

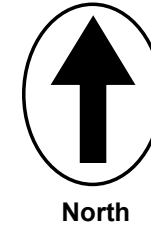
Date : 06/28/22

Count Number : TMC 2221

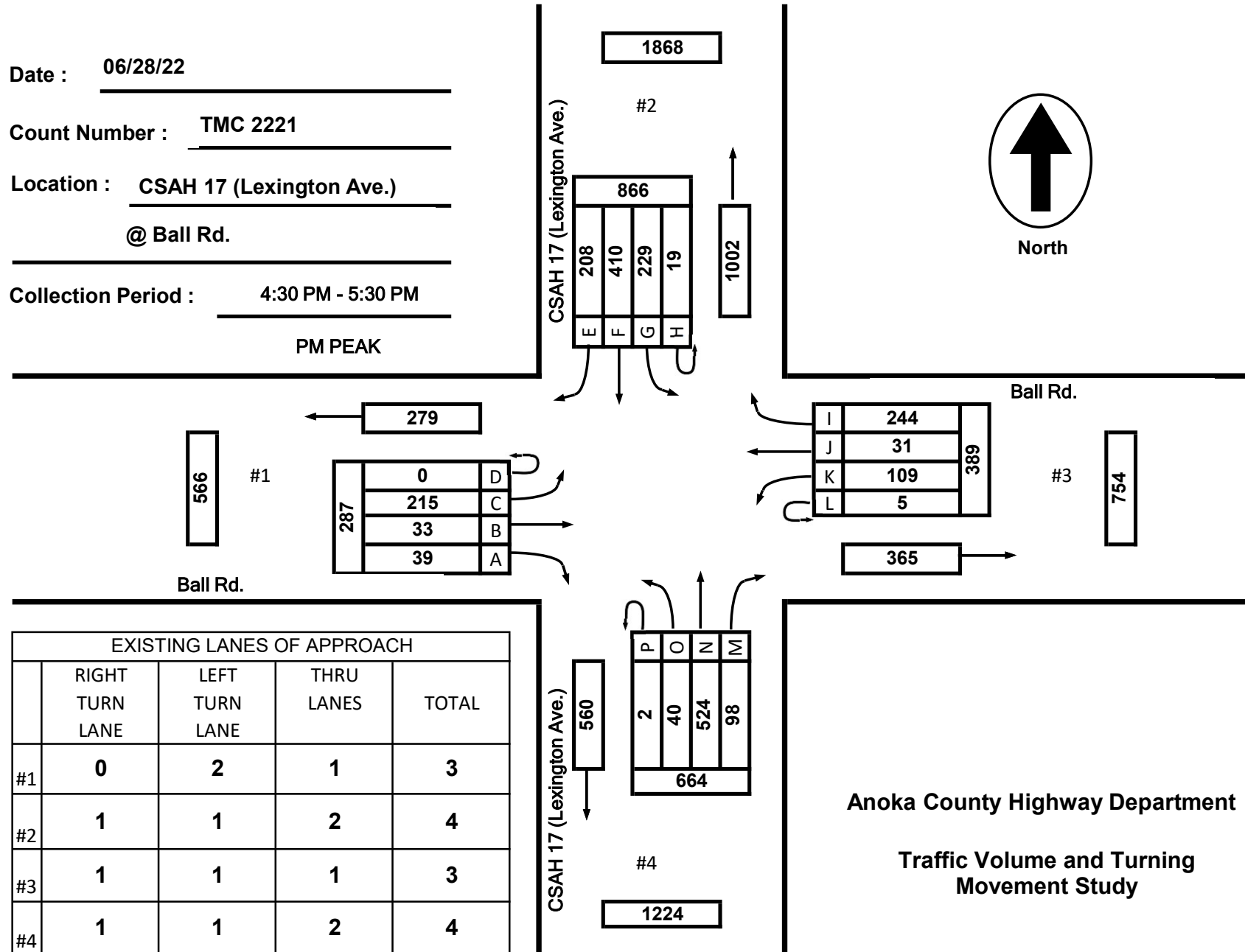
Location : CSAH 17 (Lexington Ave.)  
@ Ball Rd.

Collection Period : 4:30 PM - 5:30 PM

PM PEAK



North



EXISTING LANES OF APPROACH				
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	TOTAL
#1	0	2	1	3
#2	1	1	2	4
#3	1	1	1	3
#4	1	1	2	4

Anoka County Highway Department

Traffic Volume and Turning Movement Study



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2221  
 Site Code :  
 Start Date : 06/28/2022  
 Page No : 1

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Adam

Groups Printed- Cars + - Trucks

Start Time	CSAH 17 Southbound						Ball Rd. Westbound						CSAH 17 Northbound						Ball Rd. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
00:00	2	1	1	0	0	4	4	0	0	0	0	4	0	5	2	0	0	7	0	0	2	0	0	2	0	17	17
00:15	1	11	4	0	0	16	3	0	0	0	0	3	0	8	0	0	0	8	0	0	0	0	0	0	0	27	27
00:30	0	5	2	0	0	7	1	0	0	0	0	1	0	5	0	0	0	5	0	0	1	0	0	1	0	14	14
00:45	0	7	1	0	0	8	1	0	0	0	0	1	0	4	0	0	0	4	0	0	0	0	0	0	0	13	13
<b>Total</b>	<b>3</b>	<b>24</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>22</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>71</b>	<b>71</b>
01:00	1	4	1	0	0	6	1	1	1	0	0	3	0	3	0	0	0	3	0	0	0	0	0	0	0	12	12
01:15	0	3	1	0	0	4	0	0	0	0	0	0	0	2	1	0	0	3	1	0	2	0	0	3	0	10	10
01:30	1	0	2	0	0	3	1	0	0	0	0	1	0	2	0	0	0	2	0	0	1	0	0	1	0	7	7
01:45	2	1	0	0	0	3	0	0	0	0	0	0	0	4	0	0	0	4	2	0	0	0	0	2	0	9	9
<b>Total</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>38</b>	<b>38</b>
02:00	1	2	0	0	0	3	4	0	5	0	0	9	0	2	0	0	0	2	0	0	0	0	0	0	0	14	14
02:15	1	0	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0	0	1	2	0	0	3	0	6	6
02:30	2	3	0	0	0	5	7	0	0	0	0	7	0	3	0	0	0	3	1	0	0	0	0	1	0	16	16
02:45	1	3	4	0	0	8	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	1	0	10	10
<b>Total</b>	<b>5</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>13</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>46</b>	<b>46</b>
03:00	0	3	1	0	0	4	1	0	1	0	0	2	0	1	0	0	0	1	0	0	1	0	0	1	0	8	8
03:15	2	2	1	0	0	5	1	0	0	0	0	1	0	4	0	0	0	4	0	0	2	0	0	2	0	12	12
03:30	0	1	7	0	0	8	2	0	0	0	0	2	1	3	0	0	0	4	0	0	1	0	0	1	0	15	15
03:45	0	3	6	0	0	9	1	1	1	0	0	3	5	0	0	0	0	5	0	0	1	0	0	1	0	18	18
<b>Total</b>	<b>2</b>	<b>9</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>53</b>	<b>53</b>
04:00	0	0	0	0	0	0	1	0	1	0	0	2	2	4	0	0	0	6	0	0	0	0	0	0	0	8	8
04:15	1	7	2	0	0	10	3	1	0	0	0	4	0	8	1	0	0	9	1	0	0	0	0	1	0	24	24
04:30	6	13	6	0	0	25	3	1	0	0	0	4	3	14	0	0	0	17	0	0	1	0	0	1	0	47	47
04:45	4	17	10	0	0	31	5	0	0	0	0	5	0	8	1	0	0	9	0	2	3	0	0	5	0	50	50
<b>Total</b>	<b>11</b>	<b>37</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>66</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>5</b>	<b>34</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>41</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>129</b>	<b>129</b>
05:00	6	8	8	0	0	22	9	1	0	0	0	10	2	11	3	0	0	16	2	0	1	0	0	3	0	51	51
05:15	10	13	11	0	0	34	7	0	0	0	0	7	0	14	5	0	0	19	4	1	9	0	0	14	0	74	74
05:30	13	24	14	0	0	51	10	0	0	0	0	10	7	15	2	0	0	24	2	0	5	0	0	7	0	92	92
05:45	14	34	33	0	0	81	12	3	2	0	0	17	6	23	6	0	0	35	8	3	13	0	0	24	0	157	157
<b>Total</b>	<b>43</b>	<b>79</b>	<b>66</b>	<b>0</b>	<b>0</b>	<b>188</b>	<b>38</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>15</b>	<b>63</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>94</b>	<b>16</b>	<b>4</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>0</b>	<b>374</b>	<b>374</b>



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2221  
 Site Code :  
 Start Date : 06/28/2022  
 Page No : 2

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Adam

Groups Printed- Cars + - Trucks

Start Time	CSAH 17 Southbound						Ball Rd. Westbound						CSAH 17 Northbound						Ball Rd. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
06:00	16	33	18	0	0	67	12	4	1	0	0	17	7	18	4	0	0	29	5	3	12	0	0	20	0	133	133
06:15	23	36	14	2	0	75	8	1	1	0	0	10	1	39	6	0	0	46	12	2	20	0	1	34	1	165	166
06:30	16	55	24	2	0	97	12	4	1	0	0	17	4	55	5	0	0	64	2	1	14	0	1	17	1	195	196
06:45	24	56	32	3	0	115	20	5	4	0	0	29	6	56	8	0	0	70	7	4	16	0	1	27	1	241	242
<b>Total</b>	<b>79</b>	<b>180</b>	<b>88</b>	<b>7</b>	<b>0</b>	<b>354</b>	<b>52</b>	<b>14</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>18</b>	<b>168</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>209</b>	<b>26</b>	<b>10</b>	<b>62</b>	<b>0</b>	<b>3</b>	<b>98</b>	<b>3</b>	<b>734</b>	<b>737</b>
07:00	19	59	22	5	0	105	21	5	5	0	0	31	4	50	9	0	0	63	6	3	20	0	1	29	1	228	229
07:15	23	49	19	4	0	95	24	7	3	0	0	34	2	46	5	0	0	53	4	1	32	0	0	37	0	219	219
07:30	29	48	13	7	1	97	38	3	4	0	0	45	8	59	7	0	0	74	9	0	24	0	1	33	2	249	251
07:45	29	44	35	4	0	112	22	3	6	0	0	31	10	59	4	0	0	73	6	4	29	0	0	39	0	255	255
<b>Total</b>	<b>100</b>	<b>200</b>	<b>89</b>	<b>20</b>	<b>1</b>	<b>409</b>	<b>105</b>	<b>18</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>141</b>	<b>24</b>	<b>214</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>263</b>	<b>25</b>	<b>8</b>	<b>105</b>	<b>0</b>	<b>2</b>	<b>138</b>	<b>3</b>	<b>951</b>	<b>954</b>
08:00	15	45	30	4	0	94	29	2	8	1	0	40	4	37	9	0	0	50	3	1	16	0	0	20	0	204	204
08:15	25	58	22	2	0	107	22	8	5	0	0	35	12	49	2	1	0	64	6	0	25	0	2	31	2	237	239
08:30	25	66	30	3	0	124	30	3	8	1	0	42	9	61	9	0	0	79	3	4	25	0	2	32	2	277	279
08:45	39	66	23	3	1	131	17	2	8	0	0	27	15	64	7	0	0	86	11	5	14	0	0	30	1	274	275
<b>Total</b>	<b>104</b>	<b>235</b>	<b>105</b>	<b>12</b>	<b>1</b>	<b>456</b>	<b>98</b>	<b>15</b>	<b>29</b>	<b>2</b>	<b>0</b>	<b>144</b>	<b>40</b>	<b>211</b>	<b>27</b>	<b>1</b>	<b>0</b>	<b>279</b>	<b>23</b>	<b>10</b>	<b>80</b>	<b>0</b>	<b>4</b>	<b>113</b>	<b>5</b>	<b>992</b>	<b>997</b>
09:00	39	46	34	1	1	120	32	8	11	0	0	51	14	72	5	0	0	91	4	2	31	0	0	37	1	299	300
09:15	49	52	25	3	0	129	29	6	17	0	0	52	16	57	8	0	0	81	4	6	28	0	0	38	0	300	300
09:30	34	45	21	0	0	100	18	6	14	1	0	39	15	71	7	0	0	93	7	8	40	0	0	55	0	287	287
09:45	28	68	37	0	0	133	29	6	17	1	0	53	23	68	6	0	0	97	8	9	28	0	1	45	1	328	329
<b>Total</b>	<b>150</b>	<b>211</b>	<b>117</b>	<b>4</b>	<b>1</b>	<b>482</b>	<b>108</b>	<b>26</b>	<b>59</b>	<b>2</b>	<b>0</b>	<b>195</b>	<b>68</b>	<b>268</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>362</b>	<b>23</b>	<b>25</b>	<b>127</b>	<b>0</b>	<b>1</b>	<b>175</b>	<b>2</b>	<b>1214</b>	<b>1216</b>
10:00	31	52	30	3	0	116	43	2	16	0	0	61	32	63	9	0	0	104	10	6	31	0	0	47	0	328	328
10:15	51	56	28	1	2	136	43	10	13	0	0	66	18	70	7	0	0	95	10	7	27	0	0	44	2	341	343
10:30	34	56	35	1	0	126	45	2	26	1	0	74	23	70	8	0	0	101	9	10	33	1	0	53	0	354	354
10:45	50	66	45	1	0	162	35	1	24	0	0	60	28	75	6	0	0	109	7	6	41	0	1	54	1	385	386
<b>Total</b>	<b>166</b>	<b>230</b>	<b>138</b>	<b>6</b>	<b>2</b>	<b>540</b>	<b>166</b>	<b>15</b>	<b>79</b>	<b>1</b>	<b>0</b>	<b>261</b>	<b>101</b>	<b>278</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>409</b>	<b>36</b>	<b>29</b>	<b>132</b>	<b>1</b>	<b>1</b>	<b>198</b>	<b>3</b>	<b>1408</b>	<b>1411</b>
11:00	35	82	39	0	0	156	43	12	22	0	0	77	22	68	7	0	0	97	7	6	38	0	3	51	3	381	384
11:15	46	79	39	0	0	164	34	7	22	0	0	63	38	78	9	0	0	125	6	10	36	0	0	52	0	404	404
11:30	45	57	40	0	0	142	64	10	20	2	0	96	26	78	7	0	0	111	16	11	45	0	0	72	0	421	421
11:45	52	81	52	0	0	185	52	5	20	0	0	77	20	82	7	0	0	109	15	6	34	0	0	55	0	426	426
<b>Total</b>	<b>178</b>	<b>299</b>	<b>170</b>	<b>0</b>	<b>0</b>	<b>647</b>	<b>193</b>	<b>34</b>	<b>84</b>	<b>2</b>	<b>0</b>	<b>313</b>	<b>106</b>	<b>306</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>442</b>	<b>44</b>	<b>33</b>	<b>153</b>	<b>0</b>	<b>3</b>	<b>230</b>	<b>3</b>	<b>1632</b>	<b>1635</b>
12:00	58	76	56	0	0	190	48	8	24	0	0	80	30	92	13	0	1	135	11	4	51	0	0	66	1	471	472
12:15	61	82	44	1	0	188	48	4	27	2	0	81	22	106	8	2	0	138	17	7	42	0	0	66	0	473	473
12:30	52	80	30	0	1	162	35	6	20	0	0	61	21	97	10	0	5	128	7	8	55	0	0	70	6	421	427



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2221  
 Site Code :  
 Start Date : 06/28/2022  
 Page No : 3

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Adam

Groups Printed- Cars + - Trucks

Start Time	CSAH 17 Southbound						Ball Rd. Westbound						CSAH 17 Northbound						Ball Rd. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
12:45	56	78	51	0	0	185	37	14	26	0	0	77	23	71	8	0	0	102	9	11	50	0	0	70	0	434	434
Total	227	316	181	1	1	725	168	32	97	2	0	299	96	366	39	2	6	503	44	30	198	0	0	272	7	1799	1806
13:00	37	75	46	2	1	160	46	6	16	0	0	68	20	77	6	0	0	103	12	8	56	0	1	76	2	407	409
13:15	72	81	47	1	0	201	57	8	24	2	0	91	28	87	9	0	0	124	13	8	45	0	0	66	0	482	482
13:30	50	73	46	1	0	170	41	6	12	0	0	59	23	89	13	0	2	125	16	5	42	0	3	63	5	417	422
13:45	59	80	54	0	2	193	37	6	22	0	0	65	31	86	6	0	1	123	8	5	49	0	1	62	4	443	447
Total	218	309	193	4	3	724	181	26	74	2	0	283	102	339	34	0	3	475	49	26	192	0	5	267	11	1749	1760
14:00	58	53	54	2	1	167	49	8	29	0	0	86	19	73	6	0	0	98	11	6	60	0	2	77	3	428	431
14:15	69	94	43	1	0	207	54	10	27	0	0	91	22	83	8	0	0	113	15	12	62	0	0	89	0	500	500
14:30	60	75	62	2	0	199	47	6	21	1	0	75	22	105	11	1	0	139	7	9	48	0	0	64	0	477	477
14:45	70	63	52	2	0	187	48	7	24	0	0	79	32	99	5	0	0	136	8	13	47	1	0	69	0	471	471
Total	257	285	211	7	1	760	198	31	101	1	0	331	95	360	30	1	0	486	41	40	217	1	2	299	3	1876	1879
15:00	47	76	53	2	0	178	73	5	28	1	0	107	20	84	8	0	0	112	11	9	81	0	2	101	2	498	500
15:15	55	75	56	3	0	189	45	8	26	0	0	79	28	108	8	0	0	144	9	8	67	0	0	84	0	496	496
15:30	55	100	77	1	0	233	86	14	26	1	0	127	29	124	6	0	0	159	10	7	45	0	0	62	0	581	581
15:45	60	91	47	1	0	199	51	9	30	1	0	91	27	109	8	0	2	144	18	2	53	0	2	73	4	507	511
Total	217	342	233	7	0	799	255	36	110	3	0	404	104	425	30	0	2	559	48	26	246	0	4	320	6	2082	2088
16:00	54	89	46	4	0	193	54	4	32	0	0	90	26	135	6	0	1	167	7	9	64	1	2	81	3	531	534
16:15	65	92	59	1	1	217	59	7	38	0	0	104	27	115	7	0	0	149	7	6	60	0	0	73	1	543	544
16:30	44	105	53	4	0	206	73	9	28	2	0	112	23	120	10	2	0	155	8	5	51	0	0	64	0	537	537
16:45	55	95	59	7	0	216	52	9	29	1	0	91	17	124	8	0	0	149	12	9	62	0	0	83	0	539	539
Total	218	381	217	16	1	832	238	29	127	3	0	397	93	494	31	2	1	620	34	29	237	1	2	301	4	2150	2154
17:00	44	101	60	5	1	210	53	6	33	0	0	92	25	135	10	0	0	170	9	11	55	0	1	75	2	547	549
17:15	65	109	57	3	0	234	66	7	19	2	2	94	33	145	12	0	1	190	10	8	47	0	0	65	3	583	586
17:30	50	76	51	1	0	178	56	7	27	3	0	93	23	121	5	0	0	149	6	11	66	0	0	83	0	503	503
17:45	35	74	41	1	0	151	49	4	24	0	0	77	33	109	10	0	0	152	9	6	55	1	3	71	3	451	454
Total	194	360	209	10	1	773	224	24	103	5	2	356	114	510	37	0	1	661	34	36	223	1	4	294	8	2084	2092
18:00	50	72	35	0	1	157	48	2	14	1	0	65	18	86	6	0	0	110	6	6	43	0	0	55	1	387	388
18:15	41	88	30	0	1	159	40	3	18	1	0	62	14	93	6	0	0	113	8	8	49	0	1	65	2	399	401
18:30	52	71	48	0	3	171	35	7	24	1	0	67	29	79	9	0	3	117	8	4	29	0	1	41	7	396	403
18:45	31	70	30	1	0	132	43	4	18	0	0	65	18	74	4	0	0	96	5	5	47	0	0	57	0	350	350
Total	174	301	143	1	5	619	166	16	74	3	0	259	79	332	25	0	3	436	27	23	168	0	2	218	10	1532	1542



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2221  
 Site Code :  
 Start Date : 06/28/2022  
 Page No : 4

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Adam

Groups Printed- Cars + - Trucks

Start Time	CSAH 17 Southbound						Ball Rd. Westbound						CSAH 17 Northbound						Ball Rd. Eastbound						Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total			
19:00	44	60	36	0	0	140	41	1	23	0	0	65	25	65	5	0	2	95	9	5	32	0	1	46	3	346	349
19:15	32	65	33	0	1	130	30	11	17	0	0	58	19	58	5	0	0	82	11	8	37	0	1	56	2	326	328
19:30	28	62	37	0	1	127	28	5	18	0	0	51	20	57	8	0	0	85	7	7	32	0	0	46	1	309	310
19:45	24	62	34	0	0	120	29	3	13	0	0	45	15	69	4	0	0	88	11	2	36	0	2	49	2	302	304
<b>Total</b>	<b>128</b>	<b>249</b>	<b>140</b>	<b>0</b>	<b>2</b>	<b>517</b>	<b>128</b>	<b>20</b>	<b>71</b>	<b>0</b>	<b>0</b>	<b>219</b>	<b>79</b>	<b>249</b>	<b>22</b>	<b>0</b>	<b>2</b>	<b>350</b>	<b>38</b>	<b>22</b>	<b>137</b>	<b>0</b>	<b>4</b>	<b>197</b>	<b>8</b>	<b>1283</b>	<b>1291</b>
20:00	20	51	32	0	1	103	42	6	21	0	0	69	16	40	9	0	2	65	8	6	35	0	0	49	3	286	289
20:15	21	72	19	0	0	112	43	2	15	0	0	60	14	48	4	0	2	66	10	8	34	1	0	53	2	291	293
20:30	17	50	36	0	0	103	24	5	12	1	0	42	12	43	2	0	0	57	4	2	22	0	1	28	1	230	231
20:45	12	51	26	0	1	89	40	2	13	1	0	56	11	66	7	0	0	84	6	0	16	1	0	23	1	252	253
<b>Total</b>	<b>70</b>	<b>224</b>	<b>113</b>	<b>0</b>	<b>2</b>	<b>407</b>	<b>149</b>	<b>15</b>	<b>61</b>	<b>2</b>	<b>0</b>	<b>227</b>	<b>53</b>	<b>197</b>	<b>22</b>	<b>0</b>	<b>4</b>	<b>272</b>	<b>28</b>	<b>16</b>	<b>107</b>	<b>2</b>	<b>1</b>	<b>153</b>	<b>7</b>	<b>1059</b>	<b>1066</b>
21:00	16	35	13	0	0	64	28	3	17	0	1	48	19	47	2	0	0	68	7	4	12	0	0	23	1	203	204
21:15	10	29	26	0	1	65	14	2	16	0	1	32	10	35	4	0	0	49	3	4	12	0	1	19	3	165	168
21:30	7	47	15	0	0	69	19	2	9	0	0	30	10	19	1	0	0	30	2	1	8	0	0	11	0	140	140
21:45	8	28	17	1	3	54	11	3	15	0	0	29	13	22	5	0	0	40	5	2	6	0	0	13	3	136	139
<b>Total</b>	<b>41</b>	<b>139</b>	<b>71</b>	<b>1</b>	<b>4</b>	<b>252</b>	<b>72</b>	<b>10</b>	<b>57</b>	<b>0</b>	<b>2</b>	<b>139</b>	<b>52</b>	<b>123</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>187</b>	<b>17</b>	<b>11</b>	<b>38</b>	<b>0</b>	<b>1</b>	<b>66</b>	<b>7</b>	<b>644</b>	<b>651</b>
22:00	5	30	14	0	1	49	23	1	15	0	0	39	4	21	1	0	0	26	3	3	6	0	0	12	1	126	127
22:15	7	22	12	0	0	41	15	2	2	0	1	19	1	16	2	0	0	19	3	2	6	0	0	11	1	90	91
22:30	5	28	9	0	0	42	14	0	4	0	0	18	4	26	1	0	0	31	3	0	3	0	0	6	0	97	97
22:45	4	16	7	0	0	27	10	3	3	0	0	16	2	17	3	0	0	22	1	1	4	0	0	6	0	71	71
<b>Total</b>	<b>21</b>	<b>96</b>	<b>42</b>	<b>0</b>	<b>1</b>	<b>159</b>	<b>62</b>	<b>6</b>	<b>24</b>	<b>0</b>	<b>1</b>	<b>92</b>	<b>11</b>	<b>80</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>98</b>	<b>10</b>	<b>6</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>2</b>	<b>384</b>	<b>386</b>
23:00	2	10	3	0	0	15	18	1	3	0	0	22	1	9	0	0	0	10	2	0	2	0	0	4	0	51	51
23:15	4	14	4	0	0	22	5	0	0	0	0	5	0	10	0	0	0	10	2	0	2	0	0	4	0	41	41
23:30	4	21	4	0	0	29	4	0	0	0	0	4	2	7	1	0	0	10	2	0	5	0	1	7	1	50	51
23:45	2	10	3	0	0	15	1	0	0	0	0	1	0	5	1	1	0	7	0	0	3	0	0	3	0	26	26
<b>Total</b>	<b>12</b>	<b>55</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>81</b>	<b>28</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>3</b>	<b>31</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>37</b>	<b>6</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>18</b>	<b>1</b>	<b>168</b>	<b>169</b>
<b>Grand Total</b>	<b>2622</b>	<b>4577</b>	<b>2589</b>	<b>96</b>	<b>26</b>	<b>9884</b>	<b>2670</b>	<b>376</b>	<b>1189</b>	<b>28</b>	<b>5</b>	<b>4263</b>	<b>1265</b>	<b>5094</b>	<b>473</b>	<b>7</b>	<b>22</b>	<b>6839</b>	<b>574</b>	<b>387</b>	<b>2499</b>	<b>6</b>	<b>40</b>	<b>3466</b>	<b>93</b>	<b>24452</b>	<b>24545</b>
<b>Apprch %</b>	<b>26.5</b>	<b>46.3</b>	<b>26.2</b>	<b>1</b>			<b>62.6</b>	<b>8.8</b>	<b>27.9</b>	<b>0.7</b>			<b>18.5</b>	<b>74.5</b>	<b>6.9</b>	<b>0.1</b>			<b>16.6</b>	<b>11.2</b>	<b>72.1</b>	<b>0.2</b>					
<b>Total %</b>	<b>10.7</b>	<b>18.7</b>	<b>10.6</b>	<b>0.4</b>		<b>40.4</b>	<b>10.9</b>	<b>1.5</b>	<b>4.9</b>	<b>0.1</b>		<b>17.4</b>	<b>5.2</b>	<b>20.8</b>	<b>1.9</b>	<b>0</b>		<b>28</b>	<b>2.3</b>	<b>1.6</b>	<b>10.2</b>	<b>0</b>		<b>14.2</b>	<b>0.4</b>	<b>99.6</b>	
<b>Cars +</b>	<b>2596</b>	<b>4434</b>	<b>2554</b>	<b>94</b>		<b>9704</b>	<b>2633</b>	<b>372</b>	<b>1182</b>	<b>28</b>		<b>4220</b>	<b>1257</b>	<b>4957</b>	<b>471</b>	<b>7</b>		<b>6714</b>	<b>565</b>	<b>381</b>	<b>2472</b>	<b>6</b>		<b>3464</b>	<b>0</b>	<b>0</b>	<b>24102</b>
<b>% Cars +</b>	<b>99</b>	<b>96.9</b>	<b>98.6</b>	<b>97.9</b>	<b>100</b>	<b>97.9</b>	<b>98.6</b>	<b>98.9</b>	<b>99.4</b>	<b>100</b>	<b>100</b>	<b>98.9</b>	<b>99.4</b>	<b>97.3</b>	<b>99.6</b>	<b>100</b>	<b>100</b>	<b>97.9</b>	<b>98.4</b>	<b>98.4</b>	<b>98.9</b>	<b>100</b>	<b>100</b>	<b>98.8</b>	<b>0</b>	<b>0</b>	<b>98.2</b>
<b>Trucks</b>	<b>26</b>	<b>143</b>	<b>35</b>	<b>2</b>		<b>206</b>	<b>37</b>	<b>4</b>	<b>7</b>	<b>0</b>		<b>48</b>	<b>8</b>	<b>137</b>	<b>2</b>	<b>0</b>		<b>147</b>	<b>9</b>	<b>6</b>	<b>27</b>	<b>0</b>		<b>42</b>	<b>0</b>	<b>0</b>	<b>443</b>
<b>% Trucks</b>	<b>1</b>	<b>3.1</b>	<b>1.4</b>	<b>2.1</b>	<b>0</b>	<b>2.1</b>	<b>1.4</b>	<b>1.1</b>	<b>0.6</b>	<b>0</b>	<b>0</b>	<b>1.1</b>	<b>0.6</b>	<b>2.7</b>	<b>0.4</b>	<b>0</b>	<b>0</b>	<b>2.1</b>	<b>1.6</b>	<b>1.6</b>	<b>1.1</b>	<b>0</b>	<b>0</b>	<b>1.2</b>	<b>0</b>	<b>0</b>	<b>1.8</b>



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2221  
 Site Code :  
 Start Date : 06/28/2022  
 Page No : 5

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Adam

Start Time	CSAH 17 Southbound					Ball Rd. Westbound					CSAH 17 Northbound					Ball Rd. Eastbound					Int. Total
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	
Peak Hour Analysis From 00:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 09:00																					
09:00	39	46	34	1	120	32	8	11	0	51	14	72	5	0	91	4	2	31	0	37	299
09:15	49	52	25	3	129	29	6	17	0	52	16	57	8	0	81	4	6	28	0	38	300
09:30	34	45	21	0	100	18	6	14	1	39	15	71	7	0	93	7	8	40	0	55	287
09:45	28	68	37	0	133	29	6	17	1	53	23	68	6	0	97	8	9	28	0	45	328
Total Volume	150	211	117	4	482	108	26	59	2	195	68	268	26	0	362	23	25	127	0	175	1214
% App. Total	31.1	43.8	24.3	0.8		55.4	13.3	30.3	1		18.8	74	7.2	0		13.1	14.3	72.6	0		
PHF	.765	.776	.791	.333	.906	.844	.813	.868	.500	.920	.739	.931	.813	.000	.933	.719	.694	.794	.000	.795	.925

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00																					
12:00	58	76	56	0	190	48	8	24	0	80	30	92	13	0	135	11	4	51	0	66	471
12:15	61	82	44	1	188	48	4	27	2	81	22	106	8	2	138	17	7	42	0	66	473
12:30	52	80	30	0	162	35	6	20	0	61	21	97	10	0	128	7	8	55	0	70	421
12:45	56	78	51	0	185	37	14	26	0	77	23	71	8	0	102	9	11	50	0	70	434
Total Volume	227	316	181	1	725	168	32	97	2	299	96	366	39	2	503	44	30	198	0	272	1799
% App. Total	31.3	43.6	25	0.1		56.2	10.7	32.4	0.7		19.1	72.8	7.8	0.4		16.2	11	72.8	0		
PHF	.930	.963	.808	.250	.954	.875	.571	.898	.250	.923	.800	.863	.750	.250	.911	.647	.682	.900	.000	.971	.951

Peak Hour Analysis From 14:00 to 23:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	44	105	53	4	206	73	9	28	2	112	23	120	10	2	155	8	5	51	0	64	537
16:45	55	95	59	7	216	52	9	29	1	91	17	124	8	0	149	12	9	62	0	83	539
17:00	44	101	60	5	210	53	6	33	0	92	25	135	10	0	170	9	11	55	0	75	547
17:15	65	109	57	3	234	66	7	19	2	94	33	145	12	0	190	10	8	47	0	65	583
Total Volume	208	410	229	19	866	244	31	109	5	389	98	524	40	2	664	39	33	215	0	287	2206
% App. Total	24	47.3	26.4	2.2		62.7	8	28	1.3		14.8	78.9	6	0.3		13.6	11.5	74.9	0		
PHF	.800	.940	.954	.679	.925	.836	.861	.826	.625	.868	.742	.903	.833	.250	.874	.813	.750	.867	.000	.864	.946



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2221  
 Site Code :  
 Start Date : 06/28/2022  
 Page No : 1

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Adam

Groups Printed- Trucks

Start Time	CSAH 17 Southbound					Ball Rd. Westbound					CSAH 17 Northbound					Ball Rd. Eastbound					Int. Total	
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total		
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
02:30	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	2
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	1	0	0	0	1	3
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
05:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	0	2	3	3
Total	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	1	0	1	0	2	5	5
06:00	1	0	1	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
06:15	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5	5
06:30	0	2	1	0	3	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	5	5
06:45	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	2	7	2	0	11	0	1	0	0	1	0	2	0	0	2	0	0	2	0	2	16	16
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	6	6
07:45	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	7	7
Total	0	5	0	0	5	0	0	0	0	0	0	8	0	0	8	0	0	2	0	2	15	15
08:00	0	2	0	0	2	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	7	7
08:15	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8	8
08:30	1	4	1	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	10	10
08:45	0	4	1	1	6	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	9	9
Total	1	13	2	1	17	2	0	0	0	2	0	14	0	0	14	0	1	0	0	1	34	34
09:00	0	3	1	0	4	1	0	0	0	1	0	3	0	0	3	0	0	1	0	1	9	9



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2221  
 Site Code :  
 Start Date : 06/28/2022  
 Page No : 2

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Adam

Groups Printed- Trucks

Start Time	CSAH 17 Southbound					Ball Rd. Westbound					CSAH 17 Northbound					Ball Rd. Eastbound					Int. Total	
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total		
09:15	0	5	2	0	7	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	9
09:30	0	3	1	0	4	1	1	0	0	2	1	5	0	0	6	0	0	0	0	0	0	12
09:45	1	4	0	0	5	2	0	1	0	3	0	3	0	0	3	1	0	0	0	1	0	12
<b>Total</b>	<b>1</b>	<b>15</b>	<b>4</b>	<b>0</b>	<b>20</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>42</b>
10:00	0	2	0	0	2	0	0	0	0	0	1	4	0	0	5	1	0	0	0	1	0	8
10:15	0	5	1	0	6	4	0	0	0	4	0	3	0	0	3	0	0	0	0	0	0	13
10:30	1	3	2	0	6	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	10
10:45	1	2	0	1	4	1	0	0	0	1	1	5	0	0	6	0	1	1	0	2	0	13
<b>Total</b>	<b>2</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>18</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>44</b>
11:00	2	7	2	0	11	1	0	0	0	1	0	2	0	0	2	0	0	1	0	1	0	15
11:15	2	5	1	0	8	0	0	1	0	1	1	4	0	0	5	0	2	0	0	2	0	16
11:30	0	1	1	0	2	2	1	0	0	3	0	3	0	0	3	0	0	1	0	1	0	9
11:45	0	2	1	0	3	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	7
<b>Total</b>	<b>4</b>	<b>15</b>	<b>5</b>	<b>0</b>	<b>24</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>47</b>
12:00	1	3	1	0	5	1	0	0	0	1	1	2	0	0	3	1	0	1	0	2	0	11
12:15	0	6	0	0	6	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	9
12:30	2	3	1	0	6	1	0	1	0	2	0	3	1	0	4	0	0	0	0	0	0	12
12:45	1	5	1	0	7	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	0	11
<b>Total</b>	<b>4</b>	<b>17</b>	<b>3</b>	<b>0</b>	<b>24</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>43</b>
13:00	0	3	0	0	3	2	0	0	0	2	1	4	0	0	5	0	0	1	0	1	0	11
13:15	0	6	5	0	11	3	0	1	0	4	0	6	0	0	6	0	0	2	0	2	0	23
13:30	4	4	1	0	9	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	15
13:45	0	4	0	0	4	1	0	0	0	1	0	1	0	0	1	1	0	1	0	2	0	8
<b>Total</b>	<b>4</b>	<b>17</b>	<b>6</b>	<b>0</b>	<b>27</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>57</b>
14:00	0	3	2	0	5	0	0	1	0	1	0	1	0	0	1	1	0	2	0	3	0	10
14:15	2	6	0	0	8	1	0	0	0	1	0	3	0	0	3	0	0	1	0	1	0	13
14:30	0	4	0	0	4	1	0	0	0	1	0	3	0	0	3	0	0	3	0	3	0	11
14:45	0	2	0	0	2	1	0	0	0	1	0	6	0	0	6	0	0	1	0	1	0	10
<b>Total</b>	<b>2</b>	<b>15</b>	<b>2</b>	<b>0</b>	<b>19</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>44</b>
15:00	0	1	2	0	3	0	0	0	0	0	1	2	1	0	4	0	0	1	0	1	0	8
15:15	1	1	0	0	2	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	0	6
15:30	0	4	0	0	4	1	0	1	0	2	0	3	0	0	3	1	0	0	0	1	0	10
15:45	1	4	0	0	5	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	9
<b>Total</b>	<b>2</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>33</b>
16:00	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	10
16:15	0	1	1	0	2	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	0	7
16:30	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5
16:45	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	4
<b>Total</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>26</b>
17:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
17:30	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
17:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	3
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>
18:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	2
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
18:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<b>Total</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>6</b>





# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

File Name : TMC 2221  
 Site Code :  
 Start Date : 06/28/2022  
 Page No : 3

Weather: Warm & Sunny  
 CountCAM 2  
 Study Conducted By: Adam

Groups Printed- Trucks

Start Time	CSAH 17 Southbound					Ball Rd. Westbound					CSAH 17 Northbound					Ball Rd. Eastbound					Int. Total					
	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total	Right	Thru	Left	UTrn	App. Total						
19:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
19:15	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
19:30	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
20:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
20:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total</b>	<b>26</b>	<b>143</b>	<b>35</b>	<b>2</b>	<b>206</b>	<b>37</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>48</b>	<b>8</b>	<b>137</b>	<b>2</b>	<b>0</b>	<b>147</b>	<b>9</b>	<b>6</b>	<b>27</b>	<b>0</b>	<b>42</b>	<b>443</b>					
<b>Apprch %</b>	<b>12.6</b>	<b>69.4</b>	<b>17</b>	<b>1</b>		<b>77.1</b>	<b>8.3</b>	<b>14.6</b>	<b>0</b>		<b>5.4</b>	<b>93.2</b>	<b>1.4</b>	<b>0</b>		<b>21.4</b>	<b>14.3</b>	<b>64.3</b>	<b>0</b>							
<b>Total %</b>	<b>5.9</b>	<b>32.3</b>	<b>7.9</b>	<b>0.5</b>	<b>46.5</b>	<b>8.4</b>	<b>0.9</b>	<b>1.6</b>	<b>0</b>	<b>10.8</b>	<b>1.8</b>	<b>30.9</b>	<b>0.5</b>	<b>0</b>	<b>33.2</b>	<b>2</b>	<b>1.4</b>	<b>6.1</b>	<b>0</b>	<b>9.5</b>						

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/28/2022

## Signal Warrants - Summary

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### Major Street Approaches

Northbound: CSAH 17

Number of Lanes : 2+

Total Approach Volume: 6,839

Southbound: CSAH 17

Number of Lanes :2+

Total Approach Volume: 9,884

### Minor Street Approaches

Eastbound: Ball Rd.

Number of Lanes :2+

Total Approach Volume: 3,466

Westbound: Ball Rd.

Number of Lanes :2+

Total Approach Volume: 4,263

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### Warrant Summary (Rural Values Apply)

**Warrant 1 - Eight Hour Vehicular Volumes.....Satisfied**

**Warrant 1A - Minimum Vehicular Volume.....Satisfied**

Required volumes reached for 14 hours, 8 are needed

**Warrant 1B - Interruption of Continuous Traffic.....Satisfied**

Required volumes reached for 15 hours, 8 are needed

**Warrant 1C - Combination of Warrants.....Satisfied**

Required 1A volumes reached for 15 hours, 8 are needed

Required 1B volumes reached for 15 hours, 8 are needed

**Warrant 2 - Four Hour Volumes.....Satisfied**

Number of hours (13) volumes exceed minimum >= minimum required (4).

**Warrant 3 - Peak Hour.....Satisfied**

**Warrant 3A - Peak Hour Delay.....Satisfied**

Number of one hour periods (52) volumes exceed minimum >= required (1). Delay data not evaluated.

**Warrant 3B - Peak Hour Volumes.....Satisfied**

Volumes exceed minimums for at least one hour period.

**Warrant 4 - Pedestrian Volumes.....Not Evaluated**

**Warrant 5 - School Crossing.....Not Evaluated**

**Warrant 6 - Coordinated Signal System.....Not Evaluated**

**Warrant 7 - Crash Experience.....Not Evaluated**

**Warrant 8 - Roadway Network.....Not Evaluated**

**Warrant 9 - Intersection Near a Grade Crossing.....Not Evaluated**

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/28/2022

## Warrant 1A - Minimum Volumes

#### Description

Intended for sites where the volume of intersecting traffic is the principal reason for consideration of a signal installation.

#### Summary

14 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **2 or more**

#### Volume Requirements

Rural Factor of 70 % applied  
 Veh/Hr Major = **420**  
 Veh/Hr Minor = **140**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	<b>CSAH 17</b>					<b>Ball Rd.</b>		
16:00 - 17:00	620	+	832	=	1452	301	397	Yes
17:00 - 18:00	661	+	773	=	1434	294	356	Yes
15:00 - 16:00	559	+	799	=	1358	320	404	Yes
14:00 - 15:00	486	+	760	=	1246	299	331	Yes
12:00 - 13:00	503	+	725	=	1228	272	299	Yes
13:00 - 14:00	475	+	724	=	1199	267	283	Yes
11:00 - 12:00	442	+	647	=	1089	230	313	Yes
18:00 - 19:00	436	+	619	=	1055	218	259	Yes
10:00 - 11:00	409	+	540	=	949	198	261	Yes
19:00 - 20:00	350	+	517	=	867	197	219	Yes
09:00 - 10:00	362	+	482	=	844	175	195	Yes
08:00 - 09:00	279	+	456	=	735	113	144	Yes
20:00 - 21:00	272	+	407	=	679	153	227	Yes
07:00 - 08:00	263	+	409	=	672	138	141	Yes
06:45 - 07:45	260	+	412	=	672	126	139	No
06:30 - 07:30	250	+	412	=	662	110	111	No
06:15 - 07:15	243	+	392	=	635	107	87	No
06:00 - 07:00	209	+	354	=	563	98	73	No
05:45 - 06:45	174	+	320	=	494	95	61	No
21:00 - 22:00	187	+	252	=	439	66	139	No
05:30 - 06:30	134	+	274	=	408	85	54	No
21:15 - 22:15	145	+	237	=	382	55	130	No
05:15 - 06:15	107	+	233	=	340	65	51	No
21:30 - 22:30	115	+	213	=	328	47	117	No
21:45 - 22:45	116		186		302	42	105	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/28/2022

## Warrant 1B - Interruption of Continuous Traffic

#### Description

Intended for sites where the volume of the major street is so heavy that traffic on the minor street suffers excessive delay or hazard.

#### Summary

15 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **2 or more**

#### Volume Requirements

Rural Factor of 70 % applied  
 Veh/Hr Major = **630**  
 Veh/Hr Minor = **70**

Time	Major Road				Total	Minor Road		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
	<b>CSAH 17</b>					<b>Ball Rd.</b>		
16:15 - 17:15	623	+	849	=	1472	295	399	Yes
15:15 - 16:15	614	+	814	=	1428	300	387	Yes
17:15 - 18:15	601	+	720	=	1321	274	329	Yes
14:15 - 15:15	500	+	771	=	1271	323	352	Yes
13:15 - 14:15	470	+	731	=	1201	268	301	Yes
12:15 - 13:15	471	+	695	=	1166	282	287	Yes
11:15 - 12:15	480	+	681	=	1161	245	316	Yes
18:15 - 19:15	421	+	602	=	1023	209	259	Yes
10:15 - 11:15	402	+	580	=	982	202	277	Yes
09:15 - 10:15	375	+	478	=	853	185	205	Yes
08:15 - 09:15	320	+	482	=	802	130	155	Yes
19:15 - 20:15	320	+	480	=	800	200	223	Yes
07:15 - 08:15	250	+	398	=	648	129	150	Yes
20:15 - 21:15	275	+	368	=	643	127	206	Yes
06:15 - 07:15	243	+	392	=	635	107	87	Yes
06:00 - 07:00	209	+	354	=	563	98	73	No
05:45 - 06:45	174	+	320	=	494	95	61	No
05:30 - 06:30	134	+	274	=	408	85	54	No
21:15 - 22:15	145	+	237	=	382	55	130	No
05:15 - 06:15	107	+	233	=	340	65	51	No
21:30 - 22:30	115	+	213	=	328	47	117	No
21:45 - 22:45	116	+	186	=	302	42	105	No
05:00 - 06:00	94	+	188	=	282	48	44	No
22:00 - 23:00	98	+	159	=	257	35	92	No
22:15 - 23:15	82		125		207	27	75	No

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/28/2022

## Warrant 1C Combination of Warrants

#### Description

Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are both met to 80% of their stated values.

#### Summary

15 hours meet 1A minimums.  
15 hours meet 1B minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
Number of Major Lanes = **2 or more**  
Number of Minor Lanes = **2 or more**

#### Volume Requirements

Rural Factor of 70% applied  
Warrant 1A 1B  
Veh/Hr Major = **336 504**  
  
Veh/Hr Minor = **112 56**

#### Major Road CSAH 17

#### Minor Road Ball Rd.

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1A?
16:45 - 17:45	658	+	838	=	1496	306	370	Yes
15:45 - 16:45	615	+	815	=	1430	291	397	Yes
14:45 - 15:45	551	+	787	=	1338	316	392	Yes
13:45 - 14:45	473	+	766	=	1239	292	317	Yes
11:45 - 12:45	510	+	725	=	1235	257	299	Yes
12:45 - 13:45	454	+	716	=	1170	275	295	Yes
17:45 - 18:45	492	+	638	=	1130	232	271	Yes
10:45 - 11:45	442	+	624	=	1066	229	296	Yes
09:45 - 10:45	397	+	511	=	908	189	254	Yes
18:45 - 19:45	358	+	529	=	887	205	239	Yes
08:45 - 09:45	351	+	480	=	831	160	169	Yes
19:45 - 20:45	276	+	438	=	714	179	216	Yes

Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met1B?
16:00 - 17:00	620	+	832	=	1452	301	397	Yes
17:00 - 18:00	661	+	773	=	1434	294	356	Yes
15:00 - 16:00	559	+	799	=	1358	320	404	Yes
14:00 - 15:00	486	+	760	=	1246	299	331	Yes
12:00 - 13:00	503	+	725	=	1228	272	299	Yes
13:00 - 14:00	475	+	724	=	1199	267	283	Yes
11:00 - 12:00	442	+	647	=	1089	230	313	Yes
18:00 - 19:00	436	+	619	=	1055	218	259	Yes
10:00 - 11:00	409	+	540	=	949	198	261	Yes
19:00 - 20:00	350	+	517	=	867	197	219	Yes
09:00 - 10:00	362	+	482	=	844	175	195	Yes
08:00 - 09:00	279	+	456	=	735	113	144	Yes

# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/28/2022

## Warrant 2 - Four Hour Volumes

#### Description

Intended for sites where the volume of intersecting traffic during any four hours of the day is the principal reason for consideration of a signal installation.

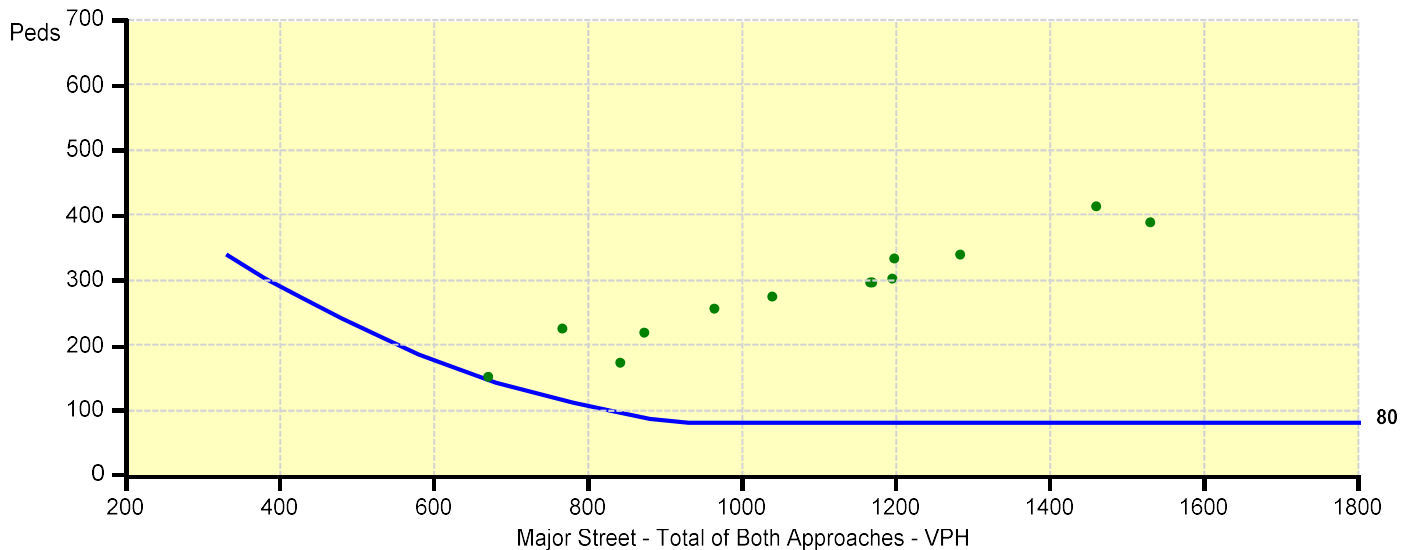
#### Summary

13 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **2 or more**

Time	Major Road CSAH 17				Total	Minor Road Ball Rd.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	664	+	866	=	1530	287	389	Yes
15:30 - 16:30	619	+	842	=	1461	289	412	Yes
14:30 - 15:30	531	+	753	=	1284	318	340	Yes
11:30 - 12:30	493	+	705	=	1198	259	334	Yes
13:30 - 14:30	459	+	737	=	1196	291	301	Yes
17:30 - 18:30	524	+	645	=	1169	274	297	Yes
12:30 - 13:30	457	+	708	=	1165	282	297	Yes
10:30 - 11:30	432	+	608	=	1040	210	274	Yes
18:30 - 19:30	390	+	573	=	963	200	255	Yes
09:30 - 10:30	389	+	485	=	874	191	219	Yes
08:30 - 09:30	337	+	504	=	841	137	172	Yes
19:30 - 20:30	304	+	462	=	766	197	225	Yes



# ANOKA COUNTY HIGHWAY

## PC-WARRANTS

### TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name:

Study Date : 06/28/2022

## Warrant 3B - Peak Hour Volumes

#### Description

Intended for sites where the volume of intersecting traffic during one hour of the day is the principal reason for consideration of a signal installation.

#### Summary

43 one hour periods meet minimums.  
Warrant IS met.

#### Site Data Required

Rural Settings Apply = **True**  
 Number of Major Lanes = **2 or more**  
 Number of Minor Lanes = **2 or more**

Time	Major Road CSAH 17				Total	Minor Road Ball Rd.		Met?
	Major NB	+	Major SB	=		Minor EB	Minor WB	
16:30 - 17:30	664	+	866	=	1530	287	389	Yes
16:45 - 17:45	658	+	838	=	1496	306	370	Yes
16:15 - 17:15	623	+	849	=	1472	295	399	Yes
15:30 - 16:30	619	+	842	=	1461	289	412	Yes
16:00 - 17:00	620	+	832	=	1452	301	397	Yes
17:00 - 18:00	661	+	773	=	1434	294	356	Yes
15:45 - 16:45	615	+	815	=	1430	291	397	Yes
15:15 - 16:15	614	+	814	=	1428	300	387	Yes
15:00 - 16:00	559	+	799	=	1358	320	404	Yes
14:45 - 15:45	551	+	787	=	1338	316	392	Yes
17:15 - 18:15	601	+	720	=	1321	274	329	Yes
14:30 - 15:30	531	+	753	=	1284	318	340	Yes

