

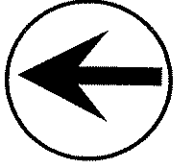
Date : 07/06/11

Count Number : TMC1117

Location : CSAH 11 (Foley Blvd.)

@ CSAH 11/12 (Northdale Blvd.)

Collection Period : 6:00AM - 10:00PM



North

8581

#2

Foley Blvd.

4400	D	257
	E	3515
	F	628

4181

Northdale Blvd.

514	G
3276	H
555	J

#3

8424

4079

5032

#1

9961

Northdale Blvd.

4929	A	1622
	B	2996
	C	311

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

1499	M
3356	L
455	K
5310	

#4

5692

Foley Blvd.

11002

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

Date : 07/07/11

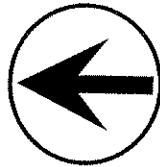
Count Number : TMC1117

Location : CSAH 11 (Foley Blvd.)

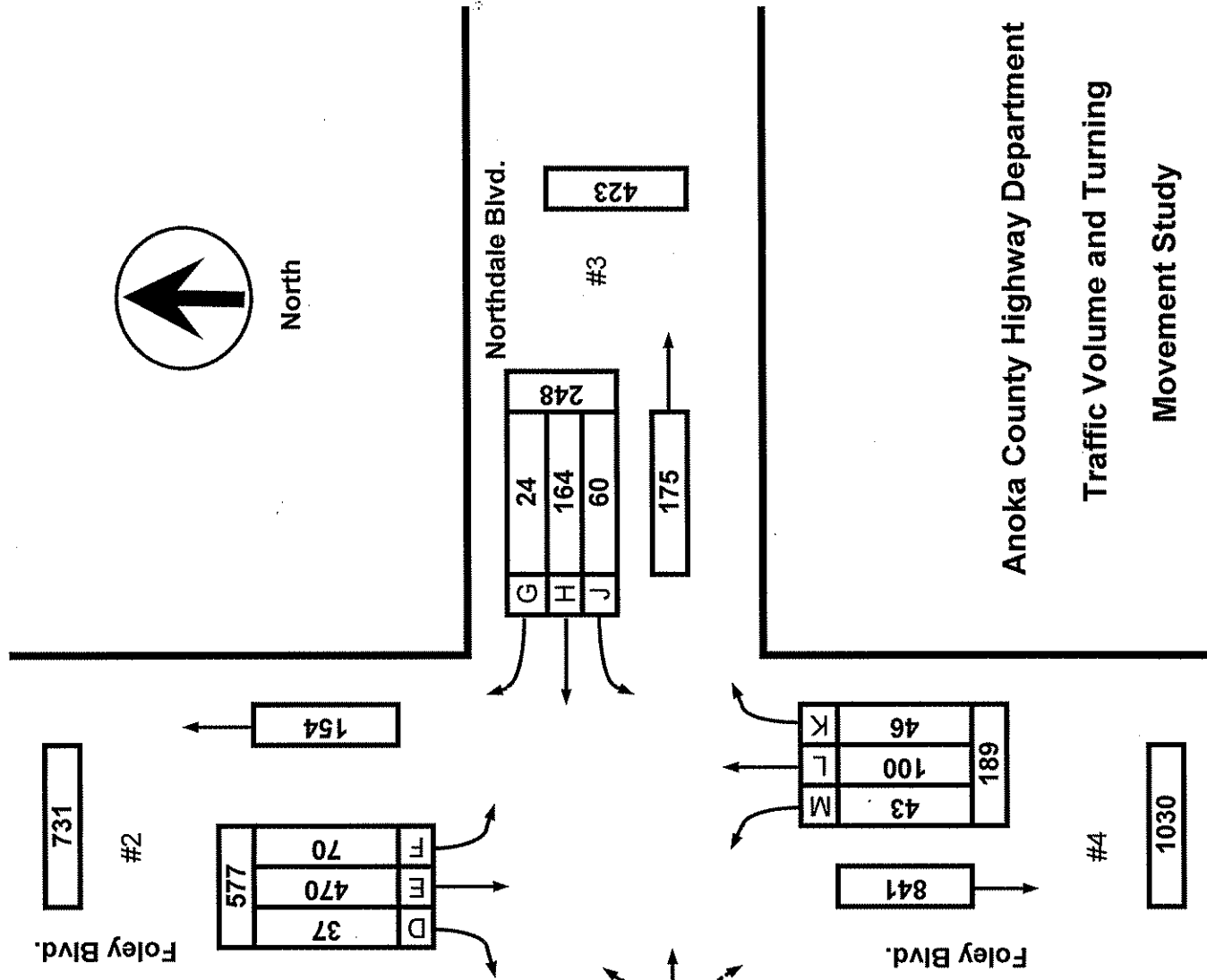
@ CSAH 11/12 (Northdale Blvd.)

Collection Period : AM PEAK

Hour : 7:15 AM - 8:15 AM



North



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

Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

Date : 07/06/11

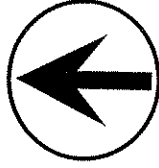
Count Number : TMC1117

Location : CSAH 11 (Foley Blvd.)

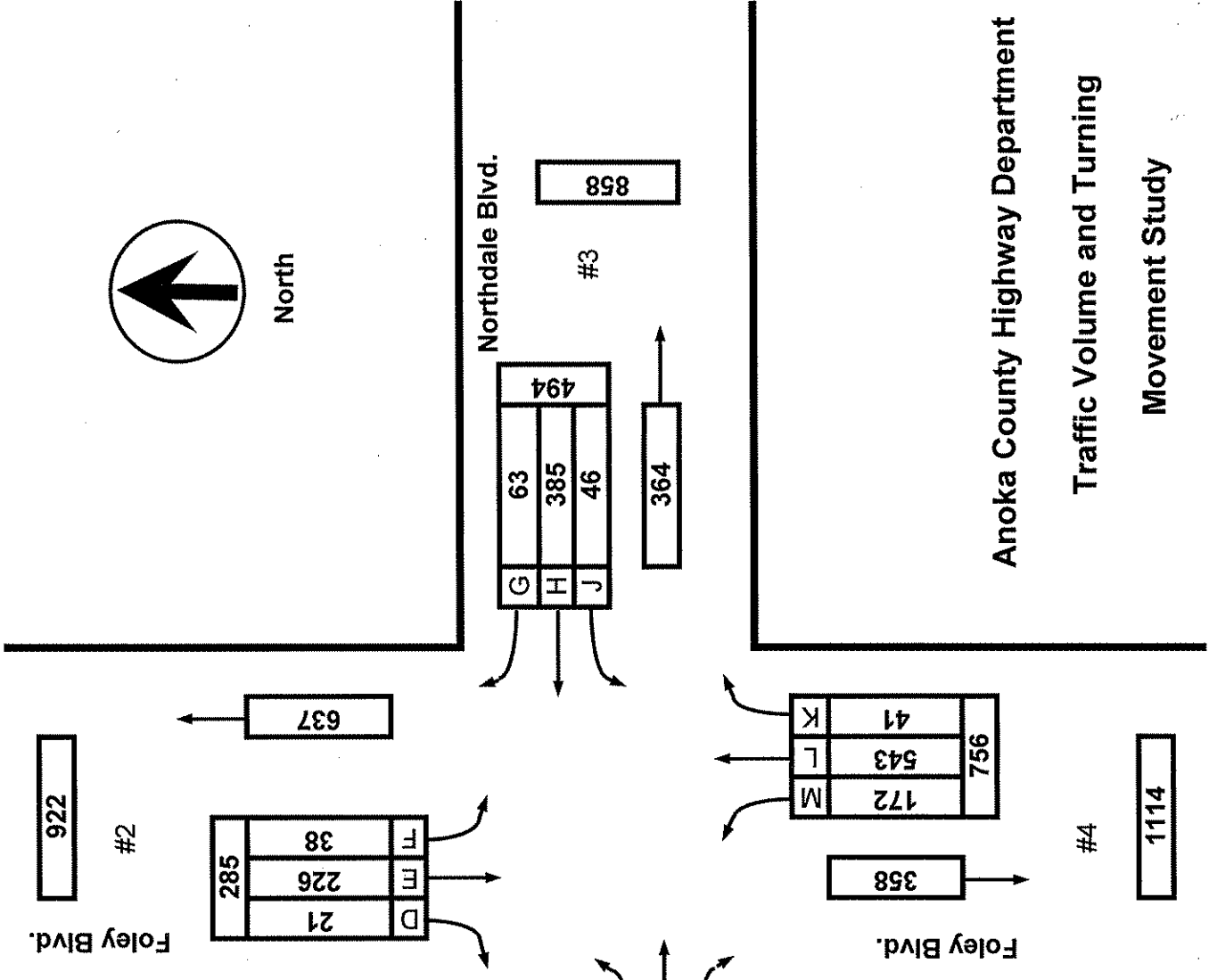
@ CSAH 11/12 (Northdale Blvd.)

Collection Period : PM PEAK

Hour : 4:30 PM - 5:30 PM



North



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

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 1117  
 Site Code : 11170202  
 Start Date : 07/06/2011  
 Page No : 1

Weather: Warm/Sunny  
 Counter: DB-400  
 study conducted by: Paige/Rachel

#### Groups Printed- Unshifted

Start Time	Foley Blvd. Southbound					Northdale Blvd. Westbound					Foley Blvd. Northbound					Northdale Blvd. Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total			
06:00	8	66	0	1	74	2	12	4	2	18	2	16	1	1	19	1	13	21	0	35	4	146	150
06:15	6	82	1	1	89	1	19	2	0	22	3	6	3	1	12	1	9	36	2	46	4	169	173
06:30	2	130	2	0	134	5	17	3	0	25	6	7	3	0	16	1	22	34	2	57	2	232	234
06:45	15	93	2	0	110	2	16	1	1	19	10	19	5	1	34	3	35	42	2	80	4	243	247
<b>Total</b>	<b>31</b>	<b>371</b>	<b>5</b>	<b>2</b>	<b>407</b>	<b>10</b>	<b>64</b>	<b>10</b>	<b>3</b>	<b>84</b>	<b>21</b>	<b>48</b>	<b>12</b>	<b>3</b>	<b>81</b>	<b>6</b>	<b>79</b>	<b>133</b>	<b>6</b>	<b>218</b>	<b>14</b>	<b>790</b>	<b>804</b>
07:00	7	112	7	3	126	10	30	1	1	41	8	27	2	0	37	2	16	32	4	50	8	254	262
07:15	14	124	7	2	145	16	35	5	3	56	9	27	7	2	43	8	16	79	3	103	10	347	357
07:30	20	142	10	1	172	11	29	5	2	45	10	21	10	3	41	6	18	67	1	91	7	349	356
07:45	23	122	10	3	155	15	60	8	5	83	14	23	12	1	49	9	15	91	6	115	15	402	417
<b>Total</b>	<b>64</b>	<b>500</b>	<b>34</b>	<b>9</b>	<b>598</b>	<b>52</b>	<b>154</b>	<b>19</b>	<b>11</b>	<b>225</b>	<b>41</b>	<b>98</b>	<b>31</b>	<b>6</b>	<b>170</b>	<b>25</b>	<b>65</b>	<b>269</b>	<b>14</b>	<b>359</b>	<b>40</b>	<b>1352</b>	<b>1392</b>
08:00	13	82	10	0	105	18	40	6	3	64	10	29	17	0	56	7	10	74	2	91	5	316	321
08:15	8	115	8	1	131	8	35	3	1	46	22	38	13	1	73	10	10	59	0	79	3	329	332
08:30	17	105	4	5	126	18	38	6	1	62	26	27	8	6	61	8	8	44	2	60	14	309	323
08:45	23	61	3	2	87	6	32	8	6	46	20	23	13	1	56	0	36	26	6	62	15	251	266
<b>Total</b>	<b>61</b>	<b>363</b>	<b>25</b>	<b>8</b>	<b>449</b>	<b>50</b>	<b>145</b>	<b>23</b>	<b>11</b>	<b>218</b>	<b>78</b>	<b>117</b>	<b>51</b>	<b>8</b>	<b>246</b>	<b>25</b>	<b>64</b>	<b>203</b>	<b>10</b>	<b>292</b>	<b>37</b>	<b>1205</b>	<b>1242</b>
09:00	9	62	0	1	71	15	51	13	16	79	11	30	7	2	48	3	37	19	2	59	21	257	278
09:15	14	66	1	1	81	6	24	8	1	38	18	33	6	2	57	2	25	22	1	49	5	225	230
09:30	9	52	7	2	68	12	43	4	2	59	17	31	5	1	53	1	27	14	1	42	6	222	228
09:45	14	56	5	0	75	7	44	4	0	55	14	24	5	0	43	1	40	21	2	62	2	235	237
<b>Total</b>	<b>46</b>	<b>236</b>	<b>13</b>	<b>4</b>	<b>295</b>	<b>40</b>	<b>162</b>	<b>29</b>	<b>19</b>	<b>231</b>	<b>60</b>	<b>118</b>	<b>23</b>	<b>5</b>	<b>201</b>	<b>7</b>	<b>129</b>	<b>76</b>	<b>6</b>	<b>212</b>	<b>34</b>	<b>939</b>	<b>973</b>
10:00	3	29	4	0	36	4	29	5	1	38	20	27	5	1	52	3	31	10	2	44	4	170	174
10:15	9	50	1	1	60	9	49	4	2	62	21	35	7	2	63	7	37	14	1	58	6	243	249
10:30	6	42	2	0	50	9	55	8	2	72	10	18	6	0	34	2	42	15	0	59	2	215	217
10:45	10	43	3	3	56	4	42	5	2	51	19	40	3	3	62	5	36	16	9	57	17	226	243
<b>Total</b>	<b>28</b>	<b>164</b>	<b>10</b>	<b>4</b>	<b>202</b>	<b>26</b>	<b>175</b>	<b>22</b>	<b>7</b>	<b>223</b>	<b>70</b>	<b>120</b>	<b>21</b>	<b>6</b>	<b>211</b>	<b>17</b>	<b>146</b>	<b>55</b>	<b>12</b>	<b>218</b>	<b>29</b>	<b>854</b>	<b>883</b>
11:00	13	44	2	4	59	7	41	10	7	58	15	32	8	0	55	10	61	19	6	90	17	262	279
11:15	9	37	5	0	51	12	55	10	3	77	17	31	3	3	51	6	59	14	4	79	10	258	268
11:30	7	32	1	4	40	9	52	4	3	65	18	36	11	0	65	6	48	23	4	77	11	247	258
11:45	13	46	1	6	60	11	41	7	2	59	17	42	10	3	69	5	76	27	11	108	22	296	318
<b>Total</b>	<b>42</b>	<b>159</b>	<b>9</b>	<b>14</b>	<b>210</b>	<b>39</b>	<b>189</b>	<b>31</b>	<b>15</b>	<b>259</b>	<b>67</b>	<b>141</b>	<b>32</b>	<b>6</b>	<b>240</b>	<b>27</b>	<b>244</b>	<b>83</b>	<b>25</b>	<b>354</b>	<b>60</b>	<b>1063</b>	<b>1123</b>
12:00	10	35	0	2	45	21	54	12	8	87	16	36	8	2	60	7	51	24	6	82	18	274	292
12:15	10	51	4	2	65	19	62	18	4	99	30	50	14	2	94	10	51	26	1	87	9	345	354
12:30	17	41	2	2	60	9	55	6	4	70	26	43	10	1	79	7	61	22	0	90	7	299	306
12:45	10	29	4	1	43	6	51	8	2	65	25	38	8	0	71	6	62	16	2	84	5	263	268
<b>Total</b>	<b>47</b>	<b>156</b>	<b>10</b>	<b>7</b>	<b>213</b>	<b>55</b>	<b>222</b>	<b>44</b>	<b>18</b>	<b>321</b>	<b>97</b>	<b>167</b>	<b>40</b>	<b>5</b>	<b>304</b>	<b>30</b>	<b>225</b>	<b>88</b>	<b>9</b>	<b>343</b>	<b>39</b>	<b>1181</b>	<b>1220</b>
13:00	9	46	9	0	64	9	48	10	3	67	22	51	7	2	80	4	47	14	1	65	6	276	282
13:15	11	53	2	0	66	2	57	7	2	66	14	39	8	2	61	3	49	23	2	75	6	268	274
13:30	6	43	5	0	54	11	46	8	3	67	21	49	5	2	75	6	48	26	0	80	5	276	281
13:45	8	42	5	0	55	11	59	3	2	73	19	41	4	2	64	1	51	17	1	69	5	261	266
<b>Total</b>	<b>34</b>	<b>184</b>	<b>21</b>	<b>0</b>	<b>239</b>	<b>33</b>	<b>212</b>	<b>28</b>	<b>10</b>	<b>273</b>	<b>76</b>	<b>180</b>	<b>24</b>	<b>8</b>	<b>280</b>	<b>14</b>	<b>195</b>	<b>80</b>	<b>4</b>	<b>289</b>	<b>22</b>	<b>1081</b>	<b>1103</b>
14:00	6	38	4	0	48	8	47	8	2	63	21	38	4	0	63	9	51	21	0	81	2	255	257
14:15	6	48	4	3	58	5	48	4	2	57	27	52	3	2	82	3	49	26	4	78	11	275	286
14:30	7	47	7	0	61	10	66	5	3	81	24	45	4	3	73	5	35	17	1	57	7	272	279
14:45	12	37	2	2	51	6	66	15	6	87	31	69	8	0	108	2	60	16	1	78	9	324	333
<b>Total</b>	<b>31</b>	<b>170</b>	<b>17</b>	<b>5</b>	<b>218</b>	<b>29</b>	<b>227</b>	<b>32</b>	<b>13</b>	<b>288</b>	<b>103</b>	<b>204</b>	<b>19</b>	<b>5</b>	<b>326</b>	<b>19</b>	<b>195</b>	<b>80</b>	<b>6</b>	<b>294</b>	<b>29</b>	<b>1126</b>	<b>1155</b>
15:00	9	32	7	0	48	9	62	7	1	78	38	57	7	1	102	5	68	18	2	91	4	319	323
15:15	12	46	1	5	59	4	66	10	2	80	32	69	6	1	107	5	59	17	2	81	10	327	337
15:30	12	41	0	0	53	6	54	8	1	68	30	60	7	1	97	5	73	28	1	106	3	324	327
15:45	14	52	0	0	66	10	57	12	2	79	40	89	5	1	134	1	49	25	0	75	3	354	357
<b>Total</b>	<b>47</b>	<b>171</b>	<b>8</b>	<b>5</b>	<b>226</b>	<b>29</b>	<b>239</b>	<b>37</b>	<b>6</b>	<b>305</b>	<b>140</b>	<b>275</b>	<b>25</b>	<b>4</b>	<b>440</b>	<b>16</b>	<b>249</b>	<b>88</b>	<b>5</b>	<b>353</b>	<b>20</b>	<b>1324</b>	<b>1344</b>
16:00	2	54	1	2	57	10	60	16	2	86	20	103	8	0	131	2	60	28	4	90	8	364	372
16:15	14	51	6	1	71	9	78	4	1	91	54	144	15	2	213	8	54	14	0	76	4	451	455
16:30	9	49	5	0	63	17	92	14	2	123	36	118	12	0	166	7	57	28	1	92	3	444	447
16:45	11	60	2	1	73	10	101	24	0	135	42	142	7	1	191	9	76	17	1	102	3	501	504
<b>Total</b>	<b>36</b>	<b>214</b>	<b>14</b>	<b>4</b>	<b>264</b>	<b>46</b>	<b>331</b>	<b>58</b>	<b>5</b>	<b>435</b>	<b>152</b>	<b>507</b>	<b>42</b>	<b>3</b>	<b>701</b>	<b>26</b>	<b>247</b>	<b>87</b>	<b>6</b>	<b>360</b>	<b>18</b>	<b>1760</b>	<b>1778</b>
17:00	6	61	7	5	74	8	92	13	2	113	40	144	12	2	196	5	62	23	1	90	10	473	483
17:15	12	56	7	0	75	11	100	12	1	123	54	139	10	3	203	10	90	18	2	118	6	519	525
17:30	12	59	4	2	75	11	97	19	1	127	37	90	6	0	133	1	55	13	0	69	3	404	407
17:45	15	56	5	0	76	6	99	26	1	131	48	94	8	0	150	7	86	15	0	108	1	465	466
<b>Total</b>	<b>45</b>	<b>232</b>	<b>23</b>	<b>7</b>																			



# Anoka County Highway Department

## Traffic Engineering Section

### Traffic Volume and Turning Movement Study

Weather: Warm/Sunny  
 Counter: DB-400  
 study conducted by: Paige/Rachel

File Name : tmc 1117  
 Site Code : 11170202  
 Start Date : 07/06/2011  
 Page No : 2

#### Groups Printed- Unshifted

Start Time	Foley Blvd. Southbound					Northdale Blvd. Westbound					Foley Blvd. Northbound					Northdale Blvd. Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total	Left	Thru	Right	Heavys	App. Total			
18:00	17	57	12	1	86	9	70	12	2	91	37	110	9	2	156	3	62	19	2	84	7	417	424
18:15	16	40	10	0	66	8	57	9	0	74	34	74	9	1	117	4	56	23	0	83	1	340	341
18:30	5	44	6	0	55	7	64	10	0	81	31	58	6	0	95	5	62	18	2	85	2	316	318
18:45	7	49	9	0	65	8	46	5	1	59	30	57	9	0	96	4	60	22	1	86	2	306	308
<b>Total</b>	<b>45</b>	<b>190</b>	<b>37</b>	<b>1</b>	<b>272</b>	<b>32</b>	<b>237</b>	<b>36</b>	<b>3</b>	<b>305</b>	<b>132</b>	<b>299</b>	<b>33</b>	<b>3</b>	<b>464</b>	<b>16</b>	<b>240</b>	<b>82</b>	<b>5</b>	<b>338</b>	<b>12</b>	<b>1379</b>	<b>1391</b>
19:00	13	44	2	1	59	3	49	11	1	63	30	71	4	0	105	3	64	21	0	88	2	315	317
19:15	6	43	1	0	50	5	39	5	1	49	24	59	5	1	88	6	78	19	0	103	2	290	292
19:30	10	30	3	0	43	9	34	3	0	46	30	50	6	0	86	6	43	16	1	65	1	240	241
19:45	4	26	2	1	32	8	49	8	1	65	17	45	4	1	66	2	61	25	0	88	3	251	254
<b>Total</b>	<b>33</b>	<b>143</b>	<b>8</b>	<b>2</b>	<b>184</b>	<b>25</b>	<b>171</b>	<b>27</b>	<b>3</b>	<b>223</b>	<b>101</b>	<b>225</b>	<b>19</b>	<b>2</b>	<b>345</b>	<b>17</b>	<b>246</b>	<b>81</b>	<b>1</b>	<b>344</b>	<b>8</b>	<b>1096</b>	<b>1104</b>
20:00	5	33	3	0	41	12	56	5	0	73	22	42	6	1	70	4	65	20	0	89	1	273	274
20:15	2	35	5	0	42	9	60	7	0	76	25	47	4	0	76	2	41	18	0	61	0	255	255
20:30	9	44	3	0	56	9	47	6	0	62	23	37	5	0	65	11	70	22	0	103	0	286	286
20:45	4	38	7	0	49	6	45	3	0	54	28	46	8	1	82	7	60	24	0	91	1	276	277
<b>Total</b>	<b>20</b>	<b>150</b>	<b>18</b>	<b>0</b>	<b>188</b>	<b>36</b>	<b>208</b>	<b>21</b>	<b>0</b>	<b>265</b>	<b>98</b>	<b>172</b>	<b>23</b>	<b>2</b>	<b>293</b>	<b>24</b>	<b>236</b>	<b>84</b>	<b>0</b>	<b>344</b>	<b>2</b>	<b>1090</b>	<b>1092</b>
21:00	5	45	3	0	53	6	46	10	0	62	26	52	11	0	89	5	49	15	0	69	0	273	273
21:15	6	28	2	0	36	7	36	6	0	49	25	68	6	0	99	7	35	21	0	63	0	247	247
21:30	5	28	0	0	33	2	47	6	0	55	21	45	3	0	69	3	28	18	0	49	0	206	206
21:45	2	11	0	0	13	2	23	5	0	30	12	53	4	1	69	4	31	10	1	45	2	157	159
<b>Total</b>	<b>18</b>	<b>112</b>	<b>5</b>	<b>0</b>	<b>135</b>	<b>17</b>	<b>152</b>	<b>27</b>	<b>0</b>	<b>196</b>	<b>84</b>	<b>218</b>	<b>24</b>	<b>1</b>	<b>326</b>	<b>19</b>	<b>143</b>	<b>64</b>	<b>1</b>	<b>226</b>	<b>2</b>	<b>883</b>	<b>885</b>
<b>Grand Total</b>	<b>628</b>	<b>3515</b>	<b>257</b>	<b>72</b>	<b>4400</b>	<b>555</b>	<b>3276</b>	<b>514</b>	<b>129</b>	<b>4345</b>	<b>1499</b>	<b>3356</b>	<b>455</b>	<b>72</b>	<b>5310</b>	<b>311</b>	<b>2996</b>	<b>1622</b>	<b>113</b>	<b>4929</b>	<b>386</b>	<b>18984</b>	<b>19370</b>
Apprch %	14.3	79.9	5.8			12.8	75.4	11.8			28.2	63.2	8.6			6.3	60.8	32.9					
Total %	3.3	18.5	1.4		23.2	2.9	17.3	2.7		22.9	7.9	17.7	2.4		28	1.6	15.8	8.5		26	2	98	

Start Time	Foley Blvd. Southbound				Northdale Blvd. Westbound				Foley Blvd. Northbound				Northdale Blvd. Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	14	124	7	145	16	35	5	56	9	27	7	43	8	16	79	103	347
07:30	20	142	10	172	11	29	5	45	10	21	10	41	6	18	67	91	349
07:45	23	122	10	155	15	60	8	83	14	23	12	49	9	15	91	115	402
08:00	13	82	10	105	18	40	6	64	10	29	17	56	7	10	74	91	316
<b>Total Volume</b>	<b>70</b>	<b>470</b>	<b>37</b>	<b>577</b>	<b>60</b>	<b>164</b>	<b>24</b>	<b>248</b>	<b>43</b>	<b>100</b>	<b>46</b>	<b>189</b>	<b>30</b>	<b>59</b>	<b>311</b>	<b>400</b>	<b>1414</b>
<b>% App. Total</b>	<b>12.1</b>	<b>81.5</b>	<b>6.4</b>		<b>24.2</b>	<b>66.1</b>	<b>9.7</b>		<b>22.8</b>	<b>52.9</b>	<b>24.3</b>		<b>7.5</b>	<b>14.8</b>	<b>77.8</b>		
PHF	.761	.827	.925	.839	.833	.683	.750	.747	.768	.862	.676	.844	.833	.819	.854	.870	.879

Start Time	Foley Blvd. Southbound				Northdale Blvd. Westbound				Foley Blvd. Northbound				Northdale Blvd. Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 to 21:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	9	49	5	63	17	92	14	123	36	118	12	166	7	57	28	92	444
16:45	11	60	2	73	10	101	24	135	42	142	7	191	9	76	17	102	501
17:00	6	61	7	74	8	92	13	113	40	144	12	196	5	62	23	90	473
17:15	12	56	7	75	11	100	12	123	54	139	10	203	10	90	18	118	519
<b>Total Volume</b>	<b>38</b>	<b>226</b>	<b>21</b>	<b>285</b>	<b>46</b>	<b>385</b>	<b>63</b>	<b>494</b>	<b>172</b>	<b>543</b>	<b>41</b>	<b>756</b>	<b>31</b>	<b>285</b>	<b>86</b>	<b>402</b>	<b>1937</b>
<b>% App. Total</b>	<b>13.3</b>	<b>79.3</b>	<b>7.4</b>		<b>9.3</b>	<b>77.9</b>	<b>12.8</b>		<b>22.8</b>	<b>71.8</b>	<b>5.4</b>		<b>7.7</b>	<b>70.9</b>	<b>21.4</b>		
PHF	.792	.926	.750	.950	.676	.953	.656	.915	.796	.943	.854	.931	.775	.792	.768	.852	.933



**Anoka County Highway**  
**PC-WARRANTS**  
 Traffic Signal Warrant Analysis

Study Name : **TMC 1117**  
 Study Date : **07/11/11**  
 Page No. : **1**

**Signal Warrants - Summary**

**Major Street Approaches**

**Northbound: Foley Blvd.**  
 Number of Lanes: **2**  
 Approach Speed: **40**  
 Total Approach Volume: **5,310**

**Southbound: Foley Blvd.**  
 Number of Lanes: **2**  
 Approach Speed: **40**  
 Total Approach Volume: **4,400**

**Minor Street Approaches**

**Eastbound: Northdale Blvd.**  
 Number of Lanes: **2**  
 Total Approach Volume: **4,929**

**Westbound: Northdale Blvd.**  
 Number of Lanes: **2**  
 Total Approach Volume: **4,345**

**Warrant Summary (Urban values apply.)**

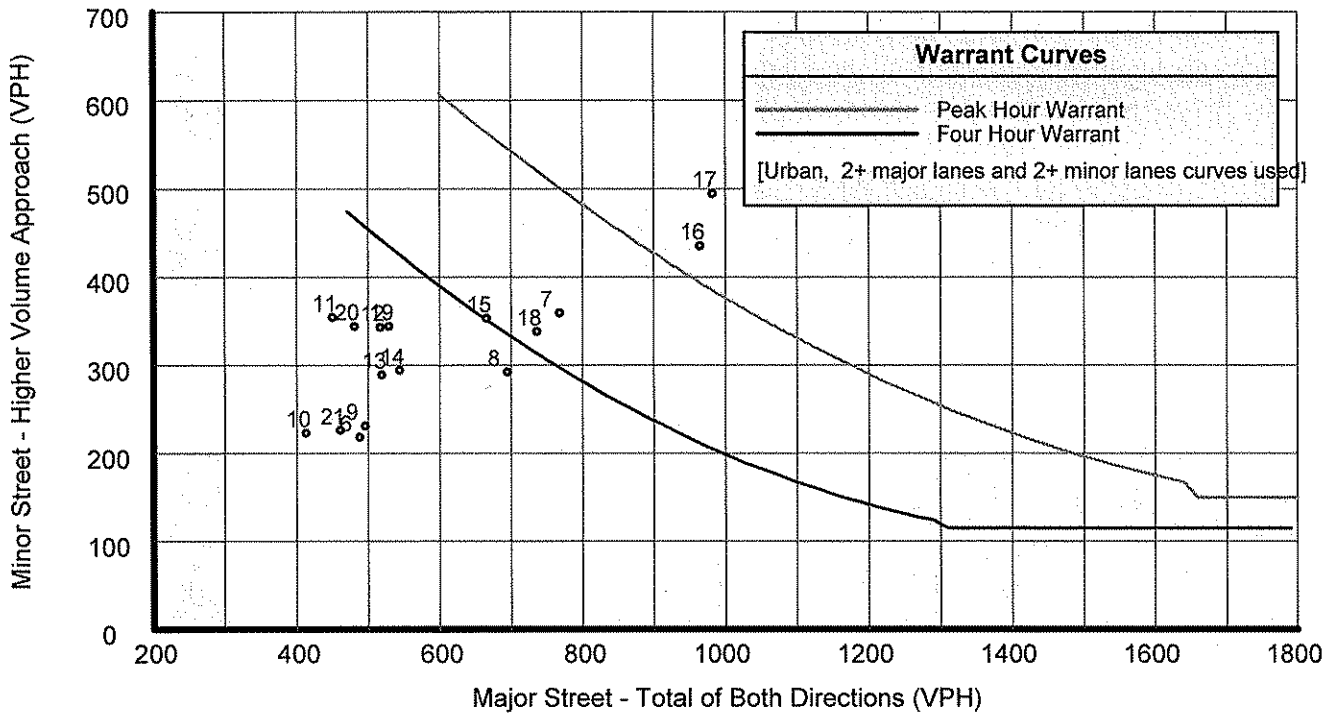
- Warrant 1 - Eight Hour Vehicular Volumes** ..... **Not Satisfied**
  - Warrant 1A - Minimum Vehicular Volume** ..... **Not Satisfied**  
 Required volumes reached for 6 hours, 8 are needed
  - Warrant 1B - Interruption of Continuous Traffic** ..... **Not Satisfied**  
 Required volumes reached for 2 hours, 8 are needed
  - Warrant 1 A&B - Combination of Warrants** ..... **Not Satisfied**  
 Required volumes reached for 4 hours, 8 are needed
  
- Warrant 2 - Four Hour Volumes** ..... **Satisfied**  
 Number of hours (5) volumes exceed minimum >= minimum required (4).
  
- Warrant 3 - Peak Hour** ..... **Satisfied**
  - Warrant 3A - Peak Hour Delay** ..... **Satisfied**  
 Number of hours (60) volumes exceed minimum >= required (1). Delay data not evaluated.
  - Warrant 3B - Peak Hour Volumes** ..... **Satisfied**  
 Volumes exceed minimums for at least one hour.
  
- 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**



# Anoka County Highway PC-WARRANTS Traffic Signal Warrant Analysis

Study Name : TMC 1117  
Study Date : 07/11/11  
Page No. : 2

## Signal Warrants - Summary



### Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor Vol	Dir	War-1A			War-1B			War-1A&B		
				Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	0	0	EB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
01:00	0	0	EB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
02:00	0	0	EB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
03:00	0	0	EB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
04:00	0	0	EB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
05:00	0	0	EB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
06:00	488	218	EB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
07:00	768	359	EB	600-Yes	200-Yes	Both	900-No	100-Yes	Minor	720-Yes	160-Yes	Both
08:00	695	292	EB	600-Yes	200-Yes	Both	900-No	100-Yes	Minor	720-No	160-Yes	Minor
09:00	496	231	WB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
10:00	413	223	WB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
11:00	450	354	EB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
12:00	517	343	EB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
13:00	519	289	EB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
14:00	544	294	EB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
15:00	666	353	EB	600-Yes	200-Yes	Both	900-No	100-Yes	Minor	720-No	160-Yes	Minor
16:00	965	435	WB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
17:00	982	494	WB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
18:00	736	338	EB	600-Yes	200-Yes	Both	900-No	100-Yes	Minor	720-Yes	160-Yes	Both
19:00	529	344	EB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
20:00	481	344	EB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
21:00	461	226	EB	600-No	200-Yes	Minor	900-No	100-Yes	Minor	720-No	160-Yes	Minor
22:00	0	0	EB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
23:00	0	0	EB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---



# Anoka County Highway PC-WARRANTS Traffic Signal Warrant Analysis

Study Name :  
Study Date : 07/11/11  
Page No. : 1

## Multi-Way Stop Warrant Report

### Major Street Approaches

**Northbound: Foley Blvd.**  
Total Approach Volume: 5,310  
Approach Speed: 40

**Southbound: Foley Blvd.**  
Total Approach Volume: 4,400  
Approach Speed: 40

### Minor Street Approaches

**Eastbound: Northdale Blvd.**  
Total Approach Volume: 4,929

**Westbound: Northdale Blvd.**  
Total Approach Volume: 4,345

### Warrant Summary

**Criteria A - Interim Measure** ..... Not Evaluated  
If traffic signals are justified, stop signs can be installed as an interim measure.

**Criteria B - Crash Experience** ..... Not Evaluated

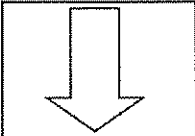
**Criteria C - Minimum Volumes and Delays** ..... Satisfied  
Delay data not evaluated  
Required volumes reached for 16 hours, 8 are needed

**Criteria D - 80% of Volumes, Delays, and Crashes** ..... Not Evaluated  
Delay data not evaluated  
Number of crashes (-1) is less than the minimum required (4).  
Required volumes reached for 0 hours, 8 are needed

### Analysis of 8 Hour Volume Warrants:

Time	Major Total	Minor Total	Crit C			Crit D		
			Major	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
05:45 - 06:45	344	203	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
06:45 - 07:45	708	485	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
07:45 - 08:45	756	600	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
08:45 - 09:45	521	434	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
09:45 - 10:45	413	450	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
10:45 - 11:45	439	554	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
11:45 - 12:45	532	682	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
12:45 - 13:45	514	569	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
13:45 - 14:45	504	559	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
14:45 - 15:45	625	669	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
15:45 - 16:45	901	712	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
16:45 - 17:45	1,020	877	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
17:45 - 18:45	801	737	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
18:45 - 19:45	592	559	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
19:45 - 20:45	448	617	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
20:45 - 21:45	510	492	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
00:00 - 01:00	0	0	300-No	200-No	No	240-No	160-No	No
00:15 - 01:15	0	0	300-No	200-No	No	240-No	160-No	No
00:30 - 01:30	0	0	300-No	200-No	No	240-No	160-No	No
00:45 - 01:45	0	0	300-No	200-No	No	240-No	160-No	No
01:00 - 02:00	0	0	300-No	200-No	No	240-No	160-No	No
01:15 - 02:15	0	0	300-No	200-No	No	240-No	160-No	No
01:30 - 02:30	0	0	300-No	200-No	No	240-No	160-No	No
01:45 - 02:45	0	0	300-No	200-No	No	240-No	160-No	No





COUNT LOCATION:

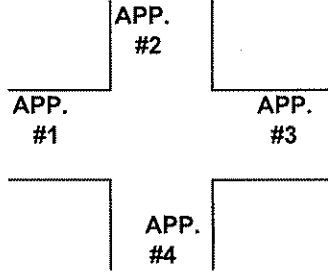
CSAH 11 (Foley Blvd.) @

DATE:

07/07/2011

CSAH 11/12 (Northdale Blvd.)

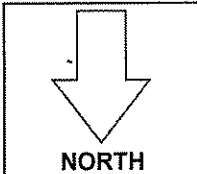
<b>NORTH</b>
APP. #1 = Northdale Blvd.
APP. #2 = Foley Blvd.
APP. #3 = Northdale Blvd.
APP. #4 = Foley Blvd.



- HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
- A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
  - B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
  - C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM			2	1	3	3		2
6:15-6:30						2		1
6:30-6:45	1				1	1		1
6:45-7:00						1		3
<b>HOURLY TOTAL</b>					<b>4</b>	<b>HOURLY TOTAL</b>		<b>14</b>
7:00-7:15						4		3
7:15-7:30		1	1	2	4	4	1	5
7:30-7:45						2		5
7:45-8:00		1			1	6	2	7
<b>HOURLY TOTAL</b>					<b>5</b>	<b>HOURLY TOTAL</b>		<b>39</b>
8:00-8:15						1		4
8:15-8:30			1	1	2	2		1
8:30-8:45			1		1	5	1	9
8:45-9:00						6	3	5
<b>HOURLY TOTAL</b>					<b>3</b>	<b>HOURLY TOTAL</b>		<b>37</b>
9:00-9:15	1				1	5		16
9:15-9:30			4		4	4		2
9:30-9:45		1			1	3		2
9:45-10:00						2		
<b>HOURLY TOTAL</b>					<b>6</b>	<b>HOURLY TOTAL</b>		<b>34</b>
10:00-10:15		2			2	4		
10:15-10:30		1	1	4	6	5		1
10:30-10:45		30			30	2	1	
10:45-11:00			1		1	8	1	6
<b>HOURLY TOTAL</b>					<b>39</b>	<b>HOURLY TOTAL</b>		<b>28</b>
11:00-11:15	2			2	4	8		8
11:15-11:30	1		1		2	8	2	2
11:30-11:45			29	3	32	5		8
11:45-12:00		1			1	13		6
<b>HOURLY TOTAL</b>					<b>39</b>	<b>HOURLY TOTAL</b>		<b>60</b>
12:00-12:15			1	1	2	10		8
12:15-12:30						3	1	4
12:30-12:45						5		2
12:45-1:00		4	4		8	4		1
<b>HOURLY TOTAL</b>					<b>10</b>	<b>HOURLY TOTAL</b>		<b>38</b>
1:00-1:15				2	2	6		
1:15-1:30		1			1	2		3
1:30-1:45			2		2	2	2	1
1:45-2:00			1		1	4		1
<b>HOURLY TOTAL</b>					<b>6</b>	<b>HOURLY TOTAL</b>		<b>21</b>
					<b>TOTAL</b>			<b>TOTAL</b>
					<b>112</b>			<b>271</b>

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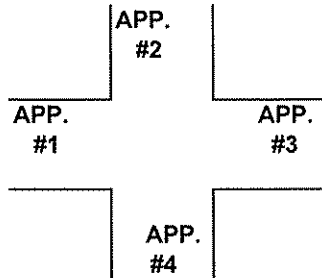
CSAH 11 (Foley Blvd.) @

DATE:

07/06/2011

CSAH 11/12 (Northdale Blvd.)

<b>NORTH</b>
APP. #1 = Northdale Blvd.
APP. #2 = Foley Blvd.
APP. #3 = Northdale Blvd.
APP. #4 = Foley Blvd.



- HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
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  - C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
2:00-2:15PM		3	4		7			2
2:15-2:30		5		2	7	6	1	4
2:30-2:45		3			3	3		4
2:45-3:00	2	1		5	8	3		5
<b>HOURLY TOTAL</b>					<b>25</b>	<b>HOURLY TOTAL</b>		<b>28</b>
3:00-3:15		4		2	6	2		2
3:15-3:30		3		1	4	4		6
3:30-3:45	1		1		2	4		
3:45-4:00	1	1		4	6			2
<b>HOURLY TOTAL</b>					<b>18</b>	<b>HOURLY TOTAL</b>		<b>20</b>
4:00-4:15		4	1	2	7	7		1
4:15-4:30		2	2		4	2		2
4:30-4:45		2		1	3	2		1
4:45-5:00				4	4	3		
<b>HOURLY TOTAL</b>					<b>18</b>	<b>HOURLY TOTAL</b>		<b>18</b>
5:00-5:15	1		5	1	7	8	1	1
5:15-5:30						6		
5:30-5:45	4	3	2		9			3
5:45-6:00				2	2	1		
<b>HOURLY TOTAL</b>					<b>18</b>	<b>HOURLY TOTAL</b>		<b>20</b>
6:00-6:15	1	3	1	1	6	4		3
6:15-6:30	1		2	1	4	2		
6:30-6:45		2	2	2	6	1		
6:45-7:00	2	2	5	3	12	1		2
<b>HOURLY TOTAL</b>					<b>28</b>	<b>HOURLY TOTAL</b>		<b>13</b>
7:00-7:15		6	8	8	22	1		
7:15-7:30	2	6		2	10	2		
7:30-7:45						1		
7:45-8:00	2	2			4	3		
<b>HOURLY TOTAL</b>					<b>36</b>	<b>HOURLY TOTAL</b>		<b>7</b>
8:00-8:15	5	1	5	6	17	1		
8:15-8:30	1		3	3	7			
8:30-8:45								
8:45-9:00						1		
<b>HOURLY TOTAL</b>					<b>24</b>	<b>HOURLY TOTAL</b>		<b>2</b>
9:00-9:15	1	1			2			
9:15-9:30	1				1			
9:30-9:45	2				2			
9:45-10:00		3			3	2		
<b>HOURLY TOTAL</b>					<b>8</b>	<b>HOURLY TOTAL</b>		<b>2</b>
<b>TOTAL</b>					<b>287</b>	<b>TOTAL</b>		<b>381</b>

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