

# Alliant Engineering Inc Minneapolis, MN 55415

TH-61 at 147th St N / Oneka Lk Blvd  
 Ref.Pt.: 152.833  
 data by: Alliant Engineering Inc  
 TURN MOVEMENT COUNT

File Name : TH-61 at 147th St N 2012  
 Site Code : 25  
 Start Date : 11/6/2012  
 Page No : 1

Groups Printed- Cars - Trucks

| Start Time      | TH-61 Southbound |      |      |       |      | 147th St N / Oneka Lake Blvd Westbound |      |      |       |      | TH-61 Northbound |      |      |       |      | 147th St N Eastbound |      |      |       |      | Int. Total |      |
|-----------------|------------------|------|------|-------|------|--|------|------|-------|------|------------------|------|------|-------|------|----------------------|------|------|-------|------|------------|------|
|                 | UTrn             | Left | Thru | Right | Peds | UTrn                                   | Left | Thru | Right | Peds | UTrn             | Left | Thru | Right | Peds | UTrn                 | Left | Thru | Right | Peds |            |      |
| 06:00           | 0                | 0    | 100  | 1     | 0    | 0                                      | 52   | 0    | 3     | 0    | 0                | 1    | 21   | 2     | 0    | 0                    | 0    | 1    | 0     | 0    | 0          | 181  |
| 06:15           | 0                | 0    | 88   | 0     | 0    | 0                                      | 43   | 0    | 7     | 0    | 0                | 0    | 34   | 5     | 0    | 0                    | 0    | 0    | 0     | 0    | 0          | 177  |
| 06:30           | 0                | 1    | 117  | 1     | 0    | 0                                      | 57   | 0    | 2     | 0    | 0                | 1    | 35   | 2     | 0    | 0                    | 2    | 0    | 2     | 0    | 0          | 220  |
| 06:45           | 0                | 2    | 123  | 3     | 0    | 0                                      | 55   | 0    | 10    | 0    | 0                | 1    | 37   | 10    | 0    | 0                    | 0    | 1    | 3     | 0    | 0          | 245  |
| Total           | 0                | 3    | 428  | 5     | 0    | 0                                      | 207  | 0    | 22    | 0    | 0                | 3    | 127  | 19    | 0    | 0                    | 3    | 1    | 5     | 0    | 0          | 823  |
| 07:00           | 0                | 3    | 133  | 1     | 0    | 0                                      | 54   | 1    | 6     | 0    | 0                | 0    | 50   | 5     | 0    | 0                    | 1    | 0    | 1     | 0    | 0          | 255  |
| 07:15           | 0                | 4    | 155  | 1     | 0    | 0                                      | 49   | 0    | 3     | 0    | 0                | 0    | 60   | 11    | 0    | 0                    | 1    | 0    | 1     | 0    | 0          | 285  |
| 07:30           | 0                | 4    | 147  | 0     | 0    | 0                                      | 48   | 1    | 4     | 0    | 0                | 1    | 48   | 15    | 0    | 0                    | 0    | 1    | 2     | 0    | 0          | 271  |
| 07:45           | 0                | 3    | 144  | 2     | 0    | 0                                      | 32   | 2    | 9     | 1    | 0                | 4    | 63   | 11    | 0    | 0                    | 1    | 0    | 2     | 1    | 0          | 275  |
| Total           | 0                | 14   | 579  | 4     | 0    | 0                                      | 183  | 4    | 22    | 1    | 0                | 5    | 221  | 42    | 0    | 0                    | 3    | 1    | 6     | 1    | 0          | 1086 |
| 08:00           | 0                | 4    | 104  | 1     | 0    | 0                                      | 26   | 1    | 7     | 0    | 0                | 4    | 44   | 11    | 0    | 0                    | 1    | 2    | 2     | 0    | 0          | 207  |
| 08:15           | 0                | 2    | 102  | 0     | 0    | 0                                      | 29   | 0    | 6     | 0    | 0                | 0    | 65   | 12    | 0    | 0                    | 0    | 2    | 1     | 0    | 0          | 219  |
| 08:30           | 0                | 1    | 83   | 2     | 0    | 0                                      | 27   | 0    | 12    | 0    | 0                | 3    | 54   | 15    | 0    | 0                    | 0    | 1    | 3     | 0    | 0          | 201  |
| 08:45           | 0                | 1    | 86   | 1     | 0    | 0                                      | 26   | 0    | 8     | 0    | 0                | 0    | 55   | 11    | 0    | 0                    | 2    | 0    | 1     | 0    | 0          | 191  |
| Total           | 0                | 8    | 375  | 4     | 0    | 0                                      | 108  | 1    | 33    | 0    | 0                | 7    | 218  | 49    | 0    | 0                    | 3    | 5    | 7     | 0    | 0          | 818  |
| 09:00           | 0                | 6    | 83   | 4     | 0    | 0                                      | 28   | 0    | 8     | 0    | 0                | 1    | 75   | 19    | 0    | 0                    | 0    | 1    | 1     | 0    | 0          | 226  |
| 09:15           | 0                | 2    | 94   | 1     | 0    | 0                                      | 33   | 0    | 7     | 0    | 0                | 2    | 72   | 15    | 0    | 0                    | 2    | 3    | 5     | 0    | 0          | 236  |
| **** BREAK **** |                  |      |      |       |      |  |      |      |       |      |                  |      |      |       |      |                      |      |      |       |      |            |      |
| Total           | 0                | 8    | 177  | 5     | 0    | 0                                      | 61   | 0    | 15    | 0    | 0                | 3    | 147  | 34    | 0    | 0                    | 2    | 4    | 6     | 0    | 0          | 462  |
| **** BREAK **** |                  |      |      |       |      |  |      |      |       |      |                  |      |      |       |      |                      |      |      |       |      |            |      |
| 10:30           | 0                | 5    | 81   | 1     | 0    | 0                                      | 9    | 1    | 8     | 0    | 0                | 6    | 69   | 6     | 0    | 0                    | 3    | 2    | 3     | 0    | 0          | 194  |
| 10:45           | 0                | 3    | 80   | 4     | 0    | 0                                      | 15   | 2    | 6     | 0    | 1                | 5    | 73   | 12    | 0    | 0                    | 1    | 0    | 2     | 0    | 0          | 204  |
| Total           | 0                | 8    | 161  | 5     | 0    | 0                                      | 24   | 3    | 14    | 0    | 1                | 11   | 142  | 18    | 0    | 0                    | 4    | 2    | 5     | 0    | 0          | 398  |
| 11:00           | 0                | 1    | 55   | 4     | 0    | 0                                      | 19   | 2    | 6     | 0    | 0                | 4    | 70   | 14    | 0    | 0                    | 7    | 0    | 4     | 0    | 0          | 186  |
| 11:15           | 0                | 4    | 101  | 5     | 0    | 0                                      | 11   | 0    | 6     | 0    | 0                | 6    | 72   | 15    | 0    | 0                    | 2    | 2    | 6     | 0    | 0          | 230  |
| 11:30           | 0                | 3    | 91   | 5     | 0    | 0                                      | 11   | 1    | 6     | 0    | 0                | 10   | 90   | 21    | 0    | 0                    | 5    | 1    | 5     | 0    | 0          | 249  |
| 11:45           | 0                | 3    | 89   | 3     | 0    | 0                                      | 19   | 0    | 3     | 2    | 0                | 3    | 83   | 18    | 0    | 0                    | 4    | 0    | 5     | 0    | 0          | 232  |
| Total           | 0                | 11   | 336  | 17    | 0    | 0                                      | 60   | 3    | 21    | 2    | 0                | 23   | 315  | 68    | 0    | 0                    | 18   | 3    | 20    | 0    | 0          | 897  |
| 12:00           | 0                | 3    | 108  | 8     | 0    | 0                                      | 13   | 2    | 6     | 0    | 0                | 9    | 99   | 10    | 0    | 0                    | 6    | 2    | 9     | 0    | 0          | 275  |
| 12:15           | 0                | 1    | 71   | 8     | 0    | 0                                      | 16   | 3    | 5     | 0    | 0                | 11   | 74   | 25    | 0    | 0                    | 8    | 3    | 11    | 0    | 0          | 236  |
| 12:30           | 0                | 4    | 81   | 1     | 0    | 0                                      | 19   | 0    | 3     | 0    | 0                | 7    | 72   | 12    | 0    | 0                    | 7    | 0    | 5     | 0    | 0          | 211  |
| 12:45           | 0                | 3    | 74   | 3     | 2    | 0                                      | 16   | 2    | 6     | 0    | 0                | 4    | 91   | 21    | 0    | 0                    | 4    | 0    | 5     | 0    | 0          | 231  |
| Total           | 0                | 11   | 334  | 20    | 2    | 0                                      | 64   | 7    | 20    | 0    | 0                | 31   | 336  | 68    | 0    | 0                    | 25   | 5    | 30    | 0    | 0          | 953  |
| 13:00           | 0                | 4    | 87   | 2     | 0    | 0                                      | 26   | 1    | 6     | 0    | 0                | 5    | 78   | 18    | 0    | 0                    | 5    | 2    | 7     | 2    | 0          | 243  |
| 13:15           | 0                | 1    | 75   | 2     | 0    | 0                                      | 13   | 2    | 13    | 0    | 0                | 7    | 80   | 12    | 0    | 0                    | 0    | 2    | 6     | 0    | 0          | 213  |
| **** BREAK **** |                  |      |      |       |      |  |      |      |       |      |                  |      |      |       |      |                      |      |      |       |      |            |      |
| Total           | 0                | 5    | 162  | 4     | 0    | 0                                      | 39   | 3    | 19    | 0    | 0                | 12   | 158  | 30    | 0    | 0                    | 5    | 4    | 13    | 2    | 0          | 456  |
| **** BREAK **** |                  |      |      |       |      |  |      |      |       |      |                  |      |      |       |      |                      |      |      |       |      |            |      |
| 14:30           | 0                | 6    | 83   | 4     | 0    | 0                                      | 14   | 0    | 3     | 0    | 0                | 1    | 111  | 17    | 0    | 0                    | 0    | 2    | 3     | 0    | 0          | 244  |
| 14:45           | 0                | 5    | 75   | 2     | 0    | 0                                      | 11   | 1    | 8     | 0    | 0                | 5    | 98   | 23    | 0    | 0                    | 4    | 0    | 15    | 0    | 0          | 247  |
| Total           | 0                | 11   | 158  | 6     | 0    | 0                                      | 25   | 1    | 11    | 0    | 0                | 6    | 209  | 40    | 0    | 0                    | 4    | 2    | 18    | 0    | 0          | 491  |
| 15:00           | 0                | 5    | 85   | 2     | 0    | 0                                      | 13   | 2    | 9     | 0    | 0                | 3    | 142  | 22    | 2    | 0                    | 2    | 2    | 2     | 0    | 0          | 291  |
| 15:15           | 0                | 4    | 85   | 4     | 0    | 0                                      | 14   | 0    | 5     | 0    | 0                | 5    | 141  | 40    | 4    | 0                    | 2    | 2    | 4     | 0    | 0          | 310  |
| 15:30           | 0                | 9    | 95   | 1     | 0    | 0                                      | 26   | 1    | 10    | 0    | 0                | 6    | 153  | 39    | 0    | 0                    | 1    | 0    | 2     | 2    | 0          | 345  |
| 15:45           | 0                | 8    | 78   | 3     | 0    | 0                                      | 23   | 1    | 9     | 1    | 0                | 4    | 143  | 31    | 2    | 0                    | 2    | 1    | 5     | 0    | 0          | 311  |
| Total           | 0                | 26   | 343  | 10    | 0    | 0                                      | 76   | 4    | 33    | 1    | 0                | 18   | 579  | 132   | 8    | 0                    | 7    | 5    | 13    | 2    | 0          | 1257 |
| 16:00           | 0                | 7    | 77   | 2     | 0    | 0                                      | 15   | 0    | 8     | 0    | 0                | 4    | 104  | 34    | 0    | 0                    | 0    | 4    | 6     | 0    | 0          | 261  |

# Alliant Engineering Inc Minneapolis, MN 55415

TH-61 at 147th St N / Oneka Lk Blvd  
 Ref.Pt.: 152.833  
 data by: Alliant Engineering Inc  
 TURN MOVEMENT COUNT

File Name : TH-61 at 147th St N 2012  
 Site Code : 25  
 Start Date : 11/6/2012  
 Page No : 2

Groups Printed- Cars - Trucks

| Start Time  | TH-61 Southbound |      |      |       |      | 147th St N / Oneka Lake Blvd Westbound |      |      |       |      | TH-61 Northbound |      |      |       |      | 147th St N Eastbound |      |      |       |      | Int. Total |
|-------------|------------------|------|------|-------|------|--|------|------|-------|------|------------------|------|------|-------|------|----------------------|------|------|-------|------|------------|
|             | UTrn             | Left | Thru | Right | Peds | UTrn                                   | Left | Thru | Right | Peds | UTrn             | Left | Thru | Right | Peds | UTrn                 | Left | Thru | Right | Peds |            |
| 16:15       | 0                | 7    | 81   | 3     | 0    | 0                                      | 22   | 0    | 3     | 0    | 0                | 4    | 165  | 53    | 0    | 0                    | 4    | 0    | 4     | 0    | 346        |
| 16:30       | 0                | 6    | 120  | 1     | 0    | 0                                      | 16   | 1    | 10    | 1    | 0                | 5    | 172  | 43    | 0    | 0                    | 3    | 1    | 5     | 2    | 386        |
| 16:45       | 0                | 9    | 98   | 4     | 0    | 0                                      | 20   | 1    | 11    | 0    | 0                | 4    | 161  | 45    | 0    | 0                    | 0    | 1    | 3     | 0    | 357        |
| Total       | 0                | 29   | 376  | 10    | 0    | 0                                      | 73   | 2    | 32    | 1    | 0                | 17   | 602  | 175   | 0    | 0                    | 7    | 6    | 18    | 2    | 1350       |
| 17:00       | 0                | 4    | 83   | 1     | 0    | 0                                      | 30   | 2    | 5     | 0    | 0                | 10   | 135  | 66    | 0    | 0                    | 0    | 2    | 0     | 0    | 338        |
| 17:15       | 0                | 7    | 83   | 0     | 0    | 0                                      | 29   | 0    | 8     | 0    | 0                | 6    | 143  | 44    | 0    | 0                    | 1    | 4    | 4     | 0    | 329        |
| 17:30       | 0                | 4    | 84   | 2     | 0    | 0                                      | 27   | 2    | 3     | 0    | 0                | 1    | 139  | 46    | 0    | 0                    | 2    | 0    | 2     | 0    | 312        |
| 17:45       | 0                | 10   | 55   | 2     | 0    | 0                                      | 36   | 1    | 4     | 0    | 0                | 2    | 119  | 41    | 0    | 0                    | 3    | 0    | 2     | 0    | 275        |
| Total       | 0                | 25   | 305  | 5     | 0    | 0                                      | 122  | 5    | 20    | 0    | 0                | 19   | 536  | 197   | 0    | 0                    | 6    | 6    | 8     | 0    | 1254       |
| 18:00       | 0                | 0    | 68   | 3     | 0    | 0                                      | 34   | 0    | 4     | 0    | 0                | 2    | 107  | 42    | 0    | 0                    | 1    | 1    | 5     | 0    | 267        |
| 18:15       | 0                | 1    | 51   | 2     | 0    | 0                                      | 14   | 0    | 7     | 0    | 0                | 7    | 84   | 34    | 0    | 0                    | 4    | 1    | 2     | 0    | 207        |
| Grand Total | 0                | 160  | 3853 | 100   | 2    | 0                                      | 1090 | 33   | 273   | 5    | 1                | 164  | 3781 | 948   | 8    | 0                    | 92   | 46   | 156   | 7    | 10719      |
| Apprch %    | 0                | 3.9  | 93.6 | 2.4   | 0    | 0                                      | 77.8 | 2.4  | 19.5  | 0.4  | 0                | 3.3  | 77.1 | 19.3  | 0.2  | 0                    | 30.6 | 15.3 | 51.8  | 2.3  |            |
| Total %     | 0                | 1.5  | 35.9 | 0.9   | 0    | 0                                      | 10.2 | 0.3  | 2.5   | 0    | 0                | 1.5  | 35.3 | 8.8   | 0.1  | 0                    | 0.9  | 0.4  | 1.5   | 0.1  |            |
| Cars        | 0                | 154  | 3634 | 94    | 2    | 0                                      | 1050 | 30   | 242   | 1    | 0                | 162  | 3590 | 927   | 6    | 0                    | 91   | 39   | 153   | 4    | 10179      |
| % Cars      | 0                | 96.2 | 94.3 | 94    | 100  | 0                                      | 96.3 | 90.9 | 88.6  | 20   | 0                | 98.8 | 94.9 | 97.8  | 75   | 0                    | 98.9 | 84.8 | 98.1  | 57.1 | 95         |
| Trucks      | 0                | 6    | 219  | 6     | 0    | 0                                      | 40   | 3    | 31    | 4    | 1                | 2    | 191  | 21    | 2    | 0                    | 1    | 7    | 3     | 3    | 540        |
| % Trucks    | 0                | 3.8  | 5.7  | 6     | 0    | 0                                      | 3.7  | 9.1  | 11.4  | 80   | 100              | 1.2  | 5.1  | 2.2   | 25   | 0                    | 1.1  | 15.2 | 1.9   | 42.9 | 5          |

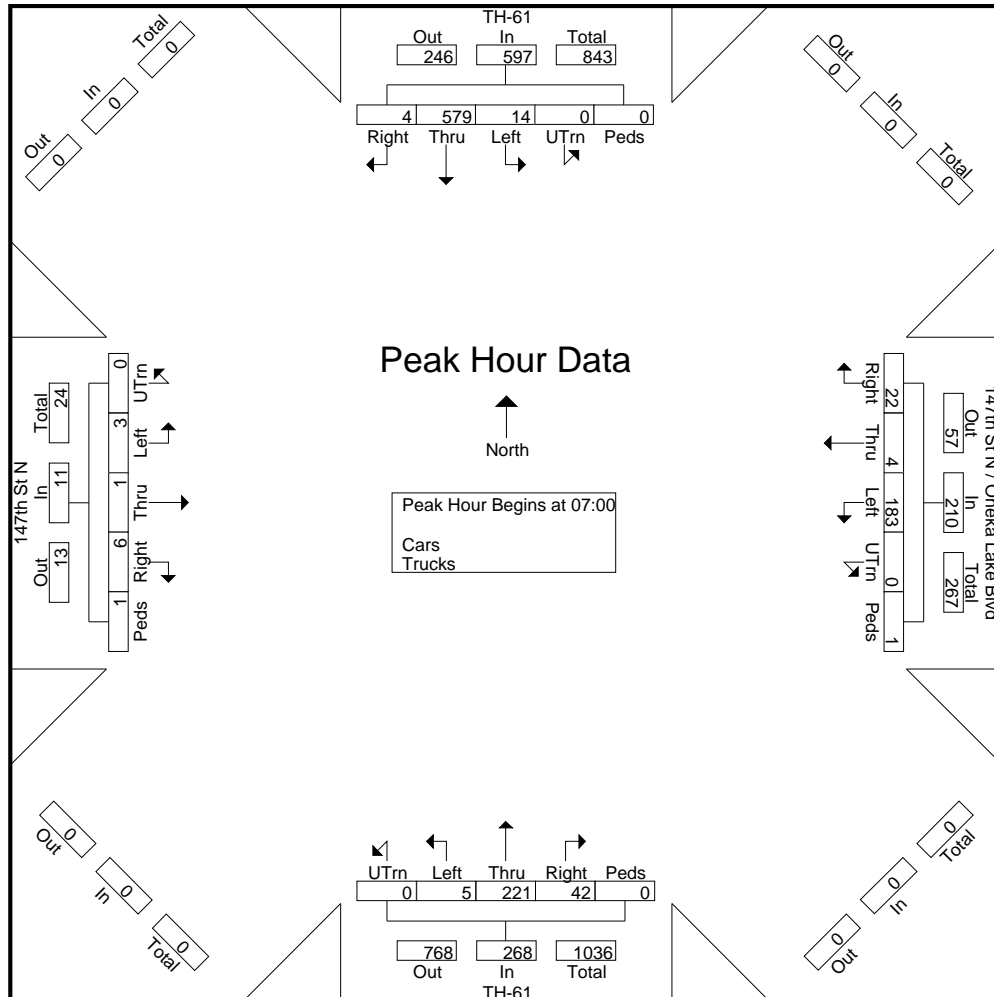
# Alliant Engineering Inc Minneapolis, MN 55415

TH-61 at 147th St N / Oneka Lk Blvd  
 Ref.Pt.: 152.833  
 data by: Alliant Engineering Inc  
 TURN MOVEMENT COUNT

File Name : TH-61 at 147th St N 2012  
 Site Code : 25  
 Start Date : 11/6/2012  
 Page No : 3

| Start Time   | TH-61 Southbound |      |      |       |      |            | 147th St N / Oneka Lake Blvd Westbound |      |      |       |      |            | TH-61 Northbound |      |      |       |      |            | 147th St N Eastbound |      |      |       |      |            | Int. Total |
|--------------|------------------|------|------|-------|------|------------|--|------|------|-------|------|------------|------------------|------|------|-------|------|------------|----------------------|------|------|-------|------|------------|------------|
|              | UTrn             | Left | Thru | Right | Peds | App. Total | UTrn                                   | Left | Thru | Right | Peds | App. Total | UTrn             | Left | Thru | Right | Peds | App. Total | UTrn                 | Left | Thru | Right | Peds | App. Total |            |
| 07:00        | 0                | 3    | 13   | 1     | 0    | 137        | 0                                      | 54   | 1    | 6     | 0    | 61         | 0                | 0    | 50   | 5     | 0    | 55         | 0                    | 1    | 0    | 1     | 0    | 2          | 255        |
| 07:15        | 0                | 4    | 155  | 1     | 0    | 160        | 0                                      | 49   | 0    | 3     | 0    | 52         | 0                | 0    | 60   | 11    | 0    | 71         | 0                    | 1    | 0    | 1     | 0    | 2          | 285        |
| 07:30        | 0                | 4    | 147  | 0     | 0    | 151        | 0                                      | 48   | 1    | 4     | 0    | 53         | 0                | 1    | 48   | 15    | 0    | 64         | 0                    | 0    | 1    | 2     | 0    | 3          | 271        |
| 07:45        | 0                | 3    | 144  | 2     | 0    | 149        | 0                                      | 32   | 2    | 9     | 1    | 44         | 0                | 4    | 63   | 11    | 0    | 78         | 0                    | 1    | 0    | 2     | 1    | 4          | 275        |
| Total Volume | 0                | 14   | 579  | 4     | 0    | 597        | 0                                      | 183  | 4    | 22    | 1    | 210        | 0                | 5    | 221  | 42    | 0    | 268        | 0                    | 3    | 1    | 6     | 1    | 11         | 1086       |
| % App. Total | 0                | 2.3  | 97   | 0.7   | 0    |            | 0                                      | 87.1 | 1.9  | 10.5  | 0.5  |            | 0                | 1.9  | 82.5 | 15.7  | 0    |            | 0                    | 27.3 | 9.1  | 54.5  | 9.1  |            |            |
| PHF          | .000             | .875 | .934 | .500  | .000 | .933       | .000                                   | .847 | .500 | .611  | .250 | .861       | .000             | .313 | .877 | .700  | .000 | .859       | .000                 | .750 | .250 | .750  | .250 | .688       | .953       |

Peak Hour Analysis From 06:00 to 09:15 - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00



# Alliant Engineering Inc Minneapolis, MN 55415

TH-61 at 147th St N / Oneka Lk Blvd  
 Ref.Pt.: 152.833  
 data by: Alliant Engineering Inc  
 TURN MOVEMENT COUNT

File Name : TH-61 at 147th St N 2012  
 Site Code : 25  
 Start Date : 11/6/2012  
 Page No : 4

| Start Time   | TH-61 Southbound |      |      |       |      |            | 147th St N / Oneka Lake Blvd Westbound |      |      |       |      |            | TH-61 Northbound |      |      |       |      |            | 147th St N Eastbound |      |      |       |      |            | Int. Total |
|--------------|------------------|------|------|-------|------|------------|--|------|------|-------|------|------------|------------------|------|------|-------|------|------------|----------------------|------|------|-------|------|------------|------------|
|              | UTrn             | Left | Thru | Right | Peds | App. Total | UTrn                                   | Left | Thru | Right | Peds | App. Total | UTrn             | Left | Thru | Right | Peds | App. Total | UTrn                 | Left | Thru | Right | Peds | App. Total |            |
| 16:15        | 0                | 7    | 81   | 3     | 0    | 91         | 0                                      | 22   | 0    | 3     | 0    | 25         | 0                | 4    | 165  | 53    | 0    | 222        | 0                    | 4    | 0    | 4     | 0    | 8          | 346        |
| 16:30        | 0                | 6    | 120  | 1     | 0    | 127        | 0                                      | 16   | 1    | 10    | 1    | 28         | 0                | 5    | 172  | 43    | 0    | 220        | 0                    | 3    | 1    | 5     | 2    | 11         | 386        |
| 16:45        | 0                | 9    | 98   | 4     | 0    | 111        | 0                                      | 20   | 1    | 11    | 0    | 32         | 0                | 4    | 161  | 45    | 0    | 210        | 0                    | 0    | 1    | 3     | 0    | 4          | 357        |
| 17:00        | 0                | 4    | 83   | 1     | 0    | 88         | 0                                      | 30   | 2    | 5     | 0    | 37         | 0                | 10   | 135  | 66    | 0    | 211        | 0                    | 0    | 2    | 0     | 0    | 2          | 338        |
| Total Volume | 0                | 26   | 382  | 9     | 0    | 417        | 0                                      | 88   | 4    | 29    | 1    | 122        | 0                | 23   | 633  | 207   | 0    | 863        | 0                    | 7    | 4    | 12    | 2    | 25         | 1427       |
| % App. Total | 0                | 6.2  | 91.6 | 2.2   | 0    |            | 0                                      | 72.1 | 3.3  | 23.8  | 0.8  |            | 0                | 2.7  | 73.3 | 24    | 0    |            | 0                    | 28   | 16   | 48    | 8    |            |            |
| PHF          | .000             | .722 | .796 | .563  | .000 | .821       | .000                                   | .733 | .500 | .659  | .250 | .824       | .000             | .575 | .920 | .784  | .000 | .972       | .000                 | .438 | .500 | .600  | .250 | .568       | .924       |

Peak Hour Analysis From 14:30 to 18:15 - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 16:15

