

Rapid City Area
Metropolitan Planning Organization

**2008 TRAFFIC VOLUME COUNTS
REPORT**



In cooperation with:

City of Rapid City
Engineering Services Division
Public Works Department

June 2008

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INTRODUCTION/PURPOSE

Traffic volume studies are conducted to obtain accurate information about the number and movement of vehicles within or through an area or at selected points within an area. Current and historical volume counts provide vital information that is used in operational evaluations, traffic modeling and in the selection and design of road network improvements. The Traffic Volume Counts Report is designated in the Rapid City Area Metropolitan Planning Organization's (MPO) Operations Plan as one of the transportation products to be presented to the MPO's three transportation process committees. This report is an informational document and as such does not require any formal approval process. Traffic volume information is presented for the years 2006 – 2008.

DATA & METHODOLOGY

The Traffic Volume Counts Report presents the most recent three years of data collected by the City's Traffic Operations Section (Engineering Services Division - Public Works Department) and the South Dakota Department of Transportation (SDDOT). Note that the identification of regular counting sites is a dynamic process and not every location may have associated with it three years of history. Volume information is also provided for all counts that were conducted in conjunction with other engineering studies.

- All volumes presented in this document are actual traffic counts and have not been adjusted to account for seasonal variations.
- Data provided by the Traffic Operations Section has been collected using portable traffic counters while the data provided by the SDDOT has been collected at permanent counting stations. The permanent stations count traffic volumes daily and provide a basis for determining the variation of traffic volumes throughout the year.

The normal counting period is between April and June. This period was chosen for two reasons: (1) to maintain consistency between annual counts (presents a truer representation of any changes), and, (2) to avoid data collection during the peak tourist season. Due to personnel changes, the 2006 counts were collected between August

and November and caution should be exercised when comparing them. Due to the later counting period, some roads were not counted in 2006 due to ongoing construction work that was judged to significantly affect travel patterns. In 2007, staff has begun using the City's Geographic Information System (GIS) to manage the count data and decided to build a historical base directly through GIS rather than inputting previous year's data.

- In accordance with accepted traffic engineering protocol, volume counts were only conducted on Tuesdays, Wednesdays, or Thursdays. Mondays and Fridays do not generally represent typical weekdays due to the influence of higher numbers of people being absent from the workplace and a higher percentage of recreational travel.
- Volumes have not been factored to account for vehicles with more than two axles, i.e. trucks, certain recreational vehicles, vehicle/trailer combinations, etc. The actual vehicular volumes are generally lower than the published counts and can be determined if the percentage of vehicles with more than two axles is known. The correction factor is given by the formula,

$$1.0 - 0.5 * \text{percentage of truck traffic.}$$

COMPARISON OF ANNUAL VOLUMES

The count summary includes the percent change between successive year's counts. A weighted average percent change is also calculated taking into consideration all of the counts. Extreme caution should be exercised when interpreting annual changes in volumes for the following reasons:

- Traffic volumes will vary on a particular section of roadway depending on the month the count was conducted or the day of the week of the count. Additionally, there is an inherent variability in traffic volumes due to factors that are not easily explained or quantified.
- Construction projects, on or adjacent to a section of road, can significantly alter traffic volumes.
- Traffic count reliability is directly related to the amount of data collected. The more counts taken at a particular location, the higher the accuracy of conclusions drawn from the data. A single volume provides a "snapshot" of traffic that traveled that roadway on that specific day. Trend analyses should most accurately be limited to using permanent count station data.

PERMANENT COUNT STATIONS

Data from the following five SDDOT permanent count stations are included in this report:

- 5th Street, north of St. Cloud Street
- Anamosa Street, east of Haines Avenue
- West Main Street, east of Jackson Boulevard
- I-90, east of the Elk Vale Road interchange
- I-90, east of I-190

RAPID CITY MPO TRAFFIC COUNT PROGRAM

RAPID CITY MPO TRAFFIC COUNT PROGRAM					
ANNUAL COUNT LOCATIONS	ANNUAL 24 HOUR TRAFFIC COUNTS				
Count on Road A - Between Roads B and C (A-B/C)	2008 DAILY VOL	% Change 2008/2007	2007 DAILY VOL	% Change 2007/2006	2006 DAILY VOL
1st St - Omaha St/ Main St	1031		No Count	No Count	1162
2nd St - Omaha St/ Main St	996		No Count	No Count	999
3rd St - Omaha St/ Main St	2863		No Count	No Count	2502
5th St - 3rd St/ Texas St	15609	0%	15534	4%	14895
5th St - Cathedral Dr/ 3rd St	23445	32%	17806	5%	16889
5th St - Columbus St/ St Cloud St	19939	1%	19677	14%	17203
5th St - Main St/ St Joseph St	19072	-14%	22281	-7%	23970
5th St - Minnesota St/ Parkview Dr	4499	-1%	4539	-32%	6636
5th St - Omaha St/ Main St	18303	-30%	25990	19%	21852
5th St - St Cloud St/ St Patrick St	20087	3%	19495	-27%	26638
5th St - St Joseph St/ Columbus St	19586	-16%	23254	0%	23355
5th St - St Patrick St/ Fairmont	24045	47%	16332	-27%	22445
5th St - Texas St/ Minnesota St	12265	6%	11625	3%	11288
5th St (N) - North St/ New York St	19430	-14%	22654	17%	19321
8th St (N) - North St/ Omaha St	No Count	No Count	7610	48%	5149
32nd St - Canyon Lk Dr/ Jackson Bl	4787		No Count	No Count	4676
44th St - W Main St/ Raider Rd	4795		No Count	No Count	4686
Anamosa St - Haines Av/ West Bl (N)	4619	25%	3694	13%	3256
Anamosa St - N Maple Av/ Haines Ave	Construction		9487	0%	9489
Argyle St - Jackson Bl/ W Flormann St	No Count	No Count	No Count	No Count	2220
Cambell St - Omaha St/ E St Patrick St	19930	-4%	20852	28%	16280
Cambell St - E Fairmont Bl/ E Minnesota St	15072	7%	14110		Const.
Cambell St - E Minnesota St/ E Catron Bl	10162	-24%	13306		Const.
Cambell St - E Omaha St/ Centre St	No Count	No Count	No Count	No Count	17047
Cambell St - E St Joseph St/ E Fairmont Bl	20282	-4%	21136		Const.
Cambell St - E St Patrick St/ E St Joseph St	No Count	No Count	No Count	No Count	Const.
Cambell St (N) - E North St/ E Omaha St	21227	-9%	23209	18%	19711
Canyon Lk Dr - Clifton St/ Jackson	8082	-2%	8288	49%	5574
Canyon Lk Dr - Mt View Rd/ Sheridan Lk Rd	13335	49%	8973	-11%	10075
Canyon Lk Dr - Sheridan Lk Rd/ Soo San Dr	13154	38%	9566	-13%	11020
Canyon Lk Dr - Soo San Dr/ Clifton St	8973	8%	8275	12%	7414
Cathedral Dr - 5th St/ Tower Rd	13898	-24%	18169	18%	15403
Cathedral Dr - Tower Rd/ Mt Rushmore Rd	14885	0%	14834	3%	14337
Catron Bl - 5th St/US 16	8651	-23%	11277	43%	7863
Catron Bl - US 16/ Sheridan Lk Rd	9046	-21%	11389	53%	7460
Country Rd - Haines Av/ W Nike	1524	40%	1091	-5%	1149
Deadwood Av - County Line/ I-90	1941		No Count	No Count	2560
Deadwood Av - I-90/ Universal Dr	14182		No Count	No Count	18427
Deadwood Av - Lien St/ Omaha St	17547	2%	17279	-6%	18303
Deadwood Av - N Plaza Dr/ Lien St	13973	-8%	15109	20%	12546
Disk Dr - N Maple Av/ Haines Av	7715	-8%	8410	57%	5355
Dyess Av - Seger Dr/ Country Rd	No Count	No Count	2739	87%	1464
E Anamosa St - Lacrosse St/ N Maple Av	7366	-29%	10362	-7%	11101
E Catron Bl - SD79/ 5th St	8185	-23%	10595	1%	10527
E Disk Dr - N Lacrosse St/ N Maple Av	7642	-6%	8101	-23%	10525
E Fairmont Bl - Cambell St/ Elm Av	7076	-8%	7710	-25%	10327
E Hwy 44 - Airport Rd/ Reservoir Rd	Construction		6957	13%	6133
E Hwy 44 - E St Patrick St/ Sedivy Ln	18335		No Count	No Count	19661
E Hwy 44 - Jolly Ln/ Twilight Dr	17186	13%	15177	-20%	18872

RAPID CITY MPO TRAFFIC COUNT PROGRAM

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ANNUAL COUNT LOCATIONS	ANNUAL 24 HOUR TRAFFIC COUNTS				
Count on Road A - Between Roads B and C (A-B/C)	2008 DAILY VOL	% Change 2008/2007	2007 DAILY VOL	% Change 2007/2006	2006 DAILY VOL
E Hwy 44 - Reservoir Rd/ Jolly Ln	15182		No Count	No Count	16994
E Hwy 44 - Sedivy Ln/ Cambell St	18335	-9%	20141	-16%	23925
E Hwy 44 - Twilight Dr/ E St Patrick St	22684	-2%	23115	-17%	27950
E Main St - Steele Av/ East Blvd	6591	-44%	11847	61%	7363
E Mall Dr - E North/ Dyess	3764	31%	2871		
E Mall Dr - Dyess/ Elk Vale	2251	51%	1493		
E Minnesota St - Cambell St/ Elm Av	4856	-15%	5715	44%	3981
E Minnesota St - Elm Av/ 5th	3532	-31%	5129	17%	4384
E North St - E Anamosa St/ N Cambell St	18179	17%	15599	21%	12852
E North St - I-90/ E Anamosa St	12094	2%	11813		Const.
E North St - N Cambell St/ N Lacrosse St	17136	1%	17048	-15%	20158
E North St - N Lacrosse St/ Milwaukee St	16161	-8%	17562	1%	17375
E Omaha St - Cambell St/ Lacrosse St	19649	-16%	23525	3%	22737
E St Joseph St - Cambell St/ E St Patrick St	6046	0%	6028	0%	6002
E St Joseph St - E St Patrick St/ Steele Av	12707	7%	11834	1%	11707
E St Joseph St - Steele Av/ East Blvd	8227	-10%	9108	29%	7063
E St Patrick St - Cambell St/ E St Joseph St	13944	-14%	16274		Const.
E St Patrick St - Creek Dr/ Cambell St	15288	1%	15076		Const.
E St Patrick St - E St Joseph St/ Elm Av	12650	-2%	12930	1%	12798
E St Patrick St - Sedivy Ln/ Creek Dr	No Count	No Count	10139	15%	8850
East Bl - Main St/ St Joseph St	9381	-17%	11329	4%	10881
East Bl - New York St/ Omaha St	14490	-29%	20358	19%	17063
East Bl - Omaha St/ Main St	11404	-20%	14245	-14%	16566
East Bl - St Joseph St/ Kansas City St	5473	-1%	5522	21%	4553
Eglin St - Beale St/ E Anamosa St	3023		No Count	No Count	4102
Elk Vale Rd - I-90/ Jubilee	13576	-17%	16321		
Elk Vale Rd - Seger Dr/ I-90	Construction		2423		
Elk Vale Rd - SD 79/ SD44	10108	-5%	10691		
Elm Av - E Indiana St/ E Oakland St	No Count	No Count	2752	-49%	5407
Elm Av - E St Patrick St/ E Indiana St	No Count	No Count	7482	25%	5989
Fairmont Bl - Elm Av/ Wisconsin St	8123	-29%	11519	27%	9035
Fairmont Bl - Wisconsin St/ 5th St	10726	-5%	11233	-11%	12602
Haines Av - Anamosa St/ North St	21104	-16%	25253	37%	18421
Haines Av - Country Rd/ Mall Dr	10450	-25%	13993	39%	10061
Haines Av - Disk Dr/ I-90	27717		No Count	No Count	27909
Haines Av - I-90/ Anamosa St	22178	4%	21365	7%	20033
Haines Av - Mall Dr/ Disk Dr	17213	24%	13866	22%	11390
Haines Av - Country Rd/ To City limits	2061	-50%	4084	-29%	5716
Hillsview Dr - W St Patrick St/ Raider	2937		No Count	No Count	2705
I-190 - I-90/ Silver St	18831		No Count	No Count	19285
I-190 - Silver St/ Omaha St	17496		No Count	No Count	17862
I-90 - I-190/ Deadwood Av	28646		No Count	No Count	33510
I-90 - I-190/ N Lacrosse St	No Count	No Count	31449	11%	28224
I-90 - Elk Vale/ East City limits	19965	-10%	22221		
Jackson Bl - 32nd St/ Park Dr	14701	-9%	16087	6%	15205
Jackson Bl - Canyon Lk Dr/ Chapel Ln	8159		No Count	No Count	10125
Jackson Bl - Chapel Ln/ Cleghorn Canyon Rd	4768	0%	4775	6%	4521
Jackson Bl - Main St/ Sheridan Lk Rd	22651	-22%	28916		Const.
Jackson Bl - Park Dr/ Canyon Lk Dr	12292		No Count	No Count	9971

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	2008 DAILY VOL	% Change 2008/2007	2007 DAILY VOL	% Change 2007/2006	2006 DAILY VOL
Jackson Bl - Sheridan Lk Rd/ 32nd St	14701	-9%	16185	13%	14320
Main St - 5th St/ 6th	11745	-41%	19765	35%	14658
Main St - East Bl/ 3rd St	9175	-38%	14916	38%	10798
Main St - 9th St/ West Bl	14619	-17%	17520	5%	16727
Mall Dr - N Lacrosse St/ N Maple Av	Construction		2466	0%	2454
Mall Dr - N Maple Av/ Haines Av	Construction		3731	-52%	7734
Mt Rushmore Rd - Catron Bl/ City limits	9932		No Count	No Count	13518
Mt Rushmore Rd - Flormann St/ Cathedral Dr	25768	0%	25846	102%	12808
Mt Rushmore Rd - Main St/ St Joseph St	20058	-18%	24423	5%	23184
Mt Rushmore Rd - Omaha St/ Main St	16001	-18%	19588	-4%	20399
Mt Rushmore Rd - Skyline Dr/ Catron Bl	10992	-21%	13929	5%	13327
Mt Rushmore Rd - St Cloud St/ St Patrick St	27567	29%	21450	-13%	24532
Mtn View Rd - Canyon Lk Dr/ Jackson Bl	8636		No Count	No Count	Const.
Mtn View Rd - W Main St/ Canyon Lk Dr	16056		No Count	No Count	Const.
Mtn View Rd - W Omaha St/ W Main St	16870		No Count	No Count	Const.
N Lacrosse St - E Anamosa St/ E North St	28133	5%	26730	2%	26120
N Lacrosse St - E North St/ E Omaha St	11151	-13%	12776	-4%	13355
N Lacrosse St - I -90/ E Anamosa St	23096	15%	20155	-11%	22729
N Lacrosse St - Disk Dr/ I-90	17751	25%	14217	-4%	14795
N Lacrosse St - Disk Dr/ Mall Dr	3723	-30%	5293		
N Maple Av - E Disk Dr/ W Disk Dr	7642	140%	3187	136%	1351
Omaha St - 3rd St/ 5th St	23781	-18%	28866	No Count	
Omaha St - 5th St/ Mt Rushmore Rd	26501	-23%	34262		
Omaha St - Maple Av/ East Bl	21380	-14%	24851	-2%	25262
S Canyon Rd - 44th St/ W Main St	937	-33%	1391	44%	968
S Canyon Rd - Berry Pine Rd/ 44th St	5173	-29%	7287	14%	6376
Seeger Dr - Dyess Av/ N Lacrosse St	3004	-4%	3126	-10%	3478
Sheridan Lk Rd - Canyon Lk Rd/ Jackson Bl	7560	-56%	17269	81%	9547
Sheridan Lk Rd - Corral Dr/ N Wildwood Dr	12431	-8%	13547	3%	13157
Sheridan Lk Rd - Jackson Bl/ W Flormann St	14629	0%	14697	-8%	16033
Sheridan Lk Rd - N Wildwood Dr/ S Wildwood Dr	6695	-24%	8835	22%	7232
Sheridan Lk Rd - W Flormann St/ Fairway Hills Dr	13811	-7%	14833	-4%	15416
Sheridan Lk Rd - W Main St/ Canyon Lk Dr	8150	-44%	14618	21%	12121
Soo San Dr - Range Rd/ Canyon Lk Dr	8182		No Count	No Count	8222
St Joseph St - 5th St/ 6th St	12066	-30%	17147	8%	15880
St Joseph St - East Bl/ 3rd St	8797	-30%	12617	14%	11070
St Joseph St - 9th St/ West Bl	14184	-15%	16623	-9%	18202
St Patrick St - 5th St/ Mt Rushmore Rd	6876	-5%	7251	17%	6203
St Patrick St - Elm Av/ Prairie Av	11204	-12%	12682	2%	12376
St Patrick St - Mt Rushmore Rd/ West Bl	3817	-12%	4350	17%	3705
St Patrick St - Prairie Av/ 5th St	11204		No Count	No Count	11973
Sturgis Rd - St Martins Rd/ W Chicago St	9320	-7%	9969	3%	9710
Sturgis Rd - W Chicago St/ W Main St	12186	-16%	14466	10%	13107
Twilight Dr - Jolly Ln/ E Hwy 44	7256		No Count	No Count	8165
Twilight Dr - Reservoir Rd/ Covington St	3526		No Count	No Count	2712
W Chicago St - 44th St/ Berry Pine	No Count	No Count	1884	-31%	2722
W Chicago St - Deadwood Av/ Sturgis Rd	13740	-8%	14922	-3%	15322
W Chicago St - Sturgis Rd/ 44th St	10842	-19%	13361	17%	11388
W Main St - 44th St/ Berry Pine Rd	2018	104%	988	-35%	1521

RAPID CITY MPO TRAFFIC COUNT PROGRAM

ANNUAL COUNT LOCATIONS Count on Road A - Between Roads B and C (A-B/C)	ANNUAL 24 HOUR TRAFFIC COUNTS				
	2008	% Change	2007	% Change	2006
	DAILY VOL	2008/2007	DAILY VOL	2007/2006	DAILY VOL
W Main St - Jackson Bl/ Mt View Rd	35686		No Count	No Count	Const
W Main St - Mt View Rd/ Sheridan Lk Rd	22900	-16%	27241		Const
W Main St - Sheridan Lk Rd/ Sturgis Rd	22149	8%	20446	-5%	21450
W Main St - Soo San Dr/ 44th St	5008	-23%	6491	35%	4797
W Main St - Sturgis Rd/ Soo San Dr	14950	24%	12078	21%	10011
W Main St - West St/ Cross St	No Count	No Count	40916	-4%	42682
W Nike Rd - Country Rd/ Cobalt	No Count	No Count	725		
W Nike Rd - Cobalt/ City limits	No Count	No Count	289		
W Omaha St - Cross St/ Mt View Rd	27020		No Count	No Count	Const
W Omaha St - I-190/ Cross St	27020	-15%	31625		Const
W Omaha St - Mt View Rd/ Deadwood Av	23573	-15%	27598		Const
W St Joseph St - Mt Rushmore Rd/ West St		-100%	38645	72%	22449
West Bl - Main St/ St Joseph St	14686	3%	14313	25%	11460
West Bl - Omaha St/ Main St	16604	-26%	22300	2%	21970
West Bl - Quincy St/ St Cloud St	8813		No Count	No Count	7430
West Bl - Fulton St/ St Patrick St	5230	-26%	7049	17%	6014
West Bl - St Joseph St/ Quincy St	8813	-13%	10155	35%	7518
West Bl - St Patrick St/ Flormann St	5517	204%	1816	6%	1721