#### NILES & NEW LISBON WATER TANKS

Trackside water tanks, where steam locomotives stopped to replenish water supply, were a fixture on early railroads. Typically, tanks were located at the ends of the railroad (where locomotives were serviced between assignments), at intermediate points (where locomotives were based to perform local switching chores), and at the bottom and the top of long grades (due to increased water consumption by engines struggling upgrade).

Information on water tanks along the Niles-to-Lisbon line is very limited. But some sources exist, showing tanks were once found along the N&NL at each of these typical locations.

## Niles

The Report on the Condition of the Atlantic & Great Western Railroad, December 9, 1874, pages 39 and 40, lists railroad assets (both N&NL and former Cleveland & Mahoning) at Niles.

> Depot-22x74, Well painted and sanded stone foundation, good; two Passenger, Baggage, Ticket, and Telegraph Offices.

14x18 L, Water Closet, same as Depot.

4479 square feet of Platform, stone foundation, good.

Freight House-85x16, Rough Board, shingle roof, wood foundation, poor.

1860 square feet of Platform, fair.

16x24 Frost Proof Tank, new, first class, two stand pipes in good

20x15 Pump House, brick, slate roof, first class; Worthington

40x16 Carpenter Shop, rough board, board roof, in good condition. 60x36 Engine Shed, two stalls, rough board battened, in good repair; one water plug.

10x31 Sand House, rough board throughout, in good condition. Iron Turntable, set in masonry, 1st class.

146x13 Coal Platform, post foundation, good.

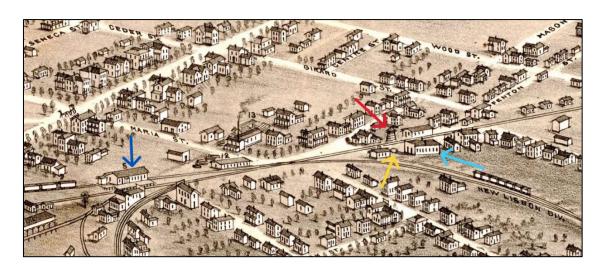
In the list, note the 16' X 24' water tank and two stand pipes for filling engine tenders, along with a brick pump house used to pump water into the tank. Also note the engine shed, sand house, turntable and coal platform all used to service engines between assignments.

The Annual Report of the Commissioner of Railroads and Telegraphs to the Governor of Ohio, Year Ending 6/30/1882, page 385, provides further information about the Niles tank. Engineering Department N. Y. P. & O. R. R.:

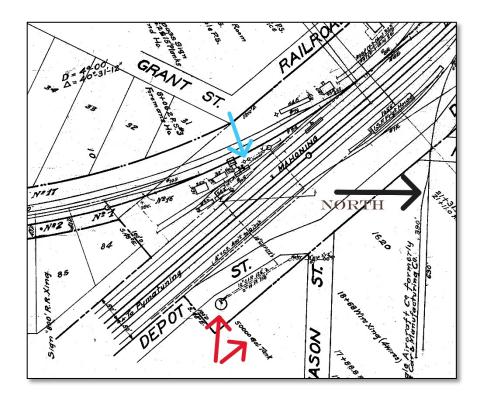
STATEMENT OF WATER SUPPLY.

March 31st, 1874.									June 30th, 1882.							
Kind of tank.	Size of tank.	Source of supply.	Kind of pump.	Length-feet.		Length—feet.	Size-Inches.	Name of station.	Kind of tank.	Size of tank.	Source of supply.	Kind of pump.	Dally consumption—gallons.	Length-feet.		
" Frost proof	. 16x16 . 16x16 . 16x16 . 24x16	Well Well Mill run	Caloric			3960 1800 3497	3"	Solon	Frost proof	16x24 16x24 16x24 16x24	Spring	Worthington Knowles Worthington	25000 20000 20000	377 108 200 664 1564 3497	9 4 6 6 8	

It appears the same 16X24 tank used in 1874 was still in use in 1882. It relied on a nearby stream for water supply. A Worthington steam pump forced water some 664 feet through a 6" iron pipe from the stream upward into the tank. This 1882 Beck & Paull Bird's Eye View Lithograph of Niles (source: Library of Congress) shows the location of the water tank (red arrow), engine house (light blue arrow), turntable (yellow arrow) a short distance east of the Niles depot (dark blue arrow).



By 1918 a 16' X 24' 50,000 gallon tank was in use at Niles (red arrows below in Erie Railroad 1918 Valuation Map). This tank was in the same general area, along the north side of the former C&M mainline, opposite the old N&NL engine house. A 10" C.I.P (likely an abbreviation for "Cast Iron Pipe") ran from the tank, under the mainline to the locomotive servicing



area and what appear to be two stand pipes (light blue arrow).

## Mile 2 ½

South of Niles, there was once a small water tank near Milepost 2 ½ (see below, Report on the Condition of the A&GW, Dec. 9, 1874, p. 42). This tank was about ¾ miles north of the depot at Mineral Ridge. The water tank was apparently built about the time the N&NL began operation in 1869; by late 1874 it was no longer in use. I've not found any other information about this tank.

#### BUILDINGS—NILES AND NEW LISBON.

NILES

28x16 Road Master's Office, well sided, never been painted.

MILE 1.

41x30 Old Blacksmith Shop, rough board, board roof, poor.

MILE 21.

15x15 Old Tank, rough board throughout, poor. Tub 8x12, not in use.

## Austintown

There are two early references to a water tank at Austintown (MP 6.2). The first is from the Report on the Condition of the A&GW, Dec. 9, 1874, p. 42. The second from the Annual Report

#### AUSTINTOWN.

Depot-55x16, needs painting, wood foundation; Passenger, Freight and Office Rooms.

1677 square feet of Platform, fair.

Water Station—15x15, rough board throughout, poor. Tub 8x12, Gravity; wood pipe 800 feet.

		Marc	h 31st, 1874.						12		June 30tl	h, 1882.		
		ė		Wo	000	ipe.	 on.	غ غ			×		-uon	Iro
Kind of tank.	Size of tank.	Source of supply	Kind of pump.	Length-feet.	Size-inches.	Length-feet.	Size-Inches.	Name of station	Kind of tank.	Size of tank.	Source of supply	Kind of pump.	Dally consumpt gallons.	Length-feet.
oneed	R <b>T</b> 18	Creek.	Caloric.		l			Hubbard	Frost proof	16x20 16x2	City Brook	None	10000	2695

Note.—Total number of water-stations June 30, 1882, is 55. 16 x 24 tanks hold 50,000 gallons each. 16 x 20 tanks hold 35,000 gallons each. 16 x 16 tanks hold 23,000 gallons each.

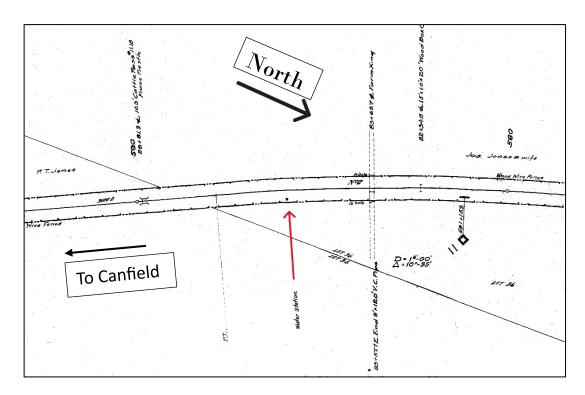
of the Commissioner, Year Ending June 30, 1882, p. 385. It appears the tank was approximately 16' X 16' (first source shows 15X15), had a capacity of approximately 23,000 gallons, was sourced from a spring about 800 feet away using gravity (no pump) through a wooden pipe. The tank was abandoned by June 1882. The precise location of the tank is unknown.

It's likely this tank was located at Austintown for two reasons. First, there were daily switching chores at the many N&NL-served coal mines in the Austintown/Mineral Ridge area. This required a local water supply for those switching engines. (I found no evidence of a water tank ever at Mineral Ridge.) And second, trains departing southward from Niles had two long grades (one included a stretch of 1.25%) to climb from the Mahoning River Valley to Canfield, Milepost 12. A tank at Austintown could replenish water near the midpoint of those climbs.

## Canfield

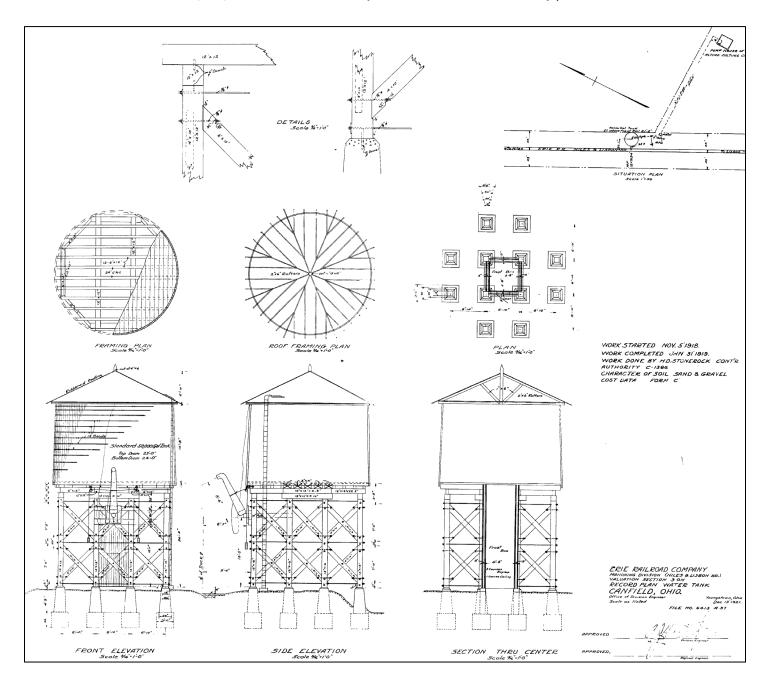
Canfield, elevation about 1159 feet, was the highest point on the N&NL line. It was an uphill climb from Niles (elevation about 860') to Canfield; from there the line gradually descended to Lisbon (elevation about 960'). So, one might expect to find a water tank on the early N&NL at the top of the grade somewhere near Canfield. But there is no reference to a tank in the Canfield area in either the 1874 A&GW Report or the June 30, 1882 Ohio Annual Report.

The earliest reference to a tank near Canfield appears in the 1918 Erie Railroad Valuation Map (below). Near Milepost 11.1 (about a half mile north of the grade crossing of present US Route 224) the 1918 map shows a "Water Station" reference and black dot on the railroad right-of-way, on the east side of the track. The right-of-way here passes through property



owned by the family of Prior T. Jones, who, in the 1800's, owned much of the land along the north side of present Route 224. I've found no further information about this water tank.

In early 1919 the Erie Railroad apparently discontinued use of the tank at Milepost 11.1 with the construction of a new water tank in Canfield near Milepost 12.1, approximately 600 feet south of the crossing of present-day Route 62. Below is a detailed Erie Railroad Engineering Dept. document used in constructing the tank. (Source: George Elwood's Fallen Flags website, Erie/DL&W/EL Drawings <a href="https://www.rr-fallenflags.org/el/dwg/draw.html">https://www.rr-fallenflags.org/el/dwg/draw.html</a> Document Erie 37-6413 - Canfield OH - 12/13/21 - Water Tank - {Kevin Morris Collection})



This document contains a wealth of detailed information about the structure (increase the size of the image to view detail). Some of the key details are listed below:

--This was a Standard 50,000 Gallon Tank design, 16 feet (actually 15'8") vertical height X 24 feet diameter at base of tank (see Front Elevation drawing at lower left).

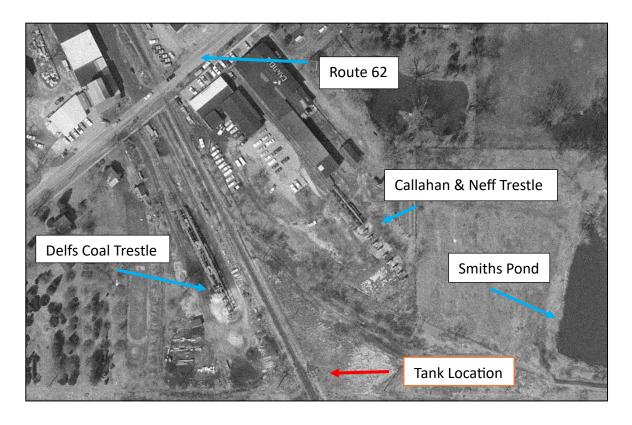
- --The tank was constructed during a three-month period beginning Nov. 5, 1918, and completed Jan. 31, 1919. Work was performed by an outside contractor, H. D. Stonerock (see notes on right, middle of the page).
- --The tank was located on the east side of the track. Water was sourced from a nearby pond of the Altimo Culture Company, utilizing a pump house of that company, and pumped through a 3" pipe 970 feet to the tank (see Situation Plan, upper right). (Note: The Altimo Culture Co. had a large greenhouse operation approximately 1500 feet east of the tank. During these years Altimo was also developing a system of pipelines throughout Canfield to market natural gas to the village.)
- --The tank rested on 12 square (3'6" X 3'6") concrete supports embedded in the ground, positioned in a distinctive 2,4,4,2 arrangement (see Plan drawing at middle right).

On January 3, 1919, the Mahoning Dispatch published a report of the new water tank being constructed in town.

The Eric Railroad Co. is creeting a large tank a short distance south of the Salem road crossing and water will be furnished from the Altimo Culture Co. lake for use in locomotives. It is understood that the pumping station near Greenford station will be abandoned as soon as the new plant is placed in operation.

(Note—Presentation Slide 114 in this website cites a Depression-era hobo jungle in Canfield near Smith's Pond. This water tank information makes clear why the jungle developed at that location. Hobo jungles required three things: a sheltered area hidden from view (woods), a water source (Smith's Pond), and a place where trains routinely stopped—the water tank.)

A 1965 aerial view of Canfield (Source: Ohio Dept. of Transportation, Aerial Imagery) provides a record of the location of the water tank, about 600 feet south of Route 62.



By 1965 the tank was gone. But at the Tank Location (red arrow), note the distinctive 2,4,4,2 alignment of concrete supports that still existed in 1965 (increase size of image for better view of concrete supports).

# Greenford

Greenford, elev. 1129' at S. Range Rd. and the midpoint of the railroad (MP 17.4), was a favorable location for a water tank. The earliest reference to a tank at Greenford (often called "Green" in early N&NL documents) appears below in the Annual Report of the Commissioner, Year Ending June 30, 1882, p. 385.

		Marc	h 31st, 1874.						19.		June 30th	1, 1882.			
3					P	ipe.							1	Iro pip	
		ply.	d	Wo	od.	Ire	on.	lon.			pply.	d.	ptto		
ind of tank	ze of tank.	urce of sup	und of pum	ngth-feet.	ze-inches.	ngth-feet.	ze-Inches.	ame of stat	ind of tank	ze of tank.	uree of sup	. und of pum	dly consum	ength-feet.	or Inches
×	T.	ž	3	-I-	ž.	<u></u> -	ž.	ž	×	ž.	ž.	*	Ă.	7	-
								"	Frost proof	16x20	City			2695	
used	16×16	Creek	Caloric				loom A	Anstintown	Abandoned			None			
							7	Green	Frost proof	16x20	Drive well	Knowles	10000		
used	16x16	Creek	Knowles					New Lisbon		10X20	MIII race	Knowles	10000	173	,

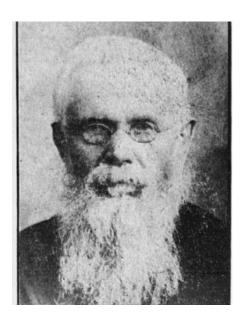
The tank was built sometime after 1874 and was in service by 1882. It measured 16' X 20' with a capacity of about 35,000 gallons. Water was sourced from a nearby well, and the system relied on a Knowles Steam Pump to pull water from the well and force it upward into the tank.



Knowles Steam Pump, Image Source: Smithsonian, National Museum of American History. Patented by L. J. Knowles of Mass. April 1, 1879.

Knowles pumps were commonly used in the 1880's and later to pump water into railway tanks. Pumps were typically positioned in a small pump house by the tank. A railroad employee maintained and operated the tank, tending the fire needed to power the system, and keeping water flowing from the source upward into the tank.

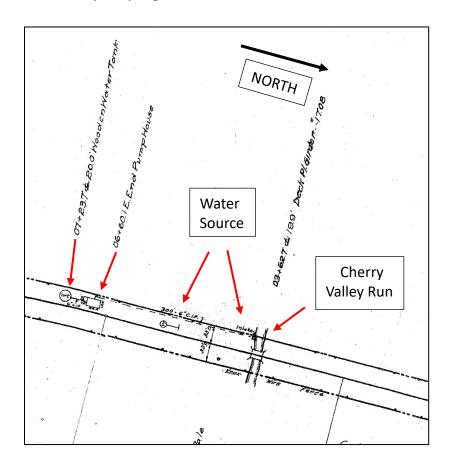
The June 25, 1915 edition of the Mahoning Dispatch reported the death of Andrew Reichstadt, the first N&NL station agent at Greenford. After 22 years as agent, Mr. Reichstadt worked 9 years at the Greenford water tank pumping station (from about 1891 to 1900).



#### GREENFORD June 24-Andrew Reichstadt was born in Wurttemburg, Germany, Dec. 13, 1827, and died June 15, 1915, at the home of his daughter, Mrs. V. V. Zimmerman, in this place. He came to America in 1853 and for many years followed his trade of tinsmith. He was the first station agent at Greenford for the Erie Railroad Co., performing the duties for 22 years, and then was in charge of the pumping station at the water tank for nine years. He was also engaged in the manufacture of tile and building blocks for a long time. For more than half a century he was a member of Canfield lodge of Odd Fellows and 54 members of that order attended his funeral. He united with the Lutheran church when 13 years of age and was a well read Bible student. The deceased was well

known for miles around and his

The 1918 Erie RR Valuation map (below) depicts interesting information regarding the water tank and pumping station at Greenford near MP 17.17. Note the 20' wooden tank and the



adjacent 24'X14' pump house on the west side of the track. It's not clear if this is the same 16X20 tank listed in 1882. But by 1918 the well source for the tank had been replaced by water from a nearby stream. Note the "Intake" text and the dotted line showing a 300' 6" Cast Iron Pipe from Intake to the Pump House. The stream from which the water was drawn was Cherry Valley Run, which the rail line closely followed downstream from here to Leetonia.

Based on the 1-3-1919 report in the Mahoning Dispatch on page 6 above, the Greenford tank and pump station were likely taken out of service in early 1919.

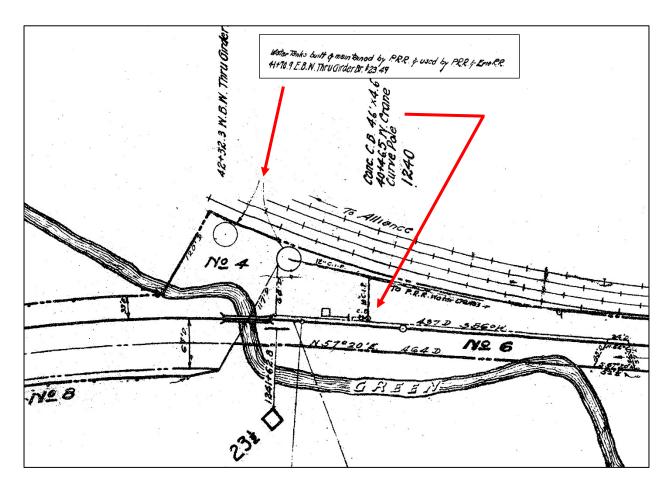
## Leetonia

The New Lisbon Rwy. began operating between Leetonia and New Lisbon in 1865. Initially, Leetonia was home terminal, where the sole engine (probably the John Young) was serviced, refueled and water supply replenished. In this May 1866 New Lisbon Rwy schedule (Ohio

NEW LISBON BRANCH -OF-Atlantic and Great Western Railway. ON AND AFTER MONDAY, MAY 7, 1866, Trains will run on this road as follows . GOING SOUTH. ..... 7.45 A. M. 2.85 P. M. Leave Lectons. 7.58 12.46 Franklin 2.53 8.03 Long's ..... Teegarden's ...... 3.01 .... 18.11 3.20 Arrivont New Lisbon . GOING NORTH. 9.15 A. M. 4.00 P. M. Leave New Lisbon 4.21 Teegarden's. ..... 9.30 Long's 4.29 Franklin ...... 9.52 4.87 10.00 Arrive at Lectona ... .. The Mail and Local Freight Trains on the Pittsburgh, Fort Wayne and Chicago Rallway make close connections with Trains going South, and Trains going North make close connection with Mail Train going West and Express Trains going East and West on the Pittsburg, Fort Wine and Chicago Railway

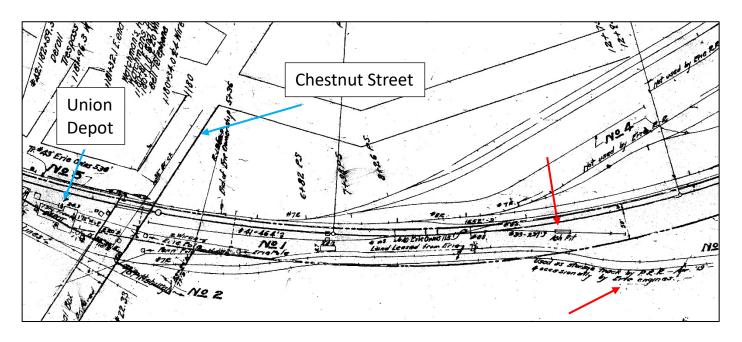
Patriot, 6-15-1866), note how the two daily roundtrips over the line began at Leetonia, the trains spending only 40-45 minutes each trip turning in New Lisbon.

With the opening of the Leetonia Iron & Coal Co. and the Grafton Iron Co. blast furnaces in Leetonia in 1867, the development of coal mines in the Leetonia and Washingtonville area (Fairview Mine, National Mine and LI&C #3 Mine) and the development of a busy interchange with the Youngstown & Ohio River RR in Washingtonville after 1906, it's clear the N&NL "shifter engines" (as they were referred to locally), were based and serviced in the Leetonia area. Despite this, I've found no explicit information confirming a tank on the early N&NL at Leetonia, MP 22.4. The earliest direct reference I've found to a N&NL tank in the Leetonia area appears in the 1918 Erie RR Val Map at MP 23.5.

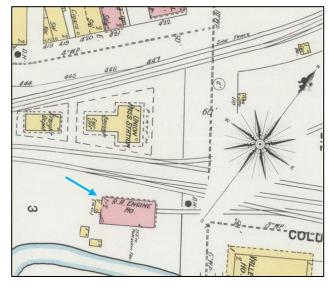


The map shows two water tanks on the N&NL right-of-way, positioned between N&NL and Pennsylvania RR tracks. The tanks (2 circles on map) were built and maintained by PRR, and used by both railroads (see text box and straight red arrow). A 12" Cast Iron Pipe from the easternmost tank carried water to a water crane on the north side of the N&NL track (see crooked red arrow). It's unknown if the water source was a well or Green Creek (Cherry Valley Run flowed into Green Creek at Leetonia; Green then flowed westward emptying into Little Beaver Creek near Franklin Square).

The same 1918 Valuation Map provides clues that suggest a water source for N&NL engines at Leetonia. Just east of Chestnut St. and the depot, on sidings along the mainline, we see an Ash Pit and a track sometimes used by Erie engines (red arrows). Ashes from engine



fireboxes were cleaned out and dumped at these pits. Pits were an integral part of engine service locations. So, it seems likely a N&NL water source was also somewhere nearby.



(Note: We know of two water sources for PRR locomotives in the Leetonia area. The jointly used tanks at MP 23.5 fed track pans on the adjacent PRR mainline. Here speeding trains lowered a scoop mechanisim from the tender, forcing water into the tender reservoir as the train passed. PRR knew this location as Grafton, named after the original name of the ironworks nearby. Within the town of Leetonia, as early as the 1890's, the Pennsylvania Co. had a small enginehouse and servicing facility south of the depot and PRR mainline, on the bank of Green

Creek (blue arrow). Source: Sanborn Fire Insurance Map, June 1898, Library of Congress)

## Lisbon

On Friday of last week, as the train on the New Lisbon Road was about ready to start, the fireman was ordered to run it down to the tank and fill the engine with water. He started off with an ordinary head of steam, and the switch not being closed, the engine run into some flats loaded with stone. The passenger and freight cars were somewhat injured, though not to any great extent Passengers were carried by the engine on Friday and Saturday The train is again going along all right.

In 1865 New Lisbon became the southern terminus of the New Lisbon Railway. So, we'd expect a water source there for the steam locomotives. The earliest reference to a water tank for railway locomotives at New Lisbon appears July 26, 1867, in New Lisbon's Ohio Patriot newspaper. The New Lisbon Rwy. fireman was ordered to take the train "down to the tank and fill the engine with water." No further information about this tank is known.

After the Niles & New Lisbon Railway gained control of the New Lisbon Railway between Leetonia and New Lisbon in 1869, we find these two articles in the Ohio Patriot.

LAST Tresday morning, while workmon were engaged on the new engine house, the east gable fell and injured Samuel Small and William Vaughn considerably. Fortunately no bones were broken. The town council, last wook, contracted to furnish the Miles & New Lishon Railway company with water for their engines; for five years, at sixty dollars a year.

Ohio Patriot 9-2-1870

Ohio Patriot 12-1-1871

In the 1870 article, a N&NL enginehouse is under construction, suggesting a water source would also be nearby. In 1871 the town of New Lisbon agreed to supply water to N&NL engines "for five years, at sixty dollars a year."

The Dec. 9, 1874 Report on the Condition of the Atantic & Great Western, page 43, describes the N&NL assets at New Lisbon, including a 120' X 32" Engine House and a 16'X16' water tank which relied on a Knowles pump. (I believe the Battery House cups contained salt water and

#### NEW LISBON.

Depot-55x16, dressed board, never been painted, stone foundation, poor; Passenger, Freight and Office Rooms.

1869 square feet of Platform, poor.

Water Station—16x16, rough board, shingle roof, fair. Tub 12x12. Knowles pump.

11x15 Battery House, well painted, new; 96 Cups and 6 Cups not in use, (W. U.)

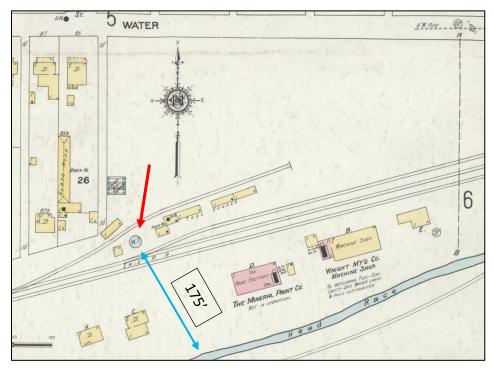
Engine House—120x32, rough board, shingle roof, poor; 2 pits. 31x16 Coal Platform, wood foundation, good.

copper and zinc plates which generated DC electric current to power the telegraph line. The telegraph between Niles and New Lisbon was placed in operation in the fall of 1870. It was jointly owned by Western Union and N&NL; Western Union owned 1 wire, while N&NL owned the second wire and the poles.)

The water supply information on page 385 in the June 30, 1882 Annual Report of the Comissioner of Railroads shows the 16' X 16' tank used in 1874 was replaced by 1882 with a 35,000 gallon 16' X 20' tank. The system was still powered by a Knowles pump which drew water from a nearby mill race, 175 feet away.

		Marc	h 31st, 1874.						3		June 30th	1, 1882.		
	Ī				P	ipe.							į	[ro pip
Kind of tank.	Size of tank.	Source of supply.	Kind of pump.	Length-feet.	Size-inches, po	Length-feet.	Size-Inches.	Name of station.	Kind of tank.	Size of tank.	Source of supply.	Kind of pump.	Dally consumptio gailons.	Length-feet.
oused	16x16	Creek	Caloric					Hubbard	Frost proof	16x24	Brook	None	10000	500 2695

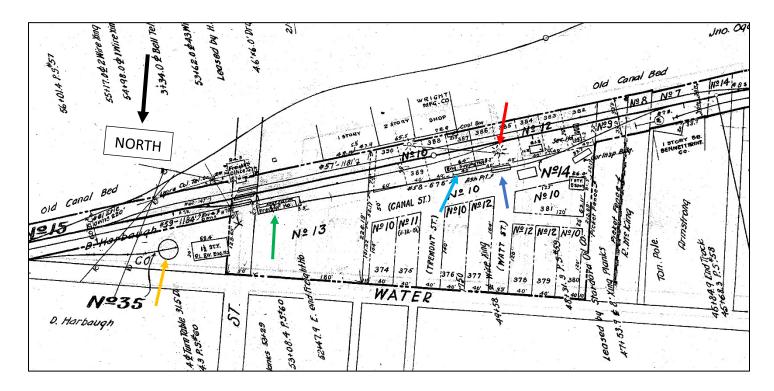
We don't know the exact location of the New Lisbon water tank in 1882. But it was likely at the same spot or very near the location of the water tank shown in this Sept. 1909 Sanborn Fire Insurance map of the east end of the 3-track N&NL yard (Source: Library of Congress).



The water tank (the light blue circle marked with the letters W T, see red arrow) was about 250' south of Water Street and almost exactly 175' north of the mill race which flowed eastward between the railroad yard to the north and Little Beaver Creek to the south.

The 1918 Erie Railroad Valuation map below shows a tank at the same location. This map

provides a broader view of the Erie RR engine-servicing facilities at Lisbon (Note: North is downward in this map. Red arrow identifies water tank, dark blue arrow identifies ash pit,



light blue arrow identifies engine supply house, yellow arrow points to PL&W turntable used by Erie RR from about 1912 to 1943, and green arrow identifies Erie freight station.)

# Retirement of Lisbon Branch Water Tanks

In the decades after 1920, water tanks continued to be required on the Lisbon Branch to provide water to steam locomotives. The December 1920 Detour Chart for the Erie Railroad Mahoning Division shows Water Stations on the Lisbon Branch at Niles, Canfield, Leetonia and Lisbon (Source: George Elwood's Fallen Flags website, Erie/DL&W/EL Drawings <a href="https://www.rr-fallenflags.org/el/dwg/draw.html">https://www.rr-fallenflags.org/el/dwg/draw.html</a> Document <a href="https://www.rr-fallenflags.org/el/dwg/draw.html">https://www.rr-fallenflags.org/el/dwg/draw.html</a> Document <a href="https://www.rr-fallenflags.org/el/dwg/draw.html">Erie 22-6304-2b</a> - 12/1920 - Detour Chart - overview chart - {Kevin Morris Collection}).

By 1942, however, the tank at Canfield was no longer in service, as the Erie Railroad Mahoning Division Record of Water Stations as of 12/31/42 lists water stations only at Niles, Leetonia and Lisbon. In 1942 the Niles tank had a daily consumption of over 40,000 gallons (the preponderance of this was likely for the many locomotives traveling the mainline, not the Lisbon Branch), while the joint PRR/Erie tank at Leetonia showed only 5000 gallons daily used by Erie engines, with no daily usage at Lisbon. (Source: George Elwood's Fallen Flags website, Erie/DL&W/EL Drawings <a href="https://www.rr-fallenflags.org/el/dwg/draw.html">https://www.rr-fallenflags.org/el/dwg/draw.html</a> Document <a href="https://www.rr-fallenflags.org/e

Freight traffic on the Branch increased significantly after WWII, prompting the Erie in the summer of 1948 to rebuild bridges to handle heavier locomotives, like the Class N-1 2-8-2 engines weighing 254 tons (see Presentation slide 117 in this website). Use of larger engines,

with greater tender water capacity, probably further reduced the need for water tanks at Leetonia and Lisbon.

Of course, the change from steam to diesel engines on the Branch eliminated the need for any water tanks south of Niles. The earliest report found for the use of a diesel locomotive on the line--a test run--appeared in the Leetonia Register December 19, 1947. It wasn't until over a year later that we find another report, this in the Lisbon Evening Journal, of a diesel

## Eric Tests New Engine On Run Through Town

A few Leetonians who were downtown between 3.30 and 4.30 p.m. Monday got a preview of the type of railroad locomotive that may be used in the near future by the Erie Railroad on its Niles to Lisbon runs.

The new locomotive, a product of the Baldwin Locomotive Co., was used on a test run, and spent some time here in switching. The engine is a Diesel-electric locomotive, deep maroon in color, and considerably smaller than the common conception of a modern engine, indicating that tomorrow's locomotives will be less bulky with their compact power plants.

Leetonia Register 12-19-1947

# Diesel Engines On Lisbon-Niles Run

One of the causes of smoke in Liston has been removed by the Eric Railroad using diesel engines on the daily run to Liston from Niles. The double unit engine has been in use for three nights now.

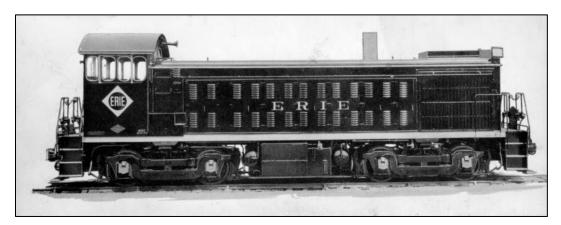
The double unit has been neces-

ary because of the large volume of traffic over the route. J. R. Cassidy, Eric agent here, said that the oil-burning engines will be used exclusively on the Liabon run from now on.

Lisbon Evening Journal 10-7-1949

locomotive assigned to service on the Branch. According to the report, the diesel double unit was first used three days earlier on October 4, 1949.

I'm not certain, but it's likely those first trains in October 1949 were powered by two Lima-Hamilton 1000 horsepower switch engines, like the one below. The units were built in 1949 and probably coupled cab-to-cab (Source: Railroad Locomotive Blog, Will and David Davis).



While the 10-7-49 article says diesels would be used regularly thereafter, a 3-31-1951 Journal article (about an upcoming 4/8/1951 excursion train) stated diesels were not used regularly on the Branch until July 1950. With that, the need for water tanks on the N&NL line finally ended.