



INDIRECT SCREENING REPORT

STIP Project I-4400 / I-4700

Widening of I-26 from US 25 to I-40

Henderson and Buncombe Counties

Submitted by: HNTB North Carolina, P.C.

Date: November 2013

EXECUTIVE SUMMARY

Project Description

North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program (STIP) Project I-4400 / I-4700 is the proposed widening of Interstate 26 from four lanes to six or eight lanes, or a combination of six/eight lanes. The proposed widening project is 22.2 miles in length and would extend from US 25 south of Hendersonville in Henderson County to I-40 near Asheville in Buncombe County. I-26 serves an important function for western North Carolina and the southeastern United States for the movement of both people and goods. In addition, it provides a connection to I-40, which is the major east-west corridor for the region as well as North Carolina. As a freight corridor, I-26 connects the southeastern United States with the northeast via the connection with I-81 near Kingsport, Tennessee. With its current traffic demand, I-26 is approaching capacity and is anticipated to operate over capacity by design year 2040. The purpose of the proposed project is to reduce congestion, with a goal of achieving an overall level of service (LOS) D in the design year (2040), and improve the pavement structure in order to improve existing and projected roadway capacity deficiencies and improve insufficient pavement structure and deteriorating existing road surface conditions.

Community Context

Land use throughout the Future Land Use Study Area (FLUSA) is mixed, consisting of large residential areas, commercial nodes, industrial areas, and agricultural tracts. Residential areas generally consist of single-family homes on individual parcels or within subdivisions. Commercial development is largely concentrated near the I-26 interchanges with US 64, NC 280 (Airport Road), NC 146 (Long Shoals Road), and NC 191 (Brevard Road). A time horizon of 2035 was used in this study as the period across which the potential for indirect and cumulative effects was assessed.

Buncombe County has grown steadily over the past two decades. According to the US Census Bureau, the population of Buncombe County grew by 18.0 percent (1.8 percent annually) from 1990 to 2000, and by 15.4 percent (1.5 percent annually) from 2000 to 2010 (US Census Bureau, www.census.gov, accessed July 2013). Henderson County's population grew by 28.7 percent (2.9 percent annually) from 1990 to 2000, and by 19.9 percent (1.9 percent annually) from 2000 to 2010. Much of Buncombe and Henderson County's growth can be attributed to their location within the North Carolina mountains, a desirable location for retirees, and the service, business, and cultural options associated in Asheville and Hendersonville. In comparison, the State grew 21.4 percent from 1990 to 2000, and by 18.5 percent from 2000 to 2010.

According to the North Carolina Office of State Budget and Management (NCOSBM), the annual population growth rate is expected to increase in both counties over the next two decades (NCOSBM, www.osbm.state.nc.us, accessed July 2013). Buncombe County's population is expected to increase at a rate of 1.1 percent annually between 2013 and 2033, and Henderson County is expected to grow by 0.3 percent annually during the same time period. These decreasing growth rates are in line with the projected trend for a slowing growth rate statewide between 2013 and 2033 (1.0 percent).

Although the Buncombe County planner expects the annual population growth rate across all of Buncombe County to align with the projected annual rate of 1.1 percent predicted by NCOSBM over the next 20 years, he expects growth in the Buncombe County portion of the FLUSA will be slightly higher than the NCOSBM's projections. The Henderson County planner also anticipates a higher annual growth rate for Henderson County as a whole than what has been projected by NCOSBM, and is hopeful that the Henderson County portion of the FLUSA will grow at an annual rate that is slightly higher than that projected by NCOSBM.

Notable Features

Site visits, interviews with local officials, Buncombe and Henderson County GIS data, NCDOT GIS data, and NC OneMap GIS data were used to inventory community facilities along the I-26 project corridor and within the FLUSA. Following is a description of the notable features within the FLUSA in relation to STIP Project I-4400/I-4700.

- The FLUSA is located within the French Broad and Broad River Basins and the I-26 corridor crosses fourteen streams and two rivers within the FLUSA. Within the FLUSA, Hominy Creek, French Broad River, Clear Creek, Devils Fork, Bat Fork, Mud Creek, and Cane Creek are listed on NC Division of Water Resource's 2012 list of 303(d) impaired water bodies. Of these, Hominy Creek, French Broad River, Clear Creek, and Devils Fork are crossed by the I-26 project corridor. In this portion of the FLUSA, French Broad River is also classified as Designated Public Mountain Trout Waters.
- National Wetlands Inventory wetlands appear to be located immediately adjacent to the I-26 corridor in the vicinity of the French Broad River and Mud Creek. Jurisdictional wetland and stream determinations will be documented in greater detail in a Natural Resources Technical Report that will be prepared by NCDOT for STIP Project I-4400/I-4700.
- The Asheville Regional Airport is located nine miles south of Asheville at the I-26 and NC 280 (Airport Road) interchange. Ancillary access to the airport is possible by utilizing Fanning Bridge Road; however there is no direct access to I-26.
- A portion of the Biltmore Estate property, listed on the National Register of Historic Places, is located adjacent to the east side of I-26 and occupies a significant section of the northern portion of the FLUSA from the Blue Ridge Parkway to NC 191/Brevard Road.
- Within the FLUSA, the Blue Ridge Parkway travels for approximately four miles from NC 191 (Brevard Road) easterly to the point where the Parkway crosses Four Mile Branch. The Parkway crosses I-26 but does not have direct access with I-26.
- Just north of Cane Creek, Broadmoor Golf Links is an 18-hole course located on the west side of I-26.
- The Western North Carolina Agricultural Center, owned and operated by the North Carolina Department of Agriculture and Consumer Services, grounds and buildings are along the western side of the I-26 corridor.
- Park Ridge Hospital, located within Henderson County, is adjacent to the I-26 corridor just off of Howard Gap Road.
- Duke Energy (formerly Duke Power and Progress Energy) owns and operates the 376-megawatt coal-fired Asheville Plant, located just east of the I-26 corridor and adjacent to the western side of Lake Julian in Buncombe County.

Results of the ICE Screening Tool Matrix

The purpose of this report is to assess the likelihood of possible indirect effects on land use decisions as a result of the project, as considered in combination with other projects and development actions occurring in the area during the same time period. A FLUSA was delineated as the area that could potentially be indirectly affected as a result of the project in combination with other actions.

Based on the results of the Indirect Effects Screening Matrix, the need for a Land Use Scenario Assessment is "not likely", and there is a low to moderate concern for indirect and cumulative effects as a result of STIP Project I-4400/I-4700. Despite the apparent large amount of available land, local officials suggest there are a number of

constraints to development in the FLUSA, notably natural environmental features and topography, as well as the sizable extent of land occupied by Biltmore Estate in the northern section of the FLUSA. Potential land use effects as a result of the I-4400/I-4700 project are further tempered by the fact that the project is not expected to provide any new access or opportunities for traffic exposure to properties in the FLUSA, and is anticipated to generate marginal travel time savings. The completion of the project is also not anticipated to create any additional land use nodes or generate any added transportation within the study area as a direct result of STIP Project I-4400/I-4700. The extent of potential indirect land use effects as a result of the I-4400/I-4700 project will be largely dependent upon several key variables, including: the future local economy and market for development, public infrastructure projects, as well as the completion of other transportation improvements in the area, particularly the future planned Balfour Parkway and the improvements to Upward Road and Howard Gap Road.

At this time, the necessity for further evaluation of the potential indirect and cumulative effects of the I-4400/I-4700 project remains “possible”. The potential for further indirect and cumulative effects analysis, in the form of a Land Use Scenario Assessment, will be re-evaluated at a later date in the project schedule when variables (nearby transportation projects that are completed or near completion) with the cumulative potential to influence development are more certain. NCDOT is conducting a Regional Cumulative Effects Study (CES) of other planned projects for the Asheville and surrounding areas, and the findings of that report (expected in Spring 2014) will be incorporated into future re-evaluation and analysis of the cumulative effect of STIP Project I-4400/I-4700.

Summary of Findings

STIP Project I-4400/I-4700 is the proposed widening of I-26 from four lanes to six or eight lanes. The proposed widening project is 22.2 miles in length and would extend from US 25 south of Hendersonville in Henderson County to I-40 near Asheville in Buncombe County. The project alternatives currently being considered include the option to widen along the full project corridor to a 6-lane facility asymmetrically at locations that “best fit” the current road way location and surrounding land uses, the option to widen along the full project corridor to a 8-lane facility asymmetrically at locations that “best fit” the current road way location and surrounding land uses, and the option to widen as a hybrid of 6- or 8-lane segments asymmetrically at different locations along the project corridor that “best fit” the current road way location and surrounding land uses. This project would complement other STIP Projects in the provision of greater regional mobility.

Due to the growing and planned expansion of sewer service throughout the FLUSA, relatively economical housing prices, anticipated growth of local jobs in the area, and expected moderate population growth, the local market for development is relatively robust at present. Land use throughout the FLUSA is mixed, consisting of large residential areas, commercial nodes, industrial areas, and agricultural tracts. Commercial development is largely concentrated near the I-26 interchanges with US 64, NC 280 (Airport Road), NC 146 (Long Shoals Road), and NC 191 (Brevard Road). The Buncombe and Henderson County planners expect the I-26 corridor to largely maintain its mix of residential and commercial characteristics, with the exception of potential changes to land uses within the project area in proximity to Upward Road, Howard Gap Road, and the proposed Balfour Parkway. Planners anticipate the improvements to these facilities will entice more use by local travelers and therefore lead to development pressures along these existing facilities, which in turn could lead to more traffic utilizing I-26 in the project corridor.

Based on this assessment of the currently identified project alternatives, the I-4400/I-4700 project is not expected to have a notable indirect effect on land use in the FLUSA. Any direct natural environmental impacts by the project would be addressed through Programmatic Agreements with resource agencies during the Merger and Permitting processes. Developments will be required to follow local, state, and federal guidelines and permitting regulations.

Because few indirect impacts are anticipated, the cumulative effect of this project, when considered in the context of other past, present, and future actions, and the resulting impact on the notable human and natural features, should be minimal. Therefore, contribution of the project to cumulative impacts resulting from current and planned development patterns is expected to be minimal.

Due to the uncertainty in transportation project schedules, and the number of identified variables that could notably affect FLUSA conditions prior to I-4400/I-4700 right-of-way acquisition and project construction, it may be

necessary to re-evaluate the findings of this report, and the need for further ICE analysis in the form of a Land Use Scenario Assessment (LUSA), at a later date in the project schedule.

BASE SCREENING INFORMATION

Existing Conditions

The North Carolina Department of Transportation (NCDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to improve an approximately 22.2-mile section of Interstate-26 by removing and replacing highway pavement, improving existing interchanges that are not being completed as separate STIP projects, and adding additional lanes along I-26. I-26 is a Strategic Highway Corridor. The roadway is important for western North Carolina and the southeastern United States for the movement of both people and goods. In a local function, it serves as the main south-north facility for residents and local businesses as well as providing direct access to the region's airport, Asheville Regional Airport. At the northern end of the project, I-26 provides a connection to I-40, which is the major east-west corridor for the region as well as North Carolina. As a freight corridor, I-26 originates at the nation's fourth busiest container port of Charleston, South Carolina and connects the southeastern United States with the northeast via the connection with I-81 near Kingsport, Tennessee. A project vicinity map is shown on **Figure 1** in **Appendix A**.

Within the project study area, I-26 runs south-north through Henderson and Buncombe Counties as a four-lane, median-divided, full control-of-access facility between US 25 (Exit 54) in Henderson County and I-26/I-40/I-240 (Exit 31) in Buncombe County. This section of I-26 also carries the US 74 designation. The project area includes eleven existing grade-separated crossings and eight existing interchanges. In Henderson County, I-26 has interchanges with US 25, Upward Road (SR 1722), US 64, US 25 (Asheville Highway), and NC 280 (Airport Road). In Buncombe County, I-26 has interchanges with NC 280 (Airport Road), NC 146 (Long Shoals Road), NC 191 (Brevard Road), I-40 and I-240. The Blue Ridge Parkway has a grade-separated crossing, but no direct access. The speed limit of I-26 varies from 65 miles per hour (mph) in southern Henderson County to 60 mph in northern Henderson County up to I-40 in Buncombe County.

With limited alternative south-north routes, automobile and truck-freight through traffic utilizing I-26 are forced to share the facility with local traffic, creating several areas of congestion during peak travel periods on I-26. The I-26 corridor in the study area experiences a seasonal increase in traffic volume during the summer and fall months as tourists visit the region for recreational activities and fall foliage viewing. With the region's topography, national forests, the French Broad River, and the Biltmore Estate property forcing the transportation system to follow river valley basins south of Asheville, constraints are placed on the regional transportation system that limit its expansion as well as making parallel alternate routes or grid patterns difficult to nearly impossible to develop. Other roads located away from the river valley floor are often very steep with sharp curves, have little to no shoulders, and have limited sight distances. The result is that travel of all types is funneled onto the major roadways, creating areas of congestion during peak travel periods. With its current traffic demand, I-26 is approaching capacity and is anticipated to operate over capacity by design year 2040.

The purpose of the proposed project is to reduce congestion, with a goal of achieving an overall level of service (LOS) D in the design year (2040), and improve the pavement structure in order to improve existing and projected roadway capacity deficiencies and improve insufficient pavement structure and deteriorating existing road surface conditions.

Project History

Pursuant to the National Environmental Policy Act (NEPA), an Environmental Impact Statement (EIS) will be prepared for this project. This level of study can generally be classified as a "high" level environmental analysis for the documentation required under NEPA. Conducting this level of analysis and documentation for I-4400/I-4700 was determined following the past history of the project. An Environmental Assessment was completed for STIP I-4400 (the 13.6 mile segment between US 25 and NC 280) in May 2001. A Finding of No Significant Impact (FONSI) was completed in January 2002 and, subsequently, the project was advertised as a Design-Build project by NCDOT. A lawsuit and resulting judgment in 2003 found that NCDOT should conduct a broader analysis of the cumulative

impacts and logical termini, or project limits, of the overall expansion of the I-26 corridor, which was an underlying impetus for conducting a Regional CES. The project was subsequently placed on hold due to financial constraints. However, the growing need for improvements to the I-26 corridor was recognized and the project was reinitiated and included in the Draft NCDOT 2013-2023 STIP. In order to address the 2003 judgment, the NCDOT concluded to combine the analysis of STIP I-4400 with STIP I-4700 (the 8.6-mile segment between NC 280 and I-40) into one comprehensive EIS. The EIS will address logical termini and cumulative effects in accordance with NEPA.

Proposed Modifications

Four alternatives are currently under consideration for STIP Project I-4400/I-4700, which include a No-Build Alternative and three Build Alternatives. The No-Build Alternative would not provide any substantial improvements to the I-26 corridor in the study area, and only typical maintenance activities would be provided along this section of I-26. Although the No-Build Alternative would not reduce congestion, and thereby not meet the project's purpose and need, this alternative is being assessed so as to provide a basis for comparing the adverse impacts and benefits of the detailed study alternatives.

The three Build Alternatives under consideration include "Best Fit" 6-Lane Widening (Build Alternative 1), "Best Fit" 8-Lane Widening (Build Alternative 2), and "Best Fit" Traffic Report Recommendations Widening (Build Alternative 3). Descriptions of these alternatives are as follows:

Build Alternative 1 – "Best Fit" 6-Lane Widening Alternative

Alternative 1 would widen I-26 along the full project corridor to a 6-lane facility asymmetrically at locations that "best fit" the current roadway location and surrounding land uses. "Best Fit" locations would be evaluated and selected to improve the existing highway alignment, minimize impacts, and accommodate maintenance of traffic during construction. The additional traffic lanes would increase capacity and reduce congestion.

Build Alternative 2 – "Best Fit" 8-Lane Widening Alternative

Alternative 2 would widen I-26 along the full project corridor to an 8-lane facility asymmetrically at locations that "best fit" the current roadway location and surrounding land uses. "Best Fit" locations would be evaluated and selected to improve the existing highway alignment, minimize impacts, and accommodate maintenance of traffic during construction. The additional traffic lanes would increase capacity and reduce congestion.

Build Alternative 3 – "Best Fit" Traffic Report Recommendations Widening Alternative

Alternative 3 would widen I-26 as a hybrid of 6- or 8-lane segments at different locations along the project corridor. Widening to 6- or 8-lanes would be asymmetrical at locations that "best fit" the current roadway location and surrounding land uses and as outlined in the traffic report recommendations in specific areas. "Best Fit" locations would be evaluated and selected to improve the existing highway alignment, minimize impacts, and accommodate maintenance of traffic during construction. The additional traffic lanes would increase capacity and reduce congestion.

The 2013-2023 Draft NCDOT STIP indicates that right-of-way acquisition is funded for the I-4400 section and scheduled to begin in Fiscal Year 2018, with construction partially funded and scheduled to begin in Fiscal Year 2020. The 2013-2023 Draft STIP also indicates that right-of-way acquisition and construction for the I-4700 section of the project are partially funded and scheduled to begin in Fiscal Years 2018 and 2020, respectively.

Major Regional Connecting Routes

Interstate-26 interchanges with I-85 in Spartanburg, South Carolina, as it continues on to the port of Charleston, South Carolina, and with I-40 in Asheville, North Carolina, on its way to I-81 near Kingsport, Tennessee. I-26 interchanges with US 25, which serves the region as a north-south connection between Asheville, North Carolina, and Greenville, South Carolina and US 64, which serves the region as an east-west connection between I-77 in Statesville, North Carolina, and I-75 near Chattanooga, Tennessee. The intersecting of I-26 and I-40 in Buncombe County form the center of the region's transportation system. These two important freeways interconnect the region and carry the highest percentage of trips passing through the area, while their locations in proximity to

populated areas, commercial areas, and the Asheville Regional Airport also serve a significant portion of the local travel demands.

Future Land Use Study Area

The FLUSA is the area surrounding a construction project that could possibly be indirectly affected by the actions of others as a result of the completion of the project and combined projects. The FLUSA generally extends approximately one to two miles from the project corridor. Since population and economic variables were important factors in determining potential indirect and cumulative effects for this project, the FLUSA follows US Census Block Group boundaries (2010) to the greatest extent practicable. It is generally bound by:

- US 19, Norfolk Southern Railroad, Canie Creek, Hominy Creek, the French Broad River, the Swannanoa River, and various US Census block group boundaries to the north;
- US 25, Norfolk Southern Railroad, Cane Creek, Howard Gap Road (SR 1006), Hutch Mountain Road (SR 1556), Locust Grove Road (SR 1528), McMinn Road (SR 1617), Clear Creek Road (SR 1622), Sugar Loaf Road (SR1734), Blue House Road (SR 1735), Upward Road (SR 1783), Deep Gap Road (SR 1799), and various US Census block group boundaries to the east;
- Polk County, the Green River, and Pot Shoals Road (SR 1836) to the south; and
- US 176, King Creek, Bat Fork Creek, Mud Creek, Stoney Mountain Road (SR 1383), NC 191, the French Broad River, the Buncombe & Henderson county line, Pennsylvania Road (SR 3492), Avery Creek Road (SR 3486), and NC 112 to the west.

The FLUSA encompasses all of the areas examined for potential increases in development pressure as a result of project construction and other foreseeable projects in the area. The area outlined in pink on **Figures 2A, 2B, and 2C**, located in **Appendix A**, has been identified as the FLUSA.

Time Horizon

This report analyzes growth trends and potential development between now and the year 2035. Establishing 2035 as the horizon year is consistent with the planning horizon used for the French Broad River Metropolitan Planning Organization's (FBRMPO) current comprehensive planning efforts, *Comprehensive Transportation Plan for French Broad River MPO and Rural Areas of Buncombe and Haywood Counties (Final Report January 18, 2008)* and *FBRMPO 2035 Long Range Transportation Plan (LRTP)*, and population projections provided by the NCOSBM.

Other Transportation and Infrastructure Projects

This section provides a description of major transportation and infrastructure projects in the FLUSA, or in relative proximity, that are either underway at present or likely to occur in the foreseeable future (e.g. funded or being planned with a definite funding stream). This includes other NCDOT projects, local transportation projects included in the *FBRMPO 2035 LRTP* and *FBRMPO Metropolitan Transportation Improvement Program for FY 2011-2020*, and other local infrastructure projects. These projects are shown on **Figures 2A, 2B, and 2C**.

NCDOT Projects

Eight NCDOT STIP projects are located in proximity to the I-4400/I-4700 project. STIP Project I-2513 (I-26 Connector) would tie into the northern terminus of STIP Project I-4700 in Asheville at the I-26/I-40/I-240 interchange. The Asheville Connector is a proposed widening and new location multilane interstate highway project to connect I-26 from the I-26/I-40/I-240 interchange southwest of Asheville to US 19-23-70 north of Asheville. This new interstate will be designated as I-26 and will connect existing I-26 with I-81 south of Kingsport, Tennessee. Although the project is currently unfunded, the project website indicates that right-of-way acquisition and construction are scheduled to begin in 2018 and 2020, respectively (www.ncdot.gov/projects/search/details.html?id=1495, accessed March 2013).

Located north of STIP Project I-2513 (I-26 Connector), STIP Project A-10A also proposes improvements to the I-26 corridor. STIP Project A-10A begins at the northern terminus of the I-26 Connector project and continues to the SR 2148 (Stockton Bridge Road) interchange, just south of the Buncombe County/Madison County border. This

project includes 12 miles of Interstate, nine interchanges, and no weigh stations, rest areas, or future interchanges. The project includes redesigning the corridor to meet Interstate Standards and portions of the corridor would be widened to accommodate the growing traffic volumes. According to the LRTP, the project is planned to begin as a Tier II (2016-2025) project and be completed in Tier III (2026-2035). The LRTP designated the southern portion of the project, through the US 25 interchange, as being widening to six lanes, while the remaining portion is anticipated to remain a four-lane freeway. In the event that the no-build alternative is selected for STIP Project I-2513, or the project no longer is financially viable, the southern terminus of the A-0010A project would be at I-240 and would include construction between I-240 and SR 1477 (Draft FBRMPO Interstate System Study: Study Approach, URS Corporation, May 2013).

STIP Project B-5178 is the replacement of Bridge Nos. 235 and 238 on I-26 over Pond Road (SR 3431) and Hominy Creek. This project is located in Buncombe County just south of the I-26 interchange with I-40/I-240 and is currently under construction. According to NCDOT's website for STIP Project B-5178, the project is scheduled to be complete in 2016 (www.ncdot.gov/projects/search/details.html?id=519, accessed March 2013).

STIP Project I-5501 proposes to retrofit the existing I-26/NC 280 interchange in Buncombe County to a diverging diamond interchange configuration. The project website indicates that the project is funded with right-of-way acquisition currently in progress and construction scheduled to begin in September 2013 (www.ncdot.gov/projects/search/details.html?id=1721, accessed March 2013).

STIP Project I-5504 is the proposed modification to the I-26/NC 191 (Brevard Road) interchange in Buncombe County within the Direct Community Impact Area, which includes improvements to the traffic operations and access control along NC 191. NCDOT's *Draft 2013-2023 STIP* indicates that this project is currently programmed for planning and environmental study only, and right of way acquisition and construction are currently unscheduled.

Just parallel to I-26, STIP Project R-5207 is the proposed upgrade to approximately seven miles of Howard Gap Road (SR 1006) in Henderson County from Jackson Road (SR 1539) in Fletcher to US 64 near Hendersonville. The project will widen the existing two-lanes to 12-foot lanes, add bike lanes, improve the road geometry (curves and vertical changes), replace four bridges, and add turn lanes at several key intersections. According to NCDOT's project website, STIP Project R-5207 is currently under construction and scheduled to be complete in 2015.

STIP Project B-5409 is the proposed replacement of Bridge No. 58 on Mid Allen Road (SR 1893) over Devils Fork Creek near Hendersonville. This project is located just east of the I-26 corridor. Based on the project website, right-of-way acquisition and construction are scheduled to begin in 2017 and 2018, respectively (www.ncdot.gov/projects/search/details.html?id=624, accessed March 2013).

Located in the southern portion of the project area near Flat Rock, STIP Project R-4430 is the widening and improvement of Upward Road (SR 1783) from US 176 to Howard Gap Road (SR 1006). Upward Road currently has an interchange with I-26. STIP Project R-4430 is currently under construction and scheduled to be complete by August 2013.

French Broad River MPO 2035 Long Range Transportation Plan

The FBRMPO, serving the urbanized areas of Buncombe, Haywood, and Henderson Counties, is the federally required transportation planning agency charged with conducting a Comprehensive, Continuing, and Cooperative transportation planning process for the region. The 2035 LRTP was adopted by the FBRMPO in September 2010 and addresses all surface transportation modes, including highways, railways, public transportation, bicycle and pedestrian infrastructure, as well as connections to aviation. The time horizon for this LRTP is 2010 to 2035.

The LRTP's transportation project recommendations are prioritized into three tiers – Tier I (2011 to 2015), Tier II (2016 to 2025), and Tier III (2026 to 2035). These projects within or in proximity to the FLUSA include (projects within each Tier are not listed in priority order):

Tier I (2011 to 2015)

- STIP Project R-4430 – see description above;
- STIP Project R-5207 – see description above;
- I-26 Asheville to Hendersonville – Comprehensive, multi-modal corridor study for I-26 (area covered by I-4400/I-4700), planning funding only;
- STIP Project I-2513 – Non-loop portion (see description above).

Tier II (2016 to 2025)

- STIP Project I-2513 – Local equity formula funds to supplement loop funding;
- STIP Project I-4400 – From NC 280 to US 25, widen to six lanes or other appropriate treatment as determined by corridor study;
- STIP Project A-10AA – Future I-26 (US 19/23), upgrade to Interstate standards north of I-240 in Asheville to US 25;
- STIP Project R-2813A (Buncombe County) – Long Shoals Road, widening to NC 191;
- Express Bus to Hendersonville (Buncombe and Henderson Counties) – Purchase commuter bus for express service between Hendersonville and Asheville.

Tier III (2026 to 2035)

- STIP Project I-4700 – I-26 from I-40 to NC 280, widen to six lanes or other appropriate treatment as determined by corridor study;
- STIP Projects A-10AB and A-10BC (Buncombe and Madison Counties) – Future I-26, upgrade to interstate standards from US 25 to SR 2148 (Stockton Branch Road);
- STIP Project U-3403 (Buncombe County) – NC 191, widening and improvements from NC 280 to the Blue Ridge Parkway;
- FS 1214-B Proposed Balfour Parkway (Henderson County) – Construct a new four-lane expressway (6.7 miles) from NC 191 (Brevard Road) north of Stony Mountain Road (SR 1383) to US 64, north of Nix Road (SR 1513) in Hendersonville. This project proposes a new interchange along I-26 in Henderson County just north of US 64.

Population Trends & Projections

Buncombe County has grown steadily over the past two decades. According to the US Census Bureau, the population of Buncombe County grew by 18.0 percent (1.67 percent annually) from 1990 to 2000, and by 15.5 percent (1.45 percent annually) from 2000 to 2010 (US Census Bureau, www.census.gov, accessed July 2013). Much of Buncombe County's growth can be attributed to its location within the North Carolina mountains, a desirable location for retirees, and the service, business, and cultural options associated in and around Asheville. Henderson County's population grew by 28.7 percent (2.56 percent annually) from 1990 to 2000, and by 19.7 percent (1.81 percent annually) from 2000 to 2010. Much of Henderson County's growth can also be attributed to its location within North Carolina mountains, a desirable location for retirees, and the service, business, and cultural options associated in Hendersonville and north in Asheville. In comparison, the State grew 21.4 percent from 1990 to 2000, and by 18.5 percent from 2000 to 2010.

According to the NCOSBM, the annual population growth rate is expected to increase in both counties over the next two decades (NCOSBM, www.osbm.state.nc.us, accessed July 2013). Buncombe County's population is expected to increase at a rate of 1.1 percent annually between 2013 and 2033, and Henderson County is expected to grow by 0.3 percent annually during the same time period. These decreasing growth rates are in line with the projected trend for the slowing growth rate statewide between 2013 and 2033 (1.0 percent).

Although the Buncombe County planner expects the annual population growth rate across all of Buncombe County to align with the projected annual rate of 1.1 percent predicted by NCOSBM over the next 20 years, he expects growth in the Buncombe County portion of the FLUSA will be slightly higher than the NCOSBM's projections. The

Henderson County planner also anticipates a higher annual growth rate for Henderson County as a whole than what has been projected by NCOSBM, and is hopeful that the Henderson County portion of the FLUSA will grow at an annual rate that is slightly higher than that projected by NCOSBM.

Population growth rates are not anticipated to be affected by the construction of STIP Project I-4400/I-4700, as the proposed widening project will not increase exposure to adjacent parcels and access to those parcels would not increase. However, the population in the FLUSA may change with the continuing migration of retirees and others who locate to the Asheville and Hendersonville areas. As such, residential development may become attracted to the I-4400/I-4700 project area, therefore, potentially increasing the population growth rate in the FLUSA.

Job Trends & Projections

Data from the North Carolina Department of Commerce - Division of Employment Security (DES) indicates that Buncombe County and Henderson County gained jobs at an annual rate of 9.9 percent and 12.6 percent, respectively, between 2001 and 2011. The DES also produces labor projections for the Workforce Development Boards (WDB) in North Carolina. The DES predicts a 0.9 percent annual increase in jobs between 2008 and 2018 in the four-county Mountain Area WDB (Buncombe County, Henderson County, Madison County, and Transylvania County). Job projections beyond the year 2018 were not available at the time of this assessment.

Much of the existing land in the FLUSA is zoned for a variety of uses, including residential, commercial, light industrial, institutional, and agricultural uses. There are sparse and few vacant or undeveloped tracts of significant size within the immediate project area. Within the FLUSA area, there are more opportunities for development in the areas of Fletcher and Arden. According to discussions with local planners (**Appendix B**), Buncombe County indicates that it anticipates continued growth within the Arden area due to the area's good access to four-lane facilities (US 25/25A and I-26), as well as reasonable first-home housing prices and other amenities such as retail, restaurant, and parks and recreational resources. Henderson County notes that much of the county's previous growth occurred in Fletcher and eastern and southern Henderson County, due in part to Fletcher's accessibility and proximity to both Hendersonville and Asheville and the gentle and most easily converted terrain from forest and farmland to that needed for residential development.

Job growth rates are not anticipated to increase as a result of STIP Project I-4400/I-4700, as the project does not propose to increase, or provide a new level of, traffic exposure or access for any properties in the FLUSA. The annual job growth rate may however be affected by the continuing migration of retirees and others who locate to the Asheville, Hendersonville, and surrounding areas. As such, commercial development may become attracted to the I-4400/I-4700 project area, therefore potentially increasing the job growth rate in the FLUSA. Buncombe County anticipates that employment growth may be slightly higher in the southern portion of the county in the FLUSA area (i.e. Arden) due to the anticipated residential growth in that area. Henderson County anticipates that, given the existing economic situation and the dramatic loss in jobs between 2007 and 2010, no to minimal employment growth over the near future for Henderson County.

Notable Environmental Features

Below is a description of both the notable natural and human environmental features located within the FLUSA. The features in this section are identified using GIS data from NCDOT, Buncombe County, Henderson County, NC One Map, NC Division of Water Resources (NCDWR), US Fish and Wildlife Service (USFWS), ESRI, site visit observations, and interviews with local planners. These features are shown geographically on **Figures 2A, 2B, and 2C**.

Land use throughout the FLUSA is mixed, consisting of large residential areas, commercial nodes, industrial areas, and agricultural tracts. Residential areas generally consist of single-family homes on individual tracts or within subdivisions. Commercial development is largely concentrated near the I-26 interchanges with US 64, NC 280 (Airport Road), NC 146 (Long Shoals Road), and NC 191 (Brevard Road). Notable agricultural uses in Buncombe County include hay production (24th in the state), vegetables, fruits, nuts, and berries (25th in the state), and livestock including milk cows (11th in the state) and beef cows (17th in the state). Notable agricultural uses in Henderson County include nurseries, greenhouses, floriculture, and Christmas trees (2nd in the state), vegetables,

fruits, nuts, and berries (3rd in the state), and livestock including milk cows (8th in the state) (www.ncagr.gov/stats/codata/, accessed July 2013).

Natural Environment Features

The FLUSA is located within the French Broad and Broad River Basins and contains a total of sixty-one streams and rivers that traverse within these basins. The I-26 corridor crosses fourteen streams and two rivers within the FLUSA – Hominy Creek, Long Valley Branch, Dellwood Lake, French Broad River, Ducker Creek, Powell Creek, Kimsey Creek, Cane Creek, Byers Creek, Featherstone Creek, Clear Creek, Devils Fork, Dunn Creek, Beck Creek, Hill Branch, and Green River. These streams are classified by the NCDWR as Class C. Accordingly, they are designated for secondary recreation, fishing, wildlife, fish consumption, aquatic life propagation, survival and maintenance of biological integrity, and agriculture. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner.

Beck Creek, Hill Branch, and Green River have the NCDWR supplemental classification of Trout Waters (TR). The TR classification is described as intended to protect freshwaters which have conditions which shall sustain and allow for trout propagation and survival of stocked trout on a year-round basis. This classification is not the same as the NC Wildlife Resources Commission's (NCWRC) Designated Public Mountain Trout Waters designation. However, Beck Creek, Hill Branch, and Green River are south of the I-4400/I-4700 project terminus at US 25, and are not within the project corridor.

As indicated by NCWRC data, there are instances of Designated Public Mountain Trout Waters within the FLUSA. Just north of Fletcher and east of US 25, but just west of a Norfolk Southern rail line, Pinner Creek and one unnamed tributary are classified as Designated Public Mountain Trout Waters. In this portion of the FLUSA, French Broad River is also classified as Designated Public Mountain Trout Waters. Just east of US 25 and north of US 64, near Fruitland Road, there is an unnamed tributary to Harper Creek that is classified as Designated Public Mountain Trout Waters. In the extreme southern portion of the FLUSA, south of the I-4400/I-4700 project terminus, Laurel Branch, Laurel Creek, Beck Creek, Hill Branch, Jones Branch, Mill Creek, the Green River and one unnamed tributary, and the Hungry River and two unnamed tributaries are classified as Designated Public Mountain Trout Waters. There are no Wild and Scenic Rivers within the FLUSA.

Within the FLUSA seven water bodies are listed on NCDWR's 2012 list of 303(d) impaired water bodies: Hominy Creek (Ecological/Biological Integrity Benthos), French Broad River (Turbidity, Fecal Coliform, Ecological/Biological Integrity Benthos and Fishcom), Clear Creek (Ecological/Biological Integrity Benthos), Devils Fork (Ecological/Biological Integrity Benthos), Bat Fork (Ecological/Biological Integrity Benthos and Fishcom), Mud Creek (Ecological/Biological Integrity Benthos and Fishcom), and Cane Creek (Ecological/Biological Integrity Benthos). Of these, Hominy Creek, French Broad River, Clear Creek, and Devils Fork are crossed by the I-26 project corridor.

NC One Map GIS data (www.nconemap.com, February 2012) reveals that North Carolina Department of Environment and Natural Resources (NCDENR) Ecosystem Enhancement Program designated targeted local watersheds (HU Code: 06010105060030, 06010105070040, 06010105050010, 06010105040010, 06010105030030, 06010105030040, and 06010105030020) are present in all but the extreme southern portion of the FLUSA. A targeted local watershed is one that exhibits both the need and opportunity for wetland, stream, and riparian buffer restoration, and receives priority for planning and restoration project funds. A portion of one water supply watershed (WSW) (French Broad River (Asheville), Protected Status, Class WS-IV) is located in the western area of the FLUSA along Haywood Road (NC 191). Two High Quality Water Zones (HQW) and Outstanding Resource Water Zones (ORW) are located within the FLUSA. One zone is east of the I-26 corridor and runs along the Blue Ridge Parkway to just east of the FLUSA boundary. The other zone is just south of the I-4400/I-4700 project terminus at US 25 and runs along the Green River and extending south of the FLUSA.

National Wetlands Inventory (NWI) wetlands are located sparsely throughout the FLUSA and appear to be concentrated along the French Broad River, Cane Creek, Mud Creek, Bat Fork, and the southern and western portion of the FLUSA. Wetlands appear to be located immediately adjacent to the I-26 corridor in the vicinity of

the French Broad River and Mud Creek. Jurisdictional determinations for wetlands and streams will be documented in greater detail in a Natural Resources Technical Report (NRTR) that will be prepared by NCDOT for STIP Project I-4400/I-4700.

Significant Natural Heritage Areas are located within the FLUSA. Mud Creek Oxbow Significant Natural Heritage Area is located west of I-26 off of N Rugby Road. Mud Creek/Hickory Hill Floodplain is located just west of I-26 and adjacent to the west side of Mud Creek. Mud Creek Bridge and Eubank Swamp Remnant/Jackson Park Wetlands are located adjacent to each other running along Mud Creek and Bat Fork and extend west beyond the boundary of the FLUSA. Bat Fork Bog is adjacent to Bat Fork along the western boundary of the FLUSA. East Flat Rock Bog Remnant extends on the eastern and western sides of NC 225 as it runs along Bat Fork. Laurel Branch Creek Gorge/Buckeye Ford extends north of the Green River and extends east and west of Laurel Branch along the southern border of the FLUSA. Green River Gorge and Lower Hungry River Gorge Significant Natural Heritage Areas run along and extend beyond the Green river and the Hungry River along the southern border of the FLUSA. The Cliffeld Mountain/Upper Hungry River Significant Natural Heritage Area runs along the Hungry River in the southeastern section of the FLUSA.

The Pisgah National Forest is comprised of over 500,000 acres, and is primarily a hardwood forest with whitewater rivers, waterfalls and hundreds of miles of trails. This national forest is home of the first tract of land purchased under the Weeks Act of 1911 which led to the creation of the national forests in the eastern United States. It is also home of the first school of forestry in the United States, now preserved at the Cradle of Forestry in America historic site, and boasts two of the first designated wilderness areas in the east. The Pisgah, Grandfather, and Appalachian Ranger Districts are scattered along the eastern edge of the mountains of western North Carolina and offer visitors a variety of opportunities for outdoor recreation and enjoying the natural beauty of the mountains. The western boundary of the FLUSA runs along the eastern boundary of the Pisgah National Forest. Based on NCDOT GIS data, a portion of the NCWRC's Pisgah National Forest Black Bear Sanctuary is adjacent to, but west of, the FLUSA boundary. At the southern end of the FLUSA, a portion of the Green River Game Lands extends north into the FLUSA.

Human Environment Features

The Asheville Regional Airport (AVL) is located nine miles south of Asheville at the I-26 and NC 280 (Airport Road) interchange. Asheville Regional is a class C-3 airport that contains a single 8,000-foot runway with a full parallel taxiway, with future plans to construct a new runway and taxiway, and 163 acres reserved for terminal use. According to the *Asheville Regional Airport Annual Report for FY 2011-2012*, AVL served over 709,000 commercial passengers (<http://flyavl.com/pages/about-the-airport.php>, accessed July 2013). Currently, the airport is updating its master plan to add retail and commercial land uses to its growing property. Direct access to the airport from I-26 is provided at Exit 40, NC 280 (Airport Road). Ancillary access to the airport is possible by utilizing Fanning Bridge Road; however there is no direct access to I-26.

Duke Energy owns and operates the 376-megawatt coal-fired Asheville Plant, located just east of the I-26 corridor and adjacent to the western side of Lake Julian in Buncombe County. The site also includes two combustion turbines capable of producing 324 megawatts. The site incorporates the use of coal ash ponds for the storage of waste left over after burning coal to generate electricity. The ponds and other storage facilities are within 500 feet of the eastern side of the I-26 corridor.

Given that I-26 is an interstate facility, there are no pedestrian or bicycle facilities along the corridor, nor was pedestrian / bicycle activity observed during the site visits. According to data from NCDOT, Designated Bike Routes are present on the following facilities that cross the I-26 corridor: Brevard Road (NC 191), Blue Ridge Parkway (the Mountains to Sea Trail also utilizes this crossing), Long Shoals Road (NC 146), Glen Bridge Road, Fanning Bridge Road, Butler Bridge Road, Brookside Camp Road, Tracy Grove Road, and Crest Road. Based on Google Maps satellite imagery, within the FLUSA sidewalks are located along US 64, Long Shoals Road (NC 146), and a small portion of Brevard Road (NC 191).

The region is a popular tourist destination, as it is home to many points of interest including the 8,000-acre Biltmore Estate that attracts approximately one million visitors a year (www.biltmore.com, accessed June 2013). The Biltmore Estate property covers a significant portion of the northern section of the FLUSA. Biltmore Estate is listed on the National Register of Historic Places and therefore qualifies as a Section 4(f) resource.

Outstanding scenery and recreational opportunities make the Blue Ridge Parkway one of the most visited sections of the National Park System. Within the FLUSA, the Parkway travels for approximately four miles from NC 191 (Brevard Road) easterly to the point where the Parkway crosses Four Mile Branch. The Parkway crosses I-26 but does not have direct access with I-26. At this crossing point, the Mountains to Sea Trail utilizes the Parkway bridge. It is anticipated that the columns supporting the bridge deck are spaced in such a way that they will not accommodate any widening of the I-26 facility. As a result, the bridge has been proposed for replacement by NCDOT, FHWA, and the National Park Service (who will utilize Eastern Federal Lands to design and construct the bridge). The design and methods utilized for the bridge replacement will be discussed in more detail in subsequent technical reports for STIP Project I-4400/I-4700.

Buncombe County has 4 parks within the FLUSA – Buncombe County Sports Park, Rhododendron Park, Shiloh Rec Center & Park, and Julian Park. Buncombe County has four river parks within the FLUSA that provide access to the French Broad River Paddle Trail – Hominy Creek River Park, Bent Creek River Park, Corcoran Paige River Park, and Glen Bridge River Park. Within Buncombe County in the northeastern portion of the FLUSA is located the private Biltmore Forest Country Club, just west of US 25 (Hendersonville Road). Henderson County has 6 parks within the FLUSA – Kunz Park, Kate’s Park, Fletcher Community Park, Berkeley Mills Park, Dana Park, and East Flat Rock Park. There is also one river park that provides access to the French Broad River Paddle Trail – Westfeldt Park. Just north of Cane Creek, Broadmoor Golf Links is an 18-hole course located on the west side of I-26. Given that Broadmoor is a public golf course, it may be a potential 4(f) resource.

The Western North Carolina Agricultural Center, owned and operated by the North Carolina Department of Agriculture and Consumer Services, is the home of the North Carolina Mountain State Fair and other events throughout the year. The grounds and buildings for the center are along the western side of the I-26 corridor, and just south of Fanning Bridge Road.

There are sixteen schools and educational institutions within the FLUSA. Eight of these are located within Buncombe County and eight are located within Henderson County. Of these, only Fletcher Academy (Henderson County) and Blue Ridge Community College (Henderson County) are within ½ mile of the I-26 corridor.

Within the FLUSA in Buncombe County there are thirty-six places of worship. Of these, Sardis United Methodist Church, Biltmore Baptist Church, Blue Ridge Cowboy Church, and Boiling Springs Church are within ½ mile of the I-26 corridor. Within the FLUSA in Henderson County there are thirty-five places of worship. Of these, St. Nicholas Russian Orthodox, Asheville Korean Baptist Church, Mount Sinai Church, Ebenezer Pentecostal Church, Bethel Church, Upward Baptist Church, Pentecostal Holiness Church, Oak Grove Baptist Church, and Ebenezer Pentecostal Church are within ½ mile of the I-26 corridor.

According to data from NCDOT, there are seven cemeteries within the FLUSA. Saint Matthews Cemetery (Brookside Camp Road) is the only cemetery within ½ mile of the I-26 corridor.

Within the FLUSA, there are five fire and EMS facilities located within Buncombe County and six fire and EMS facilities located within Henderson County. Park Ridge Hospital is also located within the FLUSA in Henderson County, and is adjacent to the I-26 corridor just off of Howard Gap Road.

In the extreme northeastern corner of the FLUSA, in Buncombe County, are located the National Register of Historic Places (NRHP) Biltmore Village Cottages. In the northwestern corner of the FLUSA is located the NRHP listed Asheville School. In the center of the northern portion of the FLUSA is the NRHP listed Biltmore Estate. Just to the east of the eastern boundary of the Biltmore Estate are the NRHP listed properties of Gunston Hall, the Judge Junius G. Adams House, and the Thomas Wadley Raoul House. In the Henderson County section of the

FLUSA are located the NRHP listed Ruby Grange house and property, The Meadows house and property, and the Moss-Johnson Farm. The Biltmore Estate and Rugby Grange properties are adjacent to the I-26 corridor.

Within the FLUSA, in Buncombe County, is Lake Julian Park. Based on the National Park Service's online database (<http://waso-lwcf.ncrc.nps.gov/public/index.cfm>), portions of Lake Julian Park were constructed with funds from the Land and Water Conservation Fund (LWCF), which therefore qualifies the park as a Section 6(f) Property. Also within the FLUSA, in Henderson County, Westfeldt Park qualifies as a Section 6(f) Property.

ANALYTICAL SCREENING INFORMATION

Transportation Impact Causing Activities

Travel Time Savings

Interstate-26 is listed as a freeway on the NCDOT 2004 Strategic Highway Corridor Vision Plan, revised July 2008. The studied portion of I-26 measures a distance of 22.2 miles and runs south-north through Henderson and Buncombe Counties as a four-lane, median-divided, full control-of-access facility between US 25 (Exit 54) in Henderson County and I-26/I-40/I-240 (Exit 31) in Buncombe County. This section of I-26 also carries the US 74 designation. The project area includes eleven existing grade-separated crossings and eight existing interchanges. In Henderson County, I-26 has interchanges with US 25, Upward Road (SR 1722), US 64, US 25 (Asheville Highway), and NC 280 (Airport Road). In Buncombe County, I-26 has interchanges with NC 280 (Airport Road), NC 146 (Long Shoals Road), NC 191 (Brevard Road), I-40, and I-240. The Blue Ridge Parkway has a grade separated crossing, but no direct access. The speed limit of I-26 varies from 65 miles per hour (mph) in southern Henderson County to 60 mph in northern Henderson County, into Buncombe County, and up to I-40.

According to NCDOT's Project Level Traffic Forecast Report: TIP Projects I-4400/I-4700/B-5178/I-5501, 2011 annual average daily traffic (AADT) volumes along the I-4400/I-4700 project ranged from 43,600 vehicles per day (vpd) to 74,000 vpd. The 2040 design year traffic volumes along the I-26 project corridor are estimated to range between 70,100 vpd to 90,500 vpd. The report indicates that I-26 in the project corridor in 2011 operated at a LOS C near the project's southern terminus at US 25 to Upward Road, a LOS D from Upward Road to NC 280 (Airport Road), and a LOS F from NC 280 to the project's northern terminus at I-40. The entire segment of I-26 in the project area is expected to operate at a LOS F if no improvements are made in the 2040 design year. With the proposed improvements, it is the goal of the project segment of I-26 to operate at an overall LOS D.

Improvements to I-26 would create increased capacity and enhanced mobility between Hendersonville and Asheville. This is likely to bring about travel time savings as a result of improving the overall LOS along the I-26 corridor within the project area so that users may travel more in line with the posted speed limits; thereby reducing the existing travel time deficit caused by current and projected capacity deficiencies. Local planners do not anticipate that traffic patterns would change appreciably as a result of STIP Project I-4400/I-4700. However, local traffic may be more inclined to use I-26 following construction of the project as opposed to traveling on US 25 or other south-north routes to traverse in the project study area.

Exposure to Traffic

Given that I-26 is an existing facility with control of access, the proposed widening project would not create any new exposure for properties; however, since the project is expected to improve traffic carrying capacity along the studied portion of I-26, south-north mobility is expected to be generally improved through the area. The I-4400/I-4700 project is not expected to directly affect the level of traffic exposure for properties in the FLUSA; however, if local traffic begins to use I-26 more frequently following construction of the project, as projected by local planners, this could indirectly increase the level of traffic exposure for properties along facilities with direct access to the project corridor.

Change in Travel Patterns

Interstate-26 is used both by local residents and travelers through the area. Local planners in both Buncombe and Henderson Counties indicate that many of these local residents who commute within the area utilize either I-26, US 25, or US 25 Alternate as the main south-north routes. The planners suggest that improvements to I-26 along

the project corridor may encourage more commuters and travelers to utilize I-26, however, due to I-26 being located on the far western side of Asheville, many commuters and travelers to downtown Asheville will continue to utilize US 25 and US 25 Alternate to reach their destination. Completion of STIP Project I-4400/I-4700 is not anticipated to significantly alter the travel patterns of area residents or travelers into and through the FLUSA area.

Transportation/Land Use Node

Local planners do not anticipate a substantial change in development patterns in the area as a result of STIP Project I-4400/I-4700. Local planners anticipate that local traffic may be more inclined to use I-26 after it is widened, which may potentially increase development pressure for highway commercial oriented businesses targeting commuter traffic (restaurant, gas station, etc.). However, development in the I-26 corridor area is already occurring at existing interchanges and along their respective crossing routes, and local planners anticipate this development pattern to continue after improvements to the I-26 corridor in the project area.

Water & Sewer Service in the Area

Residents of the Buncombe County portion of the FLUSA currently receive water from the City of Asheville or by private or shared wells. The North Fork Water Treatment Plant built in 1978 and later expanded to a current capacity of 31-million gallons per day, or gpd, operates using a direct filtration process. The William DeBruhl Water Treatment Plant located at Bee Tree Lake operates using the same process as the North Fork Water Treatment Plant-the current capacity is five million gpd. The seven million gpd Mills River Water Treatment Plant was designed to produce drinking water that is comparable to the high quality water that comes from the North Fork Reservoir. After treatment, the water travels through over 1,666 miles of water lines and is stored in 34 reservoirs located throughout the distribution system. Each day, the water system delivers an average of 20.5 million gallons of water to over 125,000 people in Asheville, Buncombe County, and Henderson County. Residents of the Buncombe County portion of the FLUSA receive sewage treatment and disposal from the non-profit, publicly-owned Metropolitan Sewerage District (MSD) of Buncombe County, or by private septic system. The MSD owns, operates, and maintains a 40-million gpd wastewater treatment plant to treat raw sewage and industrial wastewaters collected in an extensive network (approximately 900 miles) of collector sewers currently owned, operated, and maintained by the MSD. The MSD also owns, operates, and maintains approximately 60 miles of interceptor sewers that connect such sewers to the treatment plant. The current service area of the MSD is shown on the map located in **Appendix C**. Buncombe County notes in its *Draft Comprehensive Land Use Plan 2013 Update* the desire to expand the MSD and adopted sewer service extension policies that support the direction and pattern of development recommended in the Comprehensive Land Use Plan. However, the plan also notes that the North Carolina General Assembly has recently adopted legislation requiring the merger of the City of Asheville Water Authority with the MSD. This would potentially result in modified planning for the expansion of water and sewer infrastructure with the County, and the County expects that a modified water/sewerage district boundary may be adopted by MSD as a result of this merger. As of October 2013, the City of Asheville filed a lawsuit in May 2013 challenging the State's measure to transfer the City's water system to the MSD. In October 2013 the parties agreed to let Asheville retain control of the system until a trial court ruling in the case, expected in early 2014 (www.citizen-times.com/article/20131016/NEWS/310160072/, accessed October 2013). The results of this lawsuit will be discussed and incorporated into later technical documents for STIP Project I-4400/I-4700.

Residents of the Henderson County portion of the FLUSA receive water from City of Hendersonville Water and Sewer, City of Asheville, or by private or shared wells. City of Hendersonville Water and Sewer is responsible for providing water service to more than 62,000 residents and businesses of Hendersonville and Henderson County and sewer service to more than 19,000 residents and businesses. The department is also responsible for the operation and maintenance of over 580 miles of water mains, 57 water pumping stations, 24 water storage tanks (ranging in size from 100,000-gallons to 5,000,000-gallons), over 185 miles of sewer mains, and 37 sewer pumping stations. The Cane Creek Water & Sewer District (CCWSD) operates and maintains a public sewer collection system that was established by the Henderson County Board of Commissioners in 1981 for the purpose of providing public sewer to Fletcher, Hoopers Creek, and surrounding areas. The CCWSD currently operates and maintains 62.6 miles of sewer collection lines with 11 pump stations serving 3,013 residential customers, 254 commercial customers, and 6 industrial customers in the Fletcher area, Mountain Home Industrial Park, Broadpointe Industrial Park and a portion of the Mills River Area. These customers receive water service from the

City of Hendersonville, the City of Asheville and, in some limited cases, private wells. The CCWSD is part of a larger regional wastewater system with treatment and disposal of wastewater provided by MSD of Buncombe County. CCWSD is regulated by the North Carolina Department of Environmental and Natural Resources (Division of Water Resources) and the Henderson County Sewer Use Ordinance. Henderson County's 2020 Comprehensive Plan indicates that Henderson County recognizes water and sewer infrastructure and services are fundamental to the County's ability to accommodate future growth and development. However, the Plan makes no recommendations nor does it identify specific, localized, infrastructural improvements to be used for near-term capital planning. Rather, the Plan states that Henderson County should take a leadership role in sewer and water planning and work towards the regionalization of water and sewer policy-making operations. The Plan also notes that Henderson County update the current sewer and water master plan to reflect service areas or create a sewer and water service area boundary plan for the purpose of approving sewer and water extensions for proposed developments.

Development Regulations

Buncombe County notes in its *Draft Comprehensive Land Use Plan 2013 Update* a desire to adopt zoning for the county that coincides with the land use areas depicted on the Proposed Comprehensive Land Use Plan map (**Appendix D**). The County desires to establish land use regulations which allow for a flexible range of development options while still accounting for the needs of Buncombe County, though at the same time expand existing land use policies and regulations to adjust for changes in land use patterns and demands. The County employs the use of regulations for potential hazards to development. The main regulations the County employs to mitigate these risks for new or additional development include the Steep Slope/High Elevation Overlay District and the Protected Ridge Overlay District in its Zoning Ordinance, and the Flood Damage Prevention Ordinance.

Within the specific FLUSA area of Buncombe County, future land use is generally constricted due to the Pisgah National Forest, Biltmore Estate property, French Broad River, Blue Ridge Parkway, Lake Julian and the Duke Energy Power Plant, and Asheville Regional Airport. However, within the northern section of the FLUSA in the vicinity of I-26, I-40, and NC 191, the Plan and local planners indicate a desire to maintain and attract a mix of residential, commercial, and light industrial land uses. Within the southern section of Buncombe County, the Plan and local planners note the anticipated continuing growth of the Arden area both in terms of residential land uses as well as commercial land uses in support of the area's increasing population.

The 2020 Growth Management Strategy Element of the *Henderson County 2020 Comprehensive Plan, as amended through September 2009*, indicates that Henderson County desires to consolidate existing land development ordinances into a single Land Development Code that will include the Zoning, Subdivision, Manufactured Home Park, Water Supply Watershed, and other ordinances, as illustrated on the Plan's Proposed Land Use Plan map (**Appendix E**). The Strategy notes that the purpose of such a consolidated Land Development Code is to provide for better coordination across related development ordinances, to reduce redundancies and conflicts, to improve and streamline the plan review and permitting process, and to provide for a regulatory structure that is generally well organized and understandable to the user public.

The Plan indicates the desire of Henderson County to increase the supply of prepared industrial sites and buildings in developed and developing areas of the county, primarily along the I-26/US 25 corridor, and make them available on a cost competitive basis to attract more manufacturing to the economy base. Commercial growth has occurred primarily at major intersections along the I-26/US 25 corridor (Upward Road, US 64, US 25, NC 280, Clear Creek Road), and the Plan indicates a desire to encourage future growth within these existing areas to facilitate growth and preservation in other areas. The Plan recognizes the past and potential future residential growth of the county, in Hendersonville and Fletcher, and seeks to provide a balanced mix of family units for the county's anticipated future growth. However, the Plan also acknowledges the preservation of agriculture as a component of the economy, a land resource, a visual feature of the landscape, and a way of life to its residents. The Plan recognizes that it is not the county's responsibility or goal to preserve farmland, but rather to create a planning and funding framework that maximizes the possibilities for voluntary farmland protection in areas of existing agricultural production.

Available Land

There are approximately 60,250 acres of land contained within the FLUSA. Approximately 5,367 acres (8.9 percent) are covered by the road network and existing rights-of-way. Approximately 3,252 acres (5.4 percent) are covered by streams and creeks (with a 50-foot total buffer), rivers, surface waters, and NWI wetlands. Other lands that are protected from development activities (i.e., Significant Natural Heritage Areas, game lands, conservation property) that do not overlap with water bodies or NWI wetlands totaled approximately 10,373 acres (17.2 percent).

It was assumed that any parcel without a structure, with a structure valued at less than \$10,000, or with a single structure on land in excess of ten acres, is considered “available for development.” Any parcel other than that was assumed to be “developed,” and therefore not available. Developed land is approximately 32,838 acres (54.5 percent).

After subtracting these areas from the total land area, there are approximately 8,420 acres in the FLUSA (or 14 percent of the study area) that is considered available for development.

Market for Development

Buncombe County notes in its *Draft Comprehensive Land Use Plan 2013 Update* the downturn in the national economy since 2006 has been a major factor for many of the changing trends in Buncombe County. The burst of the housing bubble resulted in a shift in employment and land use trends in Buncombe County, which had become a popular second home and retirement destination. However, Buncombe County is projected to remain the seventh most populous county in the state through 2030, expanding at an overall growth rate of almost 31 percent from 2010 to 2030. The population centers within Buncombe County continue to be located within long-standing and more densely developed areas. Though development has slowed due to the economic downturn, it continues to be concentrated in lower-lying areas in closer proximity to transportation corridors. The physical topography which increases the risk of natural hazards in Buncombe County also serves to direct development pressures. The valleys have become thoroughfares for transportation and the extension of public sewer and water infrastructure, even as they remain those areas most threatened by flooding.

Local planners indicate that low property tax rates, good school districts, and a rural environment make Buncombe and Henderson counties attractive communities to reside and work. The majority of residential and commercial growth in both counties has occurred, and continues to occur, in the southern portion of Buncombe County and northern portion of Henderson County, particularly in the Arden (Buncombe County) and Fletcher and Balfour (Henderson County) areas. This growth can be attributed to the reasonable pricing for land and housing, topography suitable for development, and attractive property tax rates.

The Plan identifies several recommended strategies for future growth in the County. A few of note include attracting development to designated “hubs” by locating community facilities such as parks, schools, and libraries within them. Another is the continued expansion of water service to areas of the County not served by the City of Asheville. However, the status of Asheville’s lawsuit with the State challenging the State’s measure to transfer Asheville’s water system to the MSD will be monitored, and the results of this lawsuit will be discussed and incorporated into later technical documents for STIP Project I-4400/I-4700.

Also, creating economic development incentives to encourage industrial and other major employers to locate in Buncombe County, and provide incentives that encourage the recycling of existing industrial sites.

The Plan notes that the challenges to economic development and opportunities for growth include: lack of inventory of industrial buildings and inventory of developable industrial sites; cost of existing buildings and developable sites; workforce skills gap (next generation careers from industry to technology and services that demand higher proficiency of science, technology, engineering, and mathematics skills); cost of living; and unknown variables as the new government leadership takes place. The Plan does highlight opportunities for development as well, including: the reputation of Buncombe County and the Asheville area garners national attention that translates to continued above-average in-migration rates and economic development opportunities; the migration trends for Buncombe and Asheville continue to suggest the area is a magnet for highly educated

professionals; and riverfront redevelopment along the French Broad and Swannanoa Rivers that supports both light industry and a creative economy.

The 2020 Growth Management Strategy Element of the *Henderson County 2020 Comprehensive Plan, as amended through September 2009*, indicates that Henderson County desires to direct growth to areas where essential services and infrastructure are present, and protect sensitive natural areas and key historic/cultural resources from extensive development. The Strategy also recommends that the County coordinate planning with the county's municipalities and other governments within the region. The Strategy proposes that three geographically distinct levels of developability emerge: the Urban Services Area (USA), the Rural/Urban Transition Area (RTA), and the Rural/Agricultural Area (RAA). Each of the three categories identified has specific patterns of development that are envisioned within them. The Strategy defines the USA as the area within which most urban services and urban-scale development is currently concentrated, and within which such development should generally be concentrated through the year 2020. The RTA is described as being generally more rural in character, with existing pockets of limited higher density residential and commercial development but lacking widespread sewer and water service. The RAA is defined as covering those portions of the county that are predominantly rural and are characterized by low-density residential development with substantial land areas devoted to agriculture and undeveloped lands.

INDIRECT SCREENING MATRIX

Based on the existing conditions information presented in the previous sections, the potential for indirect effects on local land use as a result of the I-4400/I-4700 project was assessed. The following section presents the methodology and results of the indirect effects screening matrix.

Methodology

The indirect and cumulative effects (ICE) impact categories listed on the Indirect Screening Matrix (**Table 1**) represent a set of variables that have been shown to influence land development decisions in numerous areas statewide and nationally. Each impact variable in the ICE screening matrix has been assessed individually in a manner that is exclusive of all other impact variables. The information used to rate the level of concern for each impact variable, from a high concern for potential indirect effects as a result of the I-4400/I-4700 project, to less concern for potential indirect effects as a result of the project, has been documented in detail in the Base Screening Information and Analytical Screening Information sections of this report. Results are then tabulated for the whole table – for all impact variables – to determine the overall potential for indirect effects as a result of the proposed I-4400/I-4700 project.

Table 1: Indirect Effects Screening Matrix – STIP I-4400/I-4700

Rating	Scope of Project	Change in Travel Time	Forecasted Population Growth	Forecasted Employment Growth	Available Land	Water/Sewer Availability	Market for Development	Public Policy	Notable Environmental Features	Result
More Concern	Major New Location	> 10 minute travel time savings	> 3% annual population growth	Substantial # of New Jobs Expected	5000+ Acres of Land	All services existing / available	Development activity abundant	Less stringent; no growth management	Targeted or Threatened Resource	
↑					X					
↑										
↔						X	X	X	X	
↓	X	X	X	X						Indirect Scenario Assessment Not Likely
↓										
Less Concern	Very Limited Scope	No travel time savings	No population growth or decline	No new Jobs or Job Losses	Limited Land Available	No service available now or in future	Development activity lacking	More stringent; growth management	Features incorporated in local protection	

Matrix Results

Table 1 shows the results of the indirect effects screening matrix for STIP Project I-4400/I-4700. Based on site visit observations and interviews with local officials, the categories in the screening matrix indicate an overall

moderately low level of concern for indirect and cumulative effects as a result of STIP Project I-4400/I-4700. Based on the results of the Indirect Effects Screening Matrix, the conclusion of this report is “Indirect Scenario Assessment Not Likely”.

A summary of ratings for the level of concern for each potential ICE impact variable, as they relate to the proposed I-4400/I-4700 project, is provided below:

Scope of Project

The scope of the I-4400/I-4700 project is considered moderately low level based on two factors: (1) the proposal to widen along the existing corridor, which is typically considered a minimizing factor in this category, and (2) a proposed project corridor of 22.2 miles, which is relatively long in comparison to other NCDOT projects.

Change in Travel Time

The entire segment of I-26 in the project area is expected to operate at a LOS F if no improvements are made in the 2040 design year. With the proposed improvements, it is the goal of the project segment of I-26 to operate at an overall LOS D. The widening of existing I-26 is expected to increase capacity and enhance mobility; this is likely to result in marginal travel time savings during AM and PM peak travel time periods. The project does not propose any new interchanges or major modifications to existing interchanges. Therefore, the level of concern for this impact variable was rated at the moderately low level.

Forecasted Population Growth

According to population projections provided by the NCOSBM, the populations of Buncombe County and Henderson County are expected to increase at annual rates of 1.1 percent and 0.3 percent, respectively, through 2033 (www.osbm.state.nc.us, accessed July 2013). The Buncombe County planner is confident that the Buncombe County portion of the FLUSA will grow at an annual rate slightly higher than that projected by NCOSBM. The Henderson County planner also feels that the Henderson County portion of the FLUSA will experience similar population growth patterns during the time horizon for this report. The level of concern for this impact variable was rated at the moderately low level.

Forecasted Employment Growth

In accordance with NCDOT guidance on assessing projected employment growth, a growth rate of one to two percent is generally considered to be moderate, and a growth rate that is greater than three percent annually is considered to be high. The DES projects a 0.9 percent annual increase in jobs between 2008 and 2018 in the four-county Western Area Workforce Development Board (WDB). Job projections beyond the year 2018 were not available at the time of this assessment. Both the Buncombe and Henderson County planners are hopeful that the annual job growth rate in the FLUSA will be slightly higher than that projected by DES over the next 20 years. The forecasted employment growth rate was thus rated at the moderately low level of concern.

Available Land

It is estimated that more than 8,000 acres of land within the FLUSA is available for development. As such, the level of concern for this impact variable was rated at the high level.

Water & Sewer Availability

Water service is available throughout most of the FLUSA, and is planned to be expanded by both Buncombe and Henderson Counties. Sewer service is also available throughout most of the FLUSA and is planned to be expanded by both Buncombe and Henderson Counties. Buncombe County notes in its *Draft Comprehensive Land Use Plan 2013 Update* the desire to expand sewer service extension policies that support the direction and pattern of development recommended in the Comprehensive Land Use Plan. Henderson County's *2020 Comprehensive Plan* indicates that Henderson County recognizes water and sewer infrastructure and services are fundamental to the County's ability to accommodate future growth and development. Based on the considerable availability of public water and sewer service along the project corridor and in the remainder of the FLUSA, and considering the desire of local plans to extend service in the future, the overall level of concern for this impact variable was rated at the moderate level.

Market for Development

Local officials do not anticipate additional development to occur as a direct result of this project and expect the FLUSA to remain a predominantly mixed use area. It is anticipated that the majority of future growth will occur on ancillary facilities to the I-26 corridor, and would occur with or without the future widening of I-26 in the project corridor. Based on these variables, the level of concern for this impact variable as a result of STIP Project I-4400/I-4700 was rated at the moderate level.

Public Policy

As discussed, there are land use plans in place for Buncombe and Henderson Counties as well as a Comprehensive Transportation Plan (CTP) for both Buncombe and Henderson Counties to guide land use decisions and regulate development as well as handle future transportation expansion in the FLUSA. Based upon the relatively standard level of growth management in place, as compared to other rural and ex-urban counties in North Carolina, the level of concern for local growth management was rated at the moderate level.

Notable Environmental Features

Several natural environmental features are located within or adjacent to the FLUSA including streams, NWI wetlands, Significant Natural Heritage Areas, NCWRC game land and Designated Public Mountain Trout Waters, NCDENR Ecosystem Enhancement Program designated targeted local watersheds, a portion of a Protected Water Supply Watershed, and 303(d) impaired water bodies. As detailed in the "Available Land" section of this report, approximately 5.4 percent of the total FLUSA land area is comprised of hydrologic resources and associated regulatory buffers, while an additional 17.2 percent contains land being held in some form of conservation or preservation. While there are development restrictions in place in to protect many of these resources, the level of concern for this impact variable was rated at the moderate level largely due to the fact that approximately one quarter of the FLUSA land area is comprised of notable natural environmental resources.

SUMMARY STATEMENTS

Indirect Summary Statement

Based on the results of the Indirect Effects Screening Matrix, the need for a Land Use Scenario Assessment is "not likely", and there is a low to moderate concern for indirect and cumulative effects as a result of STIP Project I-4400/I-4700. Despite the apparent large amount of available land, local officials suggest there are a number of constraints to development in the FLUSA, notably natural environmental features and topography, as well as the sizable extent of land occupied by Biltmore Estate in the northern section of the FLUSA. Potential land use effects as a result of the I-4400/I-4700 project are further tempered by the fact that the project is not expected to provide any new access or opportunities for traffic exposure to properties in the FLUSA, and will generate marginal travel time savings. The extent of potential indirect land use effects as a result of the I-4400/I-4700 project will be largely dependent upon several key variables, including: the future local economy and market for development, public infrastructure projects, as well as the completion of other transportation improvements in the area, particularly the future planned Balfour Parkway and the improvements to Upward Road and Howard Road.

Water Quality Effects Summary Statement

Qualitative analyses of the probable development patterns in the FLUSA, based on the information and data available at this time of this report, suggest that STIP Project I-4400/I-4700 would have little effect on water quality or future stormwater runoff in the watersheds encompassed by the project. Water quality concerns should be avoided and/or mitigated through compliance with regulations covering watershed protection, floodplain protection, stream and river buffers and stormwater management.

At this time, the necessity for further evaluation of the potential indirect and cumulative effects of the I-4400/I-4700 project remains "possible," albeit largely dependent on the variables identified. The potential for further indirect and cumulative effects analysis, in the form of a Land Use Scenario Assessment, will be re-evaluated at a later date in the project schedule when variables (nearby transportation projects that are completed or near completion) with the cumulative potential to influence development are more certain.

Cumulative Effects Summary Statement

STIP Project I-4400/I-4700 is the proposed widening of I-26 from four lanes to six or eight lanes. The proposed widening project is 22.2 miles in length and would extend from US 25 south of Hendersonville in Henderson County to I-40 near Asheville in Buncombe County. The project alternatives currently being considered include the option to widen along the full project corridor to a 6-lane facility asymmetrically at locations that “best fit” the current road way location and surrounding land uses, the option to widen along the full project corridor to a 8-lane facility asymmetrically at locations that “best fit” the current road way location and surrounding land uses, and the option to widen as a hybrid of 6- or 8-lane segments asymmetrically at different locations along the project corridor that “best fit” the current road way location and surrounding land uses. This project would complement the other previously described STIP Projects in the provision of greater regional mobility.

Due to the growing and planned expansion of sewer service throughout the FLUSA, relatively economical housing prices, anticipated growth of local jobs in the area, and expected moderate population growth, the local market for development is relatively robust at present. Land use throughout the FLUSA is mixed, consisting of large sections of residential areas, commercial and industrial stretches, and agricultural tracts. Commercial development is largely concentrated near the I-26 interchanges with US 64, NC 280 (Airport Road), NC 146 (Long Shoals Road), and NC 191 (Brevard Road). The Buncombe and Henderson County planners expect the I-26 corridor to largely maintain its mix of residential and commercial characteristics, with the exception of changes to land uses at the projects involving Upward Road, Howard Gap Road, and the proposed Balfour Parkway. Planners anticipate the improvements to these facilities will entice more use by local travelers and therefore lead to development pressures along these existing facilities, which in turn could lead to more traffic utilizing I-26 in the project corridor.

Based on this assessment of the currently identified project alternatives, the I-4400/I-4700 project is not expected to have a notable indirect effect on land use in the FLUSA. Any direct natural environmental impacts by the project would be addressed through Programmatic Agreements with resource agencies during the Merger and Permitting processes. Developments will be required to follow local, state, and federal guidelines and permitting regulations.

NCDOT is currently conducting a Regional CES of other planned projects for Asheville and the surrounding areas. The Regional CES will examine a study area larger than the FLUSA and will encompass a number of projects beyond, but including, the scope of the I-26 widening. The Regional CES will analyze the potential cumulative effects of projects from the cities, counties, FBRMPO, and major projects planned by private sector businesses and institutional entities within the region to determine their potential cumulative effects. The findings of that report (expected in Spring 2014) will be incorporated into future re-evaluation and analysis of the cumulative effect of STIP Project I-4400/I-4700.

Based upon current data, because few indirect impacts are anticipated, the cumulative effect of this project when considered in the context of other past, present, and future actions, and the resulting impact on the notable human and natural features should be minimal. Therefore, contribution of the project to cumulative impacts resulting from current and planned development patterns is expected to be minimal.

CONCLUSIONS & NEXT STEPS

Based on present conditions in the FLUSA, as assessed in this report, no immediate actions from NCDOT, Buncombe County, or Henderson County are currently anticipated. However, continued outreach to community leaders and elected officials is recommended as the project progresses.

Due to the uncertainty in transportation project schedules, and the number of identified variables that could notably affect FLUSA conditions prior to I-4400/I-4700 right-of-way acquisition and project construction, it may be necessary to re-evaluate the findings of this report, and the need for further ICE analysis in the form of a Land Use Scenario Assessment (LUSA), at a later date in the project schedule.

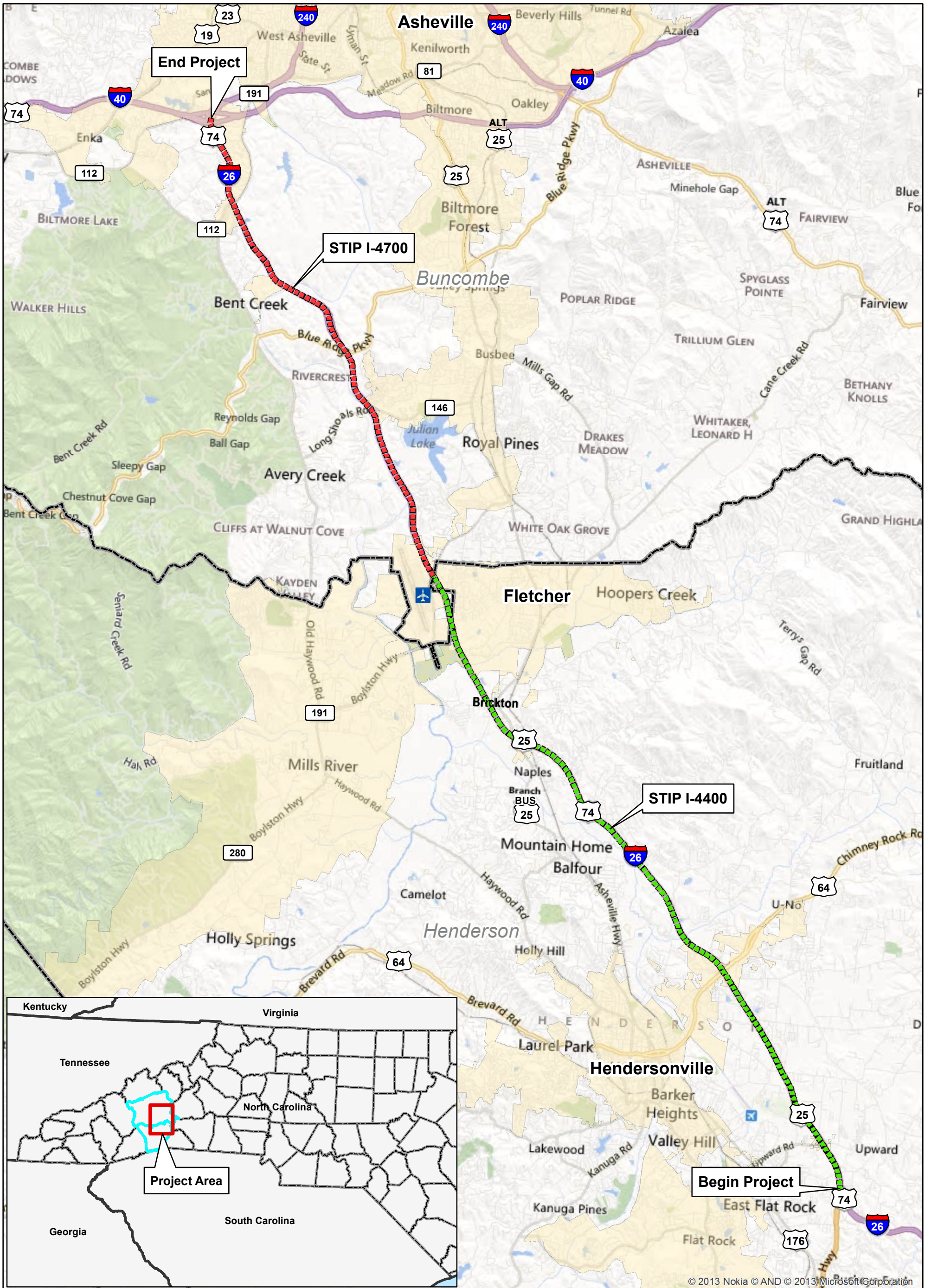
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APPENDICES

- A - Figures
- B - Interview Records
- C – Map of Service Area of Metropolitan Sewerage District of Buncombe County, NC
- D - Buncombe County *Draft Comprehensive Land Use Plan 2013 Update*, Proposed Comprehensive Land Use Plan map
- E – Henderson County *2020 Comprehensive Plan*, Future Land Use map

Appendix A: Figures

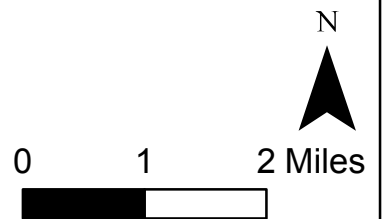


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Figure 1
Project Vicinity
STIP Project I-4400/I-4700

Legend

- - - - - STIP Project I-4400
- - - - - STIP Project I-4700



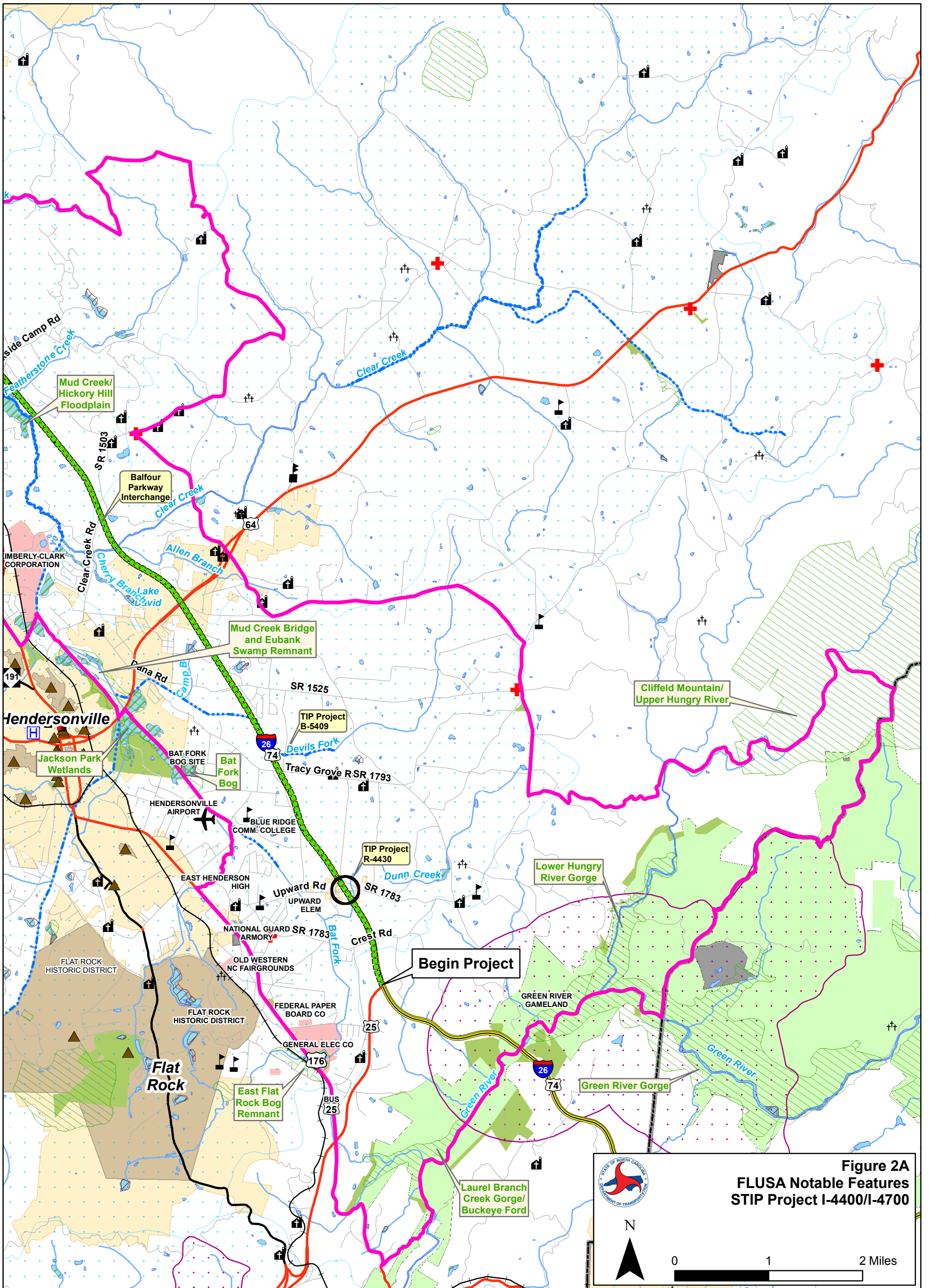


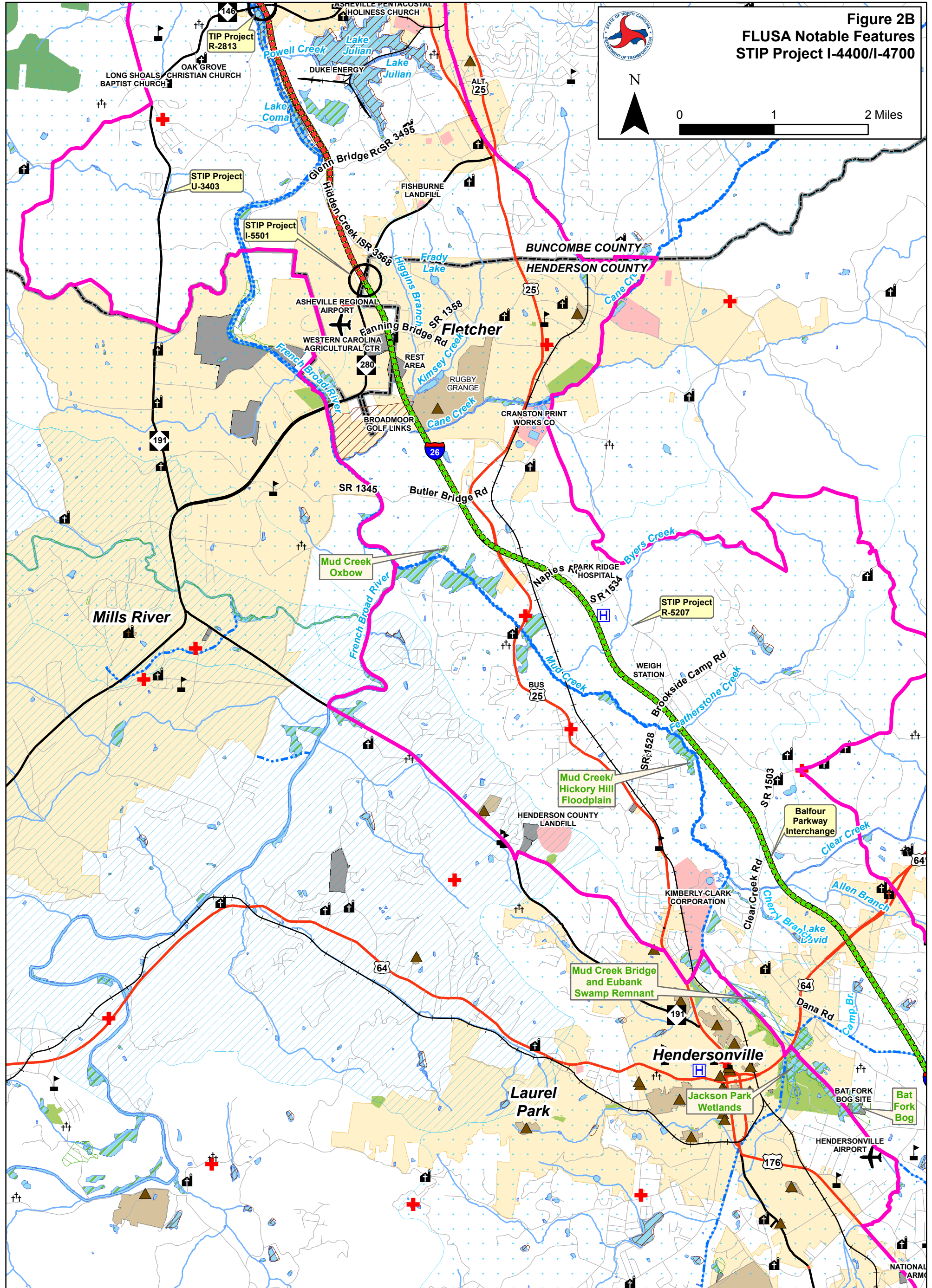
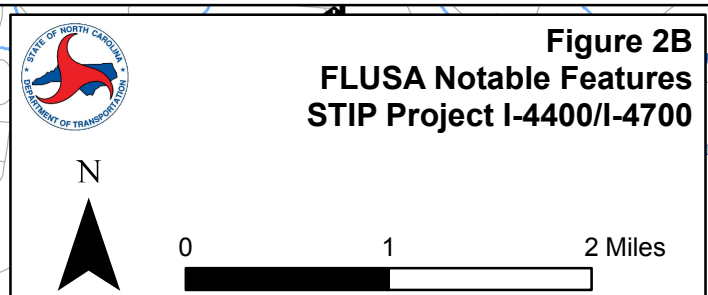
Figure 2A
FLUSA Notable Features
STIP Project I-4400/I-4700

Legend

- | | | | |
|---------------------|----------------------------|--|-----------------------------|
| STIP Project I-4400 | Airport | Designated Public Mountain Trout Waters | Green River Game Lands |
| FLUSA Boundary | Interstate | Targeted Local Watershed | Henderson Co. Park |
| Other STIP Projects | US Route | Water Body | State-Owned Complex |
| Place of Worship | State Route | River, Stream, or Creek | National Register Structure |
| Cemetery | Secondary Road | National Wetland Inventory Wetland | National Register Boundary |
| Fire Station | Railroad | High Quality Outstanding Resource Water Zone | Municipal Boundary |
| Hospital | 303(d) Impaired Water Body | Significant Natural Heritage Area | County Boundary |
| School | | Hazardous Substance Site | |

Data Sources: NCDOT, NC OneMap, NCSHPO, NCDWQ, NCWRC, USFWS, NPS, NFS, Henderson Co., Buncombe Co., HNTB

Figure 2B
FLUSA Notable Features
STIP Project I-4400/I-4700



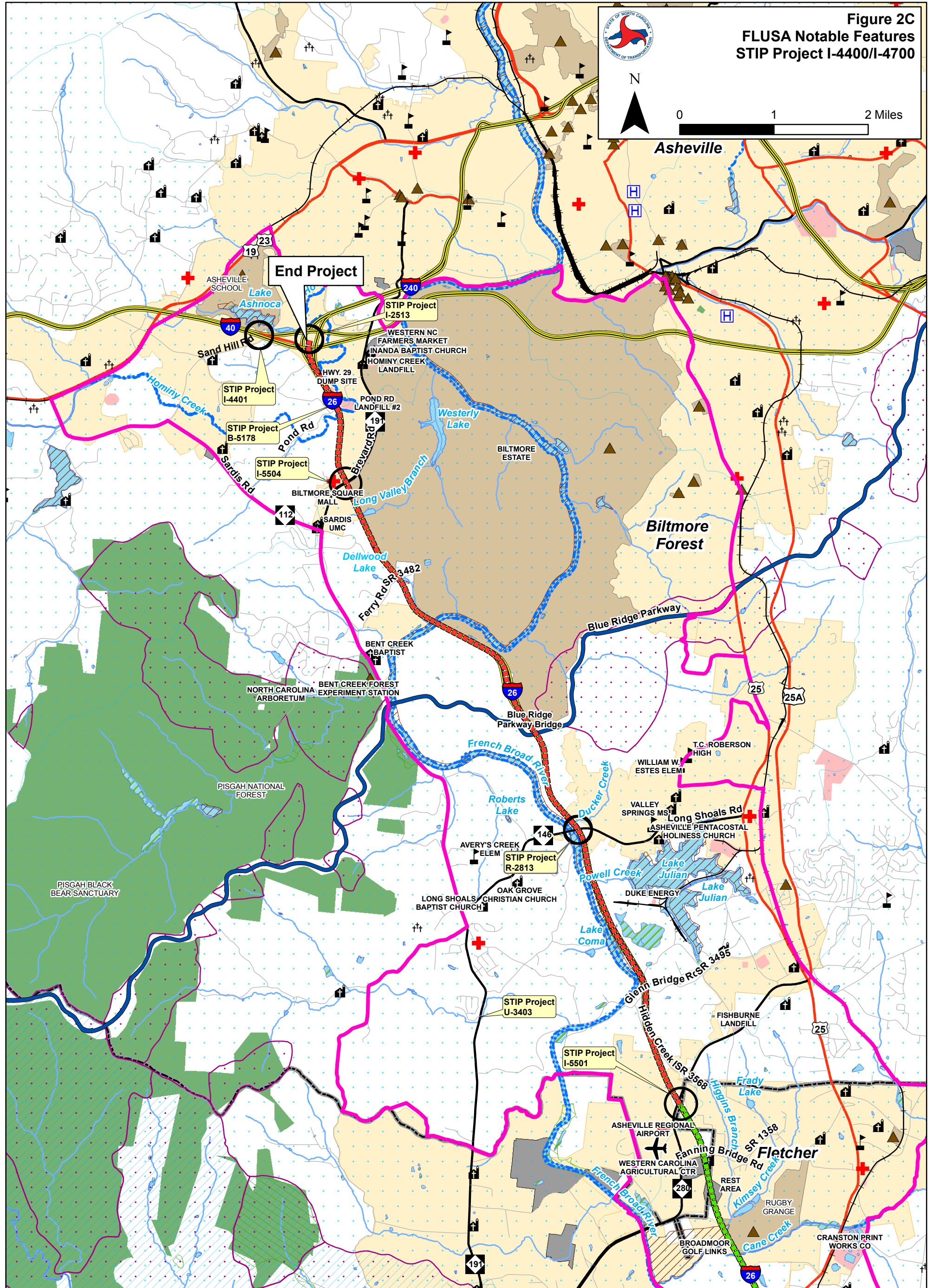
Legend

- | | | | | |
|---------------------|---------------------|---|-----------------------------------|--------------------|
| STIP Project I-4400 | School | 303(d) Impaired Water Body | Significant Natural Heritage Area | Municipal Boundary |
| STIP Project I-4700 | Airport | Designated Public Mountain Trout Waters | Hazardous Substance Site | County Boundary |
| FLUSA Boundary | Other STIP Projects | Targeted Local Watershed | Pisgah National Forest | |
| Place of Worship | Interstate | Water Body | Henderson Co. Park | |
| Cemetery | US Route | River, Stream, or Creek | State-Owned Complex | |
| Fire Station | State Route | National Wetland Inventory Wetland | National Register Structure | |
| Hospital | Secondary Road | Water Supply Watershed | National Register Boundary | |
| | Railroad | | | |

Data Sources: NCDOT, NC OneMap, NCSHPO, NCDWQ, NCWRC, USFWS, NPS, NFS, Henderson Co., Buncombe Co., HNTB



Figure 2C
FLUSA Notable Features
STIP Project I-4400/I-4700



Legend			
	STIP Project I-4400		Schools
	STIP Project I-4700		Airport
	FLUSA Boundary		Railroad
	Other STIP Projects		303(d) Impaired Water Body
	Place of Worship		Designated Public Mountain Trout Waters
	Cemetery		Targeted Local Watershed
	Fire Station		Water Body
	Hospital		River, Stream, or Creek
			National Wetland Inventory Wetland
			High Quality Outstanding Resource Water Zone
			Significant Natural Heritage Area
			Water Supply Watershed
			Hazardous Substance Site
			Pisgah National Forest
			State-Owned Complex
			National Register Structure
			National Register Boundary
			Municipal Boundary
			County Boundary
			Interstate
			US Route
			State Route
			Secondary Road
			Blue Ridge Parkway

Data Sources: NCDOT, NC OneMap, NCSHPO, NCDWQ, NCWRC, USFWS, NPS, NFS, Henderson Co., Buncombe Co., HNTB

Appendix B: Interview Records

**STIP Project I-4400/I-4700
I-26 from US 25 to I-40
Buncombe County and Henderson County**

**Community Characteristics Report (CCR) &
Indirect and Cumulative Effects Screening Report (sICE)**

INTERVIEWEE: Paul Black / FBR MPO Director

DATE/TIME: 7/12 10-11am

PLACE: Conference Call

1) How familiar are you with the project study area? (Figure 1-1)

Very

2) We have collected several French Broad River MPO (FBR MPO) plans available on-line:

FBR MPO:

- FBR MPO 2035 LRTP
- FBR MPO 2011-2020 Metropolitan TIP
- FBR MPO 2012 Long-Range Transportation Demand Management Plan (March 2013)

Buncombe County Plan as well

Congestion Management; CTP; Regional Bike Plan (5501-5504 projects cover those)

Are there any relevant plans we are missing, or are any of the plans listed above currently being updated?

Address transit - information sent by email

model express

light rail

6-lane def needed for freight, peak times congested

3) Currently, we are using NC One Map and NCDOT GIS data for the assessment. Is there any newer mapping or local GIS data available? (We are particularly interested in land use, zoning, protected areas, community facilities, etc.)

Parcel land use - GIS

Zoning map - some GIS, composite map; many

local street

sidewalk layer

Future land use composite

4) Are there any proposed local transportation projects in (or near) the study area?

Balfour Parkway future - feasibility study FS 124 (FS 142?)
Upward road improvements

5) Are there any adopted plans for either pedestrian, greenway, bicycle, or transit facilities in the area? Please provide a description of how the plan applies to the project area, the title of the plan, its year of adoption, and the current status of its implementation.

Greenway crossings - see county
Blue Ridge Bike Plan - draft going on (July 22) ^{released}

6) Have we missed any important community facilities or other notable features including community landmarks, historic structures/districts, threatened and endangered species, parks, etc. in the study area that we have missed on the draft figures (Figures 1-2A, B, C)?

Power Plant - coal ash ponds near I-26

7) Do you anticipate impacts to any particular communities or facilities? Impacts may be related to stability, cohesion, aesthetics, noise, access, safety, etc.

Induced demand at existing interchanges

8) Are road names referenced by the names locals use?

shapefile will help

9) What are the current traffic patterns? Any problem areas in terms of congestion?

ADTs don't show freight; cause congestion going up grade
spot congestion at interchanges - sight distances

10) Do you expect traffic patterns to change following construction of the project? If so, how?

No; perhaps induced demand

11) Where are the major employment centers? Are there any planned employer relocations (into or out of the area)?

Hospitals
data set from FBR
GE announcement

12) What are the commuting patterns? Do most residents work within the project area or commute outside of the area?

Paul-map generally south to north
50,000 - ~ 90,000/day
74? Swannanoa
~ 50,000

Maybe US 25 parallel
widening in draft TIP
2023

13) US Census data indicate that the population in Buncombe County and Henderson County grew by 15.5% and 19.7% between 2000 and 2010, respectively, compared to 18.5% in North Carolina. Could you describe the nature of this growth between 2000 and 2010, and where the growth is occurring more specifically? Are there reasons for growth in a particular area? Is the growth concentrated in any portion of the project study area?

Madison Co Stayed even
Second homes - growth (~30-40k per summer)
fastest growing area Fletcher and Arden; expect same pace; bc of pricing and topography, eas to build
Mills River - getting brewery
Sierra Nevada Brewery

14) Where is growth (residential and non-residential) occurring in your jurisdiction as well as regionally? Are any major developments under construction near to project (within 1 - 2 miles)?

Not really; mostly urban already
Town of Fletcher - Heart of Fletcher program; spur higher density development in old downtown

15) Are there any known plans for development in the vicinity of the project?

Will follow up by email

16) Is any redevelopment taking place? If so, where?

Nothing of note

17) How would you characterize the residential market? Commercial market? Industrial market?

- Bad off 2-3 years ago, recovering; suburbs
- park and ride lots used quite a bit; increasing use
 - downtown pretty consistent

18) How would you describe the local commitment to development (pro-growth vs. anti-growth)? Is the political climate stable or unstable?

Not anti-growth; controlled + type of growth
in fill and grow up
Suburbs want better mobility
transit good asset to include again

19) What are the general development goals for this area? How does the MPO envision this area and the I-26 corridor?

long term - fixed guideway parallel to 26, maybe along 25 with
more compatible land use

express bus route } if coordinate with county, but pretty far
van pool out

20) Are there any development moratoria? What about development incentives?

Not aware

Not aware

21) What are the major constraints to development in the area?

Environmental - steep slopes, water, topography

22) Are you aware of any minority communities/populations within or near the study area? Do you anticipate impacts to these communities/populations?

Not aware - more suburban in corridor area
maybe northern end?, but Bitmore east and retail/commercial west

23) Are you aware of any other special populations / communities (e.g. low-income, Limited English Proficiency) existing in the study area?

if any, further north in Asheville and NE Henderson

24) Is any land protected from development?

Biltmore + Parkway

25) Based on North Carolina Division of Employment Security data, it is anticipated that the 4-County Western Area Workforce Development Board (Buncombe County, Henderson County, Madison County, and Transylvania County) will experience an annual employment growth rate of approximately 0.9% per year between 2008 and 2018. Is this estimate satisfactory in your opinion? Would you expect the annual employment growth in the project area to be less, the same, or more than the Western Area WDB as a whole?

manufacturing holding steady
study area has the most growth (Fletcher + Mills River)

26) Based on data published by the North Carolina Office of Budget and Management, it is anticipated that the population in both Buncombe and Henderson Counties is expected to grow at an annual rate of 1.1% and 0.3%, respectively, between 2013 and 2033. Is this estimate accurate in your opinion? Would you expect the annual population growth in the study area to be lower than, the same as, or higher than the Counties as a whole?

Henderson - low? - Fletcher and Mills River (now has water service)
~~At~~ Arden

27) Do you anticipate this project (STIP Project I-4400/I-4700) will affect land use or development patterns in the area? If yes, what kinds of effects are expected and where do you anticipate they would occur?

May increase growth, but same type of growth already occurring

28) Are you aware of any community concerns or controversy relative to this project?

WNCA

Asheville - Brevard Rd area

29) Are there any additional comments you would like to make?

**STIP Project I-4400/I-4700
I-26 from US 25 to I-40
Buncombe County and Henderson County****Community Characteristics Report (CCR) &
Indirect and Cumulative Effects Screening Report (sICE)**

INTERVIEWEE: *Josh O'Connor / Buncombe County Planner*

DATE/TIME: *7/25 3-4 pm*

PLACE: *Conference Call*

1) How familiar are you with the project study area? (Figure 1-1)

Moderately

2) We have collected several County plans and ordinances available on-line:

Buncombe County:

- Buncombe County Comprehensive Land Use Plan Update (2013)
- Buncombe County Sustainability Plan (May 2012)
- Zoning Ordinance (amended January 17, 2012)
- Subdivision Ordinance (amended October 5, 2010)
- Stormwater Ordinance (Adopted June 24, 2008)

*Greenway Plan
Bike Plan - forwarded by email*

Are there any relevant plans/ordinances we are missing, or are any of the plans/ordinances listed above currently being updated?

Not aware

3) Currently, we are using NC One Map and NCDOT GIS data for the assessment. Is there any newer mapping or local GIS data available? (We are particularly interested in land use, zoning, protected areas, community facilities, etc.)

Online

NC 146 - transferring from City to County

VAD - Gene Hume at GIS Dept

4) Does the County have a Voluntary Agricultural District (VAD) program? If so, are there any VADs or EVADs located in the study area?

See # 3

5) What kinds of farms / agricultural operations are located in the project area? What types of crops are grown?

Bitmore - vineyards, farm to table concepts

6) Are there any FEMA buyout properties in the study area? If so, where are these properties located? Who owns the properties (e.g. city, county, state, etc.)? Do you have mapping or GIS data that shows their location?

Not aware of any
EMS Dept. 828-250-6605 Angela Ledford

7) Are there any proposed local transportation projects in (or near) the study area?

No local projects
Bitmore maybe increasing entrance on NC 191

8) Are there any adopted plans for either pedestrian, greenway, bicycle, or transit facilities in the area? Please provide a description of how the plan applies to the project area, the title of the plan, its year of adoption, and the current status of its implementation.

will email info

9) Have we missed any important community facilities or other notable features including community landmarks, historic structures/districts, threatened and endangered species, parks, etc. in the study area that we have missed on the draft figures (Figures 1-2A, B, C)?

Ag Center, Airport are important in project area

10) Do you anticipate impacts to any particular communities or facilities? Impacts may be related to stability, cohesion, aesthetics, noise, access, safety, etc.

No

11) Are road names referenced by the names locals use?

Yes

12) What are the current traffic patterns? Any problem areas in terms of congestion?

Most local traffic use 25/25A; carries you into center Asheville
NC191 Commercial; not doing well; only serves local population
5

13) Do you expect traffic patterns to change following construction of the project? If so, how?

Depends on future congestion of US 25; continuing residential develop

14) Where are the major employment centers? Are there any planned employer relocations (into or out of the area)?

New Belgium site - just east of 26/240/north of 40; outside FLUSA

15) What are the commuting patterns? Do most residents work within the County or commute outside of the County?

Generally south to north; US 25 25A, I-26 to lesser degree

16) US Census data indicate that Buncombe County's population grew by 15.5% between 2000 and 2010 (less than the State at 18.5%). Could you describe the nature of this growth between 2000 and 2010, and where the growth is occurring more specifically? Are there reasons for growth in a particular area? Is the growth concentrated in any portion of the project study area?

Now lot of infill development - Arden area (good access to 4 lane roads)

17) Where is growth (residential and non-residential) occurring in your jurisdiction as well as regionally? Are any major developments under construction near to project (within 1 - 2 miles)?

Commercial move down towards Arden (Disks, retail)

18) Are there any known plans for development in the vicinity of the project?

County taking over Asheville ETS; makes development easier to permit

19) Is any redevelopment taking place? If so, where?

Not aware

20) How would you characterize the residential market? Commercial market? Industrial market?

NC 191 - few industrial expansion
south - industrial converting to retail
residential - first home market picking back up compared to second home market

21) How would you describe the local commitment to development (pro-growth vs. anti-growth)? Is the political climate stable or unstable?

County residents usually in favor
City folks don't always agree with growth, 63 development appeal

22) What are the general development goals for this area? How does the County envision the I-26 corridor?

Not from county perspective - more of a Land Suitability concept; let local communities develop growth goals

23) Are there any development moratoria? What about development incentives?

None

24) What are the major constraints to development in the area?

None other than ^{existing} environmental, topography

25) Are you aware of any minority communities/populations within or near the study area? Do you anticipate impacts to these communities/populations?

North end of airport - lower income mobile homes impacted by previous airport projects and retail across I-26

26) Are you aware of any other special populations / communities (e.g. low-income, Limited English Proficiency) existing in the study area?

Not aware

27) What areas are served by water and sewer services? Who are the sewer and water service providers?

Water provided, maybe isolated areas not serviced

28) What is the existing capacity of the water and sewer systems? How much of the capacity is being used currently? When would you anticipate reaching full capacity for both the water and sewer systems?

29) Are there any planned upgrades to capacity (plant or conveyance capacity) for water and/or sewer services? If so, are the upgrades funded?

Planned expansion by MSD ; legislation may delay plans

30) Are there any planned water or sewer line extensions? If so, where would the new lines be? Is there funding for these extensions?

Expansions planned but halted bc of legislation

31) Are there any riparian buffer regulations or other land use controls (other than zoning)?

None

32) Are there any local stormwater runoff management programs? Phase II stormwater regulations?

Follows state standard

33) Is any land protected from development?

Not aware of any

34) Based on North Carolina Division of Employment Security data, it is anticipated that the 4-County Western Area Workforce Development Board (Buncombe County, Henderson County, Madison County, and Transylvania County) will experience an annual employment growth rate of approximately 0.9% per year between 2008 and 2018. Is this estimate satisfactory in your opinion? Would you expect the annual employment growth in the project area to be less, the same, or more than the Western Area WDB as a whole?

Maybe slightly higher towards southern end and/or CBD

35) Based on data published by the North Carolina Office of Budget and Management, it is anticipated that Buncombe County will experience an annual population growth rate of approximately 1.1% through 2033. Is this estimate accurate in your opinion? Would you expect the annual population growth in the Buncombe County portion of the study area to be lower than, the same as, or higher than the County as a whole?

Same types as predicted

36) Do you anticipate this project (STIP Project I-4400/I-4700) will affect land use or development patterns in the area? If yes, what kinds of effects are expected and where do you anticipate they would occur?

Not really. Develop pattern should stay the same

37) Are you aware of any community concerns or controversy relative to this project?

Not for this ~~connect~~ project; more for connector

38) Are there any additional comments you would like to make?

**STIP Project I-4400/I-4700
I-26 from US 25 to I-40
Buncombe County and Henderson County**

**Community Characteristics Report (CCR) &
Indirect and Cumulative Effects Screening Report (sICE)**

INTERVIEWEE: Matt Cable, Transportation Planner

DATE/TIME: 8/13/13

PLACE:

1) How familiar are you with the project study area? (Figure 1-1)
Very

2) We have collected several County plans and ordinances available on-line:

Henderson County:

- Henderson County 2020 Comprehensive Plan (amended September 16, 2009)
- Henderson County Land Development Code (amended February 20, 2013)

Are there any relevant plans/ordinances we are missing, or are any of the plans/ordinances listed above currently being updated?

Yes

- Dana Community Plan
- Green River, Tuxedo, Zirconia Community Plan

3) Currently, we are using NC One Map and NCDOT GIS data for the assessment. Is there any newer mapping or local GIS data available? (We are particularly interested in land use, zoning, protected areas, community facilities, etc.)

Yes, All pertinent local layers are available through our website. Visit <http://www.hendersoncountync.org/gis/gisdownload.html>

4) Does the County have a Voluntary Agricultural District (VAD) program? If so, are there any VADs or EVADs located in the study area?

Yes, there is a VAD program. Yes, there are VADs in the study area.

5) What kinds of farms / agricultural operations are located in the project area? What types of crops are grown?

Unknown. Ground verification would be required. A large majority of our farms are involved in apples, berries, corn, etc.

6) Are there any FEMA buyout properties in the study area? If so, where are these properties located? Who owns the properties (e.g. city, county, state, etc.)? Do you have mapping or GIS data that shows their location?

Not to my knowledge.

7) Are there any proposed local transportation projects in (or near) the study area?

Please contact the City of Hendersonville and Town of Fletcher who maintain their own road networks. The County does not manage any transportation projects outside of public transit. Public transit routes do not utilize the I-26 corridor but do travel across it on US Highways 64 and 25.

8) Are there any adopted plans for either pedestrian, greenway, bicycle, or transit facilities in the area? Please provide a description of how the plan applies to the project area, the title of the plan, its year of adoption, and the current status of its implementation.

Please contact the City of Hendersonville and Town of Fletcher who maintain their own pedestrian, greenway, and bicycle plans/infrastructure. The County is constructing a new transit center not within the project area in the year 2015. The County does not have a pedestrian, greenway, or bicycle plan. The Land of Sky Regional Council of Governments is working on the Blue Ridge Bike Plan which is a regional bicycle plan project.

9) Have we missed any important community facilities or other notable features including community landmarks, historic structures/districts, threatened and endangered species, parks, etc. in the study area that we have missed on the draft figures (Figures 1-2A, B, C)?

Please refer to the City of Hendersonville, Town of Fletcher, and pertinent County Community Plans to identify this information.

10) Do you anticipate impacts to any particular communities or facilities? Impacts may be related to stability, cohesion, aesthetics, noise, access, safety, etc.

No particular impacts,

11) Are road names referenced by the names locals use?

Yes.

12) What are the current traffic patterns? Any problem areas in terms of congestion?

Constrained because of limited lanes. Constrained at US Highway 64 intersection. Short and high ramp with limited visibility at US Highway 25 entering north bound I-26.

13) Do you expect traffic patterns to change following construction of the project? If so, how?

Overall increase in access and use of interstate to move between Henderson County interchanges.

14) Where are the major employment centers? Are there any planned employer relocations (into or out of the area)?

Major employment centers are along US Highway 64, US Highway 25, US Highway 176, and in Fletcher and Hendersonville. No relocations into or out of the area are known.

15) What are the commuting patterns? Do most residents work within the County or commute outside of the County?

Many residents travel from Henderson County to Buncombe County for work along I-26. To a lesser extent, Buncombe County residents travel to Henderson County for work. Some also utilize the I-26 corridor through Henderson County for purposes of reaching work in Polk and Haywood Counties (from any of the four counties).

16) US Census data indicate that Henderson County's population grew by 19.7% between 2000 and 2010 (more than the State at 18.5%). Could you describe the nature of this growth between 2000 and 2010, and where the growth is occurring more specifically? Are there reasons for growth in a particular area? Is the growth concentrated in any portion of the project study area?

Much of the growth (in terms of rate) occurred in Fletcher, eastern Henderson and southern Henderson County. These areas were among the less developed areas of the County. Fletcher is growing because of its accessibility and proximity to both Asheville and Hendersonville. The eastern area of the county is among the most gentle in terrain and most easily converted from forest and farmland to residential development. The eastern portion of the county also has the most interconnected road networks.

17) Where is growth (residential and non-residential) occurring in your jurisdiction as well as regionally? Are any major developments under construction near to project (within 1 – 2 miles)?

Henderson County is the fastest growing county in the region. Other than the construction of the Sierra Nevada Brewery on Boylston Highway (NC 280), I am not aware of any major developments under construction near to the project. You may wish to contact the City of Hendersonville and Town of Fletcher to identify any known development within their jurisdiction.

18) Are there any known plans for development in the vicinity of the project?

Not known, refer to City of Hendersonville and Town of Fletcher.

19) Is any redevelopment taking place? If so, where?

Not known, refer to City of Hendersonville and Town of Fletcher.

20) How would you characterize the residential market? Commercial market? Industrial market?

Please clarify.

21) How would you describe the local commitment to development (pro-growth vs. anti-growth)? Is the political climate stable or unstable?

Pro-growth and politically stable.

22) What are the general development goals for this area? How does the County envision this area and the I-26 corridor?

The Henderson County 2020 Comprehensive Plan identifies most of the properties on either side of the I-26 corridor as part of the Urban Services Area which is proposed for high density residential, commercial and industrial development.

23) Are there any development moratoria? What about development incentives?

There are no development moratoria in Henderson County. Henderson County does offer density increases where public water and sewer are available. You may wish to contact the City of Hendersonville and Town of Fletcher to verify moratoria and development incentives in their jurisdictions.

24) What are the major constraints to development in the area?

Topographical constraints are key to confining development in the area.

25) Are you aware of any minority communities/populations within or near the study area? Do you anticipate impacts to these communities/populations?

I am not aware of minority communities/populations within the study area. The majority of our minority population are focused east of Interstate 26. It is possible that communities along Crest Road, Dana Rd, and Tracy Grove Road have communities of minorities which may be impacted.

26) Are you aware of any other special populations / communities (e.g. low-income, Limited English Proficiency) existing in the study area?

I am not aware of special communities/populations within the study area. Much of our LEP population are east of Interstate 26. It is possible that communities along Crest Road, Dana Rd, and Tracy Grove Road have communities of special populations (including LEP) which may be impacted.

27) What areas are served by water and sewer services? Who are the sewer and water service providers?

The City of Hendersonville provides water and sewer service in the area. The City of Asheville also provides water and sewer service. You may wish to contact the City of Hendersonville and City of Asheville to verify the extent of their service area. Water and sewer is available along Upward Rd, US Highway 64 and US Highway 25 in the vicinity of I-26.

28) What is the existing capacity of the water and sewer systems? How much of the capacity is being used currently? When would you anticipate reaching full capacity for both the water and sewer systems?

You may wish to contact the City of Hendersonville and City of Asheville to verify this information.

29) Are there any planned upgrades to capacity (plant or conveyance capacity) for water and/or sewer services? If so, are the upgrades funded?

You may wish to contact the City of Hendersonville and City of Asheville to verify this information.

30) Are there any planned water or sewer line extensions? If so, where would the new lines be? Is there funding for these extensions?

You may wish to contact the City of Hendersonville and City of Asheville to verify this information.

31) Are there any riparian buffer regulations or other land use controls (other than zoning)?

All land use regulations for Henderson County are contained within the Land Development Code. Henderson County combined multiple land use regulations into this document. Please clarify which types of land use controls are pertinent and we will provide additional information regarding those land use

controls. You may wish to contact the City of Hendersonville and Town of Fletcher regarding their land use controls.

32) Are there any local stormwater runoff management programs? Phase II stormwater regulations?

The Henderson County Land Development Code contains adopted WSWS regulations and stormwater regulations. I believe the City of Hendersonville enforces Phase II regulations. You may wish to contact the City of Hendersonville and Town of Fletcher regarding their stormwater management programs.

33) Is any land protected from development?

The Green River Gamelands are protected by Fish and Wildlife. What other "protected lands" are of interest.

34) Based on North Carolina Division of Employment Security data, it is anticipated that the 4-County Western Area Workforce Development Board (Buncombe County, Henderson County, Madison County, and Transylvania County) will experience an annual employment growth rate of approximately 0.9% per year between 2008 and 2018. Is this estimate satisfactory in your opinion? Would you expect the annual employment growth in the project area to be less, the same, or more than the Western Area WDB as a whole?

Given the existing economic situation and the dramatic loss in jobs between 2007 and 2010. I would anticipate no to minimal employment growth over the period for Henderson County. I cannot guess as to the impacts in the other Counties in the region.

35) Based on data published by the North Carolina Office of Budget and Management, it is anticipated that Henderson County will experience an annual population growth rate of approximately 0.3% through 2033. Is this estimate accurate in your opinion? Would you expect the annual population growth in the Henderson County portion of the study area to be lower than, the same as, or higher than the County as a whole?

I would estimate this growth rate to be accurate. Growth within the study area will likely be similar to that experienced across the County. The proximity to I-26 will generate more growth than elsewhere, but likely not within the constrained study area.

36) Do you anticipate this project (STIP Project I-4400/I-4700) will affect land use or development patterns in the area? If yes, what kinds of effects are expected and where do you anticipate they would occur?

The project will increase nonresidential and residential development in the areas immediately surrounding I-26 and along the major 4-lane corridors which extent from these interchanges.

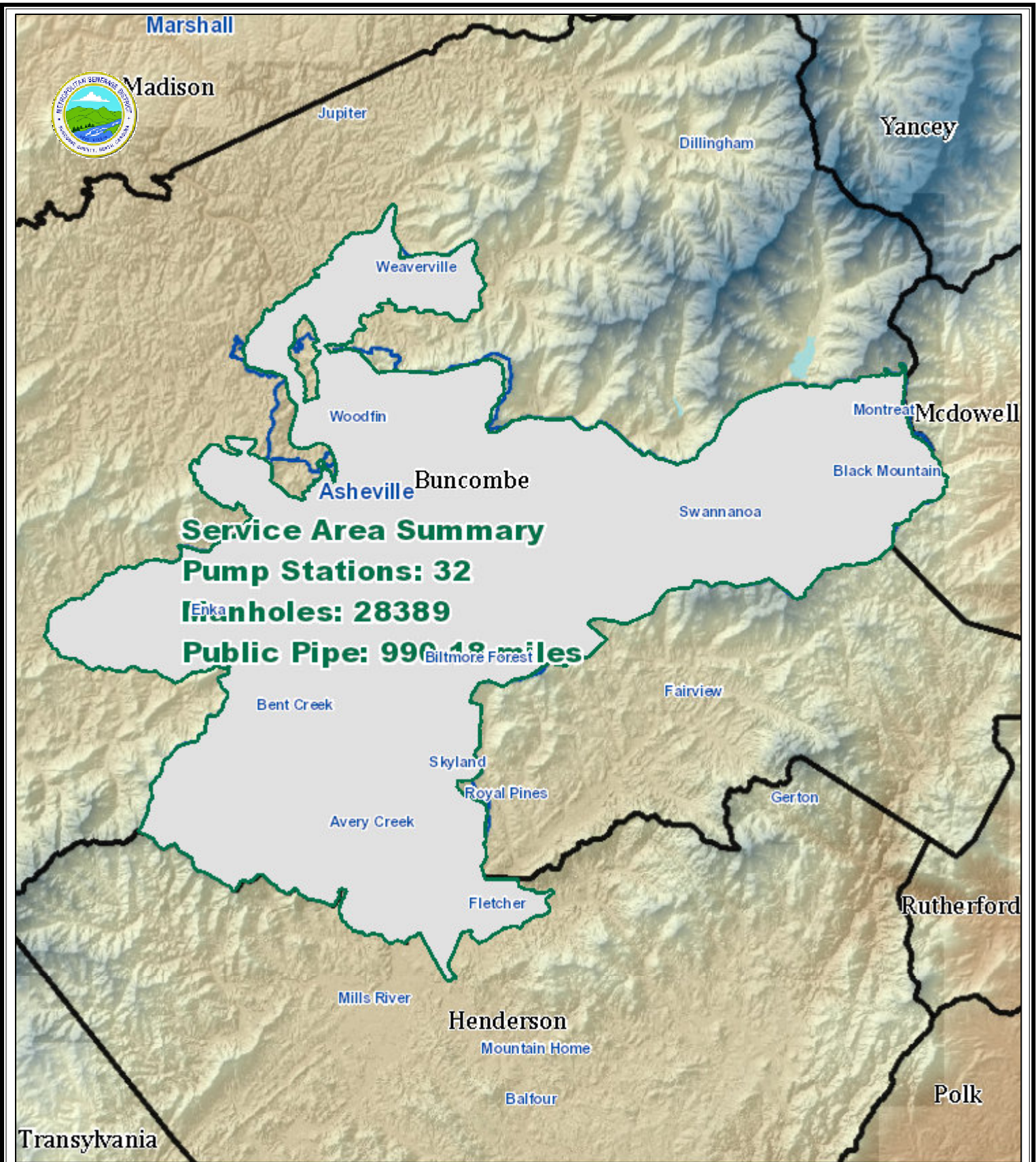
37) Are you aware of any community concerns or controversy relative to this project?

I am not aware of concerns beyond the need for additional capacity to improve safety.

38) Are there any additional comments you would like to make?

None.

Appendix C: Map of Service Area of Metropolitan Sewerage District of Buncombe County, NC



MSD Service Area

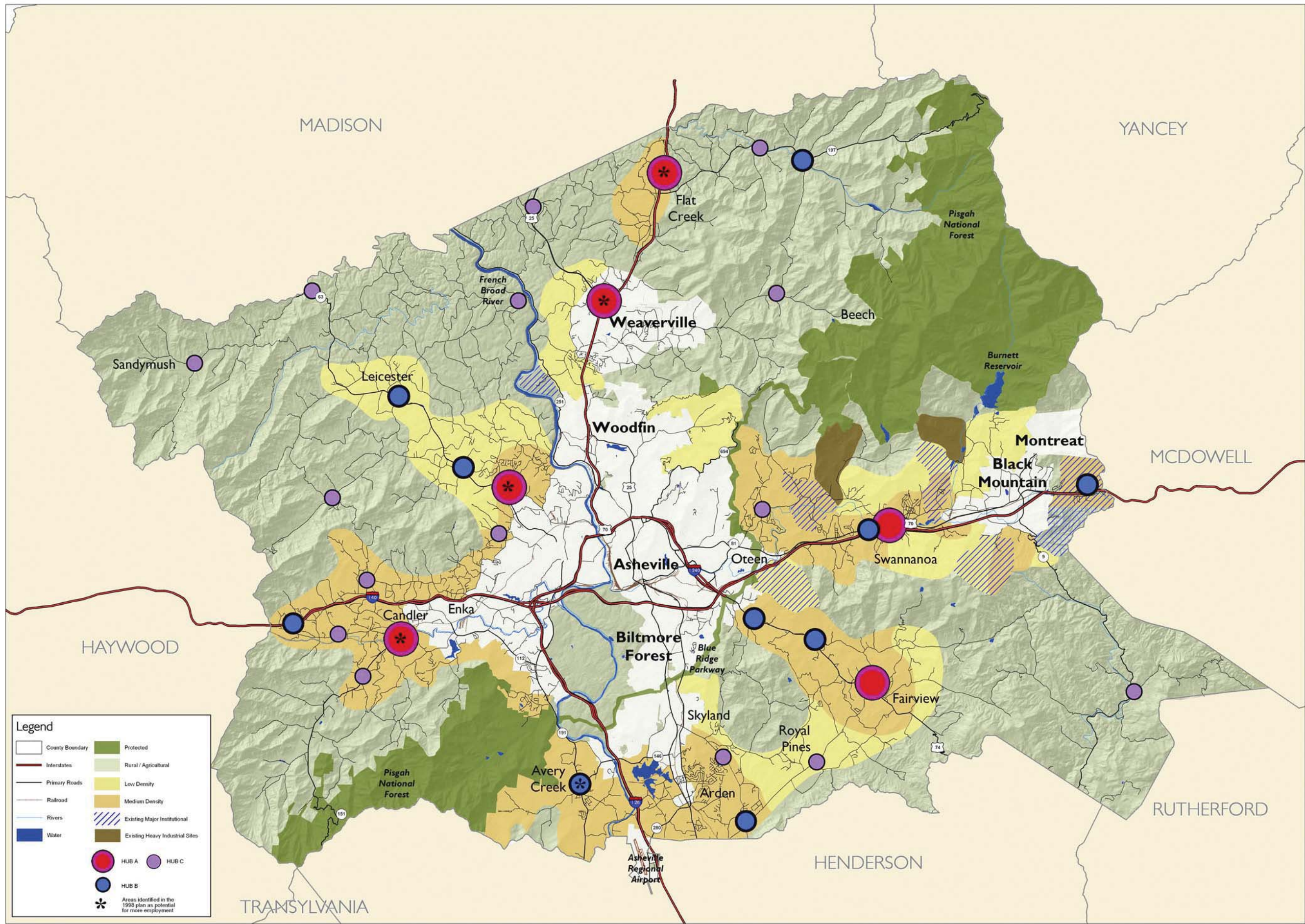
Author: MSD Online Map Generator

1 in = 20,000 ft

Date: 10/23/2013

The Metropolitan Sewerage District of Buncombe County, NC has prepared these maps based on best available information for use in assisting District maintenance work, service area analysis, and planning. The District does not warrant the accuracy of any of the information shown. Field verification is advised for all information shown on the maps or included with manhole data. No guarantee is given as to the accuracy or currency of any of the data. Therefore, in no event shall the District be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data, or profits, whether in an action of contract, negligence, or other action, arising out of or in connection with the use of the information herein

Appendix D: Buncombe County *Draft Comprehensive Land Use Plan 2013 Update*, Proposed Land Use Plan map

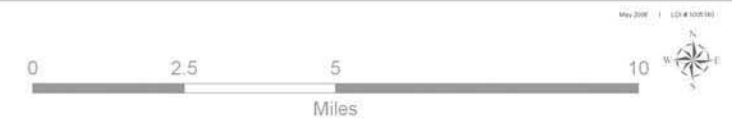


Legend

County Boundary	Protected
Interstates	Rural / Agricultural
Primary Roads	Low Density
Railroad	Medium Density
Rivers	Existing Major Institutional
Water	Existing Heavy Industrial Sites
HUB A	HUB C
HUB B	Areas identified in the 1998 plan as potential for more employment






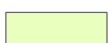
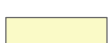
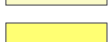
LandDesign.
 200 North Wolfe Street
 Charlotte, NC 28202
 Phone: 704.252.0222
 Fax: 704.252.0222

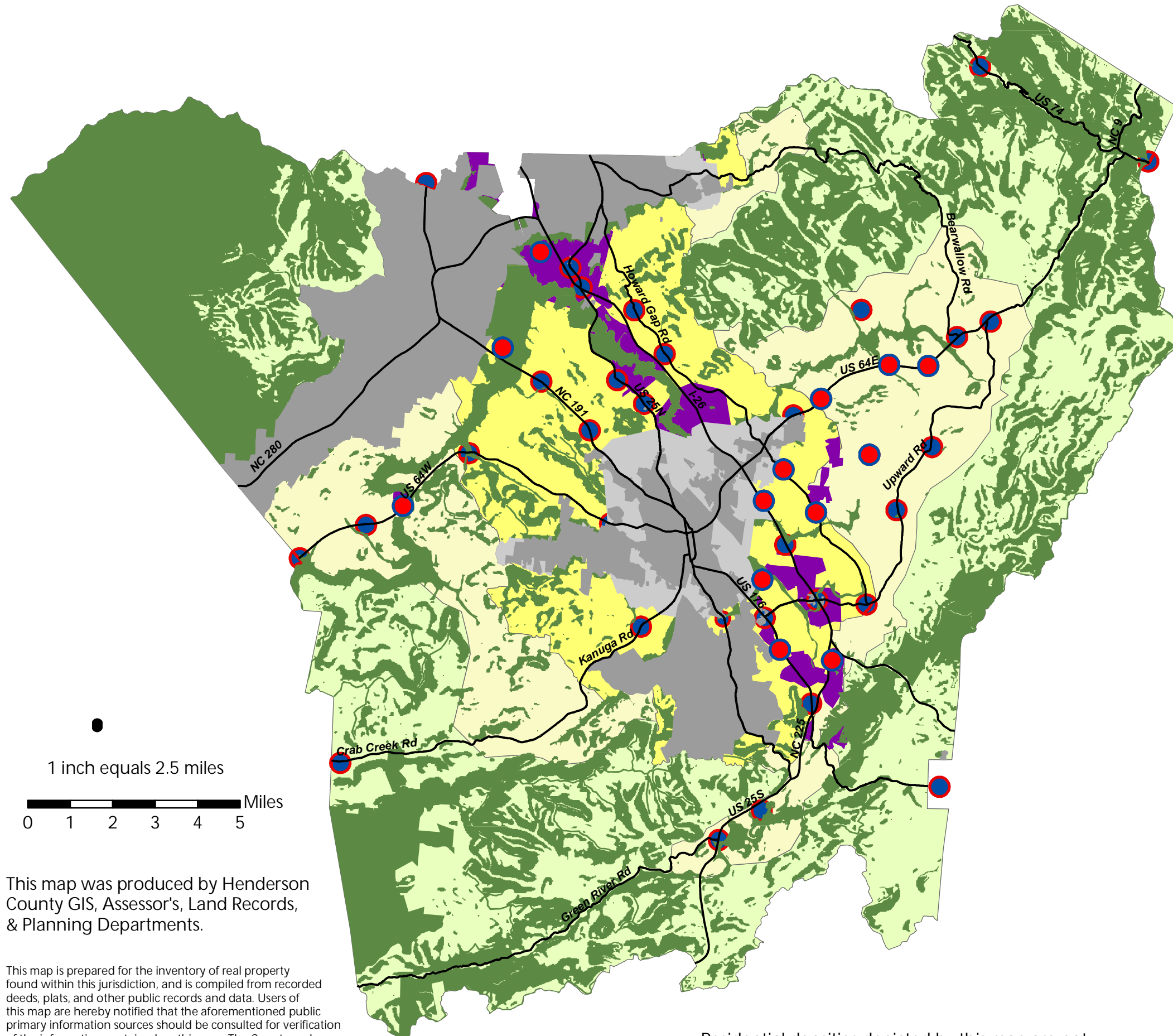
Proposed Land Use Map
 Comprehensive Land Use Plan Update
 Buncombe County, North Carolina



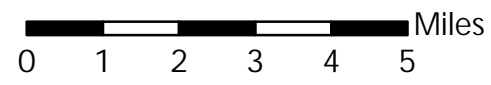
Appendix E: Henderson County *2020 Comprehensive Plan*, Future Land Use map

Henderson County Comprehensive Plan Future Land Use*

-  Major Roads
-  Proposed New Community Service Centers
-  Community Service Center
-  Industrial
-  Conservation
-  Rural/Agricultural Areas
-  Rural/Urban Transition Areas
-  Urban Services Area



1 inch equals 2.5 miles



This map was produced by Henderson County GIS, Assessor's, Land Records, & Planning Departments.

This map is prepared for the inventory of real property found within this jurisdiction, and is compiled from recorded deeds, plats, and other public records and data. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information contained on this map. The County and mapping company assume no legal responsibility for the information contained on this map.

Residential densities depicted by this map are not absolute. Density will vary within these areas as determined by Community Plans.

* This Future Land Use Map is not intended to provide precise, site-level details as to future land use. Rather, it is intended to serve as a general guide for important infrastructural, zoning, and other decisions. This map is subject to change and will be regularly updated.

** Community Service Centers: Intended to contain a mixture of Commercial, Community Facility, and Dense Residential uses; intended to depict general location only, actual size, shape, and range and intensity of uses therein shall be determined by Community Plans and other detailed studies; other Community Service Centers may be identified in the future.