PRINCE GEORGE'S COUNTY COMMENTS TO THE SUPERCONDUCTING MAGNETIC LEVITATION (SCMAGLEV) DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) – MAY 24, 2021

OVERARCHING CONCERNS:

- **The system is not designed to serve local commuters and communities.** It will not have local stops. Only three passenger stations would be built (i.e., south Baltimore (Cherry Hill), Washington D.C. (Mount Vernon), and the BWI Airport). As there is no access within Prince George's County, the meaningful transportation benefit is not evident.
- The project should spur economic development in Prince George's County. **This project, in fact, will most likely be a drain on economic development in the County**. If there is to be a facility within Prince George's County, there needs to be a significant threshold for ensuring that those positions stay within Prince George's County.
- The estimated cost of travel tickets is $60 to $80. **This cost is significantly higher than the existing Amtrak Acela rail option and would be prohibitive for most rail commuters**.
- The Maglev project **will not** remove local commuter traffic or address traffic congestion from the local road network.
- **The Maglev project is not a "green" project.** The technology has a high power consumption rate with a potentially high climate impact. In addition, this project would likely burden an already stressed electrical grid. Energy consumption is very high per passenger miles travelled (**Table 4.19-6**).
- Recent developments of high-speed rail (HSR) have reduced the advantage of Maglev at higher speeds, so that the differences in travel times are not significant. Second, high speed intercity rail has a huge advantage over Maglev due to HSR's compatibility with existing rail networks and rights of way with greater flexibility to serve additional communities with more frequent stops. Third, high speed rail involves a lower investment cost, while operating costs on Maglev are still uncertain. Energy consumption is estimated to be lower for high speed rail. All other features, like riding comfort, system image, grade climbing ability, noise, etc., are not significant enough to make one mode superior to the other. **Thus, the benefits of high-speed rail strongly outweigh Maglev's small travel time advantage.**
- **The existing railway corridors should be improved rather than shifting much needed resources to the Maglev system.** The Maglev project would serve as a systemic drain on existing vital transportation infrastructure and their networks (e.g., MARC and the Amtrak corridor, etc.). Additionally, there would be a reduction in the customer base of MARC and AMTRAK, as a percentage of future users would likely gravitate to the Maglev. As stated in the DEIS, Amtrak has unmet funding requirements to achieve a higher speed network with greater efficiencies along the Northeast Corridor (NEC). The answer is not to add a system that will siphon much needed resources, but to invest in the existing and vital network. We believe resources would be better utilized by focusing on and addressing the existing infrastructure, rather than diverting them to the Maglev.
- One of the purported purposes is to "provide connectivity to existing transportation modes in the region (e.g., heavy rail, light rail, bus, air)" (Page ES-6). However, this project proposes a *separated* alignment using a technology that is inconsistent with readily connecting to existing heavy rail (Amtrak), light rail (Purple Line), and local bus networks. If the only

connection points are in D.C., BWI, and Baltimore, and in the case of Baltimore, not even in the major business district, all the transit options within the County are excluded. **Again, there is no *direct* benefit to County residents as there are no stations located within the County.**

- Automated and connected vehicle technology is advancing quickly and will have a significant impact on the efficiencies in the transportation network that will render the Maglev system far less relevant and competitive. The underlying assumption from the DEIS that individuals will leave their personally operated vehicles (POV) for Maglev may no longer be relevant in the advent of the greater use of connected/automated vehicles. In addition, the DEIS does not adequately address changing transportation trends, such as a larger low/no emission and automated vehicle fleet.
- There was nothing in the document about consideration of various emerging technologies. Especially given the project timeline for implementation in 2030, the technology being proposed is already out of date and other technologies (e.g., hyper loop design, automated/connected vehicles, electric vehicles, etc.) should be considered.

Table 4.19-6: 2045 Projected Transportation Energy Consumption for Build Alternatives

Build Alternative	Transportation Mode	2045 Projected Transportation Consumption			
		Passenger-Miles Traveled (in 000s)[a]	Mode Energy Intensity in Btu per Passenger-Mile Traveled	Energy Consumption (MMBtu)	Percent of Total
Terminal station in Cherry Hill	Auto Travel	3,382,350	2,000	6,764,700	62
	Bus Travel	11,185	1,100	12,304	>0
	Rail Travel	92,883	1,250	116,104	1.0
	SCMAGLEV	2,517,185[b]	1,671[c]	4,000,000	37
			Total	**10,893,108**	**100**
Terminal station in Camden Yards	Auto Travel	3,338,993	2,000	6,677,866	62
	Bus Travel	10,657	1,100	11,723	>0
	Rail Travel	85,880	1,250	107,350	1
	SCMAGLEV	2,793,521[b]	1,506[c]	4,000,000	37
			Total	**10,796,939**	**100**

Source: FRA calculation except where otherwise cited
[a] Passenger-miles traveled are shown in thousands and are valid for the Baltimore-Washington corridor.
[b] SCMAGLEV PMT calculated using estimates of maximum number of passengers estimated for 2045.
[c] Energy intensity of SCMAGLEV is taken as average value of Cherry Hill and Camden Yards alternatives on a Btu/passenger-mile basis.

Environmental Impacts: Environmental Justice

- Environmental Justice Outreach should include briefings to the various members of the Anacostia Watershed community groups, Patuxent River Watershed and Patuxent River Commission and interested parties who meet regularly at the Metropolitan Washington Council of Governments. These groups participate in the Anacostia River Restoration Plan which the Beaverdam Creek Watershed is part of it. In addition, outreach should be targeted to the different socially vulnerable constituencies, including non-native speakers, to be well informed in their language.
- Prince George's County is one of the most populous majority-minority counties in the United States. **A project of this magnitude that will substantially impact numerous communities, some of which are equity emphasis areas and those that register high on the socially vulnerability index, without significant benefit to the residents of the County, should be considered under the rubric of environmental justice.**

Environmental Impacts: Waterways

- The project will impact 37,000 to 43,000 Linear Feet (LF) of waterway crossings, depending upon the chosen alternative.
- **Actual and potential impacts have been poorly quantified in the DEIS. Both temporary and permanent impacts will cause damage to the environment.**
  - Temporary impacts associated with construction include truck traffic, deep drilling, removal of spoil from tunnel, construction of de-watering ponds, construction of staging areas, and more.
  - Permanent impacts include the SCMAGLEV structures, TMFs, FA/EEs, and visual impacts of towering viaduct structures to BW Parkway and Patuxent Research Refuge.
- Disruption of natural hydrology, groundwater flow, wetland ecology, and other watershed impacts.
- Disruption of underground aquifers and recharge areas by the tunneling and other permanent impacts from underground and in-ground structures.
- Deficient plan for disposal of excavated soil from tunnels; long term impacts of dewatering areas; concerns regarding chemical contaminants to watershed from TMFs; impacts along the tunnel and viaduct route, and other unaddressed issues.
- Visual impact of viaducts to Parkway and Refuge will be enormous.

Impacts of SCMAGLEV on Water Resources

- Destruction or permanent damage to wetlands.
- Diversion of streams and rivers.
- Building of viaducts and other structures over or adjacent to wetlands, streams, and rivers.
- Deep and shallow tunneling under streams, rivers, and wetlands with potential impacts to aquifers.
- Removal of native vegetation along train route and for associated Trainset Maintenance Facilities (TMFs), Fresh Air/Emergency Egress (FA/EEs), other buildings, roads, parking lots, power substations, staging areas.
- Increased impervious surfaces and increased stormwater runoff.
- Increased chemical pollution and stormwater runoff from train washing, regular maintenance and operations.

- The construction of the nine Ground Fresh Air and Emergency Access (FA/EE) shafts, which are 40-50 feet tall above ground, will require substantial access roads and clearing. This construction of these permanent structures will result in significant environmental impacts. Additionally, there are potential impact to the aquifers, wetland and streams from tunneling.
- Increase of impervious area runoff needs to be treated on-site because of the aggregate disruption to environmentally-sensitive areas within the project limits.
- Neighborhoods in and along all the alternatives are older, established neighborhoods, many of which are equity emphasis areas, and those that register high on the social vulnerability index. The older residential structures that are found within close proximity are susceptible to vibrations. **The project needs to clearly address this issue and provide perpetual responsibility for addressing any damage (material or otherwise) to properties related to vibration from the Maglev construction and operations.**

- With new structures below ground, the natural aquifer and water table will be disrupted. **Prince George's County is already dealing with high flooding complaints in these areas. There is a significant impact to flooding due to this disturbance.** Moreover, the above-ground infrastructure construction will change the topography with added impervious areas which increases the peak flow to points of interest within these sensitive watersheds.
- The environmental mitigation plan should take place in the same MDE 8-digit impacted watershed. The development of detailed plans is critical to ensure the project will adhere to the County's Municipal Separate Storm Sewer System (MS4) permit as well as meet and improve the already impaired Watersheds.

EXECUTIVE SUMMARY COMMENTS:

Page ES-6 (Project Purpose and Need)

- "Support local and regional economic growth" – **The DEIS does not adequately**

Beck Branch and Beaverdam Creek Environmental Concerns

- The project impacts Beck Branch and the Patuxent River, both bounded by Non-Tidal Wetlands of Special State Concern (NTWSSC).
- These include the headwaters of Little Patuxent River, a tributary known to support sensitive species and habitats at the north end of Patuxent Research Refuge (PRR).
- The PRR, a National Wildlife Refuge, and other adjacent federal lands occupy over 20,000 acres. This constitutes the largest block of undeveloped land in the Baltimore-Washington corridor and serves as a significant pool of biodiversity and very high natural value. It protects water quality and houses rare ecosystems such as sand barrens, pitch pine barrens, bogs, etc.
- As proposed, a portion of the rail system that is on the surface that will cross Beck Branch and Beaverdam Creek, the proposed Maglev project work at these two stream crossings would create severe impacts at the respective stream crossings. The headwaters of Beaverdam Creek Watershed are near pristine condition and impacts need to be minimized.
- Stormwater management controls need to be put in place in all new areas developed as part of this project. The preferred method for water quality is for the installation of stormwater management devices that infiltrate into the ground reducing surface runoff. Design protocols should follow the County's stormwater management ordinance.
- Predominant soil groups are B and D in the Beaverdam Creek Watershed. These soil types present challenges for stormwater management (SWM) and will greatly add to the cost for providing adequate SWM facilities.
- Maintenance Facilities are being proposed in the Beaverdam Creek and Patuxent Watershed. Both watersheds are significantly impaired. A detailed study of impacts should be completed to indicate the immediate and long-term impacts to these watersheds.

demonstrate how the project will support local and regional economic growth, in

particular, every indication is that the project would serve as an economic drain upon Prince George's County with no noticeable benefit.

Page ES-7 (SCMAGLEV Technology)

- During construction, there will be significant impacts to local traffic at points of above ground land disturbance.
- Noise Issues - Other research has shown that due to air displacement the surrounding noise for Maglev can be 5 DB higher than the conventional train.
- Maglev operating costs are approximately 3 cents per passenger mile and 7 cents per ton-mile, compared to 15 cents per passenger mile for airplanes and 30 cents per ton mile for intercity trucks. Guideways can last for at least 50 years with minimal maintenance because there is no mechanical contact and wear. (1) This may lead to less job creation as compared to the overall capitol cost in investment and is not an incentive for local job market growth for Prince Georgians.

Page ES-8 (SCMAGLEV Technology)

- Fresh Air and Emergency Egress (FA/EE) Sites – Provide fresh air circulation and emergency evacuation facilities, located between 3.1 and 3.7 miles apart along tunnel sections. Eight locations along the build alternatives would be constructed. The cooling of the magnets in the train and lowering electricity cost in the coils along the guided wall for propelling the train require liquid helium or nitrogen to reduce energy cost; however, there is no discussion to show what negative impact these helium or nitrogen can cause for the environment. In the case of helium, much has been published with regards to a helium shortage. Based on basic economics, it would serve to figure that costs can be anticipated to rise significantly, potentially to the extent that it would greatly impact the economic assumptions being made by the Maglev Team and may negate any economic advantage that is being advanced by advocates of Maglev and could make costs prohibitive.
- Power Facilities – Power substations are required near or at each Trainset Maintenance Facility, stations, and approximately every 12 to 16 miles along the guideway route. Also, the power source in the grid may be adversely impacted due to higher electricity consumption, which could otherwise be provided for the local neighborhoods. There is no study shown that demonstrates that the power consumption from the project and overall impact on the power grid will not adversely impact a rate increase to local resident

Page ES-11 (Alternatives Development Process)

- The proposed guideway transition from tunnel to viaduct at the southern half of the project, next to Greenbelt and NASA should be relocated further north by approximately one (1) mile to minimize environmental, human and physical impacts on both communities/areas.

CHAPTER 3.3 DESCRIPTION OF ALTERNATIVES:

Page 3-39 (Construction Phase Facilities)

- The site of the former Landover Mall is at the confluence of major roadways in Prince George's County would most likely bring undesirable large vehicle movements to a densely populated area and cause unsafe traffic operations that could significantly, and negatively, affect the local population. Therefore, this site should no longer be considered. In addition, there are two major WSSC water mains located on this property. All precautions must be made to not impact this infrastructure, as there was a break to far from this location that created significant flooding and impact to the community. **Coordination with WSSC is a must on this issue.**
- In addition, the DEIS indicates a seven-year construction plan that would use the two FA/EE shafts as the means to remove and haul an enormous amount of sediment and debris would result in significant heavy truck movements and overall impact to the surrounding communities, which are equity emphasis areas and register high on the social vulnerability index.
- The below table identifies roadways impacted by the Maglev project. There appears to be an assumption by the Maglev project owners that the road right-of-way owners will be responsible for reconstructing its own roadways impacted by their project. Any reconstruction of roadways (public or private or otherwise) shall be the responsibility of the Maglev project owner**. It should be noted that the shared use overpass over the Baltimore-Washington Parkway (Spellman Overpass) that connects historic Greenbelt with the newer higher density multi-family dwelling units would be permanently removed thus creating a bifurcation in this community, which is unacceptable.**

Table 3.4-7 Summary of Permanent Existing Public Roadway Relocations

Common Route	Unique Route – Build Alternatives J	Unique Route – Build Alternatives J1
Adams Place, Washington, D.C. to be closed to public traffic Closure of Spellman Overpass over BWP, Greenbelt, MD Relocate portion of Odell Road, Beltsville, MD: 0.35 mile (BARC West TMF only) Relocate portion of Springfield Road, Beltsville, MD: 0.60 mile (for BARC Airstrip TMF only) Relocate portion of Old Portland Road, Laurel, MD: 0.5 mile (for MD 198 TMF only) Raise elevation of Annapolis Road/ Patapsco Avenue intersection approximately 20 feet on retained fill, Cherry Hill, Baltimore, MD: 0.25 mile along each approach	Explorer Road ramps to and from BWP Northbound, Greenbelt, MD: raise the elevation of 2 existing ramps approximately seven feet; ramps would be on retained fill, 0.15 mile each Lower the elevation of the existing BWP northbound ramp to Powder Mill Road[1] by approximately 3 feet to increase vertical clearance to the viaduct, 0.13 mile	Realignment of portion of Springfield Road near BWP, Laurel, MD: 0.33 miles

Source: AECOM 2020

[1] Powder Mill Road is owned by USDA.

CHAPTER 4.2 TRANSPORTATION:

Page 4.2-7 (SCMAGLEV Annual Ridership)

- Forecast diversion of passengers/trips to SCMAGLEV - Approximately 18 million rides in 2030, 67% diverted from auto, 12% from rail, 1% from bus, 4% from rideshare, 16% induced new trips). The DEIS cites 67% of trips to be diverted from vehicular travel seems overstated. The DEIS does not consider electric, autonomous and connected vehicles that should significantly reduce congestion, travel times, stress and tail pipe emissions.
- Forecast changes in Rail and Bus Passenger Miles – Rail passenger miles would decrease, being diverted to the SCMAGLEV. The diversion from MARC and AMTRAK rail service to SCMAGLEV could potentially weaken these modes of travel, that provide service to other locations in between the two cities, perhaps necessitating greater subsidies thereby increasing overall societal costs.
- Mitigation Strategies – The project shows positive impacts associated with declines in Vehicle Miles Travelled and aggregate time savings, however, the introduction of connected and autonomous electric vehicles should significantly benefit overall travel time, comfort and safety and should be considered in the study.

Page 4.2-9 (Section 4.2.4 Commuter Rail Network)

- Commuter Rail Network (MARC, 68 minutes, approximately $8 each way from the Baltimore business district to Washington) – The study incorporates improvements to provide more frequent, attractive and convenient services, included in the Baltimore Metropolitan Council (BMC) and Metropolitan Washington Council of Governments (MWCOG) Constrained Long Range Plans (CLRP). The Maryland Department of Transportation (MDOT) Maryland Transit Administration (MTA) also has a plan, MARC Cornerstone Plan, to improve management and system expansion through 2045. The project estimates that 32% of annual MARC ridership of the Camden and Penn lines would be diverted to the SCMAGLEV, likely lowering the service levels provided by MARC. The 32% diversion from both Penn and Camden lines seems rather high, considering the high fare costs of the SCMAGLEV and that these two lines serve the central business districts and many passengers besides Baltimore and Washington, DC. The project sponsors need to account for how these communities will be directly served.

Page 4.2-11 (Section 4.2.5 Intercity Passenger Rail (Amtrak))

- Intercity Passenger Rail (AMTRAK, Northeast Regional, approximately 40 minutes, $15 coach, $37 business, Acela, approximately 30 minutes, $44 business, $64 First Class) – AMTRAK service frequencies range from 15 to 20 minutes during the peak period and 30 to 40 minutes in the off-peak. The Federal Railroad Administration (FRA) has plans to improve capacity and performance of the Northeast Corridor. In addition, the new Acela 21 equipment is currently being manufactured and tested and will increase travel speeds to 160 mph. The project study estimates that 94% of traffic with Baltimore and Washington origins/destination would be diverted to SCMAGLEV, again, a rather high estimate considering the lower costs provided by AMTRAK.

Page 4.2-21 (Section 4.2.8 Station Area and Train Maintenance Facility Street Network Impacts)

- Station Areas – The stations would include drop-off areas and new parking structures (5,000 spaces). The DEIS indicates marginal changes in LOS and delay in the areas next to the Baltimore stations (neither of which serve the central business district) and proposes no mitigation plans. Considering that 67% of passengers would be diverted from automobiles to the

SCMAGLEV, they would either access the stations via existing transit services (which would significantly add to the door to door travel-time), or, would drive to the stations, causing additional traffic congestion. Therefore, future mitigation measures will be necessary at the Baltimore/Cherry Hill station. Degradation of traffic operations is expected at several intersections in the Washington, DC station area, therefore several improvements are expected at five (5) intersections.

CHAPTER 4.7 RECREATIONAL FACILITIES AND PARKLANDS:

- For Build Alternatives J and J1, tunnel alignments either coincide with or fall very close to the building footprints of Bladensburg High School, Elizabeth Seton High School, Roger Heights Elementary School and Ports Towns Elementary School. These schools are located in equity emphasis area and register high on the social vulnerability index. The County is extremely concerned with the potential health risks to these communities.

CHAPTER 4.21 PUBLIC HEALTH AND SAFETY:

- The long-term effects to humans of the high level of electro-magnetic fields that propel the Maglev is unknown and should be studied prior to any major decision advancing this project.

REVIEW OF THE APPENDIX D.7 - NATURAL ENVIRONMENT TECHNICAL REPORT

The Draft Environmental Impact Study details the short term and permanent impacts to the natural environment and includes general statements to mitigation strategies which would be proposed during final design and construction planning phases. Information provided within the Technical Appendix includes statements to these effects:

1. **The impacts from construction and operations will increase the risk of adverse runoff and level of pollutants above those which currently exist.**

    a. The only fully autonomous TMF's are proposed within Prince George's County, and such a facility "would accommodate the full range of activities that typically occur at a SCMAGLEV TMF (for example, train storage, maintenance shops, factory and repair shops, cleaning facilities, train inspection facilities, offices, employee facilities, and on-site parking). Utilities to these sites, including electric, communications, water and wastewater service will be determined during later phases of design."

    b. The Maryland Biological Stream Survey (MBSS) data and Section 303(d) of the CWA lists impaired waters. "In general, all major waterways were indicated as having fair to poor water quality, except for Beaverdam Creek (part of the Anacostia watershed), which is identified as having good health with the presence of sensitive macroinvertebrates and fish. MBSS data helps the MDE designate certain waterbodies as Tier II High Quality Waters, which are "waters that have water quality that is better than the minimum standard necessary to meet designated uses." Further, the Federal Rail Administration identified two locations; Beaverdam Creek, a Tier II stream segment within Beaverdam Creek Tier II Catchment; and T the Patuxent River Upper Watershed Tier II Catchment, with Tier II waters.

    c. The greatest total acreage of impact for any alignment (Build Alternatives J or J1) occurs in the Anacostia River Watershed, as this watershed has the longest segment of proposed tunnel and viaduct. Build Alternative J and J1 alignments within this watershed have similar impacts because they generally represent similar areas of proposed tunnel, proposed SCMAGLEV elements, and viaduct.

    d. The Build Alternative J and J1 alignments will also have similar impacts within the Patuxent River Watershed, as all alignments are largely proposed as viaduct through this area. Impacts associated with the alignments in this watershed are consistent with that of the J alignments within the Little Patuxent River Watershed noted above, with proposed construction in the floodplain, removal of vegetation, and potential affects to water quality. Although direct, indirect, permanent and temporary impacts are proposed within these watersheds and may pose an adverse effect to resources within the watershed, with BMPs and mitigation in place, it is anticipated that the overall function of these watersheds would not be adversely affected as a result of the alignments alone (surface viaduct, subsurface tunnel, and ancillary features). The alignments are largely located along the existing transportation corridor where risks to runoff and pollutants would be exacerbated

2. **There are significant concerns with the following statement from the referenced appendix which implies the need to consider alternative funding from affected local governments (i.e., municipalities, Prince George's County, etc.). It should be noted that local governments in Prince George's County will not provide material support to**

mitigating physical or environmental impacts (i.e. road realignments or impacts to County assets) of this project:

a. “Other factors may include a municipal function such as the ability to capture stormwater runoff or groundwater recharge and would the loss of these functions have a dollar value to the new artificially created municipal systems that may be required. Coordination with MDNR and county and local municipalities to identify ecological restoration priorities and consider funding agency and nonprofit community greening, water quality, and/or environmental education projects and programs”

b. Table 5.4-1 “Public Involvement and Agency Considerations” which describes “Lead Agencies and Invited Cooperating and Participating Agencies” should be modified to add the Prince George’s County Department of Permitting, Enforcement, and Inspections (DPIE) as review authority for grading and Stormwater Management, floodplains, and all proposed regulated activities which require joint state and local coordination. Please add the Prince George’s Department of Environment (DOE) for review of any proposed activities which could impact TMDLs, stormwater management pollution plans, and other aspects of the County’s MS4 NPDES Permit as issued by the Maryland Department of the Environment.