DESIGN STANDARDS FOR WILLIAMS COUNTY MAJOR COLLECTORS AND LOCAL ROADS FOR NEW OR RECONSTRUCTION OF EXISTING INFRASTRUCTURE

	County Major Collectors (CMC) "On-System"	County Roads "Off-System"	Township Roads "Off-System"	Rural Subd. Roads (More than 1 Acre)	Residential Subd. Roads** (Less than 1 Acre)
Bridge Width (Clear Roadway) - Min is 28 Ft.	30'	28'	28'	28'	28'
Storm Design Frequency (Bridges)*	25 yr	10 yr w/overflow	10 yr w/overflow	10 yr	10 yr
Design Loading (Bridges) - Min is HS-25	HS 25	HS 25	HS 20-25	HS 20-25	HS 20-25
Culvert Design Frequency*	25 yr	25 yr	25 yr	25 yr	25 yr
Minimum Culvert Size***	18"	18"	18"	18"	15"
Paved Roads					
Min. travel way width (both lanes + shoulders)	36'	32'	32'	28'	40'
Min. pavement section (base and HBP)	28'	28'	24'	24'	40'
Min. pavement thickness	6"	6"	6"	6"	4"
Min. gravel thickness	8"	8"	8"	8"	8"
Gravel Roads					
Min. travel way width (both lanes)	32'	32'	32'	N/A	N/A
Min. gravel thickness	8"	8"	8"	N/A	N/A
Design Speed	45 - 65 mph	45 - 65 mph	30 - 55 mph	30 mph	25 mph
Road Easement Width	150'	150'	150'	80'	66'
Inslope Ratio	4:1	4:1	4:1	3:1	N/A
Separation (Road Top to Ditch Bottom)	4.0'	4.0'	3.0'	2.0'	N/A
Ditch Bottom Width - Min.	14'	14'	10'	6'	N/A
Cul-de-Sac (Diameter) Travel Surface	N/A	N/A	N/A	100'	100'

*Storm Design Frequency & Culvert Design Frequency shall be approved by the Williams County Water Resource Board.

**Residential Subdivision Roads (<1 Acre) shall be paved with curb & gutter including 7.5' boulevards and 5' sidewalks.

***Culvert shall be either Corrigated Metal Pipe (CMP) or Reinforced Concrete Pipe (RCP).

NOTES:

1. Design Standards may be updated annually. See Williams County website for current version.

Adopted by Williams County

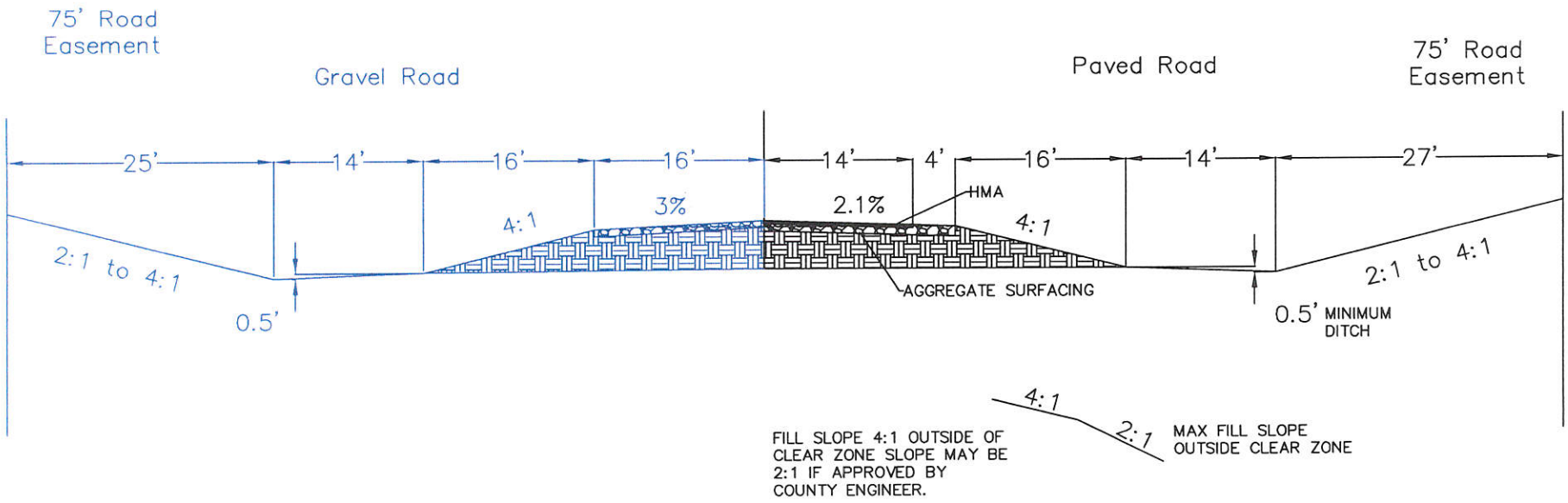
Date October 6, 2015

ATTEST:

County Auditor

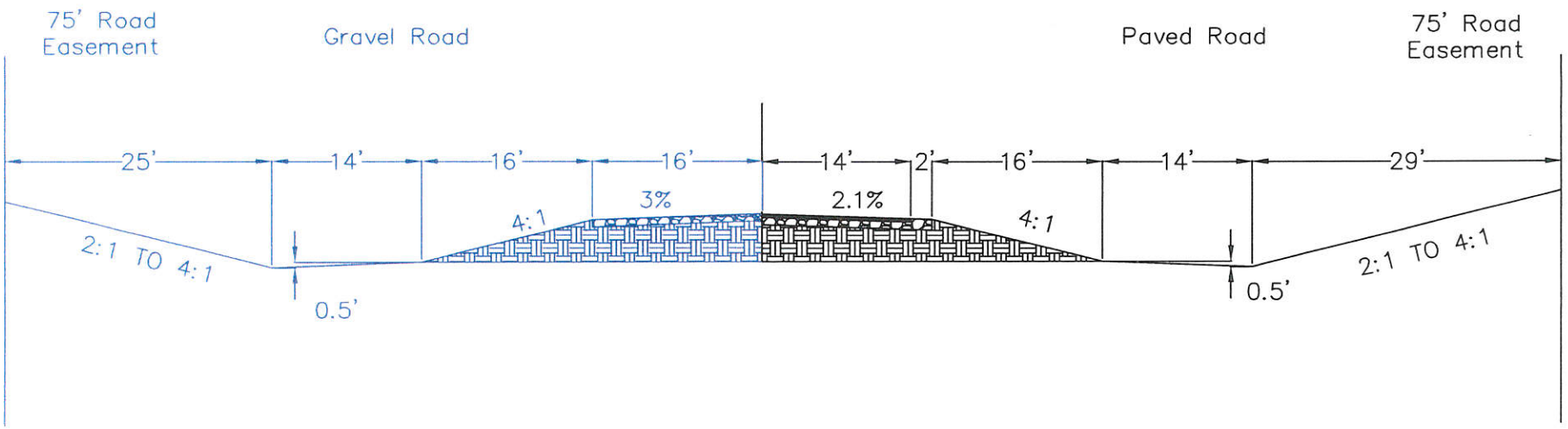
Chairperson, Board of County Commissioners

County Major Collectors
"On-System"



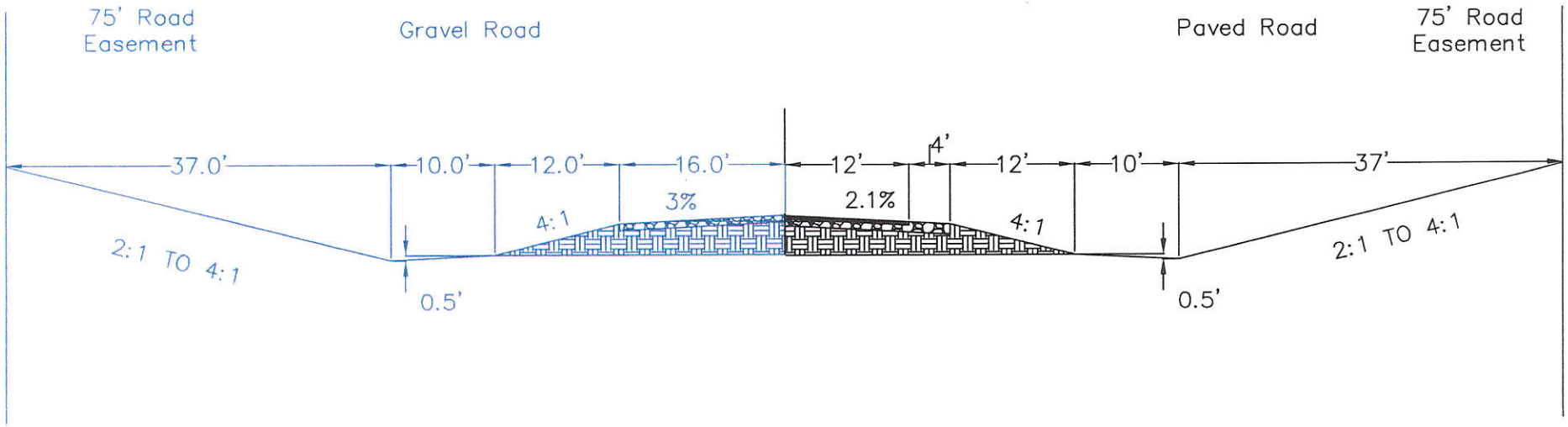
DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY NORTH DAKOTA	ROAD DESIGN STANDARD	REVISED 7/23/2015	N.T.S

County Local Roads
"Off-System"



DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY NORTH DAKOTA	ROAD DESIGN STANDARD	REVISED 7/23/2015	N.T.S

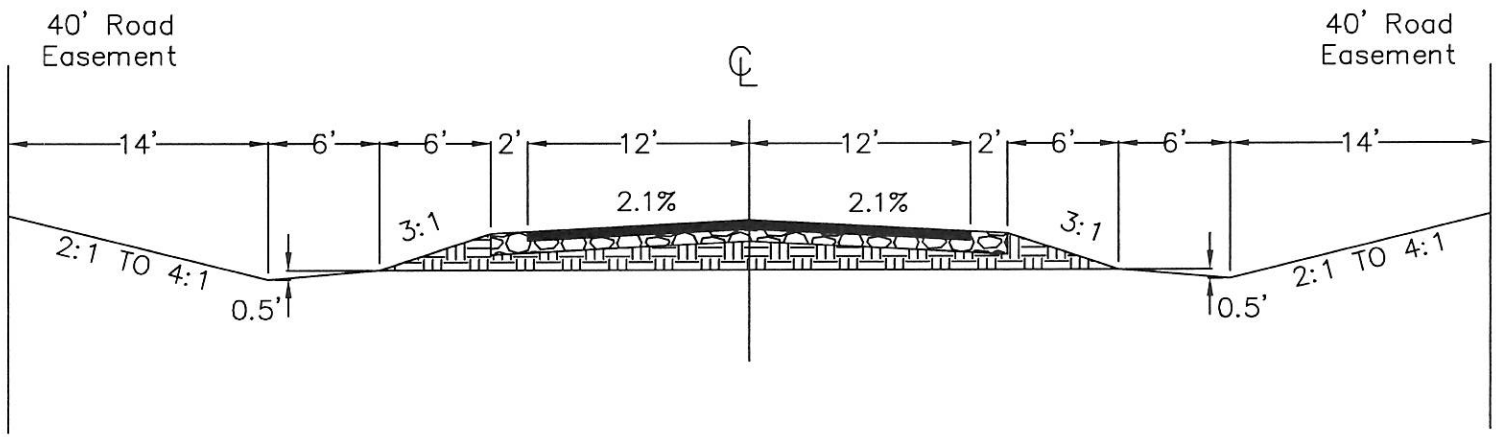
Township
"Off-System"



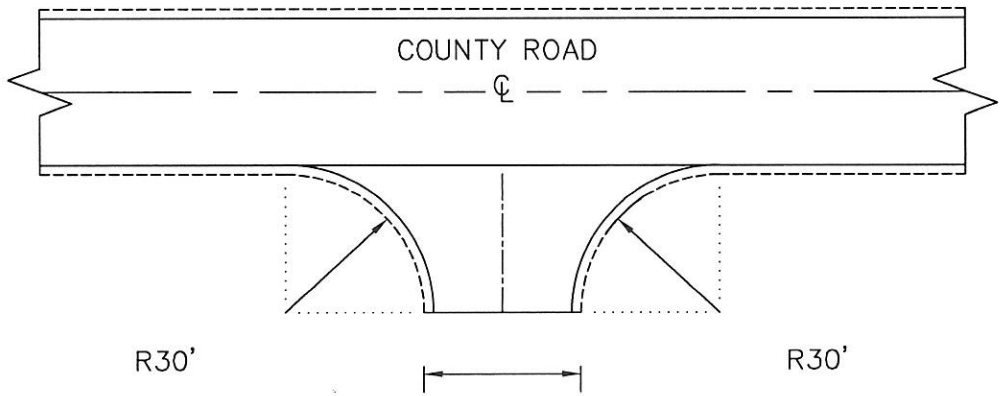
DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY NORTH DAKOTA	ROAD DESIGN STANDARD	REVISED 7/23/2015	N.T.S

Rural Subdivision Roads
(More than 1 Acre)

Paved Road



DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY NORTH DAKOTA	ROAD DESIGN STANDARD	REVISED 7/23/2015	N.T.S



NOTES:

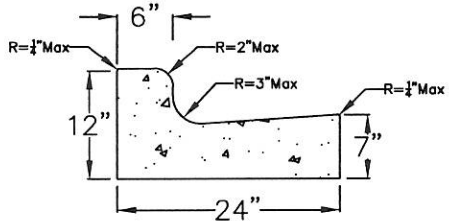
1) Approach permit shall be obtained from the Williams County Highway Department.
2) Approach culverts shall be minimum of 18 inches in diameter.
3) Culverts shall be either corrugated metal pipe (CMP) or reinforced concrete pipe (RCP).
4) Road grades shall not exceed 7%.
5) Throat width and Radius may vary depending on the type and location of the approach.

DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY NORTH DAKOTA	APPROACH DESIGN STANDARD	REVISED 6/19/2014	N.T.S

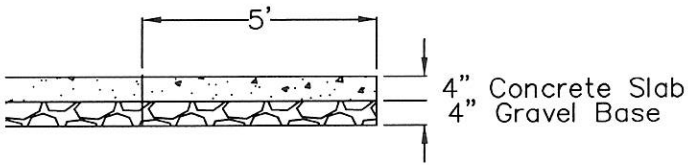
Residential Subdivision Roads
(Less than 1 Acre)

CEMENT CONCRETE TRAFFIC CURB & GUTTER NDDOT STANDARD PLAN (TYPICAL)

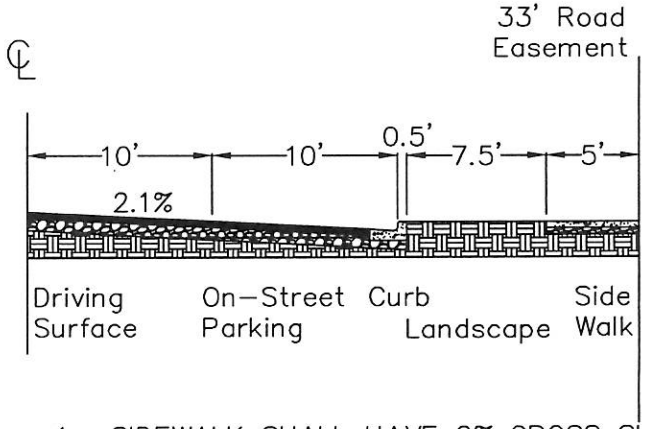
Typical Curb



Typical Side Walk

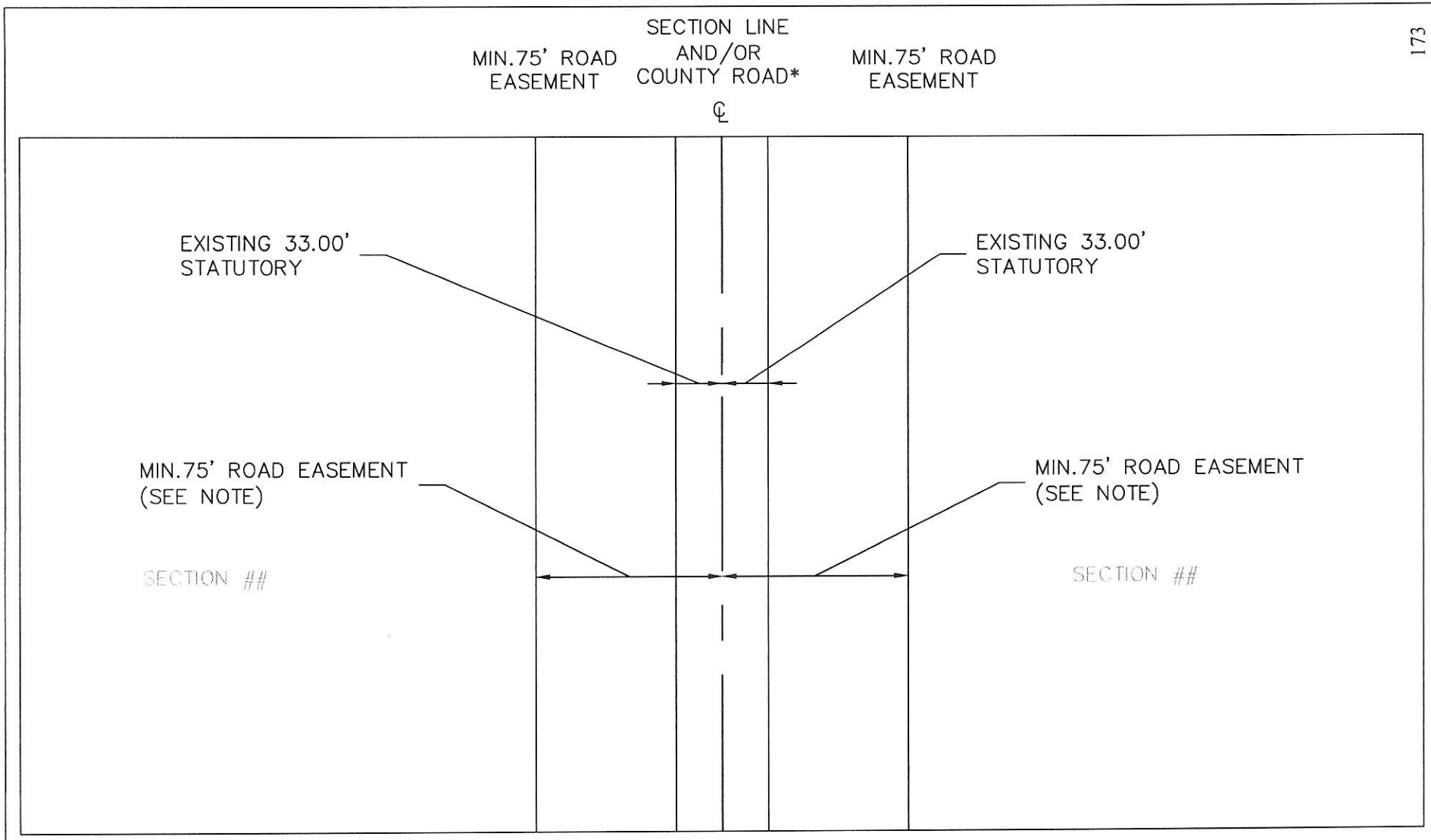


Paved Road



1. SIDEWALK SHALL HAVE 2% CROSS SLOPE TOWARD THE ROADWAY.
2. MINIMUM SURFACING WIDTH INCLUDES THE GUTTER.
3. "NO PARKING" & "PARKING ONE SIDE" REQUIRE APPROVAL BY COUNTY ENGINEER.
4. PLANTING/LANDSCAPE OPERATION & MAINTENANCE AGREEMENT MAY BE REQUIRED.

DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY NORTH DAKOTA	ROAD DESIGN STANDARD	REVISED 7/23/2015	N.T.S

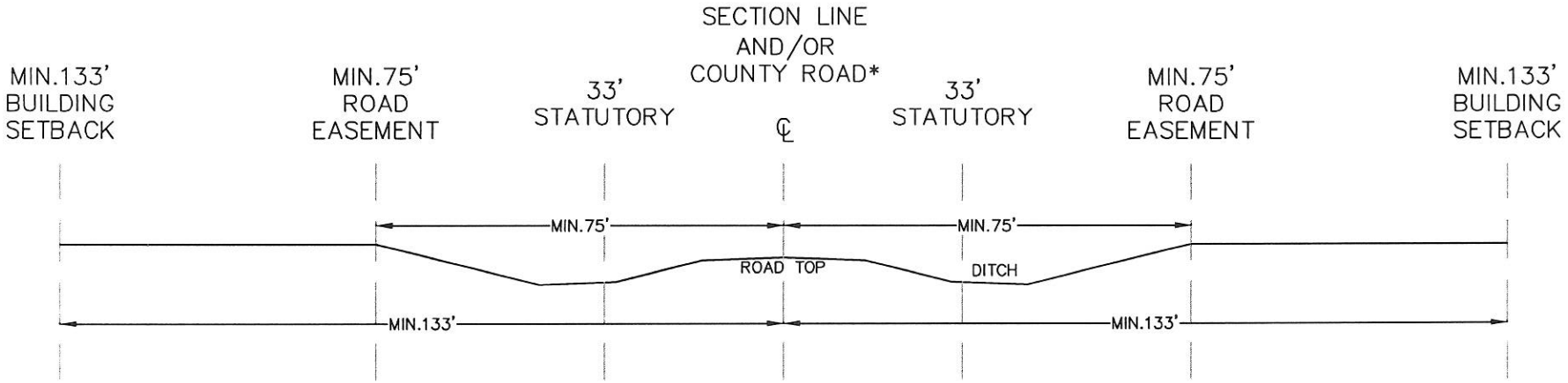


NOTE:

1). ROAD EASEMENT MEASUREMENTS ARE TAKEN FROM THE CENTERLINE OF THE ROAD WHEN THE ROAD IS NOT ON SECTION LINES.

2). REFERENCES: N.D.C.C. 11-33.2-04, 24-05-09, 24-07-03, AND WILLIAMS COUNTY SUBDIVISION REGULATION ARTICLE 5, CHAPTER 5-2-3 FOR ROADWAY EASEMENTS AND N.D.C.C. 24-01-42 FOR UTILITY LOCATION LIMITATIONS.

DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY, NORTH DAKOTA	ROAD EASEMENT DRAWING	REVISED 5/28/2015	N.T.S



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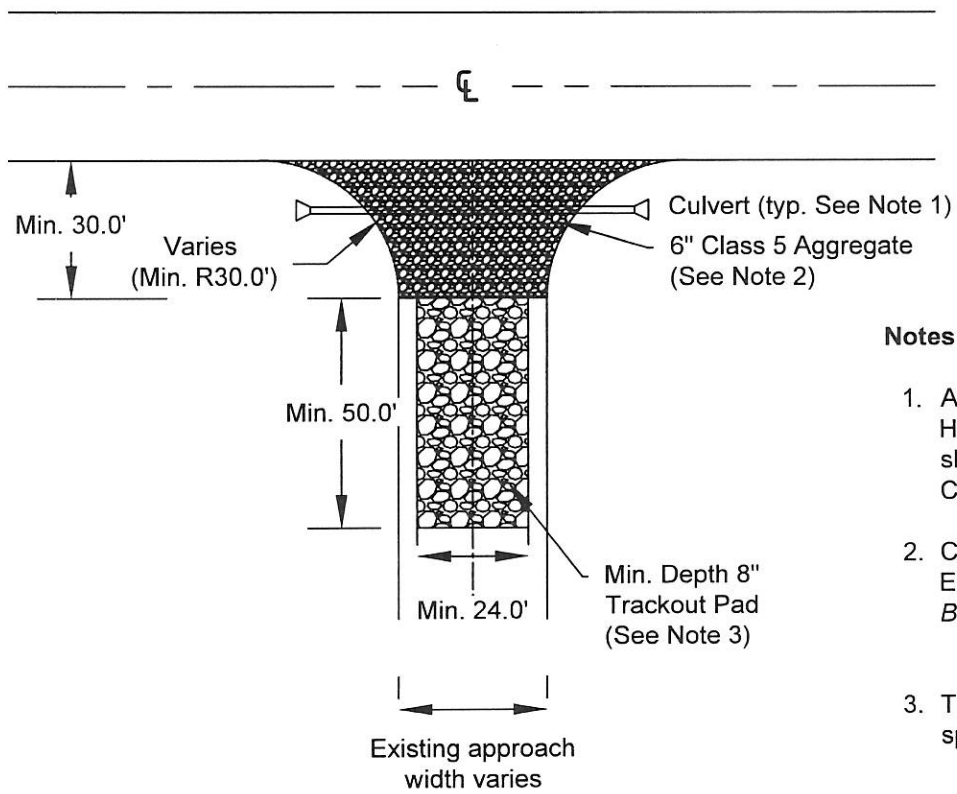
DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY, NORTH DAKOTA	ROAD CROSS SECTION	REVISED 5/28/2015	N.T.S

County Road / Township Road



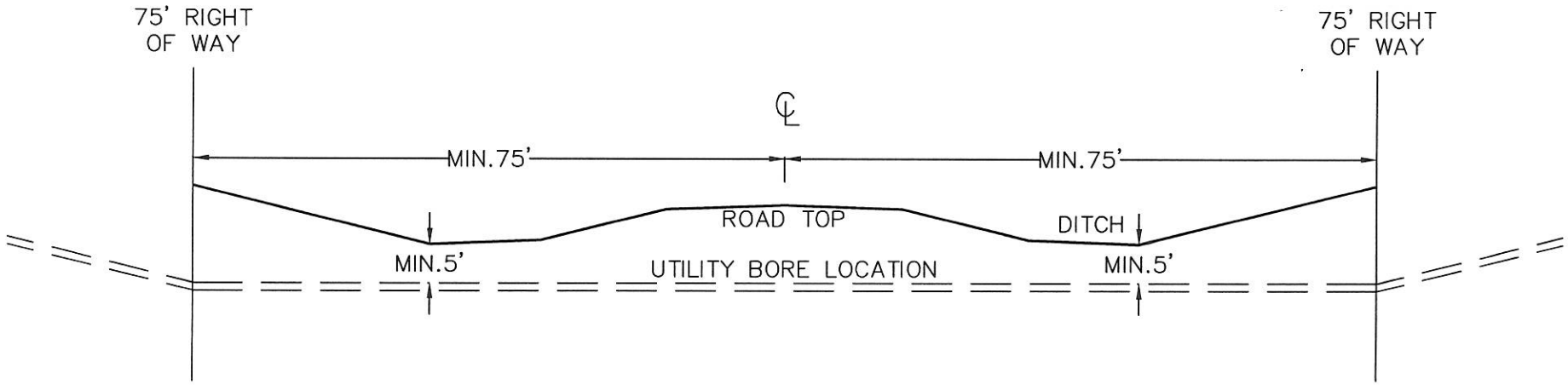
Notes:

1. Approach permit shall be obtained from the Williams County Highway Department for all country roads. Approach culvert shall be installed if determined necessary by the Williams County Highway Department.

2. Compact Class 5 Aggregate as specified in Section 203.04 E.2.a (ND T 180) of the *Standard Specifications for Road and Bridge Construction 2014 NDDOT:*
   -- At least 90% of the maximum dry density.

3. The aggregate for trackout pad shall conform with the following specifications:
   -- 90% fractured faces
   -- 3 inch percent passing 100%
   -- 1 inch percent passing 0%

DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY NORTH DAKOTA	TRACKOUT PAD STANDARD	REVISED 03/03/2015	N.T.S.



DETAIL NO.	Williams COUNTY	WILLIAMS COUNTY, NORTH DAKOTA	UTILITY CROSSING STANDARD DESIGN	REVISED 6/16/2014	N.T.S