

Transportation Planning & Management

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Answer No. 01

Transportation planning:

Transportation planning is the process of identifying potential priorities, strategies, plans and architecture to prepare people and goods for future needs to be transported to their destinations. Transportation planning includes multiple agencies involved in effective transport planning, such as policy initiatives and transport policies etc.

Scope of Transportation Planning:

Efficient movement of people and goods is the basic aim of the transport planner. It also covers various aspects of life that involve economic development, public health, quality of life along with supporting ecological balance in the long term. Twenty years before construction, intensive and long term planning is carried out.

Assumption and Limitations:

Transport Planning followed a model that defined priorities and objectives, identified problems and produced alternatives, assessed alternatives and established plans. And with growing demand for transport services but insufficient space to build more, cities are facing the need to find alternative approaches to congestion management. Although the restriction requires non-consistency and less implementation of the existing plans. Sometime plans are often accepted with old data that does not meet the required needs.

Recommendations:

We can,

- Improve human health, security and economy.
- Use equipment and obtain data from threat transport networks of all types.
- Execute the plans in less time.
- Consider the citizens' mental state in the planning process.

Answer No. 02

Activities exercised in planning are:

- Defines traffic planning.
- Identify components and performance of the travel system.
- Collect information about traveling.
- Remember method and intent of designing travel planning.
- Estimate demand for future journeys.
- Provide potential success expectations for the program.
- Identify various approaches to the alternatives.
- Efficiency, efficiency and equity of transport network are highly regarded.

There are Four Steps of Conventional Transport Modeling

Trip Generation:

The First phase of the conventional four-step transport forecasting model is trip generation.

- Different unit time trips for determined zonal land use.
- Single journey trip for any mode of transportation.
- Special purpose travel.
- Examples: Outing for Lunch/Dinner, parks etc.

Trip Distribution:

The second phase of the conventional four-step transport forecasting model is trip distribution.

- Trip distribution models link the trip's origins and destination to build estimated trips.
- Specific Destination travels.
- The most widely found models of trip distribution in action today are "gravity models," gravity model, are named because of their basis in Newton's law
- Examples: travel to university tikka restaurant opp. ICUP

Mode Choice:

The third phase of the conventional four-step transport forecasting model is mode choice.

- Evaluate the choices made by individuals or groups of individuals when choosing the modes of transport.
- Mode choice has a significant effect on the development of public transport systems.
- Examples: Private Transport or Public Transport.

Network Assignment:

The fourth phase of the conventional four-step transport forecasting model is network assignment.

- Choice of routes in transport networks relates to the selection of routes between origin and destination.
- To determine facility needs and costs and benefits, we need to know the number of travelers on each route and link of the network.
- i.e. Two or more different path b/w origins and destination.

Trip Production & Trip Attraction Attributes:

- A trip production is define as a trip end connected with a residential land use in a zone while trip attraction is define as a trip end connected to a non-residential land use in a zone.
- Trip production are consist of a pair of Trips.
- Trip production are taken place in Residential land.
- Trip attraction consist of a single trip.
- Trip attraction are taken place in commercial, manufacturing, transportation, public building and public open space.
- Trip production are generally more in numbers than trip attraction.

Answer No.03

land Use Category		Area (Hectare)							Total
		zone 01	zone 02	zone 03	zone 04	zone 05	zone 06	zone 07	
Residential		7740.0	24900.0	17064.0	40204.0	29317.0	576416.0	53445.0	749086.0
Commercial	Retail	6972.0	5688.0	26220.0	6172.0	126091.0	15270.0	1290.0	187703.0
	Wholesale	14940.0	10744.0	20976.0	7715.0	90065.0	7635.0	1935.0	154010.0
	Services	5976.0	2528.0	1748.0	6172.0	162117.0	10180.0	1720.0	190441.0
Manufacturing		1290.0	4980.0	1264.0	1748.0	4629.0	36026.0	12725.0	62662.0
Transportation		1935.0	8964.0	5688.0	5244.0	4629.0	90065.0	10180.0	126705.0
Public Buildings		2580.0	9960.0	4424.0	6992.0	3086.0	252182.0	30540.0	309764.0
public Open Space		3010.0	22908.0	15800.0	71668.0	92580.0	468338.0	114525.0	788829.0
SUM									2569200.0

land Use Category		Personal Trip/Hectare							Average
		zone 01	zone 02	zone 03	zone 04	zone 05	zone 06	zone 07	
Residential		128.0	108.0	93.0	75.0	55.0	45.0	38.0	60.0
Commercial	Retail	850.0	423.0	563.0	670.0	463.0	485.0	380.0	565.0
	Wholesale	135.0	90.0	115.0	73.0	60.0	48.0	40.0	328.0
	services	445.0	258.0	505.0	385.0	365.0	338.0	328.0	78.0
Manufacturing		353.0	183.0	83.0	73.0	55.0	53.0	35.0	65.0
Transportation		73.0	25.0	35.0	25.0	13.0	18.0	15.0	23.0
Public Buildings		595.0	265.0	375.0	245.0	90.0	48.0	10.0	115.0
public Open Space		5.0	3.0	10.0	5.0	5.0	3.0	3.0	5.0
Average	Used Land	128.0	75.0	80.0	65.0	43.0	35.0	28.0	50.0
	All Land	100.0	50.0	55.0	43.0	20.0	13.0	8.0	23.0

land Use Category		Person Trip Generation {Formula: (personal trips)*(Area)}							
		zone 01	zone 02	zone 03	zone 04	zone 05	zone 06	zone 07	Total
Residential		990720.0	2689200.0	1586952.0	3015300.0	1612435.0	25938720.0	2030910.0	37864237.0
Commercial	Retail	5926200.0	2406024.0	14761860.0	4135240.0	58380133.0	7405950.0	490200.0	93505607.0
	Wholesale	2016900.0	966960.0	2412240.0	563195.0	5403900.0	366480.0	77400.0	11807075.0
	services	2659320.0	652224.0	882740.0	2376220.0	59172705.0	3440840.0	564160.0	69748209.0
Manufacturing		455370.0	911340.0	104912.0	127604.0	254595.0	1909378.0	445375.0	4208574.0
Transportation		141255.0	224100.0	199080.0	131100.0	60177.0	1621170.0	152700.0	2529582.0
Public Buildings		1535100.0	2639400.0	1659000.0	1713040.0	277740.0	12104736.0	305400.0	20234416.0
Public Open Space		15050.0	68724.0	158000.0	358340.0	462900.0	1405014.0	343575.0	2811603.0
Number of Total Trips Generated									242709303.0

land Use Category		Area (Hectare)	Person Trip Generation	Trip per Hectare	Answers	Remarks
Residential		749086.0	37864237.0	50.5	37864237.0	Total Trip Production.
Commercial	Retail	187703.0	93505607.0	498.2	204845066.0	Total Trip Attraction.
	Wholesale	154010.0	11807075.0	76.7		
	Services	190441.0	69748209.0	366.2		
Manufacturing		62662.0	4208574.0	67.2		
Transportation		126705.0	2529582.0	20.0		
Public Buildings		309764.0	20234416.0	65.3		
public Open Space		788829.0	2811603.0	3.6		
Total		2569200.0	242709303.0	94.5	242709303.0	Total Trip Generated.