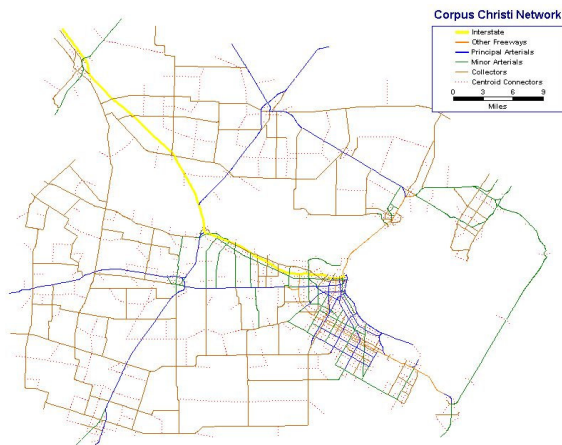


Define Base Year Network (overview drill-down)

Background

Development of the base year network is typically a cooperative process between the MPO and the TxDOT District office. Together, they inventory and identify which facilities should comprise the base year roadway network. Generally, all facilities functionally classified as a collector, or higher functional classification, are included in the roadway description provided by both agencies. In addition, several of the primary network attributes are also inventoried and included in the network database; these attributes include facility type, number of lanes, and whether the roadway is a divided or undivided facility.



Physical and operating characteristics including roadway length, number of lanes, and median access type (divided or undivided) as well as operational characteristics such as daily speed, daily capacity, average weekday traffic count and direction (one-way/two-way) will be contained in the network database. Apart from link distance and traffic counts, physical characteristics are primarily provided by the District and MPO.

All roadways comprising the base year network are defined by facility type as well as functional classification. Facility types are more precise classifications to properly code representative operational characteristics, for example, divided and undivided principal arterials. In addition to

facility type, each network link is associated with one of four area types (CBD, urban, suburban, rural) based on the link's physical location within the study area. Area types designate physical boundaries where operational characteristics are assumed to change due to land use densities and the resulting impact on travel propensities.

Sample Network Database

ID	Length	Dir	SPEED	TIME	FTYPE	ATYPE	LANES	TOT_CAP
111	1.30	0	49.00	1.58	1	3	6	141000
322	1.14	0	50.00	1.35	21	5	2	11000
517	2.98	0	50.00	3.56	21	5	2	11000
652	2.09	0	47.00	2.66	6	9	4	22000
651	0.42	0	47.00	0.55	12	9	2	11000
712	2.95	0	48.00	3.70	21	5	2	6000
789	0.49	0	52.00	0.57	6	5	4	22000
990	0.76	0	35.00	1.34	30	5	2	100
992	1.62	0	50.00	1.95	21	5	2	11000
1018	0.37	0	42.00	0.52	25	4	2	7000

Process

TxDOT-TPP will provide two sets of maps to edit as a basis for defining the base year network. Network definition (marking up the maps) should be based on the cooperative inventory and identification process conducted by the MPO and District. The network edits provided by both agencies will ensure that the roadway description used in the base year model update will accurately reflect current base year conditions. Network edits typically include:

- New facilities
- Upgrades to existing facilities (e.g. collector to divided principal arterial)
- Upgrades to lane configurations (e.g. 4 lanes to 6 lanes)
- Upgrades to access control (e.g. undivided to divided)

The network definition (map mark-up) should match existing facility and lane configurations at the time of the urban saturation counts. Therefore, all actual improvements must be completed prior to the urban saturation count process in order for it to be included in the base year network. For example, if a new road is not opened by the time the urban saturation counts are conducted, that facility should not be included in the base year network; however, the facility will need to be included in any forecast year network.