

## Stage 1 Road Review Submission Checklist

Plans should be approximately 25% complete at this stage.

The following sheets and information must be reviewed for Quality Assurance and should be included with the review submission:

- **Conformance.** Review the plans for conformance with the Level One controlling design criteria listed in Section 40-8.02(01), and indicate apparent or possible design exceptions. Also, identify discrepancies from the Level Two design criteria listed in Section 40-8.02(02).
  
- **Abbreviated Engineer's Assessment.** Provide a written scope of the project requirements.  
This will be a short description of the criteria proposed for use in the design of the project.
  - a. If an Abbreviated Engineer's Assessment has been prepared, a copy should be included with the submission.
  - b. If an Abbreviated Engineer's Assessment was not prepared, the designer should provide a brief written description of the project. The description will, at a minimum, include the information as follows:
    - (1) project location;
    - (2) project need and purpose;
    - (3) existing facility;
    - (4) traffic data;
    - (5) identification of proposal;
    - (6) cost estimate;
    - (7) environmental issues;
    - (8) right-of-way impact;
    - (9) traffic maintenance during construction; and
    - (10) concurrence. For an INDOT project, signed by the district production director or the district planning director. For an LPA project, signed by the Project Sponsor.
  
- **Level One Checklist and Design Computations.** The designer should submit a Level One checklist, including computations for the mainline and each S-line. The designer should include computations for the required intersection sight distance at each public road, including each local-service road or frontage road within the project limits. The designer should also submit documentation of the intersection sight distance provided at each public road. Level One Criteria verification is not required for maintenance of traffic at this time. It is not necessary to submit a Level One checklist for an S-line that does not exceed the work necessary to build the appropriate public-road approach, including the required taper distance to account for transitioning to the existing pavement width. This does not relieve the designer of making the project satisfy all Level One design elements

for such an S-line, e.g., maximum grade, vertical stopping sight distance, and intersection sight distance.

The computations for the Level One items and intersection sight distance are to be initialed and dated by the designer and reviewer before submission. The items to be included are as follows:

- a. Level One checklist;
  - b. project-length computations including guardrail lengths and other contributing factors; and
  - c. design computations for determining geometrics.
- **Index and Title Sheet.** At this project stage, information on the title sheet should include the following:
- a. project numbers;
  - b. description (des) number;
  - c. location map;
  - d. project location map including north arrow and scale;
  - e. description of the project work type and location;
  - f. design data including design speed, project design criteria, functional classification, terrain, traffic data, urban or rural area, and access control.
  - g. applicable reference point (does not apply to local agency project);
  - h. signature blocks, but not filled in at this stage;
  - i. gross and net project lengths, not including incidental construction or lengths along S-lines;
  - j. an index of plan sheets at this stage. Sheet numbers will change for future submittals;
  - k. list of utility owners and addresses;
  - l. bridge structure information;
  - m. latitude and longitude; and
  - n. appropriate version of Standard Specifications.
- **Typical Cross Sections.** Typical cross sections should show only the basic configuration and design features. These include the following:
- a. lane and shoulder widths;
  - b. profile grade, construction centerline, paper-relocation line, and survey-line locations;
  - c. basic design features including curbs, sidewalk locations and widths, pavement and shoulder cross slopes, side slopes, ditches, shoulder configurations (if warranted), bicycle facilities, etc.; and
  - d. clear-zone width for 4R project, or obstruction-free-zone width for 3R project.
6. Plan and Profile Sheets. These sheets will include only the preliminary design information. The details that should be addressed include the following:
- a. existing topography;

- b. beginning and end of project;
- c. horizontal alignment (e.g., horizontal curve data, PC, PI, PT, bearings);
- d. vertical alignment and its relationship to grade-controlling features;
- e. preliminary drainage design;
  - (1) include mainline culverts;
  - (2) include ditch grades only if they must be known to establish the profile grade;
  - (3) need not show storm sewers;
- f. preliminary public-road approach and drive locations;
- g. alignment-controlling features (e.g., high-water levels, existing crossroads and bridges, regulated drains, drainage structures, railroads, underdrain criteria, traffic-maintenance considerations, cemeteries, historical buildings, parks, ADA requirements, etc.);
- h. proposed guardrail limits, only if they affect the project limits; and
- i. survey reference ties and benchmark data.

- Details.** These should include only the superelevation-transition diagrams.
- Interchange.** If the project includes at least one interchange, the general layout of the interchange should be shown, including the following:
  - a. geometrics;
  - b. preliminary ramp grades;
  - c. horizontal and vertical alignments;
  - d. traffic elements; and
  - e. design information.
- 9. Cross Sections. The preliminary cross sections should include the following:
  - a. templates of the typical sections placed on the existing cross sections;
  - b. profile-grade elevations; and
  - c. mainline drainage structures.
- Design Information.** In addition to the plans, the designer should include copies of the preliminary hydraulic analysis for each mainline culvert, if applicable, and results of economic analyses that may have been completed for alternative grade lines. The preliminary cost estimate should be developed for the major pay items with percentages for the minor pay items. The hydraulic analysis should be signed and sealed by a professional engineer licensed in Indiana.
- Quality Assurance Form.**
- INDOT All Project Commitments Report.** This should include all known resolutions.