

Capsule Summary

Survey No.: B-1305/BA-2874

Name/Address: Northern Central Railway Engineering Structures Historic District

Construction Date: ca. 1854-1865

Town/Vicinity:

County: Baltimore City and Baltimore County

Access: public/private

Summary Description:

Between 1854 and 1865, several different types of structures, including box and round arch culverts and one- and two-span bridges, were constructed along the Northern Central Railway alignment. Culvert type appears to be related to the distance spanned; three to four-foot spans were typically made with a simple box culvert consisting of a stone lintel atop several courses of rock-faced ashlar with chiseled margins; five- to approximately twelve-foot spans were made with round arches and barrel vaults. Larger culverts (up to twenty feet) and bridges (over twenty feet) consist of stone abutments and stepped wing walls which would have been spanned originally with timber or iron trusses. In nearly all cases, the original spans have been replaced with standardized reinforced concrete slabs and plate-girders, leaving abutments, wing walls, and piers intact. A unique corbelled culvert located south of the Falls Road Station appears to have been designed and executed to demonstrate the skill of the mason. In most cases, the granite employed by the masons is rock-faced coursed ashlar.

Statement of Significance

Between Woodberry, in the city of Baltimore and Warren Road in Baltimore County, at least 31 examples of mid-nineteenth-century railroad engineering structures survive intact and in service on these 12.5 miles of the MTA light rail line. Most of the extant culverts and bridges were constructed between 1854 and 1865 by the Northern Central Railway (NCR), an important passenger and freight line that from its inception in 1828 as the Baltimore and Susquehanna Railroad to its reincarnation as the Central Light Rail has been ultimately responsible for the settlement patterns and economic development of Baltimore County. The NCR culverts and bridges reflect standardized types of box and round-arch culverts, and bridge abutments and piers. Modern alterations have been made to the decks of the bridges and some of the culverts have been reinforced or extended with concrete. Overall, the structures retain integrity as a discontinuous district comprised of standardized engineering structures built to serve the NCR in the mid- to late nineteenth century. The district appears to meet the eligibility requirements for listing in the National Register under criterion C.

Maryland Historical Trust State Historic Sites Inventory Form

MARYLAND INVENTORY OF
HISTORIC PROPERTIES

Survey No. B-1305/
BA-2874
Magi No.
DOE yes no

1. Name (indicate preferred name)

historic Northern Central Railway Engineering Structures Historic District

and/or common Northern Central Railway Engineering Structures Historic District

2. Location

street & number discontinuous district along the MTA light rail corridor between Woodberry and Texas not for publication

city, town Baltimore City, Baltimore County vicinity of congressional district

state Maryland

county Baltimore City and Baltimore County

3. Classification

Category

- district
 building(s)
 structure
 site
 object

Ownership

- public
 private
 both

Public Acquisition

- in process
 being considered
 not applicable

Status

- occupied
 unoccupied
 work in progress

Accessible

- yes: restricted
 yes: unrestricted
 no

Present Use

- agriculture
 commercial
 educational
 entertainment
 government
 industrial
 military

museum

- park
 private residence
 religious
 scientific
 transportation
 other:

4. Owner of Property (give names and mailing addresses of all owners)

name Mass Transit Administration (MTA)

street & number William Donald Schaeffer Tower, St. Paul Street

telephone no.:

city, town Baltimore

state and zip code MD

5. Location of Legal Description

courthouse, registry of deeds, etc.

liber

street & number

folio

city, town

state

6. Representation in Existing Historical Surveys

title Cultural Resources Investigations for Proposed Construction of Double Track, North Half, Central Light Rail, Baltimore & Baltimore Co., MD

date 1999

depository for survey records Maryland Historical Trust

federal state county local

city, town Crownsville

state MD

7. Description

Survey No. B-1305/BA-2874

Condition

- excellent
 good
 fair

- deteriorated
 ruins
 unexposed

Check one

- unaltered
 altered

Check one

- original site
 moved date of move

Prepare both a summary paragraph and a general description of the resource and its various elements as it exists today.

Summary

Between 1854 and 1865, several different types of structures, including box and round arch culverts and one- and two-span bridges, were constructed along the Northern Central Railway alignment. Culvert type appears to be related to the distance spanned; three to four-foot spans were typically made with a simple box culvert consisting of a stone lintel atop several courses of rock-faced ashlar with chiseled margins; five- to approximately twelve-foot spans were made with round arches and barrel vaults. Larger culverts (up to twenty feet) and bridges (over twenty feet) consist of stone abutments and stepped wing walls which would have been spanned originally with timber or iron trusses. In nearly all cases, the original spans have been replaced with standardized reinforced concrete slabs and plate-girders, leaving abutments, wing walls, and piers intact. A unique corbeled culvert located south of the Falls Road Station appears to have been designed and executed to demonstrate the skill of the mason. In most cases, the granite employed by the masons is rock-faced coursed ashlar. At least one earlier retaining wall, dating to the 1830s or 40s, differs in style and construction but remains as one of the earliest surviving engineering structures of the former railroad.

General Description

The 12.5 mile light rail alignment from North Avenue, Baltimore, to Warren Road, Baltimore County, was surveyed. The following culverts and bridges were located during the course of fieldwork; however, it is likely that additional similar culverts exist but were not found. The amount and extent to which vegetation has overtaken the railroad berm may have obscured structures that are present and intact. Others may be silted in and/or obscured by modern extensions, such as concrete box culverts. The following structures are identified by type, location relative to light rail station number, and geographical location.

Culverts in Baltimore (City)(B-1305)

B-1305-A: Culvert, STA N186, Clipper Road and Union Avenue

Round arch culvert, 10-12-foot span. Battered/stepped interior walls. Rock-faced rubble and ashlar with a brick arch launched from stone impost on the east side; west side has modern I-beam and concrete slab span atop irregular ashlar walls.

B-1305-B: Bridge, STA N215, north of Woodberry

Bridge abutments and pier. Coursed ashlar with modern concrete cap, plate-girder and concrete deck. Eight visible courses. Modern concrete wing walls and rip-rap.

B-1305-C: Bridge, STA N246, north of Melvale

Abutments, wingwalls, and pier. Rock-faced granite ashlar; pier of 7-8 visible courses with concrete cap. Stream flows along south side of pier; north side has been silted in and is now a muddy bank. Upstream (west side, south end) has rounded abutment and walls, downstream is evidence of an older stone abutment and wingwall of coursed rubble adjacent to coursed ashlar abutment. The *Baltimore County Union* reported that "The new Iron Bridge over the Jones Falls at Melvale, N.C.R.R. has been completed. It is 64 feet long, 17 feet wide and cost \$1,639.00" (15 September 1888, in the Williams Collection). A modern plate-girder and concrete deck now spans the old abutments and pier.

(see continuation sheet 1)

7. Description (continuation sheet 1)

Survey No. B-1305/BA-2874

B-1305-D: Culvert, STA N295, south of Northern Parkway

Round arch culvert. Coursed granite ashlar, slightly battered interior walls. Approximately 8' arch, 26' long. Voussoirs are rock-faced with chiseled margins. This culvert has stepped wingwalls of coursed granite ashlar. The structure has been reinforced and extended with concrete buttresses.

B-1305-E: Culvert, STA N310, south of Mount Washington

Box culvert, approximately 3'x4'. Three-and-one-half visible courses of rock-faced granite ashlar with chiseled capstone. Floor of culvert paved in limestone blocks.

B-1305-F: Bridge, STA N321, south of Mount Washington Station

Bridge abutments and wingwalls over Western Run. Five visible courses of rock-faced granite ashlar. Stepped wing walls have cement stucco in places. Plate-girder/half-thru girder deck spans mid-nineteenth century abutments.

B-1305-G: Culvert, STA 330, north of Mount Washington Station

Box culvert, 3'x4'. Coursed rock-faced granite ashlar. Capstone broached with chiseled margins, beveled top. Openings visible on east and west sides of tracks.

B-1305-H: Culvert, STA N336, Mt. St. Agnes Path

Box culvert, may be standard 3'x4'. West side of railroad tracks. Rock-faced granite ashlar with granite lintel. Silted in with evidence of recent excavation of drainage.

B-1305-I: Culvert, STA N131, South of Mt. Vernon Mill No. 1

Box culvert, may be standard 3'x4'. East side of railroad tracks. Rock-faced granite ashlar with granite lintel. Modern concrete culvert and wingwalls circumvents historic culvert, but structure remains intact.

B-1305-J: Retaining Wall, STA N144, North of Mt. Vernon Mills No. 1

Retaining wall of rough limestone ashlar. This wall retains the railroad bank above the Jones Falls. The wall differs from the type of stone work employed in the 1850s and 1860-era structures, and appears to date to the 1830s or 1840s. This may be an original engineering feature of the Baltimore & Susquehanna Railroad.

B-1305-K: Pedestrian Tunnel and Culvert., STA N160, Druid Hill Park

This deep tunnel probably afforded access from Druid Hill Park, under the railroad berm, to the Jones Falls. The tunnel and culvert are arranged in a double-decker relationship, with the tunnel directly above the culvert. The stone work is of granite, with a monolithic rectangular lintel supported on corbeled stone work.

Culverts in Baltimore County (BA-2874)

BA-2874-A: Culvert, STA N353, south of BGE Mount Washington Substation (triangle)

Box culvert, approximately 5' to apex. Coursed ashlar triangular corbeled culvert. Possibly local gneiss or granite. Unique culvert is unlike the other NCR culverts, either in dressing of stone or the construction techniques. Corbeled culvert approximately 20' long; East side extended with concrete box culvert. West side buttressed with concrete.

BA-2874-B: Culvert, STA N359, Falls Road Station

Culvert visible on south side of tracks southwest of platform. A recent drainage system has been excavated here, and the sides rip-rapped. This culvert may not be part of the original NCR system. It does not appear to have the hallmark granite ashlar, but it was too obscured to investigate more closely. Not contributing to the NCR H.D.

BA-2874-C: Culvert, STA N364, north of Falls Road Station

Box culvert, 3'. Visible in the yard of the house at 4 Railroad Avenue, on the north side of tracks, northeast of existing platform. The granite ashlar box culvert has been silted in and the bottom plane of the lintel is only inches from the water's surface. The culvert is similar to the standard box culverts along the NCR alignment.

BA-2874-D: Bridge, STA N390, Lake Roland (part of BA-1274, Lake Roland Historic District)

In 1860, the 88' iron truss bridge over the falls was replaced. The bridge was again replaced in 1892 (Robert L. Williams). Stone abutments remain.

(see continuation sheet 2)

7. Description (continuation sheet 2)

Survey No. B-1305/BA-2874

BA-2874-E: Bridge, STA N453, Ruxton Road viaduct

Abutments and wingwalls. Two stone abutments and wingwalls at Ruxton are of uncoursed gneiss or granite and limestone ashlar and may date to the late nineteenth century, at which time the Ruxton Station of the NCR was constructed due north of this bridge. The 1916 track guide indicates that an iron truss bridge was installed here in 1887. The look of the stone work and its difference from the typical NCR mid-nineteenth-century work may date this bridge to the 1880s. The abutments have been reinforced with concrete and the deck, described as a half thru girder, is recent. A concrete pier has been added west of the tracks.

BA-2874-F: Culvert, STA N462, Bellona Avenue near Locust

Box culvert, approximately 3'6"x4' or 3.5'x4'. Coursed, rock-faced granite ashlar; chiseled margins around culvert opening. Lowest visible course consists of narrow stones topped with 5 courses of large, regular ashlar. Narrow broached and chiseled cap stone. Creek bed inside culvert has been paved in limestone blocks.

BA-2874-G: Culvert, STA N489, Bellona Avenue south of Joppa Road

Round arch culvert, 8' span. Coursed, rock-faced granite ashlar; eight visible courses with capstone. Voussoirs with chiseled margins. Drains west).

BA-2874-H: Culvert, STA N498, north of Joppa Road

Round arch culvert, 8' span. Coursed, rock-faced granite ashlar; eight visible courses with capstone. Voussoirs with chiseled margins. Drains west. On west side, concrete buttresses on exterior and wooden cascades on interior.

BA-2874-I: Culvert, STA N515, south of Rider Avenue

Box culvert, approximately 3'x4'. Coursed, rock-faced granite ashlar; chiseled margins around culvert opening. Pecked and chiseled cap stone. Interior of culvert has been partially silted in. No visible outlet on opposite side.

BA-2874-J: Bridge, STA N527, south of south of Railroad Avenue, Lutherville

Abutments and wing walls. Coursed, rock-faced granite ashlar laid in 10 visible courses with slightly battered walls. Angle draft at corners. Wing walls are granite with limestone caps with chiseled margins. Modern concrete poured atop limestone; concrete cap atop abutment.

BA-2874-K: Bridge, STA N545, south of Railroad Avenue, Lutherville

Abutments and wing walls. Coursed, rock-faced granite ashlar laid in 5-5.5 visible courses with slightly battered walls. Angle draft at corners. Stepped wing walls (7-8 steps). Modern concrete deck spans abutments.

BA-2874-L: Culvert, STA N576, south of Lutherville Light Rail Station

Abutments and wing walls. Coursed, rock-faced granite ashlar laid in 5-5.5 visible courses with slightly battered walls. Angle draft at corners. Stepped wing walls (7-8 steps). Modern concrete deck spans abutments. Below bridge are two rows of what appear to be the remnants of a wood structure or piles.

BA-2874-M: Culvert, STA N663, Timonium Light Rail Station

6'x6' culvert. Portions of the abutments of this small bridge remain. The deck is a modern replacement and much of the original stonework has been removed or damaged to accommodate it. Not contributing to the NCR H.D.

BA-2874-N: Culvert, STA N686, near Padonia Road

Round arch culvert, 9' span. Coursed, rock-faced granite and limestone ashlar. Voussoirs with chiseled margins on east side and keystone in prominent relief. Pecked finish on lowest plane of voussoirs. West side voussoirs are regular but not chiseled. East side features wing walls; west has stepped retaining walls along creek. Creek channelized with aggregate concrete.

BA-2874-O: Culvert, STA N760, south of Warren Road

Round arch culvert and wing walls, 15' span. This culvert just south of Warren Road is the largest round-arch culvert located during this survey. It consists of approximately 20 courses of rock-faced granite and limestone ashlar. The regular voussoirs have chiseled margins and the keystone is slightly larger than the regular voussoirs.

(see continuation sheet 3)

7. Description (continuation sheet 3)

Survey No. B-1305/BA-2874

BA-2874-P: Culvert, STA N416, Lake Roland

This culvert is composed of two halves dating to two different periods and built for two purposes. West side is part of Lake Roland, and has the appearance of a dock, with a silted-in culvert opening barely visible below the water line. Chiseled into the rock-faced granite cap stones is "B.M. No. 9", indicating that the feature may have served as a benchmark for the lake level. This face was probably constructed in the 1860s. The east side is a limestone retaining wall (east of Bellona Road), with a small, three-ring brick round arch culvert. The retaining wall and culvert were undoubtedly built for the Powder Mill Rd., now Bellona Avenue, and may date to the first half of the nineteenth century.

BA-2874-Q: Culvert, STA N429, south of St. John's Church

Like its neighbor to the south, this culvert was constructed in two periods for two purposes. On the west it is a four-ring brick round arch culvert set into a granite structure with wingwalls. The 8' span supports the railroad bank. This ca. 1860s structure abuts a much earlier small bridge/culvert built for the Powder Mill Rd., now Bellona Avenue. Near the point at which they abut, a modern concrete sewer pipe has been cut into the older half. The eastern face is coursed limestone and granite ashlar with regular stone voussoirs and a prominent keystone. The abutments are battered and extend into curved wing walls. The impost and a parapet wall are articulated by bands of stone. The culvert may date to the first quarter of the nineteenth century, and is an interesting and well-preserved example of early stone engineering.

BA-2874-R: Culvert, STA N467, Bellona Avenue near Maywood

Small 2'x3' box culvert of coursed, rock-faced granite ashlar with chiseled margins on west side. All that remains of the east face is the capstone, embedded in the shoulder of Bellona Avenue. Eastern side has been replaced by a modern sewer.

BA-2874-S: Culvert, STA N478, Bellona Avenue near Maple

Small 2'x3' box culvert of rock-faced granite ashlar on west side. East side is not original. This culvert does not appear to retain enough integrity to be considered eligible as a contributing resource to the NCR H.D.

BA-2874-T: Culvert, STA N602, Business Park Drive

This low box culvert has been almost entirely replaced. A few courses of stone are partially intact, but a gabion system has replaced the historic stone wing walls. The deck is modern. Pieces of the historic stone are strewn along the stream bed. Not contributing to the NCR H.D.

8. Significance

Survey No. B-1305/BA-2874

Period	Areas of Significance-	Check and justify below	
<input type="checkbox"/> prehistoric	<input type="checkbox"/> archeology-prehistoric	<input type="checkbox"/> community planning	<input type="checkbox"/> landscape architecture
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> archeology-historic	<input type="checkbox"/> conservation	<input type="checkbox"/> law
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> literature
<input type="checkbox"/> 1600-1999	<input type="checkbox"/> architecture	<input type="checkbox"/> education	<input type="checkbox"/> military
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> art	<input checked="" type="checkbox"/> engineering	<input type="checkbox"/> music
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> commerce	<input type="checkbox"/> exploration/settlement	<input type="checkbox"/> philosophy
<input type="checkbox"/> 1900-	<input type="checkbox"/> communications	<input type="checkbox"/> industry	<input type="checkbox"/> politics/government
		<input type="checkbox"/> invention	

Specific dates: ca. 1854-1865

Builder/Architect: Northern Central Railway/Pennsylvania Railroad

check: Applicable Criteria: A B C D
and/or
Applicable Exception: A B C D E F G
Level of Significance: national state local

Prepare both a summary paragraph of significance and a general statement of history and support.

Statement of Significance

Between Woodberry, in the city of Baltimore and Warren Road in Baltimore County, at least 31 examples of mid-nineteenth-century railroad engineering structures survive intact, and in some cases service, on the MTA light rail line. Most of the extant culverts and bridges were constructed between 1854 and 1865 by the Northern Central Railway (NCR), an important passenger and freight line that from its inception in 1828 as the Baltimore & Susquehanna Railroad to its reincarnation as the Central Light Rail has been ultimately responsible for the settlement patterns and economic development of Baltimore County. The NCR culverts and bridges reflect standardized types of box and round-arch culverts, and bridge abutments and piers. Modern alterations have been made to the decks of the bridges and some of the culverts have been reinforced or extended with concrete. Overall, the structures retain integrity as a discontinuous district comprised of standardized engineering structures built to serve the NCR in the mid- to late nineteenth century. The district appears to meet the eligibility requirements for listing in the National Register under criterion C.

History and Context of the Northern Central Railroad

The histories of Baltimore City and County are intertwined. The county, which included present-day Baltimore City until 1850, was established in 1659. At that time, the county encompassed land on either side of the head of the Chesapeake (currently parts of Cecil and Harford counties), and extended west beyond present day Frederick County. After several reductions in area, the county assumed its present form by 1773. Early settlers of the county were concentrated along navigable waterways. David Jones settled on 380 acres on the east side of the eponymous Jones Falls in 1661. In 1729, the Maryland Assembly enacted the establishment of a town named Baltimore near the mouth of the Jones Falls, after which land was purchased and platted on the western bank of the small river. In 1745, the settlement known as Jones Town east of the falls, merged with settlements west of the falls to become Baltimore Town.

Baltimore Town emerged in the eighteenth century as a dominant colonial port, earning the title of the fastest growing city in the nascent United States during the 1790s. An influx of German settlers brought wheat and grain culture to the county that, like so many other Maryland counties, had relied on land-intensive tobacco cultivation. Mills established along the powerful Jones Falls produced flour for the active domestic and export markets. Distilleries processed county rye into whisky.

The Jones Falls was essential as a power source for the mill industry in the valley, though the Falls were only navigable to Lexington Street in the city of Baltimore. The Falls Road Turnpike was chartered in 1805 to enable the efficient shipment of Baltimore County's farm products and industrial goods to the growing port of Baltimore. The first tollgate was located north of North Avenue. The turnpike followed the falls, though the organizers tried to engineer a route beyond the reaches of the regular freshets that plagued the falls. Like many nineteenth-century turnpikes, the Falls Road Pike suffered from poor maintenance, and its primary users were vocal in their complaints about tolls collected for a ruinous road.

(see continuation sheet 4)

8. Significance (continuation sheet 4)

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Though the county enjoyed an extensive system of roads, alternative forms of transportation were sought. Between 1783 and the 1820s, speculative and abortive canal ventures failed to provide a water-borne trade route from the county's interior to port (Scharf 1971:342). Roads, however consistently deteriorated, remained the principal means of shipment. The advent of the railroad in the 1830s became the primary catalyst for growth along Jones Falls Valley and north. The railroad's impact is clearly visible in the pockets of suburban and industrial development which relied equally on the success and expediency of the railroad. Baltimore County history parallels that of the railroad's from the second quarter of the nineteenth century into the mid-twentieth century.

During the summer of 1827, York County, Pennsylvania toll road owners consulted with Baltimore business men about the possibility of creating a railroad link between Baltimore and York Haven, above the falls of the Conowingo River near the projected route of the Pennsylvania Canal (Gunnarsson 1991:12-13). A charter for the Baltimore & Susquehanna Railroad (B&S) was granted by the Maryland legislature February 13, 1828, but persistent trade rivalries between Baltimore and Philadelphia prevented the issuance of a charter in Pennsylvania (Gunnarsson 1991:12-14).

Despite the Pennsylvania legislature's denial of a charter, the cornerstone for the Baltimore & Susquehanna Railroad was laid on August 8, 1829, approximately 60 feet from the North Avenue Bridge in Baltimore (Gunnarsson 1991:14; Scharf 1971: 343). To minimize effort through the hilly terrain north of Baltimore, the Jones Falls Valley was chosen as the route northward. Construction started along the west bank of the Jones Falls. Bridges were to be of wood, with wood ties and stringers supporting a 4'8-½" gauge iron rail (Gunnarsson 1991:15). Predominantly Irish work gangs reached Relay, at present day Lake Roland, in 1831 (Gunnarsson 1991:15; Scharf 1971: 344). At first, horse-drawn carriages plied the track. The first run between Belvedere Station and Relay was made on 4 July 1831, followed in August 1832, by the line's first steam locomotive, the "Herald" (Gunnarsson 1991:15; Scharf 1971: 344).

Still lacking a charter in Pennsylvania, the Green Springs Line, a new but short-lived "Main Line" was engineered westward from Relay through the Green Springs Valley (Gunnarsson 1991:16). In 1831, the governor of Pennsylvania acquiesced, allowing work to resume on the B&S's northward expansion. Due to the expense incurred by construction, work progressed sporadically between 1832-1836. The railroad reached Timonium in October 1832, followed soon after by the quarries at Texas and Cockeysville in 1834 and 1835 (Gunnarsson 1991:19). Work continued on the Pennsylvania segment from the late 1830s to mid-century. Work on the northern extent of the line was not a concern for the mills and quarries benefiting from the open access to the port at Baltimore. The quality of original construction was a concern, however, and as a result the B&S spent the 1850s improving their extant track system (Gunnarsson 1991:29).

In 1854, four railroads consolidated under the Northern Central Railway Line (NCR) creating a continuous line from Baltimore to Sunbury, Pennsylvania, nearly 150 miles north of Baltimore. Official operations under the NCR charter began 1 Jan 1855 (Gunnarsson 1991:38-39; Scharf 1971:344). NCR operations marked an era of increasing traffic and efficiency on the line, but were not a guarantee of financial success (Gunnarsson 1991:42-43). Bridge replacement, infrastructure investments, upgrading, new facilities and equipment exhausted company coffers (Gunnarsson 1991:43). The hilly route along the falls necessitated the construction of a large number of bridges and culverts. Nearly all of the extant stone engineering structures were built between 1854 and 1861 (Gunnarsson 1991: Appendix 3).

The expansive Pennsylvania Railroad acquired the NCR in April 1861 (Gunnarsson 1991:47). Double-tracking the alignment from Baltimore to Harrisburg was a priority to increase efficiency and train frequency. Second tracks were completed to Relay in 1862 followed by Cockeysville in 1862 (Gunnarsson 1991:65). New bridges were constructed and new grading was undertaken where necessary.

At the outbreak of the Civil War, Camp Small was erected in Melvale to protect the NCR tracks from Confederate sabotage. A regiment of Zouaves from York, Pennsylvania was stationed at the encampment (Gunnarsson 1991:57). In spite of the protective presence of the Zouaves, in 1861, the NCR was damaged when Confederate troops were ordered to burn bridges in the vicinity of Cockeysville (Gunnarsson 1991:64-65). Four large wooden trestles and six small bridges south of Cockeysville were burned. Replacement was quickly undertaken so that service was minimally interrupted on the busy railroad.

(see continuation sheet 5)

8. Significance (continuation sheet 5)

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Between the 1850s and early twentieth century, the construction of regularly spaced stations north of Baltimore fostered the suburban development of Baltimore County. Often, the original simple frame structures would be replaced with more architecturally distinctive stations once the community was established. The years 1853 and 1854 saw the development of Lutherville and Mount Washington, two of the earliest developed Baltimore suburbs. The early stations were replaced in the 1870s, Lutherville with a substantial limestone station (1876), and Mount Washington with a picturesque Gothic Revival-inspired design (1877). Other stations were erected at West Woodberry, Melvale, Riderwood, the Timonium fairgrounds, Padonia, Texas, and Cockeysville, in addition to private stations like Cylburn and Brightside. In keeping with the Pennsylvania Railroad's sophisticated architectural aesthetic, a new Riderwood Station, which stands today north of Joppa Road on the light rail corridor, was designed by Philadelphia architect Frank Furness in 1903 (Gunnarsson 1991:113). The Parkton Station, now demolished, was built from the same plans.

The Pennsylvania Railroad had acquired the NCR in 1861, but continued to operate the line under the NCR name. After 1914, the rail line was operated as the Pennsylvania Railroad, and continued a booming service into the 1920s, when trucking and changes in industry diminished the freight business. Passenger service remained active until eclipsed by the personal automobile (Harwood 1995:19).

The Jones Falls Expressway, funded by the Federal-Aid Highway Act of 1956, was opened to traffic in November 1962. The elevated highway follows the path of the Jones Falls from the center of Baltimore through the county and into Pennsylvania, essentially, the route of the former NCR. As commuters came to prefer personal automobiles to train travel, ridership dwindled. The Pennsylvania Railroad continued to operate suburban service along the former NCR rail line until 1959 (Zembala 1995:108). Many of the old passenger stations were demolished, including the architecturally distinctive stations at Mount Washington and Ruxton (Gunnarsson 1991:161). The Pennsylvania Railroad was absorbed into the Penn Central system, which declared bankruptcy in 1970. Limited freight traffic continued to ply the track until it was severely damaged by hurricane Agnes in 1972. Selective repairs made the track useful for short freight service from the Campbell limestone quarries to Baltimore (Gunnarsson 1991:164-165). The reuse of much of the alignment for light rail was studied in the two decades following the Pennsylvania system bankruptcy. Light rail service began in 1992 (Harwood 1995:13).

Engineering and Infrastructure

From its inception as the Baltimore & Susquehanna Railroad in 1828, the Northern Central Railroad served Baltimore and Baltimore County industry by providing an efficient means of shipment to the port of Baltimore for the County's industrial goods and products of county mines and quarries. Excursion trains along the railroad enabled city dwellers to day-trip to the county, eventually fueling the development of suburban retreats and settlements like Mount Washington and Lutherville. In 1854, the NCR was formed from the consolidation of four rail lines, including the B&S. The NCR embarked on a campaign of upgrading its infrastructure to deal with increased traffic and heavier loads of modern steam engines and freight. The NCR sponsored the construction of stone structures of the highest quality and craftsmanship to reflect the quality of the NCR's service. During the mid- and late nineteenth century, the construction of passenger stations was treated with the same attention to detail, resulting in the construction of many architecturally distinctive and notable stations, most of which have since been demolished.

The earliest bridges and culverts on the B & S were of timber construction. Timber was the quickest and most affordable material for the construction of the early stream and creek crossings. The hilly terrain along the Jones Falls Valley necessitated the construction of numerous drainage systems and water crossings. The failings of the timber bridge were highlighted when in April 1861, Confederate forces burned several bridges south of Cockeysville. Contemporary accounts of the reconstruction of the line note the speed with which service was restored. "The bridges on this road have all been rebuilt and on Monday last the regular trains commenced running. . . ." (Williams Collection: *Baltimore County Advocate* 18 May 1861). "The Northern Central Railway Company have completed a new bridge over Western Run, near Cockeysville. The bridge over the Beaver Dam branch, near the same place, has not been rebuilt, the stream still being crossed by the old trestle work. These two bridges were destroyed on the memorable 20th of April, 1861. The Iron Railroad Bridge over Jone's [sic] Falls, near Relay House, has again been put up in its original shape. (Williams Collection: *Baltimore County Advocate* 12 October 1861).

(see continuation sheet 6)

8. Significance (continuation sheet 6)

Survey No. B-1305/BA-2874

Between 1854 and 1865, several different types of structures, including box and round arch culverts and one- and two-span bridges, were constructed along the railroad alignment. Culvert type appears to be related to the distance spanned; three to four-foot spans were typically made with a simple box culvert consisting of a stone lintel atop several courses of rock-faced ashlar with chiseled margins; five- to approximately twelve-foot spans were made with round arches and barrel vaults. Larger culverts (up to twenty feet) and bridges (over twenty feet) consist of stone abutments and stepped wing walls which would have been spanned originally with timber or iron trusses. In nearly all cases, the original spans have been replaced with standardized reinforced concrete slabs and plate-girders, leaving abutments, wing walls, and piers intact. A unique corbeled culvert located south of the Falls Road Station appears to have been designed and executed to demonstrate the skill of the mason. In most cases, the granite employed by the masons is rock-faced coursed ashlar.

MARYLAND HISTORICAL TRUST REVIEW

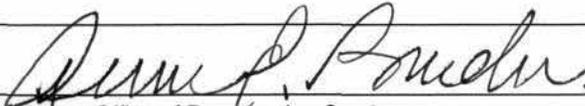
Eligibility recommended

Eligibility not recommended

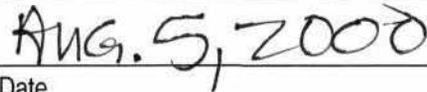
Criteria: A B C D

Considerations: A B C D E F G None

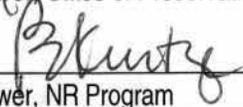
Comments:



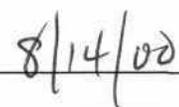
Reviewer, Office of Preservation Services



Date



Reviewer, NR Program



Date

9. Major Bibliographical References (continued)

Baltimore County Union. 15 September 1888. Williams Collection.

Williams, Robert L. (Williams Collection). n.d. Personal notes and compiled information on the history of the NCR. Original documents, maps, drawings.

Zembala, Dennis M., editor. 1995. *Baltimore: Industrial Gateway on the Chesapeake*. B. Henry Latrobe Chapter of the Society for Industrial Archaeology and the Baltimore Museum of Industry, Baltimore, MD.



9. Major Bibliographical References

Survey No. B-1305/BA-2874

Gunnarsson, Robert L. 1991. *The Story of the Northern Central Railway*. Greenberg Publishing Company, Sykesville, Maryland.

Harwood, Herbert. 1995. *Baltimore's Light Rail*. Quadrant Press, New York.

Pennsylvania Railroad. 1916. *Present Alignment and General Situation between Melvale and Padonia, Baltimore Division, P.R.R.* Office of the Assistant Engineer, Engineering Department, P.R.R., Baltimore, MD. In the Williams Collection.

Scharf, J. Thomas. 1881. *History of Baltimore City and County*. [1971 reprint] With new introduction and rearranged index by Edward G. Howard. Regional Publishing Company, Baltimore, MD.

(see continuation sheet 5)

10. Geographical Data

Acreage of nominated property:

Quadrangle name Baltimore West 7.5' and Cockeysville 7.5'

Quadrangle scale 1:24,000

UTM Reference do NOT complete UTM references

zone	easting	northing
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Verbal boundary description and justification

Discontiguous district comprised of individual structures.

List all states and counties for properties overlapping state or county boundaries

state	Maryland	code	county	Baltimore City	code
-------	----------	------	--------	----------------	------

state	Maryland	code	county	Baltimore County	code
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11. Form Prepared By

name/title Kerri Culhane/Project Architectural Historian

organization John Milner Associates, Inc.

date 10/1999

street & number 5250 Cherokee Avenue, Suite 410

telephone 703/354-9737

city or town Alexandria

state Virginia

The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

return to: Maryland Historical Trust
DHCP/DHCD
100 Community Place
Crownsville, MD 21032

**PRESERVATION VISION 2000; THE MARYLAND PLAN
STATEWIDE HISTORIC CONTEXTS**

I. Geographic Region:

- Eastern Shore (all Eastern Shore counties, and Cecil)
 Western Shore (Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
 Piedmont (Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
 Western Maryland (Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

- Rural Agrarian Intensification A.D. 1680-1815
 Agricultural-Industrial Transition A.D. 1815-1870
 Industrial/Urban Dominance A.D. 1870-1930
 Modern Period A.D. 1930-Present
 Unknown Period (prehistoric; historic)

III. Historic Period Themes:

- Agriculture
 Architecture, Landscape Architecture, and Community Planning
 Economic (Commercial and Industrial)
 Government/Law
 Military
 Religion
 Social/Educational/Cultural
 Transportation

IV. Resource Type:Category: DistrictHistoric Environment: Rural/Village/UrbanHistoric Function(s) and Use(s): TRANSPORTATION: rail-related; railroad culverts, bridges, retaining wallsKnown Design Source: Northern Central Railroad and unknown

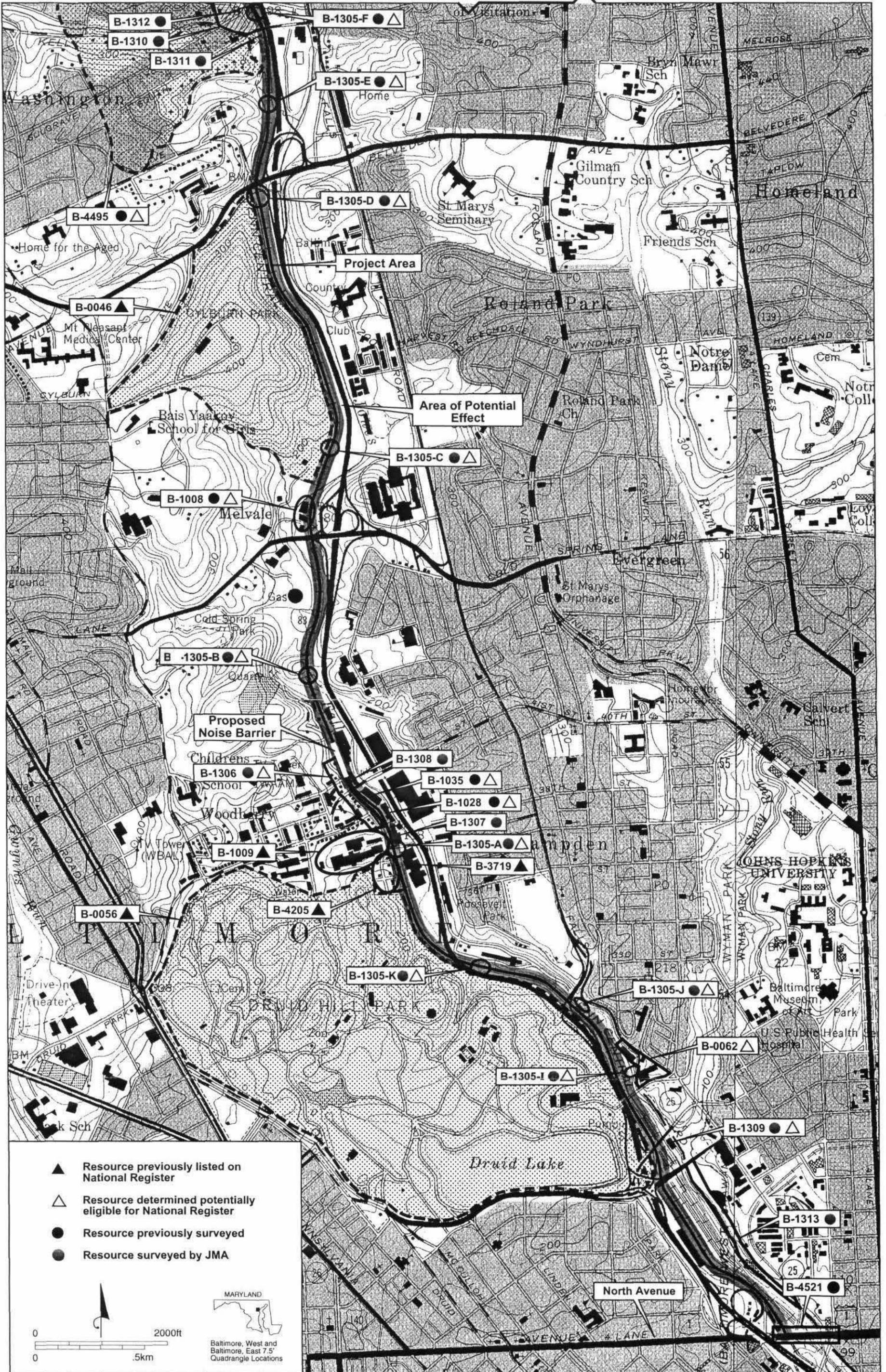


Figure c. Northern Central Railway Engineering Structures Historic District (B-1305/BA-2874).



B-1305-A

ROUND ARCH CULVERT, CLIPPER RD and Union Avenue
NCR ENGINEERING STRUCTURES I.A.D. (B-1305/BA-2874)
BALTIMORE, MD

K-CULLANE

8/1999

MD SHRO

CULVERT OPENING, EAST SIDE RR TRACKS. VIEW TO WEST



B-1305-A

CULVERT, CLIPPER RD. AND UNION AVE.

NCR ENGINEERING STRUCTURES I.I.D. (B-1305/BA-2874)

BALTIMORE, MD

K. CULHANE

8/1999

MD SHPO

OPENING, WEST SIDE RR TRACKS, VIEW TO E/SE



B-1305-B

BRIDGE, NORTH OF WOODBERRY

NCR ENGINEERING STRUCTURES P.D (B-1305 / BA 2874)

BALTIMORE, MD

K. CURTANF

5/1999

MDSAPO

DOUBLE TRACK ON PLATE GIRDER AND CONCRETE DECK
VIEW TO NORTH.



B-1305-B

BRIDGE, NORTH OF WOODBERRY
NCR ENGINEERING STRUCTURES H.O. (B-1305/BA-2874)
BALTIMORE, MD

K. CULLANE
8/1999

MD SHPO

GRANITE ASHLAR ABUTMENTS AND PIER VIEW TO N/NE.



B-1305-B

BRIDGE, NORTH OF WOODBERRY

UICR ENGINEERING STRUCTURES F.I.D. (B-1305/BA-2874)

BALTIMORE, MD

K. CULHANE

8/1999

MD SHPO

GRANITE-ASHLAR PIER AND WINGWALL (PARTIALLY OBSCURED
BY VEGETATION). VIEW TO N/NW.



B-1305-C

Bridge, north of Melvale

NCR ENGINEERING STRUCTURES A.D (B-1305/DA-2574)

BALTIMORE, MD

K CULSWF

8/1999

MDSHIP

GRANITE ASHLAR PIER. VIEW TO E/NE

6/54



B-1305-C

BRIDGE, NORTH OF MELVALE

NCR ENGINEERING STRUCTURES A.D. (B-1305/BA-287A)

BALTIMORE, MD

K. CULLANE

8/1999

NO SHPO

GRANITE ASHLAR ABUTMENT AND WING WALL VIEW TO SE.



B-1305 -C

BRIDGE, NORTH OF MELVALE

NCR ENGINEERING STRUCTURES H.D. (B-1305/BA-2874)

BALTIMORE, MD

K. CULLANE

8/1999

MD SHPO

GRAVITE ASHLAR ABUTMENT AND COURSED RUBBLE/
ROUGH ASHLAR FORMER ABUTMENT? EARLY WING WALL?
VIEW TO S/SW.

8/54



B-1305 - C

BRIDGE, NORTH OF MELVALE

NCR ENGINEERING STRUCTURES A.D. (B-1305/BO-2874)

BALTIMORE, MD

K. COLLAVE

8/1999

MD SHPO

GRANITE ASHLAR ABUTMENT AND WINGWALL. VIEW TO NW.
NOTE CONCRETE WORK (MODERN) USED TO LAUNCH NEW
DECK.

9/54



B-1305-D

ROUND ARCH CULVERT, S. OF NORTHERN PARKWAY
NCR ENGINEERING STRUCTURES H.O. (B-1305/BA-2874)
BALTIMORE, MD

K. CULANE

8/1999

MD SHPO

ROUND ARCH CULVERT AND WING WALLS, OPENING W-SIDE
RR TRACKS. REINFORCED WITH CONCRETE. VIEW TO EAST.



B-1305-D

ROUND ARCH CULVERT, S. OF NORTHERN PARKWAY
MCR ENGINEERING STRUCTURES # D (B-1305/BA-2874)

BALTIMORE, MD

K. CULHANE

8/1999

NO SHP

ROUND ARCH CULVERT AND WING WALLS, OPENING W SIDE RR
TRACKS. VIEW TO EAST



B-1305-E

Box culvert, S. of Mt. Washington

NCR Engineering Structures H-D (B-1305 / BA-2874)

Baltimore, MD

K. CULANE

8/1999

MDSTPO

view to east

12/54



B-1305 F

BRIDGE, S. OF MT. WASHINGTON STATION

NCR ENGINEERING STRUCTURES H-D (B-1305/BA-2874)

BALTIMORE CITY, MD

K. CULHANE

8/1999

MD SHPO

SOUTHERN ABUTMENT and TRESTLE, VIEW TO S/SW

13/54



B-1305-F

BRIDGE ABUTMENTS / PLATE GIRDER TRESTLE, SOUTH OF MT.

WASHINGTON STATION

NCR ENGINEERING STRUCTURAL H.D. (B-1305/DA-2874)

BALTIMORE CITY, MD

K. CULHANE

8/1999

MD SHIP

Trestle and Southern abutment. View to South/SE.

14/54



B-1305F
BRIDGE, S. OF MT WASHINGTON STATION
NCR ENGINEERING STREET A.D (B-1305 / BA-2574)
BALTIMORE CITY, MD

K. CULHANE

8/1999

MD SHRO

VIEW TO SOUTH - DOUBLE TRACK BEDS ACROSS PLATE GIRDER
TRESTLE.



B-1305-F

BRIDGE ABUTMENTS / PLATE GIRDER TRESTLE, S. OF MT. WASHINGTON
STATION.

NCR ENGINEERING STRUCTURES H.O. (B-1305 / BA-2874)

BALTIMORE CITY, MD

K. CULHANE

8/1999

NDSTPO

trestle and abutments, on western run. view to E/SE.



B-1305-G

BOX CULVERT / RETAINING WALL, AT MF. WASHINGTON STATION

NCR ENGINEERING STRUCTURES H.D. (B-1305/BA-2874)
BALTIMORE CITY, MD
K. CULNANE

8/1999
MDSHPD

SOUTHEAST CORNER OF RETAINING WALL, showing dressed
and chiseled, beveled cap. view to north

17/54



B-1305 G

BOX CULVERT / RETAINING WALL, AT Mt. WASHINGTON STATION
NCR ENGINEERING STRUCTURES H.D. (B-1305/BA-2874)
BALTIMORE CITY, MD

K-CULTANE

8/1969

WDSHPO

VIEW OF WEST OPENING . Looking EAST

18/54



B-1305-G

BOX CULVERT / RETAINING WALL AT Mt. WASHINGTON STA.

NCR ENGINEERING STRUCTURES H.D. (B-1305/DA-2874)

BALTIMORE CITY, MD

K. CULHANE

8/1999

MD SHPO

OPENING, EAST SIDE RR TRACKS. Looking NW.

19/54



B-1305-G

BOX CULVERT / RETAINING WALL,
WASHINGTON STATION

AT MT.

NCR H.D. (B-1305/BA-2874)
BALTIMORE CITY, MD

K. CULHANE

8/1999

MDSHPO

View to north, showing south end of retaining wall
and modern drainage.



B-1305-4

BOX CULVERT, NORTH OF MT. WASHINGTON STATION
NOR ENGINEERING STRUCTURES INC (B-1305/BA-2874)
Baltimore City, MD

K. CULHANE

8/1999

MDOT

SILTED-IN CULVERT, W. SIDE RR TRACKS VIEW TO E/NE

21/54



B-1305-H

BOX CULVERT, NORTH OF MT. WASHINGTON STATION
NCR ENGINEERING STRUCTURES H.D. (B-1305/BA-2874)
Baltimore City, MD

K. CULHANE

8/1999

MD SHPO

SILTED IN CULVERT, W SIDE RR TRACKS. VIEW TO NORTH

22/54