



Below are the comments we received from the attendees of our Bike Summit II on February 12, 2009 in the area of engineering:

### **Engineering Goal: Bicycling is fully integrated into the transportation network**

*How do we accomplish integration of bicycling into the automobile focused transportation network?*

#### **Comments from bike summit attendees:**

- Intersection improvements
  - I.D./Prioritize intersection improvements
  - Explore options for trafficking and signaling to address each situation (i.e., bike box)
  - Left turns out of bike lanes? Solution? Alternative engineering designs
  - Visual cuing at intersection – colored blocks
  - Use of color - bright
  - Address speed needs/multi-modal at large intersections
  - Colored bike boxes for trouble spots
- Facility Types
  - Safest location for bike path
  - Standards for where and what type of route or facility should be created
  - In areas of greatest conflict, separate motorist from bike path
  - Examine facilities in other countries to see what other design options are available (Columbia bikeways in median)
  - Ped/Bike right-of-way zone – cars – 50-55 mph
  - Bicycle Blvd. – implement
  - Create “bypass lanes” – short stretches of right-side pull-out lanes, reserved for bike and ped. To allow motor vehicles to pass, on shared roads.
  - Differentiate between bike lanes vs. erroneous extra space
  - Are bike lanes the best solution? Creates yours & mine
  - Bike facilities in school zones
  - Encourage round-a-bouts or innovative design solutions that better integrate multiple modes
  - Ensure adequate/appropriate design when expanding network (materials, rumble strips, trail widths, paved shoulder, etc.)
- Road diets
  - I.D. all opportunities to “road diet”/re-strip to allow for facilities
  - Explore removal of parking spaces for bike facility
  - Expand use of road diets
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  - Where can we cut lanes to convert to bike vs. building new?
- Traffic Calming

- New design restrictions too narrow for more bike room/slower traffic
- Lower vehicle speed at bike facility
- Traffic calming or elimination at parks
- Arterial speed limits
- Various traffic calming tactics
- Traffic calming – implement more – along with creation of bike lanes
- Miscellaneous
  - Shared used facility design for capacity
  - Sewer/Utility grates designed to bike friendly
  - Consistent consideration from design to construction phases
  - Rumble strips and grates - eliminate
  - Widen sidewalks
  - Explore unique options when dealing with existing conditions
  - Under interchange or loop crossing facilities – what do other communities do? Cost-effective solutions? (especially Watterson out)
  - Designate arterials that have various options for similar travel (ex, 2 auto east route, 1 bike/auto route east – lots of signage & bike designation)
  - Bridge improvements – joint plates, smoother edges, etc.

**Engineering Goal: Bicyclists of all ages and skill levels feel comfortable and safe riding to their destinations**

*How do we improve comfort and safety for bicyclists?*

- Provide safe 2-mile rides to destinations in order to eliminate a car trip
- Branch off of existing system to the destinations within two miles of concentrated population of people/neighborhoods
- Pilot project for complete street to show example
- Retrofit existing facilities
- Expand facilities to meet all levels of users
- Any/All resurfacing consider bike lane or bike-friendly striping
- Missed opportunities for bike facilities
- New developer/builder incentives for bike awareness of additional bike-friendly measures
- Take advantage of existing opportunities (LJCPS,etc.)
- Using Federal funds for safety improvements
- Balance between sustainability and new facilities
  - Use existing facility where possible
  - MSD facilities
  - Levee walls

***Maintenance:***

- Maintenance of bike facilities – improved cleaning
- Improving maintenance of current bike lanes, paths and signage. Our money is certainly better spent on these issues, especially if we expect the Louisville community to take

these “big changes” and this “changing culture” seriously. Some signage is already worn and/or “invisible”, having just been put into place less than a year or two ago

- Maintaining existing facilities
- Maintenance of bike lanes
- Better promotion of bike facilities (bike lane maintenance)
- Keep current road paths clear of dirt & debris.
- “Adopt-a-bike” lane

### ***Mapping:***

- Website interactive map to identify safe routes for bikes
- GIS route mapping
- Develop mapping/programs for existing facilities
- Maps for off-road
- System map at trailhead

### ***Parking:***

- Co-op with businesses to expand bike parking facilities
- Gallery Hop bike parking
  
- Functional bike racks
  
- Visibility/signage for bike racks - consistency
- Lockers/Storage at bike racks (2)
- Bike parking – commercial, shopping secure
- Incentives for merchant/builders to provide bike parking
- Portable/Movable bike storage during development, festivals, or undeveloped land
- Increase car parking costs
- Bike racks at schools
- Partner with JCPS to expand bike parking, facilities
  - Denver bike lockers - example

### ***Signage, markings, and signalization:***

- Share the road signs
  - Educational (motorists)
  - Raises the awareness
  - Higher priority for signage that educates driver (i.e., share the road)
  - Sharrow – Pk. markings
  - Education/Awareness of designated bike path or shared space
  - Sharrows
  - Other visual aids
- Adjust signal sensors to recognize bikes (induction loops)
  - Or alternative technologies

- Loop stop light detectors for bikes
  - Scooter works – device to increase bike sensitivity at signals
- Wise placement of signage, designed/placed based on specific situations, integrated with vehicular signage
- Improved signage for opening car doors into bike traffic
- Signal controls & bike lane – traffic detectors for bikes
- Improve signage on road for bike lane; more share the road
- Dual signage – not necessarily bike only areas but also car and bike
- Continuity of bike route signage
- Standard signage (color, shape, location, etc.)
- Traffic control devices formatted to bikes – metro-wide
- Signage – implementation & maintenance
- Pavement markings more evident
- Improved signage
- On-road markings
- Signage standards – ex. height
- Mileage to destinations
- Intersection – detection & signalization
- The old designated “bike routes” need to be repaved in order to be safe for cyclists, for example, Ormsby is a “bike route” that I use to get to the bike lanes downtown, but it is in such bad shape with holes and patchwork fixes that it is tough to ride on.
- Bike markings when appropriate
- Signal timings to promote passive speed enforcement
- Exclusive phase for bikes at signal

***Miscellaneous:***

- Understand users
  - Commuter riders – people w/o cars
  - Immigrant population
  - Recreational cyclists
- Look at user groups and revisit laws for who can ride on sidewalks
  - Speed of rider
  - Sophistication level
  - Quality of equipment
- Need more of everything
- Plan for all levels & abilities
- Need political influence
- Stronger regulations
- Require KYTC to implement safety plan (FHWA)
- Increase public support
- Integrate bike/ped facilities into tourism marketing
- Better connections to Indiana

- I was very excited when the bike lanes were added on 2<sup>nd</sup> & 3<sup>rd</sup> Sts. It was the difference between me commuting once in a while to commuting by bike several times a week
- Improving communication on the web and through media seems critical. Cycling and non-cycling communities alike need to know about changes in paths/routes/road painting and paving for cyclists and how it is intended to be used
- Veladrome location?
- Public/private connection
- Incentive programs to promote bike, cut commutes
- State included in local bike goals
- “Roads are for people” where do people travel most via car, bike, etc.
- Tax incentive opportunities for bike usage
- Inclusion of more user groups
  - Teens
- Driver’s test – include bicycle laws

### **Engineering Goal: Expand off-road cycling opportunities throughout Louisville Metro.**

- Cyclocross
  - More off-road/cyclocross & connection to existing facilities
  - Provide cyclocross facilities in current parkways (Iroquois, Fisherman’s Park, JMF, TSP)
  - Cyclocross facility
  - Permanent home for cyclocross
- Otter Creek
  - Explore other possibilities to utilize current trains instead of buying land or creating trails in parks, i.e., JMF & Iroquois. This is an added cost and expense.
  - The closure of Otter Creek Park has hurt mountain bikers deeply. Do something!
  - How can we claim to be trying to expand off-road facilities while closing viable places? The off-road access in Louisville has very nearly been cut in half!
  - Look at implementing fee to reopen use of Otter Creek Park
- Trail System Facilities
  - Trailheads with parking, RR, etc.
  - Expand facilities for mountain bicyclists, BMX, and cyclocross
  - Connectivity to existing facilities
  - Complete improvements in Cherokee & Waverly dirt trails, i.e., improved signage & expansion of trails
  - We need more off-road single-track trails. We need concrete goals that establish new miles of trails every year or a certain amount by a certain year.
  - Expanding off-road facility with non-asphalt materials
    - Maybe incorporate into Floyds Fork area or Metro Parks
  - Create bicycle skills area or bike park within next 2 years built centrally located; convenient to downtown (short track, MTB trails, cyclocross area)
- On Greenway, integrate interesting features for the mountain biker
- Develop specific goals, i.e., 8-10 miles of dirt trails for varying skill levels to encourage younger individuals & beginners to progress them to Cherokee Park & Waverly

- I like the idea of the multi-use paths along the parkways
- I also agree that there is a need for some true off-road paths for mountain biking that is suitable for beginners
- Select materials for trail
- Conservation easements to complete trails
- Off-road facilities – lots of bang for buck – small but useful
- Various mountain/off-road biking levels of difficulty
- More connector pieces to ex./Prop. Parks & off-road facility (mtn. bike)
- Include off-road facilities in Development Requirements
- Expand facility in southwest area
- Bike Parks/Bike skills
- Set specific amount of mileage of mtn. bike facilities - to replace existing & implement new
- Private Partnerships
  - Maintenance of trails or facilities
  - “Adopt-A-Trail”
- Identify and integrate linking into off-road facilities
- Acceptable distance of 2 miles to safe connections to off-road facilities
- Maintenance of off-road systems
  - Use of trails when muddy
  - Coordination between use types – Runners/Mtn. bikes
  - Signing to not use trails when muddy
  - Rutting of trails
  - Best trail building practices - implement