

# Design Standards Letter

**Letter Number: D-1960-04**

**Letter Date: 02/19/1960**

**Effective Date: 02/19/1960**

**Section/Plan No.: None**

**Subject: Federal Requirements for Preparation of Plans P.P.M. 40-3.1**

**Body**

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**TO ALL DIVISION, DISTRICT AND URBAN ENGINEERS:**

**Attached hereto for your information is a copy of Policy and Procedure Memorandum 40-3.1 on the subject "Plans and Specifications for Federal Aid Projects," issued by the Bureau of Public Roads October 1, 1959.**

**Although the memorandum prescribes standards for preparation of plans and specifications for Federal-Aid projects, this letter will concern only the requirements regarding the preparation of plans. The contents of the memorandum were reviewed at a conference held Monday, February 8, 1960, attended by the following personnel of this Department and the Bureau of Public Roads:**

J. J. Corbett Missouri State Highway Department

C. P. Owens " " " "

R. L. Hyder " " " "

C. C. Tevis " " " "

F. V. Reagel " " " "

F. L. Stuckey " " " "

L. R. Burns " " " "

J. L. Pasley " " " "

H. W. Watkins " " " "

H. F. Hendrickson " " " "

A. E. Brewer " " " "

S. W. O'Brien Bureau of Public Roads

L. D. Asmus " " " "

D. L. Froerer " " " "

Harry Trader " " " "

J. O. McQuary " " " "

In general, all plans as now prepared comply with the requirements of the memorandum. However, pertinent comments with recommended procedure and changes for carrying out

the provisions of the memorandum as agreed to at the conference are listed herewith beginning with Section 4:

4. Plans

(a) Continue present practice since it meets the requirements of the memorandum. Plans as now prepared, including B sheets, comply therewith and the Xerox method of reproduction reduces the 22" x 36" sheets to one-half size.

(b) Add to the Title Sheet the following:

1. Scale of Title Sheet
2. A group index listing all sheets in the complete set of plans in the following order:

INDEX OF SHEETS

Title Sheet . . . . .	1
Typical Sections (3 sheets) . . . . .	2
Summary. . . . .	2-A
Plan-Profile & B Sheets. . . . .	3-14
Reference Points. . . . .	15-17
Special Sheets. . . . .	18-22
Culvert Sections. . . . .	23-35
Bridge Plans. . . . .	36-45
Standards. . . . .	29 Sheets
Cross Sections and/or Computer Sections. . . . .	1-102

**The sheet numbers for bridge plans (if any) and the number of Standard sheets will be added to the title sheet by the Main Office. Likewise, the number of cross-section and/or electronic computer yardage and section data sheets will be added by the Main Office; however, if the total number of such sheets are 15 or less, they will be renumbered by the Main Office in consecutive order following the bridge plans. All sheet numbers should be shown in pencil in order that corrections can be made by the Main Office when necessary.**

**3. Show all conventional symbols used.**

**4. Show Design Designation in the manner indicated on page 110 of the AASHO - Blue Book, and page 93 of the AASHO - Red Book.**

**5. Additional spaces for dates and signatures of approving Federal officials will be provided on the title sheet by the Main Office.**

**6. Continue present practice of showing all typical sections with station limits for each, if more than one section is involved. Bridge cross-sections will continue to be shown on bridge drawings. If stage construction is involved, show future construction by appropriate lines and label.**

- (d) Present practice complies with the requirements of this section. It is not necessary to show variations in base thickness in tabular form, if indicated graphically.**
- (e) Present practice of B sheet preparation by the Districts (on Interstate and Major System plans) and 2-A sheet preparation by the Main Office (on all plans) fulfills the requirements of this section.**
- (f) Present practice substantially meets the requirements of this section. However, profiles should be drawn to the same horizontal scale as the plans, except for special cases.**
- (g) Present practice complies with the requirements of this section, except that coordinates of the beginning and end stations are not shown. We will continue to show land ties for the beginning and end stations.**
- (h) New instructions will be issued later on the preparation of right-of-way plans after the matter of minimum requirements has been worked out with the Bureau of Public Roads. This refers to final right-of-way plans and not to plans submitted to this office for preliminary right-of-way approval.**
- (i) Continue present practice of showing existing utilities, buildings, etc., and the disposition of same. Plans covering work to be done by railroad and utility companies shall continue to be prepared in accordance with P.P.M. 30-3 and Mr. Whitton's letter of February 18, 1959 on Utility Adjustments.**
- (j) Present practice conforms to the requirements of this section except that known sources of locally available surfacing and base materials are not shown on the plans. There will be no change in present procedure.**
- (k) This section pertains to any bridge or section of roadwork that is to be constructed without Federal Aid, and located either within the limits of the Federal Aid project or adjoining it. Present practice of showing such work as a part of the overall improvement, but excepting it from the Federal length is considered adequate.**
- (l) Present practice complies with the requirements of this section.**
- (m) Present practice complies with the requirements of this section, since the point of profile grade is indicated on the typical sections. Therefore a notation to indicate whether the grade line represents the surface of pavement or subgrade is considered unnecessary, except for special conditions.**
- (n) Cross-sections or electronic computer section data, as presently prepared, meet the requirements.**
- (o) Culvert standards comply with the requirements of this section with the exception**

of the reinforcing bar list. However, the bar list can be figured from the data shown, therefore, present practice will be continued. Reference to applicable specifications is made in the first sheet of the proposal. Minor structures require detail plans.

**(p) Bridge plans comply fully with the requirements of this section, including the location and log of each foundation sounding or boring.**

**(q) Standard drawings comply with all of the requirements of this section, except that there is no notation regarding the standard specifications. The reference to the applicable specifications on the first sheet of the proposal for a project is considered adequate.**

**Your full cooperation in complying with these added requirements as mentioned above will be greatly appreciated so that completed plans will receive approval by the Bureau of Public Roads without delay.**

**C. P. Owens  
Engineer of Surveys and Plans**