

## Pavement Design Report Outline

### Subject

- ID Number
- Roadway Name
- Termini
- Highway Number or indicate if local road
- County Name

### Executive Summary

- Project type (refer to [FDM 3-5-2](#) and [FDM 14-15-5](#))
- Recommended pavement structure description and pavement design method used (WisPave, ME Design or other)
  - Pavement material
    - thickness
    - warranted (if applicable)
    - AC material grade for HMA pavements
    - individual layer thicknesses if HMA pavement
    - nominal size aggregate gradation for individual layers if HMA pavement
  - Base material
    - thickness
    - drainage (if applicable)
  - Subbase(s)
    - thickness (if applicable)
  - Pavement related special provisions (if applicable)
  - Unique pavement related issues (if applicable)
    - construction staging
    - user delay
    - other
- Pavement type selection basis (LCCA or other); justify omission of LCCA if applicable
- Local Road Projects
  - Rural or urban
  - Posted Speed
  - Design ADT

### Project Description

- Purpose of project (can be summarized from MOU, CDR, etc.)
- Project length
- Functional class
- Roadway design classification
- Posted speed
- Existing facility
  - Year built
  - Number of lanes
  - Rehabilitation history
  - Results of pavement cores (if applicable)
  - Existing pavement structure description (material type and thickness of each layer)
  - Existing pavement condition - type, severity, and extent of surface distress
- Pavement condition
  - PCI values and survey year
  - IRI values and survey year
  - Type, severity, and extent of surface distress

### Traffic Data

- Construction year AADT
- Design year AADT
- Directional Factor used (not Directional Distribution; see [FDM 14-1-5](#) for more information)
- Lane Distribution Factor used
- Percent truck traffic

- Total percent trucks
- Percent AADT for each truck type (2D, 3-SU, 2-S1, 2-S2, 3-S2, double bottom)
- ESALs for concrete and HMA pavement (if applicable)

#### Soil Parameters

- Design Group Index (DGI)
- Frost Index (FI) (when included in the Soils Report)
- Soil support value (SSV) (flexible pavement design)
- Modulus of subgrade reaction (k) (rigid pavement design)
- Discussion of predominant soil type(s)
- Any potential construction/future problems or special information
- Subgrade improvement (if applicable)
- Author of the soils report and date of soils report

#### Alternatives

- Brief discussion of pavement structure alternatives
  - Pavement type, width and thickness
  - Base and subbase (if any) type and thickness
  - Shoulder treatment (paved, granular, curb & gutter, etc.)
- Treatment of existing pavement and existing shoulder
  - Clearly state why or why not specific layers of the existing pavement were utilized
  - Clearly state whether thickness of existing pavement used in design is average, minimum, or other

#### Life Cycle Cost Analysis

- State which program and version was used for LCCA computations
- Present and explain results of LCCA. Include a table showing:
  - Initial Construction Costs
  - Total Facility Costs
  - Percent difference from lowest cost

#### Recommendations and Considerations

- Selected alternative with justification
- Constructability concerns
- Preference of any cost-sharing participant and cost share required
- Discussion of results if presented before the “5% rule” review committee (refer to “Exception Process” in [FDM 14-15-1](#))

#### Other Discussion (if applicable)

- Ramps
- Roundabouts
- Side roads
- Transition sections
- Detours
- Temporary roads
- Crossovers

#### Exhibits

- Project specific map
- Traffic forecast report
- WisPave computer program exhibits - include screen prints of each WisPave screen for all alternatives considered.