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Fayetteville
ARKANSAS
Master Plan
The Fayette Junction Master Plan area summarizes the notable opportunities for development and revitalization in south Fayetteville. This area was once a hub for the lumber and canning industries, which led to the development of modest residential areas. Newer developments include the addition of the Crowne apartments, BioBased Companies and Bungalows at Cato Springs. Many of the recent changes have been beneficial to the area but have occurred more or less in isolation from one another. These developments, the proximity to the Arkansas Research and Technology Park (ARTP), a significant conservation easement and the entrance into Fayetteville from I-540 suggest that a comprehensive plan for this area would provide a tapestry that weaves these developments and opportunities together, creating a whole that is greater than the sum of its parts. Planning enables stakeholders to shape the form of future development by setting forth a vision that encourages a sustainable development pattern.

Over 100 citizens offered input on the vision for the Fayette Junction Master Plan September 13-18, 2008. During the charrette process, the diverse voices and opinions of the residents, business owners and other stakeholders converged to shape three guiding principles.

The extensive floodplains and significant hillsides that flank the entrance into Fayetteville from I-540 necessitate a careful integration of the natural and built environments. Stakeholders repeatedly mentioned the need for effective and innovative stormwater management techniques, and staff from the University of Arkansas stressed the importance of preserving the viewshed to Old Main, Fayetteville's iconic building. The second guiding principle speaks to a regional concept of sustainable economic development. The Illustrative Plan envisions a clean tech cluster, which capitalizes on the presence of ARTP, BioBased Companies and stakeholders’ desire to see an advertisement for “Green Valley” at the entrance to Fayetteville and a firm commitment to sustainability by encouraging clean tech industry to locate in Fayette Junction. Multi-modal transit also plays a significant role in tying employment centers and residential areas together both within the Fayette Junction area and throughout the region. A trail network links ARTP to the larger university campus as well as to residential neighborhoods within the planning area and the proposed clean tech cluster. Fayette Junction is envisioned as a proposed transit hub, potentially evolving from a park and ride to a rail transit stop and demonstrating how transit-oriented development can become a reality.

The vision document provides implementation steps for the short-term (0-5 years), mid-term (6-10 years) and long-term. While the illustrative plan captures a vision for final build-out, the action steps provide a roadmap for achieving the vision. Some of the short-term goals include rezoning along the Razorback Road corridor, creating a riparian buffer ordinance and adding the proposed streets to the Master Street Plan. Mid-term goals include adding or repairing existing sidewalks and preserving the Ogden hillside at the entrance to Fayetteville from I-540. Long-term goals include extending the principal arterial boulevard from 15th Street to the I-540 entrance along Razorback Road.

The ultimate vision will only become a reality through collaboration and cooperation among different stakeholder groups and partnerships between the public, private and non-profit sectors. Some of the short-term goals, including rezoning Razorback Road, can be initiated by the City, but the development of Fayette Junction will only occur through coordinated efforts between the public and private sectors.

This Plan serves as a guide for building upon the strengths of the Fayette Junction area and seizing opportunities that promote sustainable development patterns. Its implementation depends upon a firm commitment and concerted efforts from all relevant stakeholder groups.
# Table of Contents

## How the Plan was Created
- Charrette Preparation 4
- Analysis Maps 5
- History 9
- Neighborhood Tours 10
- The Charrette 10
- After the Charrette 13

## Plan Fundamentals
- *Integrate the built and natural environments* 15
  - Shining Gateway 15
  - Soil and Stormwater Infiltration 16
  - The Urban Transect 22
- *Create a clean tech cluster* 23
  - “Green Valley” 23
  - University of Arkansas Research and Technology Park (ARTP) 24
  - Capturing “Green Valley” in Fayetteville’s southern gateway 25
- *Support multi-modal transit* 26
  - Multi-modal transit is a key component of a sustainable community 26
  - Transportation constraints and opportunities 27
  - Fayette Junction 28

## Implementation Plan
- Short-term Projects 32
- Mid-term Projects 36
- Long-term Projects 38
- Conclusion 39

## Appendices
- Work-in-Progress Survey Results 40
- Illustrative Plan 43
- Alternative Zoning Map 44
- Resources 45
City Plan 2025, Fayetteville’s comprehensive land use plan, was adopted by the City Council unanimously on July 17, 2007. One of the stated objectives in City Plan 2025 was to produce a complete neighborhood plan each year using a charrette process in order to maximize public participation. The Fayette Junction area was chosen and approved by the City Council on June 3, 2008. Long Range Planning staff headed a team composed of City staff from the Engineering and Current Planning divisions, the City’s Sustainability Coordinator, and three local designers to facilitate an open public participation process for the Fayette Junction area. Over the course of several months and a seven-day intensive charrette, more than 100 community residents, business owners, University of Arkansas faculty and staff, and elected and appointed officials offered input for the neighborhood vision.

Charrette Preparation
Staff began gathering information three months prior to the charrette, meeting with groups that live or work within the neighborhood boundary, including business owners, neighborhood residents, and staff from the University of Arkansas Research and Technology Park. The charrette team compiled a series of analysis maps that showed environmental constraints, land use, property ownership and existing right-of-way, and listened to two experts discuss hydric soils in the area and water and sewer infrastructure. Mark Boyer, a Landscape Architecture professor at the University of Arkansas, shared his knowledge about hydric soils and the implication for development, and David Jurgens, the City’s Water and Wastewater Treatment Director, provided information on the water and sewer infrastructure in the southwest corner of Fayette Junction.

Staff sought to maximize public participation by sending save-the-date postcards to each resident and property owner within the neighborhood and providing yard signs to residents and businesses. Flyers were distributed in English and Spanish to the neighborhood Head Start program. Staff also publicized the charrette through presentations at Ward 1 and Ward 4 meetings, a Lions Club meeting, and a business owner meeting co-sponsored by the Fayetteville Economic Development Council and the Chamber of Commerce. A public service announcement aired on the Government Channel three weeks prior to the charrette, and ads were published in the Northwest Arkansas Times and the Free Weekly magazine.
Hillsides. The Dowell Cemetery hillside is the largest and most easily recognizable landform in the Fayette Junction area. Its steeply forested slopes give the area character and provide a sense of scale. The conservation easement placed on the Dowell Cemetery hillside provides stakeholders in the area with the knowledge that this important piece of natural green space will endure for future generations.

Riparian Areas. The Fayette Junction master plan area is bisected by two significant streams, the Cato Springs Branch and the Town Creek Branch. These streams are part of the larger White River Watershed that ultimately flow into Beaver Lake, which is the drinking water source for the Northwest Arkansas Region. Future development in close proximity to these, and the other smaller branches within the Fayette Junction area, needs to be particularly careful in the treatment and release of stormwater runoff.
Current Zoning and Existing Development Pattern:
Like much of historic Fayetteville the traditional development patterns have located primarily on the flattest and most easily developable lands. The location of the railway line and wye spurred the early development in this area along the Town Branch. Subsequent residential and modern industrial land uses have occurred more or less hodgepodge on the remaining flat lands.
Existing Land Uses

**Existing Land Uses**

**Single Family Housing** - There are three distinct residential neighborhoods that are primarily single family in nature. Located north, south and west of the Fayette Junction, these existing subdivisions provide a stable and cohesive residential component within the planning area.

**Multi-Family Housing** - Recent development in the Fayette Junction area has been primarily multi-family residential, the largest being the Crowne Apartments on 15th St. Close proximity to the UA, existing infrastructure such as water, sewer and streets, and relatively level typography make much of this area prime for medium density residential and mixed use.

**Commercial** - The Fayette Junction area has a limited amount of commercial uses. The University Village development in front of the Crowne Apartments is the newest commercial activity in the area and it has a mixture of hotel, restaurant and commercial uses. An assortment of commercial uses is located at the corner of 15th St. and South School Avenue.

**Open Space** - Two significant open spaces provide outdoor recreation opportunities. Greathouse Park, located off of Garland Ave, has a playground surrounded by a large open grassy area. The hillside adjacent to Dowell Cemetery is owned by the City of Fayetteville and is in a conservation easement. Future passive recreation opportunities may exist for this wooded hillside.

**Industrial** - While a large portion of the area is zoned industrial, there are only a few industrial activities ongoing. This would include the cement plant on Cato Springs Road, BioBased Companies located at the corner of Cato Springs Rd. and Razorback and the old Levi Strauss plant on Garland Ave., which is currently used for storage and equipment rentals.
Future Land Use: Fayette Junction has a diverse mix of land use types envisioned in the future. Land uses vary from natural and rural areas to urban centers. The large percentage of vacant and underutilized land provides opportunities for varying degrees of residential densities and commercial intensities while preserving significant open space.

Urban Center Areas are the equivalent of a main street, including building types that accommodate retail, offices, rowhouses and apartments. They are usually a tight network of streets, with wide sidewalks, consistent street planting and buildings set close to lot frontages. These areas contain taller buildings and have the most intense and dense development patterns within the City, as well as the greatest variety of buildings, with unique civic buildings in particular. Urban Center Areas recognize conventional strip development, but encourage the redevelopment of these existing properties for more efficient use of the land.

Residential Neighborhood Areas are almost exclusively residential in nature with naturalistic planting and conventional setbacks. This zone recognizes conventional subdivision development but encourages traditional neighborhood development that incorporates low-intensity non-residential uses. Developments should have a strong sense of connectivity where appropriate.

Natural Areas consist of lands approximating or reverting to a wilderness condition, including lands with limited development potential due to topography, hydrology, vegetation or its value as an environmental resource.

Rural Areas consist of lands in an open or cultivated state or sparsely settled. These may include woodland, agricultural lands or grasslands. These areas only have infrastructure and public services to support low-density zoning.

City Neighborhood Areas are a denser and primarily residential urban fabric. Mixed and low-intensity nonresidential uses are usually confined to corner locations. These areas have a wide range of residential building types: single, side-yard and rowhouses. Setbacks and landscaping are variable. Streets typically define medium sized blocks with a high level of connectivity between neighborhoods. City Neighborhood areas recognize conventional strip commercial developments but encourage complete, compact and connected neighborhoods.
History
One of the oldest roads in Fayetteville crosses the Fayette Junction Master Plan area. Brooks Street served as an early route for the Butterfield Stage Line, which began running in 1858 between Tipton, Missouri and San Francisco, CA. The Frisco Rail Line arrived in Fayetteville in 1881, and in 1886, “... a switch was installed on the Frisco main line about a mile south of Fayetteville, and the spot was named Fayette Junction.” (Campbell 2005).

Fayette Junction soon became the hub of a thriving lumber industry in the late 1800s, and multiple hardwood milling operations located nearby. The Sligo Wagon Wood Company and Brown Veneer, two of the original structures, still have building remnants at Fayette Junction. Neighborhoods developed in the area to house mill workers.

From the 1930s-1950s, the canning industry dominated the area. Tom Hargis operated Hargis Cannersies as a brokerage for approximately 30 small canneries in Washington and Madison counties. His vegetables and fruits were canned at the Sligo mill before shipping to wholesalers.

The area began to decline in the 1970s as the Sligo mill deteriorated. City Lumber used the Sligo mill for storage until abandoning the site in the early 1990s. After 100 years of use, the Burlington Northern Railroad sold off all its land in Fayette Junction except for the right-of-way. The area became home to primarily industrial uses. However, the extension of Razorback Road south of 15th Street created new development opportunities, and the area is beginning to see some new neighborhoods such as the Bungalows at Cato Springs and the Crowne Apartments.
Neighborhood Tours
The charrette team organized a driving tour with neighborhood residents and Ward 1 and Ward 4 aldermen. This driving tour enabled the team to capture photos of the varied uses within the Fayette Junction area, identify potential infill areas and note the existing network of streets and blocks. Residents identified unique characteristics of the neighborhood as well as areas of concern.

The Charrette
The charrette began on September 4, 2008 with a Kick-off event at Staybridge Suites. The event featured local historian Denele Campbell who presented to the crowd of approximately 50 people an overview of the history of Fayette Junction, which began as a hub for the timber industry in Fayetteville in the late 1800s and later served as an important stop for transporting canned goods in the 1960s. Mayor Dan Coody and Alderwoman Brenda Thiel also encouraged citizens to get involved with the Master Plan process and showcased the progress that has been made with other master plans such as the Downtown Master Plan and the Walker Park Neighborhood Master Plan.

Attendees also completed a survey at the Kick-off that asked about the challenges and opportunities in Fayette Junction. The challenges most frequently identified were truck traffic, eyesores and access to I-540. The top opportunities identified were tech industrial growth, creating walkable neighborhoods and providing usable greenspace.
Community members gathered at the Genesis Center at the Arkansas Research and Technology Park (ARTP), September 13, 2008 for the hands-on design workshop. Approximately 40 people attended for the three-hour session. Dara Sanders, Current Planner, began the workshop with a visual preference survey, which gave the participants common visual images that they could use in their small group discussions. Karen Minkel, Interim Director of Long Range Planning, then offered a “Food for Thought” presentation that highlighted traditional planning practices, community planning and smart growth principles. Participants then worked in groups of 6-8 people to reach a consensus about the things they would most like to see included in a vision for the Fayette Junction area and used markers and sticky notes to render their vision for Fayette Junction on the maps provided at each table.

At the end of the session, each of the five groups chose a representative to present the group’s ideas to the entire assembly. Common elements quickly emerged. Among the ideas repeated most frequently were:

- “Razorbak Road—turn into a boulevard”
- “Low-impact development—address drainage problems and provide green roof incentives”
- “Connectivity with trails, bike lanes, sidewalks”
- “Clean green industry”

The hands-on design session forged an initial consensus, and the maps and ideas generated served as a key tool for the charrette team as they began to create an illustrative map based on the citizen input.
The charrette team held an Open Design Studio at the Innovation Center at ARTP through Thursday, encouraging interested community members to check the status of the plan and look over the designers’ shoulders to make sure their ideas were represented in the master plan. The citizen maps from the hands-on design session lined the hallway and rough sketches that showed the evolution of different design concepts were posted throughout the studio. Approximately a dozen people per day stopped by to talk with the design team and view the drafts.

In addition to the open design studio, the charrette team held an Open House on September 15, 2008 and offered different scenarios for residential neighborhood designs from which participants could choose. Attendees provided feedback through a short survey. Four areas were highlighted at the Open House: 1) Fayette Junction; 2) Red Arrow neighborhood; 3) the residential area just south of 15th Street; and 4) the residential area south of Cato Springs Road, across from ARTP.

Charrette team members also met with specific stakeholder groups at the studio for feedback on designs. City engineers reviewed infrastructure proposals, University of Arkansas campus planning and ARTP staff discussed the interaction between ARTP and the surrounding areas, and local business owner Mike Muccio of BioBased Companies, Steve Rust with the Fayetteville Economic Development Corporation and Phil Stafford with ARTP offered input on the potential for a clean tech concentration within the 640 acres.
A Work-in-Progress presentation on September 18, 2008 in the Genesis building concluded the charrette. Approximately 40 people came to hear the charrette team’s proposals and view the illustrative plan. Karen Minkel reviewed the week’s events and then shared the three main goals developed by the charrette team based on citizen input. The presentation gave citizens a “tour” of the Fayette Junction area in the future and summarized initial regulatory ideas that would enable the Plan to become a reality. A survey was distributed to all attendees in order to gauge the community’s reaction to the ideas. Ninety-four percent of the surveys received at the Work-in-Progress session thought that the plan was “on the right track.”

**After the Charrette**
Over a period of 14 weeks, the charrette team refined the illustrative plan and drafted a vision and Master Plan document to be presented for adoption to the Planning Commission and City Council.
The Guiding Principles are:

1. Integrate the built and natural environments
2. Create a clean tech cluster
3. Support Multi-modal transit
Integrate the built and natural environments.

The Fayette Junction Neighborhood Plan area has a wide variety of topography, landform types, soil classifications, floodplain and wetlands. In the past, a substantial amount of development occurred in the floodplain, such as the old Levi Strauss Plant. Negative impacts of floodplain development can include diminished property value and environmental damage to the stream system. The new development shown in the Fayette Junction Illustrative plan is intentionally placed outside of the 100-year floodplain. The steep hillside areas have reforested and have generally been left undisturbed. These diverse landforms present both opportunities and challenges that have been addressed in the Illustrative Plan.

Shining Gateway

The intersection of Razorback Road and I-540 provides a prime opportunity to preserve and enhance the southern gateway into the City. Razorback Road is flanked on the east by a smaller hillside that provides a distinctive vantage point opposite the Dowell Cemetery hillside. Development on this site could potentially impair the terminated vista of the iconic Old Main. The University of Arkansas Facilities Management Planning Group expressed the desire to keep this site unobstructed for this important viewshed.

The Fayette Junction Illustrative Plan shows this gateway with a small church or civic building constructed above Dowell Cemetery with parking that could be shared with visitors to the adjacent city owned open space. Across Razorback Road on the smaller hilltop, a civic building is illustrated that could be associated with the clean tech cluster envisioned in this area.

The hillsides reflect the natural beauty of the Ozarks, serving as sentinels to the City. The preservation of these two hillsides adjacent to the development of a clean tech park would symbolize the City’s commitment to sustainability and the attention to balance between preservation and development. The opportunity to preserve this most dramatic of gateways is in the near future - before development pressures make it cost prohibitive.

WHAT IS A 100-YEAR FLOODPLAIN?

Flooding is a natural and recurring event for a river or stream. Flooding occurs when heavy or continuous rainfall exceeds the absorptive capacity of soil and the flow capacity of the river or stream, causing a watercourse to overflow its banks onto adjacent lands. Floodplains are, in general, those lands most subject to recurring floods, situated adjacent to rivers and streams. Floodplains are therefore “flood-prone” and are hazardous to development activities if the impact of those activities exceeds an acceptable level.

Floods are usually described in terms of their statistical frequency. A “100-year flood” or “100-year floodplain” describes an event or an area subject to a 1% probability of a certain size flood occurring in any given year.
**Soils and Stormwater Infiltration**

Future development should be carefully planned and built with best management practices that minimize negative impacts on the watershed. Excessive stormwater runoff from impervious surfaces will create increased volumes and velocities during major rain events. The integration of the natural and built environment is possible with careful utilization of mitigation measures.

A large part of the Fayette Junction Master Plan area has soils that are categorized as “hydric”. As a general rule hydric soils are not particularly conducive to stormwater infiltration. This is a common soil type throughout the City of Fayetteville and large areas with hydric soil types have been developed in the past. For instance, much of the area around the CMN business park has hydric soils, and many Fayetteville neighborhoods have been built in areas with hydric soils.

The soils in the Fayette Junction area are primarily a variety of sandy loams that have a very fine texture and have been laid down by alluvial processes. Stormwater will have a tendency to stand on these types of soils and percolate downward very slowly. Untouched virginial lands of this type mainly consisted of seasonal wetlands prior to early urbanization and agriculture. Very few fragments of this wet prairie type still exist today, and much of the Fayette Junction area has been altered at some point in time over the last 150 years of settlement.

Additionally, the groundwater table is in close proximity to the surface in many areas. Development of areas with a high water table is extremely challenging. Individual sites in areas with known high water tables should be investigated thoroughly prior to development to mitigate negative impacts.
Recommended Development Practices

An analysis of the 100-year floodplain map shows that a notable amount of the undeveloped area in the Fayette Junction Master Plan is near or adjacent to the floodplain and riparian areas. Consideration should be given to Low Impact Development Management Practices as these areas build out. These could include:

- **Low-impact Development (LID) Streets**
  
  LID streets utilize a natural swale or ditch adjacent to the roadway to allow runoff to infiltrate into the ground. The conventional pipe and pond engineering is replaced with gravel substrate lined swales. The filtration of the stormwater occurs as the water percolates downward into the subsurface. In areas with drainage or infiltration problems, due to soil type or geology, innovative combinations of conventional and LID engineering solutions should be utilized. A LID street is shown in the Illustrative Plan as an extension of Boone Street to Treat Street because it partially falls in the floodplain.

- **Elevated Structures**
  
  The use of elevated structures can be a useful tool for development that falls outside of regulated flood zones but is still in areas that could be considered vulnerable to flooding. Construction techniques for elevated structures have been designed and built recently in the Gulf Coast region and are depicted in a rendering that shows development bordering a floodplain.
**Green Corridors for Alternative Transportation**

The Cato Springs and Town Branches provide the opportunity to expand the City’s alternative transportation trail system within their floodplains. The illustrative plan shows these linkages both within the riparian areas and adjacent to likely residential, commercial, and recreational nodes. The trails system currently being planned, designed, and built provides a vital transportation alternative to vehicular transportation that enhances the overall walkability and livability of Fayetteville. Due to its location and existing infrastructure, the Fayette Junction area could be a major hub in the future for the convergence of multiple transportation alternatives. The proximity of the trail to the riparian area has the added benefit of preserving a natural buffer area along the waterway.

**Natural Habitat Linkages**

The riparian areas in the Fayette Junction Neighborhood link to the larger City and will contribute to a green infrastructure corridor that allows for natural habitat linkages. These linear corridors are conducive to allowing the migration of wildlife. Also, the availability of accessible and meaningful green-space is vitally important to ensuring that the built environment does not dominate the natural environment. Increased density and intensity needs to be designed to allow for human interaction within the preserved natural habitat.
• **Stormwater Detention and Retention**

Conventional engineering practices capture stormwater runoff by piping its flow to a catch or detention basin that is designed to release the flow capacity at a rate equal to or less than the runoff rate of the undeveloped land. Stormwater detention in this form is evident in most projects that have been built in the last three decades. Alternative techniques, such as retention basins, are beginning to change how engineers design and construct stormwater structures.

Retention basins differ in that they are designed to capture runoff and store it at a desired elevation before releasing it to the next basin downslope. This allows aquatic plant life to establish itself and provide filtration of stormwater pollutants, such as motor oil from a parking lot. Retention basins also retain relatively stable water levels, providing opportunities for wildlife and recreational openspaces.

Retention ponds naturally filter stormwater pollutants.

Charleston Place, Fayetteville, AR
Cisterns, Rainbarrels and Other Stormwater Capture Techniques

Rooftop impervious surfaces provide an excellent opportunity for rainwater capture. Historically, the capture and storing of rainwater provided a valuable renewable water resource. This was true for most of human history and only recently, with the advent of modern water distribution systems, has its importance in the built environment diminished.

Fortunately, cisterns, rainbarrels and underground storage vaults are re-emerging as solutions for mitigating the increased stormwater runoff caused by the built environment. These applications can be applied to small scale projects, like a single-family home, or large scale projects such as a commercial or industrial project. Stored rainwater is most often used to irrigate landscape elements, but can also be designed to provide non-potable water for interior uses such as toilets. Ultimately, the capture of rainwater is a design element that should be utilized widely and is especially important in areas that are near or adjacent to riparian areas and flood zones.
• **Green Roofs**

A green roof is a building roof covered by vegetation. This has environmental advantages for reducing stormwater runoff and absorbing carbon dioxide from the air. Much of the innovation with green roofs in the U.S. has occurred in Chicago, and the Chicago Center for Green Technology recognizes the following benefits:

- Reduction in rainfall runoff impacts
- Reduction of carbon dioxide and air pollution
- Reduction of heat island effect
- Reductions in building heating and cooling loads
- Lengthened roof life
- Removal of nitrogen pollution in stormwater runoff

*Source: City of Chicago Green Roof Fact Sheet.*
The Urban Transect

Planners use a visual tool called the transect to describe the variations in intensity of the built environment. The transect is also used to illustrate the demarcation lines between differing degrees of urban density and intensity.

In the Fayette Junction Illustrative Plan, the variations of intensity and density can be seen as commercial nodes, such as the Junction, which give way to mixed-use, multi-family, and ultimately single-family detached development patterns. The area directly north of the existing Red Arrow Subdivision east of Razorback Road exemplifies this concept. A large piece of underdeveloped land exists between 15th Street and the Red Arrow Subdivision. The current zoning here would allow a build out of 24 units per acre of multi-family dwellings. The existing density and zoning for the Red Arrow Subdivision is currently single-family 4 units per acre. The illustrative plan shows how new development could transition from 4 units per acre in Red Arrow, to 8 units per acre for several blocks and then ultimately to multi-family and mixed use buildings along the minor arterial 15th Street. The other side of the street advances this progression with a large hotel development. The gradual transition of density and intensity allows for an orderly and acceptable pattern while still allowing the land owner to maximize the overall development potential of the land.
Create a clean tech cluster.

The expansion of the Arkansas Research and Technology Park, the construction of BioBased Companies headquarters and the development of the Crowne Apartments serve as harbingers for the potential of the Fayette Junction area. Connecting this area to downtown and ultimately Northwest Arkansas not only serves as a catalyst for economic development, but encapsulates the principles of a sustainable community.

“Green Valley”

An ambitious coalition composed of local businesses, the University of Arkansas and the Fayetteville Economic Development Council formed in 2007 to promote a cluster of businesses that focus on sustainability technology. Similar to the founders of Silicon Valley or Research Triangle in North Carolina, the Green Valley Network envisions an internationally significant cluster, primarily in Northwest Arkansas. The area already serves as a home to the following:

- The highest concentration of plant scientists in the world
- Wal-Mart, the largest funnel for global consumer demand and the largest proponent of sustainability on Earth
- The largest pre-existing supplier cluster with 1,300 consumer goods companies
- One of America’s largest oil and gas energy centers
- The world’s busiest cargo airport
- One of America’s largest agri-business centers with biofuel and eco-tourism opportunities


The Green Valley Network founders believe these facts leave Northwest Arkansas poised to successfully recruit businesses that offer technological jobs while promoting a sustainable environment. The City of Fayetteville offers an ideal home for knowledge-based companies that emphasize sustainability. The University of Arkansas’ Research and Technology Park (ARTP) is located in Fayetteville, the City offers cultural amenities that employees of knowledge-based companies desire, and the City engages in sustainable practices that are reflected in myriad policies and programs.
University of Arkansas Research and Technology Park (ARTP)
The Fayette Junction boundary is adjacent to ARTP, which currently serves as a research incubator for clean tech companies. Fayette Junction offers an opportunity to promote the concept of “Green Valley” with shovel-ready land for clean tech companies that mature and want or need additional facilities apart from ARTP such as Biobased Companies.

The official case for a research and technology park was made in 2001 by the 2010 Commission assembled by the University of Arkansas. The 2010 Commission envisioned a “physical space where links between high quality academic research and business ideas [could] be formed to the benefit of all” (Center for Business and Economic Research, 2002).

The expected value of the total impact of operating ARTP is nearly $720 million (The Teller 2003). Currently, ARTP is home to 31 public/private affiliates and employs approximately 350 people. Since assuming management responsibility in November of 2004, the University of Arkansas Technology Development Foundation has grown the partnership base at ARTP from 13 to 31 public/private affiliates working to develop a broad array of technologies. In addition to the growing number of for-profit companies, ARTP is also home to a number of not-for-profit companies that provide complimentary services to University affiliates including the Small Business Administration, University of Arkansas Office of Technology Licensing, Arkansas Capital Corporation and Innovate Arkansas. Since January of 2005, affiliates of the ARTP have secured over $46 million in federal grants and contracts.
Capturing “Green Valley” in Fayetteville’s southern gateway

The vision for “Green Valley” has become a shared vision in Fayetteville among industry leaders, the University of Arkansas and City government. The southern gateway into Fayetteville from I-540 currently lacks defining features but has potential to become a striking entrance into the city, highlighting the “Green Valley” concept and building upon the strengths of ARTP.

The potential for a grand entrance into the City of Fayetteville exists first in the natural landscape. Dowell Cemetery Hillside lies to the west of the entrance. A smaller hill and undeveloped land lie to the east. The two hillsides frame a view of the University’s Old Main, serving as sentinels into the city. Extending the boulevard south along Razorback Road to I-540 as envisioned in the Illustrative Plan would enhance the streetscape at Fayetteville’s southernmost exit. This boulevard would also limit curb cuts onto Razorback Road, limiting the starts and stops in traffic flow caused by vehicles entering and exiting onto the arterial.

The Illustrative Plan envisions a clean tech park located at the undeveloped land southeast of the I-540 exit with a focus on fabrication and manufacturing, complementing rather than competing with the research and development activities at ARTP. Clean tech labs or offices within the identified park or east of BioBased Companies could also utilize the existing rail line for deliveries by constructing a spur. Locating clean tech industries on the undeveloped land just east of this entrance accomplishes two things: 1) Close proximity to ARTP and BioBased Companies allows a cluster of companies to take advantage of material and intellectual resources; and 2) Clean tech companies that employ “green” building techniques such as those envisioned in the Illustrative Plan create an advertisement and announcement for “Green Valley” with Fayetteville as its epicenter.
Support multi-modal transit.

Multi-modal transit is a key component of a sustainable community.
Charrette participants shared a vision for connected sidewalks, additional trails and the future potential for light rail during the Hands-on Design Workshop. Their preferences reflect a desire to have multiple modes of transit available for commuting to work as well as shopping for daily goods. Multi-modal transit not only provides more options for travel, but is an integral part of a sustainable community. Reductions in vehicle miles traveled leads to decreased air pollution and traffic congestion, which is consistent with the definition of a sustainable transportation system.

City Plan 2025 reflects this principle with the stated goal that Fayetteville will “grow a livable transportation system.” Constructing a trail network, providing pedestrian and cyclist options on all streets, and supporting regional mass transit are critical components of this tenet.

The Fayette Junction Illustrative Plan exemplifies this principle of City Plan 2025. The extensive floodplains in the master plan area offer opportunities for a significant trail network. The transformation of Razorback Road into a boulevard will accommodate pedestrians and cyclists as well as vehicle traffic, and the Plan envisions Fayette Junction evolving into a passenger rail stop supported by transit-oriented development.

WHAT IS A SUSTAINABLE TRANSPORTATION SYSTEM?

- Allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations;
- Is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy; and
- Limits emissions and waste within the planet’s ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise.

- Defining Sustainable Transport, Centre for Sustainable Transportation, March 31, 2005

Extensive floodplains offer opportunities for a significant trail network.
Fayette Junction evolving into a passenger rail stop supported by transit-oriented development.
The Razorback Road boulevard extends from 15th Street to I-540.
**Transportation constraints and opportunities**

Multiple transportation constraints confront the Master Plan. First, the extensive floodplains make the construction of north/south and east/west roads cost prohibitive. Trail networks that extend to other parts of the City, however, show that floodplains also present an opportunity for expanding multi-modal transit opportunities. Trails such as Mud Creek Trail and Scull Creek Trail are constructed partially within floodplains, providing an alternative transportation option for pedestrians and cyclists.

The Fayette Junction Master Plan continues this approach by showing a trail system that runs parallel to Town Branch and Cato Springs Branch. The Fayette Junction trail system will enable a resident of Crowne Apartments to commute to the Arkansas Research and Technology Park and an employee of ARTP to visit a colleague at the clean tech park on Razorback Road without having to use a motorized vehicle. The pedestrian linkages shown throughout the Fayette Junction area will ultimately become connections to the greater citywide trail system.
The second major challenge confronting connectivity is the railroad line. The Arkansas and Missouri Railroad limits the number of crossings allotted to a municipality so that if a new crossing is granted, one must be forfeited. Crossings also come at an additional expense. The builder has to pay for a construction team to work rapidly, often in one night, to complete the crossing.

The Fayette Junction Master Plan shows two additional railroad crossings—one at 18th Street and one at Treat Street—in order to improve east/west connectivity. A conversation with the General Superintendent of the Arkansas Missouri Railroad, Jim Seratt, confirmed the general policy of giving one crossing up in order to get another, although he added that there could be exceptions to this rule. Recent history also indicates that the costs are not strictly prohibitive; a developer constructed a new crossing at Quality Lane in order to provide access to a multifamily development.

**Fayette Junction**

The greatest potential for providing sustainable, multi-modal transit comes from the railroad right-of-way. The railroad currently has 100-200 feet of right-of-way along the existing rail line, which runs through the heart of the downtown areas of the four major cities along the Northwest Arkansas corridor. Building a parallel track for public transit within the existing railroad right-of-way or utilizing a system on the existing track would provide cost-savings worth millions of dollars in right-of-way acquisition.

The University of Arkansas Community Design Center makes a compelling argument for Northwest Arkansas as a candidate for federal rail transit dollars in its 2007 study. The region, formed by a linear string of cities, is made up of a population that meets the density threshold necessary to support transit and that is likely to use rail transit, including University students, inter-city commuters, and retirees. These facts make the region a competitive candidate for New Start dollars, federal funding allocated for fixed guideway systems designed for the exclusive use of mass transportation. (UACDC, 2007)
Creating a transit hub that can evolve over time will enable the Fayette Junction area to transition to a transit-worthy urban destination.

This series of graphics envisions how the Fayette Junction railroad wye would transform and build-out over time into a transit-oriented development hub. Currently the Fayette Junction wye consists of a large open space being utilized as a concrete manufacturing facility. The 0-10 year build-out centers new development at the intersection of Cato Springs Road and Razorback Avenue. The 10–15 year graphic illustrates the addition of north-south and east-west streets with accompanying residential and commercial growth. In 16-20 years, the area becomes a transit hub with a large central plaza, parking deck, commercial, residential and green technology uses. The final illustration is the full build-out of a complete transit-oriented neighborhood with a density of 20 units per acre.
WHAT IS TRANSIT-ORIENTED DEVELOPMENT?

...It’s building a place, not just a transportation system. The creating of an engaging public realm beyond mere engineering of a transportation project is critical to rail transit feasibility.

...It’s a regional planning instrument for developing land uses that consume less land per capita, conserve sensitive natural areas, and revitalize urban areas.

...It’s creating a pedestrian-oriented urban district within a half-mile radius around a rail transit station.

...It’s about guiding growth, rather than creating it. Unlike highway development, good transit design can capture sustained economic value from the triangulation of transportation efficiencies, community redevelopment, and shifting consumer habits due to "agglomeration efficiencies."

- NWA Rail Visioning Rail Transit in Northwest Arkansas: Lifestyles and Ecologies, UA Community Design Center 2007
The Fayette Junction Illustrative Plan combines the concept of a passenger rail system parallel to the existing railroad line with the transit-oriented development needed to support an urban transit hub. The Illustrative Plan utilizes the concept of a transit shed, or a half-mile radius around the transit stop that supports significant pedestrian traffic by creating a destination urban hub complete with retail, offices and high-density housing options. An appropriate density for supporting a rail stop is approximately 15-20 units per acre, which is the density suggested in the Illustrative Plan. The current density of the Fayette Junction Neighborhood is closer to 3-4 units per acre.
The ultimate success of any planning document depends upon the willingness and capacity of all stakeholder groups to implement the vision. The implementation of the Fayette Junction Master Plan will only occur through cooperative efforts among the City, residents, business owners, the nonprofit sector and the private sector. The following steps outline projects that will help achieve the goals of the Master Plan and are broken down into a series of short-term projects (0-5 years), mid-term projects (6-10 years) and long-term projects. Short-term steps include regulation changes and projects that require little infrastructure or cost. Long-term projects are those that require more significant capital investment. The ultimate timing of implementation will reflect the overall commitment to the realization of the vision developed by the community.

**Short-term Projects**

1. **Seek zoning changes along the Razorback Road corridor from I-540 to 15th Street.**

Development along the Razorback Road corridor forms a first impression of Fayetteville. The form of this development will affect property values and contribute to Fayetteville's identity. The Master Plan recommends preserving the hillsides at the entrance and zoning for an urban development form along the rest of the corridor. This zoning will promote continuous frontage of buildings near the street, contributing to a pedestrian-friendly environment that enhances property values and promotes infill development where infrastructure can support urban densities and intensities.
2. Amend the Master Street Plan to include the key proposed street connections.

Including the proposed streets in the Master Street Plan will ensure that these connections are completed when new development occurs. Multiple connections are shown in the Illustrative Plan, and may change as concrete projects are proposed. However, several connections significantly facilitate traffic flow and should be added to the Master Street Plan:

- Squareback at Fayette Junction, which includes the wye geometry
- 18th Street extension to Garland Avenue
- Street connection between Treat and Cato Springs Road
- Treat extension to Cato Springs Road
3. Amend the Future Land Use Map to reflect the transit-oriented development at the historic Fayette Junction.

The Fayette Junction area is currently designated as City Neighborhood on the City’s Future Land Use Map. Staff proposes amending the future land use map by designating the area around the Fayette Junction as Urban Center. The Urban Center designation allows for a more intense and dense pattern of land use, encouraging a diverse mix of residential, commercial and office uses within the Fayette Junction Area. Multi-modal transit hubs have been shown to work best when a variety of employment and housing options are located within a half-mile transit shed.
4. Establish a riparian buffer ordinance.

Both the Cato Springs Branch and Town Branch are part of the riparian ecosystem that feeds into the White River, which drains into Fayetteville's water source, Beaver Lake. This ecosystem needs protection in order to maintain the integrity of Fayetteville's most valuable water resource. Municipalities often use riparian buffer ordinances to ensure that riparian ecosystems continue to provide all the benefits that occur naturally. A riparian buffer ordinance is a useful tool for protecting the built environment of neighboring properties from erosion and flooding while also providing environmentally valuable open space. The Environmental Protection Agency states that these ordinances accomplish the following:

1. Restore and maintain the chemical, physical, and biological integrity of the water resources;
2. Remove pollutants delivered from urban stormwater;
3. Reduce erosion and sediment entering the stream;
4. Stabilize stream banks;
5. Provide infiltration of stormwater runoff;
6. Maintain base flow of streams;
7. Contribute the organic matter that is a source of food and energy for the aquatic ecosystem;
8. Provide tree canopy to shade streams and promote desirable aquatic organisms;
9. Provide riparian wildlife habitat; and
10. Furnish scenic value and recreational opportunities.

Examples of riparian zone buffer used as trails and open space. Photo Source: http://www.stormh2o.com
Mid-term Projects

1. Preserve the Ogden hillside at Razorback Road and I-540.

The Razorback Road entrance to the City presents the unique opportunity to establish a natural gateway to the City. The large Dowell Cemetery hillside has been preserved through City ownership and a conservation easement. The smaller hillside located across Razorback Road is in private ownership. This land is owned by the Joyce Ogden Family Trust and comprises a 10-acre parcel. The University of Arkansas has expressed interest in acquiring this land in order to preserve the viewshed of Old Main and the Fayetteville downtown skyline. The Illustrative Master Plan depicts this land as being utilized for a welcome or visitor’s center.

The City of Fayetteville in partnership with the University of Arkansas should work to acquire the Ogden land either through ownership or a conservation easement. A conservation easement separates the ownership of the land from the development rights. The landowner relinquishes these development rights but can continue to use and enjoy the land while protecting it from further development in perpetuity. An easement assures property owners that their heirs and successors will maintain the land in uses consistent with open space purposes and the landowner’s wishes. A variety of tax benefits may be available to landowners who place their land in a conservation easement. These may include deductions in income, property and estate taxes.
2. Add or repair sidewalks along existing streets within the neighborhood.

The City Transportation Division and Sidewalks and Trails Committee have committed to ensuring that all existing streets have a sidewalk on at least one side of the street. Each year, new sidewalks are constructed based on a prioritized list that balances the construction of new sidewalks in different parts of the City, first addressing streets where no sidewalks exist. The following streets in Fayette Junction lack sidewalks on both sides of the streets and should be added to the sidewalk construction list:

Clover Drive (north of Eden Circle)
Laverne Avenue
Coleman Avenue
Laura Lee Street
Emma Avenue
Selle Drive
Brooks Avenue
Boone Street
Price Avenue
Duncan Avenue
Walker Street
Arrowhead Street
Custer Lane
Ashwood Avenue
18th Street
Long-term Projects

1. Extend the Razorback Road boulevard cross-section from 15th Street to I-540.

Redeveloping Razorback Road as an extension of the boulevard between 15th Street and Martin Luther King, Jr. Boulevard will take significant infrastructure investment. This type of project will occur as capital funds become available and development occurs along the Razorback Road corridor to merit the investment.
Conclusion

The Fayette Junction Master Plan vision document and Illustrative Plan sets forth an ambitious effort for tying disparate parts of the area together to create a comprehensive plan that maximizes opportunities. This vision captures the main goals expressed by stakeholders such as protecting the floodplains, providing multi-modal transit opportunities and promoting clean tech development.

The vision document also identifies policies and programs to help achieve these goals. Razorback Road has the potential to become a “great address” and shining entrance into the City as it transitions from a five-lane road to a boulevard that is capable of accommodating both vehicles and pedestrians. Rezoning this corridor to a zoning district that encourages an urban form will encourage Razorback Road’s transformation. Modifying the Master Street Plan and building a trail network will increase connectivity throughout the area. Finally, the Illustrative Plan provides a visual design of how this area can develop in such a way that protects the natural beauty and environmentally sensitive areas prevalent throughout the area, respects existing residential neighborhoods and encourages appropriate infill development.

The overall implementation process will take the mutual cooperation of multiple sectors, both public and private over a period of decades, but the recommendations also include measurable steps that will begin the process of implementing the community’s vision.
Work-in-Progress Survey

These survey results represent approximately 40 participants who attended the Work-in-Progress presentation. Over 100 community members participated during the entire charrette, but the Work-in-Progress session served as a culmination of the week’s work and events and provided an opportunity for written feedback.

Appendix: Work-in-Progress Presentation

What events did you participate in during the charrette?

- Attended only the Work-in-Progress Presentation: 12%
- Attended the Work-in-Progress Presentation and one charrette event: 29%
- Attended the Work-in-Progress Presentation and two charrette events: 41%
- Attended the Work-in-Progress Presentation and three charrette events: 18%
- Attended all charrette events: 0%
Of the many ideas you heard tonight, which idea should be made a top priority?

1. **Stormwater Management (30%)**
   - Drainage
   - Trails system—floodplain greenspaces
   - Run-off water
   - Drainage—Cato Springs Road, along Selle Drive
   - Approaching runoff and drainage issues from a potential asset point of view, rather than assuming these issues as a liability
   - Managing floodplain and runoff

2. **Multi-modal transit (20%)**
   - I like the transportation hub
   - Transit hub/development
   - Light rail (Is there a way to pressure Cong. Boozman to do his part, or at least not sabotage those efforts?)
   - Trails

3. **Sustainability/clean tech concepts (20%)**
   - Green Valley
   - Partnership w/U of A
   - LEED
   - Density management integrating clean tech and residential

4. **Greenspace (20%)**
   - I like the community area, trails, parks and greenspace
   - Keep and expand useful green areas
   - Park on Laverne
   - Trails system—floodplain greenspaces

5. **Infrastructure (5%)**

6. **The housing (high density) adjacent to Greathouse Park—the target group being seniors (5%)**

7. **Street grid—this neighborhood can't function until it's connected. It's the necessary first step (5%)**
**Are there any elements of your vision for the future of the Fayette Junction Neighborhood we might have missed?**

- New developments having an increased number of retention ponds; make sure mosquito control is included so as to not add to the existing problem
- Put time limits for new construction to eliminate half-completed buildings sitting for numerous months or years
- Some areas are too dense
- Suggest using normal setbacks on new construction instead of zero lot lines
- Ensure new development that is built in low-lying areas have proper drainage and not drain on existing residents causing flooding
- Make sure there is adequate parking for new development as to alleviate parking on the street
- The area S. of Cato by Laverne should definitely be park/greenspace
- I don’t think placing buildings—even beautiful ones—on top of the hills/knolls as you enter Fayetteville is a good idea. Can we not preserve the hilltops as forest and build in way that doesn’t gash the natural landscape so visibly.
- Plenty of street trees/boulevards to slow entry traffic from I-540 and new development to SW
- Sidewalks along Cato Springs Road
- A formal involvement from the UA
- Fayette Junction neighborhood association
- Any issues with truck traffic to industrial areas?

**Do you think the plan is on the right track?**

- Yes (94%)
- No (6%)
Appendices

Legend
- Fayette Junction Boundary
- Stream
- RSF-4
- RMF-12
- RMF-18
- RMF-24
- C-1
- C-2
- I-1
- P-1
- R-PZD
- Urban

APPENDICES: ALTERNATIVE ZONING MAP
Resources:


City Plan 2025, Fayetteville http://cityplan2025.accessfayetteville.org


The Centre for Sustainable Transportation http://cst.uwinnipeg.ca/

University of Arkansas Community Design Center http://uacdc.uark.edu/

University of Arkansas - Facilities Management Planning Group http://planning.uark.edu/

Urban Land Institute http://www.uli.org