CE 45000: Transport Policy and Planning
Due Tuesday, October 22, 2019

Problem 1: Can you go node 1 to node 12 in 10 hours? Prove. Use Minimum Path Algorithm. (30 points)


Problem 2: Determine the minimum path for node 1 in the following figure. Sketch the final tree. Also, determine the number of trips on each link using the minimum path trips shown in table below. (50 points)


| From | To | Trips |
| :---: | :---: | :---: |
| 1 | 2 | 50 |
|  | 3 | 75 |
|  | 4 | 80 |
|  | 5 | 100 |
|  | 6 | 125 |
|  | 7 | 60 |
|  | 8 | 30 |
|  | 9 | 90 |

Problem 3: Answer following questions and provide supporting documents or source: (20 points)

1. Provide the study area limits for a shopping center of $150,000 \mathrm{sq}$. ft . and a fast-food restaurant?
2. What is the guideline in terms of trips whether you need to conduct a traffic impact study or not?
3. What is approximate horizon years for a development greater than 1,000 peak-hour trips?
4. How do you identify that there is an impact at an intersection due to a new development?
