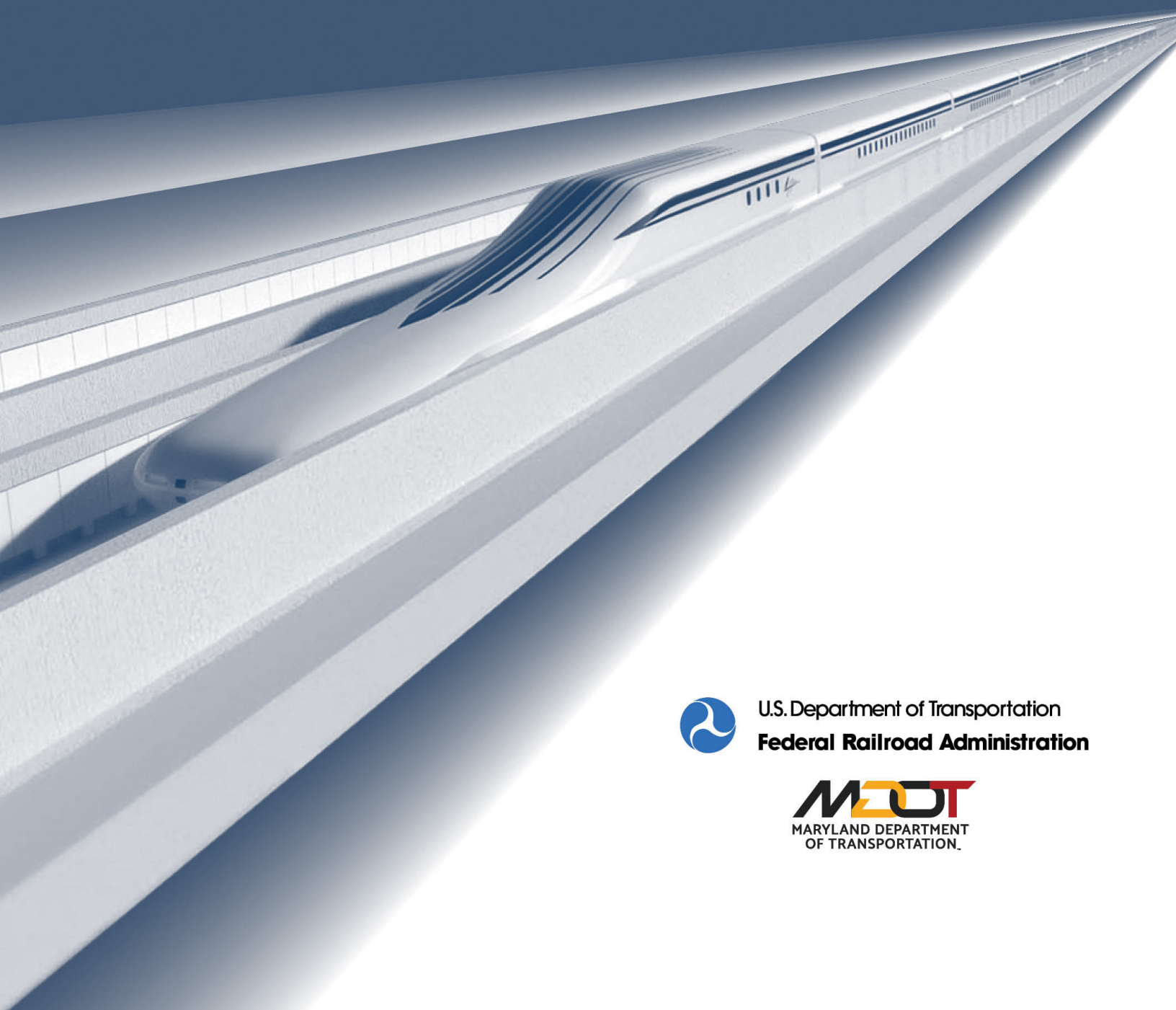
Chapter 1
Introduction

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT AND SECTION 4(f) EVALUATION



U.S. Department of Transportation
Federal Railroad Administration

MARYLAND DEPARTMENT OF TRANSPORTATION

Chapter 1: Introduction

The Draft Environmental Impact Statement and Draft Section 4(f) Evaluation (DEIS) presents the analysis of a proposed Superconducting Magnetic Levitation (SCMAGLEV) Project (SCMAGLEV Project) high-speed rail system between Baltimore, Maryland (MD) and Washington, D.C. (Proposed Action). The Federal Railroad Administration (FRA) published a Notice of Intent (NOI) in the *Federal Register* on November 25, 2016 (stating the intent to prepare a DEIS on the Proposed Action). FRA has prepared this DEIS in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321–4327 and 40 C.F.R. Parts 1500–1508); 23 U.S.C 139; Section 4(f) of the Department of Transportation Act; FRA Procedures for Considering Environmental Impacts (64 FR 28545, May 26, 1999; 78 FR 2713, January 14, 2013); 23 C.F.R. Part 771 – Environmental Impact and Related Procedures, and other applicable laws and regulations.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), as amended, authorized funding for pre-construction planning activities related to SCMAGLEV technology for eligible projects. In March 2015, FRA issued a Notice of Funding Availability (NOFA) to solicit applications for construction of high-speed rail. In April 2015, acting on behalf of the Project Sponsor (Baltimore-Washington Rapid Rail (BWRR)), Maryland Department of Transportation Maryland Transit Administration (MDOT MTA) submitted an application to FRA for the SAFETEA-LU funds to perform preliminary engineering and NEPA studies related to BWRR's proposal to build a SCMAGLEV system. However, there is no Federal funding appropriated for construction, as of the publication of this DEIS.

In November 2015, the Maryland Public Service Commission approved BWRR's application to acquire a passenger railroad franchise to deploy a SCMAGLEV system between Washington, D.C. and Baltimore. In 2016, FRA awarded a $27.8 million SCMAGLEV grant to MDOT MTA for preliminary engineering and to complete a NEPA study for the Proposed Action. BWRR committed to provide a 20 percent match contribution for the NEPA study and preliminary engineering.

FRA is the lead Federal agency and MDOT MTA is the joint lead agency. BWRR, a private corporation, is the Project Sponsor and developer of the proposed SCMAGLEV service. For more information about BWRR visit their SCMAGLEV Project website https://bwrapidrail.com/.

This DEIS reflects public and agency input received during the formal Scoping period and throughout the development of this document. MDOT MTA created a website to inform and allow public and stakeholder input https://www.bwmaglev.info/. The feedback received and analysis presented in this DEIS will inform and provide the basis for FRA's identification of a Preferred Alternative, following a series of public hearings. This chapter provides a project description, defines the Project Study Area and planning context, explains the NEPA process, and lays out the scope of the DEIS in two volumes.

1.1 Project Description

1.1.1 Proposed Action

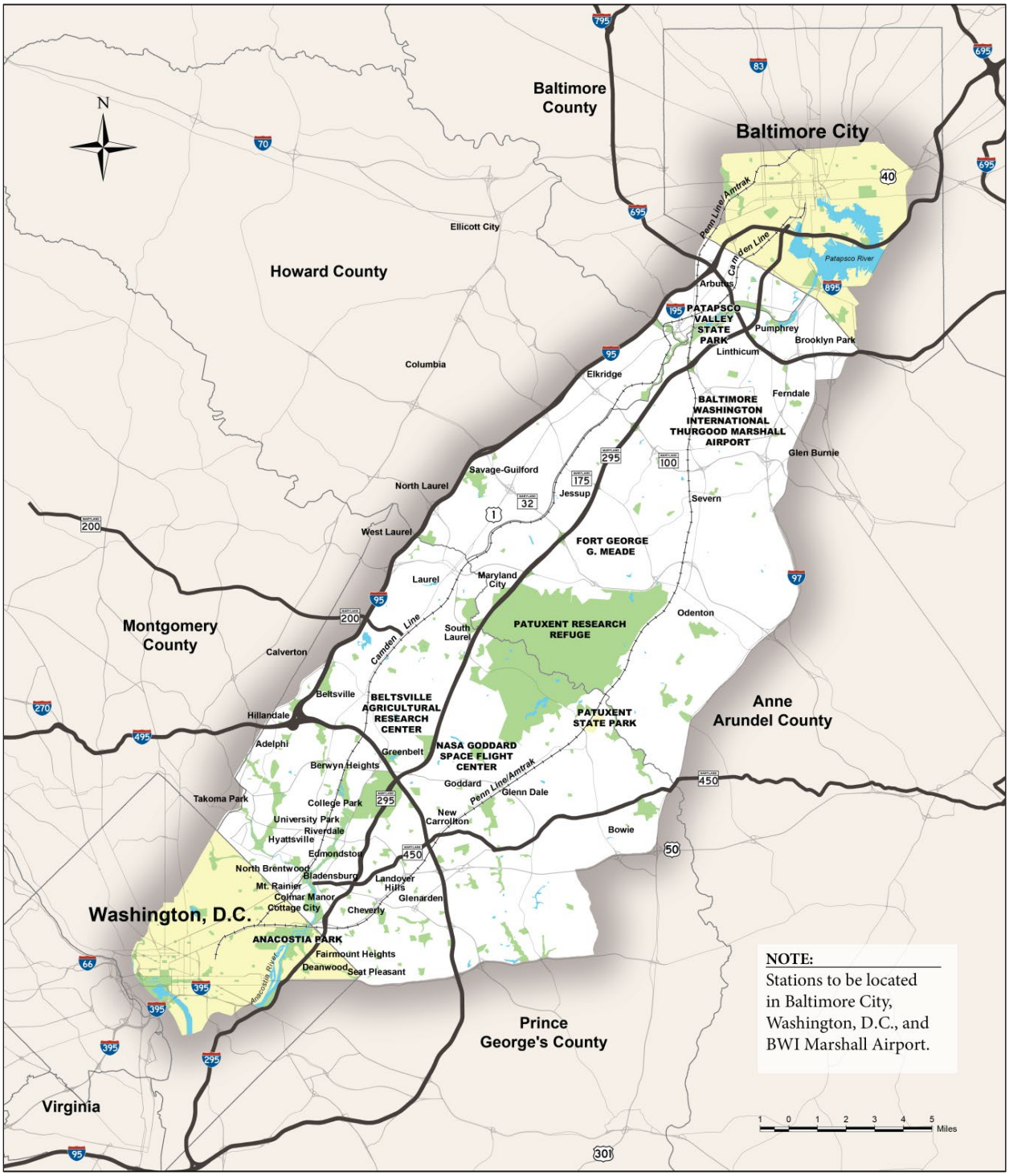
The Proposed Action includes the construction and operation of a SCMAGLEV system between Baltimore, MD and Washington, D.C. The SCMAGLEV Project is a high-speed rail technology that runs on a grade-separated, fixed guideway powered by magnetic forces. This system can operate at speeds of over 300 miles per hour. This system does not operate on standard steel wheel railroad tracks and therefore requires a separate operating environment. Chapter 3**,** Alternatives Considered, provides more information on the superconducting magnetic levitation technology.

The SCMAGLEV Project includes two terminal stations (Washington, D.C. and Baltimore, MD) and one intermediate station at the Baltimore-Washington International Thurgood Marshall Airport (BWI Marshall Airport Station). The system requires additional facilities to operate including one trainset maintenance facility (TMF), two maintenance of way (MOW) facilities, and various smaller ancillary facilities. The ancillary facilities include fresh air and emergency egress (FA/EE) facilities, substations, SCMAGLEV wayside system facilities and stormwater management. The system proposes to operate on both underground (deep tunnel) and an elevated guideway (viaduct). Stations and ancillary facilities are generally above, below, or adjacent to the guideway and would provide for access to passenger and employee parking as applicable.

1.1.2 Project Study Area

The Project Study Area for the SCMAGLEV Project is roughly bound by I-95 on the west and by the former Washington-Baltimore & Annapolis Electric Railroad alignment on the east. It spans approximately 40 miles north to south and ten miles east to west. It includes portions of the Washington, D.C, Prince George's County, Anne Arundel County, Howard County, Baltimore County, and the City of Baltimore, MD. **Figure 1.1-1** shows the Project Study Area.

Figure 1.1-1: Project Study Area



Source: AECOM 2018

1.2 Planning Context

1.2.1 Previous Maglev Studies

In 2001, FRA published a Record of Decision (ROD) following completion of a Programmatic Environmental Impact Statement (PEIS)[1] for the Maglev Deployment Program (MDP). The purpose of this action was to demonstrate Maglev technology by identifying a viable Maglev project in the United States, and by assisting a public/private partnership with the planning, financing, construction, and operation of a project. As published in the ROD, FRA concluded that Maglev was an appropriate technology for use in new transportation options in Maryland and Pennsylvania and should be further studied at the project level.

In coordination with MDOT MTA, FRA prepared and circulated a DEIS in 2003, for a Maglev project linking Union Station in Washington, D.C., BWI Marshall Airport Station and downtown Baltimore. The DEIS documented project needs, including transportation demand, regional economic growth, and reducing corridor congestion. The DEIS also documented feasible mitigation measures for the environmental impacts and the benefits of the project alternatives.

The 2001 PEIS and 2003 DEIS considered German Transrapid, Inc technology, which is an early form of Maglev technology and different from the Japanese SCMAGLEV technology evaluated in this DEIS. The Japanese SCMAGLEV technology is a more current technology, and its use has been successfully demonstrated in multiple places in the world.

1.2.2 Northeast Corridor (NEC) FUTURE Program

In 2012, FRA launched the Northeast Corridor (NEC) FUTURE program to consider the role of rail passenger service along the 457-mile NEC rail line between Washington, D.C. and Boston, MA. The NEC is the rail transportation spine of the Northeast and the most heavily utilized rail network in the United States. The NEC FUTURE Environmental Impact Statement (EIS) included an evaluation of current and future transportation demands and the appropriate level of investment in capacity improvements for the NEC. Through the NEC FUTURE program, FRA identified a long-term vision and investment strategy for the NEC. The Selected Alternative resulting from that process is documented in the ROD for the NEC FUTURE program (July 2017).

The Selected Alternative includes proposed improvements to the existing NEC between Washington, D.C. and Baltimore, MD. Improvements included increased frequencies for

[1] A programmatic EIS evaluates broad, planning-level decisions that may cover a range of individual projects, implementation of projects over a long-time frame and/or implementation of projects over a large geographic area. A programmatic EIS does not evaluate project-level issues, such as precise footprints or specific design details; these types of detailed evaluations are undertaken in a traditional, project-level EIS.

passenger rail (intercity and regional), new station connections, conflict-free operations by increasing rail capacity, and support for integrated rail network connections to points south and north of the NEC. FRA did not incorporate advanced guideway options or similar new technologies, such as maglev technology, in the alternatives' development process for the NEC FUTURE program. However, the NEC FUTURE program did not preclude such technologies from being studied separately as a future investment in the regional transportation system.

1.2.3 NEPA Process

The NEPA process applies when a project requires Federal funding or approvals (e.g., Federal permits). Through the NEPA process, Federal agencies must consider the impact of their proposed action(s) on the built and natural environment and engage with the public.

For each project subject to NEPA, a "class of action" is determined by the lead Federal agency. The NEPA class of action is determined based on the potential for the project to result in significant impacts and the potential for public controversy. FRA, as the lead Federal agency, determined that the appropriate class of action for the SCMAGLEV Project is an EIS. An EIS requires:

- A NOI to prepare an EIS published in the Federal Register (FR);
- A formal Scoping process, initiated with the NOI, that provides interested parties with an opportunity to provide input on the scope of analysis, the range of alternatives evaluated, and the purpose and need for the Proposed Action;
- An opportunity for the public to review and comment on the DEIS, which may also include a public hearing; and
- The preparation of a Final EIS (FEIS) that incorporates and addresses relevant comments from the DEIS public hearing and comment period and identifies the Preferred Alternative.

Based on the EIS and public comments, a Federal agency may issue a Record of Decision (ROD).

1.2.3.1 Agency Roles and Responsibilities

FRA, as the lead Federal agency is responsible for ensuring that the environmental review process is conducted in accordance with NEPA and all applicable environmental laws. Cooperating Agencies are those agencies that have jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative). Participating Agencies are those agencies that may have an interest in the proposed project. By agreeing to be either a cooperating or participating agency in the NEPA process, agencies are committing to participate throughout the process and to provide input on things such as methodology, analysis, findings and mitigation. FRA has invited applicable Federal, state, county, and local government regulatory and jurisdictional agencies within the Project Study Area to be cooperating

and participating agencies. Some of the identified agencies with jurisdiction over affected resources or property may require additional approvals to authorize the project. More information on required approvals for each agency is provided in Appendix D.01. Chapter 5, Public Involvement and Agency Coordination provides a list of agencies and their roles.

FRA and MDOT MTA invited a broad range of Federal, state, and local agencies to review and comment on documentation at three key milestones as part of the EIS process: 1) Purpose and Need; 2) Alternatives Retained for Detailed Study; and 3) Preferred Alternative and Conceptual Mitigation. For this DEIS, the FRA has not identified a Preferred Alternative. The FRA will seek input from the public and agencies prior to identifying a Preferred Alternative and conceptual mitigation. Select agencies are considered "Concurring Agencies" and are requested to concur to the decisions made at key milestones. For the SCMAGLEV Project, FRA identified the following concurring agencies: The U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (USEPA), and the Federal Aviation Administration (FAA) (**see Table 1.2-1**).

Table 1.2-1: Likely Federal Permits and Approvals

Permit/Approval	Responsible Permitting Agency
National Environmental Policy Act – Record of Decision Section 4(f), Department of Transportation Act - Approval	Federal Railroad Administration
Construction at BWI Airport - Permit	Federal Aviation Administration
TBD	Surface Transportation Board
Section 7, Endangered Species Act	U.S. Fish and Wildlife Service
Special Use Permit	National Park Service*
Land-owning Agency	U.S. Department of Agriculture*
Section 404/408, Clean Water Act - Permit	U.S. Army Corps of Engineers
Coordination/Land-owning Agency	National Security Agency/Fort George Meade (U.S. Army)
Coordination/Land-owning Agency	National Aeronautics and Space Administration
Land-owning Agency	U.S. Secret Service/James J. Rowley Training Center
Land-owning Agency	General Services Administration
Coordination/Land-leasing Agency	U.S. Department of Labor/Woodland Jobs Corps Center
Coordination	National Capital Planning Commission

*Denotes where a Congressional Act may also be required to authorize agency action.

1.3 Scope of this Document

This DEIS is presented in two volumes:

Main Body

- A detailed Purpose and Need (Chapter 2, Purpose and Need) for the SCMAGLEV Project.
- An overview of the alternatives' development process and definition of the No Build and Build Alternatives evaluated in this DEIS (Chapter 3, Alternatives Considered).
- A description of the existing conditions, potential effects of the Alternatives Considered, and mitigation strategies to address adverse effects (Chapter 4, SCMAGLEV Project Affected Environment, Environmental Consequences and Mitigation).
- A summary of public and agency involvement through the publication of this DEIS (Chapter 5, Public Involvement and Agency Coordination).

Appendices

- List of Acronyms, Glossary of Terms, References, and List of Preparers (Appendix A)
- A mapping atlas (Appendix B)
- Supporting Alternatives Development (Appendix C)
- Chapter 4 Supporting Technical Documents and Mapping (Appendix D)
- Agency Correspondence and Outreach Documentation (Appendix E)
- A Draft Section 4(f) Evaluation (Appendix F)
- The Preliminary Engineering and Design Specifications of the Build Alternatives. (Appendix G)