



KENAI PENINSULA BOROUGH

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JOHN J. WILLIAMS
MAYOR

MEMORANDUM

TO: Grace Merkes, Assembly President
Members, Kenai Peninsula Borough Assembly

THRU: John J. Williams, Kenai Peninsula Borough Mayor *JJW*

FROM: Gary Davis, Road Service Area Director *[Signature]*

DATE: February 7, 2008

SUBJECT: Ordinance 2008-05, Amending KPB Chapter 14.06, Road Standards

The intent of this ordinance is to ensure that roads built to Chapter 14.06 standards are well built roads and that the Road Service Area (RSA) only assumes maintenance responsibility for these good roads. The road standards were last amended in June of 2002 and in light of progressive development, road building activities, public comment, and experience gained by the RSA, changes to the standards are recommended to improve the quality of the roads built in the borough, enhance RSA efficiency, provide continuity of enforcement, reduce maintenance costs, and ensure a better road system for public use. These changes generally call for improved quantity and quality of construction materials, increased engineering requirements for difficult and sensitive terrain types, dimensional changes and changes in inspection and certification procedure.

This ordinance does carry one obvious departure from a narrow focus on road construction standards, that being proposed KPB 14.06.140, a warranty section aimed primarily toward administration and protecting the public trust. If, however, the assembly does not wish to enact this ordinance because of the inclusion of the warranty section, the RSA director would recommend, through amendment, reducing the percentage of financial guarantee required, reducing its applicability to select categories of roads, or eliminating the entire provision as opposed to failing to enact the ordinance as a whole based on the inclusion of the warranty section. Any change to proposed KPB 14.06.140 must also be reflected in KPB 14.06.100(B) which references the financial guarantee.

This ordinance builds on Ordinance 2007-10 which died on the table in October 2007. For your benefit, the following summarizes not only the recommended changes to KPB Chapter 14.06:¹ but also many of the differences between this ordinance and Ordinance 2007-10.²

¹ Not all grammatical or technical changes are discussed or called out.

1. **14.06.010. Road Construction Standards—Introduction.** The introduction was derived from the former section 14.06.080, and moved to the front of the chapter, partly based on comments from Terry Cowart, who reasonably pointed out that an introduction should go at the beginning. Further, this section now reminds applicants up front that a right-of-way construction permit is required prior to working in a right-of-way. In Ordinance 2007-10, this section included a provision that all platted roads in a subdivision that connected to adjacent constructed roads had to be built for the RSA to certify any road within the subdivision. This requirement is deleted. Finally, subsections originally contained in 14.06.080 regarding applications for maintenance have been moved to a more appropriate section (14.06.050, Application for maintenance).
2. **14.06.020. Standards Applicable.** This section is the same as was proposed in Ordinance 2007-10, only clarifying from the current code provision that the RSA administers the standards.
3. **14.06.030-.040. Road Construction Standards and Subdivision Standards.** These sections also remain the same as proposed in 2007-10, reversing the order of these two sections from the current code to clarify that the standards apply to all roads where maintenance is sought, not just subdivision roads.
4. **14.06.050. Application for Maintenance.** As was proposed in 2007-10, this section is changed to clarify that a person or any entity, such as a corporation, can apply for maintenance. Departing from 2007-10, subsections from other former code provisions relating to the application process are all now listed under this subsection, consolidating the information pertaining to the application process.
5. **14.06.060. Certification and Inspections.** In addition to grammatical changes proposed in 2007-10, “Inspections” is added to the title as well as a clear requirement that the applicant must pay for the expenses associated with inspections for certification (aside from RSA staff time) and that all work must be finished by October 1 to accommodate a final inspection.
6. **14.06.070. Other Requirements Not Eliminated.** As in 2007-10, it is recommended that a sentence be added to clarify that it is the applicant’s responsibility to ensure that design and construction activities comply with all laws. Meeting borough standards does not relieve a road builder of the duty to ensure compliance with other applicable state or federal laws or permitting requirements.
7. **14.06.080. Road Construction Standards—Construction Categories.** Changes from current code include clarification that roads are categorized by the number of lots served, and that all collector roads be built to Category IV standards. Unlike Ordinance 2007-10, there is no recommendation that the RSA director consider future development when categorizing roads.

² Since the assembly was provided a draft of this ordinance at committee for purposes of analyzing Ordinance 2007-33, changes to the ordinance have been made, most notably to the financial security requirements and disallowing organics to be buried in rights-of way.

8. **14.06.090. Road construction standards—Road Widths.** As in 2007-10, it is recommended that an introduction to the existing table be included.
9. **14.06.100. Road construction standards—Construction standards for maintenance certification.** Substantively, the recommended changes to this section are similar to those recommended in 2007-10, except where noted. In addition to technical changes to requirements for embankment material and base depths, other changes from the current code (former 14.06.120[A]) include the following:

A(1). This subsection adds that roads on section line easements can be accepted into the road maintenance system. This change has been recommended after learning the state Department of Natural Resources, which controls the majority of the section lines, does NOT plat over these section lines. Because of this, the RSA believes it must allow roads built to RSA standards on these section lines be accepted into the road maintenance system.

A(2). While not included in 2007-10, it is now recommended that if geotextiles are utilized over organics, then the depth of the embankment must be two feet minimum for category I & II roads, and 30 inches for Category III roads. (Category IV roads have their own unique requirements)

A(4). Recommended Changes from both the current code and 2007-10 include a provision that geotextile placed over subgrade soils with a frost classification of F4 cover the maximum width of embankment.

A(6). This section was changed to keep bury pits outside any future areas that may include pavement as road needs change. It also restricts the size of material that can be buried in the right-of-way. If a road is upgraded, it is often widened, which can result in the expensive removal of bury materials unless those materials are excluded from the area where expansion might occur. Unlike 2007-10, it is now proposed that backfill be compacted and that no organics be buried in the right-of-way.

A(7). This section adds that fill areas over six feet must be engineered to deal with erosion and other problems that occur when fill areas exceed six feet in depth.

A(8). This new section requires specific drainage requirements on roads in flat subdivisions. These are the areas that often experience ponding or standing water over the road during breakup or flooding.

B. This section is new and allows the RSA director to require a proof roll test on any road that has been built but not yet experienced its intended volume of traffic. Because roads may be certified after being built, yet not actually used as expected until any surety for the road has been returned, it is important for the RSA to be able to require a proof roll test prior to the return of surety so that the RSA may have a means to test how the road will hold up to the expected traffic volume. The roll test consists of driving a heavily laden truck on the road to see how it stands up. Although this is not a perfect test, it is a practical and economical means of simulating regular traffic use.

- C. This subsection adds that roads built across wetlands and peat bogs must be engineered. The RSA feels this is a necessary requirement due to drainage problems that often require engineering to address. Finally it is recommended that throughout the standards that Sieve designation of No. 200 for Type one roads be 3-6, as opposed to 0-6.

10. **14.06.110. Category I and II roads—Alternate design method.** Proposed changes to this section deviate from 2007-10 only in regard to the Type II base depth, decreasing a 12-inch requirement to a 6-inch requirement. Recommended changes to this section from former 14.06.120(C) include emphasizing that the RSA board must approve of alternate design methods prior to construction of an alternate design road. Alternate designs for roads are made available for utilization in areas where soil and geography are such that it is not economically practical to build to typical standards. The RSA director believes that it is necessary for the RSA board to approve alternate design roads prior to construction to ensure that applicants truly have a need for such a design rather than just a desire to build a cheaper road. Additionally, the standards require the applicant to provide documentation that demonstrates the need for an alternate design road and requires a proof roll test prior to certification for road maintenance to ensure that the alternate design road will hold up prior to the RSA taking over responsibility for the road. This is necessary even though the RSA will perform inspections during construction of the road because RSA inspectors cannot be at the construction site to monitor construction at all times.
11. **14.06.120. Category I, II, and III roads—Engineering required for project designs other than typical or alternate.** Unlike 2007-10 the title and body have been changed to reduce confusion between engineered projects and the project specific ROW permit provided for in KPB 14.04 by referring to construction under this section as an engineered project instead of a project specific design. Also it is recommended that test holes be every 250 feet instead of 500 feet. Identical to 2007-10, changes to this section (former 14.06.120[B][1]) emphasize the requirement that engineered designs for project specific roads be pre-approved by the RSA board prior to construction. Even though the road is being designed by an engineer, the RSA would still like the opportunity to review the design prior to construction. This allows the RSA to have some participation in the design and construction of a road that it may end up being responsible for in the future if certification is approved.
12. **14.06.130. Category IV roads—Engineering required.** Identical to 2007-10, this section is based on former 14.06.125(A). Category IV roads serve the greatest number of lots and likely will support the highest traffic volume. For this reason the RSA wants to ensure that roads are engineered and that the design is approved by the RSA board prior to construction.
13. **14.06.140. Warranty and Security Requirements.** This section has been completely reworked from what was proposed in 2007-10. This section now generally requires that an applicant for road maintenance warrant that the road(s) sought for certification has been built to standards and that it will hold up to those standards for at least one year. The applicant additionally warrants that the road was built free of defects in design, workmanship, and materials. It is intended that the RSA will inspect the roads upon application for compliance with applicable standards. The RSA will then preliminarily approve compliant roads for

maintenance and will then notify the applicant of preliminary approval. The applicant will then have 30 days to provide the required security to back up the warranty. The RSA will certify the road for maintenance after inspecting the completed road and taking the applicant's warranty and security for the warranty. If no problems with the road are discovered within the one-year warranty period, after a final inspection the security will be returned to the applicant. If defects that occurred within the warranty period are discovered during the warranty period or prior to the return of security, the applicant will be requested to fix the problems within a reasonable time. If the applicant does not fix the deficiencies, the borough will use the security to fix the problems. Ten percent of the project cost is recommended as the amount of required security as it reasonably strikes a balance between securing enough to fix most problems and not being overly burdensome to small developers. It is believed that larger developers on bigger projects can secure bigger security amounts if necessary. Road improvement assessment districts would not be subject to the warranty or security requirements.

14. **14.06.150. Road construction standards—Typical section materials.** The RSA has updated its technical requirements for standard materials used in road construction. There are no substantial changes to this section from what was proposed in 2007-10.
15. **14.06.160. Road construction standards—Alignment.** The RSA has recommended minor grammatical changes to this section (former 14.06.140) and a requirement that driveways be spaced as much as possible so as not to interfere with drainage ditches.
16. **14.06.170. Road construction standards—Drainage and culvert material.** The RSA recommends changes to this section (former 14.06.150) that require culverts to have at least a 1 percent drainage grade and other minor technical changes. There are no material changes to this section from what was proposed in 2007-10.
17. **14.06.180. Road construction standards—Structures/bridges.** The RSA has recommended adding this section (former 14.06.110) which will require bridges, culverts, and retaining walls to be designed by engineers and meet state standards. These structures can be complicated to design, expensive to repair, and present an obvious safety factor, so the RSA wants to have a level of comfort that the structures were designed by engineers prior to accepting responsibility for them. There are no changes to this section from what was proposed in 2007-10.
18. **14.06.190. Airparks.** The RSA recommends adding this section in response to recent developments of airparks throughout the borough. The RSA does not want to be responsible for roads utilized by aircraft nor does it want to encounter airplanes on roads during maintenance operations. The only change in this section from what was proposed in 2007-10 is changing the word “may” to “will” as follows... “where aircraft *will* utilize the roadway.”
19. **14.06.200. Road construction standards—Signs.** The RSA recommends one minor grammatical change to this section (former 14.06.180). There are no changes to this section from what was proposed in 2007-10.
20. **14.06.210. Road construction standards—Paving specifications.** The RSA recommends updating the technical requirements for paved roads and implementing reporting

and testing requirements. Paved roads are expensive to build and repair, and the RSA wants to ensure the pavement is up to standards prior to taking over responsibility for the roads. Since 2007-10, the RSA recommends putting it up front that all paving projects must be engineered and that compacted shoulders are required (as opposed to may be requested).

21. **14.06.220. Road construction standards—fee schedule.** No material change to this section (former 14.06.190).
22. **14.06.230. Road construction standards—Exceptions.** (Former 14.06.130.) The RSA recommends clarifying that an exception to the standards can be granted if any one of the listed conditions are present as opposed to requiring all the conditions to be met. There are no material changes to this section from what was proposed in 2007-10.
23. **14.06.240. Road decertification.** (Former 14.06.070.) Other than minor grammatical changes, the RSA recommends adding language that allows it to recommend to the assembly decertification of a road when there is no reasonable opportunity to bring a maintained road up to standards. The only material change from 2007-10 is a recommendation to delete a reference to a definition of “drivable surface” as it is not defined anywhere in the code.
24. **14.06.250. Road construction standards—Definitions.** (Former 14.06.200.) The RSA recommends including a few new definitions to clarify what is required in the standards. This ordinance primarily differs from Ordinance 2007-10 in that it is not providing a definition for “SOA” (State of Alaska).

The RSA looks forward to presenting these recommendations to the assembly and will address questions and concerns as necessary.