West Virginia's Historic Turnpikes Research and Survey Methods

by Courtney Fint

West Virginia Division of Highways Building 5, Room 450 State Capitol Complex 1900 Kanawha Boulevard, East Charleston, WV 25311

Phone: 304-558-7421 Fax: 304-558-7296 courtney.p.fint@wv.gov

Even with the most descriptive narrations, in-depth research and clearest maps, it is difficult to imagine a time in America's past when the next town, county, or state could not be reached by simply hopping in the car and letting the road lead one there. In the early years of the nation, hacking a road through the wilderness to reach what lay beyond required intrepidness and resourcefulness, even more so in the Appalachian mountains of western Virginia. Hopeful entrepreneurs were some of the first to undertake this challenge by forming partnerships with state governments that allowed them to construct roadways and charge travelers a toll for use. Vestiges of these turnpikes can still be seen today; modern travelers may often note with curiosity what appear to be road beds, old bridges, culverts and other objects along existing highways. Study and identification of historic turnpikes, however, can accomplish more than mere satisfaction of curiosity. Knowledge of the "where and why" of turnpikes can serve as a valuable tool in environmental review of highway projects, creation of historic contexts for an area and right-of-way resolution. Identification of historic turnpike routes is a task that involves a variety of resources, from traditional primary sources such as historic maps and documents to the latest GPS technology. This paper will describe current efforts by the West Virginia Division of Highways to synthesize information from available sources in the creation of a complete picture of historic turnpike development in the state. It is hoped that this project can serve as a methodological model for other organizations and agencies that seek to understand turnpikes and other historic roads.

Building a highway today can often seem like an endless process of bureaucratic review, fund procurement and political maneuvering, causing longing for a simpler time of less regulation and a smaller population to appease. However, investigation into the development of transportation networks in early Virginia yields recurring themes of sectional rivalries and political squabbles. As an English colony, Virginia followed the traditions and laws of the homeland. According to the Highways Act enacted by Parliament in 1555, the responsibility for building and maintaining roads was entrusted to the local parish. Each parish citizen was responsible for contributing four days of work annually, which was directed by two elected surveyors.¹ This requirement was changed to 6 days in a renewal of the Highways Act in 1562. In Virginia, county courts, rather than parishes, administered the road improvement program. This system worked for a time, as the main functions of roads were as local connectors between navigable waterways, the primary transportation network in colonial Tidewater Virginia.² However, as people moved further westward, mountainous terrain limited water navigation and demand for longer and more extensive routes grew. The colonial Virginia government passed special legislation for several routes in the 1760s and 1770s, but construction of such roads was nearly impossible under the localized citizen-laborer system. Alternate methods of

¹ Pawlett, *A Brief History*, 3-4. ² Pawlett, *A Brief History*, 5.

construction and financing were being explored when road construction was curtailed by the Revolutionary War, as all attention was focused on military efforts.³

After the emergence of the new United States of America, attention turned back to internal improvements. Government leaders recognized the necessity of linking disparate areas of the new nation, both economically and politically. George Washington feared that the settlers in the Appalachians and beyond – the "Transmontane" – would see little benefit in remaining part of the republic if communication and transportation were not improved. He wrote as much in his diary shortly after the end of the Revolution, after traveling to explore rivers in western Pennsylvania:

The certain consequence therefore of an attempt to restrain the extension of the Navigation of these rivers, (so consonant with the interest of these people) or to impose any extra duties upon the exports, or imports, to, or from another State, would be a separation of the Western Settlers from the old and more interior government; toward which there is not wanting a disposition at this moment in the frontier.⁴

Washington's focus was on waterways and navigation, and he recommended to Virginia governor Benjamin Harrison in 1784 that the state pursue linkages to the Great Lakes and Ohio River. In response, the Virginia General Assembly chartered the James River Company and the Chesapeake and Ohio Canal Company.⁵ Before these state-sponsored projects could be fully realized, the National Road, from Cumberland, Maryland to

³ Pawlett, A Brief History, 8.

⁴ Brooks, The Northwest Turnpike,13.

⁵ Rice, West Virginia: a History, 86.

Wheeling, was completed by the federal government in 1818 and was "the first notable success in linking trans-Allegheny Virginia and the seaboard."⁶

Construction of canals and locks continued, but the same pre-Revolution problems with constructing waterways in the mountains remained and better roads were also needed. Tolls and lotteries to finance construction were conducted sporadically by the state and county governments, but no comprehensive sources of planning or funding were at hand during the early 1800s. Disagreements arose between geographical and political factions over the role of the federal government in providing internal improvements and the National Road threatened to divert commerce with away from Virginia through Pennsylvania and Maryland.⁷ The Virginia General Assembly could not ignore the necessity of confronting these problems, and commissioned a study of the transportation needs of the state. In 1816, the legislature observed the report's recommendation to establish a Board of Public Works and a Fund for Internal Improvement.⁸ The Fund for Internal Improvement provided monies "to be applied, exclusively, to the purpose of rendering navigable, and uniting, by canals, the principle waterways, and of more intimately connecting, by public highways, the different parts of the Commonwealth." The act established a Board of Public Works to administer the fund and gave this board the power to appoint a Principal Engineer to provide technical services for transportation projects. The Board of Public Works was also authorized to invest in 2/5 of the stock of private turnpike companies, but not until 3/5 of the stock had

⁶ Rice, West Virginia: a History, 87.

⁷ Brooks, *The Northwest Turnpike*, 20.

⁸ Pawlett, A Brief History, 21.

been pledged to other subscribers and 1/5 securely paid.⁹ By the 1830s, the standard proportion of stock shares purchased by the state had increased to 3/5.¹⁰ However, as historian Robert F. Hunter noted, "The turnpike builders usually began to make the dirt fly before they had determined where all the money needed would come from. Often their funds were only half-collected, and just as often their roads were only half-finished."¹¹

The General Assembly passed another law in 1817 that stipulated detailed regulations for administration and construction of turnpikes. These regulations provided protections for both travelers and turnpike companies. The law required that bridges be constructed over all waterways, and that the roads be "sixty feet wide at least, eighteen of which shall be well covered with gravel or stone."¹² Weight restrictions were placed on wagons depending on wheel width and the company was allowed to collect fines from any travelers who violated this rule.¹³ Upon completion of a five-mile section of road, the company was directed to request a review from the county court; if the road was satisfactory, a toll gate could be installed and tolls collected according to a specific schedule.¹⁴ Roads were to be well-maintained. Anyone could report a road in ill repair to the county court, and the turnpike company was required to cease toll collection until the road had been inspected by unbiased individuals, repaired and inspected again.¹⁵ If the

⁹ An act to create a Fund for Internal Improvement (February 5, 1816), *Revised Code of the Laws of Virginia*, ch. 228..

¹⁰ Hunter, "The Turnpike Movement in Virginia 1816-1860," 280.

¹¹ Hunter, "The Turnpike Movement in Virginia," 281.

¹² An act prescribing certain general regulations for the incorporation of turnpike companies (February 7, 1817), *Revised Code of the Laws of Virginia*, ch. 234.014.

¹³ Revised Code of the Laws of Virginia, ch. 234.014.

¹⁴ Revised Code of the Laws of Virginia, ch. 234.017.

¹⁵ Revised Code of the Laws of Virginia, ch. 234.023.

road remained in ill repair for 18 months, the company's stock and toll collection would

be "forfeited and cease forever." ¹⁶

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v four horses, 50	
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y two horses, 32	· · · · · · · · · · · · · · · · · · ·
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y two horses, 37	
every two-wheeled riding carriage, drawn	For every person on foot, 61 For every four-wheeled riding carriage drawn by one horse. 25
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Provided always, 1st, That return wagons of	or carts, at all the gates, shall pay one half of the said
ls or levy.	
2d, That persons on whose land any of the s	said toll-gates may stand, shall be exempt from tolls at
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	tock, implements of husbandry, and persons employed in
nveying the same from one plantation to the oth	
	n mill, for the purpose of procuring meal for the consump-
	t of tolls on the Kanawha turnpike road and bridges.
	le to the owners of stages or wagons, for the use of the
tent lock.	
By order of the Board of Directors of	f the James River and Kanawha Company.
	WM. P. MUNFORD, Sec'ry.

1. "Tariff of Tolls to be Charged on the Kanawha Turnpike Road." 1855. (Source: Archives and Manuscripts Section, West Virginia University Libraries.)

Six hundred forty-seven turnpikes were chartered in Virginia over a time period of about 40 years, but their ubiquity as a business venture was not an indicator of financial success. Less than 30 percent of chartered companies ever raised enough money

¹⁶ Revised Code of the Laws of Virginia, ch. 234.024.

to establish a board and begin construction activities. Of about 180 companies in Virginia that did succeed in establishment, only one was ever consistently profitable. The high cost of construction, especially in steep terrain, and the ease of avoiding tollgates ("shunpiking") made chances of profit remote.¹⁷

Perhaps no figure plays a more significant role in the Virginias' roadway history than Claudius Crozet, the Principal Engineer for the Board of Public Works from 1822-1832 and 1837-1843.¹⁸ Crozet was a Frenchman who had served under Napoleon, and immigrated to the United States in 1816, working first as a professor at West Point.¹⁹ After becoming principal engineer, Crozet began an extensive effort to survey the entirety of Virginia and to plan thoroughfares to connect economic regions.²⁰ When a private turnpike company received a charter from the Virginia General Assembly, Crozet provided technical assistance in locating the best alignment, drainage, curve radius, road width, bridge construction and location, and other design elements. However, a company was not required by law to follow these recommendations, and Crozet often expressed frustration that company managers, frequently amateurs more entrepreneurial than technically skilled, built poor roads.²¹ The steep topography of the Transmontane was a challenge in balancing grade and length. A straight line between two points in the mountains would produce grades difficult for horses and wagons to traverse, but attempting to keep the grade too gentle resulted in a meandering, excessively long road. Ever concerned with profit, turnpike companies tended to err on the side of steeper

¹⁷ Hunter, "The Turnpike Movement in Virginia" 280, 285.

¹⁸ Jacob, "Biographical/Historical Information.

¹⁹ Barrett, "Claudius Crozet."

²⁰ Pawlett, A Brief History, 26-27.

²¹ Hunter, "The Turnpike Movement in Virginia," 281-282.

grades.²² In 1829, Crozet reported to the Board of Public Works on the Ashby's Gap Turnpike:

Its grade in places in very considerable; the stones are generally too large, and the carriage way is frequently too narrow. The last two defects may be easily remedied; the first would require a change of location; or, in other words, a new road. This is again produced by the general error of aiming at making straight roads.²³

In spite of Crozet's difficulties, he had a hand in laying out a significant number of turnpikes, and in creating a transportation plan that, according to historian Nathaniel Pawlett, "could have readily been adapted to the use of rails, canals, or turnpikes."²⁴ Disputes over which of these three modes would dominate, however, caused stagnation in the development of any of them. The success of the Erie Canal and the Chesapeake and Ohio Canal led some influential citizens to believe that primary east-west routes must be waterways. Crozet and others, however, foresaw a system that was a combination of railroads and canals. This argument finally led to a "reorganization" of the Board of Public Works in 1831 that abolished the position of Principal Engineer, and Crozet departed for Louisiana.²⁵ In addition, while citizens of western Virginia supported federal aid for internal improvements, eastern Virginians staunchly opposed federal involvement.²⁶ Later in the 1830s, shifting of political power between the Whigs and Democrats meant that certain areas were intermittently ignored or favored for

²² Hunter, "Turnpike Construction in Antebellum Virginia,"181.

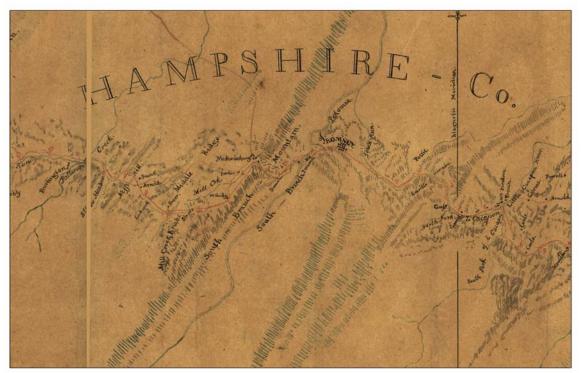
²³ Annual Report of the Board of Public Works, 1829, XIII, in The Eleventh, Twelfth and Thirteenth Annual Reports of the Board of Public Works... (Richmond, 1829) 515. Quoted in Hunter, "The Turnpike Movement in Virginia," 282.

²⁴ Pawlett, A Brief History, 31.

²⁵ Pawlett, A Brief History, 33-34.

²⁶ Pawlett, A Brief History, 32.

transportation improvements.²⁷ Still, improvements proceeded gradually, and by 1840, progress had been made on three major east-west routes: a canal, turnpike and railroad system linking the James River to the Kanawha River; the Northwestern Turnpike from Winchester to Parkersburg; and, the Staunton and Parkersburg turnpike.²⁸ More changing political tides brought Crozet back his former post in Virginia in 1837.²⁹



 Portion, "Map of Location of Part of the North-Western Turnpike Road." Made under the direction of Claudius Crozet by Charles B. Shaw, 1831.
 (Source: Library of Congress Geography and Map Division, Washington, DC.)

As the 1850s approached, the railroad began to emerge as the wave of the future in transportation. More charters were granted to railroad companies, and any turnpikes chartered at this time seemed to be intended as connections between railroads. The Civil War brought internal improvement projects to a halt, and in fact, many canals, railroads,

²⁷ Pawlett, A Brief History, 35.

²⁸ Pawlett, A Brief History, 37.

²⁹ Barrett.

and roads were destroyed or neglected. After the war, according to Pawlett, "[Canals and roads] being viewed as inefficient and archaic in the years after the war could not attract the northern capital necessary to their recovery. The railroad could, and thus swept the field."³⁰ The long-standing schism between Virginia's western mountain regions and the Tidewater finally reached irreconcilable proportions, resulting in the creation of the state of West Virginia. As W.E. Brooks put it in a 1943 address about the Northwestern Turnpike:

The revolution, for it was no less than that, tore asunder the Old Dominion, and set up the new. Washington's fears of political action that would follow the East's disregard of its needs were realized, in this event... The Northwest Turnpike had failed in what reluctant hands that called it into being had hoped it might do, bind the sections together. A phrase we have heard often in these latter years sets forth the reason: "Too little and too late."³¹

Economic devastation following the Civil War caused wholesale failure of turnpike companies and the roads eventually were transferred to government control. Turnpikes in what became the state of West Virginia became property of the new state government. In 1915, the United States Supreme Court ruled that West Virginia owed Virginia a debt of approximately \$12 million, mostly due to internal improvements made in the territory before West Virginia's secession. West Virginia paid the last installment of this debt in 1939.³²

West Virginia's turnpikes have morphed into various forms over the years. At least 98 former turnpikes are known to be located in the state. Locating the roads today

³⁰ Pawlett, A Brief History, 39.

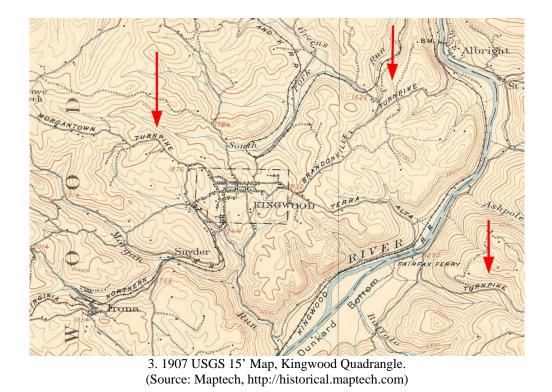
³¹ Brooks, *The Northwest Turnpike*, 22.

³² Sullivan, *The West Virginia Encyclopedia*, s.v. "Virginia Debt Question."

can quickly become a complicated task. Some were incorporated, all or in part, into national, state, and county routes. Others remain as unimproved back roads or paths, and some are utterly undetectable from the ground. In some cases, rights-of-way have been retained by the state, and in others, segments have been sold to private individuals. Widths of rights-of-way were generally 60 feet, according to the original Virginia General Assembly turnpike law, but this could vary greatly, especially in mountainous regions. Researchers seeking to determine the extent of a turnpike need take nothing for granted, as variations on codified laws and specifications were frequent.

In determining whether any turnpikes exist in a particular area, a convenient first step may be to consult historic topographical maps from the United States Geological Survey, which began mapping the United States in detail 1882.³³ Various editions of the maps are available in archives, libraries and even online. Other historic maps of a town or region may label roads as turnpikes. Often, tax plats for towns or individual parcels and even deeds note or show turnpike rights-of-way. After the official name of the road is known, more in-depth research about its history and alignment can be conducted.

³³ Maptech, Inc. "Historical Maps."



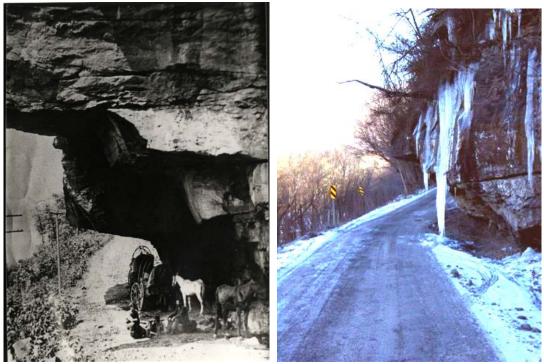
For West Virginia, the repositories most relevant to turnpike research are the Virginia and West Virginia state archives. The Virginia turnpike law required turnpike companies to make reports on the financial status of the road one year after completion of construction, and every three years thereafter. A map of the road was to be submitted with the first report.³⁴ The Principal Engineer and the Board of Public Works also produced annual reports for the Virginia General Assembly on work accomplished. These reports are available to varying degrees for individual turnpikes, and can provide very detailed information about construction progress and repairs through the years. Indeed, some turnpikes have an overwhelming amount of documentation, including field notes, specifications and maps. Reports on the Staunton and Parkersburg Turnpike, for example, span the years from its charter in 1838 through 1860; this passage from Claudius Crozet in 1839 describes efforts to determine the ideal location:

³⁴ Revised Code of the Laws of Virginia, ch. 234.029-030.

From the Dry branch gap, the most direct course appeared to be by Hodge's draft in the Shenandoah mountain, Stuart's gap in the Bull pasture mountain, and Dinwiddie's gap in Jackson's mountain... but, owing chiefly to the elevation and steepness of the Shenandoah mountain, the actual location to the Bull pasture river, was found as long that way as that formerly made by Ramsey's draft; the traveling more laborious, and the estimate cost much greater, besides the necessity of encountering, farther on, the rugged and high gap of Jackson's mountain and some additional difficulty in the Alleghany. These considerations united, determined me to change the whole of this location, and to carry it over the same ground, where in 1826, we had located the road: that is by Ramsey's draft in the Shenandoah mountain, and Dove's gap in the Bull pasture mountain.³⁵

A particular turnpike may be mentioned in periodicals, newspapers, local histories or memoirs, providing further information about its physical state as well as its local or cultural significance. Historic photograph collections also may provide valuable context for roads and surrounding landscapes.

³⁵ 23rd Annual Report of the Board of Public Works (Richmond, 1839), 18. Photocopy on file at the West Virginia Division of Highways Environmental Section.



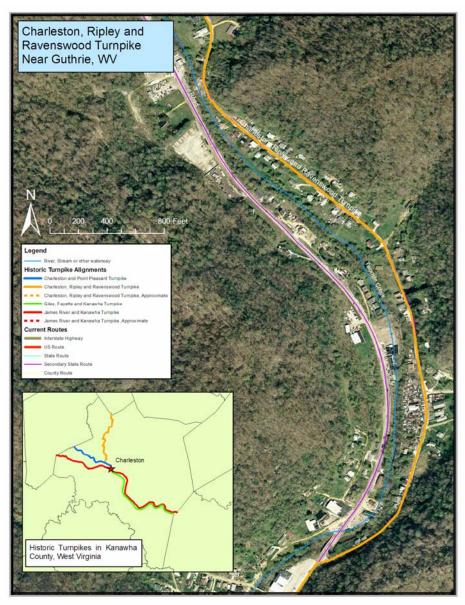
4. Rock overhang along turnpike at Kanawha Falls, WV. Left, ca. 1890. Right, 2007. Note the elevation of the road has been raised over the years.

Using archival records to locate an historic turnpike within a modern frame of reference could involve hundreds of hours of painstaking work, matching historic mountains, descriptions and landmarks with contemporary maps. Once a general idea of the turnpike route is known through study of historic documents or maps, on-the-ground survey can provide immediate visual clues and confirmation. "Turnpiking," or driving along existing roads in order to identify possible historic alignments, becomes an engaging task after some practice in recognizing clues in the landscape. In preparation for a turnpiking excursion, a rough sketch of the likely historic route on a detailed and current county road map may be helpful. Historic turnpikes do not always run parallel to existing highways, but driving is an expedient and convenient way to begin a survey.

Visual clues can include abandoned road grades, culverts, bridges and abutments located to the side of a modern road, as well as remnants of guardrails and fences. Side roads that seem to diverge and converge with the modern highway may be pieces of an older alignment that was straightened. Certain types of pavement, particularly concrete, also indicate an older road; sections of concrete can still be felt while riding in a vehicle even if the road has been subsequently paved with asphalt. Streets and roads with names such as "Pike Street" or that contain parts of the turnpike name ("Kanawha Turnpike") also usually indicate the presence of an old turnpike. Even signs for businesses, either still in operation or long closed, may reference the turnpike.

Familiarity with the history of technology and construction methods, as well as the specifications for the turnpike, assists in a more nuanced aptitude for turnpike discovery. Extremely steep grades, for instance, in excess of 5%, would have posed difficulties for horses and wagons, and can be eliminated as original road bed. Likewise, equipment capable of creating deep cuts in soil and rock was non-existent in the 19th century. It may be possible that the alignment is close, but that the original grade has been altered drastically by new road construction.

In cases where old road beds diverge significantly from existing roads, a Global Positioning System (GPS) can be indispensable for surveys on foot or using a vehicle. A GPS can be preloaded with coordinates before the field survey in order to inspect and confirm potential alignments, or it can be used to record spontaneous discoveries in the field. More advanced units can be set up to work with Geographic Information Systems (GIS) programs and can record myriad data about a point, such as location, name of turnpike, use status, ownership, surrounding landscape features, existing surface, and associated structures, to name a few. Often, corridors and road alignments that are not obvious on maps or on the ground appear more clearly on aerial photographs in GIS; historic maps, modern maps and aerial photography may also be layered for comparison purposes, helping provide points of reference for old documents. The power of GIS to comprehensively manage and analyze information for research and planning purposes is considerable. The West Virginia Division of Highways is in the midst of a long-term project to map over 90 historic turnpikes in the state, using GIS and other graphics programs.



5. GIS map produced by author using aerial photography and GPS data. 2008.

Turnpike research has a variety of applications. For governmental agencies involved in the task of cultural resource management, knowledge of historic transportation corridors is important in evaluating projects for effects on historically significant places. Resolution of property ownership issues also requires knowledge of the rights-of-way and history of sale for publicly-owned parcels such as turnpikes. The level of detail in research is linked to the type of project and researcher's objectives. A general historical context for a state, county or town may not require deep discussion of route changes and survey techniques. A legal issue, however, such as a right-of-way dispute, may warrant as much detail as can be found, but only for a small area. Beyond the single project level, an overall concept of the development of transportation links in a state or locality is essential for understanding human migration, economics, culture and other topics.

In West Virginia's case, the construction of turnpikes was very much entwined with issues of disenfranchisement and ultimately, rebellion, aspects that continue to inform the state's identity today. But if turnpikes represent the struggle to establish communication and economic security for the Transmontane, they also stand as innovations in technology, achievements of foreward-thinking lawmakers and engineers, and tangible examples of the classic themes of frontier exploration, fortune-seeking, and travel. As a 1926 guide to the James River and Kanawha Turnpike, also called the Midland Trail, put it:

Like a flying arch the Trail bridges the Alleghenies and from it you may look down upon the "cleaner, greener land" of your dreaming. The giant ridges, rank on rank, march majestically before you, manoeuvering and shifting as you overtake them like great battalions of the gods at drill. Far below their shaggy green helmets are the mountain streams, from rill to full-bosomed river, twisting in and out among the hills... Coming suddenly out of their isolation, the glamour of the past is still fresh upon them and it is of these that we shall speak, that your journey may be like a trip into bygone times.³⁶

³⁶ Reniers, *The Midland Trail Tour*, 7.

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