BWRR
BALTIMORE-WASHINGTON RAPID RAIL

TNEM
THE NORTHEAST MAGLEV

Project Introduction

Who Is BWRR?

Baltimore-Washington Rapid Rail (BWRR)
American-owned, Maryland-based franchised railroad

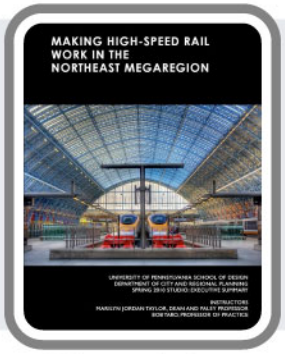
The Northeast Maglev (TNEM)
American-owned, Maryland based firm promoting the deployment of SCMAGLEV technology

Central Japan Railway Company (JR Central)

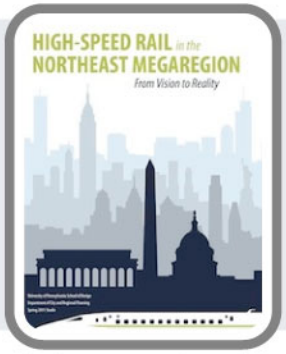
- Developer/Operator of the Superconducting Maglev high speed train
- Operator of the 'bullet train' since 1964

Need for High-Speed Service

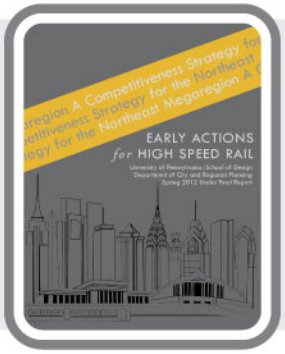
Multiple studies have determined the need for true high-speed rail in the Northeast Corridor



Making High Speed Rail Work in the Northeast Megaregion
UPenn, 2010



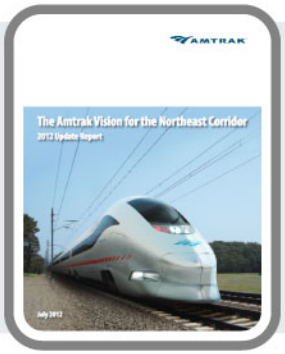
High Speed Rail in the Northeast Megaregion
UPenn, 2011



Early Actions for High Speed Rail
UPenn, 2012

Needs and Desires of Travellers in the Northeast Corridor
FRA, 1970

A Vision for High-Speed Rail in the Northeast Corridor
Amtrak, 2010



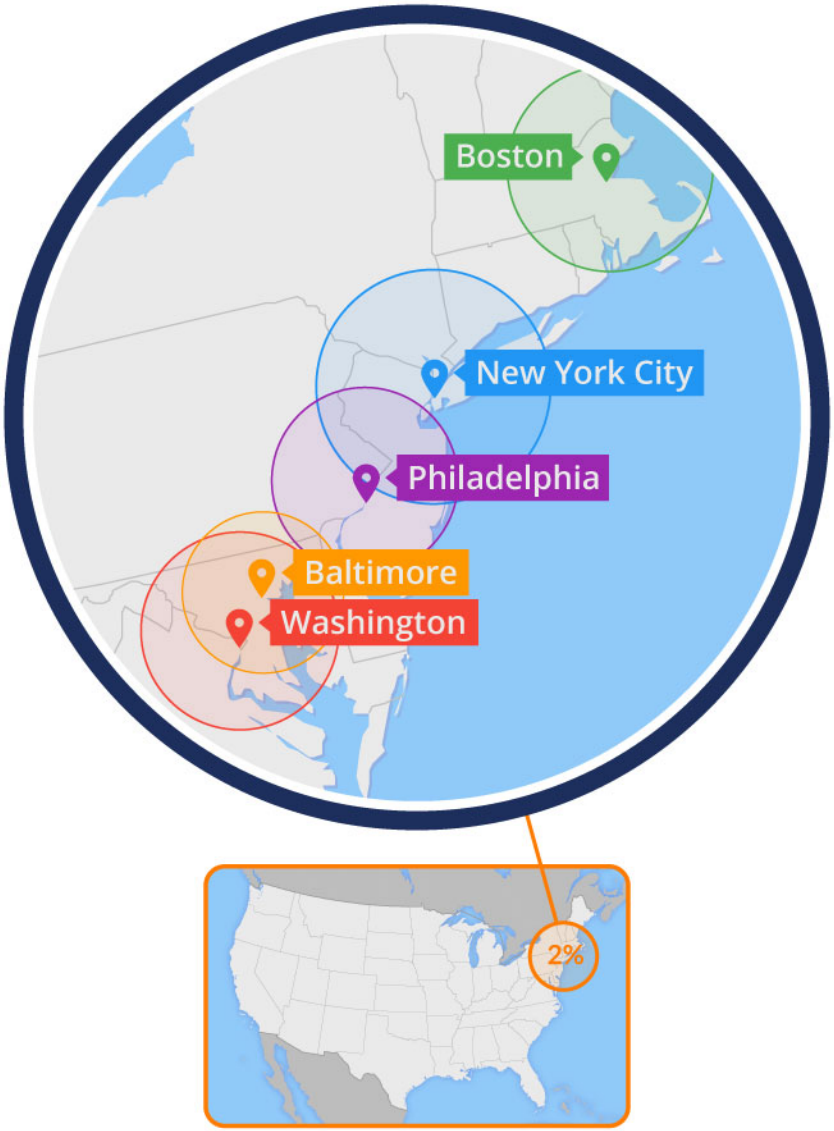
The Amtrak Vision for the Northeast Corridor
Amtrak, 2012

The Northeast Corridor: A Growing Corridor

TODAY

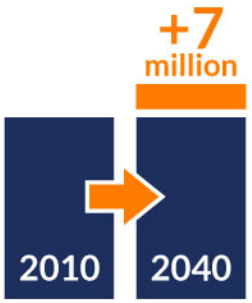
51 MILLION
residents

24 MILLION
jobs

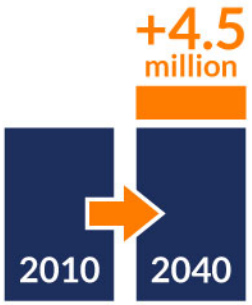


All on just 2% of U.S. land area

BY 2040



58 MILLION
residents



28.5 MILLION
jobs

NEC Infrastructure

HIGHWAYS

- 50% increase in average delay in Baltimore region since 1982
- Traffic throughout at any time of day

AIRWAYS

- Number of polluting short haul flights is increasing
- A simple one hour flight takes hours of processing

RAILWAYS

- Unpredictable delays
- Impossible to accommodate high speed on existing lines
- Current cumbersome model of shared freight & passenger rail

Our Vision: *Fastest* Train in World

Job Creation in Maryland

74,000 jobs
from construction

44,500
in Prince George's
and Anne Arundel Counties

+1,500 jobs annually
after opening

MARYLAND

GDP Increase in Maryland

$6.5 billion
from construction

$4.5 billion
in Prince George's
and Anne Arundel Counties

+$268 million annually
after opening

TOTAL JOBS NATIONWIDE:

205,000 jobs
from construction

+14,600 jobs
annually after opening

NATIONWIDE

TOTAL GDP NATIONWIDE:

$22.5 billion
from construction

+$584 million
annually after opening

Preparing for the Future

Setting up programs and training for new era technology careers – and more

Regional Job Opportunities

Construction and operation of the SCMAGLEV will result in increased demand for jobs in a variety of sectors

Construction

Logistics
Assembly
Planning & Supervision

Engineering

Software
Electrical & Mechanical
Fire, Life, Safety

Maintenance

Inspection
Infrastructure
Testing

Operations

Operators
On-Board Services
Systems Analysis

Stations

Ticketing
Cleaning
Security

Facilities

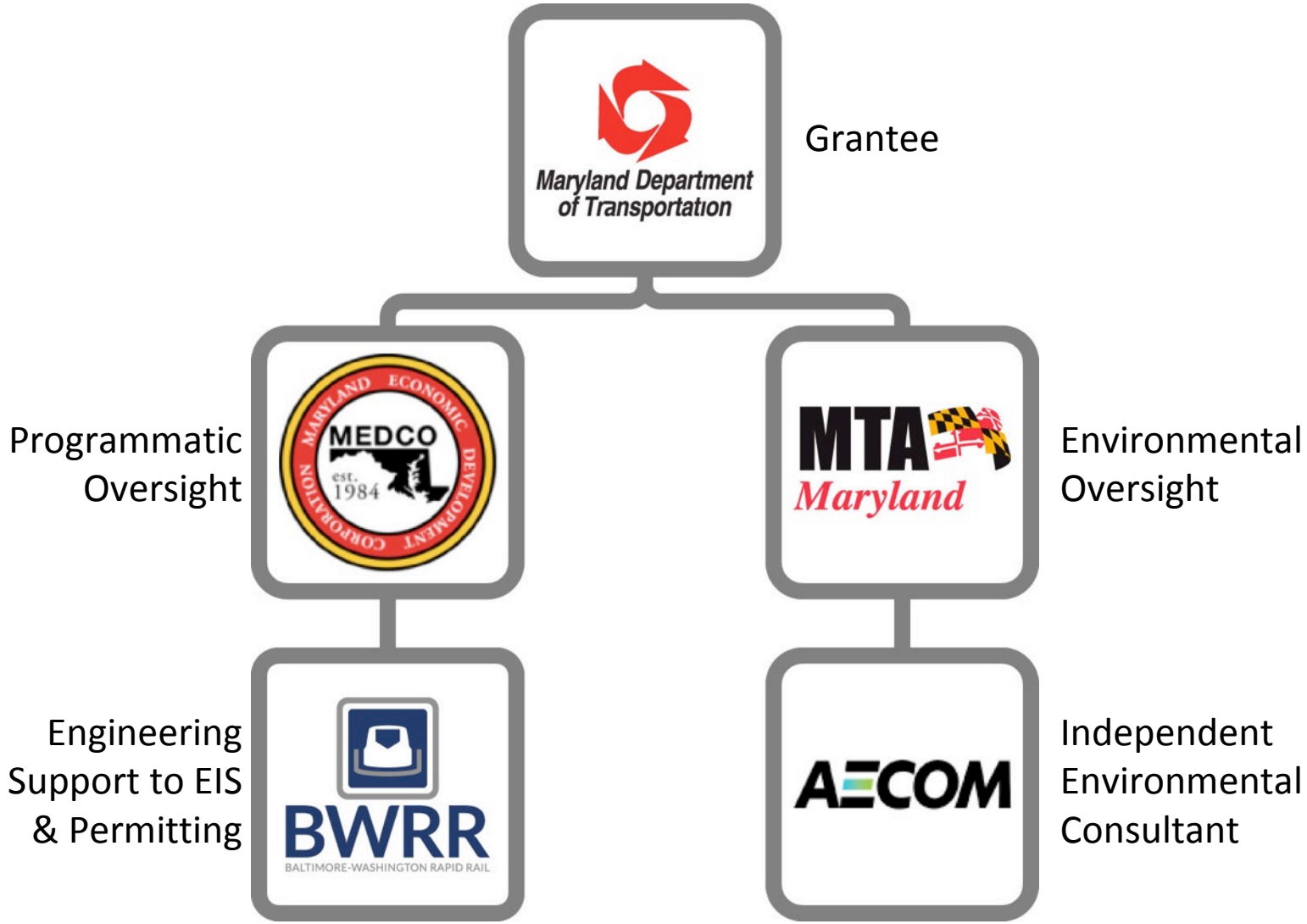
Yard Management
Rail Control Center
Vehicle Maintenance & Repair

Expected Environmental Benefits

Yearly reduction of air emissions associated with decreased vehicle miles traveled (VMT)

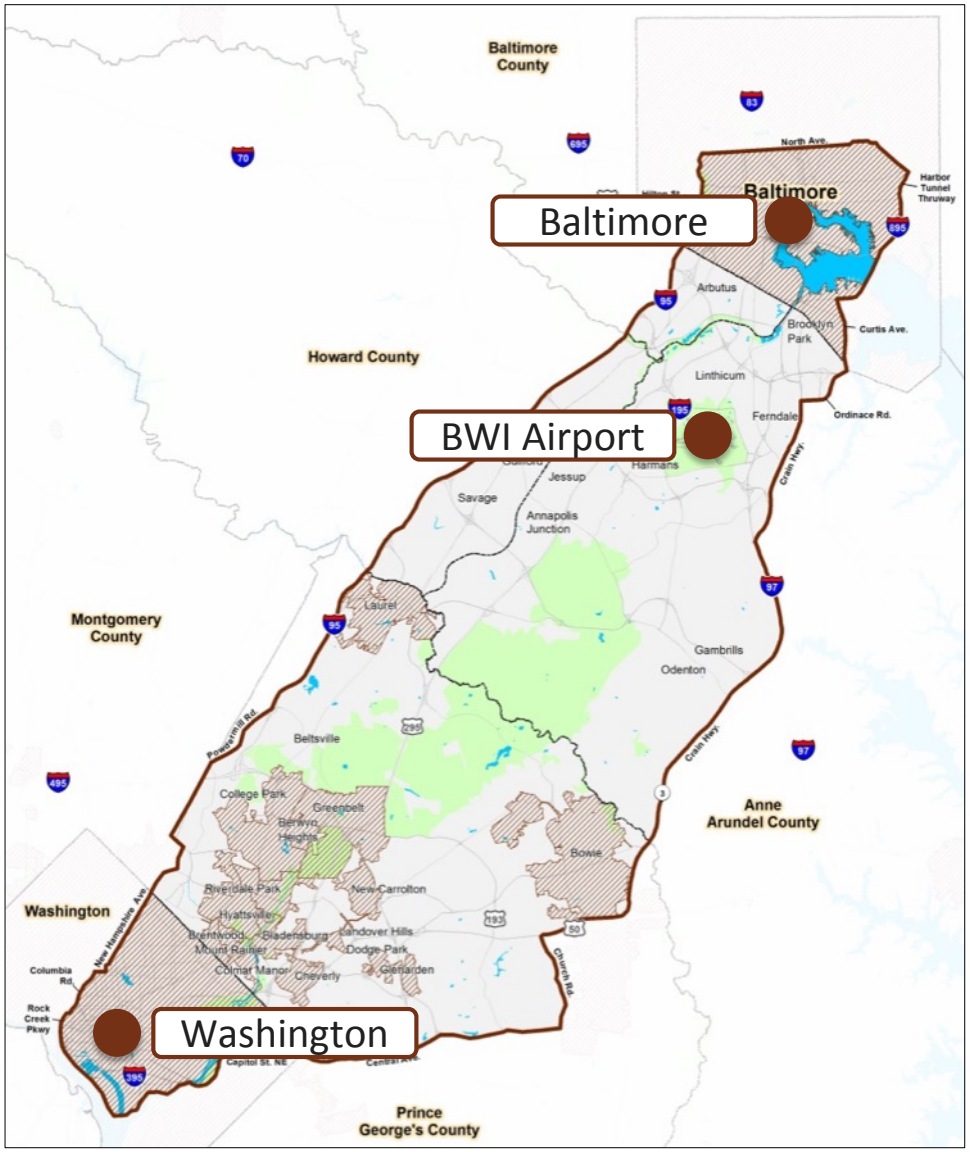
2,000,000 TONS	76,000 TONS	15,000 TONS	4,000 TONS
Greenhouse Gasses	Carbon Monoxide	Nitrogen Oxides	Volatile Organic Compounds

NEPA / Engineering Team

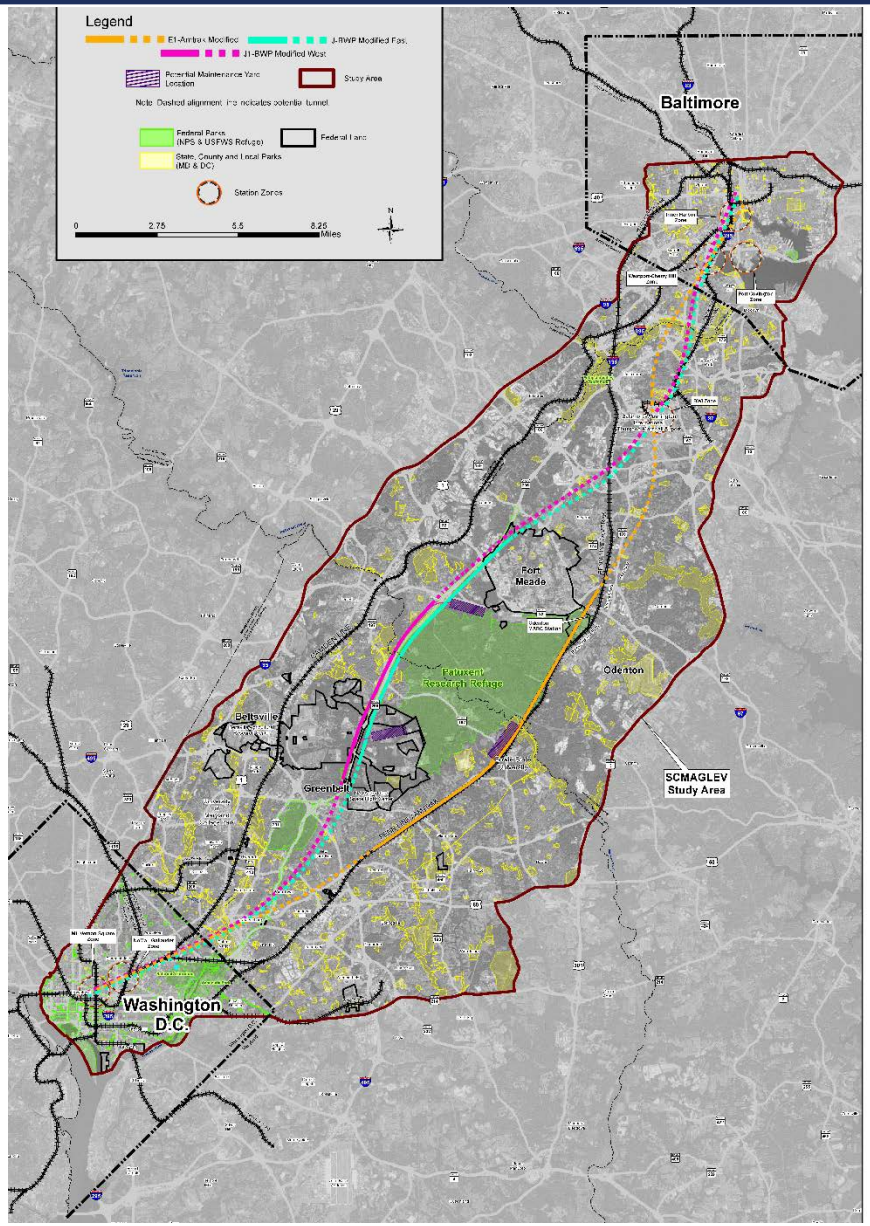


First Phase SCMAGLEV: Study

- Study area approximately 40 miles long by 10 miles wide between Baltimore and DC
- Multiple possible alignments and station locations
- Area includes numerous natural and historic resources, parks
- Land ownership is public and private
- Major government facilities

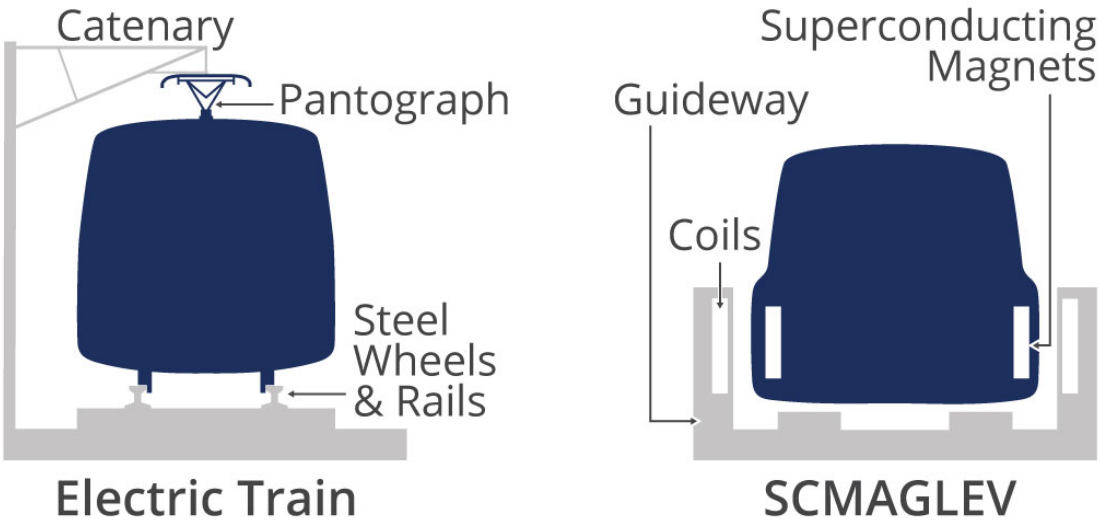


DC to Baltimore Alignment Alternatives



Superconducting Magnetic Levitation

How It Works



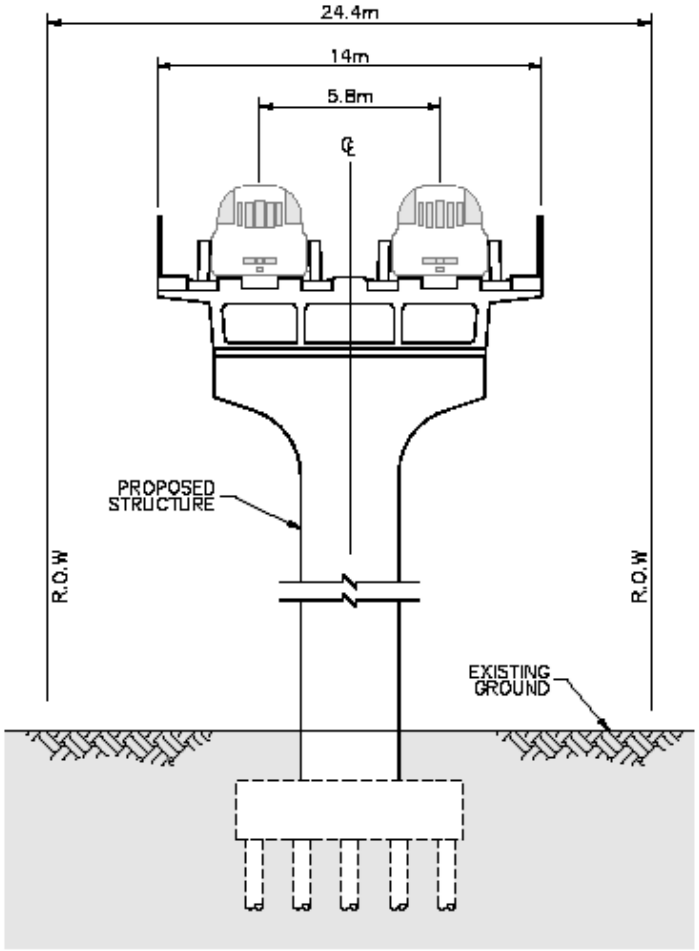
- Instead of running on rails, SCMAGLEV trains levitate between the walls of a U-shaped guideway containing coils
- The SCMAGLEV utilizes strong magnetic forces between guideway coils and superconducting magnets on the train for acceleration, deceleration, guidance and levitation

SCMAGLEV Technical Requirements

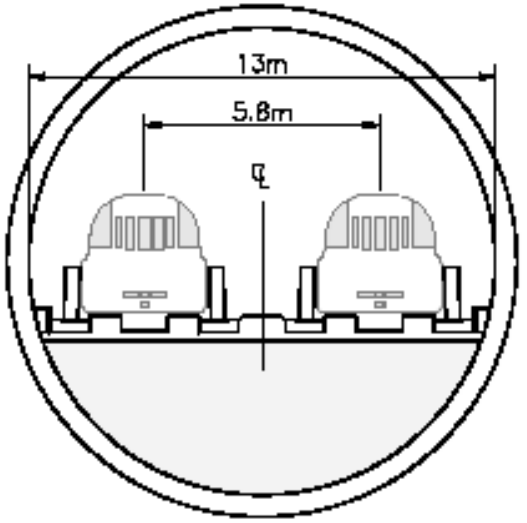
- Strict geometry is necessary to ensure highest practical speed can be attained by SCMAGLEV technology
- Shifting direction at top speed must be safely accomplished over a long and gradual geometry to ensure passenger comfort
- Tunnel or viaduct alignments allow for increased safety and minimize disruption

Typical Cross Sections

Typical Viaduct Section



Typical Tunnel Section



Baltimore-Washington Project Schedule

EIS Completion
Summer 2019

Design / Construction Commences
Winter 2019

Construction duration depends on alignment selected and construction methodology

Revenue Service Begins

* Schedule includes securing financing and procurement

Summary

- The Northeast Corridor has outgrown its infrastructure and future growth will continue to strain it.
- The need for high-speed is long recognized
- SCMAGLEV is a proven technology that will provide a transformational alternative
- Ongoing public engagement will help shape a successful result for all!

Thank you!