Greenbelt City Council
Work Session

SCMAGLEV

May 30, 2018
8:00 p.m.

Greenbelt Community Center
Room 201

Agenda

- Introductions
- Council Discussion
- Questions and Answers
- Other

MAGLEV Questions

Joyce Wineland
Joycie3@verizon.net
4/5/2018

Freight – will SCMAGLEV carry it? How much?

Magnetism – what are the impacts on the people and objects inside? What are the impacts on the people, animals, plants, etc. outside? I read the cars need shielding to protect the people and their electronics inside. How is that done? How is it monitored?

Employment – what is the breakdown of the kinds of employees during construction? For operation? For maintenance? Etc.

Economy – what is the likelihood that manufacturing plants will be developed in Maryland to make the parts needed for maintenance, and eventually, for manufacturing train cars and related equipment?

Economy – if items are shipped between Baltimore and Washington (and eventually extended to the other cities) could we expect their price to go down because of the speedier transport? Also, doesn't that mean that fewer items need to be warehoused since new supplies can arrive within hours, also reducing costs?

Energy consumption – what are the comparisons of the SCMAGLEV energy usage compared to low-speed MAGLEV, wheeled trains, airplanes? From what I have read, a large portion of the energy consumption is caused by air drag – true? I assume airplanes use many times more energy than a train because an airplane needs to lift many tons of people and cargo many miles into the air, but the SCMAGLEV only lifts it a fraction of an inch - true? If not, what is the truth?

Environment – what issues will be included in the Environmental Impact Statement (EIS)? How much time will citizens have to review and comment on the EIS findings? Air pollution, ground pollution, noise levels, stability of soil (boring and trestles), aquifers, etc.? Where will be soil and rocks (and water?) from the boring be deposited? Will it be contaminated with anything? What if the bore goes thru an aquifer, how is that handled?

Operation - Will the trains have a driver, conductor, etc? Restrooms? Food?

Cyberseurity: What are the cybersecurity protections? I assume a massive amount of software is required to operate the SCMAGLEV. And I assume you will get most of it from Japan. What are the controls to make sure the software does not contain malicious code, and that during software enhancements that nothing malicious is entered either accidentally or on purpose?

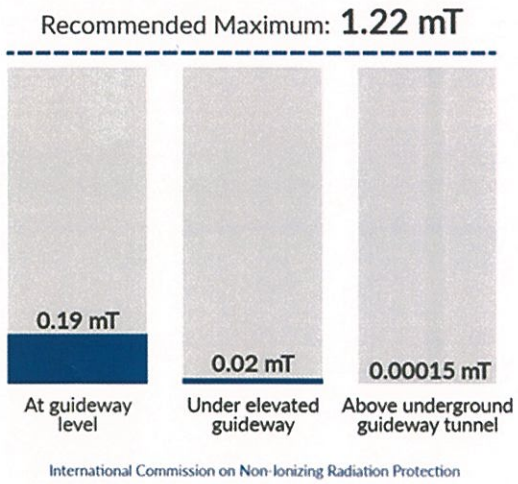
MAGLEV Questions

- ***Freight – will SCMAGLEV carry it? How much?***

The SCMAGLEV will exclusively be a passenger train that will bring industry leading technology and unprecedented standards of performance to the US Northeast Corridor. In its current state, the system is designed to be lightweight for fast, efficient passenger transport.

- ***Magnetism – what are the impacts on the people and objects inside? What are the impacts on the people, animals, plants, etc. outside? I read the cars need shielding to protect the people and their electronics inside. How is that done? How is it monitored?***

SCMAGLEV operations have been approved in Japan as safe for humans and the environment, meeting strict magnetic field exposure guidelines recommended by World Health Organization (WHO). WHO is globally recognized as "the directing and coordinating authority on international health within the United Nations' system," and includes among its responsibilities "setting norms and standards and promoting and monitoring their implementation." (http://www.who.int/peh-emf/en/)



This graphic shows EMF from the L0 series SCMAGLEV train.

As part of the EIS for this project, as well as the Federal Railroad Administration's review for safe train operation, magnetic fields and potential impacts will be evaluated in the EIS and by the FRA's Office of Safety. BWRR's commitment to be a safe train means BWRR will meet obligations to operate in a manner that appropriately takes the public's health and well-being into account.

- ***Employment – what is the breakdown of the kinds of employees during construction? For operation? For maintenance? Etc.***

In November 2017, BWRR signed a memorandum of understanding with North America's Building Trades Unions to construct the train route and its facilities. The unions will establish apprenticeship programs to develop the necessary job skills for Maryland citizens. BWRR anticipates diverse communities all over Maryland to benefit from these construction career opportunities.

Additionally, BWRR expects to soon begin planning discussions with local higher educational institutions on ways to best align coursework with future SCMAGLEV management careers.

BWRR anticipates a broad range in the type and number careers opportunities directly created when the SCMAGLEV project is approved and underway. There will be a variety of jobs available during construction and once completed, permanent jobs will be available at stations, facilities and related support businesses.
The jobs will include:

- Construction: logistics, assembly, planning and supervision
- Engineering: software, electrical & mechanical, fire, life and safety
- Maintenance: inspection, infrastructure and testing
- Operations: operators, on-board services, systems analysis
- Stations: ticketing, cleaning, security
- Facilities: yard management, rail control center, vehicle maintenance

- ***Economy – what is the likelihood that manufacturing plants will be developed in Maryland to make the parts needed for maintenance, and eventually, for manufacturing train cars and related equipment?***

The project is in early stages of development. As it evolves, BWRR will consider the source of equipment, parts, and other project for the SCMAGLEV project, which unquestionably will be one of the largest infrastructure projects in the state of Maryland's history. For now, the sources of manufacturing have not been determined, but we will take into consideration potential local business opportunities when/where possible.

- ***Economy – if items are shipped between Baltimore and Washington (and eventually extended to the other cities) could we expect their price to go down because of the speedier transport? Also, doesn't that mean that***

fewer items need to be warehoused since new supplies can arrive within hours, also reducing costs?

While transporting freight may seem like a potential service for the world's fastest train to consider, it is not envisioned currently for SCMAGLEV operations. Based on the existing service experience in Japan, the Northeast Corridor route is being solely designed for passenger transportation purposes, providing benefits for people looking to reduce travel time to and from major Northeast Corridor destinations.

- ***Energy consumption – what are the comparisons of the SCMAGLEV energy usage compared to low-speed MAGLEV, wheeled trains, airplanes? From what I have read, a large portion of the energy consumption is caused by air drag – true? I assume airplanes use many times more energy than a train because an airplane needs to lift many tons of people and cargo many miles into the air, but the SCMAGLEV only lifts it a fraction of an inch - true? If not, what is the truth?***

Overcoming air resistance is one of the largest expenditures of energy in any transportation platform. The current stage of SCMAGLEVs development is the result of countless hours of wind tunnel and materials design - all efforts to keep weight and air resistance at a minimum. In comparison, an airplane uses more than eight times more energy per seat-mile than SCMAGLEV. We are currently assembling a comparative analysis which will include more specific numbers. We'll share that with you once complete.

- ***Environment – what issues will be included in the Environmental Impact Statement (EIS)?***

The EIS will address a variety of potential issues, including:

- description of the affected environment.
- range of alternatives to the proposed action; alternatives are considered the "heart" of the EIS.
- analysis of the environmental impacts of each of the possible alternatives, including:
  - impacts to threatened or endangered species
  - air and water quality impacts
  - impacts to historic and cultural sites, particularly sites of significant importance to Indigenous peoples.
  - social and economic impacts to local communities, often including consideration of attributes such as impacts to available housing stock, economic impacts to businesses, property values, aesthetics and noise within the affected area
  - cost and schedule analyses for each alternative, including costs and timeline to mitigate expected impacts, to determine if the proposed action can be completed

at a acceptable cost and within an reasonable amount of time

- ***How much time will citizens have to review and comment on the EIS findings?***

The public input process is essential and should allow multiple opportunities for residents and businesses to weigh in. The independent EIS process led by the State of Maryland is evaluating a number of route options. Several open houses were held throughout Maryland and Washington DC to discuss the project and route options with the public. In fact, representatives for BWRR hosted or participated in more than40 public meetings since Fall 2016. This process will continue as the EIS proceeds and the preferred route is defined. Coordinating with local communities and respecting their concerns will continue to be a priority along every step of this project. The final route will be subject to approval by the FRA in collaboration with two dozen state and federal agencies following a completed EIS as required by the National Environmental Policy Act.

There will be ample additional opportunities for public comment as the Environmental Impact Statement study continues.

- ***Air pollution, ground pollution, noise levels, stability of soil (boring and trestles), aquifers, etc.?***

All of these topics will be addressed in the EIS.

- ***Where will be soil and rocks (and water?) from the boring be deposited?***

The details of this process are still in progress. We hope to reuse materials in beneficial ways.

- ***Will it be contaminated with anything? What if the bore goes thru an aquifer, how is that handled?***

Any such eventualities will be addressed in the EIS.

- ***Operation - Will the trains have a driver, conductor, etc.? Restrooms? Food?***

The trains will be fully automated -- without a driver/conductor on board. Full control will be remotely managed from the rail control center. This has proven to be an effective standard operating procedure for the SCMAGLEV train in Japan as well as many rail systems around the world. SCMAGLEV procedures are based on Japan's 50+ of experience. Safety and operation

standards developed by the operators of Japan's bullet trains have worked exceptionally well to deliver passengers to their destinations with unmatched on-time and safety records.

There will be restrooms in the train. Though the interiors of our train sets have not yet been designed, there is the possibility to add a food/beverage car for longer trips along the Northeast Corridor.

- **Cybersecurity: What are the cybersecurity protections? I assume a massive amount of software is required to operate the SCMAGLEV. And I assume you will get most of it from Japan. What are the controls to make sure the software does not contain malicious code, and that during software enhancements that nothing malicious is entered either accidentally or on purpose?**

With service planned in the Capital region and numerous neighborhoods and government facilities within close distance of the SCMAGLEV train route, BWRR considers the safety and security of nearby communities as well as our passengers, equipment and facilities as top priorities. The project will take all precautions and measures to ensure that software and all other aspects of our project are safe and secure from any potential issues.

Bonita Anderson

Subject: FW: Questions for BWRR about SCMaglev

From: ROBERT SNYDER [mailto:robertlsnyder08@comcast.net]
Sent: Thursday, May 17, 2018 3:09 PM
To: Bonita Anderson
Cc: Beverly Palau; dhenley@bwrapidrail.com
Subject: Questions for BWRR about SCMaglev

Questions on Maglev for BWRR:

ENERGY:

1.) If built, will SCMaglev's energy (electrification) usage/consumption rely more on renewable energy as Maryland requires more of its energy generation to be from renewable sources?

ENVIRONMENT:

2.) Some here in Greenbelt keep stating the Forest Preserve (FP) will be impacted by the Maglev line. Since it will be tunneled under Greenbelt and its FP, I assume they are referring to any 'woosh' sounds as trains enter or exit the portals. Will this sound be louder (or hardly noticeable) when compared to adjacent B-W Parkway (295) auto traffic?

OPERATION:

3.) Between Washington & Baltimore: What times would trains begin operating in the a.m. from DC and from Baltimore? What times would trains complete daily operations in the p.m.?

OPERATION:

4.) I understand there will be 4 northbound trains and 4 southbound trains per hour. How many cars or coaches per train? How many passengers per car are permitted? Will standing room be permitted (if needed) as is allowed on Wash DC Metrorail cars?

FUTURE PLANNING:

5.) After the Wash./Baltimore portion of SCMaglev is completed and operating with success, what might be the next phase of Maglev being completed to NYC? Would priority be given to work on the route from Baltimore on to Philadelphia? or NYC to Philadelphia?

OPERATION:

6.) Would BWRR consider offering ticket/pricing discounts to children or youth under 18? Seniors, say, over 70? Veterans?

thank you, Robert Snyder

BWRR
BALTIMORE-WASHINGTON RAPID RAIL

Baltimore Office
6 South Gay Street
Baltimore, MD 21202
(443) 759-8360

May 8, 2018

The Honorable Emmett V. Jordan,
Mayor of Greenbelt
25 Crescent Road
Greenbelt, MD 20770

Re: Maglev Project

Dear Mayor Jordan:

I am writing on behalf of Baltimore Washington Rapid Rail (BWRR) to offer a detailed update in response to the concerns raised in the City of Greenbelt's October 24, 2017 letter in "strong opposition" to the SCMAGLEV project. Your letter cites a number of issues that it assumes would negatively impact Greenbelt as well as communities and neighborhoods along the proposed routes. From our work to date, we know these various assumptions would have either never become reality, have already been cared for, or, through government processes will be addressed.

As your letter is several months old, BWRR thinks it prudent to ensure city leaders and residents have the current facts in order to more accurately inform their perspectives on this important regional transportation infrastructure project and some of its benefits. On that basis, I respectfully request that this full letter be posted to the City of Greenbelt's website in the section featuring SCMAGLEV-related documents.

Below please find BWRR's responses to your concerns, which have been provided in a point-by-point manner.

"Even though some of the route through Greenbelt is underground, there will be construction impacts and accessory structures for tunnel access, ventilation shafts and power that will negatively impact our historic community."

In fact, the entirety of Greenbelt is bypassed by deep tunnel - with little or no surface impact. In terms of the temporary nature of construction impacts, all construction-related activities are subject to county guidelines and permits. Therefore, all such fire, and life-safety facilities which protect the traveling public will be sited sensitively, comporting with the community and its historic nature.

"The J-1 alignment has a tunnel transition in the middle of the City's "green belt" where a City ballfield and our Forestry Preserve, protected by a City ordinance, are located. This proposal will also have a very destructive impact on valuable, environmentally sensitive resources, adjacent to our City including the Baltimore-Washington Parkway, the Beltsville Agricultural Research Center (BARC), the Patuxent Research Refuge and other important open spaces."

As the state's Environmental Impact Statement (EIS) managers have stated, the alignments are not static lines. For example, the tunnel portal initially sited near the Forestry Preserve has since been relocated two miles north. This change was recently discussed at a public meeting of the Greenbelt City Council.

Also, although the alignment's viaduct does not begin until four miles north of Greenbelt, your letter expressed concerns on its impact on federal lands. In fact, including the Beltsville Agricultural Research Center (BARC), the acreage impact on federal lands is marginal relative to the size of the respective facilities.

Guidance by BARC officials on siting options for a control center facility within BARC will be the subject of future discussions with those officials. The EIS will determine any impacts and provide mitigation/avoidance strategies.

"This project will not in any way benefit Greenbelt residents or any of the communities and neighborhoods along the proposed routes."

With BWRR being a Maryland-based company, we are planning for the SCMAGLEV project to provide advantages to a large number of Marylanders, including Greenbelt residents. The project will be a huge economic development generator, leading to thousands of construction jobs, as well as 1,500 permanent jobs and career opportunities.

With plans to link local higher education programs to our project, many students will prepare for exciting career paths of the future, whether with our company or other innovative technology firms. Contracting - and the variety of opportunities that brings - is anticipated for various types of businesses in our state.

Expected reductions in auto and air trips will result in reduced greenhouse gases, carbon monoxide, nitrogen oxides and volatile organic compounds. Less auto trips will also result in less congestion, reduced wear and tear of the highway infrastructure and reduced maintenance costs.

"Residents have expressed concerns about noise, loss of trees and wildlife habitat, harmful health impacts and reduction in property values. The City is also concerned about the impact on our business community and important scientific/research activities at BARC and the NASA Goddard Space Flight Center."

As the entirety of Greenbelt is bypassed by deep tunnel, noise is not an issue. For areas north of Greenbelt city limits, a portion of the alignment is on viaduct proximate to the Parkway. Approximately 93% of viaduct will not be near residential areas abutting the Parkway. Aside from Parkway traffic noise, noise will be limited to the sound of the train's displaced air, which will be subject to applicable noise containment requirements.

The EIS will address avoidance, minimization and/or mitigation measures for the *loss of trees*. In addition, the EIS will also determine the significance of *wildlife habitats* adjacent to the Parkway. Both the EIS and FRA's Office of Safety will assess any health impacts and recommend avoidance strategies if applicable. The EIS for the SCMAGLEV project in Japan concluded that *EMF* impacts were well below World Health Organization suggested limits.

As for property value implications, we believe expanded employment opportunities, the beneficial environmental consequences of cleaner air and less congestion, as well as the stature of "Maryland First" - the first in introducing a transformational means of traveling - all of which will attract future homebuyers, will also contribute to improved property values throughout this region

Also, in performing our due diligence, we have been in constructive discussions with both USDA and NASA on a range of issues to help us avoid potential concerns.

We hope this letter clarifies the misunderstandings that have arisen during the course SCMAGLEV's project development. Much still needs to be developed and we look forward to working together to shape a constructive outcome for this project – not only for Maryland, but for the region beyond.

Sincerely,

David Henley
Project Director

CITY OF GREENBELT

25 CRESCENT ROAD, GREENBELT, MD. 20770-1886

October 24, 2017

SCMAGLEV Project
Suhair Al Khatib
Maryland Transit Administration
6 Saint Paul Street
Baltimore, MD 21202

Dear Mr. Al Khatib:

On behalf of the Greenbelt City Council, I am writing to oppose the proposed Baltimore-Washington Superconducting Maglev Project. Two of the three alignments (J & J-1) currently being considered run right through our City. Even though some of the route through Greenbelt is underground, there will be construction impacts and accessory structures for tunnel access, ventilation shafts and power which will negatively impact our historic community.

Greenbelt is a National Historic Landmark and planned community with parks, open spaces and recreational amenities. The J-1 alignment has a tunnel transition in the middle of the City's "green belt" where a City ballfield (Northway Field) and our Forest Preserve, protected by a City ordinance, are located. This proposal will also have a very destructive impact on valuable, environmentally sensitive resources, adjacent to our City including the Baltimore-Washington Parkway, the Beltsville Agricultural Research Center (BARC), the Patuxent Research Refuge and other important open spaces.

This project will not in any way benefit Greenbelt residents or any of the communities and neighborhoods along the proposed routes. Our City is already divided by highways a Maglev train would further divide the community. It is not clear that this project will reduce traffic congestion. Residents have expressed concerns about noise, loss of trees and wildlife habitat, harmful health impacts and reduction in property values. The City is also concerned about the impact on our business community and important scientific/research activities at BARC and the NASA Goddard Space Flight Center.

The City of Greenbelt **strongly opposes** this project. This proposed Maglev project reduces the quality of life in our City. These funds would be better spent on improving existing rail and local transit services. We urge you to dismiss these alternatives and abandon this ill-conceived project.

Sincerely,

Emmett V. Jordan, Mayor

Judith F. Davis, Mayor Pro-Tem

Konrad E. Herling, City Council

Leta M. Mach, City Council

Silke I. Pope, City Council

Edward V.J. Pitens, City Council

Rodney M. Roberts, City Council

cc: City Council
Senator Ben Cardin
Senator Chris Van Hollen
Congressman Steny Hoyer
Governor Larry Hogan
Senator Paul Pinsky
Delegate Anne Healey
Delegate Tawanna Gaines
Delegate Alonzo Washington
Council Member Todd Turner
Council Member Derrick Davis
Council Member Dannielle Glaros
Council Member Andrea Harrison
Council Member Mary Lehman
Council Member Deni Taveras
Council Member Obie Patterson
Council Member Karen Toles
Council Member Mel Franklin
Nicole Ard, City Manager
Terry Hruby, Acting Director of Planning & Community Development

WORK SESSION OF THE GREENBELT CITY COUNCIL held Wednesday, October 11, 2017, for the purpose of meeting with representatives of Baltimore Washington Rapid Rail.

Mayor Jordan started the meeting at 8:04 p.m. It was held in the Multi-Purpose Room of the Greenbelt Community Center.

PRESENT WERE: Councilmembers Judith F. Davis, Konrad E. Herling, Leta M. Mach, Silke I. Pope, Edward V.J. Putens, Rodney M. Roberts and Mayor Emmett V Jordan.

STAFF PRESENT WERE: Nicole Ard, City Manager, Terri Hruby, Acting Director of Planning and Community Development and David E. Moran, Assistant City Manager.

ALSO PRESENT WERE: David Henley, Furqan Siddiqi and Earl Evan Jr., Baltimore Washington Rapid Rail (BWRR); George Boyce, Kris White, Laura Kressler, Bill Orleans, Aaron Marcavitch, Colin Byrd, Jean Snyder and Bob Snyder.

Mr. Henley presented a PowerPoint summarizing the proposed Baltimore-Washington Superconducting Maglev Project. He indicated that 60-70% of the alignment was underground.

Mayor Jordan asked about how BWRR was organized. Mr. Henley responded they were a private company. He anticipated the project would be funded with low interest loans from Japan Bank and the Federal government. Mayor Jordan asked about right of way (ROW) ownership. Mr. Henley responded that current railroad ROW is a mix of ownership types and this project would be similar. Mayor Jordan asked about the ticket cost to ride the Maglev. Mr. Henley responded that pricing would be competitive with Acela in the DC Market.

Mr. Roberts asked for clarification on the estimated vehicle trip reductions. Mr. Henley responded that it was estimated the Maglev would take 10% of car trips off the road. Mr. Roberts believed the Maglev was an elitist system. Mr. Henley responded that there was a market for some people to use this type of travel.

Ms. Davis noted that Council heard the whole project would be underground. Ms. Davis asked about the need for a third guideway for maintenance and cited the WMATA decision to not build a third tunnel as an example. Mr. Henley responded that this design was based on the Japan model and reported those trains don't break down. Mr. Siddiqi noted Japan had been operating their maglev for 52 years with no accidents and no fatalities.

Mr. Putens asked about the impact of earthquakes. Mr. Henley responded that this had to be included in the design. Mr. Siddiqi responded that concrete is designed to survive earthquakes. Mr. Putens asked about evacuation. Mr. Siddiqi responded that the tunnels and platforms are designed for egress.

Mr. Henley and Mr. Siddiqi encouraged Council to attend one of the upcoming open houses. Mr. Siddiqi indicated that the alignments would be narrowed to the three routes with the least impacts and this would be announced prior to the first open house.

Mr. Herling asked who would be the customer base. Mr. Henley responded that he would provide a ridership breakdown to Council.

Mayor Jordan noted that Council was familiar with the National Environmental Protection Act (NEPA) process. He asked who would decide on the final route. Mr. Henley responded that it was a joint process with Federal Railroad Administration (FRA) and Maryland Department of Transportation (MDOT) but the ultimate decision would be made by FRA.

Ms. Davis noted that projections for traffic diversion often don't materialize. She suggested that these funds could be invested in the current railroad system to make it better. Mr. Henley responded that BWRR saw this system as complimentary to existing rail systems.

Council reviewed the alignments. There was concern about the impacts of the proposed alignments.

Mayor Jordan asked about the impact on the WB&A trail alignment. Mr. Siddiqi responded that the bike path would be replaced and in tight areas the line would go underground.

Mr. Snyder asked how many jobs this project would provide. Mr. Siddiqi responded with estimates for job creation and indicated that greenhouse gases would be reduced by two million tons. Mr. Snyder expressed support for the project.

Mr. Boyce asked about plans for service levels. Mr. Siddiqi responded there would be 500 passengers every 15 minutes.

Ms. Kressler asked about tunnel depth. Mr. Henley indicated 80-100 feet deep in this area and it would be imperceptible in this area. Ms. Kressler asked about noise. Mr. Henley responded that BWRR would have to mitigate any noise impacts.

Mr. Marcavitch stressed the need for mitigation. He stated this project could impact Greenbelt but we won't have a nearby stop and receive any benefits. He asked if they had factored in sea level rise into their plans. Mr. Siddiqi responded that all the issues would need to be mitigated and this is why it takes so long to study.

Mr. Putens asked who would afford this service. Mr. Henley responded that they would provide those details. Mr. Putens questioned the benefits of this project.

Mayor Jordan asked about ongoing maintenance. Mr. Henley responded that rolling stock is replaced every 10 years and the system is closed every night for ongoing maintenance.

Mr. Roberts asked about a prior maglev proposal. Mr. Henley responded it had been around 20 years.

The meeting ended at 9:53 p.m.

Respectfully submitted,

David E. Moran
Assistant City Manager