

GLOSSARY

Alternative: General term that refers to possible approaches to meeting the need for and purpose of the project. Typically refers to the No-Build and the Build Alternatives.

Ambient Air Quality: The state of quality of the air in the surrounding environment.

Aquatic Resources: For the purpose of this study, aquatic resources are defined as both adjacent and isolated wetlands.

Aquifer: A water-bearing geologic unit of permeable rock, sand or gravel that yields considerable quantities of water to springs and wells.

Area of Influence (AOI): The geographic boundary within which possible indirect development and potential indirect impacts could occur.

At-Grade Intersection: A point where two roadways meet and traffic is controlled by a traffic signal or stop sign.

Attainment: Status of the various pollutants described in the National Ambient Air Quality Standards (NAAQS). A condition where a pollutant meets NAAQS.

Average Daily Traffic: Average traffic volume in a 24-hour period on a particular roadway.

Benthic: Located on the bottom of a body of water or in the bottom sediments, or pertaining to bottom-dwelling organisms.

Biodiversity: The variety and abundance of species, their genetic composition, and the communities, ecosystems, and landscapes in which they occur.

Biotic: Of or pertaining to life and living organisms.

Build Alternative: The Build Alternative consists of a controlled access highway constructed on a new location within the project area. This is the preferred alternative transportation mode because it is the only alternative mode of travel found to fulfill the need for and purpose of the project.

Carbon Monoxide (CO): A colorless, odorless, poisonous gas that is formed as a product of the incomplete combustion of carbon and is emitted directly by automobiles and trucks.

Circumferential Roadway: A facility that is oriented in a circular manner such as a beltway.

Coastal Barrier: Coastal barriers are unique land forms that provide protection for diverse aquatic habitats and serve as the mainland's first line of defense against the impacts of severe coastal storms and erosion.

Coastal Zone Management: The nation's coasts are managed through a voluntary federal-state partnership that protects, restores, and responsibly develops our nation's diverse coastal communities and resources.

Collector Roadways: These roadways provide service to any county seat, large towns, or other major traffic generators not served by the arterial system. They provide links to the higher classified routes and serve as important intra-county travel corridors.

Community Cohesion: The connections between and within communities which are essential for serving the needs of the residents.

Cultural Resources: Patterned physical remains of human activity distributed over the landscape through time.

Cumulative Effect/Impact: An impact on the environment which results from the incremental

impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions.

Endangered Species: A species that is in danger of extinction throughout all or a significant portion of its range.

Environmental Constraints/Sensitive Resources: Ecological, socio-economic, or cultural areas that may restrict or confine the placement of a project. Examples include areas of sensitive habitat, wetlands, cemeteries, or parks.

Environmental Justice: In accord with Executive Order 12898, the avoidance of actions that cause disproportionately high and adverse impacts on minority and low income populations with respect to human health and the environment.

Essential Fish Habitat (EFH): Areas designated as EFH contain habitat essential to the long-term survival and health of our nation's fisheries.

Flood Hazard Zone: The area flooded during a 100-year storm.

Floodplain: The portion of a river or stream valley, adjacent to the channel, which is covered with water when the river or stream overflows its banks at flood stage. It is also defined as lowland and relatively flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year (the 100-year floodplain).

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base

flood without cumulatively increasing the water surface elevation more than a designated height.

Grade Separated Intersection: A point where two roadways meet and the through traffic from each facility is separated by an overpass/underpass.

Grand Parkway Association (GPA): A nonprofit transportation organization acting on behalf of the Texas Department of Transportation (TxDOT) in the promotion and development of public transportation facilities and systems within the State of Texas to assist TxDOT in obtaining land and funding to meet the primary, legal, engineering and right-of-way (ROW) requirements of the Grand Parkway.

Groundwater: Subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated.

Historic Archeological Site: Any subsurface cultural manifestation dated post-European contact.

Houston-Galveston Area Council (H-GAC): The H-GAC is the region-wide voluntary association of 133 local governments and local elected officials in the 13-county Gulf Coast Planning Region of Texas. The Gulf Coast Planning Region consists of Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, and Wharton Counties. Its service area is 12,500 square miles and contains almost 5.4 million people. Organized in 1966, H-GAC provides a forum for the discussion of area-wide concerns, promoting regional cooperation through comprehensive planning and services to local governments.

Impact/Effect: In environment analyses, the words "impact" or "effect" are used to express the extent or severity of an environmental problem, e.g., the number of persons displaced by a new

transportation facility. As indicated in CEQ 1500 (Section 1508.8), impacts and effects are considered to be synonymous. Impacts or effects may be ecological, aesthetic, historic, cultural, economic, social, or health related, and they may be direct, indirect, or cumulative.

Indirect Effect/Impact: An impact that is caused by an action, and is later in time or farther in distance but is still reasonably foreseeable.

Interstate Highways (IH) / Freeways: These are divided highways with two or more lanes designated for the exclusive use of traffic in each direction. These roadways are intended to provide uninterrupted flow. There are no signalized or stop-controlled at-grade intersections. Direct access from adjacent properties is not permitted. Access is limited to ramp locations and opposing directions are separated by a raised barrier, a median, or a raised traffic island. Examples of Interstate Highways are IH 10, IH 45, and IH 610. The term "freeway" in this document is consistent with terminology in the Transportation Research Board's (TRB) Highway Capacity Manual (2000). Any divided arterial with complete access control and unimpeded traffic flow is designated a freeway, *whether it is tolled or not*.

Lacustrine System: Wetlands and deepwater habitats occurring in the Lacustrine System, one of five systems in the classification of wetlands and deepwater habitats (see Wetlands, Cowardin et al. 1979). The Lacustrine System includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergent plants, emergent mosses or lichens with greater than 30% areal coverage; and (3) total area exceeding 20 acres. Similar habitats totaling less than 20 acres are included if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the

water depth in the deepest part of the basin exceeds 6.6 feet at low water.

Level of Mobility (LOM): A concept introduced by the H-GAC that is based on a ratio of traffic volume to roadway capacity, which takes into account traffic demand, speed, roadway type, and number of lanes. A LOM of 0-0.85 represents a tolerable condition, 0.85-1.00 represents a moderate condition, 1.00-1.25 a serious condition, and 1.25 and higher represents severe conditions.

Level of Service (LOS): Operating conditions within a stream of traffic describing safety, traffic interruptions, speed, freedom to maneuver, comfort, and convenience. Six levels of service are defined, designated A through F, with A representing the best conditions and F the worst.

Limited English Proficiency: Individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English can be limited English proficient, or "LEP." These individuals may be entitled language assistance with respect to a particular type or service, benefit, or encounter.

Logical Termini: The FHWA memorandum *Guidance on the Development of Logical Project Termini* (FHWA, 1993) defines termini as: (1) rational end points for a transportation improvement, and (2) rational end points for a review of environmental impacts.

Low-Income Population: A population whose household income is below the Department of Health and Human Services poverty guidelines.

Major Facilities: Roadways that carry a large number of vehicles, possibly serving more regional traffic.

Metropolitan Planning Organization (MPO): The MPO is a federally designated, regional

agency that works with state and local governments, the private sector, and the region's citizens to plan coordinated transportation systems designed to move goods and people affordably, efficiently, and safely. Major products produced by the MPO include a long-range Regional Transportation Plan (RTP), a shorter-term Transportation Improvement Program (TIP), a Congestion Management System (CMS), and a Unified Planning Work Program (UPWP).

Minor Arterials: These roadways interconnect and supplement the principal arterial system with a greater emphasis on land access and a lower level of traffic mobility. They provide intra-community service and connect rural collector roadways to the urban highway system.

Mitigation: The CEQ regulations define mitigation as: Avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; compensating for the impact by replacing or providing substitute resources or environments.

Mobile Source Air Toxics (MSAT): A category of substances in the air that are known or suspected of causing cancer or other health problems in humans, and for which a National Ambient Air Quality standard (NAAQS) does not exist (i.e., excluding ozone, carbon monoxide, particulate matter, sulfur dioxide, nitrogen oxide).

Modal Transportation Improvements: Modal transportation improvements include bus transit, high-occupancy vehicle (HOV) lanes, rail, bicycle, and pedestrian.

National Register of Historic Places: The National Register of Historic Places (NRHP), as

maintained by the United States Department of the Interior, pursuant to 16 USC § 470a.

NEPA Document: Any document or report prepared by or on behalf of a federal agency pursuant to the National Environmental Policy Act (NEPA) for a project, including, but not necessarily limited to, any Environmental Assessment (EA), Finding of No Significant Impact, Draft EIS, Final EIS, or Record of Decision, but not including any pre-decisional, deliberative, or privileged materials.

Nitrogen Oxide (NOx): Colorless, sweet-tasting gas emitted directly by automobiles and trucks.

No-Build Alternative: (Does not include the construction of the proposed Grand Parkway.) This represents a continuation of the existing transportation facilities, which incorporates the execution of planned and/or committed roadway improvements, TSM, TDM and modal transportation improvements, new planned roadway construction, and Smart Streets.

Nonattainment: An area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for criteria pollutants.

Notice of Intent (NOI): An NOI is published in the Federal Register to notify the public that an agency is preparing an EIS.

Ozone: Unstable blue gas with a pungent odor formed principally in indirect reactions involving volatile organic compounds, nitrogen oxides and sunlight.

Palustrine Wetland: Wetlands occurring in the Palustrine System, one of five systems in the classification of wetlands and deepwater habitats (see Wetlands, Cowardin et al. 1979). Palustrine wetlands include all nontidal wetlands dominated by trees, shrubs, persistent emergent plants, or

emergent mosses or lichens, as well as small, shallow open water ponds or potholes. Palustrine wetlands are often called swamps, marshes, potholes, bogs, or fens.

Physiographic Province: A region that is generally consistent in geologic structure and climate and which has had a unified geomorphic history.

Preferred Alternative: The alternative that the proponent (FHWA/TxDOT/GPA) believes would fulfill its statutory mission and responsibilities and is consistent with the need for and purpose of the project, while giving consideration to economic, environmental, technical, and other factors, including public and agency comments received in response to the DEIS. This alternative may or may not be the same as the Recommended Alternative identified in the DEIS.

Prehistoric Archeological Site: Any cultural manifestation predating European contact.

Prime Farmland: Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is suitable for cropland, pastureland, rangeland, or forestland. It is not suited to urban or water use. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods.

Principal Arterials: These roadways provide an integrated network of roads that connect principal metropolitan areas and serve virtually all urban areas with a population greater than 25,000. They serve long distance travel demands such as statewide and interstate travel. Principal arterials can be grouped into two separate categories:

(1) **Freeway Principal Arterial:** These principal arterials have complete access control. Much like an interstate facility, they are designed to have an unimpeded traffic flow. The proposed Grand Parkway is an example of a freeway principal arterial.

(2) **Non-Freeway Principal Arterial:** These principal arterials do not exhibit access control. At-grade intersections and impeded traffic flow is common.

Project: The whole of an action that has a potential for resulting in a physical change in the environment, directly or ultimately, and that is any of the following:

(1) An activity directly undertaken by any public agency, including but not limited to public works construction and related activities, clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100-65700.

(2) An activity undertaken by a person, which is supported in whole or in part through public agency contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.

(3) An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Project Area: The area within the right-of-way or adjacent to the reasonable alternatives.

Radial Roadway: These are roadway facilities that radiate outward from the core of the metropolitan area like spokes on a wheel. The radial facilities typically become less dense in outer suburbs.

Recommended Alternative: Refers to the recommended routing of the Build Alternative at the time of the publication of the DEIS. Selection of this alternative is based on public and agency outreach results and an analysis and comparison of the potential effects on the physical, biological, and human environment of each Alternative.

Regional Transportation Plan: The 2035 RTP is the long-range transportation vision and plan for the Houston-Galveston region and serves as the blueprint that would guide the development of our transportation system through the next 30 years.

Regulatory Floodway: The portion of the 100-year floodplain within which the majority of the flood waters are carried and where flooding hazards are the highest.

Right-of-Way (ROW): Land, property, or interest therein acquired for and devoted to transportation purposes, including construction, maintenance, operations, and protection of a facility.

Riparian: Pertaining to anything connected with or immediately adjacent to the banks of a stream.

Riverine System: All wetland and deepwater habitats contained within a channel, with two exceptions (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens; and (2) habitats with water containing ocean derived salts.

Salt Dome: A subsurface geologic structure consisting of a vertical cylinder of salt that may be anywhere from 0.5 to 6 miles (1 to 10 kilometers) across and up to 20,000 feet (6,100 meters) deep. Domes are formed when salt from buried salt pans flows upward due to its buoyancy.

Section 106: Section 106 of the National Historic Preservation Act of 1966, 16 USC §470f.

Pertains to the protection and preservation of historic resources.

Section 4(f): Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. §303(c). Pertains to the protection of a Section 4(f) resource.

Section 4(f) Document: Any finding, evaluation, report, or other document prepared by or on behalf of FHWA or TXDOT pursuant to Section 4(f) with respect to a project, including but not necessarily limited to any finding of no constructive use and any approval of the use of a Section 4(f) resource, but not including any predecisional, deliberative, or privileged materials.

Section 4(f) Resource: Any publicly owned park, recreation area, wildlife or waterfowl refuge or historic site that is protected under Section 4(f).

Segment of Independent Utility (SIU): Segments of Independent Utility (SIUs) that meet the requirements of 23 CFR 771.111(f), as follows, "In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each EIS...shall: (1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope; (2) Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and (3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements."

Smart Streets/Express Streets: Smart Street enhancement is a concept developed and introduced into the 2025 Regional Transportation Plan (RTP) as an additional tool to increase mobility and improve transit access, and safety by providing operational improvements along

strategic regional thoroughfares. Smart Street enhancements would improve mobility through a range of alternatives such as traffic signal synchronization, construction of roundabouts, medians, or turn bays, consolidation of access points, and as appropriate, partial grade separation of some traffic lanes at major intersections.

Study Area: The area in which the development of alternatives was studied to address the need for and purpose of the project.

Study Team: Consultant team consisting of HNTB Corporation (Prime), Wilbur Smith Associates, Inc., Cobb Fendley & Associates, Inc., The Lentz Group, RODS Surveying, Inc., and SREG.

Superfund: Superfund is the name given to the federal government's environmental program established to address and clean up the nation's uncontrolled hazardous waste sites.

Surface Water: Water that is on the Earth's surface, such as in a stream, river, lake, or reservoir.

System Linkage: The connection of major facilities within a highway system.

Topography: Configuration (relief) of the land surface; the graphic delineation or portrayal of that configuration in map form, as by contour lines.

Traffic Analysis Zone (TAZ): A traffic analysis zone is the unit of geography most commonly used in conventional transportation planning models. The size of a zone varies, but for typical metropolitan planning software, a zone of under 3,000 people is common. The spatial extent of zones typically varies in models, ranging from very large areas in the exurbs to as small as city blocks or buildings in central business districts.

Traffic Study Area: An area used in analyses of traffic conditions that includes all major roadways potentially affected by the proposed new transportation facility.

Transportation Demand Management (TDM) Alternatives: Behavioral changes to commuters' travel habits that result in fewer vehicles during peak hours. Examples would be carpooling/vanpooling, employee trip reduction programs, compressed work weeks, telecommuting, flex-time, and employer incentives.

Transportation Improvement Program: The Transportation Improvement Program (TIP) is a comprehensive listing of transportation projects approved for funding and implementation within a four-year period. The Houston-Galveston Area Council, as the Metropolitan Planning Organization (MPO) for the eight-county Transportation Management Area, develops the TIP in a collaborative effort with local governments, transit and transportation agencies, and the Texas Department of Transportation.

Transportation System Management (TSM) Alternatives: Management techniques to make the existing transportation system as efficient as possible. Examples would be park-and-ride lots, ridesharing, HOV facilities, traffic signal coordination, and intersection improvements.

Travel Demand: The number of users desiring to travel the highway system based on the available roadway network.

TxDOT Houston District Potential Archeological Liability Map (Houston-PALM): A geoarcheological model designed as a decision-support tool for use by TxDOT in the compliance process. It allows a priority assessment of geoarcheological potential and the potential impact on archeological resources

by transportation activities without requiring a field visit.

geologic, fish and wildlife, historic, cultural or other similar values.

Upland Habitat: Land that has sufficient dry conditions for hydrophytic vegetation, hydric soils, and /or wetland hydrology to be lacking. Any area that is not a wetland, deepwater aquatic habitat, or other special aquatic site is considered upland habitat.

Vehicle Hours Traveled (VHT): The time (in hours) that users spend on the roadway system during a specific time period.

Viewshed: All land seen from one static point.

Watershed: A specific geographic area drained by a major stream or river.

Wetland (Adjacent): Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated conditions. Adjacent wetlands also lie within the 100-year floodplain and/or have a hydrologic connection to navigable waters.

Wetland (Isolated): Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated conditions. Isolated wetlands do not lie within the 100-year floodplain nor do they have a hydrologic connection to navigable waters.

Wild and Scenic Rivers: Congress established a National Wild and Scenic Rivers System (National System) in order to preserve forever in a free-flowing condition some of the nation's most precious rivers. To qualify, a river or river segment must be in a free-flowing condition and must be deemed to have one or more "outstandingly remarkable" scenic, recreational,