Part I: INTRODUCTION.

1. The Profession of Transportation.

2. Transportation Systems and Organizations.

Part II: TRAFFIC OPERATIONS.

3. Characteristics of the Driver, the Pedestrian, the Bicyclist, the Vehicle, and the Road.

4. Traffic Engineering Studies.

5. Highway Safety.

6. Fundamental Principles of Traffic Flow.

7. Intersection Design.

8. Intersection Control.

9. Capacity and Level of Service for Highway Segments.

10. Capacity and Level of Service at Signalized Intersections.

Part III: TRANSPORTATION PLANNING.

11. The Transportation Planning Process.

12. Forecasting Travel Demand.

13. Evaluating Transportation Alternatives.

Part IV: LOCATION, GEOMETRICS, AND DRAINAGE.

14. Highway Surveys and Location.

15. Geometric Design of Highway Facilities.

16. Highway Drainage.

Part V: MATERIALS AND PAVEMENTS.

17. Soil Engineering for Highway Design.

18. Bituminous Materials.

19. Design of Flexible Highway Pavements.

20. Design of Rigid Pavements.

21. Pavement Management.

Appendix A: Critical Values for the Student's t and x2 Distributions.

Appendix B: Developing Equations for Computing Regression Coefficients.

Appendix C: Fitting Speed and Density Data for Example 6.3 to the Greenshields Model Using Excel.

Appendix D: An Example of Level of Service Determination using HCSTM 2010.

Appendix E: Metric Conversion Factors for Highway Geometric Design.