

**Appendix D**  
**2019 Final Prioritization Plans**  
**KYTC Highway Districts**

# KYTC Highway District 1



## SHIFT 2020 Prioritization Plan

**Final**

**August 19, 2019**

**Prepared by: Jessica Herring**

### **Introduction/Overview**

This is the second evolution of the SHIFT process for KYTC. This data-driven, objective, and collaborative approach takes into account data such as crashes, fatalities, traffic volume, delays, and employment data to assess planned projects and allow for comparison with one another. The process is broken into two phases. Phase 1 being the selection of projects within our respective Districts to be sponsored. Both Highway District Office (HDO) 1 and the two Area Development Districts (ADDs), Pennyriple and Purchase, will have an allotment of sponsorships to promote projects to Phase 2. Upon the completion of Phase 1, the sponsored projects will be assessed and given their respective scores. Once the project scoring has completed, Phase 2 begins. Phase 2 is the boosting of selected sponsored projects. In Phase 2, the HDO and ADDs try to collaborate their efforts to boost the projects that each deem most important to the region. This effort from the HDO and ADDs through the SHIFT process is intended to bring financial balance and dependability to the KYTC highway plan.

### **Timeline**

- January 2019 – HDO met to discuss and select the projects to be considered for District Sponsorship.
- February – HDO and ADDs met with local officials to discuss the projects to be considered for ADD Sponsorship.
- March 7 – HDO attended the Pennyriple ADD's Transportation Committee Meetings to give the local officials the draft list of projects selected for HDO Sponsorship, and to assist the ADD in determining the projects that the local officials selected for ADD Sponsorship.

- March 20 - HDO attended the Purchase ADD's Transportation Committee Meetings to give the local officials the draft list of projects selected for HDO Sponsorship, and to assist the ADD in determining the projects that the local officials selected for ADD Sponsorship.
- March 27 – HDO and KYTC Central Office (CO) reviewed the HDO Sponsorship list.
- May – HDO reviewed and revised cost estimate data for all projects sponsored in HDO 1.
- June 13 – HDO and CO reviewed the list of projects sponsored in HDO 1 for schedules, federal eligibility, and available funding.
- July 15 & 16 – HDO met to discuss and select the projects to be given boost points by HDO 1.
- July 24 – HDO 1 met with Purchase ADD to discuss HDO selection of projects for HDO Boost Points.
- July 24 - HDO attended the Pennyryle ADD's Transportation Committee Meeting to give the local officials the draft list of projects selected for HDO 1 Boost Points, and to assist the ADDs in determining the projects that the local officials selected for ADD Boost Points.
- July 31 - HDO attended the Purchase ADD's Transportation Committee Meeting to give the local officials the draft list of projects selected for HDO 1 Boost Points, and to assist the ADDs in determining the projects that the local officials selected for ADD Boost Points.
- August – HDO finalized the HDO 1 Boost Points within CHAF.
- August – HDO documented the process used for the selection of HDO 1 Boost Points.
- August 2019 – HDO 1 will attend the West Regional Summit to select further projects for Boost Points along with our fellow HDOs within the West Region.

## **Project Selection Criteria/Methodology**

HDO 1, using the statewide formula, was allotted 50 sponsorships by KYTC. Initial priority in selecting projects for HDO Sponsorship was given to those projects that have already begun and have initiated at least the Design phase of the project.

From there, selection went to those projects with significant regional connectivity. HDO 1 considers regional connectivity to be more encompassing than one roadway corridor connecting to another roadway corridor.

And finally, selection of projects to fill the remaining sponsorship spots was based upon evaluation of the project data such as crashes, fatalities, traffic volume, delays, and employment data.

## **Project Boost Criteria/Methodology**

HDO 1 was allotted 25 project boost points. Initial priority in selecting projects for HDO Boosting was given to those projects that had already begun and had initiated at least the Design phase of the project.

From there, selection went to boost those projects with significant regional connectivity. HDO 1 considers regional connectivity to be more encompassing than one roadway corridor connecting to another roadway corridor. The significance of regional connectivity for HDO 1 comprises connecting HDO 1 to HDO 2, connecting Western Kentucky to Tennessee, Missouri, and Illinois, as well as connecting city to city within the HDO 1 region. All of these aspects of regional connectivity were considered for this review of the list of scored sponsored projects.

And finally, selection of projects to utilize the remaining boost points was based upon evaluation of the project data and collaboration with the ADDs for local priority.

## **Public Involvement/Feedback**

HDO 1 has worked closely with the ADDs throughout the SHIFT 2020 process. All projects sponsored by the HDO were presented at the transportation meetings hosted by the ADDs. All projects boosted by the HDO were both emailed out prior to and presented at the transportation meetings hosted by the ADDs. Since these meetings are attended by local officials, representatives of local officials, and public, this allowed for the public to view and comment on the projects selected. These meetings are as follows:

- March 7 – HDO 1 attended the Pennyriple ADD’s Transportation Committee Meetings to give the local officials the draft list of projects selected for HDO Sponsorship, and to assist the ADD in determining the projects that the local officials selected for ADD Sponsorship.
- March 20 - HDO 1 attended the Purchase ADD’s Transportation Committee Meetings to give the local officials the draft list of projects selected for HDO Sponsorship, and to assist the ADD in determining the projects that the local officials selected for ADD Sponsorship.
- July 24 - HDO 1 attended the Pennyriple ADD’s Transportation Committee Meeting to give the local officials the draft list of projects selected for HDO 1 Boost Points, and to assist the ADDs in determining the projects that the local officials selected for ADD Boost Points.
- July 31 - HDO 1 attended the Purchase ADD’s Transportation Committee Meeting to give the local officials the draft list of projects selected for HDO 1 Boost Points, and to assist the ADDs in determining the projects that the local officials selected for ADD Boost Points.

## **Conclusion**

This iteration of the SHIFT process seemed to go well for HDO 1. Project scoring revealed the necessity of some projects already known to HDO 1, while also calling to attention several projects that did not seem an immediate need at first. HDO 1's ultimate goal in SHIFT 2020 was that the final list of boosted projects be a good representation of the needs and priorities for the entirety of HDO 1's twelve counties.

## KYTC Highway District 2



### SHIFT 2020 Prioritization Plan

Final

August 14, 2019

Prepared by: Nick Hall

#### Introduction/Overview

The purpose of this document is to provide the plan and methodology to the Kentucky Transportation Cabinet (KYTC) that was used for the District 2 2019 Prioritization Plan. The prioritization process will be used as input for the Recommended Kentucky Highway Plan, to be submitted to the next session of the Kentucky General Assembly in 2020.

In 2017, KYTC developed a more data-driven, objective and collaborative approach to determine the state's transportation funding priorities. The Strategic Highway Investment Formula for Tomorrow (SHIFT) is a prioritization model that is intended to bring balance and dependability to Kentucky's over-programmed highway plan.

SHIFT uses quantitative data such as crashes, fatalities, traffic volumes, delays, and employment data to assess projects and compare them to each other. Transportation project types that were prioritized using SHIFT include:

- Safety Improvements
- Road Widening
- Reconstruction
- New Routes and Interchanges

This plan prioritized projects sponsored by the KYTC D2 office as well as the two Area Development Districts and three Metropolitan Planning Organizations for the eleven county area that makes up District 2.

## **Timeline**

- January-February – ADDs, MPOs and HDO staff met with local officials to select projects to be considered for sponsorship by the respective committees.
- March – ADDs, MPOs and HDOs submitted sponsored projects via the Continuous Highway Analysis Framework (CHAF) projects database.
- April- May- Reviewed sponsored projects and updated costs and schedules. Began Data verification.
- May – Submitted District 2 Draft Prioritization Plan to KYTC Central Office.
- June- Received statewide and regional scoring on sponsored projects.
- June- Held district meetings on Statewide projects
- August- Boosts were applied and regional scores were finalized.
- August – KYTC Regional Summits take place
- November- KYTC Central Office Develops Draft Recommended Highway Plan
- December – KYTC delivers Draft Recommended Highway Plan to the Governor

## **Project Selection Criteria/Methodology**

Using the statewide formula, KYTC determined the number of projects each ADD, HDO, and MPO may sponsor. For 2019, KYTC allotted 59 projects for District 2 to sponsor.

District 2 used a committee to discuss each project and provide input to make the district selections. Criteria looked at for each project were:

- Currently funded in the 2018 Kentucky Highway Plan
- Safety
- Reoccurring issues within the project area
- Regional significance

## **Project Boost Criteria/Methodology**

HDO determined the projects for boosting based on:

- Currently funded in the 2018 Kentucky Highway Plan
- Safety
- Regional significance
- Economic development

The district used the score as a starting point. Projects with a higher score were given consideration for the boost points. In some cases, other criteria were used to help identify

issues that may not have been captured by the data. An example of this would be a road that is prone to flooding being closed during a high water event.

### **Public Involvement/Feedback**

Since the HDO worked closely with the ADDs and MPOs, the projects sponsored by the HDO were shown at the respective meetings of the ADDs and MPOs. In addition, the HDO submitted a list of proposed projects for boosts to each ADD/MPO prior to their meeting held to determine their boosts. These meetings were setup and advertised by the ADD/MPO. Since these meetings are open to the public, this allowed the public a chance to view and comment on those selections. Boost meetings were held as follows:

PEADD- July 24

Owensboro MPO -July 30

GRADD- July 31

Evansville MPO- August 8

Clarksville MPO- August 15

### **Conclusion**

The process seemed to go well. Between the sponsorships from all agencies, most of the top projects in the district were able to be sponsored. The HDO attended most of the ADD/MPO meetings and participated in the boost discussion. As a result, most of the projects in District 2 were able to receive boost points from both the Local agency and the HDO.



## KYTC Highway District 3



### SHIFT 2020 Prioritization Plan

Final

August 15, 2019

Prepared by: Matthew Holder

#### Introduction/Overview

In 2017, the Kentucky Transportation Cabinet (KYTC) developed a more data-driven, objective, and collaborative approach to determine the state's transportation funding priorities. The Strategic Highway Investment Formula for Tomorrow (SHIFT) is a prioritization model that is intended to bring fiscal balance and objectivity to the Kentucky Highway Plan.

The purpose of this document is to provide the plan for how KYTC Highway District 3 (D3) worked internally and externally, with the Bowling Green Metropolitan Planning Organization (BG MPO), Barren River Area Development District (BRADD), and Pennyriple Area Development District (PADD), to prioritize projects. The prioritization process will be used as input for the Recommended Kentucky Highway Plan, which is to be submitted to the next session of the Kentucky General Assembly in 2020.

#### Timeline

- The sponsorship period officially began on January 2 – this kicked off project prioritization meetings with local officials through the BG MPO, BRADD, and PADD.
- The Continuous Highway Analysis Framework (CHAF) database was updated throughout the sponsorship process to add new or update existing projects.
- The district's 98 project total was finalized and sponsored by the March 15 deadline.
- Data verification began immediately after and lasted until the end of May.
- After scores were received on June 25, the process of deciding the projects to receive priority points (boost) began; and meetings were held internally and with the BG MPO, BRADD, and PADD to collaborate during the boosting process.
- Once boosting was complete and scores were finalized on August 14, D3 immediately began preparing for Regional Summits.

## **Project Selection Criteria/Methodology**

Beginning in December of 2017, D3 collaborated with the BG MPO, BRADD, and PADD to conduct meetings with the local officials of our ten counties to prioritize their 50 projects. After completing these meetings, D3 had an internal meeting to prioritize 48 other projects to avoid sponsoring projects already prioritized by the BG MPO, BRADD, and PADD. The five attributes of the SHIFT formula – safety, congestion, asset management, economic growth, and benefit/cost – heavily contributed to the discussion of which projects to sponsor. Each of these 98 projects were added to or updated in the CHAF database to reflect the desired scope of each project. These 98 projects were sponsored by D3, BG MPO, BRADD, or PADD by the March 15 deadline and immediately went into the data verification phase after that date.

## **Project Boost Criteria/Methodology**

The district listing of regional scores was heavily considered when deciding whether or not to boost a project. Projects with the highest scores (i.e., the top third of project scores) were still boosted to show the importance of that project to the district. Projects with the lowest scores (i.e. the bottom third of project scores) were not considered for boosting. D3 coordinated with the BG MPO, BRADD, and PADD to determine which projects to boost together (turbo boost). D3 first met internally to tentatively determine a list of which projects to boost. This list was shown to the BG MPO, BRADD, and PADD during their respective boost meetings, which helped align priorities to turbo boost the highest possible number of D3 boosted projects. This was achieved due to the belief that forming a partnership with the other agencies in the district to turbo boost projects increases the probability of those projects to better compete with other projects within the region to make it into the Kentucky Highway Plan.

## **Public Involvement/Feedback**

D3's participation in the BG MPO, BRADD, and PADD meetings provided opportunities for public involvement since all of these meetings are open to the public. Furthermore, the local officials who regularly attend these meetings serve as a channel for public concerns and opinions. Discussions were included on the agendas and minutes for these meetings, which are also open to the public and available on the website of each agency.

## **Conclusion**

The goal of this prioritization plan was to ensure that the final list of boosted projects aligns with the needs and priorities of the district, which were developed from several different sources – residents, local officials, ADD/MPO committees, legislators, KYTC personnel, etc. – from a myriad of different perspectives. For the most part, the project scores reflect the district's needs and priorities with respect to its goals and objectives. The SHIFT process also provides enough flexibility to allow for justified adjustments (priority points) of project scores to give certain projects a better chance of making it into the Kentucky Highway Plan.

## KYTC Highway District 4



### SHIFT 2020 Prioritization Plan

**Final**

**August 14th, 2019**

**Prepared by: Charles Allen**

#### **Introduction/Overview**

The SHIFT scoring process offers a comprehensive evaluation of projects based on quantitative data. However, there are still qualitative elements that are very much a part of the decision making process. These elements are such that they can influence why a project with a nominative score may be “boosted” ahead of other worthy (higher scored) projects. The process for sponsoring projects, applying boost points and the public involvement process is summarized below:

#### **Timeline**

- March 13<sup>th</sup>, 2019—District Sponsorship Meeting
- August 14<sup>th</sup>, 2019 –District Boost Meeting
- August 14<sup>th</sup>, 2019—Finalize Regional Scores
- August 28<sup>th</sup>, 2019—South Region Summit
- September, 2019—Submit Selected Projects
- October, 2019—KYTC Develops Draft Recommended Highway Plan
- December, 2019—KYTC Delivers Draft Recommended Highway Plan to Governor

#### **Project Selection Criteria/Methodology**

The Barren River, Lincoln Trail and Lake Cumberland ADD along with the Elizabethtown/Radcliff MPO each had their sponsorship meetings prior to the District Office. Most of the top projects were selected at these meetings. The District meeting held on March 13<sup>th</sup>, 2019

consisted of all Branch Managers, Planning staff and the CDE. It was decided that District 4 would sponsor the maximum number of projects (52) because our total number of boosts would be based on how many we sponsored (25% of the total sponsored). Some of these were projects that were discussed at the ADD or MPO meetings and the District agreed to sponsor them. Others were simply projects we added so we could get our maximum boosts.

### **Project Boost Criteria/Methodology**

District 4 had the opportunity to boost 25% of the total number of sponsored projects in the District 4 counties of the South Region. The District and ADDs/MPO sponsored 107 total projects so we were able to boost 27 of those projects. We applied 15 points to these projects based on the following criteria:

1. Do local officials and/or residents have concerns about safety in the project area?
2. Is there support for the project from multiple local agencies such as local officials, ADDs/MPO and the Highway District Office?
3. Was the project identified as a result of a Scoping or Planning Study?
4. Does the project have a phase that is active or has been completed?
5. Is significant growth occurring or anticipated along this route?
6. Is the project on a regionally significant corridor that will enhance connectivity between county seats and/or to interstates or parkways?

### **Public Involvement/Feedback**

The sponsored and boosted projects for District 4 were made available for review by the public on the District's Facebook Page and Website.

### **Conclusion**

District 4 worked closely with the ADDs and MPO to ensure that the most significant projects were sponsored and also received a "Turbo Boost". This collaborative effort proved to be beneficial especially for those projects with lower than expected quantitative scores.

# KYTC Highway District 5



## SHIFT 2020 Prioritization Plan

Final

August 23, 2019

Prepared by: Tom Hall

### Introduction/Overview

The Strategic Highway Investment Formula for Tomorrow (SHIFT) Prioritization Process was a data-driven, objective, and collaborative approach to identify the most appropriate projects for the Kentucky Transportation Cabinet (KYTC) Recommended Six-Year Highway Plan (SYP). This document describes the KYTC Highway District Office (HDO) 5 plan and methodology for Sponsoring and applying Priority Points to projects in the 2020 SHIFT process.

### Timeline

The timeline below summarizes the HDO's role in the overall process of KYTC delivering a Draft Recommended SYP to the Governor in December.

<b>2/2019</b>	<b>Local Officials Meetings</b>
<b>3/4/2019</b>	<b>District 5 County Ranking Meetings</b>
<b>3/7/2019</b>	<b>District 5 Sponsorship Meeting</b>
<b>3/15/2019</b>	<b>District 5 Projects Sponsored</b>
<b>3/18/2019 – 5/31/2019</b>	<b>Data Verification</b>
<b>6/3/2019 – 6/7/2019</b>	<b>Statewide Scoring Available</b>
<b>6/10/2019 – 6/18/2019</b>	<b>Statewide Project Identification (Central Office)</b>
<b>6/24/19 – 8/14/19</b>	<b>Regional Projects Priority Point Allocation and Submittal</b>
<b>8/22 – 8/30</b>	<b>Regional Summits</b>
<b>9/9/2019 – 9/13/2019</b>	<b>Finalize and Submit Selected Projects (Central Office)</b>
<b>11/18/2019 – 12/27/2019</b>	<b>Draft Recommended SYP Delivered to Governor</b>

## **Project Selection Criteria/Methodology**

The KYTC Central Office (CO) Division of Planning generated a master list of KYTC Continuous Highway Analysis Framework (CHAF) Projects which included Active Six-Year Highway Plan Projects for each of the eight counties in District 5 that were reviewed and ranked.

HDO Planning Staff then attended Local Officials Meetings in the urban and rural counties and the master list of CHAF Projects along with SYP Projects were often ranked by the counties. The addition of new projects and revisions to existing projects occurred at these meetings.

HDO 5 also requested input from legislators through an email on February 14, 2019 to ensure that the top priorities for transportation needs in their areas would be considered in the Recommended Six-Year Highway Plan development process. The HDO verified that the projects of interest submitted by the legislators were included in the consideration process.

County Ranking meetings for the projects were then held at the HDO for individual counties on March 4, 2019. These meetings included: the Chief District Engineer, the Project Development Branch Manager, the branch managers for Project Delivery and Preservation; the Design Section Supervisor, maintenance personnel from each county as well as the HDO 5 Planning Staff, Right-of-Way Staff, Utilities Staff, and the District Environmental Coordinator. Representatives from the Kentuckiana Regional Planning and Development Metropolitan Planning Organization (KIPDA MPO), and the KIPDA Area Development District (ADD) also attended these meetings. The projects from each county were first given a high priority, medium priority, or low priority designation to easily identify the projects of a higher priority for further analysis. Those projects with a higher priority were then numerically ranked as an indicator for future sponsorship and prioritization.

A second meeting on March 7, 2019, included all of the personnel listed above with the exception of the maintenance personnel, created a list of sponsored projects from each county by the HDO to continue through the SHIFT methodology. The HDO County rankings and Local Elected Official county rankings were valuable in determining which projects received sponsorship, and were able to move forward through the SHIFT methodology and possible funding in the Six-Year Highway Plan (SYP).

Projects not selected to be programmed for funding by the KYTC Leadership in the Statewide scoring were then returned to the HDO with a quantitative numerical Regional score. These projects were then reviewed for Priority “Boost” Points as described below.

## **Project Boost Criteria/Methodology**

The HDO held a Boost meeting at the District 5 Office on July 15, 2019. The attendees included: the Chief District Engineer, the Project Development Branch Manager, the Design Section Supervisor, as well as the District 5 Planning Staff, Right of Way Staff, the District Environmental Coordinator, and Central Office Planning and Design Staff. KIPDA MPO and ADD representatives Larry Chaney and Randall Embry and staff along with Bluegrass ADD (BGADD) representative Natalie Flores-Esquivel also attended the meeting. Qualitative considerations that were a part of the HDO boost methodology included:

- Projects having an imminent letting date.
- Projects with authorizations and possible expenditures on Design, Right-of-Way, or Utilities that needed funding for future phases.
- Known priority projects for the KYTC Leadership.
- Projects that have a major impact on safety.
- Projects that have a major impact on congestion.
- Highly valued economic development projects.
- Maintenance projects too large for the maintenance budget – Asset Management.
- Discussion with the MPO and the ADD for overlapping boost projects.
- Projects that balanced the rural and urban counties.

The ability to partner between the HDO and the KIPDA MPO, or the HDO and KIPDA ADD and BGADD by adding the 15 boost points together for 30 total boost points showed an even stronger support for a project across agencies. Communication with those partners on the Regionally scored projects was an important part of the plan.

The KYTC HDO is a voting member of the KIPDA Transportation Technical Coordinating Committee (TTCC) and the KIPDA Transportation Policy Committee (TPC), and was included in the priority points meetings and discussion of the 25% of projects that received the 15 point boosts by the MPO. Potential overlapping priority projects were identified at that meeting.

The KYTC HDO attended the Regional Transportation Council (RTC) meetings for the KIPDA ADD on July 25, 2019, and the BGADD on August 12, 2019, and was part of the discussion of the 25% of projects receiving the 15 priority point boost. Opportunity for cooperation on pairing boost points for a project occurred at those meetings.

The ultimate Regionally scored list of District 5 projects is to be shared with the KYTC District 6 and the KYTC District 7 at the Regional Prioritization Meeting on August 27, 2019. Projects selected at this meeting will be considered for the Recommended Highway Plan.

The following table summarizes sponsorships and boosts assigned to the District 5 area.

<b>Agency</b>	<b>Number of Counties in District 5</b>	<b>Number of Projects Sponsored</b>	<b>Boost Quota</b>
District 5	8	74	33
KIPDA ADD	4	22	10
Louisville MPO	3	54	21
Bluegrass ADD	1	7	2

### **Public Involvement and Elected Official/Stakeholder Feedback**

**February 14, 2019** – HDO 5 requested input from elected State Senators and State Representatives on their top priorities for transportation needs through an email.

Responses were received from the following discussing their high priority projects in each area:

- Representative Lisa Willner email, March 5, 2019
- Representative Maria Sorolis email March 7, 2019
- Representative James A Tipton email, March 24, 2019
- Representative Jerry Miller meeting at HDO, July 3, 2019

Meetings with elected officials, stakeholders, and other agencies are summarized below.

**February 1, 2019** – HDO Planning Supervisor Tom Hall attended a meeting at the Hillview City Hall with Bullitt County elected officials including; County Judge Executive Jerry Summers, Hillview Mayor James Eadens, Lebanon Junction Mayor Larry Dangerfield, Mount Washington Mayor Barry Armstrong, and Shepherdsville Mayor Curtis Hockenbury. Subsequently, the HDO received a Bullitt County Fiscal Court Resolution listing 5 priority projects in their area.

**February 12, 2019** – HDO Planning Supervisor Tom Hall attended the Spencer County Local Meeting at the Spencer County Courthouse scheduled by the KIPDA ADD to discuss and rank at the local level the Spencer County projects. Attendees included Spencer County Judge Executive John Riley, Spencer County Road Supervisor Todd Burch, and KIPDA ADD representatives Larry Chaney and Randall Embry.

**February 13, 2019** – HDO Planning Supervisor Tom Hall attended the Shelby County Local Meeting at the Shelby County Courthouse scheduled by the KIPDA ADD to discuss and locally rank Shelby County projects. Participants included; Spencer County Judge Executive Dan Ison, Spencer County Road Supervisor Craig Myatt, Shelbyville Mayor David Eaton, KYTC Maintenance Staff Chris Slone and Scott Tipton, and KIPDA ADD representatives Larry Chaney and Randall Embry.



**February 21, 2019** – HDO Planning Supervisor Tom Hall attended the Trimble County Local Meeting at the Trimble County Courthouse to review and locally rank the Trimble County projects. Included in the meeting were; the Trimble County Judge Executive Todd Pollock, Trimble County Road Supervisor Mike Stewart, KYTC Maintenance Staff Chris Slone, and KIPDA ADD representatives Larry Chaney and Randall Embry.

**February 22, 2019** – HDO Planning Supervisor Tom Hall attended the Henry County Local Meeting at the Henry County Courthouse to discuss and locally rank the Henry County projects. This meeting was attended by; Henry County Judge Executive John Logan Brent, KYTC Maintenance Staff Chris Slone, and KIPDA ADD representatives Larry Chaney and Randall Embry.

**March 1, 2019** – HDO Planning Supervisor Tom Hall attended the Franklin County Local Meeting at the Franklin County Judge Executive's Office in Frankfort. Franklin county projects were locally ranked by the Franklin County Judge Executive Huston Wells and the Director of Planning and Zoning Robert Hewitt.

**March 9, 2019** – HDO Planning Supervisor Tom Hall attended a second meeting at the Bullitt County Courthouse with County Judge Executive Jerry Summers to discuss SHIFT project priorities.

**April 10, 2019** – During the sponsorship process the HDO was engaged in the Middletown to Simpsonville Needs Analysis Study which addressed the rapidly growing area of the east end of Jefferson County and the west end of Shelby and Oldham Counties. The study assisted the HDO and other elected officials in the sponsorship process decision-making. A meeting was held on April, 10, 2019 at the HDO with the following local elected officials; State Representative Jerry Miller, Louisville Metro Councilman Anthony Piagentini, Louisville Metro Councilman Stewart Benson, Eastwood Village Council Chairman Bob Federico, Fisherville Area Neighborhood Association (FANA) Board Chairman Harrell Hurst, and FANA Board Member Bert Stocker. During this meeting the local elected officials shared their project priorities in their represented areas.

**May 6, 2019** – HDO Planning Supervisor Tom Hall attended a meeting with State Representative Joe Graviss at the Capitol Annex. This meeting was to discuss possible solutions and funding on 5-8902.00 IMPROVE DRAINAGE ALONG SLICKWAY BRANCH BY EXPANDING WATER SHED BASIN AT JIM BEAM DISTRIBUTION CENTER ON US 421S TO IMPROVE DRAINAGE ISSUES ON COUNTRY LANE (2016 Six-Year Highway Plan). Other attendees at this meeting included; KYTC Deputy Secretary Paul Looney, KYTC Transportation Engineer Director Jill Asher, Transportation Engineer Director Ron Rigney, and Transportation Engineer Specialist Doug Gesso.

**July 16, 2019** – HDO Planning Supervisor Tom Hall attended a Transportation Technical Coordinating Committee Working Group meeting at the KIPDA office to establish KIPDA MPO project priorities and possible boosted projects to recommend to the Transportation Policy Committee. Participants at this meeting included; Executive Director of Planning for the Louisville Regional Airport Authority Brian Sinwell, University of Louisville Co-Director of

Planning, Design and Construction John Stratton, Director of Oldham County Planning and Development Jim Urban, Director of Develop Louisville Jeff O'Brien, KYTC Transportation Engineer Specialist Tonya Higdon , and KIPDA MPO Staff.

**July 23, 2019** – HDO Planning Supervisor Tom Hall scheduled a meeting at the HDO Office with Oldham County to update and discuss SHIFT 2020 priority projects. Participants in this meeting included: HDO Project Managers Chuck Berger, Russell Whatley, Carl Jenkins, Adam Ulrich and Judi Hickerson; HDO Project Development Branch Manager Tracy Lovell, Right-of-Way Supervisor Tom Boykin and Belinda Dimas with Oldham County,

**July 26, 2019** – HDO Planning Supervisor Tom Hall scheduled a meeting at the HDO Office with University of Louisville Co-Directors of Planning, Design and Construction John Stratton and Mike Materna to discuss 5-8804.00 D & C FOR MULTI-MODAL DIRECTIONAL NON-VEHICLE & VEHICLE SAFETY PROJ@UOFL BELKNAP.1ST YR TO INCLUDE CONST FUNDS FOR ROUNDABOUT@FLOYD ST & CARDINAL BLVD & INTERS@BRANDEIS & ARTHUR ST. and 5-3218.00 University of Louisville Pedestrian Pathway Improvements, and other Highway Plan funded projects.

The HDO shared the KYTC Highway District 5 SHIFT 2020 Prioritization Plan with the public by placing the District 5 "SHIFT 2020 Prioritization Plan" on the KYTC District 5 Website for public review and comment for 21 calendar days. A hardcopy of the District 5 "SHIFT 2020 Prioritization Plan" was also placed in the District 5 reception area for public viewing and feedback for 21 calendar days.

## **Conclusion**

The KYTC District 5 SHIFT 2020 Prioritization Plan brought together the data-driven, quantitative aspect of project selection as well as the qualitative aspect of each project. The qualitative aspect was achieved through detailed discussion during many meetings which moved projects forward for potential Six-Year Plan Funding. Invaluable insight for the qualitative portion was received from personnel across the board including HDO maintenance, HDO Staff and Subject Matter Experts, the MPO and ADD Agencies, and Local Elected Officials.

The goal of the methodology was to create and finalize a collaborative balanced list of HDO 5 priority projects that brought together the numerical data and the insight from people in the region familiar with the individual stories of each project.

## KYTC Highway District 6



### SHIFT 2020 Prioritization Plan

Final

August 21, 2019

Prepared by: Nikki Hill

#### Introduction/Overview

The Strategic Highway Investment Formula for Tomorrow (SHIFT) Prioritization Process is a comprehensive data-driven process to evaluate and identify the most optimal projects to be advanced to the Kentucky Transportation Cabinet (KYTC) Recommended Six-Year Highway Plan (SYP). The approach to the process is objective and collaborative, including outreach to elected officials and regional planning partners. The process calculates technical scores where projects with the highest scores get submitted to the Kentucky General Assembly for consideration of funding. SHIFT was developed in 2016 and implemented in 2017 for the development of the 2018 Recommended Plan. The calendar year 2019 is the Cabinet's second cycle of implementing the SHIFT process. Refinements to the formulas occurred during 2018 in preparation for the current cycle.

The process initiated with engagement between highway district offices meeting with elected officials (members of the General Assembly, county judges, etc.), and regional planning partners. The discussions focused primarily on the following needs: safety, congestion, economic development, and maintenance. The discussions included updates on projects in design or in construction. A part of the discussions was an assessment of how the communities' needs have changed since previous discussions. For example, in Boone County, Amazon is building an Air Hub which will generate more traffic on state routes and cause project priorities to change. Attendees were given the opportunity to propose new prospective projects; however, none were proposed.

Following these meetings, the District coordinated with the regional planning partners to refine scope. At Highway District Office (HDO) 6, the regional planning partners requested the HDO

identify the projects to sponsor and they subsequently sponsored other projects. Therefore, the HDO met internally to determine which projects to sponsor. District planning engineers attended the regional planning partners' meeting in an advisory capacity only. Their respective transportation members selected the projects that each regional planning partner sponsored.

After the sponsorship phase, the HDO and regional planning partners refined scope, purpose and need, costs, and anticipated fiscal years. All data was submitted to KYTC Central Office for calculation of the technical scores.

There are two categories for projects: "statewide" and "regional". The statewide projects are recognized as having importance for the entirety of the state, are on the National Highway System, and include interstates and major arterials. The statewide projects advance solely on the value of the technical score and the overall amount of funds allocated to these project types. In SHIFT 2020, HDO 6 has six projects on the statewide list. All other highway projects are considered "regional" and can include "statewide" projects that received a lower technical statewide score.

The state is divided into four regions and the regional projects "compete" within their respective region. Regional projects received both a technical score and, potentially, a "boost". Because there is a qualitative nature to projects which the technical scores are unable to assess, the districts and their regional planning partners are provided with a limited number of projects which can be boosted. These boosts allow certain projects to better compete within their region. Largely, projects with the highest scores in the statewide and regional categories become the basis of the KYTC Recommended Plan.

For the most part, bridge projects and maintenance projects are eliminated from the SHIFT process. In addition, mega-projects such as the Brent Spence Bridge Replacement are also excluded. In the case of the Brent Spence Bridge, due to high costs, special legislative measures are necessary to finance.

HDO 6 is comprised of eleven counties: Boone, Bracken, Campbell, Carroll, Gallatin, Grant, Harrison, Kenton, Owen, Pendleton, and Robertson. Regional planning partners include the Ohio-Kentucky-Indiana (OKI) Regional Council of Governments, which serves as the Metropolitan Planning Organization (MPO) for the region and three Area Development Districts (ADDs): Buffalo Trace, Northern Kentucky and Bluegrass. OKI covers the three urban counties of Boone, Kenton and Campbell.

## Timeline

- January – February 2019: Project Sponsorship
- Spring 2019: Data (Scope, Costs) Verification
- Early Summer 2019: Statewide Prioritization
- Late Summer 2019: Regional Prioritization
- Fall 2019: Recommended State Highway Plan Development

## Project Selection Criteria/Methodology

HDO 6 began this second cycle of SHIFT by evaluating the status of projects that were legislated in the 2018 Enacted Highway Plan. Once a project has reached the Recommended Plan or Enacted Plan, the Cabinet is “committed” to delivering on the promise of the project; therefore, projects identified as committed were excluded from the SHIFT process. Funds are to be set aside for these projects to continue to advance. Central Office designated the following parameters as being “committed”:

- Were in the Recommended Highway Plan (body of document, not the appendix)
- Have either right-of-way (R), utilities (U), or construction (C) funds programmed in the biennium (2018-2020) of the Enacted Plan or only C programmed in 2021-2024 of the Enacted Plan (and no other phase in the Plan)
- Have consistent scope with what was proposed in 2018 (i.e., costs are within 5% and any R programmed in the biennium is on schedule for funding authorization within the biennium.)

For this cycle, the District sponsored projects that were in either the Recommended or Enacted Plans but did not qualify as “committed”. In essence, the District made its own respective commitment to continue to advance previously well-considered projects. From there, the District evaluated potential projects based on discussion at the January-February meetings with the elected officials, regional planning partners and internal district staff. The following is a list of considerations on types of projects that were considered for sponsorship:

- Projects with previous investment into the design, right-of-way and/or utility phases
- Projects ready for construction
- Projects in the STIP / TIP
- Projects within a larger corridor project; completes a corridor improvement (continuity)
- Projects in a local or regional comprehensive plan
- Projects with economic development potential
- Projects identified from recently completed or advanced Planning Studies

- Projects with safety issues (e.g., safety issues not fully captured by police reports)
- Projects addressing congestion
- Projects with public support
- Projects addressing multi-District needs
- Projects associated with the Long Range Statewide Transportation Plan

### **Project Boost Criteria/Methodology**

The HDO evaluated the quantitative scores from all district-related projects sponsored by the HDO, the ADDs, and OKI to establish an “overall” district priority. The HDO had 27 boosts that it allocated based on SHIFT score and other subjective information. The list was sent to the ADDs and OKI who scheduled committee meetings to determine where their boosts would be allocated. The HDO attended these meetings in an advisory capacity. These meetings yielded 3 single-boosted projects and 25 double-boosted projects.

### **Public Involvement/Feedback**

The day-to-day operations of ADDs and MPOs include defined mechanisms for public outreach. Further, their members are leaders in their respective communities, bringing in public comment from their agencies. SHIFT establishes multiple points in the process to engage with each other and the HDOs; most notably at the January-February outreach meetings, sponsorship meetings, and regional boost meetings.

The District relied on the ADDs, OKI, and their committee members to disseminate information to interested parties and to give opportunities for said parties to provide input.

## KYTC Highway District 7



### SHIFT 2020 Prioritization Plan

Final

August 21, 2019

Prepared by: Casey Smith

KYTC Highway District Office (HDO) 7, a 12-county highway district, collaborated with its regional transportation partners, Lexington Metropolitan Planning Organization (MPO), Bluegrass Area Development District (ADD) & Gateway ADD, during the 2020 Strategic Highway Investment Formula for Tomorrow (SHIFT) scoring process, which offers a comprehensive evaluation of projects based on quantitative data. Additionally, there are qualitative elements that affect the decision-making process, influencing project sponsorship (selecting a subset of desired projects from the entire Continuous Highway Analysis Framework (CHAF) database), ranking, and boosting (adding points to the quantitative score of a subset of the sponsored list). HDO 7 used qualitative data to make decisions about which projects to sponsor, how to rank them (independent of score), and the determination on which projects with lower scores were boosted over those with higher scores. HDO 7 qualitative project prioritization criteria included:

- Projects ready for Construction, with prior Design, Right-of-Way, or Utilities phase investment or in STIP/TIP;
- Improving capacity, safety, mobility or connectivity;
- Public interest, economic development or civic infrastructure;
- Regional or local comprehensive plan significance or benefit;
- Local input and HDO 7 leadership guidance;
- HDO 7 Rank, SHIFT quantitative score or fiscal practicability.

Based on the above criteria, the HDO 7 prioritization process:

- Compiled a list of sponsored projects based on local County Judge Executive (CJE), regional (MPO/ADDs) & District 7 input;
- Ranked all sponsored projects, independent of SHIFT quantitative scores;
- Collaborated with MPO/ADDs to strategically assign qualitative boosts to prioritized projects;
- Communicated with KYTC & MPO/ADDs of all SHIFT decisions, allowing them to serve as conduits for information release & public review.
- Budgeted select projects based on 2 funding scenarios (*NEW*):
  - A 10-year unconstrained list
  - A 6-year program budgeted under expected revenues provided

The HDO 7 SHIFT project prioritization timeline:

- January 2019: HDO 7 review of all district CHAF projects & selection of preferred projects to sponsor;
- January - February: HDO 7 ranked sponsor list; met with 28 of our 30 state legislators to review active CHAF projects in their Congressional District & get project-specific & general feedback regarding SHIFT;
- March: CJE review, with regional transportation authority (MPO/ADDs) participation, of all county CHAF projects with selection & ranking of preferred projects to sponsor;
- March: Every project desired by locals (CJE/MPO/ADDs) or HDO 7 was sponsored through collaboration, reconciliation & sharing of sponsorship slots;
- March-May: Data verification;
- June: Discussed with KYTC statewide (NHS) SHIFT scores with project funding, schedules & federal eligibility;
- July - August: Met with locals (MPO/ADDs/CJEs) to determine boosting of regional SHIFT scores; boosts officially confirmed at publicly held local transportation committee meetings (MPO: July 31; BGADD: August 12; GWADD: August 9); HDO 7 official boosts submitted on August 12.
- August: Regional summit to discuss final prioritization & budgets (with fiscal years) for select projects based on the aforementioned funding scenarios.

The final prioritization product for HDO 7 resulted in a sponsorship list of 138 projects, of which eight were selected for consideration for statewide funding for being NHS projects of statewide significance. Of the remaining 130 projects, 32 projects were boosted with 32 of them as double-boost. The budgeting phase used further qualitative analysis, dropping 14 boosted projects from current Recommended Highway Plan consideration; there are no un-boosted projects that were added in the two budgeting scenarios.



# KYTC Highway District Eight



## SHIFT 2020 Prioritization Plan

**Final**

**August 21, 2019**

**Prepared by: Jeff Dick**

### **Introduction/Overview**

The purpose of this document is to provide the Kentucky Transportation Cabinet (KYTC) Highway District Office (HDO) 8's plan for the SHIFT 2020 prioritization process to KYTC Central Office (CO). The SHIFT process is a data-driven process to help prioritize transportation projects and create a more balanced State Highway Plan. This prioritization process will be used as input for the Recommended Six Year Highway Plan that will be submitted during the Kentucky General Assembly in 2020.

KYTC has implemented a more data driven and collaborative approach than in past years, to determine priorities for funding future projects. The SHIFT formula, focuses on the factors of safety, asset management, congestion, economic growth and benefit/cost. These factors were used to create quantitative data scores.

### **Timeline**

Major dates are as follows:

- January 3 - Began SHIFT 2020 review with the HDO 8 Team
- January 22 to February 21 - Met with Legislators, Judge Executives and Mayors to discuss local projects
- February 20 to March 7 – Attended Area Development District (ADD) Regional Transportation Committee meeting to discuss local meetings and assisted in the project sponsorship process.
- March 15 - Submitted sponsored projects into the Continuous Highway Analysis Framework (CHAF) database
- March 26, 29 - Discussed projects with KYTC CO by conference call for modeling purposes
- April 17 - Attended KYTC Statewide Planners Meeting to discuss prioritization

- May 7 - Submitted Preliminary Draft Prioritization Plan to KYTC CO
- May 27 to May 31 - Reviewed data for projects
- June 10 to June 14 - Met with CO to discuss schedules, federal eligibility for statewide projects, and projected available funding
- June 24 - SHIFT 2020 project scores were released
- June 24 to August 14 – Regional Boost Period - Determined which 25% of the sponsored projects would receive the ADD and HDO Boost
- August 1 - HDO 8 personnel attended the Lake Cumberland ADD Transportation Committee meeting as a resource of information about project details for their Boost of projects.
- August 12 - HDO 8 personnel attended the Bluegrass ADD Transportation Committee meeting as a resource of information about project details for their Boost of projects.
- August 14 - HDO 8 personnel attended the Cumberland Valley ADD Transportation Committee meeting as a resource of information about project details for their Boost of projects.
- August 14 – HDO 8 Boosted 25% their sponsored projects
- August 15 to August 21 - HDO personnel prepared for Regional Summits
- August 21 - Submitted Final HDO Priorities Plan
- August 28 - HDO 8 personnel will conduct Regional Summits at Central Office, with HDO 4 & HDO 11, as well CO personnel.

### **Project Selection Criteria/Methodology**

In order for projects to move forward in the SHIFT process, they must be selected from those active in the CHAF database to be scored. HDO 8 was given 45 project sponsorship allotments for this purpose. These projects were decided on based on the following criteria:

- Local input received from HDO Leadership, County Judge Executives, Mayors, and Legislators
- How the project supports regional connectivity, economic impact, and safety
- Stage of project development (Design, Right-of-Way, or Utilities)

### **Project Boost Criteria/Methodology**

HDO 8 used the opportunity to boost 25% of the total number of regional projects, which was 21 projects. We have applied 15 points to these projects based on the following criteria:

- Did local officials and/or residents have concerns about safety in the project area?
- Was there support for the project from multiple local agencies such as local officials and ADDs?

- Did the project have a phase (Design, Right-of-Way, or Utilities) that is active or has been completed?
- Is substantial growth (tourism, economic, residential, etc.) occurring or anticipated along this route?
- Is the project on a regionally significant corridor that will enhance connectivity between traffic generators, such as: county seats, industry, and tourism with our State Primary Road System including interstates or parkways?
- Is this an area where congestion or Level of Service could be improved?

Immediately upon the regional scores being available, the HDO Team met internally to assign boost points to probable projects. The HDO Team consisted of the Chief District Engineer, Project Development Branch Manager, Project Delivery and Preservation Branch Managers from Branches I and II, Engineering Support Branch Manager and Planning Engineer. The projects were selected based on the criteria cited above and boost points were applied.

### **Public Involvement/Feedback**

Public involvement was included throughout the SHIFT 2020 prioritization process. The HDO 8 Team consulted with others including, HDO 8 staff, elected officials (Judge Executives, Mayors, and Legislators) and the Regional Transportation Committees to petition public input. The ADDs scheduled meetings with each of the County Judge Executives and available Mayors and Legislators, in which the HDO 8 Team attended as well. The HDO 8 Chief District Engineer scheduled meetings with Legislators and was able to meet with the majority to discuss their concerns, inform them of HDO 8's projects and answer any questions they had. The input gathered during these meeting were used during the process of sponsorship, selection criteria and Boost selection.

### **Conclusion**

The SHIFT 2020 prioritization process has demonstrated to be a successful process in terms of providing accurate project scores based on the data driven needs, which assist HDO 8 Team's ability to consider local and community transportation concerns from a regional viewpoint. This process reflects the HDO needs with respect to goals and objectives, as well as offering input from several sources including: HDO staff, local officials, legislators, and regional transportation committees. Gathering this information from these regional resources gives the HDO the ability to make well-informed decisions about supporting projects within the region of HDO 8.

## **KYTC Highway District 9**



### **SHIFT 2020 Prioritization Plan**

**Final**

**August 27, 2019**

**Prepared by: Joe Callahan**

#### **Introduction**

While the 2018 Highway Plan was in the process of being enacted, the prioritization process for the 2020 Highway Plan was well underway with the Strategic Highway Investment Formula for Tomorrow (SHIFT) 2020. As with any problem-solving process, SHIFT 2018 was monitored and evaluated for improvement. Feedback was gathered from local officials, fellow Kentucky Transportation Cabinet (KYTC) employees and the public to provide an opportunity for those of various perspectives to offer input for process improvement. At the Highway District Office (HDO) level, discussions of the process took place at Area Development District (ADD), Metropolitan Planning Organization (MPO) and HDO meetings. At the statewide level, KYTC leadership also worked with ADDs/MPOs and KYTC personnel; the Kentucky Transportation Center (KTC) at the University of Kentucky also assisted with refining the scoring metrics and prioritization process. KYTC also consulted an advisory group to solicit feedback on SHIFT and to provide recommendations for educating local leaders and citizens on the process.

This “refinement” process has resulted in relatively minor changes of the SHIFT 2020 process with respect to the previous iteration, with the goal being to have a better comprehensive prioritization process. Although the SHIFT 2020 prioritization process has undergone some changes since SHIFT 2018, KYTC’s mission and HDO 9’s goals and objectives remain unchanged.

For background, the model KYTC developed for the 2017 prioritization process was named SHIFT, an acronym for Strategic Highway Investment Formula for Tomorrow. SHIFT was developed to bring balance and dependability to Kentucky’s highway plan, which had generally become an over-programmed list of projects. The SHIFT process uses quantitative data such as

crash history, traffic congestion, roadway geometry, cost-benefit ratio and economic impact to assist in developing and prioritizing roadway projects in our state. Scoring formulae have been developed (and refined) and will utilize the aforementioned data to obtain project scores for assisting in the identification of project needs.

## **Committed Projects**

Projects that were well along in development by project prioritization time were considered for the “committed” project list. “Committed” projects are those that:

1. Were in the previous Recommended Highway Plan (body, not the appendix);
2. Have either Right-of-Way (R), Utilities (U), or Construction (C) programmed in the biennium (2018-2020) of the Enacted Highway Plan or only C programmed in 2021-2024 of the Enacted Plan (and no other phase in the Enacted Highway Plan);
3. Have consistent scope with what was proposed in 2018 (i.e., costs are within 5% and any R programmed in the biennium is on schedule for funding authorization within the biennium).

Those projects meeting the criteria for “committed” were not subject to the SHIFT process. However, we were advised that if there was any doubt about a project being “committed”, we should go ahead and consider sponsoring and boosting to ensure its being considered for the next Recommended Highway Plan.

HDO 9 ended up having four “committed” projects: 1) 9-8400, US 60 from I-64 at Coalton to KY 180 in Cannonsburg, 2) 9-397, KY 67 (Industrial Parkway) widening, 3) 9-144, KY 7 Carol Malone Blvd. widening, and 4) 9-62, I-64 WB off-ramp widening at KY 1 in Grayson. All four of these projects were removed from the list of potential projects to consider for SHIFT.

## **Project Sponsorship**

In March of 2019, HDOs, ADDs and MPOs were directed to review the current KYTC Highway Plan and the Continuous Highway Analysis Framework (CHAF) projects database to select, or sponsor, projects that those organizations felt were worthy of further funding consideration. Currently there are approximately 4,000 projects included in the Highway Plan and the CHAF. The CHAF projects list had previously been stored in the state’s Project Identification Form (PIF) application. However, in 2018 KYTC migrated projects from PIF to the new project data storage application called CHAF. CHAF is more conducive to the SHIFT process in that it contains data spatially linked to KYTC’s Highway Information System (HIS) that can be directly used in the SHIFT scoring process. It is worth mentioning that some PIF projects were eliminated during the initial population of the CHAF application if those projects had no activity for a long period of time.

As in 2017, it was requested that the total project list be reduced from the large number of projects to a more manageable list of around 1,200. This reduction in total projects helps in the resource-intensive nature of the scoring process.

Utilizing a formula that takes into account number of counties represented, population and lane miles, each HDO, ADD and MPO was assigned a number of sponsorships to represent their selection of projects. The following is a summary of the number of sponsorships assigned to the District 9 area:

1. HDO 9 — 40
2. Bluegrass ADD (Nicholas and 14 other non-D9 counties) — 67
3. Buffalo Trace ADD (Fleming, Mason, Lewis and two other non-D9 counties) — 16
4. FIVCO ADD (Carter, Elliott and one other non-D9 county) — 16
5. Gateway ADD (Bath, Rowan and three other non-D9 counties) — 18
6. KYOVA MPO (Boyd and Greenup) — 10

For the sponsorship portion of SHIFT, HDO 9 chose to sponsor their projects first. This decision was a change from two years ago when the HDO allowed the ADDs and MPO to sponsor first to give local officials an opportunity to express support for any of the CHAF projects. However, HDOs adjacent to HDO 9 sponsored projects prior to the ADDs and MPOs and the local officials asked HDO 9 to follow suit for consistency's sake. (However, only the Buffalo Trace ADD ended up waiting on the HDO before making their sponsorships known. The other ADDs and KYOVA MPO had already selected their sponsorships.)

On March 6<sup>th</sup>, the HDO 9 prioritization committee (Chief District Engineer, Transportation Engineering Branch Manager (TEBM) Project Development, and District Planning employees) met to select the District's 40 projects to sponsor. Input from Section engineers and the TEBMs of the Project Development and Preservation branches were taken into consideration during this phase.

Although there was no requirement to utilize all sponsorships, all ADDs, the MPO and the HDO in the HDO 9 area used every sponsorship in order to obtain project scores to guide priorities.

At the end of the sponsorship phase, HDO 9 counties had 82 total projects sponsored (including sponsorships from ADDs and KYOVA MPO).

### **Sponsored Project Data, Estimate and Schedule Verification**

This phase of the SHIFT process ended on May 31, 2019 and allowed the HDOs, ADDs and MPOs to review project data (project descriptions, milepoints, project types, etc.), phase cost estimates and phase schedules. The scoring process is only as good as the data that represents

each of the projects and this was the phase where the data was reviewed and corrections were made as needed.

## **Statewide Scoring**

The next phase of the SHIFT process began with Central Office implementation of the scoring routine. Once the scoring was complete, the list of 1,200 sponsored projects was reviewed by a KYTC Central Office committee to determine projects eligible for the Statewide scoring phase of SHIFT. Eligibility depended upon National Highway System (NHS) designation (required) and the project's importance from a statewide (vs. regional) perspective. Any projects selected for Statewide eligibility at this point would be removed from the project list and would not be included in Phase 2, Regional SHIFT scoring.

The Statewide scores were distributed to the HDOs in early June. For HDO 9, the highest-scoring Statewide project was ranked 110 out of 258 projects scored statewide. That was expected given the low number of NHS routes in District 9 and the relatively low ADTs we have in our rural district.

A "Statewide Prioritization Meeting" was scheduled for June 7<sup>th</sup> to discuss Statewide and Committed projects and associated scopes, schedules and budgets. Those in attendance from District 9 were: Chief District Engineer, TEBM Project Development, District Environmental Coordinator and District Planning staff.

## **Regional Scoring**

Upon completion of the Statewide scoring process, remaining projects that weren't selected at that time were to be scored (scheduled for June 18, 2019) and were to be forwarded to the HDOs, ADDs and MPOs for ranking. HDO 9 did not have any projects qualify as "Statewide"; so, all 82 sponsored projects were on the list for advancement in the SHIFT process. At this time, HDOs, ADDs and MPOs were given the opportunity to distribute "boost" points to the scores of the projects they felt most strongly about. A "boost" is worth 15% (15 points since the total possible score was 100) of the total project score. The options are to either give a project a full 15 point "boost" or nothing at all—partial "boosts" were not an option. Each planning entity (HDO, ADD or MPO) received a number of "boosts" equal to 25 percent of total projects on their Regional list in their particular area. For instance, HDO 9 had 82 total regional projects in their 10-county area, which translated to 21 "boosts" (rounding up for fractional values). The "boosts" assignments were as follows:

1. HDO 9 — 21
2. Bluegrass ADD (Nicholas and 14 other non-HDO 9 counties) — 28
3. Buffalo Trace ADD (Fleming, Mason, Lewis and two other non-HDO 9 counties) — 10
4. FIVCO ADD (Carter, Elliott and one other non-HDO 9 county) — 7
5. Gateway ADD (Bath, Rowan and three other non-HDO 9 counties) — 9

## **District Prioritization**

The scoring algorithm has allowances for two combined “boosts” (“turbo boost”)—one from the HDO and another from either the ADD or MPO. Therefore, a project’s score could be “boosted” by 30 points if both agencies decide to use one of their boosts for the same project. In HDO 9, discussions with the ADDs and MPO provided the opportunity to concentrate our efforts to sponsor projects that are important for both agencies. The HDO 9 Prioritization Committee also considered calculated project scores, district goals and objectives, and legislative input in determining the use of their allotted “boosts”.

## **HDO Project “Boosting”**

The HDO 9 Prioritization Committee met on July 11<sup>th</sup> to decide which projects to “boost”. The HDO chose to “boost” projects prior to the ADDs and MPO “boosting”. The reason for this was to allow the ADD and MPO transportation committees to know which projects could be eligible for the “turbo boost”—i.e., “boosted twice”.

Factors considered in the “boost” selection process were:

- Project Score
- District Goals and Objectives
- Project has previous investment/commitment into the D, R and/or U phases
- Project is Ready for Construction
- Project is in the STIP/TIP
- Project is a Segment in a Larger Corridor Project (i.e., project completes a corridor improvement [continuity])
- Project is in a Local or Regional Comprehensive Plan
- Public Interest
- Legislative Support
- Safety (including safety issues not fully captured by crash data)
- Congestion
- Multi-District or Neighboring State Connectivity Need
- Economic Development
- Public Infrastructure (e.g., schools, universities, parks, airports)
- Project Costs’ Comparison
- Other



After the committee made its selections, the HDO provided the ADDs and MPO with the list of “boosted” projects for consideration in their processes.

## **ADD/MPO Processes**

After HDO “boosting” by the District 9 Prioritization Committee, the ADDs and MPO prepared to assign their “boosts”. At each ADD/MPO Transportation Committee meeting, District representation always included the HDO Planning section. The Chief District Engineer attended the FIVCO and Gateway ADD meetings as well. The HDO representatives were provided time to discuss the rationale for their “boosted” projects with the committees prior to making their selections.

Each ADD and MPO executed their process a little differently:

- The Bluegrass ADD met on August 12<sup>th</sup>. Their Transportation Planner provided a list of suggested “boost” assignments (taking local official input, district “boosts” and project scores into consideration) and the transportation committee approved it by vote.
- Buffalo Trace ADD Regional Transportation Committee met on August 9<sup>th</sup> and began discussion of their area’s list of projects (sorted by score) and assigned their “boosts” to the ten highest-scoring projects (after eliminating three projects that were included in other larger projects).
- FIVCO ADD met on July 15<sup>th</sup> and voted to “boost” the projects HDO 9 had already boosted (three projects in Carter and Elliott counties). HDO 12 (the other HDO in this ADD) had not yet assigned their “boosts”. The committee then began discussing the remainder of the projects in their area in order of score for allocating their remaining four boosts (they had a total of 7). By the end of the meeting, the committee approved (by a separate vote) the four remaining “boost” assignments: two projects in Lawrence County and one each in Carter and Elliott Counties.
- Gateway ADD met on August 9<sup>th</sup> and each county took a turn at choosing a project to “boost”. Since there are five counties in this ADD and only 9 “boosts” available, it became evident that one of the counties would only have one “boost” to use while the others would have two. Menifee County graciously gave up one of theirs and the remaining four counties were allowed to choose two projects each to “boost”. For HDO 9, four projects were “turbo” boosted.
- KYOVA MPO met on August 1<sup>st</sup> and reviewed the projects HDO 9 had already “boosted” (four projects, which is the same number of “boosts” KYOVA received). They voted to “turbo boost” those same projects with little discussion.

Even though the processes varied somewhat from committee to committee, the end result provides an accurate representation of what the committees felt were the critical needs of their respective areas. The allowance for the varied processes serves as a testament to the flexibility of this phase of the SHIFT process.

## **Public Involvement**

HDO 9's participation in ADD and MPO meetings provided opportunities for public involvement, as all meetings are open to the public. Furthermore, the local officials who regularly attend ADD and MPO transportation committees serve as conduits for public concerns and opinions. The information gleaned from these sources was taken into consideration during the entire prioritization process.

## **Conclusion**

This cycle's prioritization process proved to be successful in terms of providing generally accurate project scores based upon a data-driven formula. For the most part, the project scores reflected the HDO's needs with respect to goals and objectives. And, it receives input from several different sources (residents, local officials, ADD/MPO committees, legislators, KYTC personnel, etc.) which identifies needs from a myriad of perspectives. And, the process provides enough flexibility to allow for justified overrides of project scores (although these were minimal) in the final rankings.

Although the SHIFT process was met with some resistance two years ago, the general opinion of the process has become more favorable as the end result becomes clearer and the end goal of the process is being realized.

## KYTC Highway District 10



### SHIFT 2020 Prioritization Plan

Final

August 19, 2019

Prepared by: Jason Blackburn, PE

#### Introduction/Overview

In 2017, KYTC developed a more data-driven, objective and collaborative approach to determine the state's transportation funding priorities. The Strategic Highway Investment Formula for Tomorrow (SHIFT) is a prioritization model that is intended to bring balance and dependability to Kentucky's previously over-programmed highway plan.

SHIFT uses quantitative data such as crashes, fatalities, traffic volumes, delays, and employment to assess proposed projects and compare them to each other.

The SHIFT 2020 prioritization process will be used as input for the Recommended Highway Plan, to be submitted to the next session of the Kentucky General Assembly in 2020.

This document is being prepared to document rationale and procedures that were used at the local highway district level in determining which projects were recommended for inclusion in the 2020 Recommended Kentucky Highway Plan.

#### Timeline

- Project Sponsorship completed – March 2019
- Project Boosting completed – August 2019
- Project Prioritization Completed – August 2019

#### Project Selection Criteria/Methodology

The Highway District Office (HDO) 10 Team used the same methodology that it successfully used during the 2018 Prioritization Process. It allowed the four Area Development Districts (ADDs) to choose what they thought were the most important projects within each ADD. The HDO 10 Prioritization Team reviewed those selections and then proceeded to select projects for sponsorship that would fill the few

remaining gaps to form a complete and rounded project pool that would help improve transportation throughout the District.

## **Project Boost Criteria/Methodology**

The HDO 10 Prioritization Team selected projects for boosting that it felt would help to provide a safe and reliable transportation system that delivers economic opportunity and enhances the quality of life for the citizens of Kentucky.

As an HDO Team, we met and reviewed the base scores that each project received and then applied the HDO Boost points based on the following criteria:

- Reviewing past project priorities
- Considering local input and community goals
- Employees knowledge about HDO 10 roadways
- Examining regional goals and connections
- Funding Maximization

## **Public Involvement/Feedback**

The typical avenue that HDO 10 utilizes to solicit public input throughout the prioritization process is through the Area Development Districts. The HDO attends at least 15 meetings each year involving the ADDs as well as several one-on-one meetings with local elected officials. The HDO also has active social media by which the general public notifies the HDO of issues throughout the District.

Throughout the year, HDO 10 speaks with citizens on a regular basis regarding current and potential future projects. It is via this “word of mouth” that the District keeps informed of the public’s desires for future transportation needs.

## **Conclusion**

As the SHIFT process continues to evolve, HDO 10 continues to strive to stay up to date with the latest information in order to make the best decisions regarding highway improvements. Project selection in SHIFT 2020 highlights HDO 10’s approach to combine data with local knowledge to select projects that continue to meet KYTC’s Mission.

The projects chosen to recommend for inclusion in the next Highway Plan provide a mix of large and small, as well as projects moving through all phases toward completion. HDO 10 takes pride in the work it has completed and looks forward to continued success in the future.

# KYTC Highway District 11



## SHIFT 2020 Prioritization Plan

Final

August 21, 2019

Prepared by: Quentin Smith

### Introduction/Overview

The purpose of this document is to describe KYTC Highway District Office (HDO) 11's SHIFT 2020 prioritization process. The SHIFT process is a collaborative, data-driven process to help prioritize transportation projects and create a more balanced State Highway Plan. The prioritization process will be used as input for the Recommended Six-Year Highway Plan, to be submitted during the next session of the Kentucky General Assembly in 2020.

The Kentucky Transportation Cabinet has recently developed a more data-driven, objective, and collaborative approach to determining the State's priorities for funding. The Strategic Highway Investment Formula for Tomorrow (SHIFT) is a prioritization model that aims to bring balance and dependability to Kentucky's previously over-programmed highway plan. The SHIFT formula, which uses quantitative data as well as input from state and local officials, focuses on these factors: safety, asset management, congestion, economic growth, and benefit/cost.

### Timeline

- January - Began SHIFT 2020 review with the HDO 11 Team
- January 25- Cumberland Valley Area Development District (CVADD) Meeting with KYTC HDOs 8 & 11 to discuss projects before meeting with local officials
- January 28 to February 21 - Met with Legislators, Judge Executives, and Mayors to discuss local projects
- February 20 and March 7 - Presented recommended sponsorship list to the CVADD and Kentucky River ADD (KRADD) Transportation Committees, respectively.
- March 15 - Submitted sponsored projects into the Continuous Highway Analysis Framework (CHAF) database
- March 29 - Discussed projects with KYTC Central Office (CO) by a conference call for modeling purposes
- May 7 - Submitted Preliminary Draft Prioritization Plan to KYTC CO

- May 27 to May 31 - Reviewed data for projects and signed off
- June 14 - Met with Central Office to discuss schedules, federal eligibility for statewide projects, and projected available funding
- June 24 - SHIFT 2020 project scores released
- June 24 to August 14 - Determined which 25% of projects within their area's Regional List will be selected to receive priority points
- August 15 to August 21 - HDO personnel prepare for Regional Summits
- August 21 - Submitted Final District Prioritization Plan
- August 22 to August 30 - HDO personnel conduct Regional Summits at Central Office.

## **Project Selection Criteria/Methodology**

For projects to move forward in the SHIFT process, they must be selected from those active in the CHAF database to be scored. HDO 11 was given 38 project sponsorship allotments for this purpose. These projects were decided on based on the following criteria:

- Legislative support
- Local needs as described by County Judge Executives and Mayors
- How the project supports regional connectivity and safety
- Stage of project development

## **Project Boost Criteria/Methodology**

HDO 11 used the opportunity to boost 17 of the total number of sponsored projects. HDO 11 applied 15 points to each of these projects based on the following criteria:

- Do local officials and residents have concerns about safety in the project area?
- Is there support for the project from multiple local agencies such as local officials, ADDs and the HDO?
- Does the project have a phase that is active or has been completed?
- Is significant growth (such as tourism, economic, residential) occurring or anticipated along this route?
- Is the project on a regionally significant corridor that enhances connectivity between county seats or to interstates or parkways?
- Is this an area where congestion or Level of Service could be improved?

Below is a summary of each organization, the number of projects per organization that populated on the regional list, and the maximum number of projects that had their scores boosted.

<b>Organization</b>	<b>Number of Counties in HDO 11</b>	<b>Projects on Regional List</b>	<b>Boost Quota</b>
HDO 11	8	61	17
Kentucky River ADD	1	2	0
Cumberland Valley ADD	7	33	17

### **Public Involvement/Feedback**

Public involvement was included throughout the SHIFT 2020 prioritization process. The HDO 11 Team consulted with others including, HDO staff, elected officials (Judge Executives, Mayors, and Legislators) and the Regional Transportation Committees to petition public input. Meetings were held with each county to review the SHIFT process and gain insight on projects considered for sponsorship. Input for sponsorship of projects, selection criteria, and determining which projects to boost was also discussed as a team within the HDO 11 and Regional Transportation Committee meetings.

### **Conclusion**

The SHIFT 2020 prioritization process proved to be successful in terms of enhancing KYTC HDO 11 Team’s ability to consider local and community transportation concerns from a regional perspective. Throughout the course of this process, information was gathered from several sources, including HDO staff, local officials, legislators, and regional transportation committees. This variety of sources and perspectives allowed the KYTC HDO 11 Team to make well-informed decisions about sponsoring and boosting projects while considering the distinctive issues that affect each of our counties within the limits of HDO 11.

## KYTC Highway District 12



### SHIFT 2020 Prioritization Plan

Final

August 16, 2019

Prepared by: Samuel Hale

#### Introduction/Overview

The six year highway plan is a method of selecting highway projects to be delivered in a certain timeframe to the tax payers. In the six year highway plans prior to 2018 the amount of projects listed exceeded the available funding. This over programmed highway plan had projects that were left in that had little chance of getting funded and built. These promised projects, some of which had been in the plan for years, were causing concern with the citizens who were expecting the projects to be constructed. These projects amounted to broken promises to the citizens and reinforced their perception that State government isn't accountable. A more responsible method of project selection and delivery was needed.

The 2020 six year plan is the second road program developed using a new data driven process. This process was initiated in 2016 when Governor Bevin directed the Kentucky Transportation Cabinet to develop a method of prioritizing projects across the state based upon specific needs of the roadway infrastructure. This method of prioritizing projects is known as the Strategic Highway Investment Formula for Tomorrow, or SHIFT.

The method of nominating projects to be evaluated in the SHIFT process has been refined with the use of a new program used by the sponsoring agencies. The program, named the Continuous Highway Analysis Framework, (CHAF), is a database containing projects that have been identified as potential capital improvements. The Highway District Offices (HDOs), the Area Development Districts (ADDs), and the Metropolitan Planning Organizations (MPOs), could sponsor existing identified projects in the CHAF, or they could identify new projects and place them in the CHAF database.



Highway District 12 consists of 7 counties and is part of three ADDs, two counties in the Kentucky River ADD (KRADD), one county in the FIVCO ADD, and four in the Big Sandy ADD (BSADD).

## **Timeline**

- Project Sponsorship - February through March 2019.
- Data Verification – April through May 2019
- Project Scoring – June 2019
- Project Boost – July through August 2019
- Prepare Draft Recommended Highway Plan – August through November 2019

## **Project Selection Criteria/Methodology**

The projects selected for sponsorship were based on the knowledge of the selecting agency. Some of the criteria used were accident history, observed congestion, amount of travel time for a given section of roadway, and by input to the agency from the public. This method used by the local county and city government officials was based upon the perceived needs without any accident history data or other data on the route. Projects were also selected based upon the need for improved routes for local industry or access to tourist destinations. Other projects were chosen based on the need to finish corridor projects.

HDO 12 was allocated thirty-one projects to sponsor for the 2020 propose six year plan. To give equal representation over the seven counties in the district, it was decided to sponsor four projects per county. This method allowed for twenty-eight projects with three additional projects that could be used to sponsor any project within the district.

The ADD agencies were allocated the following number of projects to be selected.

- BSADD - 23,
- FIVCO ADD – 26, 9 in District 12
- KRADD – 40, 16 in District 12

## **Project Boost Criteria/Methodology**

The projects were boosted based on the initial score and the likelihood that boosting them would increase their chance of being placed in the final recommend plan submitted to the Legislature. The other reason for boosting a project is the mutual selection by agencies for a project based on safety or other reason that the agencies felt was of such significance that they needed to boost the project, whether it had a chance of making it into the recommended plan or not.

One ADD agency, FIVCO, boosted their projects recommended first based upon the criteria listed above. It boosted two projects in HDO 12's area. The committee from HDO 12 met to boost projects after FIVCO. Knowing the two projects that the ADD agency boosted, HDO 12 agreed to boost one of the projects chosen by FIVCO. The other two ADD agencies boosted their projects after HDO 12.

KRADD reviewed the projects that were boosted by HDO 12 and decided to boost the same three projects in the two counties that are in KRADD. By doing this the KRADD and the HDO turbo boosted the projects, adding 30 additional points to each.

The last ADD agency to boost projects within the limits of HDO 12 was BSADD. They decided to boost two projects per county.

HDO 12 next boosted 15 projects within its area. The HDO 12 district committee members agreed to the method of selecting projects to boost based on the criteria stated above, and at least one project per county would be boosted. Using this method at least one project per ADD would be boosted. This accounted for seven of the fifteen projects to be boosted by HDO 12. The other eight projects boosted were chosen district wide by the members based on initial score, perceived need based on maintenance, safety, and past public comments.

Below are the number of projects that were boosted per agency.

- HDO 12 – 15
- BSADD – 10, 8 in HDO 12
- KRADD – 10, 3 in HDO 12
- FIVCO ADD – 7, 2 in HDO 12

## **Public Involvement/Feedback**

The public has had an indirect voice in the SHIFT 2020 process by making comments and inquiries to the Project Delivery and Preservation Branch employees. They, by way of direct communications via telephone, webpage comments, and in person with Department employees let their requests for projects be known. They have also contacted their local government officials and legislators to voice their opinions on which projects are needed. The comments they made have influenced both the HDO 12 personnel and the members of the respective ADD agencies to sponsor and then boost projects. Their involvement in the process has helped make the SHIFT process more responsive to the expressed needs of the citizens.

The proposed projects will be listed in the local newspapers, social media, and the District 12 webpage after the final boost phase is complete. The public will be allowed to make public comments on the projects in the list and on the SHIFT process itself. Any questions concerning a specific project will be directed to the Branch Manager for Project Development and may be forwarded on to the Project Manager for that project. Questions concerning the location, cost, timeline, and nature of work involved will be answered with information available to the

general public. After the scoring and boosting is complete each individual legislator will be invited to the HDO 12 office to review each project in their respective legislative district.

## **Conclusion**

The SHIFT process has resulted in a six year road plan that addresses the needs of the highway system in Kentucky in a more reasonable manner than in the past. It does not over program the plan with more projects than the Commonwealth has funds to complete. The scoring process that is started with projects that the local officials and local Department of Highways officials determine are needed is a more reasonable method of choosing projects because they are the people who maintain and use the local roadways. The scoring based on qualitative analysis results in a more fair process of determining potential projects, but with the added input from users.

As the SHIFT process evolves in the future; the continued analytical input, along with the first hand local knowledge of the needs of the area roadways, will lead to a more accountable highway construction program.