## Chapter 11 – Acronyms and Glossary

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## 11. ACRONYMS AND GLOSSARY OF TERMS

## 11.1. Acronyms

**AAB** — Massachusetts Architectural Access Board

**AAI** — All Appropriate Inquiries

**AASHTO** — American Association of State Highway and Transportation Officials

**ACEC** — Area of Critical Environmental Concern

ACM — Asbestos Containing Materials
ACS — American Community Survey
ADA — Americans with Disabilities Act

ADT — Average Daily Traffic
APE — Area of Potential Effects

**ASHRAE** — (Formerly) American Society of Heating, Refrigerating and Air Conditioning

Engineers

**ASTM** — American Society for Testing and Materials

ATR — Automatic Traffic Recorder
AUL — Activity and Use Limitation

**BBRS** — Board of Building Regulations and Standards

**BFE** — Base Flood Elevation

BLC — Boston Landmarks Commission
BMPs — Best Management Practices
BRA — Boston Redevelopment Authority

**BRT** — Bus Rapid Transit

BTD — Boston Transportation Department
 BWSC — Boston Water and Sewer Commission

**C&D** — Construction and demolition

**CAA** — U.S. Clean Air Act

CAAA — Clean Air Act AmendmentsCA/T — Central Artery/Tunnel

**CBECS** — Commercial Buildings Energy Consumption Survey

**CE** — Categorical Exclusion

**CEQ** — Council on Environmental Quality

**CERCLA** — Comprehensive Environmental Response, Compensation, and Liability Act

**CFCs** — Chlorofluorocarbons

CFR — Code of Federal Regulations
 CFS — Cubic Feet per Second
 CHP — Combined Heat and Power
 CMP — Construction Management Plan
 CMR — Code of Massachusetts Regulations

**CNG** — Compressed Natural Gas

**CO**<sub>2</sub> — Carbon dioxide

CSA — Combined Statistical AreaCSO — Combined Sewer Overflow

CSXT — CSX Transportation, Inc.
CWA — U.S. Clean Water Act

**CWMP** — Construction Waste Management Plan

**CZM** — Massachusetts Office of Coastal Zone Management

**dB** — Decibel

**dBA** — A-weighted Decibels

**DCR** — Massachusetts Department of Conservation and Recreation

**DDT** — Dichlorodiphenyltrichloroethane

**DEF** — Diesel Exhaust Fluid

**DEIR** — Draft Environmental Impact Report

**DHW** — Domestic Hot Water

**DMA** — Dual Mode Articulated diesel-electric buses

**DMF** — Division of Marine Fisheries

**DMU** — Diesel Multiple Unit

DOER—Department of Energy ResourcesDOS—Division of Occupational SafetyDOT—Department of TransportationDPF—Diesel Particulates FilterDPM—Diesel Particulate Matter

**DPU** — Massachusetts Department of Public Utilities

DPW — Department of Public Works
 DRP — Diesel Retrofit Program
 EA — Environmental Assessment
 EDA — Economic Development Area
 EDR — Environmental Data Resources

**EEA** — Executive Office of Energy and Environmental Affairs

**EENF** — Expanded Environmental Notification Form

EER — Energy Efficiency Rating
 EFH — Essential Fish Habitat
 EGR — Exhaust Gas Recirculation

EIA — Energy Information AdministrationEIR — Environmental Impact Report

**EJ** — Environmental Justice

**ENF** — Environmental Notification Form

**EO** — Executive Order

**EPA** — Environmental Protection Agency

ESA — Endangered Species Act

**ESA** — Environmental Site Assessment

**EUI** — Energy Use Index

**FAA** — Federal Aviation Administration

FEIR — Final EIR/Final Environmental Impact Report
 FEMA — Federal Emergency Management Agency

FHWA — Federal Highway Administration

FIRM — Flood Insurance Rate Map

**FR** — Federal Register

FRA — Federal Railroad Administration
 FTA — Federal Transit Administration

**FY** — Fiscal Year

**GCOD** — Groundwater Conservation Overlay District

**GDP** — Gross Domestic Product

**GHG** — Greenhouse Gas

GIS — Geographic Information System

gpd — gallons per day
GMF — General Mail Facility
GSHP — Ground-Source Heat Pump
HAPs — Hazardous Air Pollutants

**HDSC** — Hydrometeorological Design Studies Center

HFC — Hydrofluorocarbons
 HOVs — High Occupancy Vehicles
 HSG — Hydrologic Soil Group

HSIP — Highway Safety Improvement Program
 HSIPR — High Speed Intercity Passenger Rail

HSR — High Speed RailHST — High Speed Train

HTC — MassDOT's Healthy Transportation Compact
 HVAC — Heating, Ventilation, and Air Conditioning

**Hz** — Hertz

**I-90** — Interstate Highway 90/Massachusetts Turnpike

**I-93** — Interstate Highway 93

**IB** — Inbound

IECC — International Energy Conservation Code

I/I — Inflow and Infiltration
 IPLV — Integrated Part Load Value
 IRA — Immediate Response Action

ISI — Institute for Sustainable Infrastructure

ISTEA — Intermodal Surface Transportation Efficiency Act

ITC — Investment Tax Credit

**ITE** — Institute of Transportation Engineers

**LEED** — Leadership in Energy and Environmental Design

Leq (h)—Hourly equivalent noise levelLID—Low Impact DevelopmentLLC—Limited Liability CompanyLmax—Maximum noise levelLNC—Lean NOx CatalystLNG—Liquefied Natural GasLOMR—Letter of Map Revision

LOS — Level of Service

LSP — Licensed Site Professional

**LTBI** — Location to be Investigated

LUHPPL — Land Use of Higher Potential Pollutant Loads
 MAAQS — Massachusetts Ambient Air Quality Standards

MAHW — Mean Annual High Water

MAPC — Metropolitan Area Planning Council

MAS — Maximum Authorized Speed

MassDEP — Massachusetts Department of Environmental Protection

MassDOT—Massachusetts Department of TransportationMassDOS—Massachusetts Division of Occupational SafetyMassGIS—Massachusetts Office of Geographic InformationMBTA—Massachusetts Bay Transportation Authority

MCP — Massachusetts Contingency Plan

MDMF — Massachusetts Division of Marine Fisheries
 MDRP — Massachusetts Diesel Retrofit Program
 MEPA — Massachusetts Environmental Policy Act
 MESA — Massachusetts Endangered Species Act

**M.G.L.** — Massachusetts General Law

MHC — Massachusetts Historical Commission

MHP — Municipal Harbor Plan
MHW — Mean High Water
MLW — Mean Low Water

MMLOS — Multimodal Level of ServiceMOA — Memorandum of Agreement

MORIS — Massachusetts Ocean Resource Information System

**MOU** — Memorandum of Understanding

**mph** — Miles per hour

MSA — Metropolitan Statistical AreaMSGP — Multi Sector General Permit

MSL — Mean Sea Level

MS4 — Municipal Separate Storm Sewer
 MTA — Metropolitan Transportation Authority
 MWRA — Massachusetts Water Resources Authority

NA — Not Applicable
NAA — Non-Attainment Area

NAAQS — National Ambient Air Quality Standards
NAVD88 — North American Vertical Datum of 1988

NB — Northbound

NCHRP — National Cooperative Highway Research Program

**NEC** — Northeast Corridor

**NECIP** — Northeast Corridor Improvement Project

**NEMC** — Tufts Medical Center (Formerly the Tufts-New England Medical Center)

**NESHAP** — National Emission Standards for Hazardous Air Pollutants

**NEPA** — National Environmental Policy Act of 1969

**NFIP** — National Flood Insurance Program

**NFPA** — National Fire Protection Association

NHESP — Massachusetts Natural Heritage and Endangered Species Program

NMFS — National Marine Fisheries Service

NO — Nitric oxide NO<sub>2</sub> — Nitrogen dioxide

NOAA — National Oceanic and Atmospheric Administration

**NOI** — Notice of Intent

NOS — National Ocean Service

NO<sub>x</sub> — Nitrogen Oxides

NPC — Notice of Project Change

NPDES — National Pollutant Discharge Elimination System

NPS — National Park Service

NRCS — Natural Resources Conservation Service

**NWS** — National Weather Service

N<sub>z</sub> — Nitrogen Gas

**O&M** — Operation and Maintenance

OB — Outbound

OCS — Overhead Contact System
OHD — Office of Hydrologic Design
OHM — Oil and/or Hazardous Material

OHW — Ordinary High Water

**ORW** — Outstanding Resource Water

OSHA — Occupational Safety and Health Administration

OTP — On-time performance
PCB — Polychlorinated Biphenyl
PE — Professional Engineer

PIC — Public Improvement Commission

PLM — Polarized Light Microscopy

**ppb** — Parts per Billion

**PPE** — Personal Protective Equipment

**ppm** — Parts per Million

PTAC — Packaged Terminal Air Conditioner
 PTOE — Professional Traffic Operations Engineer

PV — Photovoltaic

RAO — Response Action Outcome
RC — Reporting Condition

REC — Recognized Environmental Condition
 RECS — Residential Energy Consumption Survey

RFC — Reference Concentration
ROD — Record of Decision

**RPA** — Regional Planning Agency

**RPOD** — Riverfront Protection Overlay District

RTN — Release Tracking NumberRTP — Regional Transportation Plan

**SAFETEA-LU** — U.S. Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy

for Users

SB — Southbound SCII — Stretch Code

SCR — Selective Catalyst Reduction
 SCS — Soil Conservation Service

SF — Square Feet

SGR — State of Good Repair

SHPO — Massachusetts State Historic Preservation Office

SIC — Standard Industrial Classification

SIP — State Implementation Plan

SLR — Sea Level Rise
SO<sub>2</sub> — Sulfur dioxide

**SOVs** — Single Occupancy Vehicles

**SPCC** — Spill Prevention, Control, and Countermeasures

*spp.* — Species

SREC — Solar Renewable Energy Credit

SSAR — South Station Air Rights

SSHASP — Site-Specific Health and Safety Plan

SSO — Sanitary Sewer Overflows

SSTC — South Station Bus Terminal Project

SSX — South Station Expansion

STIP — Statewide Transportation Improvement Program

**SWMP** — Stormwater Management Plan

**SWPPP** — Stormwater Pollution Prevention Plan

**TAZ** — Transportation Analysis Zone

TDM — Transportation Demand Management
 TERPS — Terminal Instrument Procedures
 TIA — Transportation Impact Assessment
 TIO — Transportation Improvements Only
 TIP — Transportation Improvement Program
 TMA — Transportation Management Association

TMC — Turning Movement Count
 TMDL — Total Maximum Daily Load
 TMP — Traffic Management Plan
 TPH — Total Petroleum Hydrocarbon

**tpy** — Tons per Year

**TREDIS** — Transportation Economic Development Impact System

TSL — Transportation Scoping Letter
TSCA — Toxic Substances Control Act
TSS — Total Suspended Solids

TTY — Teletypewriter, also known as Telecommunication Device for the Deaf (TDD)

UCL — Upper Concentration Limit

**UFP** — Ultrafine Particulates

**ULSD** Ultra-low Sulfur Diesel U.S. **United States** U.S. ACE United States Army Corp of Engineers U.S. DOT United States Department of Transportation U.S. EPA United States Environmental Protection Agency United States Fish and Wildlife Service U.S. FWS U.S.C. United States Code USCG United States Coast Guard **USDA** United States Department of Agriculture **USGS** United States Geological Survey **USPS** United States Postal Service UST Underground Storage Tank Variable Air Volume VAV V/C Volume-to-Capacity Ratio Vehicle Miles Traveled **VMT VOCs** Volatile Organic Compounds Vehicles per Day vpd **WPA** Massachusetts Wetland Protection Act **WDUZ** Water Dependent Use Zone  $\mu g/m^3$ Micrograms per Cubic Meter

## 11.2. Glossary of Terms

**100-Foot Buffer (Buffer Zone)** - The area of land extending 100 feet horizontally outward from the boundary of any bank, freshwater wetland, coastal wetland, beach, dune, flat, marsh, or swamp bordering on any ocean, estuary, creek, river, stream, pond, or lake.

100-Year Flood - The 1% annual chance flood.

**500-Year Flood** - The 0.2% annual chance flood.

**AERMOD** – AMS/EPA Regulatory Model (American Meteorological Society / Environmental Protection Agency Regulatory Model) an enhanced Gaussian dispersion model with boundary layer parameterization.

**Air Pollutant** – Any substance in the air that could, in high enough concentration, cause harm to man, other animals, vegetation, or materials. Pollutants may include almost any natural or artificial composition of airborne matter capable of being airborne. They may be in the form of solid particles, liquid droplets, gases, or in combination thereof. Generally, they fall into two main groups (1) those emitted directly from identifiable sources and (2) those produced in the air by interaction between two or more primary pollutants, or by reaction with normal atmospheric constituents.

**Air Quality Standards** – The level of pollutants prescribed by regulations that may not be exceeded during a given time in a defined area.

**Air Toxics** – Any air pollutant for which a national ambient air quality standard (NAAQS) does not exist (i.e. excluding ozone, carbon monoxide,  $PM_{10}$ , sulfur dioxide, nitrogen oxide) that may reasonably be

anticipated to cause cancer; respiratory, cardiovascular, or developmental effects; reproductive dysfunctions, neurological disorders, heritable gene mutations, or other serious or irreversible chronic or acute health effects in humans.

**Alightings** – Passengers who get off a transit vehicle.

**Alignment** – The horizontal and vertical ground plan of a roadway, railroad, transit route or other facility.

**AM Peak Period** – The morning commute period, about three hours, in which the greatest movement of passengers occurs, generally from home to work; the portion of the morning service period where the greatest level of ridership is experienced and service provided.

**Ambient Air** – Any unconfined portion of the atmosphere, open air, surrounding air.

Americans with Disabilities Act of 1990 – Wide–ranging civil rights law that prohibits discrimination and ensures equal opportunity for persons with disabilities, including public accommodations and transportation. It also mandates the establishment of TDD/telephone relay services. The current text of the ADA includes changes made by the ADA Amendments Act of 2008 (P.L. 110–325), which became effective on January 1, 2009.

**Amtrak (National Railroad Passenger Corporation)** – A quasi–public corporation created by the Federal Rail Passenger Service Act of 1970 to improve and develop intercity rail service throughout the United States.

**Anadromous** - Fish that enter fresh water from the ocean to spawn, such as alewives, shad and salmon.

**Approach Track** – In signaling, the section of track on the approach side of a signal which is equipped with a circuit to detect the arrival of a train and transmit its presence to the controlling circuits of the signal and its associated route. Used to lock a route and prevent it from being altered once a train has approached within a safe braking distance, known as approach control. This prevents the route being changed at a time when the train could run onto it and be derailed.

**At Grade** – The location of a structure or transit guide way at the same level as the ground surface.

Attainment Area – A geographic area in which levels of a criteria air pollutant meet the health–based primary standard (national ambient air quality standard, or NAAQS) for the pollutant. An area may have an acceptable level for one criteria air pollutant, but may have unacceptable levels for others. Thus, an area could be both attainment and nonattainment at the same time. Attainment areas are defined using federal pollutant limits set by regulatory agencies.

**Bank (inland)** - The portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or, in the absence of these, it occurs between a water body and an upland.

**Base Flood Elevation (BFE)** – As defined by the Federal Emergency Management Agency (FEMA), the computed elevation to which floodwater is anticipated to rise during the base flood. Base Flood Elevations (BFEs) are shown on Flood Insurance Rate Maps (FIRMs) and on the flood profiles. The BFE is the regulatory requirement for the elevation or flood proofing of structures. The relationship between the BFE and a structure's elevation determines the flood insurance premium.

**Best Management Practices** – Policies, practices, procedures or structures implemented to mitigate the direct and indirect degradation of surface water quality from an activity.

**Boardings** – Passengers who get on a transit vehicle.

**Branch** – One of multiple route segments served by a single route.

**Bulkhead** - A retaining wall along a waterfront.

Carbon monoxide (CO) – A colorless, odorless, poisonous gas, produced by incomplete burning of carbon–based fuels, including gasoline, oil and wood. Carbon monoxide is also produced from incomplete combustion of many natural and synthetic products. When carbon monoxide gets into the body, the carbon monoxide combines with chemicals in the blood and prevents the blood from bringing oxygen to cells, tissues and organs. High–level exposures to carbon monoxide can cause serious health effects, including death. Symptoms of exposure to carbon monoxide can include vision problems, reduced alertness, and general reduction in mental and physical functions.

**Catadromous** – Fish that enter salt water from fresh water to spawn, such as eels.

**Category 1 Waters** – U.S. EPA Integrated List of Waters category designating a waterbody or segment thereof as unimpaired and not threatened for all designated uses.

**Category 2 Waters** – U.S. EPA Integrated List of Waters category designating a waterbody or segment thereof as unimpaired for some uses and not assessed for others.

Category 3 Waters – U.S. EPA Integrated List of Waters category designating a waterbody or segment thereof as having insufficient information to make assessments for any uses.

Category 4 Waters – U.S. EPA Integrated List of Waters category designating a waterbody or segment thereof as impaired or threatened for one or more uses, but not requiring the calculation of a Total Maximum Daily Load (TMDL).

Category 5 Waters – U.S. EPA Integrated List of Waters category designating a waterbody or segment thereof as impaired or threatened for one or more uses and requiring a Total Maximum Daily Load (TMDL).

Catenary – The overhead contact wire and the associated system of support wires used on an electric railway.

**Central Transportation Planning Staff (CTPS)** – The staff of the Boston Metropolitan Planning Organization (MPO). CTPS provides technical and policy analysis support for transportation planning in the Boston MPO Region.

**Chapter 91** – Massachusetts General Law Chapter 91 ensures that public rights to fish, fowl, and navigate waterways are not unreasonably restricted and that waterfront property owners' abilities to approach land from the water is protected.

Class A (Inland) Waters - These waters include waters designated as a source of public water supply and their tributaries. They are designated as excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and

secondary contact recreation, even if not allowed. These waters shall have excellent aesthetic value. These waters are protected as Outstanding Resource Waters.

**Class B (Inland) Waters** - These waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment ("Treated Water Supply"). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

Class C (Inland) Waters - These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for secondary contact recreation. These waters shall be suitable for the irrigation of crops used for consumption after cooking and for compatible industrial cooling and process uses. These waters shall have good aesthetic value.

Class SA (Coastal and Marine) Waters - These waters are designated as an excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, excellent habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated in the tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for shellfish harvesting without depuration (Approved and Conditionally Approved Shellfish Areas). These waters shall have excellent aesthetic value.

Class SB (Coastal and Marine) Waters - These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated in the tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.

Class SC (Coastal and Marine) Waters - These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for secondary contact recreation. They shall also be suitable for certain industrial cooling and process uses. These waters shall have good aesthetic value.

**Classes of Track** – A categorization of track based on the maximum allowable operating speed.

**Coastal Bank** - The seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.

**Coastal Zone Management Act** – The Federal Coastal Zone Management Act of 1972 codified in 16 U.S.C. § 1456.

**Combined sewer** – A sewer designed to receive both wastewater and storm or surface water.

**Combined Sewer Outfall** or **Combined Sewer Overflow (CSO)** – A relief structure designed to allow flow from a combined stormwater and sewer system to be discharged untreated to an adjacent waterbody during storm events when high flows are experienced.

**Commonwealth Tidelands** – Defined in 310 CMR 9.02, in part, as "tidelands held by the Commonwealth or by its political subdivisions or a quasi–public agency or authority, in trust for the benefit of the public..."

**Commuter Rail** – Multicar rail transportation utilizing exclusive or shared rights–of–way with service between urban areas or between outlying suburbs and the urban core. Usually involves greater distances and fewer stops than those normally found with light rail or heavy rail.

**Concentration** – The relative amount of a substance mixed with another substance. Examples are 5 ppm of carbon monoxide in air and 1 mg/l of iron in water.

**Conformity** – The requirement that state or metropolitan transportation plans, programs, and projects be consistent with the State Implementation Plan. A conformity finding by the Environmental Protection Agency is required as part of the federal review of Regional Transportation Plans and Transportation Improvement Programs.

Corridor – A broad geographical band that follows a general directional flow or connects major sources of trips. It may contain a number of streets and highways and many transit lines and routes. Criteria Air Pollutants – The 1970 amendments to the Clean Air Act required U.S. EPA to set National Ambient Air Quality Standards (NAAQS) for certain pollutants known to be hazardous to human health. The term, "criteria pollutants" derives from the requirement that U.S. EPA must describe the characteristics and potential health and welfare effects of these pollutants. It is on the basis of these criteria that standards are set or revised.

**Crossing (Track)** – A structure, used where one track crosses another at grade, and consisting of four connected frogs. (Rail Crossing, Diamond).

**Curve Number** – An empirical parameter used in hydrology for predicting direct runoff or infiltration from rainfall excess.

**Day-Night Average Sound Level** – The average noise level measured over a 24-hour period with a 10-dBA penalty added to the nighttime hours (10 p.m. to 7 a.m.) to account for people's increased sensitivity to noise while they are trying to sleep.

**Deadhead** – Railroad industry term used to describe the movement of equipment and/or crews between locations when they are not in revenue service (such as to and from layover).

**Dewatering drainage** – Groundwater or surface water which is removed from a site and discharged beyond the limits of the site by means of gravity or pumping.

**Diadromous** - A general category describing fish that spend portions of their life cycles partially in fresh water and partially in salt water.

**Diamond** – A structure, used where one track crosses another at grade, and consisting of four connected frogs. (Rail Crossing).

**Diesel Multiple Unit** – A multiple unit train powered by on–board diesel engines. A DMU requires no separate locomotive, as the diesel engines are incorporated into one or more of the carriages. DMUs are combined with other DMUs to form a train consist.

**Disability** – Disability is defined by the ADA as "...a physical or mental impairment that substantially limits a major life activity." The determination of whether any particular condition is considered a disability is made on a case by case basis.

**Eight–Hour Ozone Standards** – Since 1971, the U.S. EPA has established national air quality standards for ozone. Revised in 1997, the current national air quality standard for ozone is 0.08 parts per million (ppm), or 80 parts per billion (ppb), averaged over 8 hours. For a given geographic area to be in compliance, its fourth highest 8–hour concentration in a year, averaged over three years must be equal to or less than that amount.

**Emissions** – Release of pollutants into the air from a source.

**Emission Factor** – A representative value for the quantity of a pollutant released to the atmosphere from a single source for a unit of time or distance. For example, an emission factor for an automobile would be the number of grams of carbon monoxide per vehicle—mile—traveled.

**Emission Inventory** – A listing, by source, of the amount of air pollutants discharged into the atmosphere for a given time period (typically one year).

**Environmental Justice (EJ)** – The principle that all people have a right to be protected from environmental pollution, and to live in and enjoy a clean and healthful environment. Environmental Justice, as defined by the EJ Policy of the Massachusetts Executive Office of Energy and Environmental Affairs (MassEEA), is the equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits.

**Environmental Justice (EJ) Populations** – EJ populations are those segments of the population that MassEEA has determined to be most at risk of being unaware of or unable to participate in environmental decision—making or to gain access to state environmental resources. An EJ population is defined as a neighborhood (consisting of a U.S. Census Bureau census block group) that meets one or more of the following criteria:

- The median annual household income is at or below 65 % of the statewide median income for Massachusetts (\$40,386 in 2010).
- 25% of the residents are minority.
- 25% of the residents are foreign born.
- 25% of the residents are lacking English language proficiency, defined as households in which no one aged 14 and over speaks English only or speaks English "very well."

Based on the above criteria, MassGIS has identified EJ populations in Massachusetts, compiled from the 2010 Census and the American Community Survey (ACS) 2006–2010 5–year estimates tables.

**Environmental Protection Agency (U.S. EPA)** – The federal agency charged with protecting the nation's environmental quality. The agency reviews all Regional Transportation Plans and Transportation Improvement Programs to ensure compliance with the Clean Air Act Amendments of 1990.

**Estimated Habitat of Rare Wildlife** - A sub-set of the Priority Habitats that show the geographical extent of the habitat of state-listed rare wetland wildlife and is codified under the Wetlands Protection Act, which does not protect rare plants.

**Executive Order 12898** – Presidential Executive Order, "Federal Actions to Address Environmental Justice in Minority Populations and Low–Income Populations," enacted in 1994 requires each federal agency to identify and address, as appropriate, "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low–income populations," collectively referred to as "EJ populations."

**Facility of Private Tenancy** – Defined in 310 CMR 9.02 as a facility at which the advantages of use accrue, on either a transient or a permanent basis, to a relatively limited group of specified individuals (e.g., members of a private club, owners of a condominium building) rather than to the public at–large (e.g., patrons of a public restaurant, visitors to an aquarium or museum).

**Facility of Public Accommodation** – Defined in 310 CMR 9.02 as a facility at which goods or services are made available directly to the transient public on a regular basis, or at which advantages of use are otherwise open on essentially equal terms to the public at–large (e.g., patrons of a public restaurant, visitors to an aquarium or museum), rather than restricted to a relatively limited group of specified individuals (e.g., members of a private club, owners of a condominium building).

**Federal Consistency Certification** – A finding issued in Massachusetts by the EEA through the Office of Coastal Zone Management, pursuant to the Federal Coastal Zone Management Act and the Massachusetts Coastal Zone Management Act, determining that a project located within the Massachusetts Coastal Zone is consistent with applicable federal policies pertaining thereto as further defined in the Massachusetts Coastal Zone Management Plan.

**Federal Highway Administration (FHWA)** – A U.S. Federal agency that administers federal highway programs. The agency reviews all Regional Transportation Plans and Transportation Improvement Programs to ensure compliance with federal planning and funding requirements.

**Federal Navigation Project** – As defined in 33 CFR Part 263.27(b), a Federal Navigation Project is a project or feature thereof that has been specifically authorized by Congress in a River Harbor Act or authorized under continuing authorities granted by Section 201 of the Flood Control Act 1965 or by Section 107 of the River Harbor Act of 1960 as amended and shall include projects or project features built by others but which have been adopted as a Federal project.

**Federal Railroad Administration (FRA)** – A U.S. Federal agency of the Department of Transportation. The FRA serves as the principal organization for assistance to the Secretary of Transportation on all matters relating to rail transport and safety.

**Federal Transit Administration (FTA)** – A U.S. Federal agency of the Department of Transportation. The FTA administers federal transit programs. The agency reviews all Regional Transportation Plans and Transportation Improvement Programs to ensure compliance with federal planning and funding requirements.

**Filled Tidelands** – Defined in 310 CMR 9.02 as former submerged lands and tidal flats which are no longer subject to tidal action due to the presence of fill.

**Fish Run (Anadromous/Catadromous)** - The area within estuaries, ponds, streams, creeks, rivers, lakes or coastal waters, which is a spawning or feeding ground or passageway for anadromous or catadromous

fish and which is identified by the Division of Marine Fisheries (DMF) or has been mapped on the Coastal Atlas of the Coastal Zone Management Program.

**Fixed–Guideway System** – A system of vehicles that can operate only on its own guideway constructed for that purpose (e.g., rapid rail, light rail).

Floor Area Ratio (FAR) – The ratio of the gross area of a structure to the area of the lot.

**Flowed Tidelands** – Defined in 310 CMR 9.02 as present (existing) submerged lands and tidal flats which are subject to tidal action.

**Frequency** – The quantity of service on a route, based on the number of vehicles per unit time past a certain point on a route (e.g., three trains per hour).

Frog – An assembly that lets the flanged rail wheels cross over the opposite rail.

**General Service Application** – The form provided by the Boston Water and Sewer Commission (BWSC) and completed by the property owner or by an agent authorized by the owner and submitted to the BWSC prior to construction, reconstruction, repair or modification of a water service pipe or a fire pipe from a public water main. A completed General Service Application includes verification that the premise address listed therein is correct.

**Grade Separated** – A crossing of two forms of transportation paths (e.g., light rail tracks and a highway) at different levels to permit unconstrained operation.

**Groin** – A rigid structure built out from a shore to protect the shore from erosion, to trap sand, or to direct a current for scouring a channel.

**Hazardous Air Pollutants (HAPs)** – Chemicals that cause serious health and environmental effects. Health effects include cancer, birth defects, nervous system problems and death due to accidental releases. HAPs are released by sources such as chemical plants, dry cleaners, printing plants, and motor vehicles (cars, trucks, buses, etc.).

**Headhouse** – The portion of a large transportation facility which contains waiting rooms, ticket counters, staff areas, retail, toilets, baggage facilities, and other sundry passenger facilities. It also includes concourses and passenger circulation elements connecting platforms and other facilities.

**Headway** – The scheduled time interval between any two revenue vehicles operating in the same direction on a route.

**Heavy Rail (Transit)** – Generally applies to higher–speed, multicar rail transportation utilizing exclusive, grade–separated rights–of–way in subway tunnels, on the surface, or elevated structures. The MBTA's Red Line is an example of heavy rail.

**Historic High Water Mark** – Defined in 310 CMR 9.02 as "the high water mark which existed prior to human alteration of the shoreline by filling, dredging, excavating, impounding, or other means. In areas where there is evidence of such alteration by fill, the Department of Environmental Protection (DEP) shall presume the historic high water mark is the farthest landward former shoreline which can be ascertained with reference to topographic or hydrographic surveys, previous license plans, and other historic maps and charts..."

**Historic Low Water Mark** – Defined in 310 CMR 9.02 as "the low water mark which existed prior to human alteration of the shoreline by filling, dredging, excavating, impounding or other means. In areas where there is evidence of such alteration by fill, the Department of Environmental Protection (DEP) shall presume the historic low water mark is the farthest landward former shoreline which can be ascertained with reference to topographic or hydrographic surveys, previous license plans, and other historic maps and charts..."

**Hours of Service** – A government regulation which determines the number of hours that employees engaging in one or more kinds of covered service (such as train and engine service and communication of train orders), as defined by law and regulations, may work before going off—duty for a specified length of time.

**Hydrocarbons (HC)** – Chemical compounds that consist entirely of carbon and hydrogen.

**Impervious Cover** – A surface with impervious cover is one which precipitation cannot penetrate, causing direct runoff or perching (examples include pavement, roofs, and densely compacted gravel).

**Intelligent Transportation System (ITS)** – Computer and communications technology that provides real–time information to operators of vehicles about transportation system conditions. Also includes technologies that identify, monitor, or control vehicles.

**Interlocking** – A segment of railroad infrastructure that consists of track, turnouts and signals linked (interlocked) in a way that allows for train operations to succeed each other in a logical, predetermined, safe order, preventing conflicting train movements by means of mechanical or electric locking. Train movements must succeed each other in proper sequence over routes being governed by signal indication.

**Interlocking Limits** – The extents of a railroad interlocking identified by the outer opposing signals controlling (governing) entrance to the interlocking.

**Interlocking Signals** – The fixed signals of an interlocking, governing trains and engines using the interlocking limits.

**Intermodal** – Involving two or more different modes (forms) of transportation.

**Intermodal Planning** – Planning that reflects a focus on connectivity between modes as a means of facilitating linked trip—making.

**Interpolation** – Estimation of an unknown quantity between two known quantities (historical data), or drawing conclusions about missing information from the available information.

**Isolated Vegetated Wetland** - Vegetated areas subject to jurisdiction under 33 U.S.C. 1251, et seq. that are not bordering vegetated wetlands subject to jurisdiction under M.G.L. c. 131, § 40 and 310 CMR 10.55(2).

**Joint Development** – The term is now commonly used to refer to commercial development undertaken in conjunction with the development or expansion of transportation projects, derived from the original FTA definition:

... Joint Development refers to the development of real property that was purchased with FTA funds. More often than not, this real property is developed while maintaining its original public transportation purpose. This is done by placing residential, commercial, or community service

development on, above, or adjacent to property that was purchased with FTA funds. Joint Development may include, but is not limited to, the following:

- Commercial and residential development.
- Pedestrian and bicycle access to a public transportation facility.
- Construction, renovation, and improvement of intercity bus and intercity rail stations and terminals.
- Renovation and improvement of historic transportation facilities.<sup>1</sup>

**Key Station Plan** – A document designating critical transit facilities needed to expand accessibility for individuals with disabilities and to meet ADA requirements.

L10 – Noise level exceeded 10 % of the time

**Land Subject to Coastal Storm Flowage** - Land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater.

**Land Subject to Tidal Action** - Land subject to the periodic rise and fall of a coastal water body, including spring tides.

**Land Under the Ocean** - Land extending from the mean low water line seaward to the boundary of the municipality's jurisdiction and including land under estuaries.

Land Uses of Higher Potential Pollutant Load (LUHPPL) – Land uses with the potential to have higher pollutant loading which could be carried in stormwater runoff. LUHPPLs may be subject to different requirements and additional on–site stormwater treatment according to the Massachusetts Stormwater Management Standards.

**Landlocked Tidelands** – Defined in Chapter 368 of the Massachusetts Acts of the General Court 2007 as "filled tidelands, which on January 1, 1984 were entirely separated by a public way or interconnected public ways from any flowed tidelands, except for any portion of such filled tidelands that are presently located: (a) within 250 feet of the high water mark of flowed tidelands; or (b) within any designated port area under the Massachusetts coastal zone management program. For the purposes of this definition, a public way may also be a landlocked tideland, except for any portion thereof which is presently within 250 feet of the high water mark of flowed tidelands."

**Layover** – Refers to the time scheduled at the end of a route before the departure time of the next trip in order to: (a) provide recovery time for the schedule to ensure on-time departure for the next trip, and (b) to provide operator rest or break time between trips.

**Layover Facility** – A place to park train vehicles, and perform light maintenance and cleaning functions.

Ldn – Day-Night Average Sound Level

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<sup>&</sup>lt;sup>1</sup> Federal Transit Administration. "About FTA." Accessed July 7, 2014. http://www.fta.dot.gov/about FTA 11009.html.

**Lead (Pb)** – A heavy metal that is hazardous to health if breathed or swallowed. Its use in gasoline, paints, and plumbing compounds has been sharply restricted or eliminated by federal laws and regulations.

**Level of Service (LOS)** – A qualitative measure used to characterize the operating conditions of a transportation service as perceived by its users. Most commonly applied to traffic operations, where designations go from A (best) to F (worst).

**Light Rail (Transit)** – Generally applies to electric rail transportation capable of operating short train sets that uses exclusive, but not usually grade–separated, rights–of–way. The MBTA's Green Line is an example of light rail.

**Limited English Language Proficiency** – As defined in the MassEEA EJ Policy and the MassGIS Environmental Justice Data, a household is defined as lacking English proficiency when no person 14 years old and over speaks only English and no person 14 years old and over who speaks a language other than English speaks English "very well" (have difficulty with English). MassGIS defines communities lacking English language proficiency as those that are "linguistically isolated." A block group is considered to lack English language proficiency and be an EJ community if at least 25% of the households in that block group are identified as having English language isolation.

**Line Capacity** – The maximum possible number of trains capable of being operated over a line in one direction, usually expressed as trains per hour.

**Local Service** – Transit service involving many stops and low operating speeds with the purpose of picking up or delivering passengers as closely as possible to origins and destinations.

**Low Income** – As defined in the MassEEA EJ Policy and the MassGIS Environmental Justice Data, a household that does not earn 65.49% of the state median income (\$62,133). A block group is considered a low–income EJ population if the median household income less than or equal to that value (\$40,637).

**Maintenance of Way (MOW)** – On-track maintenance of repairing, testing, and inspecting track, including ties, ballast, and rail. MOW work is usually conducted by the Engineering Department of a railway.

Massachusetts Coastal Zone Management Plan – A multi–part plan, approved by the National Oceanic and Atmospheric Administration, establishing the boundaries of the Massachusetts Coastal Zone, statutes, rules, regulations, Memoranda of Understanding, and other legal authorities that constitute the legal basis for the enforceable CZM program policies, administered by the EEA acting through the Office of Coastal Zone Management.

Massachusetts Department of Environmental Protection – A state agency responsible for protecting the environment and human health by ensuring clean air and water, management of hazardous wastes, and the preservation of wetlands and coastal resources..

**Massachusetts Department of Environmental Quality Engineering** – The former name for the Massachusetts Department of Environmental Protection.

Massachusetts Department of Public Works, Waterways and Public Lands Commission – A predecessor agency with authority to license activities on filled and flowed tidelands in the Commonwealth.

Massachusetts Executive Office of Energy and Environmental Affairs Environmental Justice Policy – The Commonwealth's Executive Office of Energy and Environmental Affairs (MassEEA) established an Environmental Justice Policy to help address the disproportionate share of environmental burdens experienced by lower—income people and communities of color who, at the same time, often lack environmental assets in their neighborhoods. The policy is designed to help ensure their protection from environmental pollution as well as promote community involvement in planning and environmental decision—making to maintain and/or enhance the environmental quality of their neighborhoods. See also definitions for Environmental Justice and Environmental Justice Populations, as defined by the MassEEA policy.

**Massachusetts Harbor and Lands Commission** – A predecessor body with statutory authority to license activities on filled and flowed tidelands in the Commonwealth

Massachusetts Office of Coastal Zone Management – The office within the EEA with statutory authority to administer the Massachusetts Coastal Zone Management Plan and thereby determine consistency with federal coastal zone policies and applicable requirements.

Massachusetts State Harbor Line - A Massachusetts State Harbor Line is one of a series of boundaries established from time to time by state statute under the authority of M.G.L. Chapter 91, Section 34 to establish geographic limits beyond which no structure or fill may be placed without subsequent legislative approval and for which no license may be granted pursuant to M.G.L. Chapter 91.

**Metropolitan Planning Organization (MPO)** – A federally mandated and federally funded transportation policy—making organization in the United States that is made up of representatives from local government and governmental transportation authorities.

Minority – Minority populations consist of Hispanic or Latino persons and nonwhite persons, including persons who are American Indian and Alaska Native, Asian, black or African American, Native Hawaiian and other Pacific Islander, some other race, or two or more races. As defined in the MassEEA EJ Policy and MassGIS Environmental Justice Data, a block group is considered a minority EJ population if that block group is comprised of at least 25 % minorities.

**Mobile Source Air Toxics (MSATs)** are a subset of the 188 air toxic compounds defined by the CAA which are emitted from highway vehicles and non-road mobile equipment (e.g., railroad locomotives).

**Mobile Sources** – Moving objects that release pollution; mobile sources include cars, trucks, buses, planes, trains, ships, motorcycles, and gasoline–powered lawn mowers, among others. Mobile sources are divided into two groups: on–road vehicles, which include cars, trucks and buses; and non-road vehicles, which include trains, planes, ships, lawn mowers, and some portable equipment.

**Mode** – A particular means of transportation (e.g., transit, automobile, bicycle, walking).

**Mode Split** – The proportion of people that use each of the various modes of transportation. This term also describes the process of allocating the proportion of people using modes. Frequently used to describe the percentage of people using private automobiles as opposed to the percentage using public transportation.

**Model** – An analytical tool (often mathematical) used by transportation planners to assist in making forecasts of land use, economic activity, and travel activity.

**Multimodal Planning** – Planning that reflects consideration of more than one mode to serve transportation needs in a given area.

**Multiple Unit (MU)** – Two or more locomotive units coupled in such a manner that control is from a single control point.

**Municipal Harbor Plan** – As defined in 310 CMR 9.02, a Municipal Harbor Plan means a document (in words, maps, illustrations, and other media of communication) setting forth, among other things: a community's objectives, standards, and policies for guiding public and private utilization of land and water bodies within a defined harbor or other waterway planning area; and an implementation program which specifies the legal and institutional arrangements, financial strategies, and other measures that will be taken to achieve the desired sequence, patterns, and characteristics of development and other human activities within the harbor area.

**New Starts Program** – Federal funding granted under Section 5309 (B) of the United States Code. These discretionary funds are made available by the Federal Transit Administration (FTA) for the construction of new fixed guide way systems or extensions of existing fixed guide way systems.

Nitrogen dioxide (NO<sub>2</sub>) – The result of nitric oxide combining with oxygen in the atmosphere, a major component of photochemical smog.

Nitrogen oxides (NOx) – A criteria air pollutant. Nitrogen oxides are produced from burning fuels, including gasoline and coal. Nitrogen oxides are smog formers, which react with volatile organic compounds to form smog. Nitrogen oxides are also major components of acid rain.

**Non-attainment Area** – A geographic region that the U.S. EPA has designated as failing to meet National Ambient Air Quality Standards. A single geographic area may have acceptable levels of one criteria air pollutant but unacceptable levels of one or more other criteria air pollutants; thus, an area can be in both attainment and nonattainment at the same time.

**Off–Peak** – Non–rush periods of the day when travel activity is generally lower and less transit service is scheduled.

**Open Space** – As generally defined in 310 CMR 9.00, open space means land not containing a building or other structures preventing a clear view of the sky. For the purposes of Chapter 91 and 310 CMR 9.00, open space is limited to such areas within filled tidelands.

**Outfall** – The discharge point of a collection system to a receiving body of water.

**Outstanding Resource Water (ORW)** – Water protected under the Massachusetts Surface Water Quality Standards (314 CMR 4.00 et seq.) which can include Areas of Critical Environmental Concern (ACECs), protected shorelines, protected and scenic rivers, wildlife refuges, protected water supplies (Zone I, Zone II, and Interim Wellhead Protection Areas), and certified vernal pools.

**Ozone** ( $O_3$ ) – A gas that is a strong oxidizer and a pulmonary irritant that affects the respiratory mucous membranes, other lung tissues, and respiratory functions. Exposure to  $O_3$  can impair the ability to perform physical exercise; can result in symptoms such as tightness in the chest, coughing, and wheezing; and can ultimately result in asthma, bronchitis, and emphysema.

**Park-and-Ride** – A parking area for automobile drivers who then board vehicles, shuttles or carpools from these locations.

**Particulates; Particulate Matter (PM)** – A criteria air pollutant. Particulate matter includes dust, soot and other tiny bits of solid materials that are released into and move around in the air. Particulates are produced by many sources, including burning of diesel fuels by trucks and buses, railroad locomotives, incineration of garbage, mixing and application of fertilizers and pesticides, road construction, industrial processes such as steel making, mining operations, agricultural burning (field and slash burning), and operation of fireplaces and woodstoves. Particulate pollution can cause eye, nose and throat irritation and other health problems.

Particulate Matter 10 Microns (PM<sub>10</sub>) – Made up of small solid particles and liquid droplets with an aerodynamic diameter of 10 micrometers and smaller. Particles enter the body by way of the respiratory system. PM over 10 micrometers in size is captured in the nose and throat and is readily expelled from the body. PM smaller than 10 micrometers, can reach the air ducts (bronchi) and the air sacs (alveoli).

**Particulate Matter 2.5 Microns (PM**<sub>2.5</sub>) – Made up of small solid particles and liquid droplets with an aerodynamic diameter of 2.5 micrometers and smaller.  $PM_{2.5}$  has been associated with increased incidence of respiratory diseases such as asthma, bronchitis, and emphysema; cardiopulmonary disease; and cancer.

**Passenger** – A person who rides a transportation vehicle, excluding the driver.

**Passenger Count** - A count made of passengers arriving at, boarding and alighting, leaving from, or passing through one or more points on a route.

**Passenger Miles** – A measure of service utilization which represents the cumulative sum of the distances ridden by each passenger.

**Peak Flow Rate** – The greatest amount of stormwater runoff coming out of a specific watershed or site at any one time.

**Peak Hour/ Peak Period** – The period with the highest ridership during the entire service day, generally referring to either the peak hour or peak several hours (peak period).

**Phase I Environmental Assessment** – An essential first step in determining whether contamination exists on a property.

**PM Peak Period** – The evening commute period, about three hours, in which the greatest movement of passengers occurs, generally from home to work; the portion of the morning service period where the greatest level of ridership is experienced and service provided.

**Potable Water** – Water fit for human consumption in conformance with the regulations of the Massachusetts Department of Environmental Protection.

**Precursor** – In photochemistry, a compound antecedent to a pollutant. For example, volatile organic compounds (VOCs) and nitrogen oxides react in sunlight to form ozone or other photochemical oxidants. As such, VOCs and oxides of nitrogen are precursors.

**Primary Standard** – A pollution limit based on health effects. Primary standards are set for criteria air pollutants.

**Priority Habitat of Rare Species** - The geographical extent of habitat for all state-listed rare species, both plants and animals, and codified under the Massachusetts Endangered Species Act (MESA).

**Private Tidelands** – Defined in 310 CMR 9.02 as "Tidelands held by a private person subject to an easement of the public for the purposes of navigation and free fishing and fowling and of passing freely over and through the water...the Department shall presume that tidelands are private tidelands if they lie landward of the historic low water mark or of a line running 100 rods (1650 feet) seaward of historic high water mark, whichever is further landward."

**Public Benefit Determination** – A finding issued by the Secretary of the EEA pursuant to M.G.L. Chapter 91, Section 18B documenting public benefits provided by projects located on landlocked filled tidelands.

**Public Way** – Defined in 310 CMR 9.02 as: "...a road, street, or highway for vehicular use, open to the public at large and for which a public agency is responsible for maintenance and repair."

**Public Waterfront Act** – Also known as Chapter 91. Massachusetts General Law Chapter 91 ensures that public rights to fish, fowl, and navigate waterways are not unreasonably restricted and that waterfront property owners' abilities to approach land from the water is protected.

**Qualified Person** – A person who has the knowledge, training and demonstrated experience to perform a specific duty safely and properly.

**Rail (Track)** – A rolled steel shape, commonly a T–section, designed to be laid end to end in two parallel lines on crossties or other suitable supports to form a track for railway rolling stock.

**Rail Head Concourse** – At South Station, the large open pedestrian circulation and waiting area adjacent to the terminating end of the commuter and intercity rail tracks.

**Regional Transportation Advisory Council (RTAC)** – Independent group that advises the Boston Region MPO on transportation issues and reviews the Transportation Plan, Transportation Improvement Program, and the Unified Planning Work Program. Composed of state agencies, local communities, and civic and private associations with an interest in transportation planning.

**Regional Transportation Plan** – A long–range (20+ years) vision, strategy, and capital improvement program that guides the investment of public funds in transportation facilities. The plan is developed by an MPO and contains a financial plan. It is updated every five years and may be amended as a result of changes in available funding and findings from local studies.

**Remote Storage** – Temporary storage of consists at great distances from the terminal facility (for example, at an overnight layover yard).

**Revetment** - A facing (as of stone or concrete) to sustain an embankment.

**Ridership** – The number of passenger boardings and/or alightings on a public transportation system in a given time period.

**Right-of-Way (ROW)** – The land over which a public road or rail line is built. An exclusive right-of-way is a road, lane, or other right-of-way designated exclusively for a specific purpose or for a particular group of users, such as light rail vehicles or buses.

**Riverfront Area** - The area of land between a river's mean annual high water line and a parallel line measured horizontally. The riverfront area may include or overlap other resource areas or their buffer zones. The riverfront area does not have a buffer zone.

**Root Mean Square (RMS)** – Used to express average vibration velocity levels.

**Running Time** – The time assigned for the movement of a revenue vehicle over a route, usually done on a (route) segment basis by various times of day.

**Running Track** – A track reserved for movement through a yard.

**Safety Control** – A device or devices, which will cause an automatic brake application to be initiated when the locomotive engineer becomes incapacitated.

**Sanitary Sewer -** A sewer that carries sanitary sewage and/or industrial wastes.

**Schedule** – From the transit agency (not the public timetable), a document that, at a minimum, shows the time of each revenue trip through designated time points.

**Seawall** - A wall or embankment to protect the shore from erosion or to act as a breakwater.

**Secondary Standard** – A pollution limit based on environmental effects such as damage to property, plants, visibility, etc. Secondary standards are set for criteria air pollutants.

**Sewage** –Water-carried waste, in solution or suspension, which is intended to be removed from a community. Also known as wastewater.

**Special Public Destination Facilities** – As initially defined in the Decision on City of Boston Request for Approval of the Boston Harbor Park Plan Pursuant to 301 CMR 23.00., May 22, 1991, and refined by the Secretary's Decision on the Fort Point Downtown Municipal Harbor Plan – Phase 2 (March 8, 2004), Special Public Destination Facilities refers to facilities of public accommodation that enhance the destination value of the waterfront by serving significant community needs, attracting a broad range of people, or providing innovative amenities for public use: such facilities may include cultural uses.

**State Implementation Plan (SIP)** – A detailed description of the programs a state will use to carry out its responsibilities under the Clean Air Act. SIPs are collections of the regulations used by a state to reduce air pollution in nonattainment areas. The Clean Air Act requires that U.S. EPA approve each SIP.

**Stormwater Pollution Prevention Plan (SWPPP)** – A plan required for major construction projects under the EPA's National Pollutant Discharge Elimination System (NPDES) Construction General permit. The SWPPP is required to address measures to prevent erosion, sedimentation, and other potential discharges of pollutants to waterbodies and wetlands.

**Sulfur dioxide (SO<sub>2</sub>)** – A gas that is formed during the combustion of fuels containing sulfur compounds. It can cause irritation and inflammation of tissues with which it comes into contact. Inhalation can cause irritation of the mucous membranes causing bronchial damage, and it can exacerbate pre–existing respiratory diseases such as asthma, bronchitis, and emphysema. Exposure to  $SO_2$  can cause damage to vegetation, corrosion to metallic materials, and soiling of clothing and buildings.

**Teletypewriter (TTY)** – A teletypewriter is an electronic device that lets people who are Deaf, Hard of Hearing, or speech-impaired use the telephone to communicate, by allowing them to type text messages. A TTY is required at both ends of the conversation in order to communicate.

Terra Firma- Solid ground, as distinct from water and air.

**Title VI** – Enacted as part of the landmark U.S. Civil Rights Act of 1964 (42 U.S.C. 2000d), prohibits discrimination on the basis of race, color, or national origin in federally assisted programs or activities.

**Total Maximum Daily Load (TMDL)** – A report including a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.

**Train** – A form of rail transport consisting of an engine or more than one engine coupled, with or without railroad cars to transport passengers or cargo, traveling along a rail track.

**Train Set** – A train set describes the physical makeup of a combination of locomotives and coaches coupled together and operating as one unit.

**Transit** – Generally refers to urban passenger transportation service, local in scope, provided to the public along established routes with fixed or variable schedules at published fares.

**Transfer** – A passenger who transfers from one transit line or mode to another line or mode.

**Transportation Analysis Zone (TAZ)** – An aggregation of census geography based on demographic information and the number of trips produced, and attracted within, its borders.

**Transportation Demand Management (TDM)** - In its most general form, any action or actions that attempt to control or alter existing travel patterns or choices. Included in this group are a wide range of strategies, such as promoting ridesharing, requiring alternative work hours or flextime, or increasing travel costs for single-occupant vehicles, through parking controls or fees, or through fuel taxes.

**Trip** – The one–way operation of a revenue vehicle between two terminal points on a route. Also refers to a measurement of personal travel, defined as the movement of one person from a starting origin to an ending destination by any mode of transportation.

**Trust lands** – As defined in 310 CMR 9.02, trust lands are present and former waterways in which the fee simple, any easement, or other proprietary interest is held by the Commonwealth in trust for the benefit of the public. All geographic areas subject to the jurisdiction of M.G.L. c. 91, as specified in 310 CMR 9.04, are generally considered to be trust lands.

**Ultrafine particulates** – Particulate matter that is generally less than 100 nanometers in size. Compared with  $PM_{2.5}$ , the ultrafine particles would be 0.1 microns and smaller or roughly 25 times smaller than the regulated  $PM_{2.5}$ .

**United States Coast Survey (United States Coast and Geodetic Survey)** – The predecessor agency to the National Oceanic and Atmospheric Administration established by an Act of February 10, 1807, Sess. II, Ch. 8, 2 Stat. 413–14 (1807) created to survey the coastline of the United States.

- **U.S. Census Block** Statistical areas bounded by visible features, such as streets, roads, streams, and railroad tracks, and by nonvisible boundaries, such as selected property lines and city, township, school district, and county limits and short line–of–sight extensions of streets and roads. Generally, census blocks are small in area; for example, a block in a city bounded on all sides by streets.
- **U.S.** Census Block Group Statistical divisions of census tracts, are generally defined to contain between 600 and 3,000 people, and are used to present data and control block numbering. A block group consists of clusters of blocks within the same census tract that have the same first digit of their four–digit census block number.

**U.S.** Census Tract – Small, relatively permanent statistical subdivisions of a county or equivalent entity that are updated by local participants prior to each decennial census as part of the Census Bureau's Participant Statistical Areas Program.

**U.S. DOT Order 5610.2(a)** – U.S. DOT issued EJ Order, "Actions to Address Environmental Justice in Minority Populations and Low–Income Populations" (1997, updated in 2012) to address environmental justice for minority and low–income populations. The Order sets forth steps to prevent disproportionately high and adverse effects to minority or low–income populations through Title VI analyses and environmental justice analyses conducted as part of federal transportation planning and NEPA provisions. It also describes the specific measures to be taken to address instances of disproportionately high and adverse effects and sets forth relevant definitions.

**U.S. Pierhead and Bulkhead Line** – Generally, a geographic boundary established by one or more Federal statutes beyond which no fill or structure shall be permitted. Such lines were created to preserve navigability in the United States' coastal waters.

VdB – Vibration level in decibels referenced to 1 micro inch per second

**Vehicle Hours** – The number of hours traveled by a vehicle, usually calculated by mode.

**Vehicle Miles** – The number of miles traveled by a vehicle, usually calculated by mode.

**Vehicle Miles Traveled** – The number of miles traveled by a vehicle in a fixed period of time.

**Vernal Pool (habitat)** - Confined basin depressions which, at least in most years, hold water for a minimum of two continuous months during the spring and/or summer, and which are free of adult fish populations, as well as the area within 100 feet of the mean annual boundaries of such depressions, to the extent that such habitat is within an Area Subject to Protection Under M.G.L. c. 131, § 40 as specified in 310 CMR 10.02(1).

**Volatile Organic Compounds (VOCs)** – Organic chemical compounds which evaporate under normal indoor atmospheric conditions of temperature and pressure. Emissions of VOCs are regulated by U.S. EPA mostly to prevent the formation of ground–level ozone, a constituent of photochemical smog. Many VOCs form ground–level ozone by "reacting" with sources of oxygen molecules such as nitrogen oxides (NOx) in the atmosphere in the presence of sunlight. Health effects include eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidney, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

Watershed – A region or area that contains all land ultimately draining to a waterbody.

**Yard** – A system of tracks within defined limits provided for making up trains, storing cars, and other purposes, over which movements not authorized by time table or by train–order may be made, subject to prescribed signals and rules, or special instructions.

**Yard Lead** – A track, other than a main line, which is used to direct trains in and out of the yard, ideally with sufficient room for at least one full consist length.

**Zone AE** - As defined by the Federal Emergency Management Agency (FEMA) and identified on Flood Insurance Rate Maps (FIRMs), areas subject to inundation by the 1-%-annual-chance flood event determined by detailed methods.

**Zone X** - As defined by the Federal Emergency Management Agency (FEMA) and identified on Flood Insurance Rate Maps (FIRMs), areas located within the 0.2-%-annual-chance floodplain, areas of 1-%-annual-chance flooding where average depths are less than one foot; areas of 1-%-annual-chance flooding where the contributing drainage areas is less than one-square-mile; and areas protected from the 1-%-annual-chance flood by levees.

**Zone VE** - As defined by the Federal Emergency Management Agency (FEMA) and identified on Flood Insurance Rate Maps (FIRMs), areas subject to inundation by the 1-%-annual-chance flood event with additional hazards due to storm-induced velocity wave action.

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