

# Modernizing the NEPA process via a Virtual GIS-Based Platform

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*Kelly Lyles, Senior Advisor*



2018 Rail Conference

# Key Presentation Take-Aways

- The current NEPA process is **outdated**.
- **Three tools should be implemented** to modernize the NEPA process.
- The **Maryland Transit Administration Pilot Project** demonstrates the effectiveness of two of the three tools.



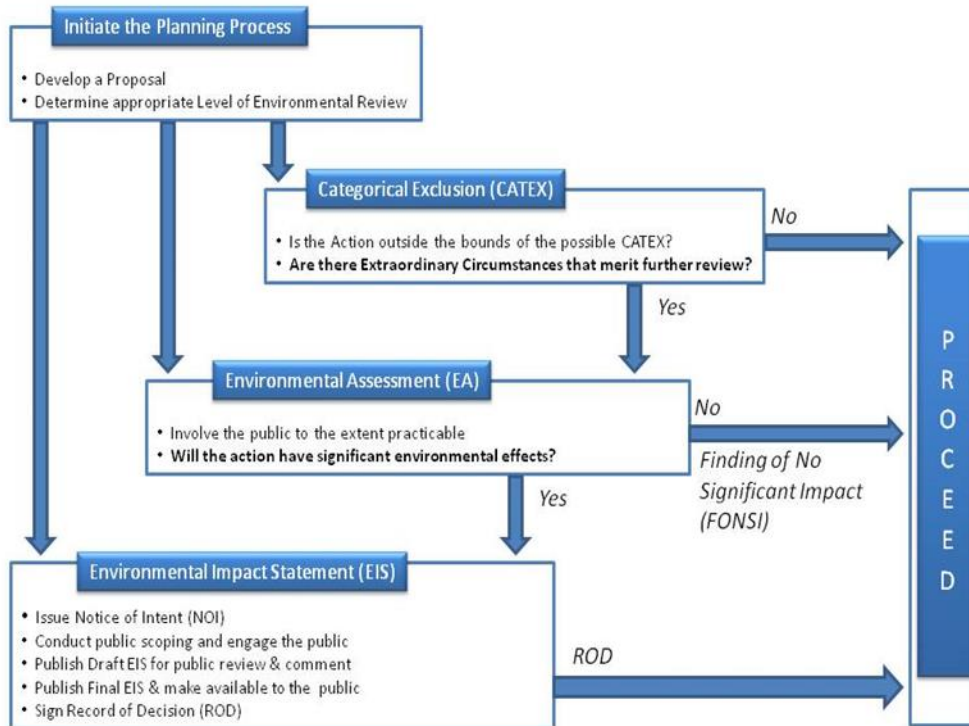
# Current NEPA Process

- Outdated – approximately 50 years old!
- Lengthy review process
- Lacks transparency (agencies and the public)
- Results in a document that is 100's to 1000's of pages



# Quick Review

## The NEPA Process



Within the NEPA process there are “Concurrence Points” needing agency and public review:

### EA Documents/Concurrence Points:

- Purpose and Need
- Environmental Assessment
- Preferred Alternative and Conceptual Mitigation
- Finding of No Significant Impact

### EIS Documents/Concurrence Points:

- Purpose and Need
- Alternatives Retained for Detailed Study
- Preferred Alternative and Conceptual Mitigation
- Draft Environmental Impact Statement
- Final Environmental Impact Statement
- Record of Decision

# Documents- Public Review

- Access via PDF on Project website and/or hard copy at the local library or community center
- Public comments are received via project email or snail mail

November 2014



## MARC NORTHEAST MAINTENANCE FACILITY

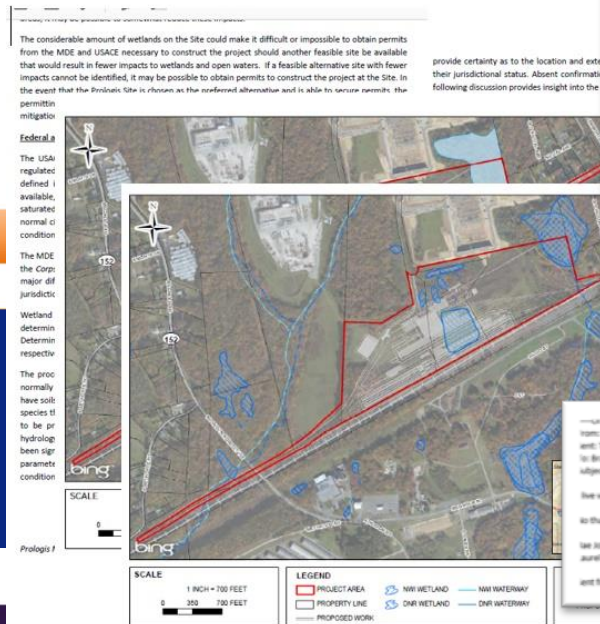
### Environmental Assessment

Section 106 of the National Historic Preservation Act of 1966

Cecil County, Maryland

Maryland Transit Administration Office of Planning  
6 St. Paul Street  
Baltimore, Maryland  
21202-1614

## ENVIRONMENTAL ASSESSMENT



Robert L. Snyder, Educator  
12 Hillside Road  
Greenbelt, MD 20770

MD Department of Transportation  
DEC 06 2017  
Office of Freight and Multimodal

December 5, 2017

SCMaglev Project  
Suhair Al Khatib, Deputy Administrator  
Maryland Transit Administration  
6 Saint Paul Street  
Baltimore, MD 21202

Dear Mr. Al Khatib:

I very much support the proposed Baltimore-Washington SCMaglev high speed rail project for a number of reasons:

1.) This project will compliment our existing rail and mass transit systems; especially if SCMaglev is eventually completed to NYC and Boston, and perhaps south to Richmond, VA and major urban areas of North Carolina. Our nation needs to upgrade and improve our infrastructure and this

Original message from: Rae Johnson [mailto:raejohnson21@gmail.com]  
sent: Tuesday, November 28, 2017 3:44 PM  
to: Bratcher, Brandon (BBA) [mailto:bratcher@dot.gov]  
subject: No Maglev

I've where the maglev would take away my view of the east. The maglev will do nothing for the people in my community but steal land and properties.

So thank you very much. Let's wait and see if the future hyper loop gives us a better chance to grow economically. At least let's see if it will maintain our natural beauty here in Laurel.

Rae Johnson  
Laurel MD 20708


sent from my iPhone

MARCH 2013

# Documents – Public Meetings

- Typically follows the release of a document (ex. Purpose and Need)
- Sent a postcard in the mail (*if they actually get sent!!*)
- Meetings includes static maps and boards with project information
- Comment on a card or email comments

bwmaglev.info



**Join us for one of these dates!**

The Maryland Department of Transportation (MDOT) invites citizens located in areas being considered for possible high-speed magnetic levitation train routes to attend an upcoming meeting, discuss the project with study team members and provide comments. If you cannot attend one of the meetings, you are encouraged to submit comments at any time through the website, [www.bowmaglev.info](http://www.bowmaglev.info), which will be updated to include all of the meeting materials.

The Federal Railroad Administration (FRA) and MDOT are in the early stages of preparing an Environmental Impact Statement (EIS) to study the feasibility and potential impacts of a new high-speed rail system. The high-speed, superconducting magnetic levitation (SCMAGLEV) system is proposed by a private company, Baltimore Washington Rapid Rail (BWRR). The SCMAGLEV system would operate between Washington, DC, and Baltimore, Maryland, with a stop at BWI Marshall Airport.

At the meetings, you can review and comment on the:

- Preliminary alternatives screening analysis results
- Overview of alternatives recommended for detailed study
- Technology and engineering features
- Preliminary station information

A short presentation with a video will start approximately 30 minutes into the meeting. The video will play several times during the Open House hours. Additionally, the Project Team will be available to answer questions as you review maps and other project materials in an Open House format.

Join us at any time between the hours listed.

**We welcome your input** and encourage you to identify and discuss project-related issues throughout the

**October 14 (10:00 am - 1:00 pm)**  
Bowie State University, Student Center  
14000 Jericho Park Rd, Bowie, MD 20715

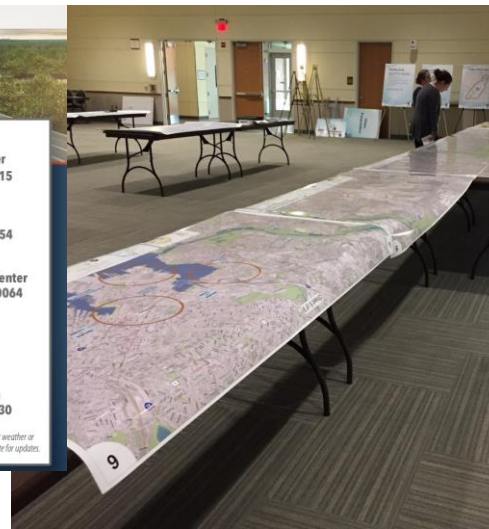
**October 16 (5:00 pm - 8:00 pm)**  
Arundel High School, Cafeteria  
1001 Annapolis Rd, Gambrills, MD 21054

**October 18 (5:00 pm - 8:00 pm)**  
Catholic University of America, Pryzbys Center  
620 Michigan Ave NE, Washington, DC 20064

**October 24 (5:00 pm - 8:00 pm)**  
Laurel High School, Cafeteria  
8000 Cherry Ln, Laurel, MD 20707

**October 25 (5:00 pm - 8:00 pm)**  
Digital Harbor High School, Cafeteria  
1100 Covington St, Baltimore, MD 21230

If government agencies or meeting locations are closed in the case of inclement weather or other unforeseen events, the meetings will be rescheduled. Please check the website for updates.



This may have worked years ago but today people want to review documents/maps and comment on THEIR time and in THEIR house.

# Antiquated NEPA Process

- Agency review of documentation is **time consuming** and **siloed**.
  - *Agencies rarely see other agency comments & distribution is difficult.*
- The public review process is **archaic and opaque**.
  - *Public meetings are inconvenient, static maps & boards, written comments.*
- In addition to the review process, the current **page numbers are absurd**:
  - *FTA/MTA's MARC Northeast Maintenance Facility EA = 506 pages*
  - *FRA/MTA EA BWI Rail Station Improvements and 4<sup>th</sup> Track = 802 pages*
  - *FTA/MTA Purple Line EIS/ROD = 9,131 pages*
- CEQ recommends → 150 pages for an EIS

**Why?**

- Fear of litigation
- All resources vs resources having significant impacts
- No one has updated the public review process

# Modernize the Process

- Improve the agency and public review processes
- Reduce document size
- Improve transparency



## Three Key Tools:

1. Project Website
2. Interactive GIS-Based Map
3. Document Management System (DMS)

# Tool #1: Project Website



[www.bwmaglev.info](http://www.bwmaglev.info)

## Home Page:

- ✓ Project description
- ✓ Project location
- ✓ Purpose and need
- ✓ Project funding
- ✓ Project status
- ✓ Key agencies

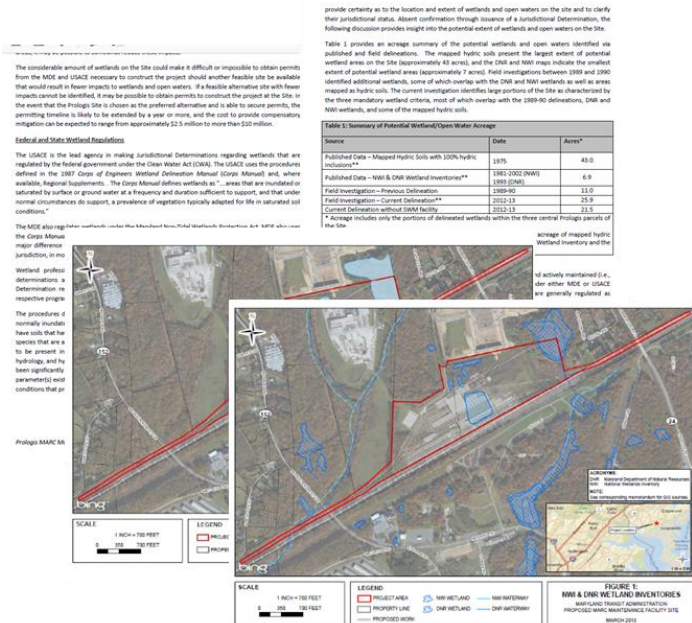
**= 1/3 of an EA/EIS**

## Links to:

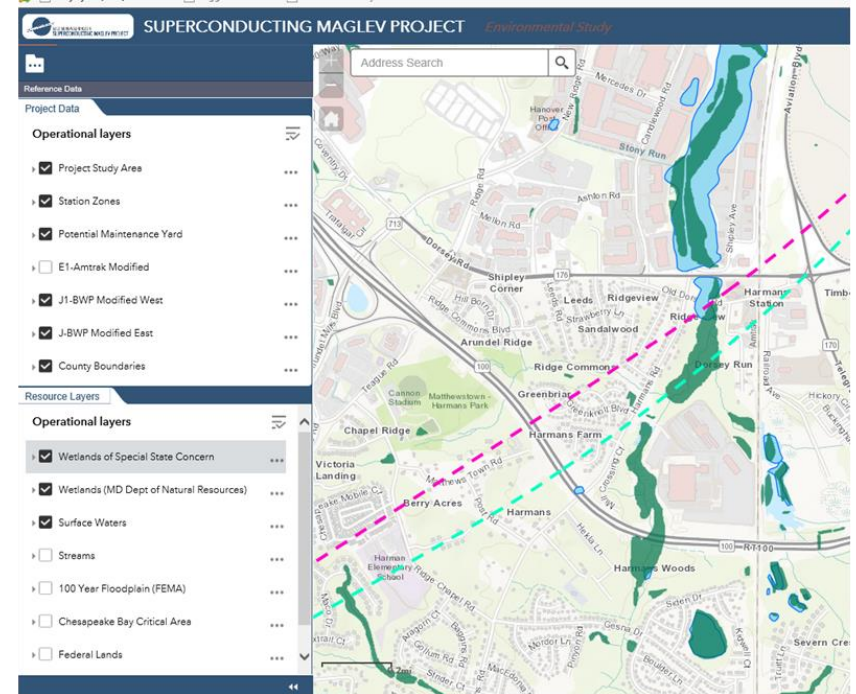
- ✓ Study area information
- ✓ Field methodology
- ✓ GIS-Interactive map
- ✓ Comment forms
- ✓ Document Management System (DMS)

**= 2/3 of an EA/EIS**

# Tool #2: Interactive GIS-Based Map



VS



MARC NE Maintenance Facility EA wetland methodology and mapping was **59 pages** of text, mapping and tables.

**One screen** with wetland layers, alternatives, project boundaries and parcels.

# Tool #3: DMS

## Document Management System (DMS) Features:

- Version control, document search tool, eForms, approvals.

## Key benefits to DMS for NEPA:

- Allows agencies to access secure documents via the project website.
- Allows agencies to review internally with staff.
- Allows agencies to see other agency comments.
- No email kickbacks b/c file size.
- No email reminders needing to be sent to agencies.
- No “we didn’t receive the email” comments from agencies. **No excuses!**

## Register User

**Register.** Use the form below to create a new account.

Passwords are required to be a minimum of 6 characters in length.

User name

Email address

First Name

Last Name

Password

Confirm password

Captcha

© 2017 - My ASP.NET Application

*Cooperating and  
Participating Agencies*

## Purpose and Need Document

Approve/Deny	All Comments	Users	User Profile	Map
All Comments				
Select One		<input type="text"/>	<input type="button" value="Search"/>	<input type="button" value="Clear Search"/>
User	Date	Comment	Approval Status	
Alones	9/15/17	Alt A Line is Great	Approved	<a href="#">View</a>
Alones	9/18/17	Alt B Line is too close to my house	Needs Approval	<a href="#">View</a>
PSmith	10/1/17	Alt C	Needs Approval	<a href="#">View</a>
GMiller	10/15/17	Alt A Line is too close to residential houses	Needs Approval	<a href="#">View</a>
GMiller	10/20/17	Alt C	Needs Approval	<a href="#">View</a>
Klohnson	10/15/17	This is #N/A!	Denied	<a href="#">View</a>
Klohnson	10/20/17	Alt B	Needs Approval	<a href="#">View</a>
Klohnson	10/25/17	Alt a line is better than Alt B or C	Needs Approval	<a href="#">View</a>
MLee	10/02/17	Alt C Line is too close to my house	Needs Approval	<a href="#">View</a>
1 2 3				

**SCMaglev EIS is ideal for  
implementing the three tools!**

- SCMaglev EIS is ideal for  
implementing the three tools!*



# MTA Pilot Project

## (Tool #1: Project Website)

### Information currently on the Project Website:

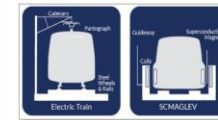
- ✓ Project Information
- ✓ NEPA Process
- ✓ What is SCMaglev
- ✓ Project Area
- ✓ Proposed Alignments

### Reports uploaded:

- ✓ Coordination Plan
- ✓ Purpose and Need
- ✓ Scoping Report
- ✓ Notice of Intent



[www.bwmaglev.info](http://www.bwmaglev.info)



#### THE GUIDEWAY

Rather than riding directly on standard steel railroad tracks, SCMaglev trains levitate between the walls of a unique concrete structure known as a guideway. The U-shaped guideway has walls surrounding the trains on both sides, making the system free from derailment.

#### SUPERCONDUCTING MAGNETS AND GUIDEWAY COILS

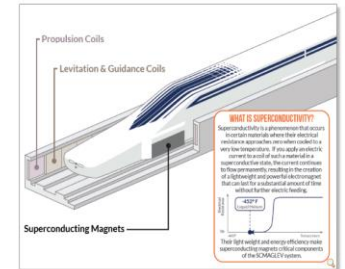
The keys to the SCMaglev system's high speed and acceleration are the magnetic forces acting between powerful superconducting magnets located on board the trains and two sets of coils that are installed in the walls of the guideway.

#### PROPULSION COILS

Used for the train's acceleration. Directly linked to power substations.

#### LEVITATION & GUIDANCE COILS

Used to maintain the train's positioning.



# **MTA Pilot Project**

## **(Tool #2: Interactive GIS-Based Map)**

- **Interactive GIS-Based Map Phase 1 developed in September 2017**
- **Launched October 1, 2017** with little advertising for the SCMaglev public meetings.
- **As of June 1, 2018 total of 24,536 views** (average 130 views per day).
- **Kudos from FRA and the public:**

*“Incredibly impactful tool.”*

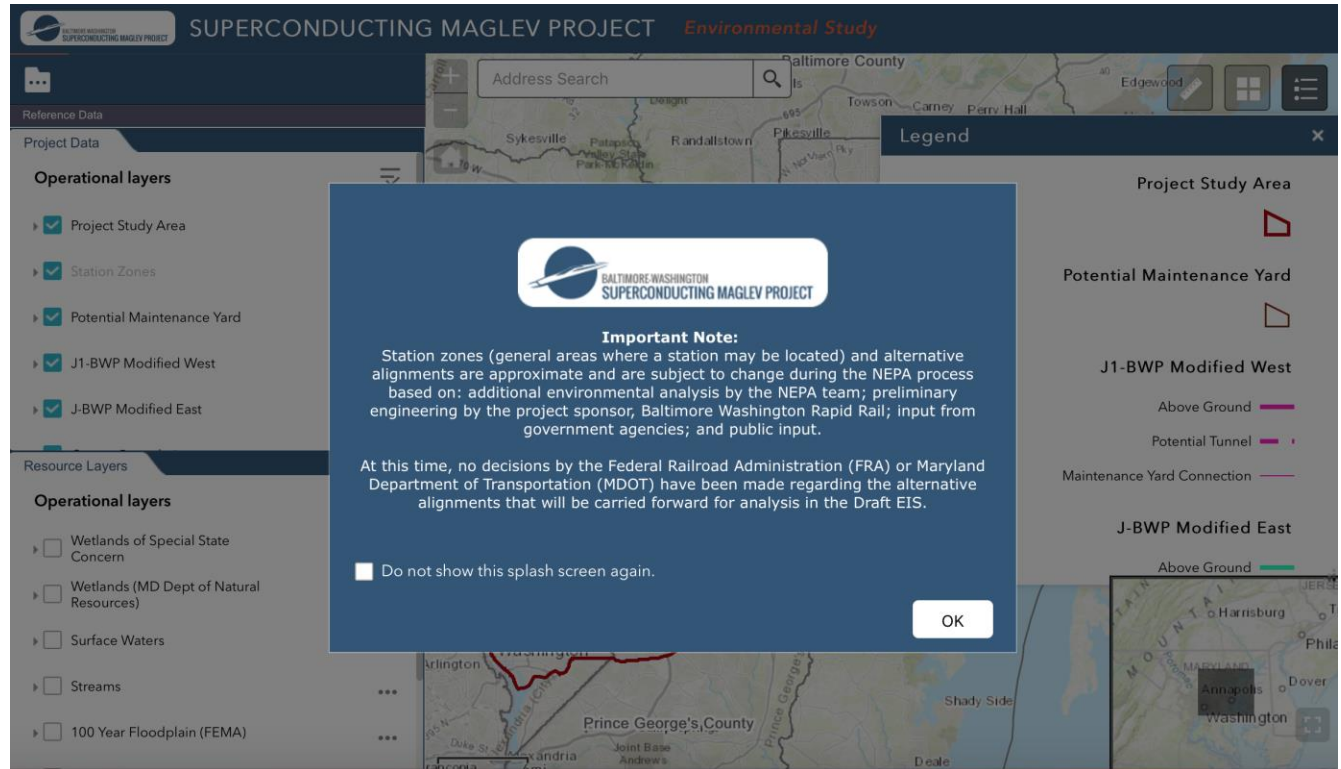
*“...allows for transparency!”*

*“Details what is important to constituents...”*



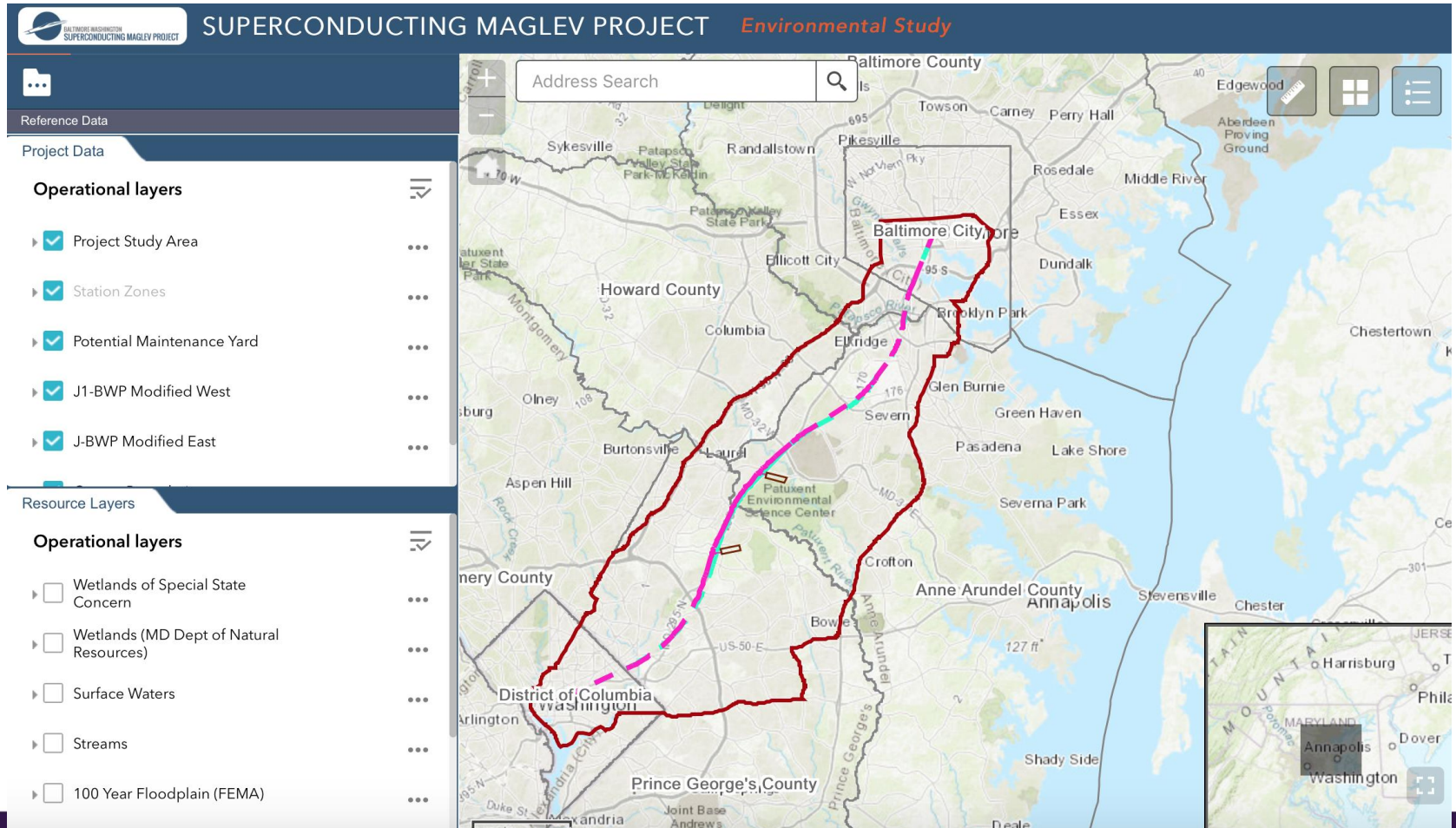
# Interactive GIS-Based Map Phase I

- Access from project website.
- Disclaimer with initial entry.



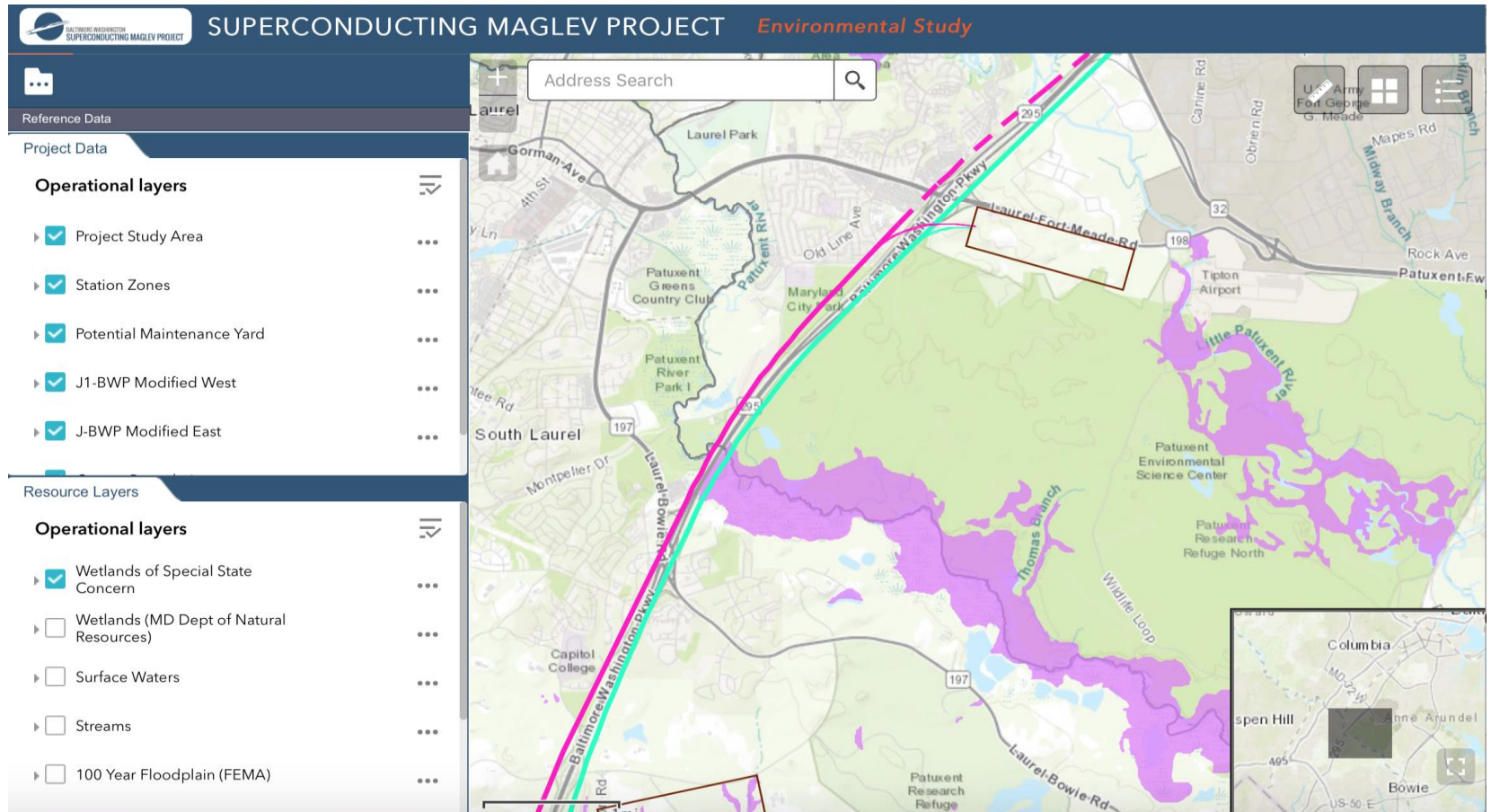
# Interactive GIS-Based Map Phase 1

*Home screen: Study area, proposed alternatives & resources layers.*



# Interactive GIS-Based Map Phase I

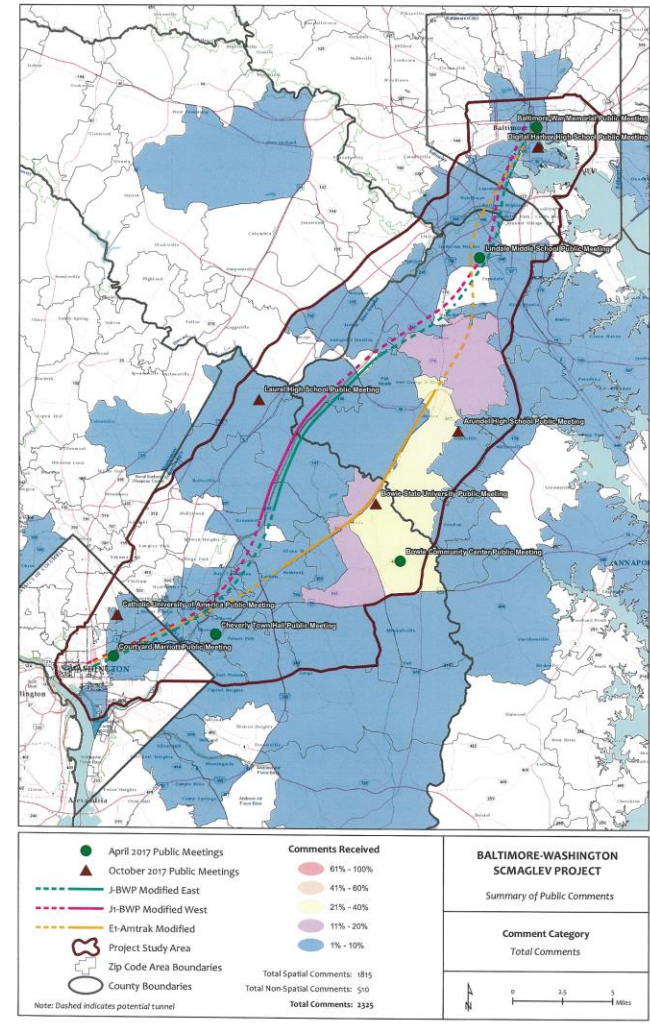
*Toggle on and off resource layers, zoom in to specific address, and review various alternatives.*



# Interactive GIS-Based Map Phase II

- **Next phase will** allow the public to comment directly on the map.
- **Spatial data** = creation of **heat maps** → **powerful decision making tool**.
- MTA wanted to **test the potential**:
  - **Manually added** all public comments by zip code (when given) from April and October 2017 Public Meetings **to create heat maps**.

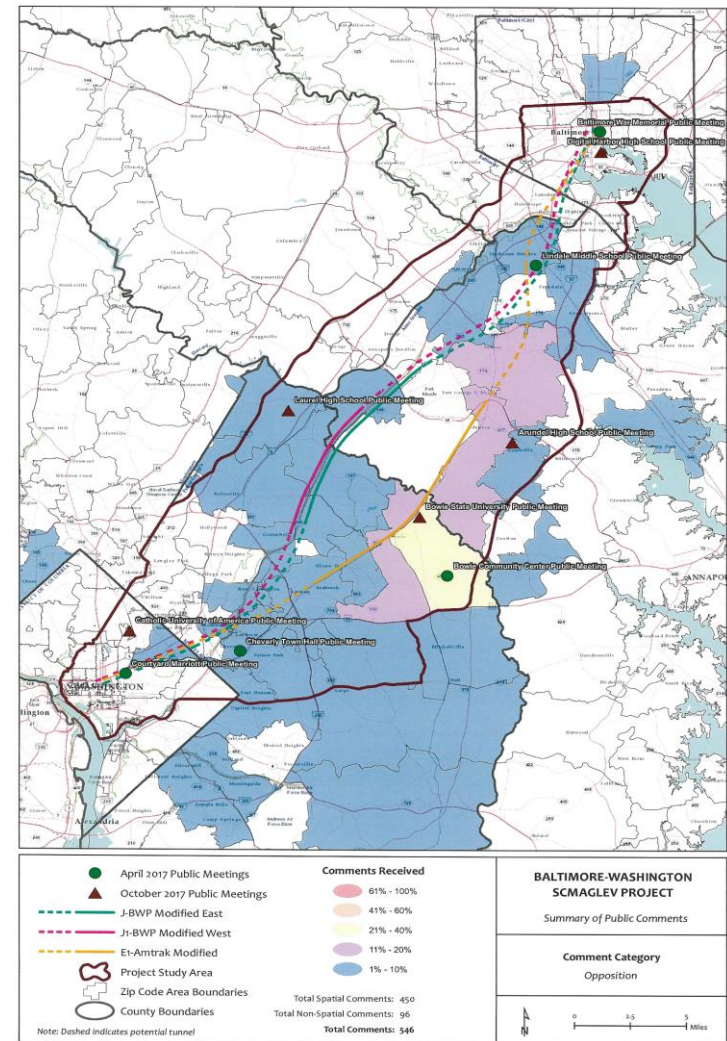
- **2,325 comments received**
- **Spatial comments = 1,815**
- **Those living along the Amtrak Alternative submitted the majority of comments.**

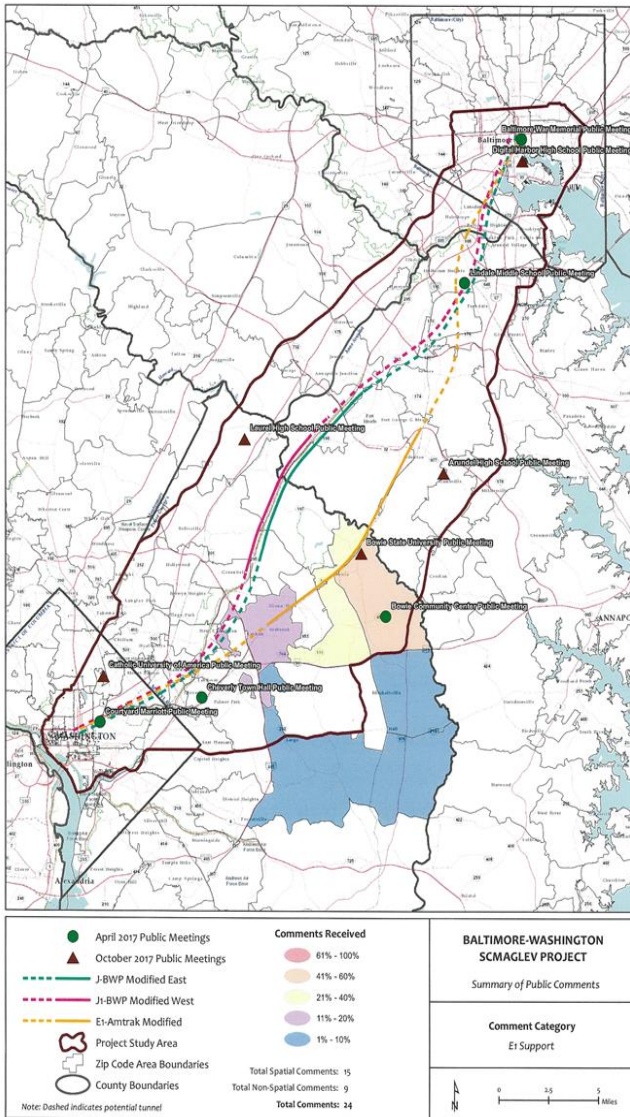


# Heat Map: Opposition

- **23 percent** of the comments were in opposition.
- Majority live along the Amtrak Alt.

*Unanswered Question – Are they in opposition of the project or just the Amtrak Alt?*

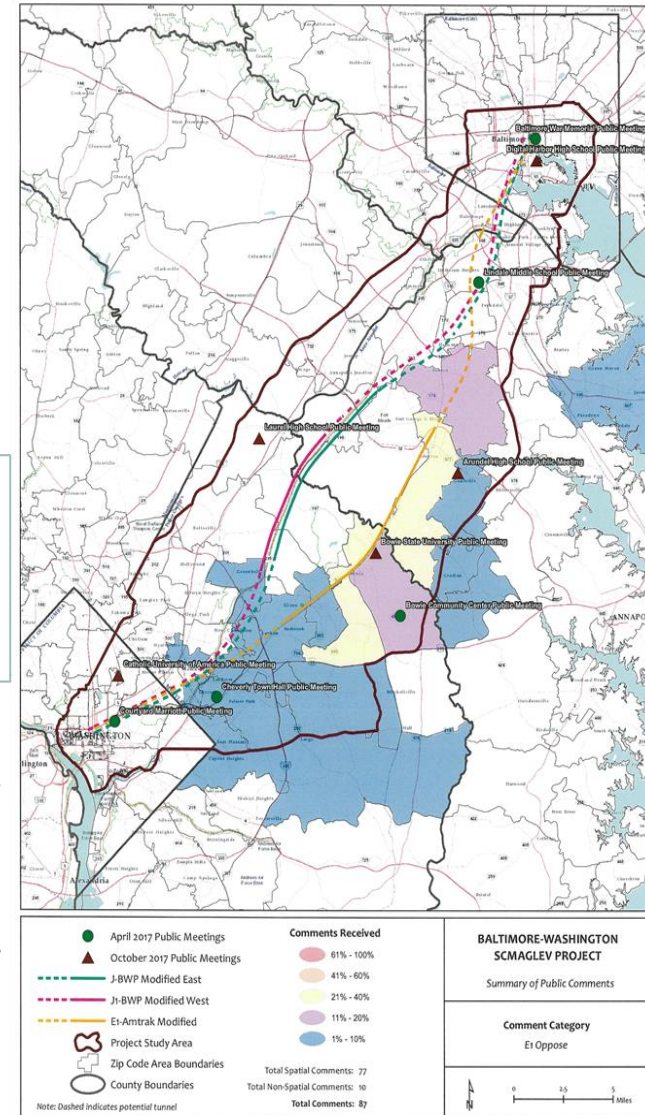


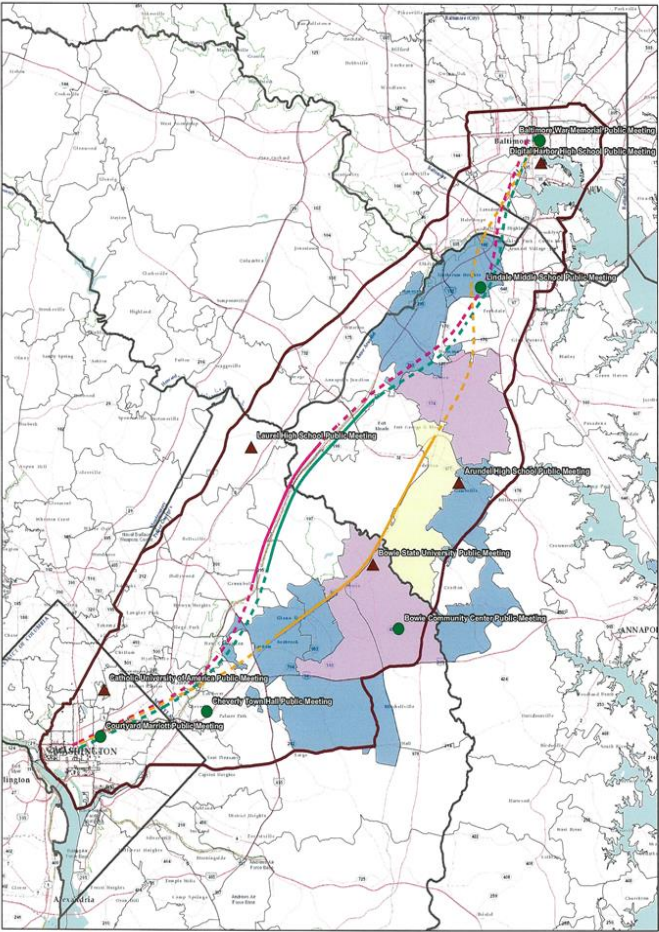


**Amtrak Support** – neutral along the corridor, support near southern end.

**Amtrak Opposition** – more vocal, concerns stretch further north, most likely NIMBY effect.

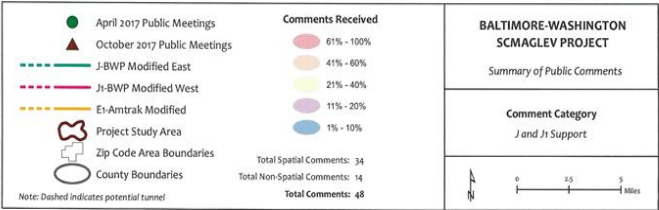
*So, the question remains...If Amtrak Alt is dropped, will J and J-1 Alts survive?  
Or public opposition = politically DOA?*



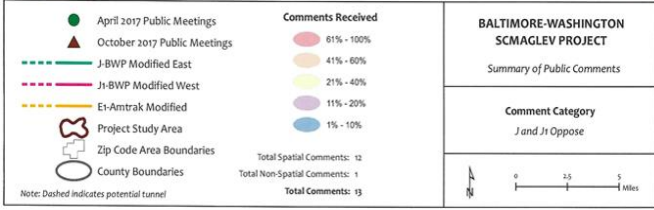
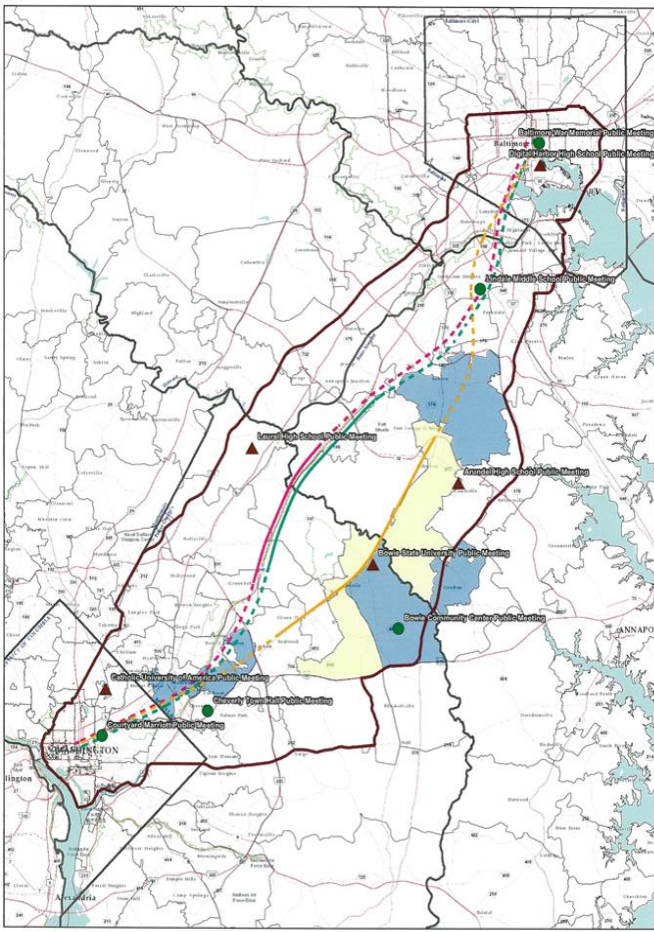


**J and J-1 Support –**  
Residents along Amtrak Alt  
support J and J-1 Alts.

**J and J-1 Opposition**  
<1% of residents living along  
J and J-1 Alts oppose the  
project.



*Good chance of moving J and  
J-1 forward into the DEIS with  
little public outcry.*



# Next Phase of the Pilot Project

- **Project Website** – Continue to upload reports, seek state and federal agency approval/accolades to foster support of this process.
- **Document Management System** – Develop a version 1.0 for DEIS Review (December 2018).
- **Interactive GIS-Based Map Phase II** (Fall 2018)
  - Commenting with spatial data
    - Public comments in real time
    - Show comments spatially
    - Comment by topic (support, oppose, tunnel, etc)
  - Respond to Comments
    - Track for Admin. Record and FOIA requests
    - Document actual response (letter, call, email, on map).

# Modernizing the NEPA Process

## (Implementation of the three tools)

- **Tool #1: Project Website** allows for detailed project information to be accessed by agencies and the public.
- **Tool #2: DMS** = allows for improved agency review and collaboration.
- **Tool #3: Interactive Map** = allows for transparency and creation of heat maps = impactful decision making tool.

**3 Tools = reduction in page number**

PROJECT	PAGE No. (w/ appendices)	Page No. (w/o appendices)	Page No. (Virtual NEPA)
<b>EA/FONSI FTA/MTA MARC NE Maintenance Facility</b>			
<b>Total Page Number</b>	<b>506</b>	<b>108</b>	<b>18</b>
Purpose and Need		6	2
Project Limits		13	1
Alternatives		28	5
Environmental Resources, Impacts and Mitigation		61	10
<b>Purple Line (DEIS/ROD)</b>			
<b>Total Page Number</b>	<b>9131</b>	<b>406</b>	<b>136</b>
Purpose and Need		16	5
Alts		36	8
Environmental Resources		178	55
Construction		16	16
4(f)		98	28
Section 106		17	5
ICE		24	5
Outreach		9	2
Index		12	12

# Contact Information



## Environmental Planning Division

Lauren Molesworth 410-767-7272 (Lmolesworth@mta.maryland.gov)

Kelly Lyles 410-767-3780 (Klyles1@mta.maryland.gov)