

Interactive Mapping and Visualization of Regional Transportation Plans

Bicycle & Pedestrian Plan Major Projects

Charlene Howard, GISP
National Capital Region Transportation Planning Board (TPB)
Bicycle and Pedestrian Subcommittee
15 July 2014

The idea

- To create an online visualization/ mapping application for major bike & ped projects
 - Projects still identified & approved the same way as with previous plans
 - Concept is consistent with intent to provide a more interactive experience for users interested in TPB's plans and programs
- Online map as a companion product to the regular TPB Bike & Ped Plan document
 - The map data will already be created in hardcopy format– we would like to take this a step further & put these data online
 - Interactive: zoom, popups and other media available to users
- Rollout to coincide with TPB approval of the plan in October 2014 (planned)

What could the map look like?

Example: 2013 CLRP web map application

National Capital Region Transportation Planning Board (TPB)
2013 Constrained Long Range Plan (CLRP), as adopted July 17, 2013.



Description

The CLRP identifies all regionally significant transportation projects and programs that are planned in the Washington metropolitan area between 2013 and 2040. Over 750 projects are included, ranging from simple highway landscaping to billion-dollar highway and transit projects. Some of the projects will be completed in the near future, while others are only in the initial planning stage.

The projects and programs that go into the CLRP are developed cooperatively by governmental bodies and agencies represented on the National Capital Region Transportation Planning Board (TPB). The TPB Vision, the policy framework adopted by the TPB in 1998, serves as the regional guide for project development.

2013 CLRP: SIGNIFICANT CHANGES

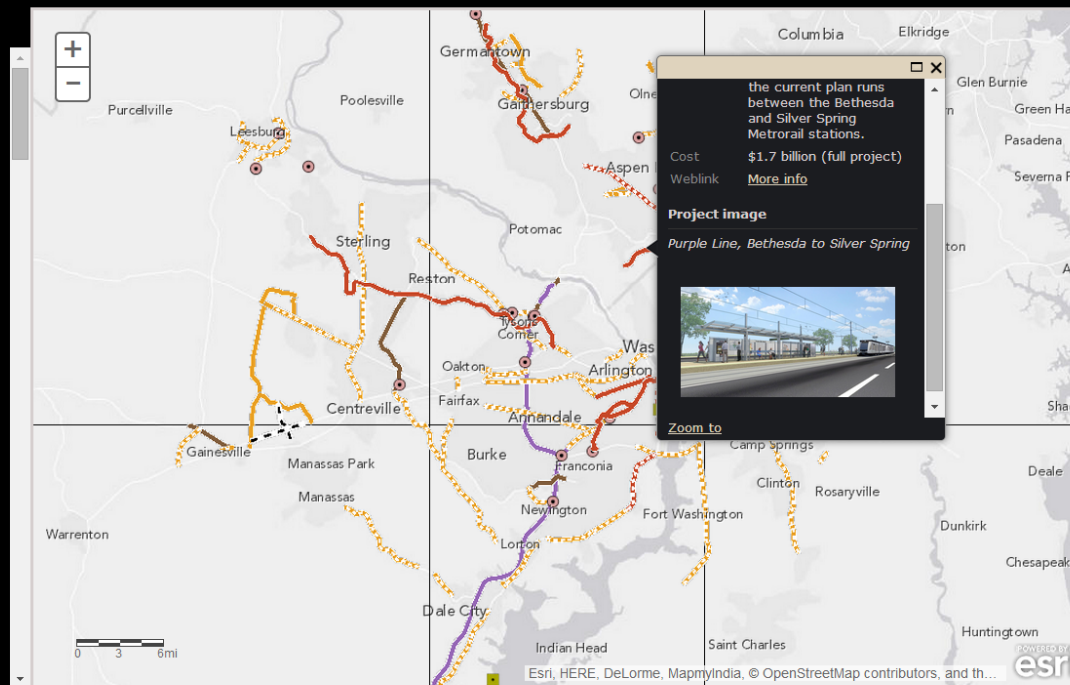
Below is a list of significant changes to the 2013 CLRP. This listing covers changes only to those projects that are considered to be major regional projects, i.e., on interstates, principal arterials and some minor arterials, as well as transit facilities. A complete list of all planned projects and proposed changes is included in Appendix B of the [2013 CLRP Air Quality Conformity Report](#).

[Click to view overview map of all changes](#)

District of Columbia

[Click to view map](#)

1. Lane Reductions and Reconfigurations
DDOT is proposing a number of projects that will



Legend

2013CLRP

Major Transit Improvements

- Transit Station Improvements
- Transit Improvements
 - New Transit
 - Transit Improvement

Major Highway Improvements

- Intersection Improvements
- Road/Highway Improvements
 - New Road
 - Widen/improve; Reconstruct
 - Remove Existing Road

Major High-Occupancy Vehicle Improvements

- Add HOT Lanes
- Add HOV Lanes

A map from: MWCOG_GIS

The application should contain selected major projects, popups with information/media, descriptive text, link to plan database, links to your resources, etc.

Where are we currently?

- Web: one live app, one test app with more planned
- A regional bicycle facilities layer from 2005
 - Obtained from the jurisdictions & assembled by TPB/COG
 - Not really being utilized in any application due to its vintage
- No pedestrian layers in our data library
- Regional Transportation Data Clearinghouse (RTDC)
 - Collection of transportation-related datasets around the region
 - For our May 2014 release, we included bike data we could easily locate and/or request; combination of map services and actual GIS data
 - GIS data layers: Prince George's and Frederick Counties
 - Map services: District of Columbia, Montgomery, Arlington, Fairfax Counties

What we have now: bike data in the RTDC

Each available jurisdiction has its own menu showing layers included. Data are 'as-is' in terms of symbology and zoom/scale (map services), facility types & descriptions, and attribute fields.

The screenshot displays the TPB Regional Transportation Data Clearinghouse web map application. The map shows a region around Washington, D.C., with various bike data layers overlaid. Several data layer panels are open, each with a 'TIP: Turn off layers before closing widget' message.

- Bike Fairfax:** Includes layers for Bicycle Shops, Signs, Bicycling Routes, Trails (Shared Use Paths), and Fairfax County Border.
- Frederick County Bikeway & Trail ...:** Includes layers for Frederick County Bikeway & Trail, DRAFT Existing and Proposed, and various trail types like Bike Lane, Signed Bike Route, On Street Bikeway, Multi Use Trails, and Natural Surface Trails.
- Montgomery County Bike Data:** Includes layers for Capital Bikeshare Stations, MTG County-On-Road Route, MTG County-Paved Trail, and MTG County-Natural Surface Trail.
- DC Bike Data:** Includes layers for Capital Bikeshare Stations, DC Bike Lane Street Right-of-W, Existing Bike Lane, Proposed Bike Lane, DC Bicycle Lanes, and DC Signed Bike Routes.
- Arlington County Bike Routes:** Includes layers for Capital Bikeshare Stations and Arlington County Bike Routes, with sub-layers for Suggested Route, Marked Route, Sharrow, Off Street Trail, and Trail Connector.
- Prince George's County Existing Tr...:** Includes layers for Prince George's County Existing Tr, Park Trail and Shared Use Path, Bicycle Lane, Shared Lane, and Walking and Equestrian Trail.

The map interface includes a search bar at the top right, a 'Data Layers' button, and a 'Basemap' button. The map shows various cities and towns, including Baltimore, Washington, and Leesburg. The map is overlaid with various colored lines representing different types of bike infrastructure.

Subcommittee buy-in & participation

- *Is this something that interests the subcommittee?*
- DTP staff will develop the mapping application; we will need some assistance with content. However, the goal of this effort is to minimize impact on jurisdiction staff time
- How can subcommittee members/others assist?
 - Facilitation of data request for GIS layers of bike/ped data; we recognize that subcommittee members may not be data stewards
 - Provide any other media or content you would like to see in the mapping application
 - Much, if not all, of the data already exist for each jurisdiction; we would like to gather and use for this application & for other TPB products in the future (RTDC, planning studies, etc.)
- We will utilize our existing (limited) resources in lieu of jurisdictional data if it cannot be provided

Proposed workflow/timeline

- July-August 2014
 - Introduce the concept, gauge interest & begin discussion
 - Request for data- GIS layers of existing/planned facilities
 - DTP staff will work on identifying major projects from the bike/ped database to include in the plan update
 - DTP GIS staff will follow up with request for data & begin app design
- September 2014
 - DTP staff presents selected 2014 Bike/Ped Plan major projects for subcommittee discussion and approval
 - DTP GIS staff finalizes mapping application based on subcommittee activity
- October 2014
 - TPB approves the 2014 Bicycle and Pedestrian Plan for the National Capital Region
 - 2014 Bike/Ped Plan interactive Mapping application rollout

**For questions, comments and
suggestions...please contact**

Charlene Howard
Principal GIS Analyst
202/ 962.3384
charlene@mwkog.org