



**PRELIMINARY INFORMATION FORM (PIF) for INDIVIDUAL PROPERTIES**

*Note: PIFs are prepared by applicants and evaluated by DHR staff and the State Review Board based on information known at the time of preparation. Recommendations concerning PIFs are subject to change if new information becomes available.*

DHR No. (to be completed by DHR staff) 128-6479

**1. General Property Information**

Property name: Norfolk & Western Railway Class J No. 611 Steam Locomotive

Property address: 303 Norfolk Ave. SW  
City or Town: Roanoke  
Zip code: 24016

Name of the Independent City or County where the property is located:  
Roanoke

Category of Property (choose only one of the following):  
Building  Site  Structure  Object

**2. Physical Aspects**

Acreage: \_\_\_\_\_

Setting (choose only one of the following):  
Urban  Suburban  Town  Village  Hamlet  Rural

Briefly describe the property's overall location and setting, including any notable landscape features:

### 3. Architectural Description

Architectural Style(s): Streamlined Art Deco

If the property was designed by an architect, landscape architect, engineer, or other professional, please list here: Norfolk & Western Railway Motive Power Department

If the builder is known, please list here: Norfolk & Western Railway – East End Shops

Date of construction (can be approximate): May 1950

#### **Narrative Description (Please do not exceed one page in describing the property):**

Briefly describe the property's general characteristics, such as its current use (and historic use if different), as well as the primary building or structure on the property (such as a house, store, mill, factory, depot, bridge, etc.). Include the materials and method(s) of construction, physical appearance and condition (exterior and interior), and any additions or other major alterations.

The 611 was outshopped in May 1950 and designed to pull the premier passenger trains for the Norfolk & Western Railway. The locomotive was one of the last steam locomotives built in the United States. Made of iron and steel, the 611 was restored to operational service in 2015 and currently pulls steam excursions for the general public. The locomotive teaches modern steam power technology, historic railroading, and serves as an ambassador for the Virginia Museum of Transportation.

#### Overall Features:

Length: 110 ft.

Height: 16 ft.

Weight: 494,000 lbs.

Fuel: Coal (35 tons) and Water (22,000 gals.)

Boiler Pressure: 300 lbs.

Tractive Effort: 80,000 lbs.

Horsepower: 5,400

Top Speed: 110 mph

Drivers: 70 in.

Valve Gear: Baker

#### 611's Service Timeline:

Regular Service: 1950-1959

Public Display (Roanoke): 1962-1981

Restored for excursion Service: 1982-1994

Designated a National Historic Mechanical Engineering Landmark (ASME): 1984

Retired and public display (Roanoke) 1994-2014

Restored for excursion service: 2015-current

Designated the Official State Steam Locomotive of Virginia: 2017

In a bullet list, include any outbuildings or secondary resources or major landscape features (such as barns, sheds, dam and mill pond, storage tanks, scales, railroad spurs, etc.), including their condition and their estimated construction dates.

- 
- 
-

#### 4. Property's History and Significance (Please do not exceed one page)

Briefly explain the property's historic importance, such as significant events, persons, and/or families associated with the property.

If the property is important for its architecture, engineering, landscape architecture, or other aspects of design, please include a brief explanation of this aspect.

The 611, being built in 1950, is the most modern steam passenger locomotive ever built and one of the last steam locomotives built in the United States. The locomotive features all of the modern steam locomotive appliances including a stoker, feedwater heater, all roller bearing running gear, and pressure fed lubrication. The 611 was designed for speed and power while pulling the Norfolk & Western's premier passenger trains between Norfolk, Virginia and Cincinnati, Ohio. In 1959, the 611 pulled the "Farewell to Steam" passenger excursion before being retired by the Norfolk & Western Railway. The locomotive was placed on display at the Roanoke Transportation Museum in Roanoke from 1962-1981. Norfolk Southern Railroad restored to operating condition in 1982 and the locomotive pulled public excursions all over the Norfolk Southern system. In 1984, the 611 was designated a National Historic Engineering Landmark by the American Society of Mechanical Engineering. She was retired in 1994 and then went back on display at the Virginia Museum of Transportation until 2014. In 2015, the 611 was again restored for excursion service and has pulled thousands of passengers on excursions. The 611 was designated the Official Steam Locomotive of Virginia in 2017.

Please list all sources of information used to research the history of the property, such as deeds, census and tax records, and/or published articles and books. (It is not necessary to attach lengthy articles or family genealogies to this form.)

- Norfolk & Western Class J, The Finest Steam Passenger Locomotive – Miller, 2000
- N&W: Giant of Steam - Jeffries 1980
- Norfolk & Western Six Eleven: Three Times a Lady – Hensley and Miller, 2015
- 

**5. Property Ownership** (Check as many categories as apply):

Private:  Public\Local  Public\State  Public\Federal

**Current Legal Owner(s) of the Property** (If the property has more than one owner, please list each below or on an additional sheet.)

name/title: Virginia Museum of Transportation

organization: \_\_\_\_\_

street & number: 303 Norfolk Ave. SW

city or town: Roanoke state: Va zip code: 24016

e-mail: zmcginnis611@gmail.com telephone: 304-610-9667

Legal Owner's Signature: \_\_\_\_\_

Date: 3/22/22

**•• Signature required for processing all applications. ••**

In the event of corporate ownership you must provide the name and title of the appropriate contact person.

Contact person: Zac McGinnis

Daytime Telephone: 304-610-9667

**Applicant Information** (Individual completing form if other than legal owner of property)

name/title: Zac McGinnis - Social Media Director (N&W 611)

organization: Virginia Museum of Transportation

street & number: 303 Norfolk Ave. SW

city or town: Roanoke state: Va zip code: 24016

e-mail: zmcginnis611@gmail.com telephone: 304-610-9667

Date: \_\_\_\_\_

**PLEASE DO NOT ATTACH CONTINUATION SHEETS TO THIS FORM. THANK YOU!**

**National Register Policy Clarification  
Integrity Requirements  
for Settings and Locations of Locomotives and Other Rolling Stock  
Barbara Wyatt, 4-9-09**

This paper examines the integrity of setting that must be evident for locomotives and other rolling stock to qualify for National Register listing.<sup>1</sup> The intent of the paper is to clarify guidelines regarding movable resources that have been published in various NR bulletins, and to explain their application to locomotives. It is not the purpose of this paper to reinterpret the content of the bulletins, but to seek clarity and consistency among them, specifically related to integrity requirements for rolling stock. Current and past practices regarding this aspect of integrity have been questioned recently, although other aspects of integrity--location, feeling, association, design, workmanship, and materials--have not been problematic.

Many movable resources are listed in the National Register, including aircraft, trolleys, ships, and locomotives. Usually they are listed under Criterion A, for their association with an aspect of transportation history or an important event, or under Criterion C for their engineering and design significance. The majority of settings of listed locomotives correspond with the clarification set forth in this paper, but some do not; however, past interpretations made in error do not establish a precedent for all nominations that follow. Instead, misunderstandings that may have led to certain evaluations and listings will be clarified, so that those preparing or reviewing nominations in the future will have a common understanding.

**Interpreting Existing Bulletins for Locomotives and Other Moving Stock**

Locomotives are rarely specifically mentioned in the National Register bulletins, but parallels can be drawn with other movable resources that are mentioned. Those that address location and setting for movable resources include *Guidelines for Evaluating and Documenting Historic Aviation Properties* and *Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places*. Consider what is stated in these bulletins and how it can be applied to locomotives and other rolling stock:

1. **Location.** The *Aviation* bulletin does not require aircraft to be located in an original location and it states that Criteria Consideration B, which concerns buildings or structures moved from their original locations, does not have to be addressed (page 32).

---

<sup>1</sup> The *Collegiate Dictionary* defines a *locomotive* as “a self-propelled vehicle that runs on rails and is used for moving railroad cars” (2002:683). The same dictionary defines a *train* as a “connected line of railroad cars with or without a locomotive” (2002:1247). *Rolling stock* is defined as “the wheeled vehicles owned and used by a railroad or motor carrier” (2002:1012), and a *railroad* is defined as a “permanent road having a line of rails fixed to ties and laid on a roadbed and providing a track for cars or equipment drawn by locomotives or propelled by self-contained motors” (2002:962). In this paper, the term *locomotive* will be used to describe the rail car that contains the engine, and any attachments will be called *cars*, unless a more specific term exists. Note: National Register Bulletins that are quoted in this report may use this terminology differently.

It makes sense that Criteria Consideration B does not have to be addressed if locomotives and rolling stock are listed under Criterion C. In fact, it is expected that an original location may be difficult to find for locomotives. Although a parallel is not made in the *Aviation* bulletin, if Criterion A applies to rolling stock the original location may be important. For example, if a cable car was nominated for its service in San Francisco, it probably would be important for the cable car to be located in San Francisco because of the iconic nature of that city's cable car system.

2. **Setting.** The *Aviation* bulletin states that aircraft must have an appropriate setting. An appropriate setting for aircraft is an air-related facility, such as an aircraft parking ramp, a hangar, a naval aviation station, or a municipal airport (page 36).

Locomotives and other rolling stock also must have an appropriate setting. In any setting, the locomotive or rolling stock must be positioned on track. In addition, an appropriate setting should include, but may not be limited to, the following settings:

- a. A railroad line or a section of track adjacent to or near a railroad line; or
  - b. The inside of a roundhouse, repair shop, or other rail-related building or structure;  
or
  - c. The exterior of a rail-related building or structure.
3. **Fragile resources.** Similarly, the *Historic Vessels* bulletin states that historic vessels must be maintained in the water, unless their preservation compels their removal from the water. In that case, a historic vessel should be in a natural waterfront setting, such as a drydock, but the setting must not present the vessel as a museum object (pages 8-9).

Likewise, some rare locomotives may have to be situated to enhance their preservation, precluding an entirely authentic setting. Conditions that may warrant special storage include fragile fabric and vulnerability to vandalism. In such cases, the locomotive must be located on tracks, in a setting that does not detract from an appreciation of the locomotive as a vehicle designed to travel within the nation's rail system. As with historic vessels, the setting should minimize the appearance of the locomotive as a museum object.

4. **Settings of collections.** The *Aviation* bulletin states that aircraft that are parts of collections can be eligible if the setting is appropriate (pages 36-37). The bulletin says that as part of a collection, the aircraft must be individually significant under the National Register criteria, retain integrity of materials, design, workmanship, feeling and association, and be in a setting that is appropriate to aircraft and allows the aircraft to convey its significance as an aircraft. In fact, the *Aviation* bulletin states that among collections, "the deciding factor will be appropriateness of setting" (page 36). The *Historic Vessels* bulletin is not quite as accepting of collections, but it states

that in exceptional cases a collection of vessels may be eligible if exhibited in an appropriate setting (page 10).

If a locomotive is part of a collection, the setting must be appropriate *and* the locomotive must individually meet the National Register criteria *and* it must retain integrity of materials, design, workmanship, feeling and association. An appropriate setting, as described in #2, above, will allow it to convey its significance as a historic locomotive. For an entire collection of locomotives or rolling stock to be found eligible, the individual significance of each car must be demonstrated, as with aircraft.

### **Locomotives Listed in the National Register**

Sixty-five locomotives are individually listed in the National Register, with several others included in non-railroad historic districts. For example, Centennial Park in Nashville, TN, was listed as a park (district), with a locomotive in the park evaluated as a contributing resource. Staff evaluated a significant sampling of listed locomotives, which were identified using a key word search of the National Register Information System (NRIS) database. Based on this review, the settings of listed locomotives generally fall into the following categories:

- Former railroad shops, depots, or other railroad facilities, some converted to museums—either inside a building or outside;
- A main line or a spur track, perhaps running through a museum or park;
- Inside a non-rail related building or structure, which may be a museum.

Due to their fragile condition, some locomotives are sheltered by an open-sided pavilion. Others are surrounded by fencing to prevent vandalism. Such treatments constitute non-historic settings, but they may be essential protective devices. Recall that the *Aviation* bulletin stated that aircraft “that have been removed from an aviation setting and are now museum objects, in the traditional sense, generally will not qualify for the National Register. National Register status for museum objects is redundant since the objectives of recognition and preservation are inherent in the museum mission” (page 36). However, if a setting is otherwise appropriate, the use of protective structures, such as sheds, may have a moderate to minimal impact on integrity. Such protective devices generally do not relegate locomotives to museum objects “in the traditional sense.”

From an examination of the submitted text, maps, and photographs of nominations, it seems that about 15% of those studied are located in settings with serious integrity problems. Examples of inappropriate settings include:

**East Tennessee and Western North Carolina Railroad Locomotive No. 12, Watauga County, NC.** Sits on track of the Tweetsie Railroad theme park, three miles from the eastern



end of the former railroad. The setting appears inappropriate, although the theme park has incorporated several miles of track for short excursions.

**Denver and Rio Grande Railroad Locomotive No. 169, Alamosa County, CO.** Located in Cole Park in Alamosa, on a section of track behind a chain link fence. It is not near a railroad line.

**C&O Steam Locomotive #2755, Logan Co, WV.** Located in a state park, not near a railroad line.

**Soo Lumber Shay, Wexford County, MI.** Located in Cadillac City Park under a shelter, not near a railroad line.

**The Lion Locomotive (c.1840), Washington County, Maine.** Located inside the state museum in Augusta. The locomotive is one of the earliest in the country and could not survive in an outside setting; however, a setting so clearly a museum setting does not meet the guidelines for aircraft or vessels and, therefore, in the future will not be deemed appropriate for locomotives.

Other settings of listed locomotives may not be composed of a historic roundhouse or depot, but at least the locomotives are on stretches of track with historic associations. A few are behind fencing. At least two were moved from city parks to other locations, probably for reasons of security. Collections of cars generally seem to be located in areas that historically had a great deal of train activity, for example railroad shops.

The National Register has occasionally listed properties that today do not seem to meet the Criteria, Criteria Considerations, or integrity requirements. Such properties are not removed from the National Register, but they inspire NPS to prepare guidelines that clarify the application of the Criteria, Criteria Considerations, and integrity requirements to a particular property type. The National Register bulletins have traditionally been the vehicle for such clarification. In the case of the settings of locomotives and other rolling stock, the bulletins that concern aviation and historic vessels provide the guidance needed to clarify the required settings of locomotives and other moving stock.

**Please see the attached clarification that pertains to locomotives and other moving stock.**

**National Register Policy Clarification  
Integrity Requirements  
for  
Locations and Settings of Locomotives and Other Rolling Stock**

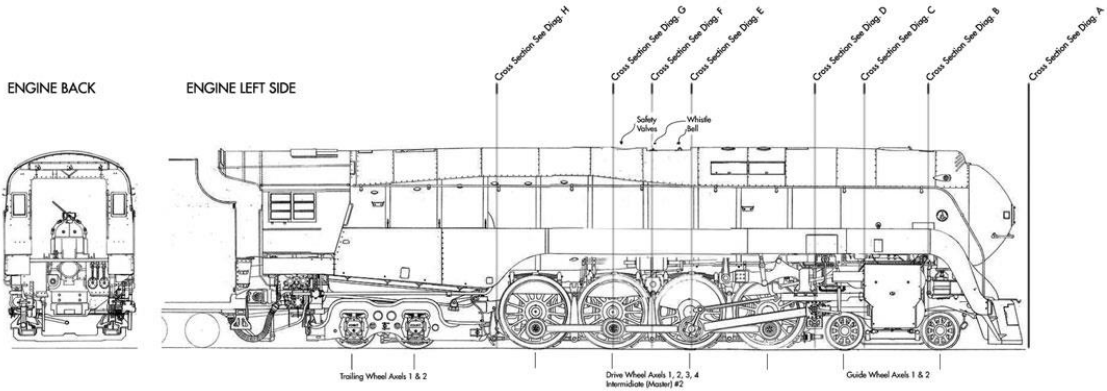
The National Register Bulletins *Guidelines for Evaluating and Documenting Historic Aviation Properties and Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places* have been adapted to address the locations and settings of locomotives and other moving stock. Based on the Aviation and Vessels bulletins, the following parameters will prevail in future evaluations of eligibility.

**Location**

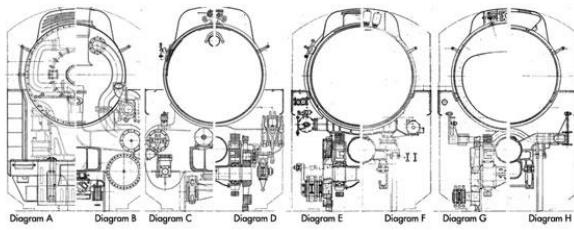
1. If Criterion A applies, the placement of the locomotive in an original *location* may be important. Such locations refer to the place a locomotive was built or housed for a significant part of its productive life. If location is important, it must retain integrity of setting for the property to be eligible.
2. If Criterion C applies, locomotives generally do not have to be in original *locations*, referring to the place they were built or housed for a significant part of their productive life. Such locomotives were intended to move from place to place; therefore, Criterion Consideration B does not have to be addressed.

**Setting**

3. Locomotives, whether sited alone or as part of a collection, must be placed in an appropriate railroad-related setting. They must be situated on railroad track. The setting may be, but is not limited to, the following:
  1. A railroad line or a section of track adjacent to or near a historic railroad line.
  2. Inside a historic roundhouse, repair shop, or other rail-related building or structure. The appropriateness of buildings and structures that are not historic will be evaluated for their compatibility with the remainder of the setting and the nominated locomotive.
  3. In the yard or vicinity of a rail-related building or structure.
  4. If a rare locomotive requires fencing and a shelter to preserve historic fabric and deter vandalism, it must be located on tracks in a setting that does not detract from an appreciation of the locomotive as a vehicle designed to travel within the nation's rail system. The setting must not present the locomotive strictly as a museum object, but must maintain feeling and associative qualities.
  5. A setting should not be contrived to create an appearance that never existed historically. For example, a false sense of history is created when a setting with characteristics of a rail facility is assembled in an area removed from actual railroad facilities. Railroad theme parks are exaggerated examples of such artificial settings.



ENGINE FRONT & CROSS SECTIONS



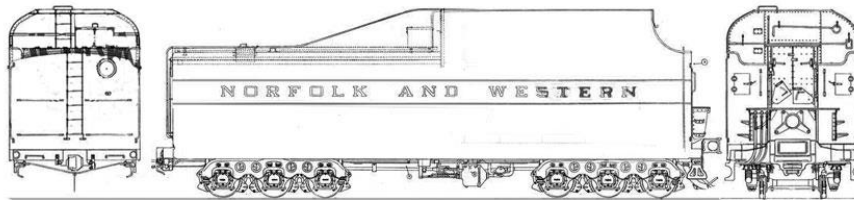
NORFOLK AND WESTERN CLASS J 4-8-4	
Built by Roanoke Shops 1950	
Engine Weight.....	494,000 lbs
Tractive Effort.....	14,000 lbs
Cylinders Diameter and Size.....	27 x 32 in.
Driving Wheel Diameter.....	70 in.
Brake Pressure.....	300 lb per sq. in.
Road Numbers.....	600-613

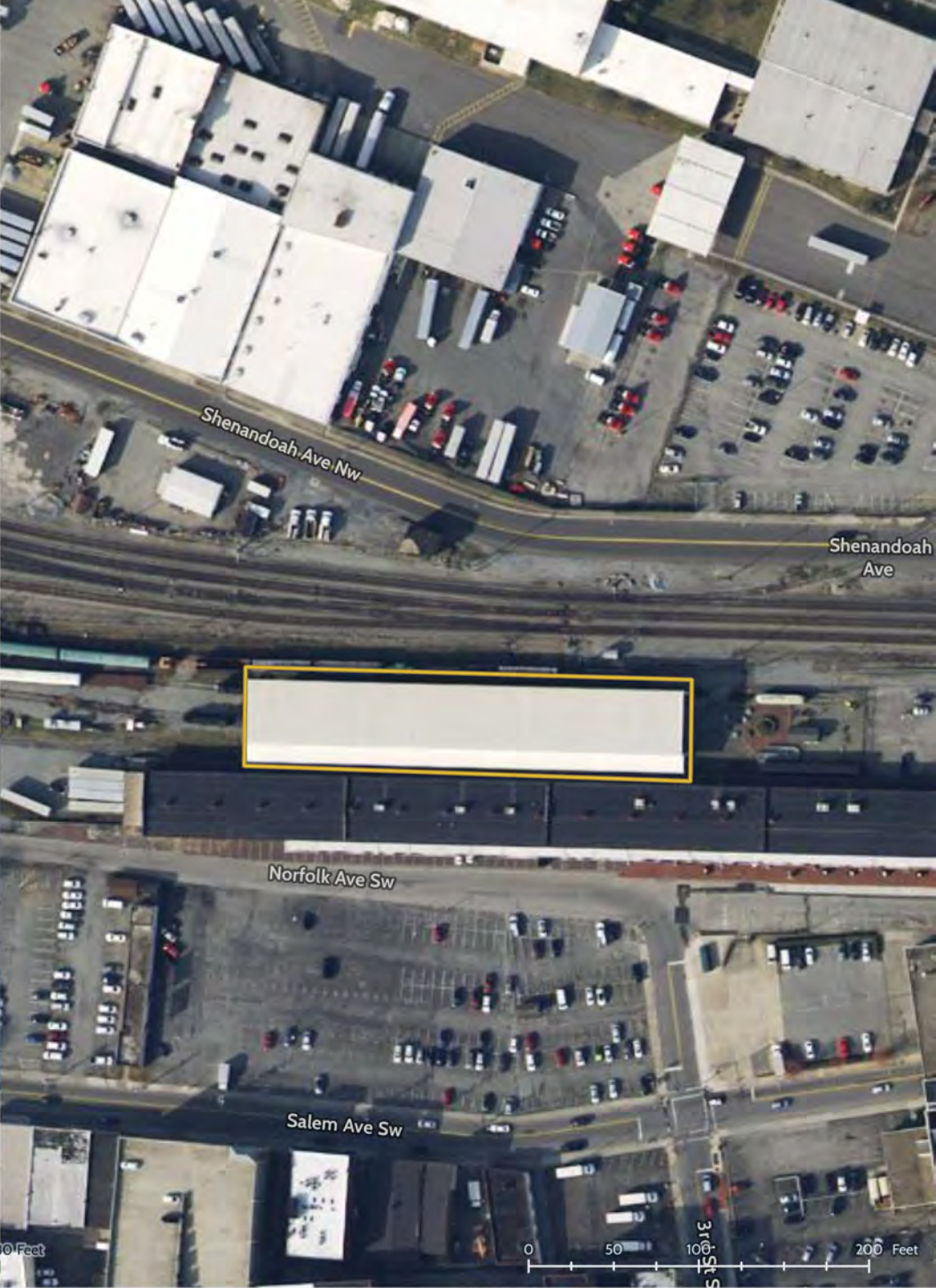
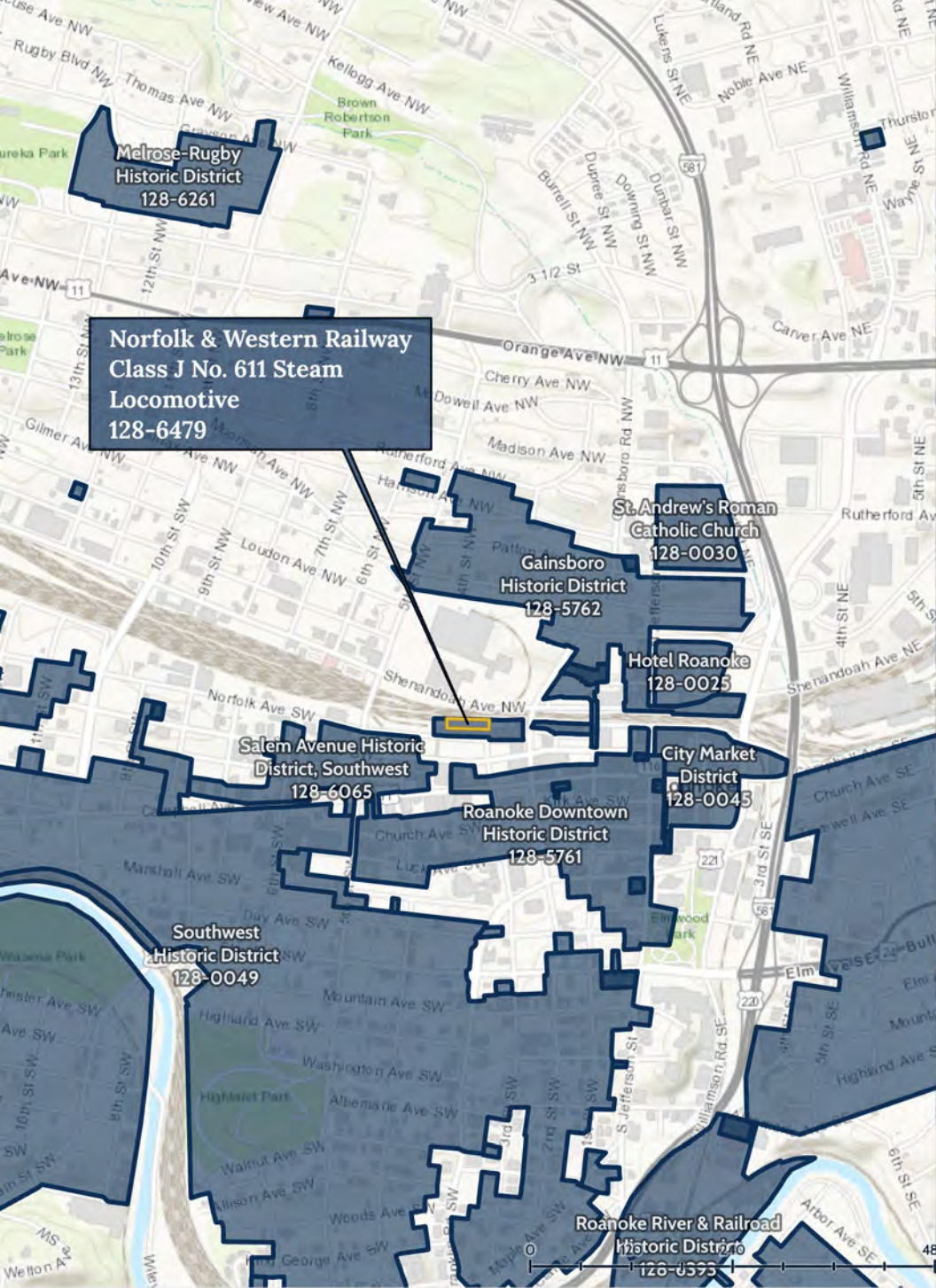
This isometric reproduction was produced with no legal certification or license and is under free use for replication or alteration for any reason. Courtesy of TheRailpage.com, Google Search Engine and www.mtrc.org, the Norfolk & Western Heritage Society, from which these diagrams and drawings were constructed with the scanned originals from their archive. Thank you N&WHS and thank you for reading this. Produced May 18th, 2010

TENDER BACK

TENDER LEFT SIDE

TENDER FRONT





**Norfolk & Western Railway Class J No. 611 Steam Locomotive**  
**City of Roanoke, Roanoke Quad**  
**DHR ID: 128-6479**

- 128-6479
- Listed Resources

Created By: D. Bascone 4/28/2023  
 Sources: VDHR 2023, ESRI 2023, VDOT 2023, VGIN 2023  
 Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years and the representation depicted is based on the field observation date and may not reflect current ground conditions. The map is for general illustration purposes and is not intended for engineering, legal or other site-specific uses. The map may contain errors and is provided "as-is". Contact DHR for the most recent information as data is updated continually.



















# NATIONAL HISTORIC MECHANICAL ENGINEERING LANDMARK

NORFOLK & WESTERN 611, CLASS J, STEAM LOCOMOTIVE  
ROANOKE, VIRGINIA 1950

DEVELOPED FOR USE IN BOTH THE PLAINS AND MOUNTAINS, THIS COAL-FIRED PASSENGER LOCOMOTIVE WAS AMONG THE MOST ADVANCED IN DESIGN, CONSTRUCTION, AND PERFORMANCE OF ANY 4-8-4. DESIGNED BY N & W ENGINEERS AND BUILT BY THE CRAFTSMEN OF THE N & W ROANOKE SHOPS, THE 611 WAS SPECIALLY BALANCED TO MINIMIZE RAIL DAMAGE AT HIGH SPEEDS. NO. 611, 12<sup>TH</sup> OF 14 CONSTRUCTED AND THE LAST SURVIVOR, WAS RETIRED FROM SERVICE AND DONATED TO THE ROANOKE TRANSPORTATION MUSEUM IN 1959.

## SPECIFICATIONS

ENGINE WEIGHT: 494,000 LB  
BOILER PRESSURE: 300 PSI  
DRIVERS: 70 INCH DIAMETER  
CYLINDERS: 27 X 32 INCHES

ENGINE AND TENDER WT: 889,260 LB  
MAX. DRAWBAR PULL: 80,000 LB  
HORSEPOWER: 5100 AT 40 MPH  
BEARINGS: ROLLER

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS - 1984