

HIGHWAY PRECONSTRUCTION MANUAL - Chapter 11

(Last updated: 12/11/2024)

CHAPTER or SECTION	NATURE OF SIGNIFICANT CHANGES
Ch 11 Highway Design	<ul style="list-style-type: none"> • Index revisions, including List of Figures and Tables • Move all Abbreviations, Acronyms and Definitions to Ch. 1, changed references from Standard Drawings to Alaska Standard Plans
1100 Introductio n	<ul style="list-style-type: none"> • [1100.2.1] Changes from PM to Pavement Preservation, updated figures. • [1100.2.2] Clarified responsibility for designers regarding publications, • [1100.2.3] Updated Figure references • [1100.2.4] Updated Figure references • [1100.2.6] Changed PM to Pavement Preservation • [1100.3.1] Removed Performance based practical design analysis. Pavement Preservation design exception clarification. • [1100.3.2] Added controlling design criteria, Reference Alaska Bridges and Structures Manual, updated links. • [1100.4.1] Added Design Speed • [1100.4.2] added Project Design Criteria references in the DSR • [Fig 1100-1] Minor changes to the Design Designation form • [Table 1100-1] Updated to reflect Standards and CED. Added clarification note for SSSS. • [Figure 1100-3b] Updated acronyms and notes.
1120 Elements of Design	<ul style="list-style-type: none"> • General: Updated references, hyperlinks, acronyms, and terminology. • [1120.1] Rewrite to simplify expectations. • [1120.2] Added Section • [1120.3] Changed numbering from 1120.2; added reference to 23 USC 111 – Interstate Highway access approval. • [1120.4] Removed duplicate language and referenced Alaska Bridge and Structures Manual (ABSM). • [Old Figures 1120-1 & 1120-2] Deleted. • [Figure 1120-1] Was Figure 1120-3. Updated and extended range. • [1120.5.1] Removed ATP language; added references to the ABSM • [1120.5.2] Removed experimental structures classification. • [1120.5.3] added reference to section 450.7.4 • [1120.5.4] revised list of wall performance variables; added references to the ABSM. • [1120.5.5] added reference to the ABSM; added wall classification language. • [1120.5.6] added language defining Alternative Wall Designs • [1120.5.7] Rewrite to generally refer the user to the ABSM. • [1120.6.1-4] Added general subsection, updated references, updated language to match AHDM, renumbered as needed. • [Table 1120-1] Deleted. • [1120.6.5] Added Bioengineered Bank Stabilization Section. • [1120.6.6 through 1120.6.10] Complete rewrite. • [1120.6.11] New Section for Minor Structures.

	<ul style="list-style-type: none"> • [Figure 1120-3] Updated maximum length. • [1120.8] Removed consent decree language, removed template information specifics, updated pay items to match AWP. • [1120.9] New Section. • [1120.10] New Section.
<p>1130 Cross Sections</p>	<ul style="list-style-type: none"> • General: <ul style="list-style-type: none"> ○ Updated language to provide more consistency rather than things like 2 percent, 2%, 0.02, and 2.0 ft/ft. ○ Provided consistency between references. ○ Changed “hazard” and “accident” language. ○ Updated Table and Figure Numbering. • [1130.1.1] Simplified language. • [1130.1.2] Removed rolled over language. • [1130.1.3] Added guidance for superelevation. • [1130.1.4] Renumbered. Rewrite. Updated and clarified language based on NHS, non-NHS, and ADT requirements. Removed references to tables where duplicated GB requirements and referenced. Updated references. • [1130.2.1] Simplified language and minor terminology updates. • [1130.2.2] Added Lateral Offset Subsection. Removed Low-Speed since covered elsewhere. • [1130.2.3] Rewrite. Simplified and clarified language. Updated language for MASH. • [1130.2.4] Rewrite. Simplified and references RDG. • [1130.3.2] Clarification on recoverable slopes • [1130.3.3] Added rounded channels with bottom widths less than 8 feet. • [1130.4] Reduced and simplified language. • [Table 1300-1] Changed layout, updated notes, and provided consistency for bottom of signals. • [Tables 1130-2 through 1130-8] Removed and reference sources. • [Figures 1130-2 & 1130-3] Removed. • [1130.5.1] Updated barrier categories, updated end treatment information, clarified order of precedence. • [1130.5.2] Updated MASH, removed example and equations and added discussion within RDG, added discussion on shy-line offset, flare rate, and some additional other guardrail considerations. • [1130.5.3] Added Cable safety rail. • [1130.5.4] Rewrite. Bridge Rail Transitions provided by the Bridge Design Section. • [1130.5.5] Simplified language. • [Figure 1130-2] New figure added. • [Tables 1130-9 through 1130-11] Removed. • [Figures 1130-6&1130-7] Deleted. • [Table 1130-12] Removed. • [Figure 1130-9] Replaced with new figure 1130-5 • [1130.7] Removed. Being moved to Ch 12. •
<p>1140 Preservatio n Projects</p>	<ul style="list-style-type: none"> • No updates

<p>1150</p> <p>Urban Streets</p>	<ul style="list-style-type: none"> • General: Updated references, hyperlinks, acronyms, names, and terminology. • [1150.1] Complete rewrite. Updated references, added range of level of service, added guidance adopted by local transportation authority, and defined urban streets. • [1150.2.1] directs the user to the GB • [1150.2.2] Complete rewrite. Added P&P 05.05.05 language for consistency, expanded to include two-way left-turn lane, added minimum width of median for signs and removed recommended median widths for consistency, and added pedestrian refuge language. • [1150.2.3] Added ideal signal spacing language and added reference to ITE Handbook. • [1150.2.4] Turn lane lengths. • [1150.3] New Section. Brought in from HPCM 450 for easier reference. • [Table 1150-2] Deleted
<p>1160</p> <p>3R</p>	<ul style="list-style-type: none"> • No change from the current 2005 version.
<p>1170</p> <p>Special Design Elements</p>	<ul style="list-style-type: none"> • General: <ul style="list-style-type: none"> ○ Updated section and figure numbering. ○ Provided consistency between references. • [1170.1] Revised lighting references. • [1170.2] Added to follow local transit operator guidance and coordination. • [1170.4] Changed board walks to board roads. Rewrite to remove figures and provided minimum and recommended guidance, added additional considerations, removed referenced figures, and provided additional surface requirements. • [1170.5] Updated grades, provided recommended extents, added lanes guidance, expanded other considerations, and added references. • [1170.6] Updated references and language in relation to 14 CFR Part 77. • [1170.7.1] Updated and condensed references. • [1170.7.2] Updated existing sign support language for roadside hardware eligibility program. • [1170.7.4] Changed 500 SF to 50 SF. Updated ASP reference. • [1170.7.5] Condensed language to avoid repeated information from ASPs and other reference like the RDG. Updated ASP references. • [1170.7.6] Added requirement to not use sign installations with 2 or more 2.5" PST posts closer than 7 feet. • [1170.7.7] Updated references and mast arm length. • [1170.8] Minor updates. Condensed 1170.8.2. Removed all types of fencing and expanded reference to SSHC. Changed noise fence to noise barrier. • [1170.9] Added Section. • [1170.10] Added Section. • [1170.11] Added Section. • [1170.12] Added Section. • [Previous Figures 1170-1a & 1b] Deleted the boardwalk figures. Renumbered other figures. • [Figures 1170-1 & 1170-5 through 1170-10] Removed round pipe sign supports entirely.
<p>1180</p> <p>Pavement Design</p>	<ul style="list-style-type: none"> • General: <ul style="list-style-type: none"> ○ Updated language to provide more consistency rather than things like 2 percent, 2%, 0.02, and 2.0 ft/ft. ○ Provided consistency between references. • [1180.2.1] Added "if needed, see 1180.4" and changed unstabilized to non-stabilized. • [1180.2.2] Rewrite. • [1180.2.3] Rewrite. Removed language in AKFPD Manual to avoid conflicts.

	<ul style="list-style-type: none"> • [1180.3.1] Simplified language. • [1180.3.2] Rewrite to reduce repeated information and updated language for pavement preservation. • [1180.3.3] Minor wording changes. • [1180.3.4] Deleted section. • [1180.4] Removed specific thickness language and reference policy and manual. • [1180.4.1 & 1180.4.2] Removed since covered elsewhere. • [1180.5] Changed subgrade to embankment, removed gravel to pavement program, added compressible soils, and added AKFPD Manual reference. • [1180.5.1] Added coordination requirements, removed information outlined in the AKFPD Manual, added CABC abbreviation and 3% or greater emulsion content, changed RAP from 3% to 2%. • [1180.5.2] Removed thickness of base course layers and removed Spec Section 308 language. • [1180.6] Changed Select to Selected and added discussions on all to tie back to specifications. • [1180.7.1] Removed dust control language in first paragraph. Added control with M&O consultation to last paragraph. • [1180.7.2] Updated references, Updated consultation requirements, and rewrote Existing Gravel Roads. • [1180.8] Deleted glossary and added a new section to address pavement smoothness.
<p>1190 Driveways and Approach Roads</p>	<ul style="list-style-type: none"> • General <ul style="list-style-type: none"> ○ Updated section and figure numbering. ○ Provided consistency between references. ○ Changed accidents to crashes. • [1190.1] Moved Exception and waiver language to own section. Added approach road and clarified use in section language. Condensed and clarifying language to distinguish between driveway and approach road design requirements. Updated municipal reviewers. Added new FHWA approval requirements under 23 U.S.C. 111. • [1190.2] Added Exceptions and waivers section and renumbered other sections accordingly. Reference to FHWA authority under 23 U.F.C. 111. • [1190.3] Removed definitions where they exist elsewhere in HPCM. • [1190.4] Minor name update and removed “The process of formally classifying Alaska roadways is not complete. • [1190.5.4] Added “functional area” • [1190.5.10] Added “and approach roads”. Removed “of the driveways” and left design. • Removed Table 1190-1 • [1190.5.11] Removed “for driveways” for median openings. Rephrased “a”. Added reference to Section 1150. • [1190.6.2] Changed “a normal street” to “an approach road”; added a reference to GB Ch 11. • [1190.6.10.g] Changed “handicapped access” to “ADA compliance curb”. • [Table 1190-2] Added note to assume level terrain. • [Table 1190-3] Rearranged the table format • [Figure 1190-5] Added note to consider vehicles that will use driveway to ensure grades and will accommodate needs. • [Figure 1190-8] Added for consistency in references between 1998 Driveway standards.