

Cultural Resources

▶ Discovering New Jersey's Transportation Past
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Acting Governor Richard J. Codey

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Commissioner Jack Lettiere

>location:

mansfield township
burlington county

>resource type

architecture
railroad
bridge

>action

survey/inventory
evaluation of significance



Mansfield Township
Burlington County

The *Cultural Resources Digest*, published by the New Jersey Department of Transportation, summarizes information from professional studies in archaeology, history and historic architecture conducted during the development of transportation projects. Visit us at <http://www.state.nj.us/transportation/works/environment/>

The Delaware & Atlantic Railroad: An Early Line from the River to the Pines



Juliustown, seen here in an undated photograph, was one of the stops on the Delaware & Atlantic [Source: South Jersey Magazine].

A primitive steam locomotive hurtles across fertile farmland at unprecedented speeds, bound for the wharves at Kinkora with a load of Jersey pine logs to fuel the Delaware River steamboats. On another trip, the freight might be greensand, mined in New Jersey's rich marl pits and destined to fertilize farm fields in northern New Jersey.

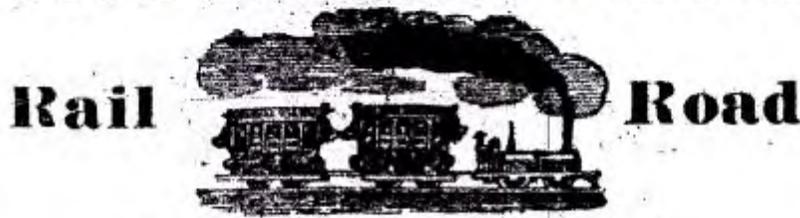
This was Burlington County at the threshold of the American railroad era. The locomotive was running on the Delaware & Atlantic Railroad, and the year was 1838. Just a few short years after the

birth of New Jersey's first railroad, the Delaware & Atlantic struck out across the farm fields and through the pines to link the Delaware River to the Atlantic Ocean. Later, adventurous tourists bound for a healthful stay at one of the new hotels in the Pine Barrens arrived at Kinkora by steamboat and took the train into the heart of the county.

Today, thousands of drivers on U.S. Route 130 daily cross the long-abandoned rail line on a pair of modern highway bridges high above the few visible remains which have survived.

ACCOMMODATION.

The Delaware & Atlantic



Passenger Line

FOR

Columbus, Jobstown, Juliustown,
Greenwood, &c:

This newspaper advertisement appeared in 1839, one year after service was inaugurated on the line. Although tracks never extended farther east than New Lisbon, the company's name reflected its grandiose geographic expectations [Source: Burlington Gazette, June 14, 1839].

Railroad Linked Burlington County Farms and Tourist Resorts to Delaware River Steamboat Wharves

Highway bridges usually carry traffic over rivers, railroad tracks or other roads. However, a bridge on U.S. Route 130, between Bordentown and Burlington in northern Burlington County, seemed to cross nothing more than an overgrown trail.

Historical research carried out in conjunction with plans to replace the bridge (actually two bridges side by side) revealed that the "trail" was the former right of way of the Delaware & Atlantic Railroad, built in 1835 to connect the landlocked interior of Burlington County with the limitless shipping opportunities offered by the Delaware River. Originally built to carry freight, the railroad would later expand its service to bring passengers to boarding houses and lakeside hotels in the Pine Barrens.

Despite the impressive aspirations implied by its name, the line only ran as far east as New Lisbon. Following a

number of corporate reincarnations and name changes, the line (at the end downsized to the less-than-dignified "Kinkora Branch" of the Pennsylvania Railroad) was abandoned in 1972.

After the researchers had unearthed the history of the railroad, a pedestrian survey traversed as much of the surviving route as possible, about 11 miles, using a 1915 inventory of the railroad's assets as if it were a traveler's guidebook. Searchers following the line trekked between farm fields, into tangled thickets and through several small southern New Jersey towns looking for remnants of the railroad in the various periods it had existed. Along the way they noted the survival of several engineering features, such as abandoned trestles, stone culverts, and the roadbed itself. They found that the only major break in the line occurs where it is crossed by Interstate 295.

Although drivers on Route 130 using the new bridges may not see the history below them, they will be crossing over the line of one of New Jersey's earliest and most important railroads.

What is a Historic Sites Survey?

A historic sites survey, also sometimes called a historic architectural survey, combines background research and fieldwork to locate tangible links to the history of a place. These links most often are represented by historic buildings, but may also be non-architectural resources such as ships, bridges or cemeteries. Surveys may focus on a particular location, such as a county, or may be based on a historical theme (e.g., the iron industry of Northern New Jersey or the struggle for women's suffrage).

Researchers begin by gathering historical information from libraries, archives and historical organizations, including any published histories, historic maps and atlases, photographs or other historic views, depending on the aims of the survey. Deeds, wills, inventories of estates, military

records and census returns may also be searched.

Armed with this information, the survey team proceeds to the field phase to determine which of the expected resources have actually survived. Findings are mapped, documented in writing and photographically. The *integrity* of the resources is also assessed at this point, that is, the extent to which the historic property retains the ability to convey its significance, or has been compromised by unsympathetic changes to its fabric or its environment.

A written report completes the survey. Typically it covers the methodology, the results of the background research, the results of the field investigation and an evaluation of the findings.

Railroad Frenzy Sweeps Burlington County

In the early 1830s, the people of northern Burlington County were feverish in their support of railroads. Although few of them had ever seen a railroad or even a steam engine, public meetings were held in Mount Holly, Burlington and Bordentown to agitate for the construction of a railroad link between Philadelphia and New York, a route that would naturally pass through the county and connect its fertile farmland to the outside world. When the Camden and Amboy made history in 1833 as New Jersey's first railroad, the sight of trains speeding through Burlington County fanned the flames of railroad fever even higher.

The Delaware & Atlantic Railroad was born of that fever. It was the child of several prominent Burlington County businessmen who wanted a share of what they believed would be rapidly growing railroad fortunes. It had its earliest roots in the Delaware and Jobstown Rail or Macadamized Road Company, faltered around mid-century, then was reborn with a new name, new destinations and new customers. Ultimately it was absorbed by the Pennsylvania Railroad, eventually suffering the same fate as the rest of that company when it collapsed in 1971.

On February 11, 1833 the New Jersey Legislature passed "An Act to incorporate the Delaware and Jobstown Rail or McAdamized Road Company." It was the eighth railroad incorporated in the State of New Jersey, and was authorized to run from the low watermark on the Delaware River, at the mouth of Crafts Creek (part of the border between Florence and Mansfield Townships), to Columbus, Jobstown, Juliustown and Lewistown, then through the pines to the vicinity of New Lisbon, "making altogether thirteen miles and thirty chains" (a chain is 66 feet).

Less than a year later the Legislature passed another act, changing the name of the company to the Delaware & Atlantic Railroad Company and optimistically granting permission to extend the line "from the vicinity of New Lisbon, in the County of Burlington, by the most convenient and eligible route to some point on the shore of the Atlantic Ocean, between Tuckerton and Barnegat."

Transportation in New Jersey before the Automobile

People and goods were in transit throughout New Jersey long before there were cars, particularly as Philadelphia and New York developed into major commercial centers. Waterways provided easy access to the interior, as demonstrated by the fact that most of the state's earliest European settlements are on navigable streams. Early roads, some of which followed the routes of Native American trails, were primitive and generally provided access to the nearest landing. Three "Kings Highways" crossed the state.

Early in the 19th century there was a spate of private toll road construction. These turnpikes were built by companies with the expectation that tolls would cover operating costs and generate a profit for the shareholders. The euphoria lasted only until canals and railroads emerged as competing modes of movement across the landscape.

Agitation for good roads arose at the end of the century from two unlikely sources: recreational bicyclists and farmers. The bicyclists' desire for smooth, hard riding surfaces is self evident. Farm families could be isolated by muddy roads for weeks on end, unable to sell crops, buy supplies, attend church or other gatherings, or otherwise participate in the life of the community. These improvements coincided with the advent of affordable cars. People were more likely to buy a car if they had access to passable roads, and as the number of motorists grew there was more demand for better roads.

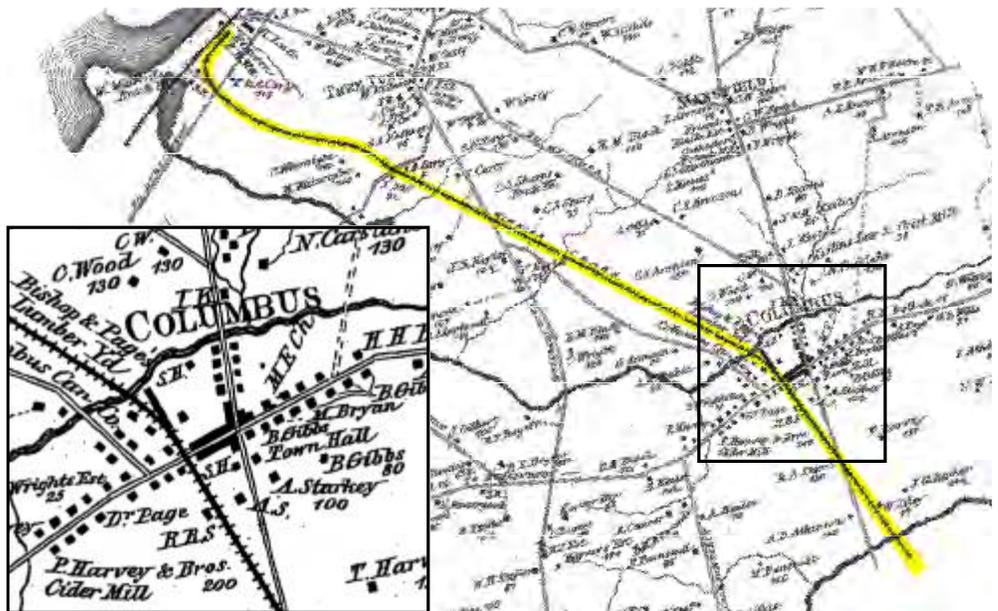
Although the railroad never succeeded in reaching the Atlantic, more than 30 miles from New Lisbon, it did ultimately play an important role in the nascent oceanfront tourism industry.

The work of acquiring the necessary right of way and laying track began almost immediately. The most significant of the small obstacles the laborers had to overcome were creek crossings. To carry the rails over the narrow ravine cut by a small tributary of Crafts Creek, just west of Old York Road, a large brick arch was constructed with a seven-foot wide opening through which the waters could pass.

Railroad masons were also at work on a stone bridge which would carry the elevated embankment over the main branch of Crafts Creek, west of Columbus. When complete, the stone arch was ten feet high and 53 feet in width.

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This 1876 atlas showed the railroad in its second incarnation, under the wing of the Camden & Amboy Railroad; it is labeled the “Kinkora C&ARR.” The inset, from the same map, shows the various businesses clustered around the siding near the middle of Columbus. The station is labeled “R. R. S.” [Source: Scott, J. D., “Combination Atlas Map of Burlington County”].



Perhaps the most impressive feature constructed by the work crews was the tunnel beneath Main Street in Columbus. The portals of the 66-foot long, barrel vaulted sandstone structure were 15 feet wide and 15 feet high.

Other major crossings were built over the Assiscunk Creek near Folwell and over Barker's Creek west of Juliustown. In addition to the larger and more impressive spans, numerous four-foot wide by 60-foot-long brick culverts were built to allow smaller streams to pass beneath the embankment.

In 1835, construction teams laid track across the right of way of the Camden and Amboy to the Delaware & Atlantic's newly constructed 30-foot wide heavy timber cribbed wharf on the Delaware River at Brown's Point, just south of Newbold Island. Rail service to Juliustown began the same year. Raw horsepower (the four-legged kind) pulled the earliest trains, but the company had switched to steam engines by 1838.

Lumber from New Jersey's vast Pine Barrens is commonly cited as the railroad's principal freight, but the trees of New Jersey's pinelands were relatively small and not well suited to milling. Records unearthed at the Interstate Commerce Commission showed that, in fact, the freight was firewood to fuel the steamboat fleet on the Delaware River. The wood could be conveniently transferred directly to the steamboats' decks and holds from the railroad's wharf.

The railroad could handle virtually any kind of bulk shipment. In an 1838 newspaper advertisement, one Caleb A. Woodward gave notice that he would deliver “Superior Quality” marl, “ready for delivery in cars at any time,” from his marl pits at Juliustown on the Delaware & Atlantic Railroad, to customers “on the Delaware and Atlantic Railroad, or on the Camden and Atlantic Railroad, anywhere between Bordentown and Burlington.”

Marl, also known as greensand, is the remains of prehistoric seabeds. Rich in minerals and marine fossils, it is found in beds up to 30 feet thick in a belt several miles wide stretching through Monmouth, Burlington, Camden, Gloucester and Salem Counties. Marling, the practice of spreading a layer of marl on the ground and then plowing it under, restores depleted fields and makes poor soils suitable for farming. Marl was the fertilizer of choice from about 1820 until the introduction of commercial, chemical-based fertilizers at the end of the century, and its importance was such that it gave its name to the towns of Marlton and Marlboro. Marl was dug from marl pits and sold to farmers statewide who lived near railroads, and was therefore one of the principal natural resources in the region traversed by the Delaware & Atlantic. Since it was heavy and bulky but not time-critical (like fresh foods or livestock), marl and railroads were well-suited to each other.

Although a 13-mile long railroad from the Delaware into the heart of the Burlington County via a string of small towns would not seem like a magnet for passenger traffic, the Delaware & Atlantic would play a significant role in a largely forgotten part of early Pine Barrens history. The

key to passenger service was not local everyday traffic; it was tourism. The intent was to attract travelers from Burlington, Bordentown or other towns and cities on the Delaware who were bound for newly established boarding houses in the Pine Barrens. Since the clean air and tea colored streams of the pine forests were considered relaxing and healthful, the Pine Barrens in the 19th century were home to a number of boarding houses, resorts and private lakeside estates. An advertisement in 1838 noted that “Delaware & Atlantic Passenger cars leave the Camden & Amboy Wharf, near Bordentown, daily upon the arrival of the Steamboat Burlington...Persons from the City [Bordentown] and from Burlington will find this a cheap and pleasant route to Brown's Mills, Greenwood & Pine Cottage.” Boarding houses at Brown's Mills, Greenwood and Pine Cottage were all well known summer resort destinations.

“The people of Columbus and vicinity are talking of constructing a railroad from that place to Kinkora, on the Delaware River...”

Ultimately the railroad was doomed by the unfamiliarity of its designers with the requirements of constructing a steam railway. Lacking iron rails, the Delaware & Atlantic used wooden rails with half-inch wide strap iron spiked to the top. Because this arrangement was inadequate for heavy steam engines, the railroad reverted to teams of horses at an unknown date, and in 1850 the entire enterprise was abandoned.

The Birth of the Columbus, Kinkora and Springfield Railroad

Good ideas persist, though, and on May 12 of 1866, the *Dollar Newspaper and Burlington County Advertiser* reported: “The people of Columbus and vicinity are talking of constructing a railroad from that place to Kinkora, on the Delaware River. The rails will be laid on the bed of the Delaware and Atlantic Railroad, so that but little grading will be required.” That same year the Columbus and Kinkora Railroad Company was incorporated, with the intent of constructing a railroad “on the old bed of the Delaware and Atlantic Railroad Company, in the county of Burlington beginning at the low water mark in the river Delaware at the mouth of

Crafts Creek or its vicinity, thence running on the old bed or course of the said Delaware and Atlantic Railroad Company, to the village of Columbus, in said county.”

In 1870 another act of the Legislature permitted the railroad to extend to the Pemberton and New York Railroad at or near New Lisbon. The name of the railroad was also changed again, this time to The Columbus, Kinkora and Springfield Railroad Company. The new company was formally organized before the year was out. Among its directors were two men significant in New Jersey railroading: John G. Stevens and Ashbel Welch. Stevens, from Hoboken, was chief engineer of the Camden and Amboy Railroad, superintendent of the Delaware and Raritan Canal Company and President of the United New Jersey Railroad (which owned them both). Ashbel B. Welch, of Lambertville, New Jersey, was one of America's foremost railroad engineers. He had been chief right of way planner and construction engineer for the Camden and Amboy, and was largely responsible for



The roadbed is still very distinct at some locations. This photograph was taken near Juliustown [Source: Hunter Research, Inc.].



This masonry culvert, near the Route 130 bridges, carried the railroad across a small stream [Source: Hunter Research, Inc.].

the design and construction of the Belvidere and Delaware Railroad under the Camden and Amboy's auspices.

The destiny of the new company was almost immediately cast, and largely by external forces. During the next six months, the Camden and Amboy Railroad signed a lease to operate the Columbus, Kinkora and Springfield when it was completed, and the Pennsylvania Railroad in turn leased the United Railroad and Transportation Companies, parent of the Camden and Amboy, for 999 years. Before it was even built, the Columbus, Kinkora and Springfield was just a branch of the mighty Pennsylvania Railroad empire.

By January of 1872, track had been laid through Jobstown, and the first train finally roared down the tracks of the Columbus, Kinkora and Springfield Railroad on July 22. The opening of the new line was celebrated with an excursion train to Lewistown. For 80 cents passengers were treated to a moonlit trip to Thomas Horner's Hotel and Ballroom, where the National Band of Bordentown provided the entertainment for a night of dancing.

In spite of a burst of prosperity, the railroad was not paying its debts (although it is arguable whether or not the line was profitable). Unable to pay its bills, the railroad was sold on foreclosure in 1901 and reorganized as the Kinkora and New Lisbon Railroad Company in 1903. However, the downward spiral continued, interrupted only by World War I. In 1914 the Pennsylvania Railroad agglomerated a number of smaller lines (including the Kinkora and New Lisbon) into a subsidiary called the Pennsylvania and Atlantic Railroad, and in 1915 the Pennsylvania leased the Kinkora and New Lisbon to the Union Transportation Company,

where it was renamed, for the last time, the Kinkora Branch. During World War I, both the Pennsylvania Railroad and the Union Transportation Company used the Kinkora Branch to operate passenger service between Trenton and the Army's new Camp Dix at Wrightstown.

Like other American railroads, revenues suffered under competition from the personal automobile and the trucking industry, both of which were beneficiaries of a system of highways built with tax dollars. Passenger service on the Kinkora Branch ended in 1939, although freight trains ran until 1972. The rails from Kinkora to Columbus were pulled up in 1974.

Tracking the Remains of the Railroad

In July of 2001, historians set out armed with historic maps of the railroad. Their quest was to follow the old roadbed to learn how much of the line and its related features, such as buildings, bridges and culverts, had survived. It was a challenging ten-mile hike through farmland, forest and underbrush, from the former junction with the Camden and Amboy near the Delaware River to New Lisbon.

Most of the line was accessible by foot, with the exception of the last few miles which are within Fort Dix, where military security precluded access. The only major break in the old right of way is where Interstate 295 crosses it.

The alignment of the railroad is fairly easy to spot, even without maps. Since railroad tracks have to be built with very gentle slopes, the track bed is nearly horizontal regardless of the native terrain, running either atop an embankment or in a cut, and the level surface where the ties were laid is of uniform width. And even though the rails were taken up when the end came for the Kinkora Branch (presumably so they could be re-used), the same is not true of the wooden ties, which were left behind.

The identifiable artifacts of the Delaware & Atlantic included the remains of the wharf on the banks of the Delaware, from which tons of New Jersey pine logs were loaded onto river steamers. Some of the pilings are still visible, spiked together, and there was even evidence of a shipwreck visible at low tide.

East of the two bridges carrying Route 130 over the railroad, a stone, brick and concrete arched culvert still conveys a stream under the embankment (photo above). Not

far from there is a cast iron post marked with a “W” (directing the engineer to sound the whistle for a grade crossing).

East of Old York Road in Mansfield Township, the roadbed crossed a branch of Crafts Creek. Spanning the creek the team encountered a large, decaying yet remarkably intact railroad bridge constructed of heavy timbers, steel girders and wood pilings. The bridge deck carried the trains approximately 15 feet above the creek bed. The deck features cross bracing for added rigidity and stability, and is further bolstered by angled pilings bracing the main pilings. The creek bed beneath the bridge is strewn with the remains of a brick arch bridge that preceded the timber bridge.

Arriving in Columbus, there were no signs of the 15-foot-wide by 66-foot-long stone arch tunnel beneath Main Street near the heart of the town, where, according to historic maps, there was a rail yard, complete with a passenger station, freight yard, tool house and a siding. Today there is a former freight shed being used as a supply store, and a grade crossing marker.

East of Columbus the railroad crossed a branch of the Assisunk Creek on a substantial wooden bridge, still intact. Unlike the bridge over Crafts Creek, this span is built without the aid of steel girders, although it is similarly supported by heavy timbers atop wood pilings driven into the creek bed.

HAER Documentation

The National Park Service, through the Historic American Engineering Record (HAER), sets standards for the documentation of historically important works of engineering. Documentation which meets these standards is called “HAER documentation.”

HAER standards, published in 1990, recognize four main areas of the recording process (content, quality, materials and presentation) and define four levels of detail or intensity of documentation. These levels include a range of approaches from sketch plans, architectural data forms and inventory cards to detailed histories and descriptive materials, large format photography and measured drawings.

Although many types of engineering works have been recorded, including machinery and industrial processes, HAER documentation is often done prior to the replacement of a historic bridge.

Most HAER documentation is on file at the Library of Congress, where it is available to the public. The HAER collection and its companion archive, the Historic American Buildings Survey (HABS) comprise one of the largest archives of their kind in the world. More information on the standards and the collections is available through <http://www.cr.nps.gov/habshaer/haer/>. Both are accessible at <http://cweb2.loc.gov/ammem/hhhtml/>.

As the survey team pressed on eastward through Jobstown, Juliustown and toward Lewistown, few additional features were found, although the roadbed was visible most of the way. Near Lewistown, the line entered Fort Dix, where the search had to be abandoned.

Following the field survey, the railroad was recorded to the standards of the Historic American Engineering Record (see box).



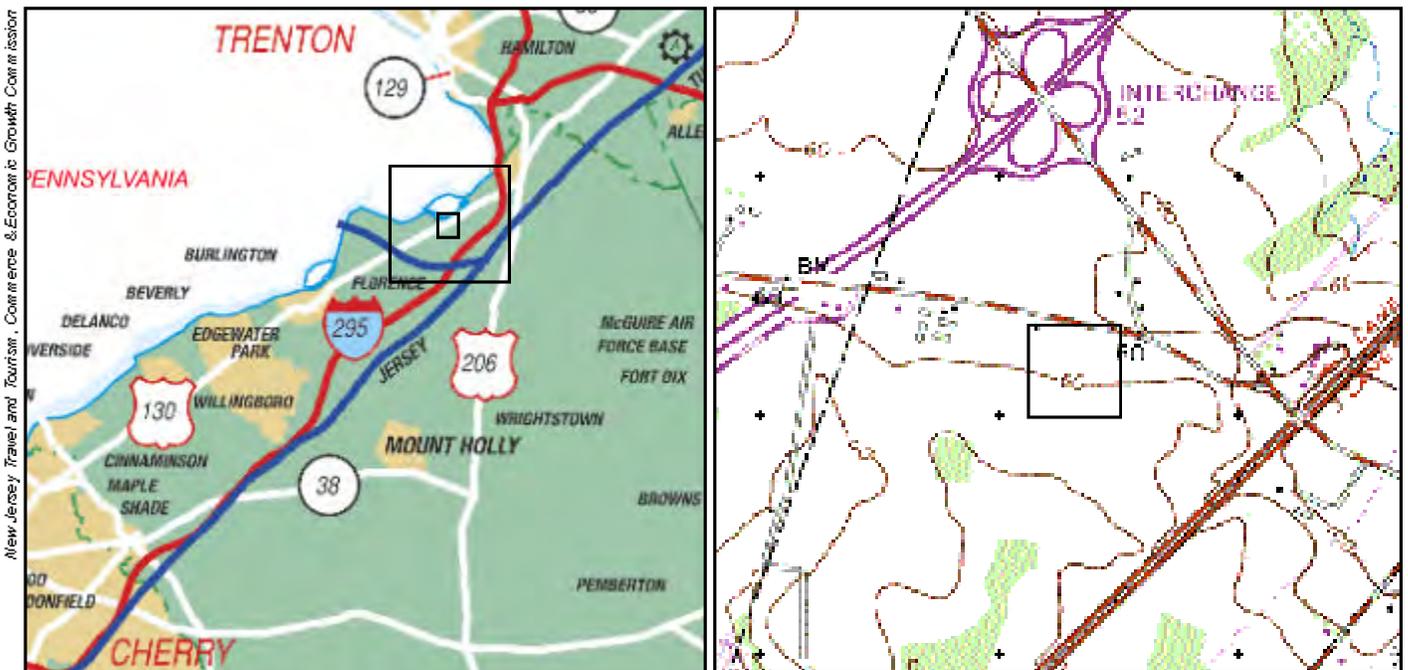
One of the more intact remnants of the Delaware & Atlantic discovered by the survey is this trestle by which the trains crossed Crafts Creek, near Old York Road in Mansfield Township. A few railroad ties can be seen at the top of the photo, and a steel girder is visible at far left [Source: Hunter Research, Inc.].

Project:	U.S. Route 130 over Abandoned Kinkora Branch Railroad Bridge Replacement
Location:	Mansfield Township, Burlington County
Date:	Summer/Fall 2001
Consultant:	Hunter Research, Inc., 120 West State Street, Trenton, NJ 08608

For More Information...

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Additional information on transportation projects and historic preservation is available from the Division of Environmental Resources, New Jersey Department of Transportation (<http://www.state.nj.us/transportation/works/environment/overview.htm>), the Federal Highway Administration (<http://www.fhwa.dot.gov/environment/archaeology/index.htm>), the New Jersey Historic Preservation Office (<http://www.state.nj.us/dep/hpo/2protection/njrreview.htm>), and the Advisory Council on Historic Preservation (<http://www.achp.gov/work106.html>).



Project vicinity map

Area of detail