\*\*Input Files:\*\*

Physical layer:

1. \*\*node.csv\*\*: Defines nodes in the network.

2. \*\*link.csv\*\*: Defines links in the network with essential attributes for assignment.

3. \*\*zone.csv\*\*: Optional, as zone\_id can be defined in node.csv.

Demand layer:

4. \*\*demand.csv\*\*: Defines the demand of passengers on each OD pair. This information could be extracted by demand\_file\_list.csv.

5. \*\*demand\_period.csv\*\*: Defines demand period, which could be extracted by demand\_file\_list.csv.

6. \*\*departure\_time\_profile.csv\*\*: Defines departure time in the agent-based simulation.

7. \*\*demand\_file\_list.csv\*\*: Defines demand type, period, and format type.

8. \*\*sensor\_data.csv\*\*: Contains observed link volume for OD demand estimation.

9. \*\*choice\_set.csv\*\*: Contains choice set data for agent-based modeling.

10. \*\*activity\_travel\_pattern.csv\*\*: (Optional) Defines activity and travel patterns of agents in the simulation.

Supply layer:

11. \*\*supply\_side\_scenario.csv\*\*: Defines different supply side scenarios.

12. \*\*signal\_timing.csv\*\*: Contains information about signal timings at intersections.

Configuration files:

13. \*\*settings.csv\*\*: Defines basic setting for the network, the number of iterations, etc.

14. \*\*mode\_type.csv\*\*: Defines attributes of each type of agent, including value of time (vot in dollars per hour) and passenger car equivalent (pce).

15. \*\*link\_type.csv\*\*: Defines types of links in the network.

16. \*\*link\_vdf.csv\*\*: Contains analytical volume demand function parameters.

Scenarios settings:

17. \*\*scenario\_index\_list.csv\*\*: Defines scenario name, scenario description and activation state.

18. \*\*subarea.csv\*\*: Extracts the subarea polygon information using NeXTA tool.

Sure, here's an overview of the output files for your traffic assignment and simulation software system:

Output files:

1. \*\*link\_performance\_s(scenario\_index)\_(scenario\_name).csv\*\*: Shows the performance of each link under different scenarios, including the travel time, volume, and resource balance.

2. \*\*route\_assignment\_s(scenario\_index)\_(scenario\_name).csv\*\*: Shows the results of the assignment under different scenarios, including the volume, toll, travel time and distance of each path of each agent, as well as the link sequence and time sequence.

3. \*\*choice\_set\_output\_(scenario\_index)\_(scenario\_name).csv\*\*: Shows the results of activity travel and mode choice.

4. \*\*od\_performance.csv\*\*: Shows the performance of the OD pairs, including the o\_zone\_id, d\_zone\_id and volume.

5. \*\*link\_performance\_summary.csv\*\*: Shows the summary of the performance of each link.

6. \*\*system\_performance\_summary.csv\*\*: Shows the performance of the whole transportation system, including total travel time, average distance, and total distance.

7. \*\*final\_summary.csv\*\*: Shows a comprehensive summary of the output.

8. \*\*subarea\_related\_zone.csv\*\*: Shows the subarea internal zones and impacted zones.

1. Input Files

├── Physical Layer (node.csv, link.csv, zone.csv)

├── Demand Layer (demand.csv, departure\_time\_profile.csv, demand\_file\_list.csv, demand\_period.csv, choice\_set.csv, activity\_travel\_pattern.csv)

├── Configuration Files (settings.csv, mode\_type.csv, link\_type.csv, link\_vdf.csv, scenario\_index\_list.csv, sensor\_data.csv)

└── Supply Layer (supply\_side\_scenario.csv, signal\_timing.csv)

2. Traffic Assignment and Simulation Process

├── Demand estimation based on sensor data

├── Traffic assignment based on network and demand data

├── Simulation of traffic based on assignment results and scenario configurations

└── Performance evaluation based on simulation results and performance criteria

3. Output Files

├── Link performance (link\_performance\_s.csv, link\_performance\_summary.csv)

├── Route assignment (route\_assignment\_s.csv)

├── Mode choice (choice\_set\_output.csv)

├── OD pair performance (od\_performance.csv)

├── System performance (system\_performance\_summary.csv)

└── Final Summary (final\_summary.csv, subarea\_related\_zone.csv)