

**CROW WING COUNTY – FIRST ASSESSMENT DISTRICT (FAD)**  
**ROAD CONSTRUCTION SPECIFICATIONS**

Adopted by the Crow Wing County Board of Commissioners 04/12/2022  
Amended by the Crow Wing County Board of Commissioners 04/08/2025

**PURPOSE:** The purpose of creating minimum road construction specifications for proposed roads within the FAD is to allow for the creation of a consistent set of expectations, provide sufficient transportation services for future residents and protect FAD residents from unexpected future costs due to inadequate roadway construction. Except as otherwise provided in the Crow Wing County Land Use Ordinance, all improvements of roads shall be planned for and accomplished in accordance with the following minimum standards: These minimums are designated for local functioning roadways proposed to be rural in design and serve residential developments.

**1. GENERAL DESIGN REQUIREMENTS**

- a. The roadway design shall have a construction plan and cost estimate, designed and signed by a Professional Engineer (PE), licensed in the State of Minnesota, to provide a minimum of a seven (7) ton design as determined by the most current version of the MnDOT Road Design Manual.
- b. The PE shall provide the design and hydraulics necessary for any water features crossed and the roadway in general.
- c. Soil borings may be required to determine the quality of sub-grade materials to achieve the seven (7) ton design. The County Engineer shall have the opportunity to review the plan and cost estimate and request additional information or changes.

**2. ROADWAY AND RIGHT-OF-WAY (ROW) STANDARDS**

- a. The standard platted road ROW shall be sixty-six (66) feet in total width.
- b. Approved dead-end roadways shall have a constructed cul-de-sac with a minimum of a sixty-six (66) foot radius provided for ROW and a fifty (50) foot radius roadway surface.
- c. The roadbed width shall be twenty-four (24) feet, shoulder to shoulder. It shall be adequately crowned to drain surface water laterally to prevent standing water from saturating the roadbed. The roadway shall be paved.
- d. A minimum of four (4) inches of class 5 aggregate base shall be provided. The PE shall determine if more is required to achieve the seven (7) ton design.
- e. The paved surface shall be a minimum of twenty-two (22) feet wide with a depth of at least three (3) inches of bituminous. Materials other than bituminous shall be reviewed on a case-by-case basis. If paving the minimum of twenty- two (22) feet, one-foot aggregate shoulders shall be provided to meet the twenty-four (24) foot roadbed requirement. The PE shall determine if more than three (3) inches of bituminous, or more than four (4) inches of gravel is required to achieve the seven (7) ton design.
- f. The minimum clear zone (area free of all obstructions including trees, utilities, etc.) shall be twenty-five (25) feet from the roadway centerline. Utilities shall be placed in the outer five feet of the right-of-way. Utilities parallel to the roadway shall be buried a

minimum depth of three (3) feet. When crossing under the roadway, utilities shall cross perpendicular and be at a minimum depth of five (5) feet below the proposed top of roadway.

- g. A maximum of three access points (platted lots) shall be allowed to access from a cul-de-sac.
- h. To verify the above requirements are met, an "as built" plan certified by the PE, shall be submitted to the County Engineer for approval. The County Engineer also reserves the right to core the road at the developer's expense to ensure the proper depth of bituminous and base material has been provided.

In areas where the required typical roadway section is unable to be physically constructed within the platted right of way, or stormwater collection areas have been identified, additional ROW or slope easements shall be provided for future use and maintenance needs.

### 3. GRADING AND GEOMETRICS

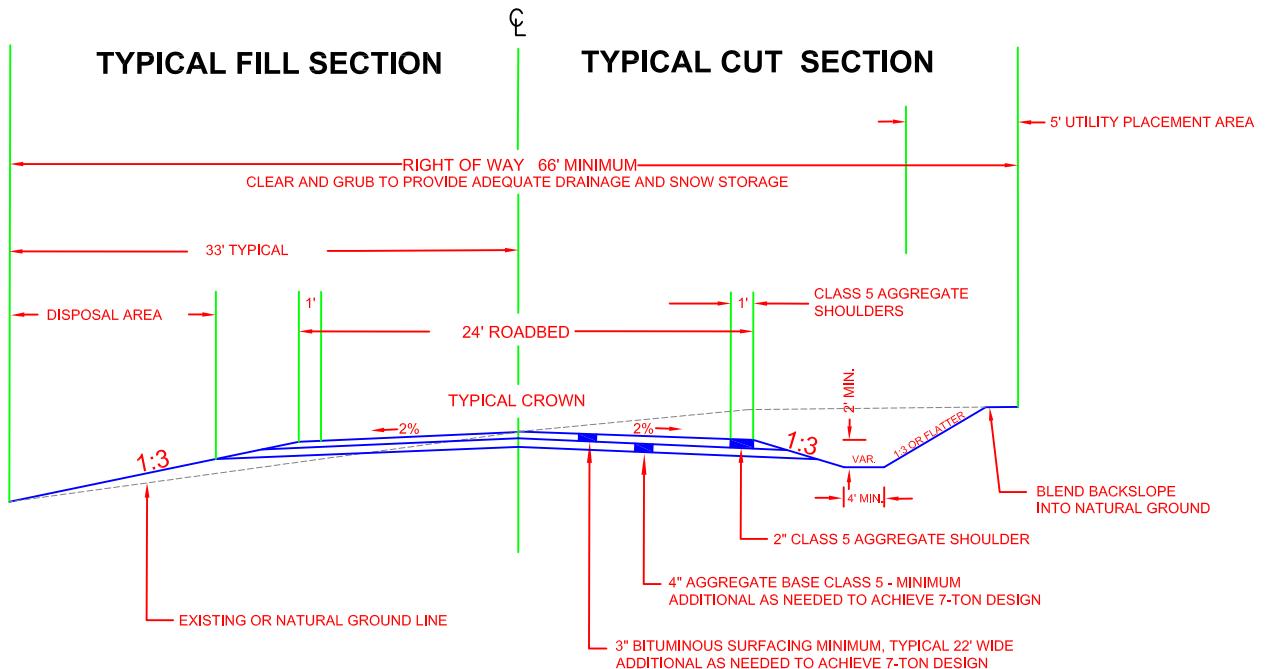
- a. The roadbed shall be constructed in the center of the sixty-six (66) foot platted ROW unless approved otherwise by the County Engineer. In no instance shall less than a minimum of twenty-five (25) feet be maintained from the centerline of the roadbed.
- b. The entire ROW shall be cleared of all obstructions to provide adequate drainage and snow storage area.
- c. Stumps and debris shall be properly disposed of outside the limits of the roadbed and all rocks larger than 3 inches shall be disposed of by burial outside the limits of the roadbed.
- d. Care shall be taken in the selection of soils used in the construction of embankments, using the best materials available for the upper portion of the embankments and the proper soils placed in the lower portion. Unsuitable soils, such as swamp materials, shall be disposed of outside the roadbed shoulder lines.
- e. Embankments shall be constructed in layers not to exceed 6 inches in plastic soils or 12 inches in non-plastic soils, with proper compaction applied to each layer until no evidence of further consolidation exists. Embankments constructed over low wet areas shall be placed in one lift to an elevation of at least one foot above water elevation before proceeding with layer construction as previously defined.
- f. Side ditch and embankment construction shall provide adequate roadbed drainage including installation of centerline culverts as required. Inslopes shall not be constructed steeper than 1 foot vertically to 3 feet horizontally to (1:3). Back-slopes shall not be constructed steeper than 1 foot vertically to 3 feet horizontally (1:3) and the top of the back-slope shall be blended into the natural ground line.
- g. Ditch sections shall be a minimum of two (2) feet deep from the road shoulder elevation with a minimum bottom width of four (4) feet. Stormwater storage/holding areas shall be designed to meet current Minnesota Pollution Control Agency (MPCA) requirements.
- h. Road intersections shall be at right angles unless approved otherwise by the County Engineer. No intersection shall be at an angle of less than 75 degrees. Horizontal and vertical alignments shall be designed to meet a 25-mph design speed as determined by the most current version of the MnDOT Road Design Manual.

- i. When connecting a proposed roadway to an existing public roadway that will require a culvert adjacent to the existing roadway, a concrete culvert shall be utilized.
- j. All graded areas as a result of road construction shall be protected from erosion to prevent destruction of the roadbed and minimize impacts to adjacent land and water features. In accordance with MPCA requirements and the NPDES Permit, topsoil, erosion control best management practices and standard turf establishment measures shall be required to prevent erosion.

4. GENERAL INFORMATION

- a. The above construction requirements outline minimum acceptable standards for construction of proposed rural residential development roads.
- b. Any proposed urban roadway designs or roadways that will serve commercial/industrial developments shall be addressed on a case-by-case basis to determine minimum requirements.
- c. The County reserves the right to require traffic studies performed by the proposer's PE to determine which of the minimum requirements listed above are not adequate. The items to be determined shall include, but not limited to, impacts to connecting roads, the need for turn/ bypass lanes, intersection lighting, intersection control evaluation, traffic signal justification, lane width, shoulder width, number of traffic lanes, trail/ sidewalk considerations, and access control.
- d. Items deemed necessary by the County for the long-term safety and functionality of any proposed changes to the roadway system shall be discussed during the plat/ subdivision development process.
- e. The most current edition of the Crow Wing County Policy on Driveway/Entrance Access to Roads Under County Jurisdiction shall be referenced as a guide when determining driveway locations and drainage considerations.

THIS CROSS-SECTION REFERS TO THE FIRST ASSESSMENT DISTRICT "ROAD CONSTRUCTION SPECIFICATIONS" ON FILE AS ADOPTED BY THE CROW WING COUNTY BOARD ON 04/12/22 AND AMENDED ON 04/08/25.



**TYPICAL ROADWAY CROSS-SECTION**  
**CROW WING COUNTY HIGHWAY DEPARTMENT**

