JOHNSON COUNTY ROAD STANDARDS

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JOHNSON COUNTY ROAD STANDARDS

The Johnson County Commissioners hereby adopt these standards as the uniform County Road Standards for existing and future county roads and/or county subdivision streets in Johnson County.

I. GENERAL

These standards shall cover the placing of crushed aggregate base and aggregate base and asphalt surfacing on county roads and streets within county subdivisions.

Prior to the construction or reconstruction of any road or street the design, plans, specifications, and other required information shall be submitted to the County Commissioners or their designated representative for review and approval. County roads designated by the Commissioners to have asphaltic surfacing shall meet the standards of this resolution. Any road or county subdivision street must be improved to the standards of this resolution before consideration will be given by the Commissioners for maintenance of the road or street by the county. In addition to meeting these standards, a county subdivision must have 95 percent of its lots sold and occupied before consideration will be given by the Commissioners for county maintenance of streets. By meeting any of the requirements of these standards it in no way or manner implies that Johnson County agrees to maintain said streets. Approval for such maintenance will be determined on a specific request basis and will be dependent on certain factors existing at the time including but not limited to county finances, location of the subdivision, and total occupancy.

Streets of county subdivisions which adjoin an asphalt surfaced county or state road shall have the streets within the subdivision brought to the asphalt surfacing requirements of these standards before the county will take over maintenance and designation as a county road and only if prior approval of the County Commissioners has been obtained for such maintenance as provided for in the preceding paragraph. All county subdivisions which adjoin an asphalt surfaced road shall have the access road paved from the county or state roadway to the property line of the subdivision. All county subdivisions are required to have their streets improved to the gravel base requirements as provided for by these standards.

Warranty. After the completion of the construction of any road(s) according to these standards there shall be a period of one year after the time of final inspection by the county before consideration will be given by the County Commissioners for county maintenance of the road(s). During the one year period the person or persons responsible for the road(s) shall carry out all maintenance and repair of the road(s) according to the Johnson County Road Standards.

Permits. Before any person shall construct any type of access whatsoever onto or across a county road that person shall apply for a county road access permit at the office of the Johnson County Clerk. Before granting such a permit the County Commissioners may require more information than requested on the permit.
II. ROADWAY CLASSIFICATION

A. Subdivisions. All streets within county subdivisions shall have a minimum of a thirty two foot (32') base width constructed according to the attached typical roadway section of these standards.

B. County Roads. County roads shall have a minimum of a thirty six foot (36') base width constructed according to the typical roadway section attached to these standards.

C. Gravel Roads. Gravel roads and streets shall have a minimum of six inches (6") of crushed base.

Where soil, water, or other conditions dictate, the Commissioners or their representative, may require additional base support for gravel or asphalt roads or streets.

III. CONSTRUCTION OF COUNTY ROADS AND SUBDIVISION STREETS

A. Gravel Base. The gravel used for crushed base shall be composed of clean, hard, durable, natural stones or aggregate having the following gradations after the crushing is complete:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing By Weight Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot;</td>
<td>95</td>
<td>100</td>
</tr>
<tr>
<td>11/2&quot;</td>
<td>95</td>
<td>100</td>
</tr>
<tr>
<td>1&quot;</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>#4</td>
<td>50</td>
<td>85</td>
</tr>
<tr>
<td>#8</td>
<td>40</td>
<td>70</td>
</tr>
<tr>
<td>#200</td>
<td>2</td>
<td>15</td>
</tr>
</tbody>
</table>

The crushed stone shall have a percentage of wear of not more than 50% when tested in accordance with A.A.S.H.O. T-95 (Los Angeles Abrasion Test). The fraction passing the #40 sieve shall have a Plasticity Index not greater than 6, as determined by A.A.S.H.O. T-89, T-90, and T-91. The fraction retained on the #4 sieve shall be composed of at least 35% (by weight) of particles having at least one fractured face. There shall be no soft lumps, clay balls, or thin elongated stones in excess of 3% of the total sample.

B. Gravel Laydown. The standard gravel base depth shall be six inches (6"). If the required compacted depth of the gravel base exceeds six inches the course shall be constructed in two or more layers of approximately equal thickness. The maximum compacted thickness of any one layer shall not exceed six inches.

Each layer shall be compacted to a density of not less than 95 percent of maximum density as determined by A.A.S.H.O. T-180 and T-191. The surface of each layer shall be maintained during the compaction operations in such a manner that a uniform texture and surface is produced and the aggregates firmly keyed. Water shall be uniformly applied over the materials during compaction in the amount necessary for proper construction.

C. Asphaltic Roads. This work shall consist of the application of bituminous material over a crushed gravel base of at least 6" followed by an application of cover coat materials.
C-1 **Prime Coat.** Prior to the placing of any asphaltic material on the gravel base a prime coat shall be applied. Prime coat shall be applied only when the surface on which the material is to be applied is dry and the air temperature is above 50 degrees F. The surface to be primed shall be shaped to the required grade and section, shall be free from all ruts, corrugations, segregated material, or other irregularities and shall be uniformly compacted.

Cutback asphalt prime coat, medium cure grade, as approved by the County Road Superintendent, shall be applied by a pressure distributor in a uniform continuous spread at the minimum rate of 0.25 gallons per square yard. Excess bituminous material shall be squeegeed from the surface. Skipped areas or deficiencies shall be corrected. A curing period of three days should be allowed between the application of the prime coat and the next application of bituminous material. During the curing period the primed surface shall be kept in repair.

C-2 **Cover Coat.** Cover coats shall be applied only when the surface on which the material is to be placed is dry and when the air temperature is 40 degrees F. and rising.

C-2a **Equipment.** The following equipment will be required:

1. Equipment for heating and applying the bituminous material. The distributor must be capable of applying the bituminous material at controlled rates of from 0.05 to 2.0 gallons per square yard with uniform pressure.

2. A minimum of at least one pneumatic tired roller. The roller shall be self-propelled and the gross load shall be adjustable to apply 200 to 350 pounds per inch of rolling width as directed by the County Road Superintendent. Pneumatic tired rollers shall be operated at a maximum speed of five miles per hour.

3. One aggregate spreader or truck as approved.

4. A minimum of at least one self-propelled steel wheel tandem or 3 wheel roller weighing not less than eight tons.

C-2b **Operations.** Cover coating operations shall not be started until the surface is thoroughly compacted by rolling and traffic. Bituminous material shall not be spread until the surface has been cleaned and the section to be coated has been approved by the County Road Superintendent. The bituminous material will be of a grade designated and approved by the County Road Superintendent.

C-2c **Bituminous Application.** Bituminous material shall be applied by means of a pressure distributor in a uniform continuous spread over the section to be treated and within the temperature range specified for the material. The quantity of material to be used per square yard shall be as directed by the County Road Superintendent. If the texture of the surface is such that the bituminous material penetrates too rapidly, a preliminary application of from 0.05 to 0.1 gallon per square yard of surface may be required. A strip of building paper at least 3 feet in width and with a length equal to that of the spray bar of the distributor plus one foot shall be used at the beginning of each spread. If the cut off is not positive the use of paper may be required at the end of each spread. The paper shall be removed and properly disposed of. The distributor shall be moving
forward at proper application speed at the time the spray bar is opened. Any skipped areas or deficiencies shall be corrected. Junctions of spreads shall be carefully made to assure a smooth ridin surface.

The length of spread of bituminous material shall not be in excess of that which trucks loaded with cover coat material can immediately cover. The spreads of bituminous material shall not be more than six inches wider than the width covered by the cover coat material from the spreading device. Under no circumstances shall operations proceed in such a manner that bituminous material will be allowed to chill, set up, dry, or otherwise impair retention of the cover coat. The distributor when not spreading shall be parked so that the spray bar or mechanism will not drip material on the surface of the traveled way.

C-2d Cover Coat Aggregate. Only one type of cover coat aggregate shall be used on any project unless approved by the County Road Superintendent. Cover coat aggregate shall consist of clean, tough, durable, fragments crushed from stone or ledge rock or crushed or natural gravel or sand free from an excess of flat, elongated, soft, or disintegrated pieces and free from stone coated with dirt or other objectionable material. The aggregate shall have a percentage of wear of not more than 40 or have a plasticity index in excess of three. The aggregate material shall be well graded from coarse to fine and shall have the prior approval of the County Road Superintendent.

C-2e Application of Cover Coat Aggregate. Immediately following the application of the bituminous material, cover coat aggregate shall be spread in quantities as designated by the County Road Superintendent. Spreading shall be accomplished in such a manner that the tire of the trucks or aggregate spreader at no time contact the uncovered and newly applied bituminous material. The cover coat aggregate shall be moistened with water when required to eliminate or reduce the dust coating of the aggregate. Moistening shall be done the day before the use of the aggregate.

Immediately after the cover coat material is spread, any deficient areas shall be covered by additional aggregate. Pneumatic-tired rolling shall begin immediately and shall be continuous until three complete coverages are obtained. Pneumatic-tired rolling shall be completed the same day the bituminous material and cover coat aggregate are applied. The same shall apply to steel wheel rolling.

After the application of the cover coat material the surface shall be lightly broomed or otherwise maintained for a period of time as directed by the County Road Superintendent. Maintenance of the surface shall include the distribution of cover coat aggregate over the surface to absorb any free bituminous material and cover any areas deficient in cover coat aggregate. The maintenance shall be conducted so as not to displace imbedded materials.

D. Other Asphal tic Roads or Streets. Nothing in these standards shall prevent the construction of a higher grade asphaltic street or county road when so desired by the builders or County Commissioners.
In such a case the specifications to follow shall be those of the Wyoming Highway Department for the particular pavement to be constructed. The County Road Superintendent shall supervise the project for the county.

E. Grading and Erosion Control. The approaches onto any county road shall be constructed to conform to the existing grade of the county road at the point of intersection. Any modification of the existing grade of a county road shall be approved by the County Commissioners or their designated representative. Any proposed modification of a county road shall be submitted to the County Commissioners in the form of plan and profile sheets. (See Johnson County Resolution dated February 4, 1975 in these standards for further requirements).

F. Culverts. A minimum fifteen inch diameter culvert shall be required at all crossings, approaches, and such other locations as shall be designated by the County Road Superintendent. Culverts shall conform to the latest requirements of the Wyoming Highway Department for the type of pipe selected for installation. The County Road Superintendent may also designate culverts larger than the fifteen inch minimum where required.

Reinforced box culverts may be used in place of cylindrical culverts when approved by the County Commissioners or their representative. Box culverts shall be designed to the standards of the Wyoming Highway Department for the size, width, and length of each structure.

G. Bridges. Prior approval of the County Commissioners will be obtained before any bridge location or design is selected. All bridge design shall meet the standards of the Wyoming Highway Department. (A.A.S.H.O. Standard Specifications for Highway Bridges). In no case will the clear roadway width of any bridge be less than twenty four feet (24') with twenty eight feet (28') being the preferred width. Bridge railing should be designed to hold out of control vehicles on the structure. Maintenance repair of damaged rail sections should be able to be completed quickly and with a minimum of equipment.

No bridge shall be designed or installed without soils foundation studies made as appropriate for the type of bridge being installed. Reinforced box culverts may be used in place of a bridge when designed according to Wyoming Highway Department specifications and when allowed by the County Commissioners.

H. Cattleguards. The builder or County Commissioners may require cattleguards on subdivision streets or county roads. Cattleguards shall be installed under the direction of the County Road Superintendent. Width to be a minimum of 12 feet with 24 feet required for subdivisions and other heavy traffic roads.

I. Backfill. Backfill material shall be fine readily compactible job excavated soil or granular fill material. Backfill material shall not contain frozen lumps, chunks of highly plastic clay, stones that could injure a structure being filled against, or other objectionable material. Backfill shall be placed in compactible layers of about eight inches loose measurement and each layer
compacted to a density of not less than 95 percent of maximum density to prevent damage to any structure either through unequal pressures exerted on the sides of the structure or by backfill being dropped directly on the structure.

Backfill adjacent to box culverts or other cast in place structures shall not be placed until the concrete has been in place 14 days. Backfilling over the top slab of box culverts shall not be started until tests indicate that the concrete has attained a minimum of 80% of the design compressive strength. The backfill shall be brought up simultaneously on all sides of the structure to avoid lateral displacement or unequal pressures.

Backfill adjacent to or over pipe culverts shall be brought up simultaneously on both sides of the pipe to avoid lateral displacement. Backfill under the pipe shall be tamped into place.

Backfill material to a depth of one foot over cast iron water lines shall be placed by hand. The material shall not be dropped directly on the pipe but placed on both sides of the trench. The material shall be uniformly compacted on both sides of the pipe to an elevation about one foot above the top of the pipe. The remainder of the backfill shall be placed according to these standards. The puddling method of backfill shall not be used without express permission of the County Road Superintendent.

Dated this fifth day of September 1978. Signed by Simon Iberlin, Chairman of the Johnson County Board of County Commissioners. Attest by Wilbur Robbins, Johnson County Clerk.
IV.

RESOLUTION

BE IT RESOLVED THAT THE Johnson County Board of County Commissioners hereby adopts the following standards for any construction involving curb cuts, additional curb and gutter, or any alterations to any county road or any road right-of-way.

1. Written application must be made to the Johnson County Board of County Commissioners, and no work shall be performed prior to the County Commissioners' approval of that application.

2. The aforementioned application must contain a detailed plan showing the location of the proposed construction or road cut.

3. Upon approval by the Johnson County Board of County Commissioners, the applicant shall be issued a license authorizing the requested work but requiring compliance to the following standards:
   a) Subexcavation of unstable material and compaction of all backfill or special backfill shall be to a density of 95%.
   b) All backfill shall be placed on top of the subgrade, and all surfaces which are courses or courses shall be replaced by materials presently composing the surface course or courses. (Asphalt pavement shall be replaced with asphalt pavement and concrete pavement shall be replaced with concrete pavement).
   c) The applicant shall bore with minimum of surface opening whenever practical.
   d) The applicant shall furnish, provide, erect, and maintain at the installation area suitable and efficient flares or blinker lights, reflectorized detour signs, barricades, and any other precautions necessary for the safety of workmen and the traveling public.

4. When the licensee fails to comply with the standards set forth in this Resolution, the Johnson County Board of County Commissioners shall then authorize a correction of the same, and all labor, equipment, and material required to make such correction shall be billed to the licensee.

5. This Resolution is not intended to apply to the maintenance of any utility facility presently being maintained by public utility which may be confronted with an emergency. If, due to an emergency, a public utility must begin work prior to the approval of an application, an application must be filed within twenty-four (24) hours of the commencement of any work to correct said emergency.

Dated this fourth day of February 1975. Signed by John P. Gammon, Chairman Johnson County Board of County Commissioners. Attest by Wilbur Robbins, Johnson County Clerk.
V.

JOHNSON COUNTY
APPLICATION FOR PERMIT TO CONSTRUCT ACCESS DRIVEWAY

Permit No._____. Date________________19___(To be prepared in duplicate). The undersigned hereby makes application for permission to construct an access driveway(s) described below and as shown on the attached sketch hereby made a part of this application.

Location of Property,

Access to County Road No._____. approximately ___ miles (N,S,E,W) ___ from (city or well defined point) ____________________________ for ingress or egress to a ________________ subdivision. Access drive width __________________ feet on (N,S,E,W) side of county road. Proposed driveway surface ____________________________.

Drainage structure ________________ size, ________________ length, ________________ type, to be located ________________ feet from shoulder of road.

Agreement.

I, the undersigned property owner, request permission to construct an access driveway(s) on public right-of-way at the above location, subject to the restrictions and regulations of Johnson County. In consideration the applicant agrees:

1. To construct and maintain driveway(s) in a safe manner so as to not interfere with or endanger public travel and to perform all work in a neat and workmanlike manner and the the right-of-way will be cleaned and left in a condition equal to or better that the original condition. The applicant will fully protect the traffic on the roadway during construction by proper barricades, flagmen, and/or lights, and to hold harmless Johnson County, its officers, and employees from all damages, expenses, claims, or liability arising out of any alleged damages of any nature to any persons or property, due to the construction, performance, or nonperformance of work, or existence of said driveway.

2. No driveway(s) shall be constructed such that there will be parking or servicing of vehicles on the county right-of-way.

3. That the profile grade of driveway(s) shall be constructed as indicated on the attached sketch and shall in no case be graded or maintained such that water will drain on the county road travel surface.
4. This permit becomes VOID if construction is not completed within _______ days after the approval date below.

5. Additional requirements: __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

Applicant
Name: __________________________. Address: __________________________
   __________________________. City: __________________________. State: ______.

Firm Name: __________________________________________.

Signature: __________________________________________.

Witness: __________________________________________.

County
Approval
Superintendent, Johnson County Road and Bridge Department
JOHNSON COUNTY 32’ BASE WIDTH ROAD SECTION

MINIMUM RURAL SUBDIVISION STREET WIDTH

32’ Base Width

24’ Traveled Way

12’

12’

3’

1’

1’

3’

Bituminous Surface

Crushed Base - 6”

Slope = 0.02’ per foot

See Road Standards Narrative To Determine When Bituminous Surface Is Required

Additional Base Support When Required Shall Be As Directed By County

Slope As Directed By County
JOHNSON COUNTY 36' BASE WIDTH ROAD SECTION

MINIMUM COUNTY ROAD WIDTH

36' Base Width

24' Traveled Way

12' 12'

Bituminous Surface

Slope = 0.02' per foot

Crushed Base = 6''

Slope As Directed By County

Additional Base Support When Required Shall Be As Directed By County

See Road Standards Narrative To Determine When Bituminous Surface Is Required