

Introduced by: Mayor at request of  
Road Service Area Board  
Date: 05/07/02  
Hearing: 06/04/02  
Action: Adopted  
Vote: 9 Yes, 0 No

**KENAI PENINSULA BOROUGH  
ORDINANCE 2002-13**

**AN ORDINANCE AMENDING KPB 14.06, ROAD CONSTRUCTION STANDARDS**

**WHEREAS**, the Kenai Peninsula Borough Road Service Area board, after its annual certification of roads for maintenance, underwent a review of the maintenance standards; and

**WHEREAS**, the categories of roads have not been reviewed since the standards were adopted in 1986; and

**WHEREAS**, roads that serve a great number of lots are deteriorating even though they meet standards at time of construction; and

**WHEREAS**, revisions to material requirements, engineering requirements, and number of lots served will prolong the life of borough roads, reduce maintenance and improvement costs, and better serve road service area residents; and

**WHEREAS**, the road service area board recommended the following changes to the construction standards at its March 18, 2002 meeting;

**NOW, THEREFORE, BE IT ORDAINED BY THE ASSEMBLY OF THE KENAI PENINSULA BOROUGH:**

**SECTION 1.** That KPB 14.06.090 is hereby amended as follows:

**14.06.090. Road Construction Standards—Construction Categories.**

[A. ROADS SHALL BE CONSTRUCTED FOR SPECIFIC TRAFFIC VOLUMES AND LEVELS OF SERVICE APPROPRIATE FOR THE CATEGORY OF ROAD SET FORTH BELOW. THERE ARE FOUR CATEGORIES OF ROADS. INDIVIDUAL ROADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD FOR THE CATEGORY OF ROAD BEING CONSTRUCTED.]

A. Internal subdivision roads. The standard to which a road subject to a maintenance application is constructed in order to be certified for maintenance shall be based on the categories set forth below. The category shall also be determined by lots indirectly served where the road subject to a maintenance application is a collector or subcollector and provides necessary access to lots not otherwise served by a borough- or state-maintained collector or subcollector.

1. *Category I:* A cul-de-sac road or other minor road, both of which serve less than [15] 10 lots.
2. *Category II:* A road [WHICH] that serves between [15] 10 and [40] 20 lots.
3. *Category III:* A road [WHICH] that serves between [41] 21 and [100] 50 lots.
4. *Category IV:* A road that serves greater than [100] 50 lots.

B. Existing collector roads. Existing collector roads shall be constructed to a Category III or IV based on current and projected traffic. The category applicable to an existing collector road should, to the extent practical, be consistent with widths set forth in Alaska Department of Transportation and Public Facilities Highway Preconstruction Manual.

C. The RSA Director or his designee will determine the category of road based on the standards set forth in this section. If the applicant for maintenance disagrees with the category the applicant may request a review by the RSA board. Any request for an exception to the appropriate category must be approved by the board pursuant to KPB 14.06.130.

**SECTION 2.** That KPB 14.06.100 is hereby amended as follows:

**14.06.100. Road construction standards—Road widths.**

<i>Category of Road</i>	<i>Minimum Width</i>	<i>Maximum Width (Feet)*</i>
I	20	28
II	22	28
III	[26] <u>24</u>	28
IV	[28] <u>26</u>	28

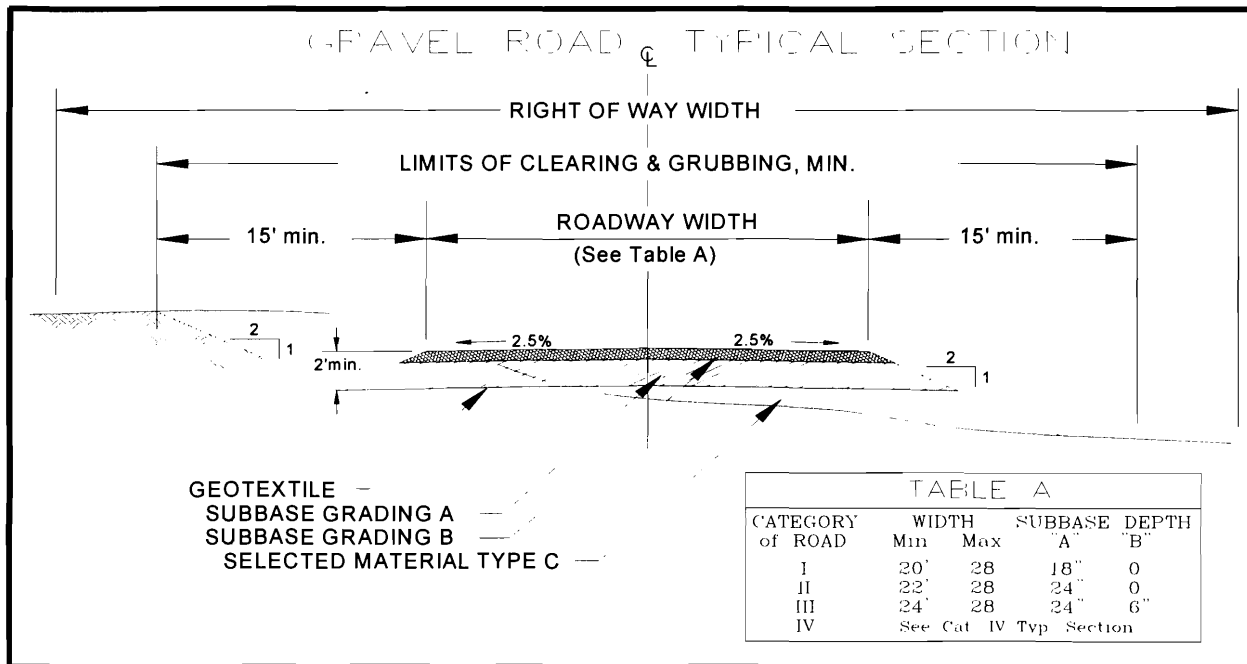
(\*Shoulder to shoulder)

**SECTION 3.** That KPB 14.06.120(A) is hereby amended as follows:

A. Typical section. Gravel roads shall be constructed in accordance with the Gravel Road Typical Section drawing [(see Drawing A-1 attached)] and associated Table A. Additional requirements are:

1. Roads must be contiguous with the existing road system maintained by the borough and the state. All roads must be on a dedicated right-of-way and must be built along the right-of-way centerline. Minimum right-of-way width shall be 60 feet, enabling utilities to be installed outside the edge of roadside ditches. Minimum width for cul-de-sac serving no more than six lots which cannot be further subdivided is 50 feet.

2. All organic material shall be stripped and removed to a minimum depth of four feet below finished grade. If geotextile is utilized over organics, then the depth of subbase must be three feet minimum or greater as required for stable embankment.
3. Extraction of material between the ditch lines for any purpose other than excavation to subgrade is prohibited.
4. Geotextile shall be placed over all subgrade soils consisting of silts or clays with a frost classification of F-4 (U.S. Corps of Engineers.)
5. The roadway embankment shall be placed in lifts and compacted to not less than 90% of maximum density. Maximum density shall be determined by AASHTO T 180, Method D.
6. In place [OF] usable excavation material meeting the specifications of the required embankment material may be utilized in lieu of borrow.

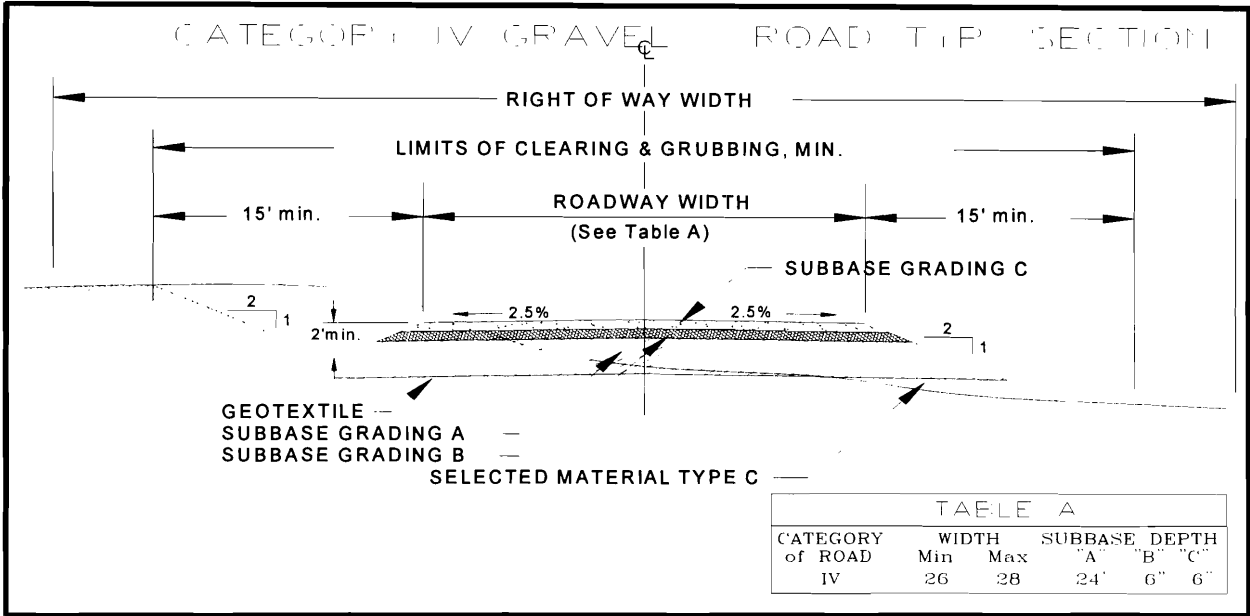


**SECTION 4.** That KPB 14.06.120(B) is hereby amended as follows:

*B. Project specific design.*

1. A project specific design may be submitted if prepared and sealed by a licensed professional civil engineer. The design shall include typical sections(s), centerline plan and profile. The design shall provide for adequate drainage. The design shall be based on a soils investigation with test holes at least every 500 linear feet. A report shall be submitted with test hole logs and soil analyses. Project specific designs are subject to approval by the RSA Board prior to construction. The RSA Board may require a project-specific as-built, engineering analysis and design to address existing or proposed roads.

2. Category IV roads require a project specific design prepared and sealed by a licensed professional civil engineer in accordance with the Category IV gravel Road Typical Section drawing and associated Table A. The design shall be approved by the RSA Director before construction begins. Once the project is complete, as-built plans, prepared and sealed by a licensed professional civil engineer, shall be submitted to the RSA. The as-built shall illustrate constructed horizontal alignment, finish grade profile, typical section of the roadbed, and material specifications. The as-built plans are required prior to acceptance by the RSA board of the road for temporary maintenance.



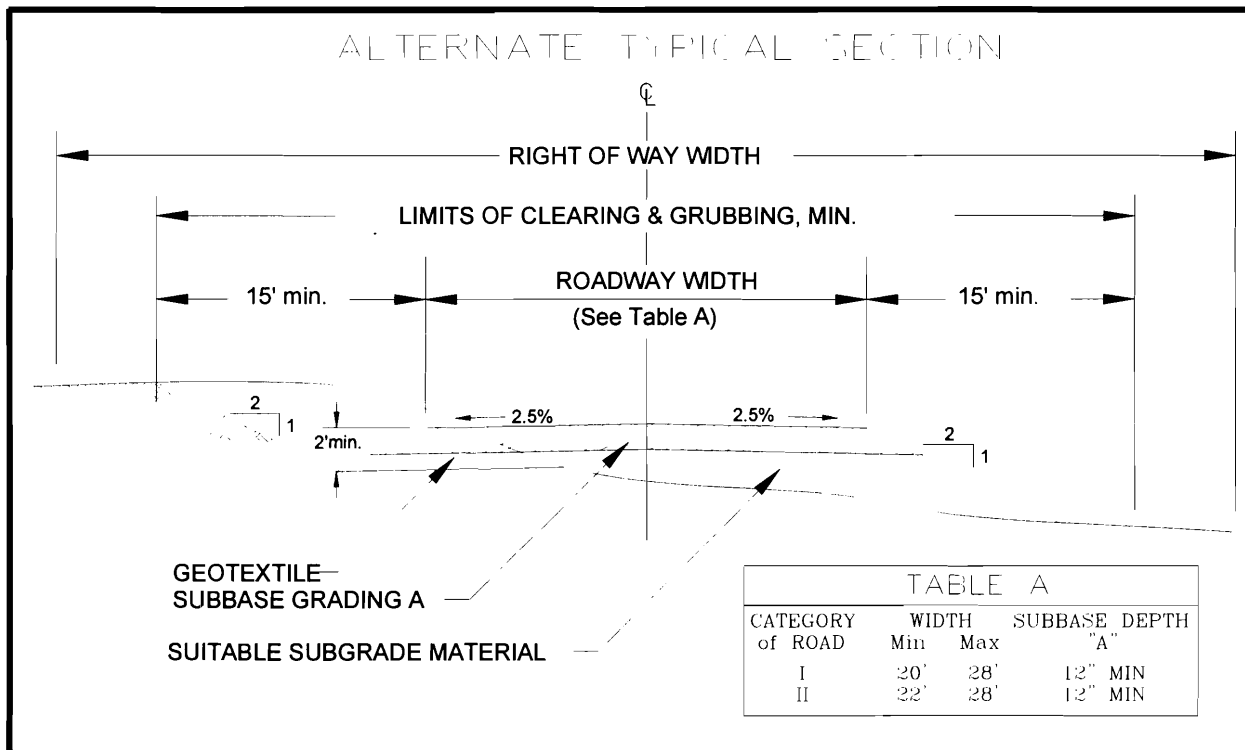
**SECTION 5.** That KPB 14.06.120 (C) is hereby amended as follows:

C. *Alternate construction method.* Alternate construction methods may be utilized for Category I and Category II roads where soil, economic and other conditions are such that the standard typical section is not practical. It is the developer's responsibility to construct a functional road that will be suitable for traffic and maintenance operations. Final acceptance by the RSA will be based on inspection and performance testing. Roads constructed under this alternate method must meet the following requirements:

1. A RSA application must be filed prior to start of construction.
2. The road must meet the minimum requirements shown on the Alternate Typical Section drawing and associated Table A [(SEE DRAWING A-2 ATTACHED)].
3. Three inspections are required by the RSA, consisting of initial, midway and final inspections. The final inspection will be conducted one year after the initial application, during the summer season when the subgrade

and roadbed are frost free. Photographic documentation will be done by the RSA representative.

4. The applicant must provide the means to conduct a proof roll test during the final inspection. The proof roll test will consist of a fully loaded 12 cubic yard end dump truck traversing the road as directed by the inspector. The minimum proof rolling is full length of the road, on both lanes. If excessive rutting, greater than three inch depth tracks, occurs, remedial work will be required. The RSA representative will designate the defective areas in a written report.
5. Winter maintenance only will be provided during the interim period for one year.



**SECTION 6.** That KPB 14.06.125 is hereby enacted as follows:

**14.06.125. Category IV roads—temporary maintenance and financial guarantee.**

A. For Category IV roads constructed under KPB 14.06.120(A) and (B), certification for permanent maintenance will be deferred for two years to ensure the stability of the road. If the road no longer meets Category IV standards within two years after being placed on temporary maintenance, the road service area board shall not certify the road for permanent maintenance until the road meets Category IV standards. The road service area shall inspect the road before the two-year anniversary and provide the applicant written direction for required improvements if any are necessary. Staff shall make a written recommendation to the road service area board regarding certification for permanent maintenance. If the applicant disagrees with the required improvements, if any, the applicant may request a review by the road service area board.

B. Category IV roads require the submittal of a financial guarantee with the application for maintenance that meets the following requirements:

1. On a form provided by the road service area, the applicant shall submit a design for the bonded improvements and an estimate of the cost of required road construction. The subdivision improvement cost estimate shall be certified by a licensed professional civil engineer.
2. Upon acceptance of the cost estimate by the road service area board, the applicant shall submit to the road service area board a bond issued by a qualified corporate surety licensed to do business in Alaska guaranteeing payment to the borough of one hundred twenty percent of the certified subdivision improvement cost.
3. In the event the applicant fails to correct deficiencies noted by the RSA, the borough shall redeem the surety for construction of the required improvements.
4. Surety shall be returned by the road service area upon completion by the applicant and approval of required improvements.

C. The road service area board may by resolution adopt procedures to implement these provisions.

**SECTION 7.** That KPB 14.06.160(A) is hereby amended as follows:

**14.06.160. Road construction standards—Typical section materials.**

A. *Subbase.* Subbase shall contain no muck, frozen materials, roots, sod or other deleterious matter. It shall have a liquid limit not greater than 25 and plasticity index not greater than 6 as determined by AASHTO T89 and T90.

Category IV roads require a 6" cap of Subbase Grading C. Specifications for Subbase Grading are as follows:

Requirements for Grading for Subbase  
Percent Passing by Weight

<i>Sieve Designation</i>	<i>Grading A</i>	<i>Grading B</i>	<i>Grading C</i>
4 inch	100	—	—
2 inch	85—100	100	—
<u>1 inch</u>	—	—	<u>100</u>
No. 4	30—70	30—70	<u>40—75</u>
<u>No. 16</u>	—	—	<u>20-43</u>
No. 200	[6—12]10 Max.	[0—6] 6—10	<u>4—10</u>

Subbase Grading C shall consist of crushed material, of which 50% by weight of the particles retained on the No. 4 sieve shall have at least one fractured face as determined by ATM T-4.

**SECTION 8.** That KPB 14.06.170 is amended as follows:

A. *Description.* The work under this section consists of the performance of all work required for the construction of asphalt concrete pavement on a prepared base [(SEE DRAWING A-3 ATTACHED)] (see Paved Road Typical Section drawing and associated Table A). Current editions of "Standard Specifications for Highway Construction," as adopted by the Alaska Department of Transportation and Public Facilities and the "Standard Specifications for Streets, Drainage, and Utilities," as adopted by the Municipality of Anchorage will be the references used for asphalt paving.

B. *Material and testing.*

1. *Asphalt.* The contractor shall submit a certified analysis of the asphalt to the RSA for review and approval. The RSA reserves the right to make check tests of the asphalt at the project site, and if the asphalt is not in accordance with the certified analysis he may reject the materials.

The asphalt required by these specifications shall conform to the requirements of The Asphalt Institute for the type and grade and shall comply with ADOT/PF specifications used in the area.

The contractor/developer, at their own expense, will be required to perform field tests measuring aggregate gradation and fracture, asphalt content and compaction. Test results shall be in conformance with

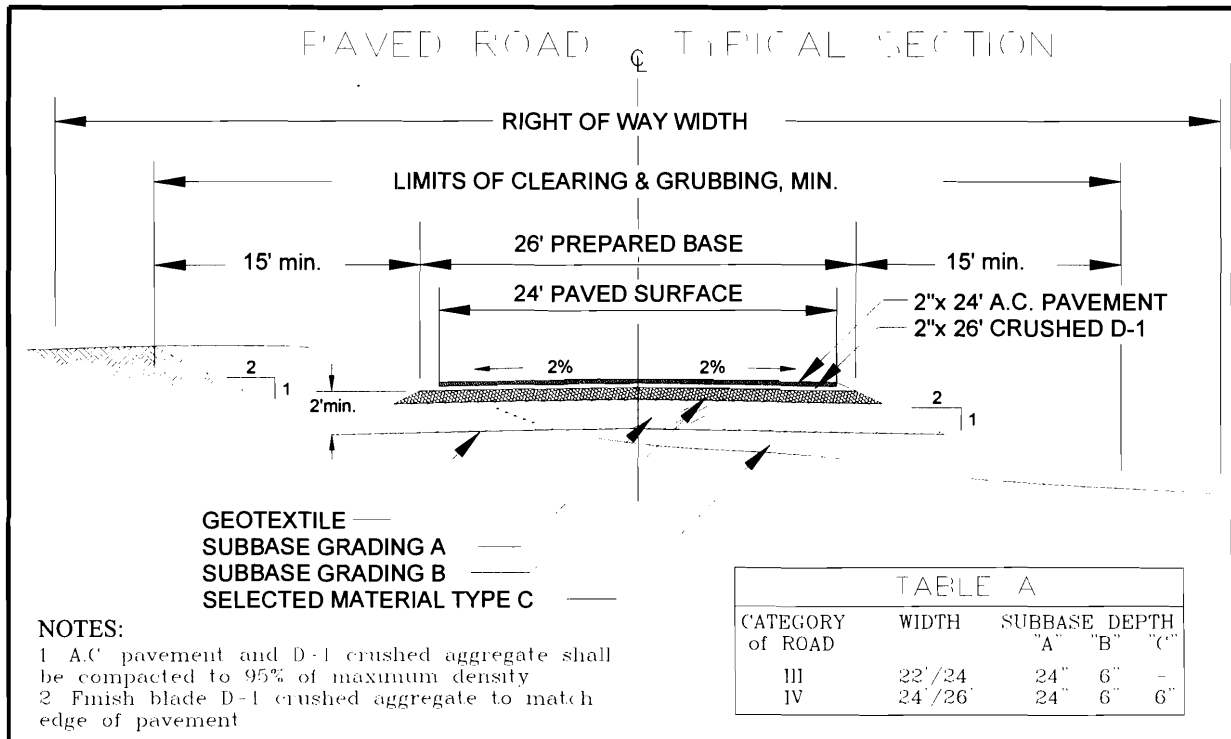


pavement mix design requirements and shall be stamped by an Alaska licensed professional civil engineer.

The prepared base shall meet the standards for a Category III road. Inspection of the subbase, by a RSA approved party, is required prior to paving.

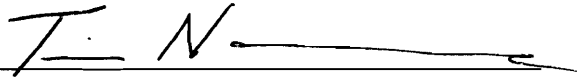
C. *Certification of design.* The RSA requires the asphalt pavement mix design be submitted and stamped by an Alaska licensed professional civil engineer. Process quality control records for aggregate shall be submitted with the asphalt pavement mix design.

D. *Other specifications.* The RSA will use the same specifications previously cited to address seal coat, prime coat, paving geotextile and recycled asphalt paving.

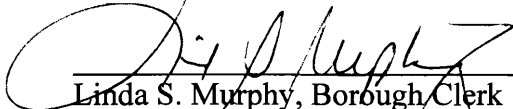


**SECTION 9.** That this ordinance shall become effective upon its enactment.

**ENACTED BY THE ASSEMBLY OF THE KENAI PENINSULA BOROUGH THIS 4TH DAY OF JUNE, 2002.**

  
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Timothy Navarre, Assembly President

ATTEST:

  
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Linda S. Murphy, Borough Clerk

