

# KRTA RECREATIONAL TRAIL MASTER PLAN

RFI 850 100000021



SUBMITTED BY:

VAUGHN & MELTON CONSULTING ENGINEERS, INC.  
109 SOUTH 24TH STREET  
MIDDLESBORO, KENTUCKY 40965





# Commonwealth of Kentucky SOLICITATION

**TITLE:** Comprehensive Recreational Trail Master Plan

**DATE ISSUED**  
2010-04-27

**SOLICITATION CLOSES**  
Date: 2010-05-20  
Time: 12:00:00

**SOLICITATION NO.**  
RFI 850 100000022

<b>I S S U E D  B Y</b>	Tourism - Secretary's Office Tim Pollard	<b>A D D R E S S  T O</b>	Please see the Terms and Conditions For Information on where to submit Your Bid/Proposal.
	<b>V E N D O R</b>		<p>Name: Vaughn &amp; Melton Consulting Engineers Address: 109 South 24<sup>th</sup> Street, P.O. Box 1425 City, State Zip Code: Middlesboro, KY 40965 Phone #: (606) 248-6600 Email Address: <a href="mailto:jkschneider@vaughnmelton.com">jkschneider@vaughnmelton.com</a> Contact Name: John K. Schneider Contact Email: <a href="mailto:jkschneider@vaughnmelton.com">jkschneider@vaughnmelton.com</a> Vendor Customer (VC) #:</p>

**FOR INFORMATION CALL:**

**ONLINE BIDDING PROHIBITED**

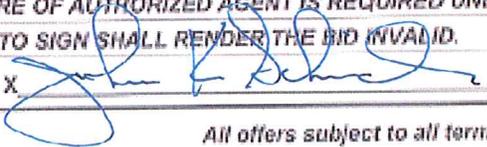
**OWNERSHIP TYPE:**

Tim Pollard  
502-564-4270

No

Sole Proprietorship  Partnership  Corporation

**SIGNATURE OF AUTHORIZED AGENT IS REQUIRED UNLESS RESPONSE IS SUBMITTED ELECTRONICALLY  
FAILURE TO SIGN SHALL RENDER THE BID INVALID.**

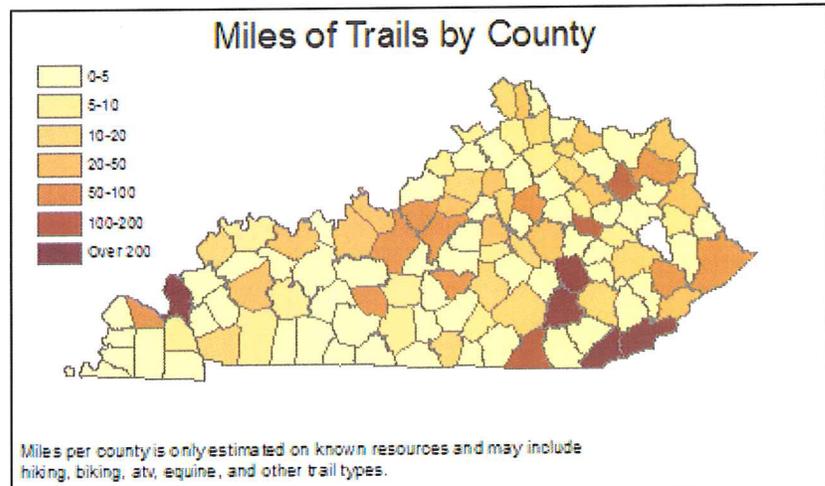
Signature X  FEIN# 61-0663508 DATE 5/19/10

All offers subject to all terms and conditions contained in this solicitation.

# RECREATIONAL TRAIL MASTER PLAN

Since 1967, Vaughn & Melton (V&M) has proudly called Southeast Kentucky home. As illustrated below and based on the partial database of existing trails provided, nearly one-half of all the trails in Kentucky are located in twelve rural southeast counties. Our employee owners are residents who live, work and play in these counties by choice. A large part of that choice is centered on what is now tagged “adventure tourism”. The Cross Kentucky Trail Project webpage states:

*“Our state is truly the premier frontier for Adventure Tourism in the nation, enhancing the economies of many rural areas as it attracts lovers of the outdoors and adventure seekers from across the US and globe.”*



The V&M Team embodies this opinion and has in recent years, been fortunate to work on such projects as the development of the 120 mile Pine Mountain State Scenic Trail (*formerly Pine Mountain Trail State Park*) and the Wilderness Trail Off-Road Park located in Bell County. Our team is excited about the possibility of expanding our involvement in Kentucky’s Adventure Tourism initiative by assisting with the development of a comprehensive Recreational Trail Master Plan.

The RFI states that KRTA’s ultimate goal is to make Kentucky a premier adventure tourism destination by **identifying, developing, connecting** and **promoting** a statewide trail program. It further states that TAHC and KRTA may establish a working relationship with an entity to address in brief, the first three items of that goal, *identifying, developing and connecting*. Although somewhat related, promoting does not appear to be a component of the possible future engineering and planning RFP. Given these three general items, we have assembled a team of professionals we feel have the required background, experience, expertise and most importantly the commitment to provide KRTA a plan which will provide the best opportunity of obtaining the ultimate goal, making Kentucky a premier adventure tourism destination.

## OUR TEAM

The tasks of *identifying, developing and connecting* will require a wide array of professional disciplines and backgrounds. V&M has on staff engineers, planners, surveyors, GIS specialists, construction specialists and property/land use experts and supporting technicians. In addition to our in-house experts, we have included the unparalleled Kentucky research and planning expertise of the **Kentucky Transportation Center at the University of Kentucky** (the Center). With over thirty (30) years experience working on Kentucky research and planning projects, the Center brings to our team the required research, planning and connectivity experience. The chart below is a possible organizational structure we feel addresses this project.



## KENTUCKY RECREATIONAL TRAILS AUTHORITY



**JOHN K. SCHNEIDER, PLS**  
Principal-in-Charge



### RESEARCH/PUBLIC INVOLVEMENT

Theodore H. Grossardt, Ph.D.  
Adam J. Kirk, PE, AICP  
Nikiforos Stamatidis, Ph.D., PE

### ENGINEERING/CONSTRUCTION

Clint R. Goodin, PE, PLS  
Sherri M. Chappell, PE

### GIS EXPERT

Brandon L. Lewis, GISP

### SURVEYING

Dempsey Miracle, Jr., PLS

### PROPERTY EXPERTS

Jimmy L. Walker, MBA, SR/WA  
Kenneth E. Corder, PLS

# RECREATIONAL TRAIL MASTER PLAN

## IDENTIFYING

Possibly the most important task for a successful plan will lie in the task of identifying. Depending on the depth of information desired by KRTA, the task of identifying could encompass a wide range of items.

- Project purpose
- Existing trails
- Existing users
- Potential users
- Priority corridors
- Resources (willing participants, federal, state and local government agencies, colleges, local organizations etc.)
- Funding options (amount, sources)
- Obstacles (zoning restrictions, protected lands, environmental/safety concerns, physical features)
- Opportunities (historical, natural, cultural, existing public land)
- Benefits (economic, planning tool, trail maps...)

In general, our team would divide these items into “hard” and “soft” items. The V&M team of engineers, surveyors and GIS specialist will take the lead with identification of existing trails, physical features and other geospatial “hard” items. The Center, with their vast background in research, forecasting and public involvement, will lead the efforts for identifying users, user preferences, economic impacts and other “soft” items.

### Identify/Collect Existing Data

The ability to leverage existing data and information will be critical to both the budget and success of the plan. The thousands of miles of trails throughout Kentucky’s 120 counties is much like a puzzle. Individually, they exist as beneficial pieces to a larger puzzle. But missing pieces and links take away from the

bigger picture. Many of Kentucky’s trails have been mapped locally or at the state level, but the data can be disjointed and lack standardization. Once existing data is gathered, mapping and new trail identification can take place.

Federal Agencies	State Agencies	Local Agencies & Groups
<ul style="list-style-type: none"><li>•National Park Service</li><li>•Forestry Service</li></ul>	<ul style="list-style-type: none"><li>•Tourism, Arts, and Heritage Cabinet</li><li>•Department of Parks</li><li>•Department of Fish &amp; Wildlife Resources</li><li>•Division of Geographic Information</li></ul>	<ul style="list-style-type: none"><li>•County Governments</li><li>•City Governments</li><li>•PVA Offices</li><li>•Trail Conferences</li><li>•Local Organizations</li></ul>

Possible Data Sources

# RECREATIONAL TRAIL MASTER PLAN

The first step is to identify and collect existing information, which will take place in cooperation with federal, state, and local agencies as well as local organizations or other private entities. It will be vital to work with all participants in order to obtain an accurate representation of data. Trail data is only one key aspect of the data collection. It will also be vital to collect data pertaining to environmental, natural, cultural, physical, and historical significance. For future planning, the additional compilation of property, transportation, points of interest, neighboring state information and other valuable data will be necessary.

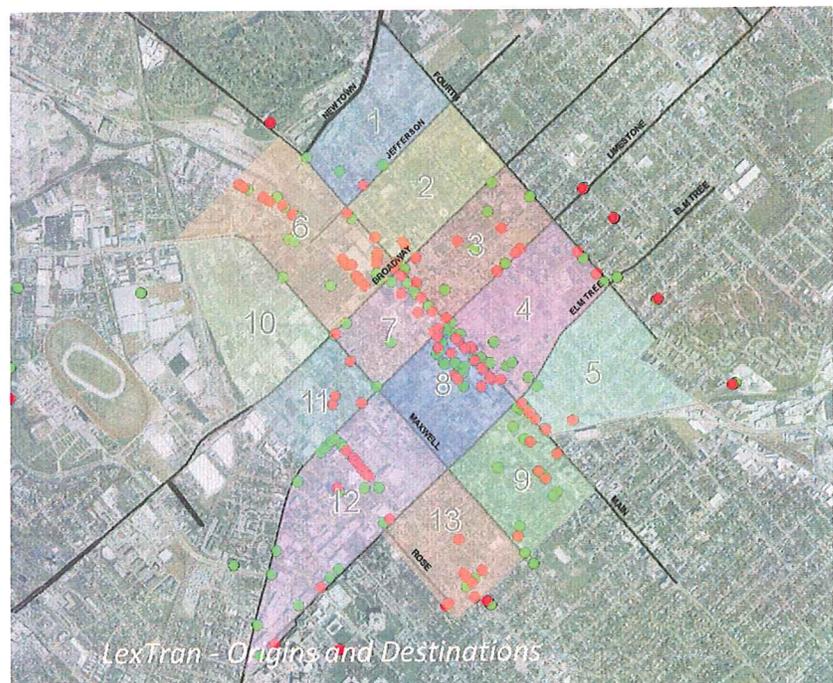
The V&M team has over 40 years of experience working with federal, state, and local governments. We have the expertise and experience to incorporate data from any format both digital and paper data into a comprehensive GIS dataset for use during the later phases of the project. Additionally, our many years of working with the Commonwealth means that the end product will seamlessly be compatible and useable by Kentucky's many agencies that may need access to the data.

## Research/Forecasting/Public Input

The Center will be leading these efforts. The research staff of the Center is composed primarily of engineers and technicians with a variety of engineering specialties. However, several other disciplines are also represented that are crucial to problem solving. As the need arises, the Center partners with other colleges at UK, with other universities, and with the private sector to obtain the expertise needed to address research issues.

To successfully plan a trail system that will attract users, public involvement will be critical. This will not so much mean gathering 'preferences' (everyone wants a trail) but rather potential user data for who, what, and where people would anticipate using a trail. This would be similar to the work performed by the Center on the FTA funded project to help LexTran figure out when and where to run the new Colt Trolley.

The Center designed and delivered a series of public meetings that gathered information on potential user types, trip purposes, origins, destinations, and timing to help LexTran deploy the new Colt Trolley, initiated in downtown Lexington. Or the project just completed by the Center for the Metro Government of Louisville. The Center organized and held a large public meeting to assess what was most valuable about River Road and, again, who the users were, what type of users (auto, bike, pedestrian) and what their current and anticipated new uses would be if the corridor were improved for bike and pedestrian use.



# RECREATIONAL TRAIL MASTER PLAN

## DEVELOPING

Using the data identified and working in conjunction with an advisory committee and/or KRTA representatives, a plan will be developed which will give a clear picture of the trail system statewide, identify potential corridors, assist with funding decisions, be a planning tool for federal, state and local governments as well as private organizations and entrepreneurs. Although a result of the plan will be a good map and inventory of trails, it must be more than just a map. With the ultimate goal of making Kentucky a premier Adventure Tourism destination, having a plan that fosters planning, commitment and cooperation, not competition between counties, agencies and other local entities will be of utmost importance.

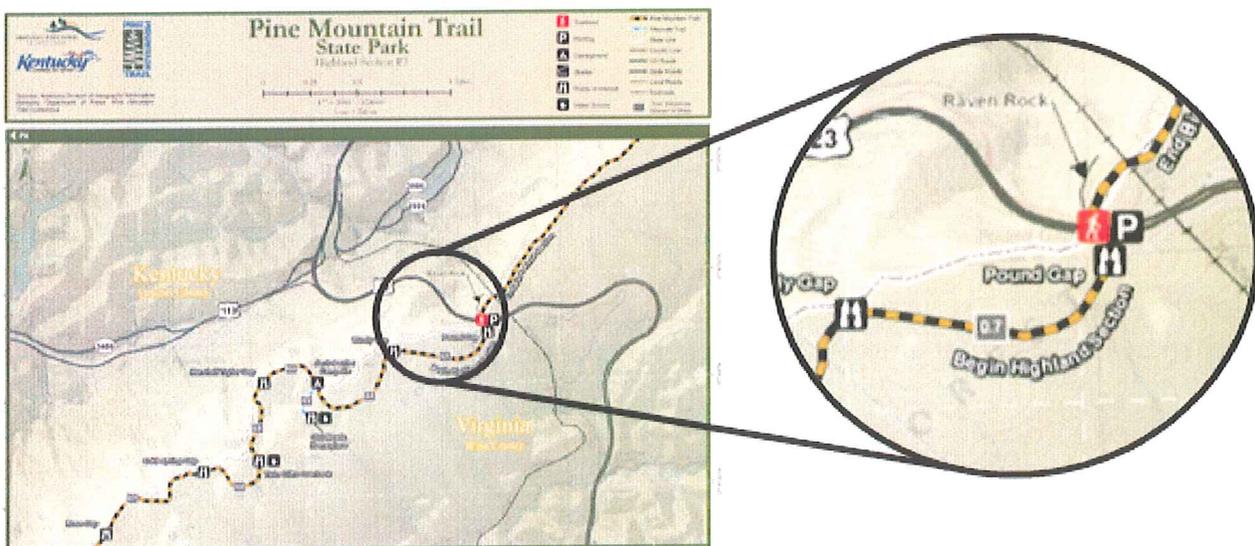
As mentioned above, the goal is for a statewide plan, a plan that portrays Kentucky as a unified entity. A key component of the plan must be standards. Once developed, these standards will be utilized throughout the development of the project.

### Develop Standards and a Data Management Plan

After existing data has been gathered, a plan to fill in the gaps can be structured. Standards will be developed to manage spatial accuracy, attribute collection, and geodatabase design. Current endeavors, like the Cross Kentucky Trail project, or other ongoing projects can aid in the development of standards. Utilizing many of Kentucky's current data collection standards and vast geospatial resources will be imperative. Proper planning of a geodatabase will take place to assist in maintaining standards.

### Develop the Trail Maps

With existing trail data collected, base mapping and core data layers retrieved, and data standards developed, any unmapped trails throughout the state can be collected. The order or priority for mapping could be based on the possibility of trail interconnections or other criteria set forth in the proposed Recreational Trail Master Plan.



# RECREATIONAL TRAIL MASTER PLAN

Collection of both horizontal and/or vertical data for trail lines, points, or other features will be conducted based on the standards set. Mapping and data collection will be carried out so that printed/digital trail guides and maps, as well as web based mapping can be achieved.

Trail Attributes	Point Attributes
<ul style="list-style-type: none"><li>•Trail Name</li><li>•Owner</li><li>•Handicap Accessible</li><li>•Trail Surface</li><li>•Trail Use (Hiking, Biking, Horse, ATV, etc)</li><li>•Mileage (Segmented by distance or between POIs)</li><li>•Trail Condition</li><li>•Schedule</li><li>•Managed By</li><li>•Cell Phone Coverage (Strong, Weak, etc)</li></ul>	<ul style="list-style-type: none"><li>•Point Type (Trailhead, POI, Shelter, Parking, etc)</li><li>•Photo</li><li>•Description</li><li>•Trail Name</li></ul>

Sample Attributes

## CONNECTING

The task of connecting is larger than just deciding the most logical points to connect the trails on the map. Of course the V&M / Center team offers the engineering expertise to decide the best location to physically construct connections, or the ability to estimate the most economical route to simply make a "cross state trail". The real issue when speaking of connecting is to find the connections that incorporate the data obtained during the identifying phase; where do the users want to go, what do they want to see, what economical impact does a connection have, what connections foster community support, and many more. In addition to the physical connections, there is the opportunity to make emotional connections. Connections developed between both public and private entities during public meetings, the potential to connect with the organizations and entrepreneurs that have independently begun work toward the Adventure Tourism goal. These connections will be paramount to building momentum and achieving buy-in of the final Master Plan.

## NEXT STEP

Given the many unknowns and variables at the current time, we feel the best course of action may be a phased approach. A small scoping study of less than \$25,000 and duration of three to six months would be the first phase. This study phase would not be a complete inventory of available data but would allow a basic consolidation of existing data and gather general input from the major entities. The result would be an action plan which may include a single RFP or possibly multiple phases and/or RFPs.

The V&M/Center Team has the required qualifications, experience, resources and capacity to achieve the established goals of KRTA on this project. We understand what is required; we have a long history working for government entities at all levels and would look forward to the opportunity to discuss our ideas and possible options with KRTA.





*Pine Mountain Trail State Park  
Bell, Harlan, Letcher & Pike County, KY*

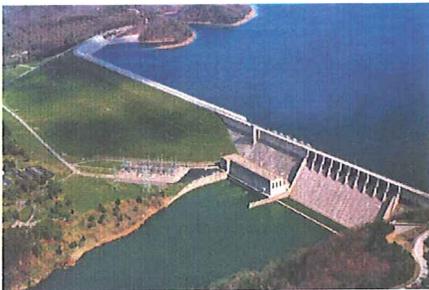
## ABOUT VAUGHN & MELTON

Since 1967, Vaughn & Melton has been building the communities and infrastructure of the Southeast, offering a wide range of engineering, architectural and surveying services. We're proud of our record of service and value to clients, which include:

- Local, state and federal governments
- Industrial boards and industries
- Utility districts
- Private developers

As our 175 employees celebrate our 40<sup>th</sup> Anniversary, each one remains committed to the attentiveness and responsiveness that sets Vaughn & Melton apart.

**“Our vision for your project is built on the foundation of our experience and the knowledge of our people.”**



*Wolf Creek Dam (Lake Cumberland)  
Mapping & GIS Development*

### Services

Vaughn & Melton is a full-service firm with extensive experience including:

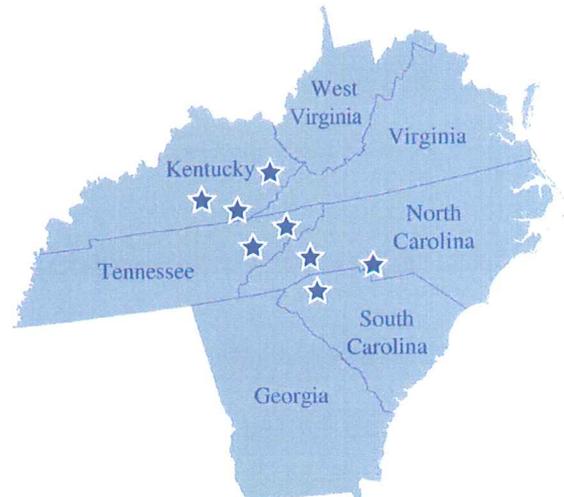
- Project management
- Wastewater treatment plant design
- Water treatment plant design
- Water & sewer line expansion
- Subsurface Utility Engineering
- Site development
- Surveying
- Grant writing
- Water storage tanks
- Roadway design
- Utilities relocation



*Cumberland Gap Walking Trail  
Cumberland Gap, TN*

### Locations

- Middlesboro, KY
- London, KY
- Prestonsburg, KY
- Tri-Cities, TN
- Knoxville, TN
- Asheville, NC
- Charlotte, NC
- Spartanburg, SC





The Kentucky Transportation Center at the University of Kentucky was established in 1979 and brought together Kentucky's Highway Research Program (formerly the Division of Research of the Kentucky Department of Highways) and the Technology Transfer Program. Both of these programs receive federal and state funding. The Center's first Director was Calvin G. Grayson, P.E., a former Secretary of Transportation for Kentucky.

The Center's technology transfer program shares transportation knowledge and puts research and new technologies into practice. Program offerings include: a safety circuit rider program; a transportation library; the Roads Scholar and Road Master Programs for local governments; and special interest training designed to solve specific problems. The transportation library holds a variety of technical assistance manuals and guides, and quarterly publications that are valuable resources, especially for roadway workers in remote rural areas. Partnerships and training initiatives have been developed for certification and training, including environmental preservation.

The Center's research program has core capabilities in: ***construction management; intelligent transportation systems; highway design, traffic operations and safety; pavement design, materials and geotechnology; structures and coatings; and planning and analysis.*** The research staff of the Center is composed primarily of engineers and technicians with a variety of engineering specialties. However, several other disciplines are also represented that are crucial to transportation problem solving. As the need arises, the Center partners with other colleges at UK, with other universities, and with the private sector to obtain the expertise needed to address research issues.

Principal investigators pursue a planned research agenda and are also available to conduct quick-response studies, to investigate unexpected problems that may occur, and to assist with implementation of research findings. The Center has the advantage of a wide range of advanced technology and laboratory facilities to conduct science-based problem solving. The Center is committed to producing practical value for its clients and ensuring that the client's research investment yields tangible benefits.

Areas of unique research and development specializations include: commercial vehicle operations and safety; intermodal freight transportation issues and connectivity to the highway system; state-of-the-art highway planning and design processes that are context-sensitive and practical; strategic highway safety analysis and planning that includes pedestrian and bicycle issues, and the design and deployment of structured public involvement processes for a wide range of infrastructure development.



## **Pine Mountain Scenic State Trail Bell, Harlan, Letcher & Pike Counties, KY**

Vaughn & Melton was selected to assist the Commonwealth of Kentucky with the creation of a new state park. The park was defined by legislation as being a linear corridor ranging from 250 to 1000 feet in width that would be centered on the crest of Pine Mountain.

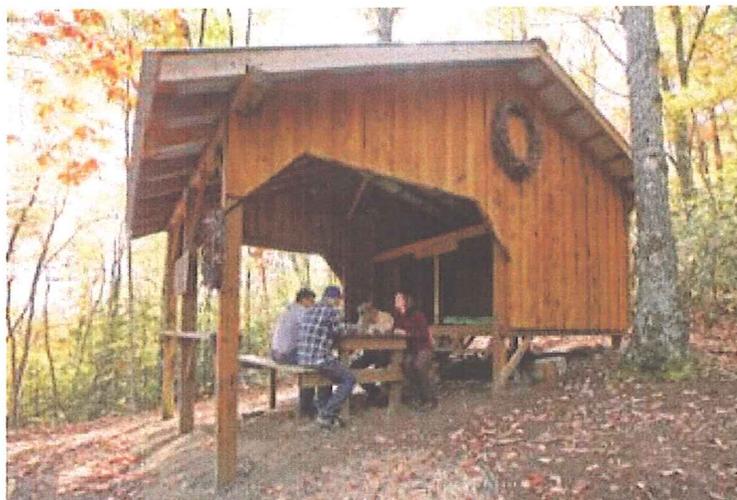
Phase I of the project involved property identification and public awareness meetings. Vaughn & Melton provided all property research, owner notification, and preparation of displays for State organized public meetings. Phase II involved the acquisition of property and easements for the creation of the trail. This phase is being performed as funding for the project allows; to date Vaughn & Melton has completed approximately 30 miles of the corridor in Pike County and Letcher County and approximately 25 miles in Bell and Harlan Counties. Phase II surveys by Vaughn & Melton include GPS control networks, in-depth courthouse research, locating and monumenting the corridor centerline, preparing plats and descriptions.

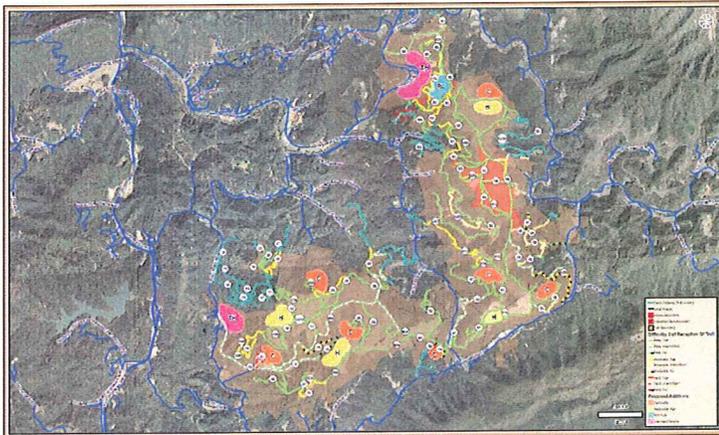


### **Client Information**

Kentucky Department of Finance  
Jim Maggard, Project Liaison  
(502) 564-3155 ext. 234

Kentucky Department of Parks  
Cary Tichenor, Project Liaison  
(502) 564-8110 ext. 246





## Wilderness Trail Off-Road Park Bell County, KY

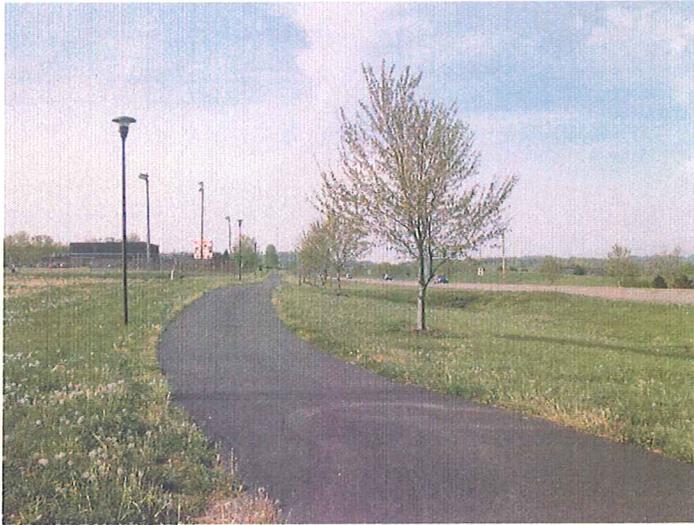
The Bell County Fiscal Court commissioned a study by Vaughn & Melton to conduct a development study for the Wilderness Trail Off-Road Park. The study, funded by the Appalachian Regional Commission (ARC), was to develop a comprehensive adventure tourism plan.

This project encompassed two tasks. The first part of the project was a study of the area designated for the park. The study included the need for such a development, the economic impact the park development could have on the county and region, environmental issues to be considered, and public input on the development of the park. The second part of the project was mapping the land acquired for trail use. The maps marked the existing trails, along with their level of difficulty. Other mapped items included areas for future trail development and cell phone coverage areas. The maps developed for this project were included in the study, but were also used independently. The developed maps can be displayed in brochures and websites, in addition to many other marketing venues.

This study looked at 9,000 acres the Bell County Fiscal Court leased to develop an off road park. During the course of the project, it was determined the two most costly elements in developing an off road park have been completed in the WTOP. The land has been obtained and over 100 miles of trail are already developed. The majority of the trails, 76 miles, were categorized as easy. The moderate trails traverse 24 miles. Hard trails cover 5 miles. The park has the potential to expand and include trailhead facilities, primitive camping, an RV park, a paintball course and numerous other activities as the park grows and becomes better known in the region, state and nation. These additions should all be reasonably obtainable with the existing terrain and electric access across a large portion of the park property and water near one side of the park property.

### Client Information

Bell County Tourism  
Pineville, KY 40965  
John Grace, Director  
(606) 302-1943



## City of Harrogate Greenway Harrogate, TN

Vaughn & Melton was selected by the City of Harrogate to provide survey, design and construction management for a greenway from HY Livesay Middle School to Cumberland Gap High School, a length of approximately two miles.

This project includes: preliminary engineering for Phase IV of the Daniel Boone Greenway, survey, design and construction inspection throughout the life of the project in accordance to the TDOT Local Programs and Guidelines.

Preliminary engineering services includes selection of a project corridor along with alternate locations within this corridor. Factors considered during the preliminary phase included clearzone requirements with respect to existing roadways, drainage, existing utilities, and existing features that could be utilized for the multi-use path.

Surveying needs associated with this project were all acquired by means of an actual ground survey rather than by aerial photography. Vaughn & Melton crews utilized GPS receivers to establish a control network by which all of the necessary field information was obtained. Conventional surveys along with RTK satellite surveys were used to obtain pertinent information.



## Client Information

City of Harrogate  
138 Harrogate Crossing  
Harrogate, TN 37752  
(423) 869-0211





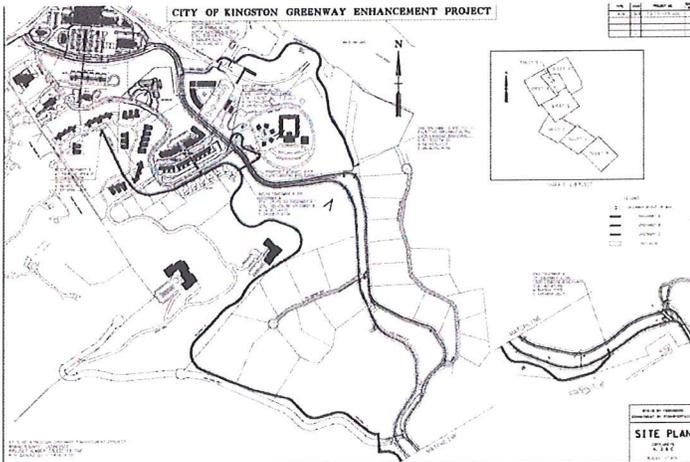
## Cumberland Gap Walking Trail Cumberland Gap, TN

In 1985 we began our construction review of the Cumberland Gap Tunnel Project for the Federal Highway Administration, Eastern Federal Lands Highway Division. The project was located within the Cumberland Gap National Historical Park in Virginia, Kentucky, and Tennessee. It consisted of the construction of two 2-lane tunnels, each 4,600 feet long, through Cumberland Mountain; 10 bridges, including an award-winning steel railroad bridge in Kentucky and **2 wooden pedestrian bridges for the walking trails**; five miles of associated roadway and approaches, including a portion of US 58 in Virginia; two interchanges; approximately 600 feet of “cut-and-cover” tunnel; and two portal buildings.

This project continues today, even though the tunnel opened to traffic in October 1996. Vaughn & Melton’s involvement with this project has continued through federal contracts.

### Client Information

Cumberland Gap National Historical Park  
Middlesboro, KY 40965  
Mark Woods  
(606) 248-1052



Site plan of project area



Rendering of project area

## City of Kingston Greenways Kingston, TN

Vaughn & Melton was contracted by the City of Kingston to provide design and construction management services for approximately two miles of a rural greenway system located within the city's Ladd Landing development. The purpose of the project is to provide scenic multimodal alternative transportation routes from three separate ties at Ladd Landing Boulevard to parks within the Ladd Landing development area or to other area transportation facilities. All three greenways will be 10' wide asphalt paved facilities with 2' graded shoulders. These routes will provide access to parks, recreation, retail opportunities within Ladd Landing and offer an enhancement to the quality of life for the residents of Kingston.

The following is a description of the proposed greenway routes:

**GREENWAY A** will be approximately 6,820' long and will follow the graded roadbed of High Tower Street to the north property lines of tracts fronting Oak Terrace Cove, the South Right-of-Way of Ladd Landing Boulevard and Waterford Place, thence crossing Regent Street to a proposed park with public parking in the center of Richmond Row.

**GREENWAY B** will be approximately 820' long and provide a grade separated link between Greenway A and westbound Ladd Landing Boulevard.

**GREENWAY C** will be approximately 2,240' long and will provide an alternative transportation link between Ladd Landing Boulevard (west of the Northbridge Close cul-de-sac) and North Kentucky Street (U.S. 70) adjacent to Fleet Street. It will pass under the U.S. 70 Bridge over the Clinch River (Watts Bar Reservoir) at an elevation above the regulatory flood water surface elevation.

This project is funded through TEA-21 enhancement grants and is currently in the design phase. V&M is providing project management services in accordance with the TDOT's Office of Local Programs Local Government Guidelines.

### Client Information

City of Kingston  
Mr. Jim Pinkerton, City Manager  
(865) 376-6584



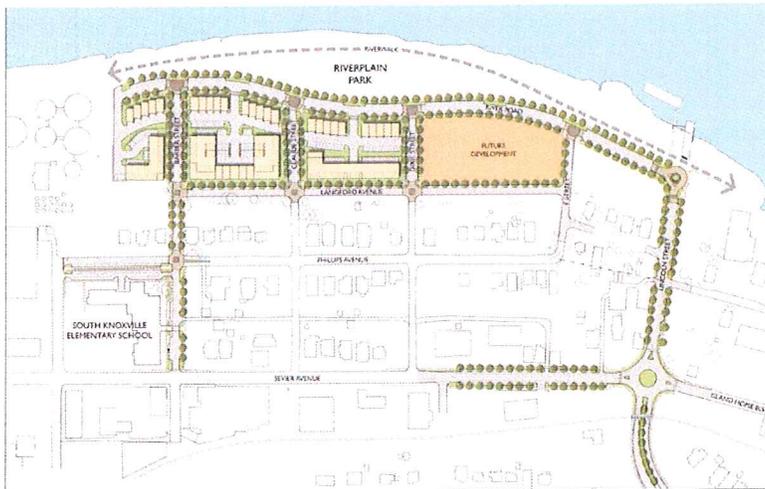
*Aerial photo of project area*

## **Knoxville South Waterfront Improvements at Lincoln Street & River Road**

The City of Knoxville has initiated a long-range plan to revitalize the South Waterfront area. Following the extensive citizen participation program and planning phase, the City has now focused on project design and implementation of several public improvement projects designed to stimulate private development in the area.

Vaughn & Melton was selected by the City of Knoxville to provide surveying, utility relocation, streetscapes and new roadway design services to Lincoln Street and River Road Improvements. Located in the 20-year South Waterfront redevelopment plan area, this is the first public improvement project to proceed.

The project is currently in the design phase with an estimated construction cost of \$7.1 million.



*Rendering of project area*

## **Client Information**

City of Knoxville  
Mr. Dave Hill  
(865) 215-3764



## Hike & Bike Trail Marion, SC

Vaughn & Melton provided engineering design services for a transportation enhancement streetscape project along Bobby Gerald Highway for the City of Marion, South Carolina.

The project provides safe pedestrian travel along an old railroad bed, and extends the hike and bike trail to the old railroad depot.

Care was taken in the design to meander through existing trees in order to keep all the current landscaping. Vaughn & Melton also designed new landscaping and street lights.

One unique aspect of this project was to provide a section of the hike and bike trail to hold up under vehicular traffic in the area near the ball field which was used for parking. Drainage and handicap access was also a large part of this project.



### Client Information:

City of Marion  
Marion, South Carolina  
City Manager  
(843) 243-5961



## Cumberland Avenue Streetscapes Improvements, Knoxville, TN

Vaughn & Melton was selected by the City of Knoxville for the design and construction of a more inviting, vibrant and safe Cumberland Avenue. The vision for the City is to enhance connections to the University of Tennessee and area employers and improve the residential and retail character of the district while effectively moving pedestrians, motor vehicles and bicycles.

The Cumberland Avenue Corridor Project will take a currently semi-suburban, auto-oriented corridor that is frequently used as a pass-through and make it into an urban, multi-modal corridor providing safe and attractive transportation for pedestrians, bicyclists, transit, and cars, while creating a unique urban district.

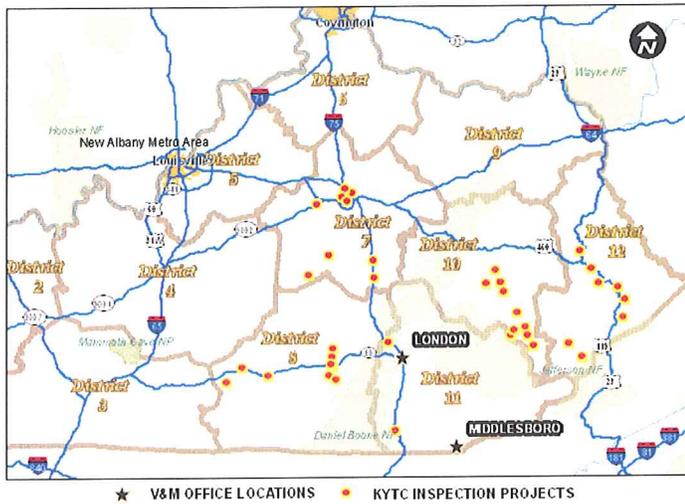


The streetscape plan includes proposals for a “road diet” from four to three travel lanes, one of which will be a dedicated turn lane. Wider sidewalks, street trees and plantings, street furniture, accommodations for transit and transit users, crosswalk design, better signalization, as well as many other factors are also included.

Additionally, the City is producing a form-based code to create a predictable urban form of development with a lesser emphasis on land use. The form-based code will allow the redevelopment of parcels at a much higher density.

### Client Information

City of Knoxville  
Knoxville, TN  
Mr. Tom Clabo  
(865) 215-6100



## Regional Construction Inspection Region 3, Kentucky

Vaughn & Melton was selected by the Kentucky Transportation Cabinet to provide technical field assistance with monitoring and inspection of contracted highway work to oversee compliance with all contract provisions in Region 3. Region 3 consists of Districts 7, 8, 10, 11, and 12. Vaughn & Melton provides technicians to Kentucky Transportation Cabinet resident engineer's crews on an on-demand basis. These technicians provide construction inspecting, field staking, and measurements, and office work under the direct supervision of the resident engineer. This construction season, our technicians have worked on grade and drain, structures, asphalt, utility relocation, staking, and office support.

Our technicians are ACI Level 1 certified at field concrete testing and have certificates for Asphalt Field Technician, Aggregate Sampling Technician, and Grade Technician Level I. Nearly all of our technicians have more than 20 years experience at construction inspection. We perform training during the winter to enhance our abilities. Our technicians are led in the field by Arthur Smallwood. Mr. Smallwood is a retired resident engineer with 37 years experience in highway construction. He oversees the duties, placement, and performance of our technicians. This oversight system sees that the Department gets the performance and attitude expected from our technicians, and that our inspectors have the training and equipment needed to do their jobs. We provide everything our inspectors need to perform their work proficiently and professionally.

### Client Information

Kentucky Transportation Cabinet  
Frankfort, KY

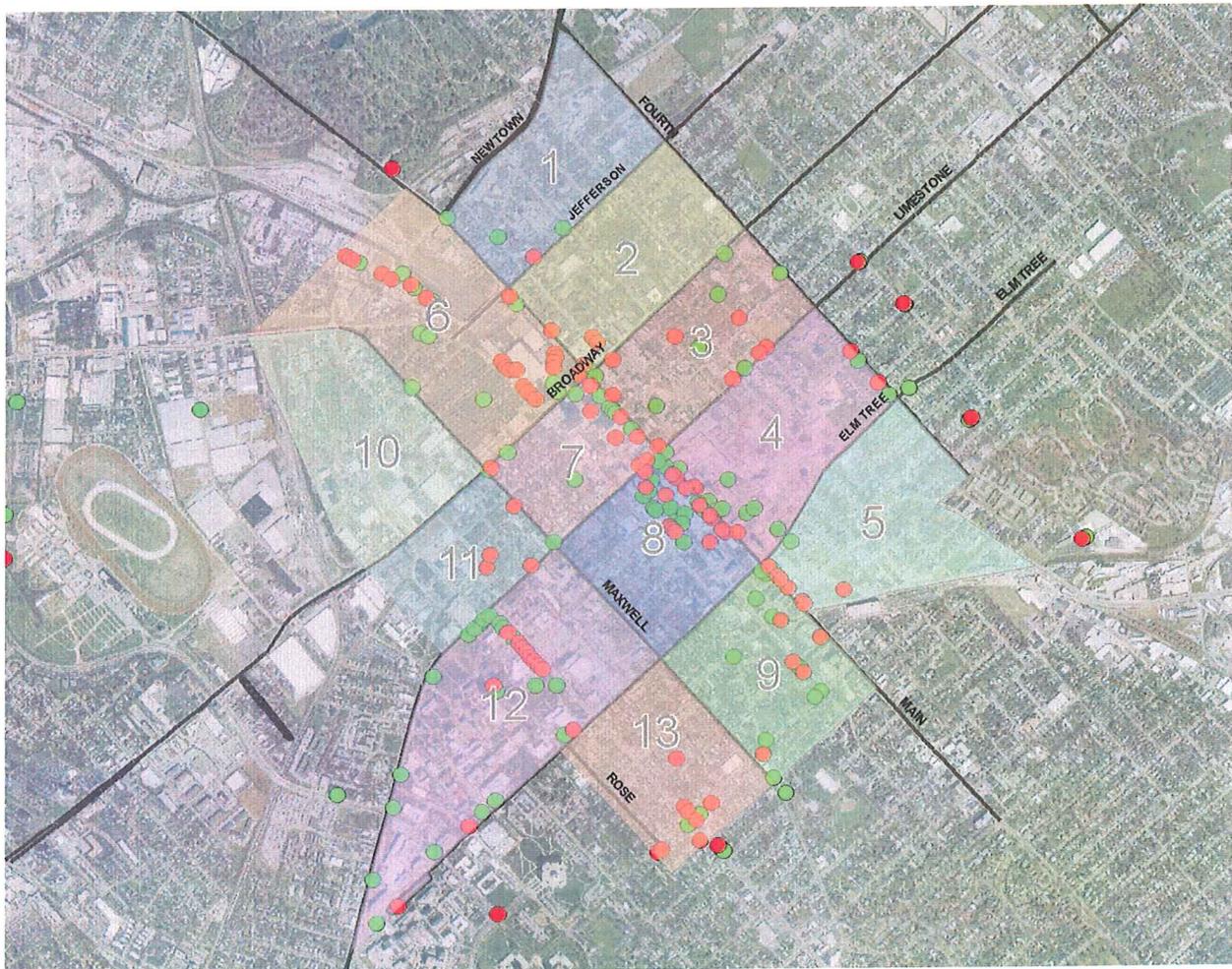
# ADDITIONAL PROJECT EXPERIENCE



PROJECT NAME/LOCATION	DESCRIPTION
Tusculum View Linear Trail Greeneville, TN	Civil Engineering, Structural Design, Architectural, and Surveying for Bridges, Walkways, Picnic Area, and Amphitheater
State of Franklin Road Bicycle and Pedestrian Trail Johnson City, TN	Civil Engineering and Surveying for Sidewalks and Trails
State of Franklin Road Bicycle and Pedestrian Trail Johnson City, TN	Civil Engineering and Surveying for Sidewalks and Trails
Middlesboro Pedestrian Sidewalks and Bicycle Trails - Middlesboro, KY	Civil Engineering and Surveying for all of Middlesboro Sidewalks and Trails
Rails to Trails Program Pulaski and McCreary counties, KY	Visual Inspection and Report Concerning the Possible Use of the Abandoned Tunnels as Part of a "Rails-to-Trails" Project in Southern Pulaski and Northern McCreary Counties. The Overall Project to Convert the Abandoned Railroad into a Multi-use Facility Covers a Distance of Approximately Seven Miles.
Meadowview Conference Center/ Hotel/ Cattails Golf Course and Walking Trails Kingsport, TN	Engineering and surveying tasks including sanitary sewer lines, water mains, wetlands mitigation, street and bridge design, stormwater control, and permitting
Newberry College Pedestrian Bicycle Trails and Sidewalks - Newberry, SC	Engineering and structural design for college walkways and trails, including brick walkways and adding lighting
Chimney Top at Graysburg Hills Greene County, TN	Design, Engineering and Surveying for Course and Trails
YMCA Soccer Fields and Walkways Greeneville, TN	Master Planning, Site Development, Field Layout, Construction Staking, and Construction Plans
Pleasant Ridge Road and Brooks Avenue Sidewalks Knoxville, TN	Engineering, Surveying, Right-of-Way Plans, Construction Plans, and Specifications for 4,750-foot Sidewalk
Peoples Street/Browns Mill Road Johnson City, TN	Survey and Street Design, including widening of roadway, adding sidewalks and storm drains along with utility improvements
Brooks Avenue Sidewalks from Biddle Street to Border Street - Knoxville, TN	Surveying, Right-of-Way Plans, Construction Plans, and Specifications for 4,000-foot sidewalk
River Road Sidewalks and Road Widening Pigeon Forge, TN	Design for the widening of River Road and the placing of sidewalks along the West Bank of the river

### Federal Transit Administration Public Transit Participation Project (PTP II)

This project was funded through an FTA grant to help transit agencies improve the public participation in their business planning and design. The Kentucky Transportation Center designed and delivered a series of public meetings that gathered information on potential user types, trip purposes, origins, destinations, and timing to help LexTran deploy the new Colt Trolley, initiated in April in downtown Lexington. The accompanying graphics show some of the data gathered from the public meetings, including Origin-Destination data. The tallest spike in the surface shows that the highest anticipated need for connections would be between the downtown and the U.K. Campus. In response to this information, the trolley has been designed to serve lunch time and after-hours establishments, linking together the downtown with both UK and Transylvania. Other issues or ideas are dynamically solicited from the public and then rated by the public for their relative importance.

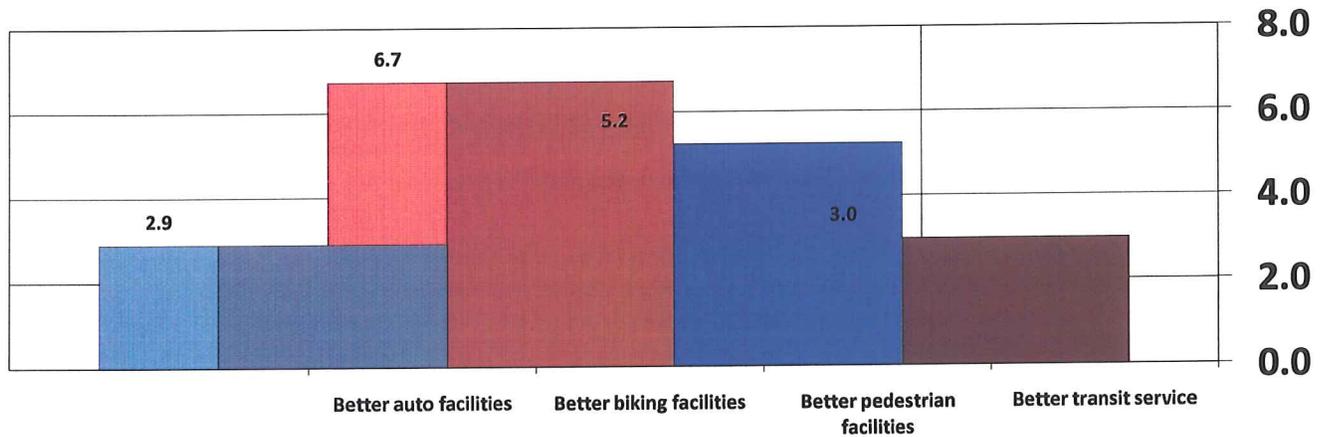




### Louisville River Road Project Public Meeting Polling Topics

- Importance of general characteristics of River Road
- Importance of some general uses of River Road, and how well it delivers that use
- General level of usage by mode, and satisfaction with that usage
- Opinion about some potential safety hazards
- Specific trips you are making now
- Trips you think you would make if River Road were improved

### How important is this improvement to safety along River Road:





## JOHN K. SCHNEIDER, P.L.S.

Principal in Charge

[jkschneider@vaughnmelton.com](mailto:jkschneider@vaughnmelton.com)

Mr. Schneider currently serves as Office Leader and Project Manager in Vaughn & Melton's Middlesboro, Kentucky office. Since joining the firm in 1979, Mr. Schneider has gained extensive experience with all aspects of the business. Mr. Schneider has provided project management and oversight of hundreds of projects during his 30-year career at Vaughn & Melton. As Office Leader of V&M Middlesboro, Mr. Schneider's role on this project would include the coordination of staff, quality control, negotiations and contractual issues. During his 30 years with Vaughn & Melton, he has gained a unique understanding of all aspects of our business. Listed is a sample of the projects that he has been involved in.

### EDUCATION:

B.S., Management & Leadership, 2009  
Lincoln Memorial University

### EXPERIENCE:

Professional Land Surveyor - 1990  
KY, WV, AR

31 years Surveying and Management  
Experience

### TECHNICAL TRAINING:

KYTC/ACEC Partnering Workshop

ArcGIS workshop - ArcCad/ArcInfo

ESRI - ArcView

Intergraph Inroads

Thinking Beyond the Pavement  
Context Sensitive Design

Improving Field Surveying Procedures  
P.O.B

Leica GPS Network Design and Field  
Operations Construction Surveys

Monuments, Lines of Possession  
Coordinate Systems in Kentucky

Arterial Streets & Intersections  
Northwestern University

The Kentucky State Plan Coordinate  
System

- **City of Harrogate Greenways Project**– Vaughn & Melton was selected by the City of Harrogate to provide survey, design and construction management for a greenway from HY Livesay Middle School to Cumberland Gap High School, a length of approximately two miles. This project includes: preliminary engineering for Phase IV of the Daniel Boone Greenway, survey, design and construction inspection throughout the life of the project in accordance to the TDOT Local Programs and Guidelines.
- **Pine Mountain Scenic State Trail** - Mr. Schneider was project manager for this project for the Kentucky Finance & Administration Cabinet. The project involved property identification and data gathering along the 120 mile proposed State Park. The proposed park is a linear park beginning at the Breaks Interstate Park, and extending approximately 120 miles in length south-southwest through Pike, Letcher, Harlan and Bell Counties along the crest of Pine Mountain to the Cumberland Gap National Park. Mr. Schneider led a team of surveyors, technicians and property acquisition specialists on this highly public project. Because of our long time working relationships with state and local government agencies, and our recognized name in the Pine Mountain Region, he was able to coordinate information from private land owners and public partners such as: Kentucky Division of Geographic Information, Kentucky State Parks, Kentucky State Nature Preserves, Kentucky State Forest, Kentucky Wildlife Management Areas, Cumberland Gap National Park, Jefferson National Forest, County PVA offices, Kentucky Revenue Cabinet, and the Nashville District of the U.S. Army Corps of Engineers. The ability to leverage available data and coordinate its use was a huge asset in maintaining public relations for this sensitive project.
- **Wilderness Trail Off-Road Park** in Bell Co., KY. Mr. Schneider was the principal-in-charge of this project. Vaughn & Melton developed a study for a comprehensive adventure tourism plan. The study looked at 9,000 acres for an off road park. First the study included the need for such a development, the economic impact the park development could have on the county and region, environmental issues to be considered, and public input on the development of the park. Second the land was mapped for trail use. The maps marked the existing trails, along with their level of difficulty, future trail development, and cell phone coverage areas.



## CLINT R. GOODIN, P.E., P.L.S.

Civil Engineer

[crgoodin@vaughnmelton.com](mailto:crgoodin@vaughnmelton.com)

Mr. Goodin heads Vaughn & Melton's highway design group at our Middlesboro Office. Since joining V&M in May 1995, Mr. Goodin has managed many highway design and infrastructure projects. These projects have included interstate and interchange design on Interstate 64, Interstate 66, and Interstate 75; turn key design, right-of-way acquisition, and utility coordination on HES projects; and the design of small projects like US 119 at Varilla Curve and multiple bridge approaches.

### EDUCATION:

M.S., Civil Engineering, 1996  
B.S., Civil Engineering, 1995  
Emphasis in structures  
University of Kentucky

### EXPERIENCE:

Professional Engineer – 1999  
KY, TN, VA, GA, AR

Professional Land Surveyor – 2003  
KY

15 years experience in Civil Design

### TECHNICAL TRAINING:

KYTC/ACEC Partnering Workshop  
Access Management, Location, and  
Design

Traffic Impact Study Training

Roadside Design Guide - 2007

Traffic Management Plan Training - 2008

Thinking Beyond the Pavement, Context  
Sensitive Design

Kentucky Lifesavers Conference

Principles of Pavement Design

Community Transportation Innovation  
Academy

Water Surface Profiling and Flood Plain  
Analysis using HEC-2

- **City of Harrogate Greenways Project** – Vaughn & Melton was selected by the City of Harrogate to provide survey, design and construction management for a greenway from HY Livesay Middle School to Cumberland Gap High School, a length of approximately two miles. This project includes: preliminary engineering for Phase IV of the Daniel Boone Greenway, survey, design and construction inspection throughout the life of the project in accordance to the TDOT Local Programs and Guidelines.
- **Wilderness Trail Off-Road Park** in Bell Co., KY. Vaughn & Melton developed a study for a comprehensive adventure tourism plan. The study looked at 9,000 acres for an off road park. First the study included the need for such a development, the economic impact the park development could have on the county and region, environmental issues to be considered, and public input on the development of the park. Second the land was mapped for trail use. The maps marked the existing trails, along with their level of difficulty, future trail development, and cell phone coverage areas.
- **College Street Streetscape Enhancement** Somerset, KY; City of Somerset. Mr. Goodin was the project manager for the design and construction of a streetscape enhancement for College Street in downtown Somerset which included Street Rehabilitation, Traffic Calming, Storm Sewer Improvements, Relocating Overhead Utilities Underground, Relocating Waterlines, New Sidewalks, and Landscaping.
- **Data Collection for Flood Study - Upper Cumberland River Area** Kentucky, USACE Nashville District, 2000-2005. As project manager Mr. Goodin was responsible for assessing the Raiseability and/or D&R potential for several hundred structures along Catrons Creek, Wallins Creek and Poor Fork River of the Upper Cumberland basin. His work included a field inspection and written assessment of each structure involved. Additional work performed on this study included control verification, obtaining and/or verifying floor elevations throughout the project area.



## **SHERRI M. CHAPPELL, P.E.**

**Civil Engineer**

[smchappell@vaughnmelton.com](mailto:smchappell@vaughnmelton.com)

Ms. Chappell joined Vaughn & Melton in 1998 after graduation. Since joining V&M she has been involved in highway design including preliminary pavement design for KY 70 in Barren/Edmonson County, and drainage analysis of US 119 Varilla Curve in Bell County. From 2002 to 2007, Ms. Chappell took a break from her service at Vaughn & Melton and worked for the Cumberland Valley Area Development District (CVADD). While at the CVADD, she conducted several transportation and development studies. These studies had a significant public involvement component.

### **EDUCATION:**

B.S., Mathematics, 1996  
Cumberland College

B.S., Civil Engineering, 1998  
University of Kentucky

### **REGISTRATION:**

Professional Engineer - 2001  
Kentucky #23131

LEED Green Associate - 2010

Land Surveyor-in-Training - 1999

### **TECHNICAL TRAINING:**

Division of Highway Design Partnering  
Workshop

Thinking Beyond the Pavement -  
Context Sensitive Design

Principles of Pavement Design

Intergraph Inroad Training

Urban Drainage Seminar

### **ORGANIZATIONS:**

Kentucky Society of Professional  
Engineers

National Society of Professional  
Engineers

- **Wilderness Trail Off-Road Park in Bell Co., KY.** Ms. Chappell worked with the local tourism director and ATV club to determine their vision of the park and begin developing the steps needed to attain it. Through the course of this study, existing infrastructure was identified and proposed additions recommended for this to become an attractive course for ATV tourists. Additionally, she performed an environmental assessment of the property and an economic impact analysis of the park for the county.
- **London/Laurel County Planning and Zoning Board in London, KY.** Ms. Chappell administered the London-Laurel County Comprehensive Plan. During this project, Ms. Chappell worked with the board to hire a qualified planner and work with the firm to ensure the city and county received a quality product. Ms. Chappell's duties included overseeing and being involved in workshops with the public to develop a mission statement, goals and objects, and methods of implementation for the plan. Additionally, Ms. Chappell worked with the board to determine correct existing zoning for the city and develop future zoning preferences for the board to adopt and use as guidelines for future developments.
- **Cannon Creek Lake Development Study in Bell Co., KY.** Ms. Chappell worked with the Bell County Judge Executive and Fiscal Court, along with the Pineville Water System to produce a plan that could increase tourism in Bell County while protecting their primary water supply. The study included determining which recreational facilities could be located at the lake and performing an economic analysis to justify the funds being spent on such facilities in Bell County. In addition to a proposed facility layout at the lake, proposed guidelines were developed with the recommendation of establishing a board to oversee these guidelines regardless of lake developments.



**Theodore H. Grossardt**, Ph. D.  
 Geography  
 Kentucky Transportation Center  
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 tgrossardt@communitydecisions.com

1126 Pleasant Street  
 Paris, Kentucky  
 cell: 859-953-0094

**i. Professional Preparation:**

Kansas State University	Geography	B.S., 1977
University of Iowa	Geography	M.A., 1979
University of Kentucky	Geography	Ph.D., 1999

**ii. Appointments:**

- 2003: Program Manager, Community Transportation Innovation Academy, University of Kentucky Transportation Center (UKTC) and the University of Louisville. *Annual Research and Education Budget: \$2 million*
- Associate Faculty, Graduate School of Architecture and Historic Preservation, University of Kentucky
- 2002: Adjunct Faculty, Department of Geography, University of Kentucky (re-appointed 2006)
- 1999: Director, Policy and Systems Analysis Division, UKTC *Annual Research Budget: \$750,000*
- 1998: Senior Professional Associate, UKTC  
 Director, Transportation Systems Management Graduate Certificate Program, UKTC
- 1996: Professional Associate, UKTC

**iii. Publications:**

- 2010 “Towards Structured Public Involvement: Justice, Geography and Collaborative Geospatial/Geovisual Decision Support Systems.” *Annals of the Association of American Geographers*. (With K. Bailey). Publication date January 2010.
- 2009 “How Risk Perception affects Driver Operating Speeds.” *Advances in Transportation Studies* 17(A): 17-28. (With N. Stamatiadis and T. Grossardt).
- “ A New Method for Public Involvement in Electric Transmission Line Routing.” *Transactions on Power Delivery*. IEEE Power Engineering Society, Piscataway, NJ. Accepted May 2009. (with W. Jewell, K. Bailey, and R. Gill)
- “Predictive Archaeological Modeling Using GIS-Based Fuzzy Set Estimation.” Paper 1495 in *Proceedings of the ESRI National User Conference*. San Diego, CA. (with P. Mink, K. Bailey, and J. Ripy).



## Theodore H. Grossardt, Ph. D. Geography

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- 2008      “Integrated Transportation and Land Use Scenario Modeling by Visual Evaluation of Examples: Case Study of Jeffersonville, Indiana.” In *Transportation Research Record 2076*. p.192-199. (with B. Blandford, J. Ripy, and K. Bailey)
- “Imagining Community: Using Structured Public Involvement (SPI) In Development Planning” paper #446 in *Proceedings of ACSP-AESOP 4<sup>th</sup> Joint Congress*. Chicago, Illinois. (with B. Blandford and K. Bailey).
- 2007      “Culture, Justice and the Arnstein Gap: The Impact of Structured Public Involvement on U.S Transportation Infrastructure Planning and Design” pp.283-290 in Schrenk, Popovich and Benedikt (eds.) *Proceedings of Real CORP 007*. Vienna, Austria (with K. Bailey).
- “Grounding Justice in Public Meeting Practice” pp.291-296 in Schrenk, Popovich and Benedikt (eds.) *Proceedings of Real CORP 007*. Vienna, Austria (with K. Bailey).
- "Community Design of a Light Rail Transit-Oriented District using CAVE (Casewise Visual Evaluation)." *Socio Economic Planning Sciences 41(3)*: 235-254. (with K. Bailey and M. Pride-Wells)
- “Justice and the Public’s Involvement in Infrastructure Planning.” *Practicing Planner 5* (1). American Institute of Certified Planners. <http://www.planning.org/practicingplanner/> (with K. Bailey)
- “Context Sensitive Methods to Influence Operating Speeds: Case Study of Rural Highway Using Casewise Visual Evaluation.” in *Transportation Research Record 2025*. pp. 90-97.(with N. Stamatiadis, K. Bailey, and J. Ripy).
- 2006      “Structured Public Involvement in Context-Sensitive Large Bridge Design Using Casewise Visual Evaluation (CAVE): Case Study Section 2 of the Ohio River Bridges Project.” in *Transportation Research Record 2028*. p.19-27. (with K. Bailey, J. Ripy, L. Toole, J.B. Williams and J. Dietrick).
- “Structured Public Involvement in Context Sensitive NoiseWall Design Using Casewise Visual Evaluation” in *Transportation Research Record 1984*. pp. 112-122. (with K. Bailey).
- “Addressing the Arnstein Gap: Improving Public Confidence in Transportation Planning and Design through Structured Public Involvement (SPI)” pp.337-341 in Schrenk, M. (ed) *Proceedings of the 11<sup>th</sup> International GeoMultimedia Symposium*. CORP2005. Vienna, Austria (with K. Bailey).
- 2005      “Landscape Features in Transmission Line Routing” in *Institute of Electrical and Electronics Engineers Power Systems Transmission and Distribution 2005/06* pp.1122-1126 (with R. Gill, W. Jewell and K. Bailey).
- “Participatory Electric Power Transmission Line Placement using the EP-AMIS methodology” in Schrenk, M. (ed) *Proceedings of the 10<sup>th</sup> International GeoMultimedia Symposium*. pp.137-142. CORP2005. Vienna, Austria (with K. Bailey and W. Jewell).

- 2004 "Community Design of a Transit-Oriented Development using Casewise Visual Evaluation (CAVE)" in Schrenk, M. (ed) *Proceedings of the 9<sup>th</sup> International GeoMultimedia Symposium* 9:123-129. CORP2004. Vienna, Austria. (with K. Bailey).
- 2003 "Towards Structured Public Involvement: Improving community involvement in transportation decision making," in *WorldMinds: Association of American Geographers Centennial Volume* (Warf B, Janelle D. and Hansen K. eds). pp. 547-552. (with K. Bailey).
- "Structured Public Involvement: Problems and Prospects for Improvement," *Transportation Research Record 1858*. Washington, DC: National Academy of Sciences. (with K. Bailey and J. Brumm).
- 2002 "Efficiency Through Accountability: Some Lessons from Kentucky's Improved Medicaid Transit Service." *Journal of Transportation and Statistics* 5: 2/3. (with L. O'Connell, B. Siria, S. Marchand, and M. McDorman).
- "Integrating Visualization into Structured Public Involvement: A Case Study of Highway Improvement in Central Kentucky," *Transportation Research Record 1817*. Washington, DC: National Academy of Sciences. (with K. Bailey and J. Brumm).
- "AMIS: Geographic Information System-based corridor planning methodology" *Transportation Research Record 1768*: 224-232. Washington, DC: National Academy of Sciences. (with K. Bailey and J. Brumm).
- "Towards Structured Public Involvement" *Transportation Research News* May June 2002. Washington, DC: National Academy of Sciences. (with K. Bailey and J. Brumm).
- 2001 "Towards Structured Public Involvement in Highway Design: A Comparative Study of Visualization Methods and Preference Modeling using CAVE (Casewise Visual Evaluation)," *Journal of Geographic Information and Decision Analysis* 5: 1-15 (with K. Bailey and J. Brumm).
- 1996 "Harvest(ing) hoboos: The production of labor organization through the wheat harvest." *Agricultural History*. Spring, 1996.

**iv. Selected Other Publications:**

- 2004 "Casewise Visual Evaluation" in *InfoTEXT: Information Technology Division of the American Planning Association*. Issue 79 (Spring) pp. 12 ff. (with K. Bailey).
- 2003 "Alternative Minimum Impedance Surface (AMIS) and the Partitioning of Preference." Paper 526, *Proceedings of the Public Participation in Geographic Information Systems Conference*, Urban and Regional Information Systems Association (URISA). Portland State University, Portland, OR. July 20, 2003. (with K. Bailey).
- "Community Design of a Light Rail Transit-Oriented Development," in *New IDEAS for Transit: Annual Progress Report of the Transit IDEA Program*. National Academy of Sciences: Washington, DC.

## Theodore H. Grossardt, Ph. D. Geography

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“Developing the Next Generation of Technological Aids to Effective Public Involvement in Public Transportation” in *Proceedings of the American Public Transit Association Conference*. Milwaukee, Wisconsin. May 13, 2003. (with A. Arno and K. Bailey).

“Building Participation in Development Plans,” *Passenger Transport* 60, no. 41, (October 21) Washington, DC: American Public Transport Association

2002 “AMIS: Least Cost Path Analysis for Transportation Planning” Paper 521, *Proceedings of the Environmental Systems Research Institute User Conference*, San Diego, CA. July 7-11, 2002. (with K. Bailey and J. Brumm).

“KTC Leads Research in Infrastructure Planning” *Enginews*. UK Office of Communications. April 2002.

2001 “Public Involvement in Highway Improvement: A Comparison of Three Different Visualization Modes for a Case Study in Central Kentucky,” Paper 428, *Proceedings of the Environmental Systems Research Institute User Conference*, San Diego, CA. July 8-12, 2001. (with K. Bailey and J. Brumm).

Policy and Systems Analysis Division. “States’ and Citizens’ User Guide to Visualization”, Kentucky Transportation Center. CD-ROM: Lexington, KY

1996 Book Review of *Peopling the Plains: Who Settled Where in Frontier Kansas*. by James R. Shortridge, Lawrence: University of Kansas Press. *Annals of the Association of American Geographers* 87 (2): 403-405.

Book Review of *Childerley: Nature and Morality in an English Country Village*. by Michael Mayerfeld Bell, Chicago: U. of Chicago Press. *Professional Geographer* 47(3): 347-8.

### v. Principal Investigator or Co-PI: Research Projects

*Structured Public Involvement Support for the Upgrade of River Road, Louisville, Ky.* (Louisville Metro Public Works) Design and deliver public meeting protocols that provide resident preferences and values and anticipated changes in usage patterns for alternative future scenarios for a section of River Road in Louisville, KY.

1 year, \$30,000

*Structured Public Involvement Support for a Community-Based Future Vision of the Paducah (Kentucky) Gaseous Diffusion Plant Facility.* (U.S. Department of Energy) Part of a multi-disciplinary team engaged in assisting the community surrounding a uranium enrichment plant plan for the clean-up and re-use of the facility when it is decommissioned.

18 months, Overall Project \$2.4 Million

## Theodore H. Grossardt, Ph. D. Geography

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*Structured Public Involvement Support for the Design of the Milton-Madison Ohio River Bridge.* (Kentucky Transportation Cabinet and Indiana DOT) Designing and delivering collaborative public participation processes using Casewise Visual Evaluation to support Wilbur Smith Inc. in the location and design of a replacement bridge linking Milton, KY and Madison, IN, a Main Street America town.

18 months, \$120,000

*Structured Public Involvement in for Improved Transit Planning.* Federal Transit Administration grant to develop SPI protocols, acquire equipment, and train LexTran personnel to improve the public input into transit planning, design, and assessment.

1 year, \$120,000

*Structured Public Involvement Support for the Design of the Bridges Over Land Between the Lakes.* (Kentucky Transportation Cabinet) Designing collaborative public participation processes using Casewise Visual Evaluation to support Michael Baker Jr., Inc. Engineering in the design of two replacement bridges on Highway 68 through Land Between the Lakes.

1 year, \$90,000

*Structured Public Involvement Support for the Design of the Louisville-Southern Indiana Ohio River Bridges Project.* (Kentucky Transportation Cabinet and Indiana DOT) Designing collaborative public participation processes using Casewise Visual Evaluation to support Parsons Brinckerhoff, Lochner and Associates, Michael Baker Engineering, and American Consulting Engineers in the design of both bridges and their approaches in Louisville, Kentucky.

2 years, \$200,000

*Develop An Integrated Land Use And Transportation Model For Communities In Kentucky:* Project to Develop an Iterative Public Involvement Process that Combines Conventional Traffic Planning Model Output with Land Use Projections to Aid Communities and Traffic Engineers in More Integrated Planning. Collaboration with Dr. Mei Chen, UK Department of Civil Engineering.

2 years, \$180,000

*Evaluation of Context Sensitive Methods To Influence Driver Behavior And Operating Speeds:* Project to Use Structured Public Involvement Protocol to Evaluate Important Roadway Environment Design Factors for Influencing Driver Operating Speed. Collaboration with Dr. Nick Stamatiadis, UK Department of Civil Engineering.

2 years, \$160,000

*Investigation of Electric Transmission Line Routing using a Decision Landscape Methodology:* National Science Foundation Grant with University of Arizona Dept. of Geography, Wichita (KS) State University Dept. of Electrical Engineering. Development of Public Participation GIS Tool for Power Line Routing.

2 years, \$160,000

*Newtown Pike Extension Community Land Trust Development:* (Kentucky Transportation Cabinet) Project to Aid Community-Based Group in Constructing New Self-Governing Non-Profit Land Trust to Manage Local Urban Land Market associated with Transportation Infrastructure Investment

1 year, \$20,000

## Theodore H. Grossardt, Ph. D. Geography

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<i>Historic Farms of the Bluegrass: Research to Establish Criteria and Methods to Evaluate Historic Farms in the Bluegrass Regions of Kentucky</i>	18 months, \$75,000
<i>AMIS Technical Development: Development to Implement Public Participation GIS Route Planning Tool.</i>	2 years, \$190,000
<i>Noise and Visualization: (Collaboration with U of Louisville Dept. of Civil Engineering) Project Using Visualization and Decision Modeling to Facilitate Public Evaluation of the Visual and Auditory Properties of Sound Barriers and the Transportation Corridor Environment.</i>	2 years, \$300,000
<i>Wright House Adaptive Re-Use: (Kentucky Transportation Cabinet) Design and Execute a Public-Based Process for the Rehabilitation of an Historic Farm House</i>	6 months, \$50,000
<i>Visualization in a Community-Based Design for a Transit-Oriented District: (National Academy of Science Transit-IDEA Grant) Adapt Structured Public Involvement methodology to architecture and land-use planning questions, in collaboration with architects, planners, local community, and regional transit authority.</i>	18 months, \$150,000
<i>Transportation and Community Systems Preservation grant (Federal Highway Administration) Use 3D and Virtual Reality to simulate road design options for public involvement. Collaboration with regional smart growth group.</i>	18 months, \$475,000
<i>Commercial Vehicle Information Systems and Networks (CVISN) Central Series I and II Project Planning Workshop coordinators:</i> Twelve states for three week-long ITS-CVO deployment planning workshops, under contract to Federal Motor Carrier Safety Administration and in cooperation with Johns Hopkins Applied Physics Laboratories. Interdisciplinary team.	Multi-year, \$250,000
<i>CVISN State advisor for Ohio and Indiana, participants in CVISN Project Planning Workshops.</i>	1 year, \$30,000
<i>Strategic Assessment of KTC Office of Technology GIS-based data systems.</i>	1 year, \$70,000
<i>Evaluation Of Delivery Of Transportation Services To Kentucky Medicaid Clients. Interdisciplinary team.</i>	6 Months, \$135,000
<i>Analysis Of Fixed-Route Transit Needs Of Kentucky Medium-Size Towns.</i>	6 months, \$30,000
<i>Assessment Of Public Satisfaction With Kentucky Highways.</i>	Annual, \$50,000
<i>Kentucky Intermodal Management System support project.</i>	Annual, \$50,000
<i>GIS Technical Assistance program to Kentucky Transportation Cabinet.</i>	Annual, \$60,000
<i>Director of Transportation Systems Management Graduate Certificate Program.</i> One of 10 Southeastern Transportation Centers consortium schools. Interdisciplinary Transportation Fellowships Awarded to over 100 CE, Geography, Public Administration, and Business graduates in the past ten years.	Annual, \$110,000

## Theodore H. Grossardt, Ph. D. Geography

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*Award-Winning ITS-CVO Training team*, one of 15 such trainers in the U.S. Delivered three different training courses in six states. Multi-year, \$500,000

### **vi. Teaching and Course Development**

*Urban Transportation Planning*: A graduate planning course at the U. of Louisville School of Urban and Public Affairs.

*Community Transportation Planning and Design*: A graduate interdisciplinary course for students in CE, Geography, Historic Preservation, Architecture, Landscape Architecture, Economics and Public Administration.

*Professional Development for Transportation Planning*: Parallel courses for transportation professionals and interdisciplinary Transportation Systems Management graduate students at the University of Kentucky.

*Project Management for Transportation Professionals*. Training in Matrix Management methods for transportation project planning professionals.

*Lands and Peoples of the Non-Western World*. Undergraduate Geography Course at the University of Kentucky

*World Regional Geography*. Undergraduate Geography Course for Fort Hays Kansas State University, Hays, Kansas.

*Social Geography*. Undergraduate Course for Sterling College, Sterling, Kansas.

*World Regional Geography*. Undergraduate Course for Barton Community College, Great Bend, KS.



**Adam J. Kirk, PE, AICP**  
Research Engineer  
Kentucky Transportation Center  
859.257.7310; akirk@engr.uky.edu

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## Profile

Mr. Adam Kirk is an engineer and planner with KTC who brings more than 10 years of experience in both the public and private sector. Mr. Kirk is active in Context Sensitive Design/Solutions having recently co-authored NCHRP Report 642: Quantification of the Benefits of Context Sensitive Solutions and NCHRP Synthesis 373: Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities. In addition, Mr. Kirk serves as the staff engineer for the Northern Kentucky Area Planning Commission, where he leads transportation studies to support the economic growth and increased land use activity within the 21 communities of Kenton County. Mr. Kirk is a registered Professional engineer and is a member of the American Institute of Certified Planners (AICP). His unique perspective provided through involvement in both engineering and planning make him an exceptional fit to assist in the development of a master plan for Kentucky's recreational trail system.

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## Education

Master of Science, Civil Engineering, University of Washington, 2005  
Bachelor of Science, Civil Engineering, University of Kentucky, 2001

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## Professional Experience

2004-Present	Engineer Associate /Research Kentucky Transportation Center, University of Kentucky
2002-2004	Transportation Planning Project Manager LJB Inc., Dayton, OH
2001-2002	Engineer, Innovative Multi-Modal Solutions CH2M Hill, Seattle, WA

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## Certifications and Memberships

Professional Engineer (KY; No. 23407)  
American Institute of Certified Planners (AICP)  
Institute of Transportation Engineers (President, 2010)  
Private Pilot: Airplane Single Engine Land

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## Relevant Projects

### **Southwest Warren County Regional Transportation Study - Warren County, OH**

Client: Burgess & Niple  
Role: Regional Planner

### **Crescent Springs Small Area Study - Crescent Springs, KY**

Client: Northern Kentucky Area Planning Commission  
Role: Transportation Planner

### **Latonia Small Area Study - Latonia, KY**

Client: Northern Kentucky Area Planning Commission  
Role: Transportation Planner

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## Profile

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Dr. Stamatiadis is a leader in the field of geometric design including context sensitive solutions and practical design/solutions concepts with over 20 years experience in research. He has used this expertise in developing policy and guidelines for the Kentucky Transportation Cabinet (KYTC), such as Access Management, Left-Turn Phasing for Signalized Intersections, and Driver Licensing Retesting. Dr. Stamatiadis has completed research for NCHRP dealing with effects of geometric features on safety and development of guidelines for measuring benefits from context sensitive solution projects. His understanding of the operational effects of geometric design also lends itself to evaluating pedestrian and bicycle safety and operational issues. This research experience includes the identification of the speed transition problem. Recent accomplishments of Dr. Stamatiadis are presented below.

## Areas of Expertise

- Safety Impacts of Geometric Design
- Pedestrian and Bicycle Safety
- Context Sensitive Solutions
- Highway Design
- Human Factors
- Driver Behavior

## Education

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- 3/86 - 8/90      Ph.D. in Civil and Environmental Engineering, Michigan State University, with specialization in transportation. Major area of research including dissertation was in highway safety.
- 9/84 - 3/86      Master of Science in Civil and Environmental Engineering, Michigan State University, with specialization in transportation.
- 9/78 - 9/83      Diploma in Surveying Engineering, College of Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece. Graduated from a five year program that is equivalent to the B.Sc. degree.

## Professional Experience

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- 9/90 - Present Professor, Transportation and Traffic Engineering, Department of Civil Engineering, University of Kentucky.
- 9/88 - 6/90      Consultant with various consulting firms working on part-time basis.
- 3/89 - 6/90      Teaching Assistant in Civil and Environmental Engineering Department, at Michigan State University.
- 1/85 - 12/89      Research Assistant in Civil and Environmental Engineering Department, at Michigan State University.
- 3/83 - 9/84      Research Assistant in Civil Engineering Department, at Aristotle University of Thessaloniki, Thessaloniki, Greece.



## **DEMPSEY MIRACLE, JR., P.L.S.**

### **Surveying Supervisor**

[djmiracle@vaughnmelton.com](mailto:djmiracle@vaughnmelton.com)

Mr. Miracle joined Vaughn & Melton in 1986 and currently serves as Surveying Supervisor for V&M's Middlesboro office. Since joining the firm, some of his duties have included proposals and cost estimates, surveying, using computer survey programs, AutoCAD and Intergraph, deed research, plotting, design assistance on sewer collection systems, highway projects, and utility relocation projects, reducing field notes, and drafting; managing projects, scheduling crews, working directly with clients. The following are some of the projects he has been involved with:

#### **EDUCATION:**

A.S., Mining Technology, 1981  
Morehead State University

#### **EXPERIENCE**

Professional Land Surveyor – 1999  
KY#3454, TN, VA

NICET AET Certification – 2000

27 years experience in Surveying

#### **TECHNICAL TRAINING:**

Leica GPS Advanced GPS Post  
Processing Training

Static GPS Network Design

NGS CORS & OPUS

A/E/C Project Manager Boot Camp

GPS Derived Heights & Precision Digital  
Leveling

GPS Training – Map Sync Seminar

Monuments, Lines of Possession  
Analysis & Reporting – 2000

Intergraph Training  
Pellissippi State Community College

AutoCAD Training  
Entre Computer Training Center

Department Of Highways Surveying  
Practices, and Archives

#### **PROFESSIONAL ORGANIZATIONS:**

Kentucky Association of Professional  
Surveyors - Past President

Tennessee Association of Professional  
Surveyors

Virginia Association of Surveyors

- **Wolf Creek Dam Mapping and GIS Development** USACE Nashville District; 2001-2006; Wolf Creek Dam and Lake in Cumberland, Kentucky. Mr. Miracle was the Project Manager on this project and oversaw the location and data collection of more than 2000+homes and dwellings in 80 mile corridor. Dwelling inventory included the gathering of ground elevation, first floor elevation, occupant and owner contact information, structure use, special needs assistance, and structure photo. He also coordinated with USACE, emergency management personnel, and local utilities and officials.
- **Wilderness Trail Off-Road Park** in Bell Co., KY. Vaughn & Melton developed a study for a comprehensive adventure tourism plan. The study looked at 9,000 acres for an off road park. First the study included the need for such a development, the economic impact the park development could have on the county and region, environmental issues to be considered, and public input on the development of the park. Second the land was mapped for trail use. The maps marked the existing trails, along with their level of difficulty, future trail development, and cell phone coverage areas.
- **Pine Mountain Scenic State Trail** - Kentucky Department of Finance This project is a proposed 120-mile long hiking trail along the crest of the rugged Pine Mountain Range through Bell, Harlan, Letcher, and Pike counties. Mr. Miracle oversees all surveying aspects which include GPS control networks, in-depth courthouse research, trail location and monumentation, preparing plats and descriptions.
- **Wheeler Boone Property Survey**, Department of Finance; 1997-Present; 4,000+ acre boundary survey in Bell County, KY. Mr. Miracle worked on all aspects of the project including coordination of field work, deed research, calculations, monumentation and plat/description preparation.
- **Kentonia State Forest "Cupp Property"** 450 acre boundary survey, Department of Finance, in Harlan Co., KY. As Surveyor-in-Charge for this boundary retracement, Mr. Miracle was responsible for all aspects of the project including coordination of field work, deed research, calculations, monumentation and plat/description preparation.



## BRANDON L. LEWIS, GISP

GIS Manager

[bllewis@vaughnmelton.com](mailto:bllewis@vaughnmelton.com)

Mr. Lewis joined Vaughn & Melton in 2004 with significant experience in programming and relational databases. As GIS Manager, he directs the activities of the GIS department and coordinates the needs and use of GIS on various projects. He has considerable understanding of database design and management, as well as spatial standards.

### EDUCATION:

B.S., Computer Science & Economics, 2004  
Centre College

### EXPERIENCE:

Geographical Information  
Systems Professional  
(GISP) certification - 2008



### TECHNICAL TRAINING:

ESRI ArcGIS Training Courses

Geodatabase Precision and Spatial  
Domain

Geoprocessing CAD Data with ArcGIS

Data Analysis and Modeling

Object-Oriented Analysis

Relational Database Modeling

Software Engineering

Program and Data Structures

Training and experience in .NET, Java, Visual  
Basic, C, C#, Python, and web-based based  
programming technologies.

### ORGANIZATIONS:

Kentucky Association of Mapping  
Professionals

Association of Computing Machinery – Past  
Editorial Board Member

- **Wilderness Trail Off-Road Park** in Bell Co., KY. Mr. Lewis was the GIS/CADD Specialist for this project. Vaughn & Melton developed a study for a comprehensive adventure tourism plan. The study looked at 9,000 acres for an off road park. First the study included the need for such a development, the economic impact the park development could have on the county and region, environmental issues to be considered, and public input on the development of the park. Second the land was mapped for trail use. The maps marked the existing trails, along with their level of difficulty, future trail development, and cell phone coverage areas.
- **Pine Mountain Scenic State Trail** - Kentucky Dept. of Finance. As GIS/CADD Specialist, Mr. Lewis was responsible for the creation of geodatabases to aid in the development and planning of the project. He produced maps for internal and public display and ensured spatial data standards were followed. Phase I involved working closely with the record keepers in four southeastern Kentucky counties and the KY Revenue Cabinet to identify all land owners and approximate boundaries along a 120 mile stretch of Pine Mountain. Phase II involved establishing a GPS control network, locating property evidence, establishing owners boundaries, monumenting park trail centerline and preparing easement plats along the 120 mile trail. All data was delivered to the State for use in their statewide GIS system.
- **Wolf Creek Dam Mapping and GIS Development**, USACE Nashville District Wolf Creek Dam and Lake Cumberland, Kentucky. Responsible for data coordination and planning the inventory of 2000+ homes and dwellings, as well as providing evacuation route data along the Cumberland River corridor downstream of Lake Cumberland. Terrain inundation modeling, breach analysis and GIS development were performed for USACE and emergency management personnel in the event of structural failure or rapid drawdown at Wolf Creek Dam.
- **Middlesboro Structure Database Update**, USACE Nashville District; After floodplain revisions from FEMA's flood map modernization program, the size of the 100-year floodplain in Middlesboro increased nearly 20% and the number of structures residing in that floodplain increased as well. It was necessary to update the existing structure information. Existing data was imported into a geospatial database and a plan was set in place to collect information on structures that were now included in the revised floodplain.



## **JIMMY L. WALKER, MBA, SR/WA**

### **PROPERTY EXPERT**

Mr. Walker joined Vaughn & Melton in 1998 with more than 30 years of experience in property acquisition and management as a negotiator. He has served as president and general manager of several large coal-mining operations in Eastern Kentucky. As a lifelong Kentucky native, Mr. Walker works very well with owners of residential properties.

Some of the projects on which he has been involved in are as follows:

#### **US 460, Sections 3 thru 8 (Greasy Creek – VA State Line), Pike Co., KY**

- Acquisition of 181 parcels, 26 mineral, 17 gas well and 84 relocations.

#### **KY 30, London – Tyner Road in Jackson County, KY**

- This project includes 29 parcels with 2 residential relocations, and 14 miscellaneous moves.

#### **KY 6 to KY 3041 Connector in Whitley/Knox County, KY**

- This project includes 16 parcels with 3 residential relocations, 1 business, and 2 miscellaneous moves.

#### **US 119, Partridge – Oven Fork in Letcher County, KY**

- This project includes 41 parcels, 30 minerals and 20 relocations.

#### **KY 40, Paintsville – Inez in Johnson County, KY**

- This project included 65 parcels.

#### **US 119, Sections 1 thru 4 – Pike County, KY**

- Acquisition of 225 parcels, 35 mineral, 11 gas wells, 3 cemeteries and 90 relocations.

#### **KY 979 (Minnie – Harold) – Floyd County, KY**

- Acquisition of 71 parcels, 3 gas wells, 16 minerals, and 23 relocations. Mr. Walker was assigned 43 parcels as a negotiator.

**Old Dominion Power (E.ON, U.S.), Clinch River Plant to Virginia City - Powerline Easements in Virginia City, VA.** This project included 40 parcels.

#### **LG&E (E.ON, U.S.) - Powerline Easements in Meade/Hardin Co., KY**

- This project included 13 parcels.

#### **Inez 69kV line Powerline Easements in Martin County, KY**

- East Kentucky Power Cooperative. This project included 23 parcels.

#### **KY 30 - Relocations Powerline Easements in Jackson Co., KY**

- East Kentucky Power Cooperative. This project required easements for relocating the transmission lines out of the area where the proposed KY 30 is being constructed. Mr. Walker was the project manager on this project. This project includes 7 parcels.

#### **EDUCATION:**

B.S., Mining Engineering, 1967  
University of Kentucky

M.S., Business Administration, 1992  
Morehead State University

#### **EXPERIENCE:**

IRWA Senior Right of Way Agent  
Designation, SR/WA

IRWA Certification in Negotiations, R/W-  
NAC

IRWA Training Courses

Relocation Forms Class held by J. Ratliff  
in Pikeville, KY

Certified Underground Mine Foreman in  
both Kentucky and Tennessee

Certified Surface Mine Foreman in  
Kentucky

#### **PROFESSIONAL ORGANIZATION:**

International Right of Way Association



## **KENNETH E. CORDER, P.L.S.**

### **PROPERTY EXPERT**

Mr. Corder joined Vaughn & Melton in 1976. He has been involved in a wide variety of engineering projects. His expertise in right-of-way issues serves him well in his capacity as negotiator on Vaughn & Melton's right-of-way projects. His work is critical in the interpretation of construction plans and communicating to the appraisers the effect on the value of property during that phase of the project. Some of the projects on which he has been involved in and provided courthouse research are as follows:

#### **EDUCATION:**

A.S., General Studies, 1975  
Georgia Military College

A.S., Forestry, 1976  
University of Kentucky

#### **EXPERIENCE:**

Professional Land Surveyor - 1987  
KY #2886, TN, MS, NC

33 years experience

Licensed Real Estate Associate, Kentucky

#### **TECHNICAL TRAINING:**

KY Dept. of Transportation Drainage  
Seminar-Prestonsburg

MicroStation (CADD) Intergraph Training

Roadside Design Seminar - KTC

Traffic Management Plan Training

Thinking Beyond the Pavement - Context  
Sensitive Design

AASHTO Roadside Design Guide  
Workshop – KTC

Miscellaneous Surveying Workshops

Erosion Control Seminar - TDOT

KYTC/ACEC Partnering Workshop

#### **KY 30, London - Tyner Road in Jackson County, KY**

- This project includes 29 parcels with 2 residential relocations, and 14 miscellaneous moves. Mr. Corder served as Assistant Project Manager and as a negotiator on this project.

#### **KY 6 to KY 3041 Connector in Whitley/Knox County, KY**

- This project includes 16 parcels with 3 residential relocations, 1 business, and 2 miscellaneous moves. Mr. Corder served as Assistant Project Manager and as a negotiator on this project.

#### **US 421, Cawood – Crummies in Harlan County, KY**

- This project included 27 parcels, 1 cemetery and 32 relocations. Mr. Corder was a negotiator on this project.

#### **US 119, Sections 1 thru 4 – Pike County, KY**

- Acquisition of 225 parcels, 35 mineral, 11 gas wells, 3 cemeteries and 90 relocations. Mr. Corder was assigned as negotiator on several parcels on this project and only one went to condemnation. He successfully settled a total of \$2,105,650 worth of right of way parcels.

#### **I-66 in Pike County, KY**

- Corridor Study for 30 miles of new interstate construction - Mr. Corder participated in public participation meetings and was responsible for the project coordination. The Study required numerous alignment studies, information collection and cost estimates. The project was completed using computer generated surface models to aid in the graphic presentations and quantity estimates.

#### **US 421 in Harlan/Leslie Counties, KY**

- Planning Study for 30 miles of relocation – Mr. Corder participated in public meetings and was responsible for the project coordination. The Planning Study required numerous alignment studies, information collection and cost estimates. This project was completed using computer generated surface models to aid in the graphic presentations and quantity estimates.