

JACTS

Glossary

3-C AGENCY: The local agency or group responsible for the conduct of the Continuing, Cooperative, Comprehensive transportation planning process.

ANALYSIS AREA: Any geographic area such as a TAZ or group of TAZs combined for the purpose of making an analysis.

ANNUAL AVERAGE DAILY TRAFFIC (AADT): The total number of vehicles passing a given location on a roadway over the course of one year, divided by 365 (days per year). Requires permanent traffic recorder to measure annual total.

ARTERIAL: Class of street serving major movements of traffic not served by freeways.

ATTRACTION: The pull or attracting power of a TAZ. For non-home based trips, attractions in a TAZ can be considered synonymous with trip destinations.

AVERAGE DAILY TRAFFIC (ADT): The average number of vehicles passing a specified point during a 24-hour period, calculated from an approximation of AADT based on a limited number of 24-hour counts, adjusted for known variation in levels of travel by month of year and day of week.

AVERAGE VEHICLES/DWELLING UNIT: A socio-economic variable input to determine trip generation. A "surrogate" variable for household income, which relates directly to the number of vehicles available and consequently to the number of trips per day by household members.

BASE YEAR: The year selected to which the major portion of data is related.

BLOCKS: The smallest Census Geographic area used as basic tabulation units in urbanized areas with populations of 10,000 or more.

CALIBRATION: The procedure used to adjust travel models to simulate base year travel.

CAPACITY RESTRAINT: The process by which the assigned volume on a link is compared with the practical capacity of that link and the speed of the link adjusted to reflect the relationship between speed, volume, and capacity. The procedure is iterative until a realistic balance is achieved.

CAPACITY: The maximum number of vehicles that can pass over a given section of a lane or roadway in one direction (or in both directions for a 2-lane or 3-lane highway) during a given time period under prevailing roadway and traffic conditions. It is the maximum rate of flow that has a reasonable expectation of occurring. The terms "capacity" and "possible capacity" are synonymous. In the absence of a time modifier, capacity is an hourly volume. The capacity would not normally be exceeded without changing one or more of the conditions that prevail. In expressing capacity, stating the prevailing roadway and traffic condition under which the capacity is applicable is essential.

CENSUS TRACT: Small areas into which large cities and adjacent areas are divided for the purpose of providing comparable small area population and housing census tabulations.

CENSUS TRANSPORTATION PLANNING PACKAGE (CTPP): Results of appropriate data items from the 2010 Census tabulated at the TAZ level by the Census Bureau for transportation planning applications.

CENTRAL BUSINESS DISTRICT (CBD): The downtown retail trade area of a city, or generally an area of very high land valuation, traffic flow, and concentration of retail business offices, theaters, hotels, and service businesses.

CENTROID: An assumed point in a TAZ that represents the origin or destination of all trips to or from the TAZ. Generally, it is the center of trip ends rather than a geometrical center of the zonal area.

CORDON LINE: An imaginary line enclosing a study area, along which external interviews with motorists may be conducted for input to the modeling process.

CORRELATION: A mutual or reciprocal relation between variables.

CORRIDOR: A group of linear transportation facilities established by common characteristics, such as proximity, direction, or functional classification.

COUNT: A volume counted on the street, which may be used for comparison with the present traffic volume assigned to the corresponding link. The count may be directional or total two-way, peak hour - morning and/or afternoon - and/or a 24 hour value.

CTPP: Census Transportation Planning Package.

CUTLINE: An imaginary line placed at a strategic location, in order to intercept all the links in an identified corridor. Traffic counts and trips assigned to the corridor are compared as a check of survey accuracy or model calibration.

DESIGN HOURLY VOLUME (DHV): A volume determined for use in design, representing traffic expected to use a road.

DESTINATION: The TAZ in which a trip terminates.

DISTRIBUTION: The process by which the movement of trips between TAZs is estimated. The distribution may be measured or be estimated by a growth factor process, or be a synthetic model.

DRIVING TIME: The time required to traverse the distance between TAZs, not including terminal time at each end of the trip.

DWELLING UNIT: A room or group of rooms occupied or intended for occupation as separate living quarters by persons or a group of persons; includes houses, flats, apartments, or other places thought of as homes. Occasionally a dwelling unit may be located in a warehouse, office building, trailer, on the grounds of another "house", or in other unusual places.

EXPRESSWAY: A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at intersections.

FACILITY: A specific road, road segment, route, or route segment.

FEDERAL-AID URBAN BOUNDARY: The boundaries of the area which encompass the entire urban place as designated by the U.S. Bureau of Census plus that adjacent area as agreed upon by local officials in cooperation with the State.

FHWA: Federal Highway Administration.

FISCAL YEAR (FY): For Federal and State of Michigan agencies, and JACTS, the time period beginning October 1 and ending September 30 of the subsequent calendar year.

FORECAST ZONE: A subdivision of the study area used for purposes of forecasting trip ends and perhaps for trip distribution.

FORECASTING: The process of determining the future values of land use, socio-economic, and trip making variables within the study area.

FUNCTIONAL CLASSIFICATION: An identification and categorization of segments of the street and highway system according to the character of service they provide.

GOVERNMENT (GOVT): An employment category comprised of, for this study, workplaces related primarily to public health/social services and public administration, including public safety personnel.

GRAVITY MODEL: A mathematical model of trip distribution based on the premise that trips produced in any given area will distribute themselves in accordance with the accessibility of other areas and the opportunities they offer.

GRIDLINE: An imaginary line, extending across the study area, splitting the area into 2 parts. Unlike a screenline, the location need not follow a natural barrier. Checks of traffic counts and trips assigned may be made in addition to a check of survey accuracy or model calibration.

GROWTH FACTOR: A ratio of future trip ends divided by present trip ends.

JACTS: Jackson Area Comprehensive Transportation Study.

JCDOT: Jackson County Department of Transportation.

HOME-BASED TRIP: A trip with one end at the residence.

LABOR FORCE: The number of persons residing in a designated area assumed to be employable and actively seeking work.

LEVEL OF SERVICE (LOS): The term used to indicate the quality of service provided by a facility under a given set of operating conditions.

LINK: In traffic assignment, a section of the highway network defined by a node at each end. A link may be one-way or two-way.

LINK LOAD: The assigned volume on a link.

LOCAL STREET: A street intended only to provide access to abutting properties. In traffic assignment, any link having a centroid as one node.

LONG RANGE TRANSPORTATION PLAN (LRTP): Determination of transportation facilities/improvements that are projected for the next 20 years.

LRP: Long Range Plan

MAJOR STREET OR HIGHWAY: An arterial highway primarily for traffic movement and secondarily for providing direct access to abutting properties, with intersections at grade, and with traffic control and geometric design features used to expedite safe traffic movement.

MANUFACTURING (MANUF): A category of employment which includes establishments engaged in the mechanical or chemical transformation of substances into new products. These establishments are usually described as plants, factories, and mills. Production is usually carried on for the wholesale market, inter-plant transfer, or for industrial purposes. Seldom is there direct sale to the domestic consumer. For this study, manufacturing includes construction, direct manufacturing, transportation, communication, and public utility operations.

MDOT: Michigan Department of Transportation

METROPOLITAN PLANNING ORGANIZATION (MPO): The organization designated by the Governor responsible, together with the State, for comprehensive transportation planning according to 23 U.S.C. 134, 23 U.S.C. 104(f)(3), and 49 U.S.C. 1602(a)(2) and (c)(a)1, 49 U.S.C. 1603(a), and 49 U.S.C. 1064(g)(1) and (1). This organization shall be the forum for cooperative decision-making by principal elected officials of general local government.

MICHIGAN ACCIDENT LOCATION INDEX (MALI): A system of tabulating accident information by street intersections maintained by the Michigan State Police. This information is available to local areas for the purpose of conducting accident studies and other transportation studies.

MICHIGAN TRANSPORTATION ECONOMIC DEVELOPMENT FUND (TEDF): Special fund of transportation monies for projects promoting economic development. There are several categories of funds available, all with specific requirements and restrictions. Administered at the MDOT, calls for projects are not on a predetermined schedule.

MINIMUM PATH: That route of travel between two points which has the least accumulation of time, distance or other parameter to traverse. This path is found by path building programs (BUILDVN, UPATH, UROAD).

MODAL SPLIT: The term applied to the division of person trips between public and private transportation. The process of separating person trips by the mode of travel.

MODE OF TRAVEL: Means of travel such as auto driver, vehicle passenger, mass transit passenger, or non-motorized (i.e., bicycling, walking).

MODEL: A mathematical formula that expresses the actions and interactions of the elements of a system in such a manner that the system may be evaluated under any given set of conditions: i.e. land use, economic, socio-economic, and travel characteristics.

MPO: Metropolitan Planning Organization.

NETWORK: A system of links describing a transportation system for analysis.

NODE: A numbered point representing an intersection or TAZ centroid.

ORIGIN: The location of the beginning of a trip or the TAZ in which a trip begins.

PEAK HOUR: That one-hour period during which the maximum amount of travel occurs. Generally, there is a morning peak and an afternoon peak and traffic assignments may be made for each period, if desired.

PERSON TRIP: A trip made by a person using any mode for any purpose.

POPULATION: Refers to the number of persons residing in a designated area.

PRODUCTIONS: The number of home based trip ends in the TAZ of residence. For all non-home based trips, productions are synonymous with origins.

R2PC: Region 2 Planning Commission. A regional planning organization that is responsible for transportation planning in the rural areas of Jackson, Lenawee, and Hillsdale Counties as well as the small urban areas (less than 50,000 population) of Hillsdale and Adrian/Tecumseh/Clinton.

RAMP: An entrance to or exit from a freeway. In traffic assignments, it is a link which connects a freeway node and an arterial node.

RETAIL TRADE: The sale of merchandise for personal or household consumption. Any service or processing (as in a restaurant or delicatessen) is incidental or subordinate to the sale of goods.

RIGHT-OF-WAY: A general term denoting land, property or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

ROUTE: That combination of street and freeway sections connecting an origin and destination. In traffic assignment, a continuous group of links connecting centroids that normally require the minimum time to traverse.

S/E: Socio-Economic

SAMPLE: The individual occurrence that represents a set or group of occurrences, usually trips.

SCREENLINE: An imaginary line, usually along a physical barrier such as river or railroad tracks, splitting the study area into a few parts. Traffic counts and possibly interviews are conducted along this line, and the crossings are compared to those calculated from the interview data as a check of survey accuracy.

SERVICES (SRVCS): An employment category comprised of workplaces related primarily to finance, insurance, real estate, and business, professional, and personal services.

STANDARD METROPOLITAN STATISTICAL AREA (SMSA): A county or a group of counties containing at least one city (or twin cities) of 50,000 or more population, plus any adjacent counties which are metropolitan in character and economically and socially integrated with the central county or counties.

STATE IMPLEMENTATION PLAN FOR AIR QUALITY (SIP): A plan developed by the State for an air quality control region which details what has to be done to assure compliance with the air quality guidelines.

STATION: A location at the external cordon line where driver interviews are conducted.

STUDY AREA: The area delineated for the purpose of data collection by a transportation study. This area contains the central city and surroundings, which will become urbanized in 20 to 30 years and is the area for which forecasts of travel are made. The entire county comprises the Jackson MPO.

STUDY AREA BOUNDARY: The area that is expected to take on urban characteristics in the next 20 to 30 years (i.e. - by the end of the planning period).

SURVEILLANCE: Maintenance of land use, socio-economic and transportation data on an annual basis that are necessary elements in the ongoing land use/transportation planning process if comparisons and evaluations of existing conditions in relation to forecasts are to be made.

TDFM: Travel Demand Forecast Model

TEDF: Michigan Transportation Economic Development Fund

TERMINAL TIME: Time included in the total travel time of a given trip, accumulated at either end of the trip. Terminal time typically involves pedestrian travel to and from the vehicle and parking.

TRAFFIC ANALYSIS ZONE (TAZ): The basic analysis unit into which all socio-economic, land use, and trip generation used to determine origin and destination of travel are summarized. Their development is based on land use, human activity, natural boundaries, and compatibility with the street system.

TRAFFIC ASSIGNMENT: The process of determining route or routes of travel and allocating the TAZ-to-TAZ trips to these routes.

TRAFFIC MODEL: See Travel Demand Forecast Model.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP): A staged multi-year program of planned transportation improvement projects.

TRANSPORTATION SYSTEM MANAGEMENT (TSM): Efforts undertaken to improve the efficiency of the existing transportation system.

TRAVEL DEMAND FORECAST MODEL (TDFM): A series of computer programs used to analyze and evaluate motor vehicle travel on a highway network. It uses various data on the location and characteristics of a population and its employment to predict travel demand, which can ultimately be used to identify highway deficiencies.

TRAVELTIME: The time required to travel between two points, including the terminal time at both ends of the trip.

TRIP: A one-direction movement which begins at the origin at the start time, ends at the destination at the arrival time, and is conducted for a specific purpose.

TRIP DISTRIBUTION: The process by which the movement of trips between TAZs is estimated. The data for each distribution may be measured or be estimated by a growth factor process, or by synthetic model.

TRIP END: Either a trip origin or a trip destination.

TRIP GENERATION: A general term describing the analysis and application of the relationships which exists between the trip-makers, the urban area, and the trip making. It relates to the number of trip ends in any part of the urban area.

TRIP PURPOSE: The reason for making a trip; normally, one of ten possible purposes. Each trip may have a purpose at each end. For example, home to work.

TRIP TABLE: A table showing trips between TAZs - either directionally or total two-way. The trips may be separated by mode, by purpose, by time period, by vehicle type or other classification.

URBAN AREA: An urban place as designated by the Bureau of the Census having a population of 50,000 or more and not within any other urbanized area.

URBAN AREA BOUNDARY: The boundaries of the area that encompass the entire urban place as designated by the U.S. Bureau of Census plus that adjacent area as agreed upon by local officials in cooperation with the State.

URBAN(IZED) AREA (UA): An urban place containing a city (or twin cities) of 50,000 or more (central city) plus the surrounding closely settled incorporated area which meets certain criteria of population size or density, as designated by the Bureau of the Census, and not within any other urbanized area. As defined by minimum population density, the urbanized area can include the central city, suburbs, and the closely settled fringe of development.

VEHICLE HOURS OF TRAVEL: Generally used as an area-wide measure. May be calculated by dividing the product of average trip length (in miles) and number of vehicle trips by average speed (in mph).

VEHICLE-MILES OF TRAVEL: Generally used as an area-wide measure. May be calculated by summing data on a link basis or by multiplying average trip length (in miles) times the total number of vehicle trips.

VHT: Vehicle Hours of Travel.

VMT: Vehicle-Miles of Travel.

VOLUME: The number of vehicles using a facility.

VOLUME TO CAPACITY RATIO (V/C): A measure of the level of service on a facility.

WHOLESALE TRADE (WHLSLE): Inclusive of businesses primarily engaged in selling merchandise to retailers, or other wholesalers. Wholesalers may sometimes act as brokers or agents, buying or selling merchandise to bring companies or person together.

ZONE: A portion of the study area, delineated as such for particular land use and traffic analysis purposes. There may be two types of zones used in the traffic assignment process:

1. Survey Zone - A subdivision of the study area which is used during the data collection phase of the study.
2. Traffic Analysis Zone (TAZ) - A subdivision of the study area.