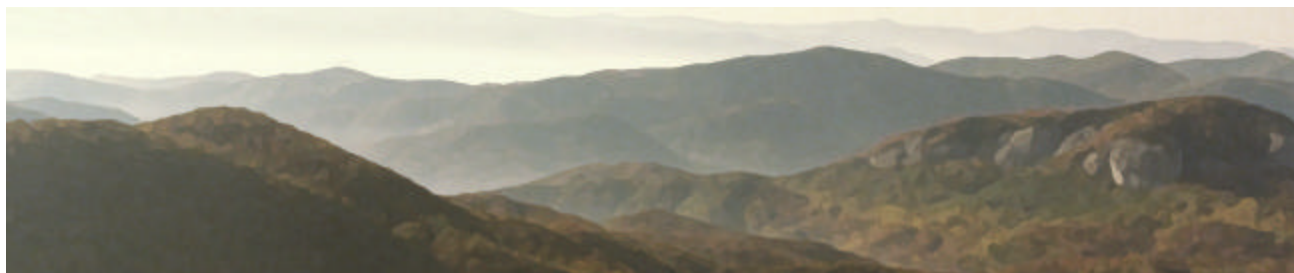


WESTERN NORTH CAROLINA PASSENGER RAIL STUDY



MARCH 2001

Summary Report

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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Introduction

In Spring 2000, the North Carolina General Assembly directed the North Carolina Department of Transportation Rail Division to study the feasibility of providing passenger rail service to Western North Carolina. The study was designed to update the 1997 Western North Carolina Passenger Rail Study and include:

- a timetable that outlines phases to implement service,
- the cost of implementing each phase and
- specific interim goals and performance measures to determine the success of implementing the plan.

To complete this feasibility study, the North Carolina Department of Transportation (NCDOT) contracted with Gannett Fleming, KPMG, the Institute for Transportation Research and Education, Ralph Whitehead and Associates, Carter-Burgess and Amtrak. Members of the study team first conducted travel and attitudinal surveys to assess the feasibility of re-establishing passenger rail service to the mountains and then evaluated current population density and travel patterns along the route. In addition, they conducted a comprehensive analysis of the existing rail infrastructure and freight operations between Salisbury and Asheville, examined the potential operating costs, revenues and ridership, and estimated the capital costs of upgrading the Norfolk Southern infrastructure between Asheville and Salisbury for passenger rail service. Additional analysis included conceptual site plans to rehabilitate seven existing historic train stations and construct two new stations. Finally, the study team evaluated the cost of purchasing new train equipment versus the cost to rehabilitate used train equipment for the proposed service.

Throughout the study process, the NCDOT worked with nine communities in Western North Carolina that were evaluated as potential stops for passenger rail service: Salisbury, Statesville, Hickory, Valdese, Morganton, Marion, Old Fort, Black Mountain and Asheville. In cooperation with the communities, the NCDOT has begun preliminary work to develop a program of safety improvements to prevent train-vehicle crashes at railroad crossings between Salisbury and Asheville. Such improvements are needed to protect both motorists and train crews, regardless of implementation of passenger rail service.

To actively participate in the study and promote restoration of passenger service, a number of elected officials, business and community leaders from each of the nine cities formed the Western North Carolina Rail Corridor Committee. The committee formed in March 2000 and has conducted monthly meetings to update their respective communities about the status of the study and to promote the need for passenger rail service to Western North Carolina. Additionally, several public transit systems along the route have expressed interest in providing transit services to connect with passenger rail service.

This summary highlights the potential benefits of re-establishing passenger rail service to Western North Carolina, outlines the projected ridership, revenues and costs of such a service and makes recommendations about implementing passenger rail service to the western part of the state.

History of Passenger Rail Service in Western North Carolina

Passenger rail service developed in the 1800s throughout the nation as the primary mode for long-distance travel. Train service connected existing cities, helped establish new communities and spurred economic development at stops along the routes.

A series of floods, fires, epidemics and other disasters that plagued the mountains of North Carolina in the mid 1800s illustrated how isolated the western part of the state was due to poor transportation. Responding to the public outcry for help, the North Carolina Legislature chartered the Western North Carolina Railroad (WNCRR) in 1855, citing the need for passenger and freight services.

Work on the Salisbury to Asheville line began in 1857 and was completed in 1879 on what was one of the most difficult railroad construction projects in the South's history. Builders on the WNCRR encountered numerous challenges during construction. The mountainous terrain presented a natural obstacle for crossing the Eastern Continental Divide. Six tunnels were built between Old Fort and Asheville along an area known as "the loops" because the tracks curve and wind back on themselves so many times. When the last tunnel was completed the chief construction engineer wired Governor Zebulon Vance saying, "Daylight entered Buncombe County today through the Swannanoa Tunnel. Grade and centers meet exactly."¹ The first passenger rail service to Asheville began in October 1880.

The State of North Carolina built, paid for and operated the WNCRR railroad until 1886 when it was leased, then sold to the Richmond and Danville Railroad. In 1894, that railroad became part of the Southern Railway Company. Southern Railway took over operation of the Western North Carolina Railroad in 1896 and joined forces with several other railroads to operate overnight trains that connected Asheville to major cities throughout the South, East and Midwest in less than 24 hours. Long-distance trains with coaches, dining cars and sleeping cars linked the North Carolina Mountains to New York, Philadelphia, Washington, D.C., Chicago, New Orleans, Birmingham, Knoxville, Jacksonville, Savannah, Columbia, Memphis, Atlanta and Charleston, South Carolina.

Passenger rail service to Western North Carolina was popular with wealthy American families who fled the cities to spend summers in the mountains where the air was cleaner, the temperature cooler and the outdoor activities more plentiful. Asheville was a social magnet for such migrations from the cities of the Southeast and the lower Midwest and Southern Railway publicized area attractions, resorts and the beauty of the Blue Ridge Mountains throughout its system.

While regular passenger train service to Asheville and Western North Carolina ended in 1975, the area still attracts millions of visitors each year—many from cities served by existing Amtrak service. Increased support for passenger rail service has sparked renewed interest in re-establishing service to Asheville to enhance economic development and improve the state's transportation infrastructure.



A partial view of 'the loops' between Old Fort and Asheville is seen from the locomotive. This curvy portion of railroad uses 12 miles to travel a straight-line distance of three miles.

¹ Gilbert, John and Jefferys, Grady. *Crossties Through Carolina: The Story of North Carolina's Early Day Railroads*. Helios Press, 1969

Study Methods

As part of the Western North Carolina Passenger Rail Service Study, the NCDOT initially evaluated six alternatives for providing passenger train service to Asheville. However, due to uncompetitive travel times and/or excessive projected operating costs, the team quickly narrowed the scope to concentrate on four alternatives. Several methods were used to estimate ridership, revenue and operating costs for each scenario, evaluate station and infrastructure improvement costs and to assess attitudes toward potential service.

The NCDOT developed ridership estimates using data from travel surveys conducted for the 1997 Western North Carolina Rail Passenger Study. Also, the group evaluated population density along the route and reviewed annual ridership performance information from Amtrak. It should be noted, however, that ridership projections are based on business and personal travel only and do not include potential traffic from tourism. Nonetheless, tourism is a significant component of the Western North Carolina economy, thus the ridership projections are conservative. Operating costs, revenue and equipment costs were estimated based on existing data for the state-supported *Carolinian* and *Piedmont* services. To estimate the costs to restore historic or build new train stations, the department worked with communities along the route and conducted on-site visits.

To accurately estimate the costs of any needed track and infrastructure improvements, the NCDOT made repeated attempts to coordinate an inspection and analysis of existing rail conditions with Norfolk Southern (NS), who owns the railroad between Salisbury and Asheville. Because NS denied repeated requests for such information, the NCDOT used existing track and rail traffic information from other sources to develop the necessary cost estimates.

The Institute for Transportation Research and Education (ITRE) assessed attitudes toward and potential use of rail passenger service to Western North Carolina by surveying more than 325 visitors and residents at a two-day craft fair in Asheville. Survey participants were asked about origin, destination, purpose of their trip, preferred mode of travel and likelihood of traveling by train. Responses were received from 203 Asheville area residents and 124 visitors – 55 of which were from other states.

The survey indicated that visitors primarily travel to the Asheville area for pleasure several times per year, typically staying for a weekend at a time. The majority of respondents indicated that they preferred traveling to the area in the fall. Residents of the Asheville area indicated they traveled from the area approximately twice as often for pleasure as for business, visiting areas such as Raleigh/Durham, Atlanta, Charlotte, Greensboro and Florida. Not surprisingly, the personal vehicle was the primary travel method for both visitors and residents.

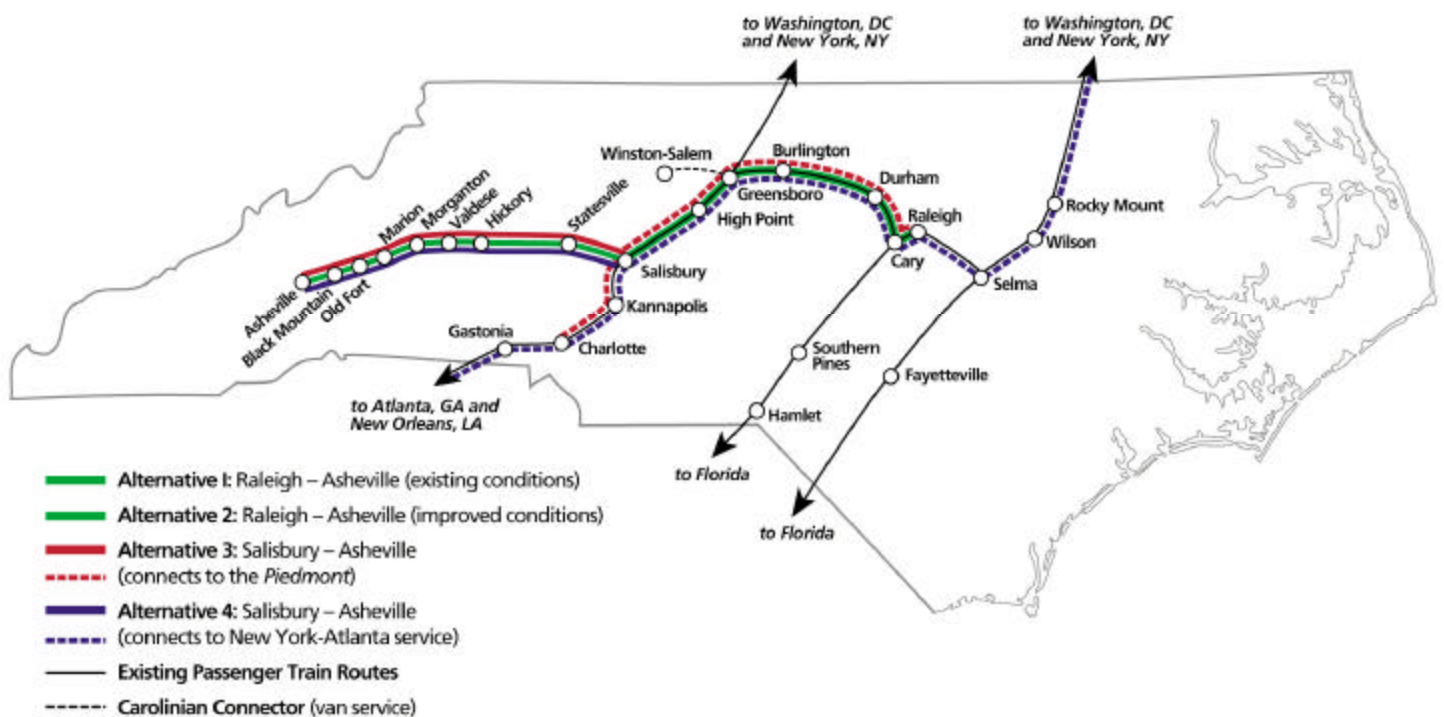
In addition, ITRE conducted telephone interviews with 49 local business leaders from various industries including chambers of commerce, camps and conference centers, resorts, retirement communities, real estate agencies and tourist destinations about potential economic impacts of passenger rail service. Survey participants unanimously responded that they believed passenger train service would have significant positive economic benefits for Western North Carolina from increased revenue from tourism and focus additional development around the train stations (such as restaurants, retail stores, arts and crafts galleries, and other tourist-related businesses). While representatives from several camps/conference centers expressed varying opinions on the benefits of passenger rail service to their centers, respondents from the tourism industry predicted that passenger trains would increase the tourist and convention trade in Asheville. In addition, some realtors believed that having an additional transportation choice would stimulate sales of second homes, particularly among those living in Florida.

In short, the surveys indicated broad public and business support for development of an alternate mode of transportation to enhance public access and sustain the growth of tourist-oriented businesses such as the Biltmore Estate and numerous area camps, conference centers and resorts.

Study Alternatives

Increased support for passenger rail service has sparked renewed interest in reestablishing service to the foothills and mountains of North Carolina. The NCDOT evaluated four different scenarios as possible ways to extend passenger rail service from Salisbury to Asheville. Each scenario incorporated a detailed review of potential ridership and revenue, as well as probable costs of operation. In order to minimize operating cost and capture ridership on the heaviest travel days, two of the scenarios also included evaluations for four-day (Friday-through-Monday) operation. On average, 65% of daily ridership is carried between Friday and Monday.

This study did not address ways to include Winston-Salem in passenger rail service to Western North Carolina as those options are currently under a separate study by the Piedmont Authority for Regional Transit (PART). The results of the PART study should be available in summer 2001 and will be incorporated as appropriate when service to Western North Carolina is implemented.



Alternate One—Raleigh to Asheville via Salisbury

Trains would operate from Raleigh to Salisbury to Asheville with stops at 13 cities along the way. Under current track speeds and conditions, the trip—a 270-mile route with an average speed of 39 mph – would take about seven hours. The train, which would consist of a locomotive, a cafe lounge, two coaches and a baggage car, could depart Raleigh at 8:35 a.m. and arrive in Asheville at 3:20 p.m. The return train could leave Asheville at 4:55 p.m. and arrive back in Raleigh at 11:57 p.m.

The train would originate and terminate on a daily basis from Raleigh. Routine maintenance would be done at the existing rail maintenance facility in Raleigh to minimize labor and facility costs. A small service facility also would be needed in Asheville to clean the train and perform minor repairs. One-time costs for the Asheville service facility are an estimated \$375,000; annual maintenance costs for daily service are \$324,000.

Alternate Two—Raleigh to Asheville via Salisbury

As in the first scenario, trains would operate along the 270-mile route between Raleigh and Asheville via Salisbury with 13 stops along the way. However, improvements to the track infrastructure between Raleigh and Salisbury would increase the average speed to 46 mph and decrease travel time to just under six hours. The same train consist as in the first scenario could leave Raleigh at 7 a.m. and arrive in Asheville at 12:50 p.m.; the return train would leave Asheville at 3:05 p.m. and arrive in Raleigh at 9 p.m.

Operating, maintenance and facility arrangements and costs for Alternate Two are the same as Alternate One.

Alternate Three—Salisbury to Asheville with connections to *Piedmont* service

Trains would operate between Salisbury and Asheville only, but passengers could easily connect to the existing daily Raleigh-Charlotte *Piedmont* service. The Salisbury-Asheville portion of the trip is 139 miles with an average speed of 37 mph. Under this arrangement, passengers could leave Raleigh at 7:05 a.m. on the *Piedmont*, transfer to a Western North Carolina train in Salisbury at 9:49 a.m. and arrive in Asheville at 1:50 p.m. Returning, passengers could leave Asheville at 2:25 p.m., transfer in Salisbury at 6:26 p.m., and arrive in Raleigh at 9:23 p.m. The Salisbury-Asheville train would consist of a locomotive, up to two coaches and a combination coach-baggage car.

The train would be serviced and housed at the North Carolina Transportation Museum in Spencer, two miles from the Salisbury station. Modest upgrades to the existing maintenance facilities and tracks at the museum would be required to make moderate repairs and service a modern passenger train; major repairs would still be made at the existing NCDOT Rail Maintenance facility in Raleigh. As in the previous scenarios, a small service facility also would be needed in Asheville. One-time facility costs at the museum are an estimated \$425,000. Because of separate labor and facility costs for the museum maintenance site, annual maintenance costs for daily service are \$624,000 and for four-day-per-week service are \$356,568.

Alternate Four—Salisbury to Asheville with connections to a New York-Atlanta service

Trains would operate independently between Salisbury and Asheville with one coach that connects to/splits off from a New York-Atlanta train. As in Alternate Three, the Salisbury-Asheville portion of the trip is 139 miles with an average speed of 37 mph. Under this scenario, passengers could leave New York at 6:05 am, Washington DC, at 10:20 am and Raleigh at 4:22 p.m., on the *Carolinian*, with their coach transferred to the Western North Carolina service in Salisbury, arriving in Asheville at 11:50 p.m. Northbound passengers could depart Asheville at 9:10 am. Upon arrival in Salisbury, the through coach would be transferred to the New-York-bound train, which would arrive in Raleigh at 3:44 p.m., Washington DC at 9:50 p.m. and New York at 2:05 am. The Salisbury-Asheville train would consist of a locomotive, combination coach-baggage car and a dedicated coach that would be transferred to/from a New York-bound train.

As in Alternate Three, the train would be serviced and housed at the North Carolina Transportation Museum with major repairs made at the existing NCDOT Rail Maintenance facility in Raleigh. Additional staff would be required to handle the switching operations between Asheville-bound and New York-bound-trains. As in the previous scenarios, a small service facility also would be needed in Asheville. Initial facilities costs are an estimated \$425,000; annual maintenance costs for daily service are \$774,000 and for four-day-per-week service are \$481,568. As in Alternate Three, separate labor and facility costs result in increased maintenance costs.

Forecasted Results for Western North Carolina Passenger Rail Service

	Alternative 1 Raleigh Salisbury Asheville (current conditions)	Alternative 2 Raleigh Salisbury Asheville (improved conditions)	Alternative 3 Salisbury Asheville (<i>Piedmont</i> connection)	Alternative 4 Salisbury Asheville (New York-Atlanta connection)
Route Length	270 miles	270 miles	139 miles	139 miles
Travel Time	6:53	5:52	3:45	4:05*
Average Speed	39 mph	46 mph	37 mph	37 mph
Avg. Trip Distance	149 miles	165 miles	214 miles	255 miles
Ridership daily/4-day	12,100	26,100	6,100/ 4,000	13,400/ 8,900
Revenue daily/4-day	\$247,000	\$560,000	\$171,000/ \$114,000	\$528,000/ \$351,000
Avg. Revenue per passenger mile daily/4-day	\$.14	\$.13	\$.13	\$.13
Operating Cost daily/4-day	2,833,000	2,811,000	1,460,000 1,145,000	2,266,000 1,599,000
Passenger Revenues daily/4-day	247,000	560,000	171,000 114,000	528,000 351,000
Operating Loss (Subsidy) daily/4-day	2,910,000	2,570,000	1,913,000 1,387,568	2,512,000 1,729,000

* Scenario includes 20-minute delay to transfer coach to/from New York-Atlanta train.

Recommendations

Based on projected ridership, revenue and costs, the best opportunity for passenger rail service to Western North Carolina is a train that operates between Asheville and Salisbury and provides connections to a long distance train such as the *Carolinian* or a proposed New York-Atlanta service. Alternate Four – daily or four-day-per-week service between Salisbury and Asheville that connects to/from a New York-bound train – provides the most cost-effective and successful option. Given that developing a new passenger rail service often takes up to three years to complete track improvements and negotiate contracts necessary for access to the railroad and to operate the train, the NCDOT proposes an incremental plan to develop passenger rail service to Western North Carolina.

This incremental approach begins with developing an Amtrak thruway bus service that would provide a temporary transportation connection to Western North Carolina while work begins to reestablish passenger train service. Developing another transportation alternative for the Western North Carolina region via thruway bus service and redeveloping existing stations will help promote economic development in the region and build a solid foundation for the return of passenger train service to Asheville.

The thruway bus would connect with current Amtrak service via the *Piedmont* and *Carolinian* in Salisbury and stop at each of the proposed stations: Statesville, Hickory, Valdese, Morganton, Marion, Black Mountain, Old Fort and Asheville. Bus service also could continue on from Asheville to Knoxville, providing the only link to Amtrak service from eastern Tennessee. Any Amtrak Thruway service would be coordinated and incorporated into the NCDOT's new intercity bus program. Once passenger rail service begins, bus service can be modified to bring passengers from outlying locations to the train stations. Incorporating bus services also would allow the stations to serve as multi-modal hubs, working toward a truly integrated transportation system. Costs to implement thruway bus service range from \$264,625 to \$268,275 annually. The lower estimate assumes a typical Greyhound bus while the higher estimate allows for a specially designed bus, similar to rail coaches with additional legroom and two sets of facing seats for families traveling together.

During this first phase, the NCDOT also would begin acquiring property or arranging long-term lease agreements for eight station sites: Statesville, Hickory, Valdese, Morganton, Marion, Black Mountain, Old Fort and Asheville. The department would begin rehabilitating six of those stations (all except Asheville and Valdese) to accommodate Amtrak Thruway bus passengers and future rail passengers and incorporate other community uses (see appendix). Already, \$5,777,000 in Transportation Enhancement funds has been dedicated to renovate the six historic stations. Work would include complete building renovation and parking improvements. Total cost for the first phase of historic station renovation work and property acquisition is an estimated \$5,769,305. Property costs for the new stations in Asheville and Valdese is an estimated additional \$320,000.

During the second phase, the department would begin negotiating an operating agreement with Norfolk Southern (NS) and Amtrak. The NCDOT would begin work with the railroad to make track improvements to enhance safety and capacity in order to efficiently accommodate both freight and passenger trains on the Salisbury to Asheville line. The NCDOT estimates these capital costs at \$22,443,000 (\$161,460 per mile). Improvements may include super-elevating portions of track to improve travel time, adding modern signals to accommodate traffic increases and building or lengthening sidings to provide room for trains to pass each other. Also in this phase, the department would complete designs for new stations in Valdese and Asheville and to expand Salisbury's station for an estimated \$465,250.

In the third phase, the NCDOT would build boarding platforms at the seven historic stations, construct new stations (including platforms) in Valdese and Asheville and remodel the Salisbury station for a total estimate of \$6,152,850.

The NCDOT would begin refurbishing passenger train equipment for the service in the fourth phase. Design specifications for rebuilding two coaches, a baggage car, a food service/lounge car and a combination coach/baggage car already have been completed. These railcars would operate as part of a pool of equipment – also used to provide daily *Piedmont* service. Rebuilding the used train equipment and purchasing a used locomotive should take about two years and cost an estimated \$5,906,250. While purchase of a new locomotive would add \$1 million to the overall equipment cost, the NCDOT recommends buying a new locomotive based on prior operating experience. Also, the department would renovate an equipment maintenance facility at the North Carolina Transportation Museum in Spencer for \$425,000.

Recruiting and training crews to operate the train is the final step before beginning passenger rail service to Western North Carolina. Training costs are an estimated \$267,000.

Recommended Schedule to Implement Western North Carolina Passenger Train

Phase 1	Cost	(Fiscal Years) Timeframe
♦ Operate Amtrak Thruway Bus Service	\$264,625- 268,275*	2002-2004
♦ Acquire property and renovate 6 historic stations (Statesville, Hickory, Morganton, Marion, Old Fort, Black Mtn.)	\$5,769,305	2000-2003
♦ Acquire property for Asheville and Valdese stations	\$320,000	2000 – 2003
Phase 2		
♦ Begin negotiations with NS/Amtrak for operations	no associated costs	2002
♦ Design 2 new stations and remodeling for 1 station (Asheville, Valdese & Salisbury)	\$465,250	2003
♦ Make needed track improvements	\$22,443,000	2003- 2004
Phase 3		
♦ Construct platforms/make track improvements at 6 stations (Statesville, Hickory, Morganton, Marion, Old Fort, Black Mtn.)	\$1,720,330	2003- 2004
♦ Construct stations and platforms for Asheville and Valdese, Make station, track and platform improvements in Salisbury	\$4,432,520	2004-2005
Phase 4		
♦ Rehabilitate 5 used rail cars; purchase 1 new locomotive	\$6,906,250	2004 –2005
♦ Build maintenance facility at the NC Transportation Museum in Spencer	\$425,000	2004 – 2005
Phase 5		
♦ Recruit and train crews	\$267,000	2004 –2005
♦ Operate passenger trains	\$1.7 - 2.5 million* (4-day cost – daily cost)	2005

* *Indicates annual costs*

Performance Measures

While there has been widespread interest and community support for re-establishing passenger rail service to Western North Carolina, to justify the state investment that is needed, the service must be cost-effective, serve a fundamental transportation purpose and be used on a regular basis. This can be particularly challenging in areas such as North Carolina's western counties, which have a low population density.

Two criteria—cost recovery and ridership—are widely used nationwide to measure passenger train performance and have been selected to measure the performance of restored train service to Western North Carolina and provide benchmarks for local communities to promote and preserve the service.

While all forms of transportation receive some public subsidy for capital, operations and/or maintenance, to be cost-effective, public transportation services should offset a significant amount of their operating costs through fare box revenues. Yet in a moderately populated region which has not had passenger rail service in nearly 30 years, generating public awareness to sustain use of the service could prove challenging and take time. Implementing a thruway bus service first will build further support for future passenger rail service while establishing a base of ridership. Once passenger train service to Western North Carolina has been operating for three years, it should have achieved a revenue-to-cost ratio of 25 percent. It should be noted, however, that some costs – such as Amtrak operating costs and track usage fees – are not under direct control of the state.

The annual number of passengers is the other measure for successful passenger train service. Western North Carolina should attract a daily average of 35 passengers per train mile traveled after the first three years. This average passenger load standard should increase to 55 passengers per train mile after five years and 75 passengers per train mile after ten years.

Performance measures, which set ridership and cost-recovery expectations, will help the state develop a passenger train service that not only serves the traveling public but also proves cost effective in its operation.

Appendix: Projected Capital Costs

Stations

The train station marks the beginning and end of each passenger's trip and serves as a gateway to the community. As part of the evaluation for rail passenger service to Western North Carolina, the NCDOT worked with representatives from nine communities along the route to evaluate seven historic stations and two new station sites and identify basic improvements necessary for each location.

Together the NCDOT, consultants and local representatives determined that each station should include – at a minimum - a 20-passenger waiting room, accessible restrooms, a 300-foot boarding platform and 20-30 parking spaces. In addition, the design teams proposed that each station incorporate a community use - such as a visitors center, museum, offices, bakery or community meeting room - to offset on-going maintenance costs and allow the stations to fulfill some important local needs. Shared use at the stations also will enhance the train passenger's travel experience and offer additional security.

Already \$5.7 million in Federal enhancement funds is included in the draft 2002-2008 North Carolina Transportation Improvement Plan to acquire property and restore six historic train stations along the Salisbury to Asheville route. An additional \$3.7 million in state highway funds is proposed to purchase property and develop new train stations in Valdese and Asheville.

Salisbury

The City of Salisbury began work in the 1980s to raise money to renovate the 1908 mission-style station. The NCDOT contributed more than \$1 million towards the project; renovation work began in 1991 and was completed in 1997. The station now includes offices for the Historic Salisbury Foundation, a large meeting room leased for receptions and community events and a recently renovated waiting room for 20 train passengers.

Additional renovations will be needed to accommodate passenger rail service to western North Carolina. Plans call for expanding the passenger waiting room into a full-service station that would include a ticket office and checked baggage service. Also, parking spaces would be added to handle additional traffic and new trackside platforms would be built to allow passengers to transfer between trains going to the mountains and trains running along the east coast. The new service would require some improvements to existing tracks, signal systems and switches.

Proposed: Expand waiting room to accommodate 40 passengers, a full-service ticket office, checked baggage service and restrooms; build boarding platform and another track

Other uses: Community meeting room, office space

Estimated cost: \$1,782,716



Historic Salisbury Depot

Statesville

Historic Downtown Statesville, Inc. purchased, relocated and completely renovated the 1911 historic Statesville station in 1997 to preserve the building and accommodate future train service to Western North Carolina and commuter train service to Charlotte. The building is now used as a visitor's center, for community meetings and for Historic Downtown Statesville, Inc. offices.



Historic Statesville station

The existing portico on the east end of the building would be extended and enclosed to provide a passenger waiting room for train and bus patrons. A boarding platform and parking lot also would be built. Historic Downtown Statesville will continue to own and occupy the station, including the visitor's center.

Proposed: Build 20-passenger waiting room, restrooms, boarding platform, parking lot

Other uses: Visitors center, offices

Estimated Cost: \$1,310,000

Hickory

The 1912 station is owned by the City of Hickory, which leases it to a successful Mexican restaurant. A modern kitchen, dining room and covered patio have been added to the original station.

About half of the existing historic station would be renovated to accommodate train passengers and inter-city bus patrons. A city bus terminal is located across the tracks from the station, providing a convenient inter-modal transfer. A police substation also would be added as part of the building renovations. The remainder of the station, as well as all of the modern additions, would continue to be used as a restaurant. The existing parking lot would be reconfigured to accommodate station parking and a passenger drop-off lane. A dedicated pull-off lane for Greyhound and/or regional bus service would be constructed on an adjacent street.

Proposed: Redevelop to include 20-passenger waiting room, restrooms, boarding platform, drop-off lane

Other uses: Restaurant, police substation

Estimated cost: \$604,530

Valdese

While currently there is no station in Valdese (the original station was razed in the 1970s), plans call for a new station that would replicate the architectural style of the historic building on the original site. Property must first be acquired or leased from Norfolk Southern to accommodate the new station.

Plans call for a new building that would include a 20-passenger waiting room in one half of the building and a bakery in the other half. In addition, the project would include a boarding platform, 31 new parking spaces and a bus drop-off lane along the adjacent street. The cost of the bakery and its parking lot is excluded from the project cost.

Proposed: Build station to include 20-passenger waiting room, restrooms, boarding platform, 31 parking spaces
Other uses: Bakery
Estimated cost: \$697,247

Morganton

Originally built in 1908, the Morganton station has been vacant since 1997; Norfolk Southern owns the underlying property and the historic building. Due to severe deterioration, the station's interior and exterior must be fully renovated. Property must first be acquired or leased from Norfolk Southern for the station and parking.

Plans call for renovating the existing building to include a 20-passenger waiting room and restrooms as well as a Welcome Center. In addition, a new boarding platform and additional parking would be added. The City of Morganton proposes to keep the Welcome Center open on a regular basis for both train passengers and other visitors.

Proposed: Renovate building to include 20-passenger waiting room, restrooms, boarding platform, add 7 parking spaces
Other uses: Welcome Center
Estimated cost: \$716,051

Marion

Originally built as a freight depot in 1935, the Marion station includes a 1950 addition built to accommodate rail passengers. The old depot, which remains vacant, is owned by Norfolk Southern and located on the railroad right-of-way. The historic station must be moved off the railroad right of way to prevent interference with future freight storage tracks. The proposed station site includes two buildings currently occupied by two active businesses. Both businesses would need to be relocated and the buildings torn down to make room for the station.

The renovated station would include a 20-passenger waiting room in one half of the building with space available for offices, a visitor's center or some other use in the remaining half. In addition, a new parking lot with 11 spaces would be built, as well as a connecting walkway to access the adjacent municipal parking lot (which has 66 spaces).

Proposed: Relocate and renovate station to include 20-passenger waiting room, restrooms, boarding platform, 11 new parking spaces
Other uses: A specific community use has not been identified, but the available area could easily accommodate a visitor's center, non-profit agency, or private enterprise.
Estimated cost: \$1,983,259

Old Fort

Old Fort's 1890 historic passenger and freight station is currently being used as a local railroad museum and community meeting room for civic events. Plans call for renovating the building and moving the railroad museum into the freight section. The passenger area would be renovated and returned to its original use.

Because the building and property are owned by Norfolk Southern, the property would need to be acquired or leased long term. Additional improvements will be needed to improve safety, drainage and accessibility. The renovated station would contain a 20-passenger waiting room. A new freight siding would be constructed east of the station and a 22-space parking lot would be constructed where the current siding is.

Proposed: Renovate to include 20-passenger waiting room, boarding platform, restrooms,
22 parking spaces

Other uses: The railroad museum would continue to operate in the former freight section

Estimated cost: \$1,574,431

Black Mountain

The historic 1908 station and property are owned by Norfolk Southern and leased to the Old Depot Association, a non-profit organization which saved the station from demolition, partially restored it, and has maintained it since the 1970s.



Historic Black Mountain station

Due to the constricted site, the station would need to be relocated to improve safety, drainage and parking. A 35-space parking lot will be constructed beside the relocated station.

Two different options for the station floor plan have been developed in cooperation with local representatives. The first accommodates the Old Depot Association in half of the station and a 20-passenger waiting room in the other half. The second option uses the entire station for passenger rail service, with a separate office to accommodate an Old Depot Association staff person, Welcome Center, or other use.

Proposed: Relocate and renovate station to include 20-passenger waiting room, restrooms, boarding platform, 35 parking spaces

Other uses: Old Depot Association Office

Estimated cost: \$1,301,367

Asheville

Two passenger train stations originally served the Asheville region: the one near downtown Asheville was demolished in 1964; the other in Biltmore Village is now privately owned and houses a restaurant. To involve the community in the station location process, the NCDOT worked with a locally appointed task force to evaluate and identify possible sites for a new Asheville passenger train station. The task force helped to identify service requirements and operating characteristics of the station and selected five sites to be considered in the study. The Decatur Street site near the old Biltmore Station was selected because of its close proximity to the Biltmore Village, ample room for parking and its ideal location to accommodate passenger trains with minimal conflicts with freight train operations.

The new full service passenger train station, to be built across the tracks from the historic Biltmore Village station, would include a ticket office, a 25-50-passenger waiting room, restrooms, baggage and mailrooms and Amtrak crew facilities. The new parking lot would accommodate 75 parking spaces and space for taxis, buses and shuttles. In addition, a new platform, canopy and service track would be built. Also, pedestrian access will be improved to provide safe access to and from Biltmore Village.

Proposed: Construct station with 25-50-passenger waiting room, restrooms, boarding platform, 75 parking spaces

Other uses: Unknown at this time; could include a visitor center, retail shops or other transit services

Estimated cost: \$2,737,800

Equipment

The Salisbury - Asheville train would generally consist of one locomotive, a combination coach-baggage car, and one or two long distance coaches that would connect through to a New York-bound train. As traffic demand grows and to accommodate more passengers during peak travel seasons, additional cars including a cafe lounge could be added to the train. The NCDOT currently has a sufficient number of railcars that could be rebuilt for use in Western North Carolina service; however, an additional locomotive would need to be purchased. It will take about two years to refurbish the existing rail cars. It also would take about two years to purchase a new locomotive and up to three years to purchase new equipment.

Equipment	Refurbish Cost	New Cost
1 baggage car	\$ 450,000	\$ 928,000
2 coaches	\$1,500,000	\$3,500,000
1 combination baggage/coach	\$ 700,000	\$1,575,000
1 cafe/lounge car	\$ 675,000	\$1,825,000
1 locomotive	\$1,400,000	\$2,400,000
Parts and supplies (15%)	\$ 708,750	\$1,534,200
Contingency (10%)	\$ 472,500	\$1,022,800
Total Cost	\$5,906,250	\$12,785,000

Support Facilities

Service and maintenance facilities will be needed at each end of the route to support any passenger train operation. The origination and destination points for the service will determine where best to locate any support facility.

Alternates One and Two would require a small service facility in Asheville to clean the train and make minor mechanical repairs. While most of the routine maintenance would be done at the existing rail maintenance facility in Raleigh (which also serves the *Piedmont*), additional staffing would be needed to ensure proper maintenance of the train.

In Alternates Three and Four, equipment could be maintained at the North Carolina Transportation Museum in Spencer, though modest upgrades to the existing facilities and tracks at the museum would be required to service modern passenger trains. Again, major repairs would need to be made at the Raleigh maintenance facility. As in the previous alternates, a small service facility would be needed in Asheville. Alternate Four also would require additional personnel at the Salisbury station to handle switching operations for the dedicated coach that would be transferred from the New York-Atlanta train to the Western North Carolina train.

Support Facility Costs

	Alternative 1 Raleigh - Asheville w/ current conditions	Alternative 2 Raleigh - Asheville w/improved conditions	Alternative 3 Salisbury Asheville – Piedmont connection	Alternative 4 Salisbury Asheville – New York connection
Service Facility	\$375,000	\$375,000	\$425,000	\$425,000
Maintenance Facility daily/4-day	\$324,000	\$324,000	\$624,000 \$356,568	\$774,000 \$481,568

Track Improvements

Norfolk Southern currently operates 13-15 trains daily along the Salisbury –Asheville route. Steep grades along portions of the railroad present significant operating challenges for freight trains. While most of the railroad is single track, there are two small portions of double track (one just west of Salisbury, the other between Salisbury and Statesville) and 22 passing sidings which allow the trains to maneuver around one another.

Major track improvements would be needed to safely and efficiently accommodate both freight and passenger trains and to minimize disruptions to NS freight operations along the Salisbury-Asheville route. Passing sidings would be added or lengthened to allow slower freight trains to enter sidings so that passenger trains may go around them. As part of that work, power switches and train control signals would be installed and crossing signal circuits would be extended. Also, some curved portions of track would be straightened, while others would be super-elevated allowing trains to travel at increased speeds. In addition, improvements would be made at highway-railroad crossings to enhance safety for train passengers, train crews and motorists.

Proposed Track Improvements

<u>Improvement</u>	<u>Cost</u>
• Upgrade/extend 7 passing sidings	\$11,695,000
• Build up to 3 new passing sidings	\$10,363,000
• Super-elevate curves	<u>\$ 385,000</u>
	\$22,443,000

The proposed track improvements would reduce the current travel time by 15 minutes to three hours, 45 minutes between Salisbury and Asheville, thereby optimizing potential ridership and revenue. Additionally, the improvements would increase the capacity of the railroad, provide more reliable passenger train service and result in a safer operating railroad. Total cost of track improvements associated with restoring passenger rail service between Salisbury and Asheville would be about \$22,443,000.