

Notable Figures and Assumptions
North Dakota New Development Calculator (ND2C)

Street Maintenance Costs

Category	Low Assumption	Medium Assumption	High Assumption	Unit	Description	Basis
Street Maintenance	\$2.16	\$2.36	\$2.96	\$/Linear Foot	Average cost of general operations and maintenance of streets, including patching, snow removal, wages for repair, etc.	MN + ND Datasets

Infrastructure/Capital Depreciation Costs

Category	Very Low Assumption (70% of Medium)	Low Assumption (85% of Medium)	Medium Assumption (100% of Medium)	High Assumption (115% of Medium)	Very High Assumption (130% of Medium)	Unit	Description	Basis
Arterial Roadways	\$38.57	\$46.83	\$55.10	\$63.37	\$71.63	Linear Feet Roadway/Year (life expectancy 30 Years)	Typically 60' wide with 5 lanes, 8" + PCC pavement, 14" + aggregate base. Includes sidewalks, curb and gutter and street lights.	Bismarck, Watford City, and Minot Engineering Data
Neighborhood Streets	\$10.26	\$12.45	\$14.65	\$16.85	\$19.05	Linear Feet Roadway/Year (life expectancy 20 Years)	Typically 40' wide with 3 lanes, 6" AC pavement, 8" aggregate base. Includes sidewalks, curb and gutter and street lights.	Bismarck, Watford City, and Minot Engineering Data
Civic Streets	\$12.64	\$15.34	\$18.05	\$20.76	\$23.47	Linear Feet Roadway/Year (life expectancy 20 Years)	Typically 37' wide with 3 lanes, 4.5" AC pavement, 6" aggregate base. Includes sidewalks, curb and gutter and streetlights.	Bismarck, Watford City, and Minot Engineering Data
Water Mains, Local	\$1.02	\$1.23	\$1.45	\$1.67	\$1.89	Linear Feet Pipe/Year (life expectancy 20 Years)	Typically 8" or 12" PVC that services adjacent properties	Bismarck, Watford City, and Minot Engineering Data

						expectancy 50 Years)		
Water Mains, Regional	\$1.30	\$1.57	\$1.85	\$2.13	\$2.41	Linear Feet Pipe/Year (life expectancy 50 Years)	Typically 16" or larger PVC	Bismarck, Watford City, and Minot Engineering Data
Sanitary Sewer Mains, Local	\$1.12	\$1.36	\$1.60	\$1.84	\$2.08	Linear Feet Pipe/Year (life expectancy 50 Years)	Typically 8" or 10" PVC that services adjacent properties	Bismarck, Watford City, and Minot Engineering Data
Sanitary Sewer Mains, Regional	\$4.27	\$5.19	\$6.10	\$7.02	\$7.93	Linear Feet Pipe/Year (life expectancy 50 Years)	Typically 10" or larger PVC	Bismarck, Watford City, and Minot Engineering Data
Stormwater System, Local	\$5.57	\$6.76	\$7.95	\$9.14	\$10.34	Linear Feet Pipe/Year (life expectancy 50 Years)	Consists of inlets, manholes & concrete or HDPE pipe that collects runoff from adjacent properties	Bismarck, Watford City, and Minot Engineering Data
Stormwater System, Regional	\$49.07	\$59.59	\$70.10	\$80.62	\$91.13	Acre/Year (life expectancy 75 Years)	Consists of large detention ponds connected by channels or pipe that collects runoff from a larger watershed.	Bismarck, Watford City, and Minot Engineering Data

Property Values

Category	Low Assumption	Medium Assumption	High Assumption	Unit	Description	Basis
Single Family Home, Residential Detached	\$240,000.00	\$289,200.00	\$340,000.00	\$/Housing Unit	Single Family / Owner Occupied, Single-Family Renter	Median value of a new home in the midwest
Single Family Home, Residential Attached and Townhomes	\$157,055.40	\$209,407.20	\$4261,759.00	\$/Housing Unit	Townhouses	Bismarck workbook

Multi-Family Residential	\$70,117.80	\$93,490.40	\$116,863.00	\$/Housing Unit	Apartment, Condominium, 3-Family Conversion, 2-Family Flat, 2-Family Duplex	Bismarck workbook
Office (Assessed Value)	\$47,909.00	\$102,662.00	\$136,883.00	Assessed Value/ 1,000 SF Gross Floor Area	Office - General, Medical Office	Bismarck workbook
Retail and Services (Assessed Value)	\$53,466.00	\$114,570.00	\$152,760.00	Assessed Value/ 1,000 SF Gross Floor Area	Auto Showroom and Sales, Bank - Branch, Shopping Center - Anchor Store, Shopping Center - Neighborhood, Shopping Center - Regional Mall, Store Convenience, Store Grocery, Store - Retail Large, Store - Retail Small, Theater	Bismarck workbook
Restaurant (Assessed Value)	\$112,542.00	\$241,161.00	\$321,548.00	Assessed Value/ 1,000 SF Gross Floor Area	Cafe, Restaurant, Restaurant - Fast Food, Bars and Lounges	Bismarck workbook
Hotel (Assessed Value)	\$41,487.00	\$88,901.00	\$118,534.00	Assessed Value/ 1,000 SF Gross Floor Area	Hotel/Motel	Bismarck workbook
Industrial (Assessed Value)	\$29,247.00	\$62,671.00	\$83,562.00	Assessed Value/ 1,000 SF Gross Floor Area Per Year	Auto Repair, Greenhouse, Manufacturing Light, Mini - Storage, Transit Warehouse building, Warehouse	Bismarck workbook

Sales Tax Revenue

Category	Low Assumption	Medium Assumption	High Assumption	Unit	Description	Basis
Household income	\$55,000.00	\$63,473.00	\$71,000.00	\$/Household	Median household income	U.S. Census
Office	\$139.26	\$298.40	\$397.87	Expected Annual Sales Tax Revenue/ 1,000 SF Gross Floor Area	Office - General, Medical Office	Bismarck workbook
Retail and Services	\$139.26	\$298.40	\$397.87	Expected Annual Sales Tax Revenue/ 1,000 SF Gross Floor Area	Auto Showroom and Sales, Bank - Branch, Shopping Center - Anchor Store, Shopping Center - Neighborhood, Shopping Center - Regional Mall, Store Convenience, Store Grocery, Store - Retail Large, Store - Retail Small, Theater	Bismarck workbook
Restaurant	\$579.73	\$1,242.27	\$1,656.36	Expected Annual Sales Tax Revenue/ 1,000 SF Gross Floor Area	Cafe, Restaurant, Restaurant - Fast Food, Bars and Lounges	Bismarck workbook

Hotel	\$797.56	\$1,709.06	\$2,278.75	Expected Annual Sales Tax Revenue/ 1,000 SF Gross Floor Area	Hotel/Motel	Bismarck workbook
Industrial	\$139.26	\$298.40	\$397.87	Expected Annual Sales Tax Revenue/ 1,000 SF Gross Floor Area	Auto Repair, Greenhouse, Manufacturing Light, Mini - Storage, Transit Warehouse building, Warehouse	Bismarck workbook

Miscellaneous

Category	Value	Unit	Description	Basis
Property Tax Assessment Rate - Residential	50% * 9% * Mill Levy	Percentage	The rate at which residential properties are assessed	State of North Dakota/Common Assessment Rate formula
Property Tax Assessment Rate – Non-Residential	50% * 10% * Mill Levy	Percentage	The rate at which non-residential properties are assessed	State of North Dakota/Common Assessment Rate formula
Percent to retail/restaurant spending	30%	Percentage	Average percent of household income that's spent on retail	General assumption based on previous similar studies
Percent of retail/restaurant spending spent locally	50%	Percentage	Percent of retail and restaurant spending that's done locally	General assumption based on previous similar studies
Assumed local retail/restaurant spending per household	\$9520.95	\$/Year	The two figures above multiplied together and then applied to the median household income	U.S. Census

Local Sales Tax Rate	2%	Percentage	Assumed local sales tax rate in North Dakota	Modal local sales tax rate
Inflation Rate	2%	Percentage	Year-of-year inflation rate	Standard
Nominal Discount Rate	5%	Percentage	Rate used to determine nominal NPV calculations	Standard
People Per Housing Unit - Single Family Home	2.31	People/Household	People Per Housing Unit - Single Family Home	U.S. Census
People Per Housing Unit - Attached/Townhomes	2.87	People/Household	People Per Housing Unit - Attached/Townhomes	U.S. Census
People Per Housing Unit - Multifamily Residence	2.28	People/Household	People Per Housing Unit - Multifamily Residence	U.S. Census