the A&S. For example, at LG-14, west of Quarryville, there was a manually operated crossover from one track to the other. The LG is not the Mile Post marker. There are separate Mile Post markers (white cast iron vertical posts marked with the Mile Post number) along the A&S. Additionally, the signals are marked with numbers such as L71 that relate to the Mile Posts (or miles from Parkesburg). Here the L also stands for Low Grade and the 71 represents the Mile Post times 10 (or Mile Post 7.1). Odd numbered signals are for the westbound track, even ones for the eastbound.

Despite all the A&S's advantages, the railroad also gained a route that had many cuts (prone to landslides) and fills (subject to washouts). To guard against these natural disasters the PRR built 11 watchboxes, staffed round the

clock, where employees could start patrols to check track conditions and phone the dispatcher to halt trains if there were problems.<sup>69</sup> The watchbox names ran from the ordinary (Mann's Run) to the colorful (Buzzard Rock and Crow's Head). The route also had three major stone bridges (Codorus, Shocks Mill, and Chickies), two major steel ones (Safe Harbor and Martic Forge), and various culverts, underpasses, and overhead road bridges that required maintenance. When the PRR built the A&S labor rates were low but as time passed labor rates for maintenance became increasingly important.



Martic Forge bridge under construction.

Soon after the dedication the railroad started to run freights over the A&S and provide relief to the Main Line. On August 23, 1906 the railroad ran a special so that General Manager Atterbury and other railroad officials could inspect the new route. Unfortunately, near Buzzard's Rock west of Safe Harbor, the special struck and killed a track worker, the first to die on the new line.<sup>70</sup>

With the A&S open, the PRR finally opened the Port Road up for regular service on August 1, 1906. The railroad had wanted to open it four weeks earlier but a storm loosened rocks and carried stone walls away. Travelers would find a railroad much changed between Washington Boro and Shenks Ferry. To accommodate the A&S, contractors filled in much of the previously existing raft channel and moved the Port Road on to this new fill.<sup>71</sup>

The A&S's opening had a great effect on Columbia. The railroad announced that it was breaking up 39 Columbia based crews with some members going to Enola for work on the A&S while others would go to Harrisburg. Six

crews would stay based in Columbia for work on the Philadelphia Division besides the crews for shifting and local work.<sup>72</sup>

Ultimately, the A&S settled down into normal operations. However, in 1936 a flood struck that knocked the line out of service for several months. To understand what happened an examination of the tracks in the Chickies Rock to Columbia stretch is in order.

The PRR's Columbia Branch, aside from running between Lancaster and Columbia, continued along the Susquehanna, passed through a tunnel north of Columbia, and followed the curving shoreline as the canal had done to Chickies Rock. When workers built PRR's A&S through the area, they followed a straight line between the two points protruding into the river -- Chickies Rock and the tunneled hill near Columbia -- instead of following the shore. To make this straight line, the workers had to dump huge amounts of fill into the river. When completed the A&S formed one side of a cut-off, back-water, poorly-drained area named Kerbaugh Lake after the contractor.

In late March 1936 the Susquehanna began flooding because of spring rains and runoff from melting snows. The flood waters broke through the A&S roadbed fill near Chickies, quickly filled Kerbaugh Lake, and rushed through the tunnel to fill the PRR's Columbia Yard. In searching for an outlet, the waters knocked LG-42 tower, on the north side of what is now the Pa. 462 bridge, off its foundation. The waters, in trying to escape Kerbaugh Lake, broke through the A&S fill near the Columbia tunnel. All that remained of the A&S between Columbia and Chickies Rock was a small island in the midst of the swirling Susquehanna's raging waters. The railroad worked for several months to restore service. At the lower end of Kerbaugh Lake workers put larger pipes, still present and visible, under the roadbed to improve drainage.<sup>73</sup>

The mid-Depression years saw a major addition to the A&S -- electrification. The Pennsy had been electrifying many of its eastern tracks since the turn of the century and in 1937 started working west from Paoli. In just over a year the PRR electrified the A&S. On April 15, 1938 the first electrified freight train rolled out of Enola.<sup>74</sup>

The high voltage lines at the top of the catenary poles, which ran about 20 per mile along the A&S<sup>75</sup>, were at 132,000 volts at 25 cycles and could carry juice from the generators at Safe Harbor<sup>76</sup> not only for the A&S, but also for the Main Line which the railroad electrified simultaneously. The Safe Harbor turbines supplied the cheapest electricity of any of the sources the PRR used for its electricity.

The lower catenary wires where the electric locomotives (or motors in PRR terminology) drew their power from were at 11,000 volts. There were seven substations<sup>77</sup> along the A&S to step the high voltage down to this lower voltage that the motors used.

While electrifying, the PRR took the opportunity to consolidate block stations at Columbia. The railroad built a new tower at the foot of Locust Street

and named it Cola. Operators in Cola would control the Columbia Branch, the Port Road, and the A&S between Port interlocking, the point where the A&S and Port Road joined, and Wago Junction. West of Wago Cly tower would control.

East of Port the railroad also consolidated block stations. At the A&S east end Parkesburg, which also controlled part of the Main Line, remained. Near Smithville, Smith tower controlled train movements over the section that traversed southern Lancaster County. Located off Pennsy Road, which paralleled the tracks on the north side for a considerable distance, Smith was at the east end of a long passing siding. This siding, which could hold 86 50-foot cars<sup>78</sup>, locally made the A&S three tracks wide.

By September of 1941 the A&S at Parkesburg was handling on average 29 eastbound freights with 2,424 cars and 23 westbounds with 2,224 cars. This



Dinkey engines.

compares to the 10 eastbound freights with 472 cars and 13 westbounds with 809 cars using the Main Line. The Main Line also had 33 passenger trains each way. The average A&S freight had, rounded off, 89 freight cars while the average Main Line freight had only 56.<sup>79</sup>

On the A&S the PRR handled the increase in traffic caused by World War II without any major changes. The railroad did invest \$11,000 to make some improvements to its water supply in the Quarryville area.<sup>80</sup>

After World War II the A&S was still quite busy. At Parkesburg in June of 1948 the A&S saw 24 eastbounds with 2,022 cars and 20 westbounds with 1,736 cars. The Main Line had 7 eastbounds with 311 cars and 12 westbounds with 738 cars and 37 eastbound passengers and 34 westbounds. The average A&S train had 85 cars, a decrease of 4, and the Main Line's average freight was 55, a drop of 1. Overall the A&S traffic was down almost 20% in terms of cars

when comparing these two months and not adjusting for other effects such as seasonal trends.<sup>81</sup>

Following the war's end, the railroad could tackle the problem of Kerbaugh Lake. Not wanting a repeat of the 1936 disaster, the railroad decided to eliminate the lake by filling it. On August 6, 1948 the railroad submitted a proposal to the Sims Construction Company to fill the lake.<sup>82</sup> After Sims agreed the railroad began shipping in rubbish from Altoona to act as fill. The job took the PRR and Sims into the 1950s to finish.<sup>83</sup>

While eliminating Kerbaugh Lake solved a potential natural disaster, normal railroad operations always had problems such as wrecks. While many were spectacular, most did not cause deaths. One example of the first type happened on April 17, 1963 when 18 cars out of 75 in a Philadelphia to Pittsburgh train loaded with ore went on the ground in front of Smith tower. The railroad needed a day to restore operations with diesels and another half day to get the wires restored. Trains detoured over the Main Line.<sup>84</sup>

In another case the railroad suspected a mechanical failure on the 32nd car of a 94 car ore train for derailing the suspect car and the following 36 in the big cut east of Quarryville. Because the PRR's wreck cranes were in use, the railroad borrowed two from other railroads to untangle the January 11, 1965 wreck. A Reading wreck crane worked from the east and a Western Maryland one came in from the west.<sup>85</sup> The cars were accordioned in the cut making it difficult to get them out. While no one was hurt during the accident, two cleanup workers received leg injuries when they fell off one of the cars when it shifted.<sup>86</sup>

The worst wreck in the last half of the A&S's life happened on August 14, 1962 at Atglen. Because of trackwork on the eastbound (No. 1) track, Q block station was open and the operator sent Extra 4415 (an E44 motor running with another E44, 4407) over the crossover and east on the westbound (No. 2) track. He did the same for a following train, Extra 4755 (an unmodified P5a with another one, 4772). Cola had given each train orders that this crossover operation would happen. While Extra 4415 was going 10 mph, Extra 4755, going at an undetermined speed, collided with the first train's rear 0.4 miles west of Atglen.

The conductor and flagman on Extra 4415 were able to alight from the cabin car before the collision and escaped injury. Unfortunately, the impact killed the two enginemen on 4755 and telescoped the front half of the motor<sup>87</sup>, injured the other three crewmen of Extra 4755, and five guards who were on the last car, a passenger-baggage car, ahead of Extra 4415's cabin. The guards were accompanying a shipment of "low level" fissionable material, possibly nuclear submarine fuel.<sup>88</sup> This car (and four others on Extra 4415) derailed, but was only somewhat damaged. The Interstate Commerce Commission report officially listed the cause as: "failure to control properly the speed of a following train moving in an occupied block."<sup>89</sup>

On a more pleasant note, passenger trains did, occasionally, travel the whole A&S. Most times, the passenger trains were specials like the one in 1936 that had PRR No. 5725, a 4-6-0, as power and paused on the Safe Harbor high bridge for photographs.<sup>90</sup> Another, with PRR MP54 electrics that normally had commuter train duty, traveled the route in 1957 on a New York to Harrisburg excursion.<sup>91</sup> Still another, sponsored by the Philadelphia Chapter, National Railway Historical Society, ran in 1978.<sup>92</sup> A wreck diverted an eastbound Amtrak train, the National Limited, on October 9, 1976 over the A&S.<sup>93</sup>

In addition to wrecks and special trains the PRR had to contend with fires their locomotives (especially steam engines) would start along the A&S. A typical case involved M16977<sup>94</sup> on March 22, 1946. That day the 4-8-2 was eastbound at MP 10 when a spark from it ignited dry grass along the right of way. The fire spread to a nearby meadow burning over two acres before three PRR employees, the Quarryville Fire Department, and a State Forest Fire Warden, battling the blaze for several hours, managed to extinguish it.<sup>95</sup>

In the early 1960s fire created a most unusual problem to vex the Pennsy. The large fill near the curve at Shenks Ferry where the railroad swings east away from the river ignited. Made of coal mine tailings the fill burned, proved difficult to extinguish, and caused the roadbed to settle dangerously. To keep watch on the settling and direct railroad traffic for the many months while fire fighting and repairs were continuing, the railroad built a temporary block station and, appropriately, called it "Fire."

The merger of the PRR and New York Central in 1968 to form Penn Central did not cause many changes to A&S operations. Four years later hurricane Agnes changed operations drastically. The June storm undermined piers of the Shocks Mill Bridge and caused the center section to collapse into the river. Penn Central, now bankrupt, had to get court approval to rebuild the center section and this took several years.

When Conrail took over Penn Central and other bankrupt Northeast railroads in 1976, Amtrak gained the Philadelphia to Harrisburg Main Line and electric power distribution system. Operations again changed dramatically. Conrail had to pay Amtrak for power from the overhead for the electrics and for trackage rights over the Main Line east of Parkesburg. Conrail felt Amtrak's charges were excessive while Amtrak felt it was merely recouping costs for the power and wear and tear on its property.

Conrail had an alternate route into Philadelphia, the Reading's mainline from its hometown. Conrail upgraded that route and diverted freight off the A&S. From 40 million plus gross ton-miles per mile of track before Conrail the A&S fell to under half the amount.<sup>96</sup>

By using alternative routes, Conrail had no need for its electric freight motors (ex-PRR GG1s from the '30s and '40s and E44s from the '60s), could retire them, and remove the catenary from its freight only lines. Contractors tore down the Low Grade catenary in 1986<sup>97</sup> but left the Amtrak-owned poles and

higher voltage upper wires to carry power from Safe Harbor to the Main Line.

By 1988 there were only two scheduled freights over the line in each direction, PIMO and PIML eastbound and MOPI and LMPI westbound.<sup>98</sup> On December 19 the last regular freight ran on the Low Grade. When train PIMO-8 with engines 6459, 6482, 7743, and 1612, 77 loads, and 57 empties passed Parkesburg at 3:18 p.m., over 80 years of service on Lancaster County's Low Grade came to an end.<sup>99</sup>

Conrail began removing the tracks from the Low Grade in 1990.<sup>100</sup> Some rail was welded (and installed as recently as 1976) and some was bolted. The rail would go to Conrail's Lucknow rail processing plant north of Harrisburg for reconditioning and ultimate relaying.

With the tracks gone and the line abandoned by Conrail there has been much discussion in Lancaster County on what to do with the route. Some want to turn the route into road that will be a southern bypass. This proposal faces the problems of what to do with the Amtrak owned and used catenary poles that would be hazardous to motorists and how to logically tie the line into the road network. Others want to convert the route into a hiking trail and face the problem on how to keep it from becoming vandalized and turned into a dumping ground and liability issues. Both face the problems of who will replace the deteriorating over- and underpasses and maintain the Safe Harbor and Martic Forge bridges.

Conrail continues to use the remaining part of the Low Grade between Wago Junction and Cres (Creswell) interlocking regularly as a natural continuation of the Port Road Branch (ex-PRR Columbia and Port Deposit Branch). After the Conrail-Amtrak collision at Gunpow interlocking Amtrak essentially forced Conrail to run freights on the Northeast Corridor at night.

This ban greatly affected Conrail operations on the Low Grade. In the evening a procession of trains heads east to get on the Corridor after dark. In the early morning there is a reverse procession of trains that came the opposite direction on the Corridor at night. Another train that follows the same pattern is the daily turnaround that runs from Enola to Lancaster and back. The only daylight trains regularly on the Low Grade are the local from Lancaster that works to Marietta and work extras.

Born in an era when America regularly tackled big projects, the Low Grade was one of the largest civil engineering projects Lancaster County has ever seen. Half the route now has no rails and only an overhead power line; the rest remains an active nighttime railroad, and all of it is an important part of Lancaster County's railroad heritage.

## Endnotes

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