

**APPENDIX “D”**

**PEDESTRIAN COUNT DATA**

## PEDESTRIAN ACTIVITY

Pedestrian activity is a normal part of any downtown area. This is especially true of the downtown Yonkers area. The existing control system is designed to accommodate pedestrian phases at signalized locations with crosswalks provided as needed.

Pedestrian counts were collected by representatives of John Collins Engineers, P.C. as well the City of Yonkers for the following locations:

- Buena Vista Avenue at the Yonkers Train Station
- Main Street at the Yonkers Post Office
- Nepperhan Avenue and New Main Street
- Nepperhan Avenue and South Broadway
- Main Street/North Broadway/ Avenue
- Palisade Avenue/Elm Street/New School Street
- Warburton Avenue and Dock Street/Nepperhan Street
- Warburton Avenue/Riverdale Avenue and Main Street
- Riverdale Avenue and Hudson Street
- Riverdale Avenue and Prospect Street

Copies of the Pedestrian Counts are contained in this Appendix.

5' SIDEWALK = 1.5 METERS  $\times 1.5$

18-10

## PEDESTRIAN FACILITY DESIGN

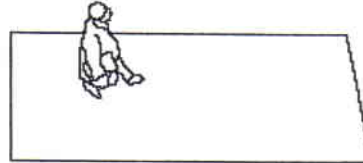
### Exhibit 18-3 Pedestrian Level-of-Service

LOS A

$\leq 24$

*Pedestrian Space*  $> 5.6 \text{ m}^2/\text{p}$  *Flow Rate*  $\leq 16 \text{ p}/\text{min}/\text{m}$

At a walkway LOS A, pedestrians move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.

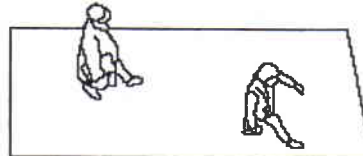


LOS B

$> 24-35$

*Pedestrian Space*  $> 3.7-5.6 \text{ m}^2/\text{p}$  *Flow Rate*  $> 16-23 \text{ p}/\text{min}/\text{m}$

At LOS B, there is sufficient area for pedestrians to select walking speeds freely, to bypass other pedestrians, and to avoid crossing conflicts. At this level, pedestrians begin to be aware of other pedestrians, and to respond to their presence when selecting a walking path.



LOS C

$> 35-50$

*Pedestrian Space*  $> 2.2-3.7 \text{ m}^2/\text{p}$  *Flow Rate*  $> 23-33 \text{ p}/\text{min}/\text{m}$

At LOS C, space is sufficient for normal walking speeds, and for bypassing other pedestrians in primarily unidirectional streams. Reverse-direction or crossing movements can cause minor conflicts, and speeds and flow rate are somewhat lower.

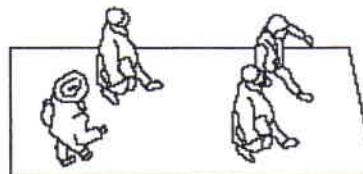


LOS D

$> 50-74$

*Pedestrian Space*  $> 1.1-2.2 \text{ m}^2/\text{p}$  *Flow Rate*  $> 33-49 \text{ p}/\text{min}/\text{m}$

At LOS D, freedom to select individual walking speed and to bypass other pedestrians is restricted. Crossing or reverse-flow movements face a high probability of conflict, requiring frequent changes in speed and positions. The LOS provides reasonably fluid flow, but friction and interaction between pedestrians is likely.



LOS E

$> 74-112$

*Pedestrian Space*  $> 0.75-1.4 \text{ m}^2/\text{p}$  *Flow Rate*  $> 49-75 \text{ p}/\text{min}/\text{m}$

At LOS E, virtually all pedestrians restrict their normal walking speed, frequently adjusting their gait. At the lower range, forward movement is possible only by shuffling. Space is not sufficient for passing slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity, with stoppages and interruptions to flow.

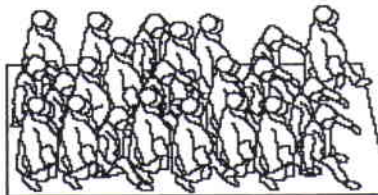


LOS F

$> 112$

*Pedestrian Space*  $\leq 0.75 \text{ m}^2/\text{p}$  *Flow Rate* varies  $\text{p}/\text{min}/\text{m}$

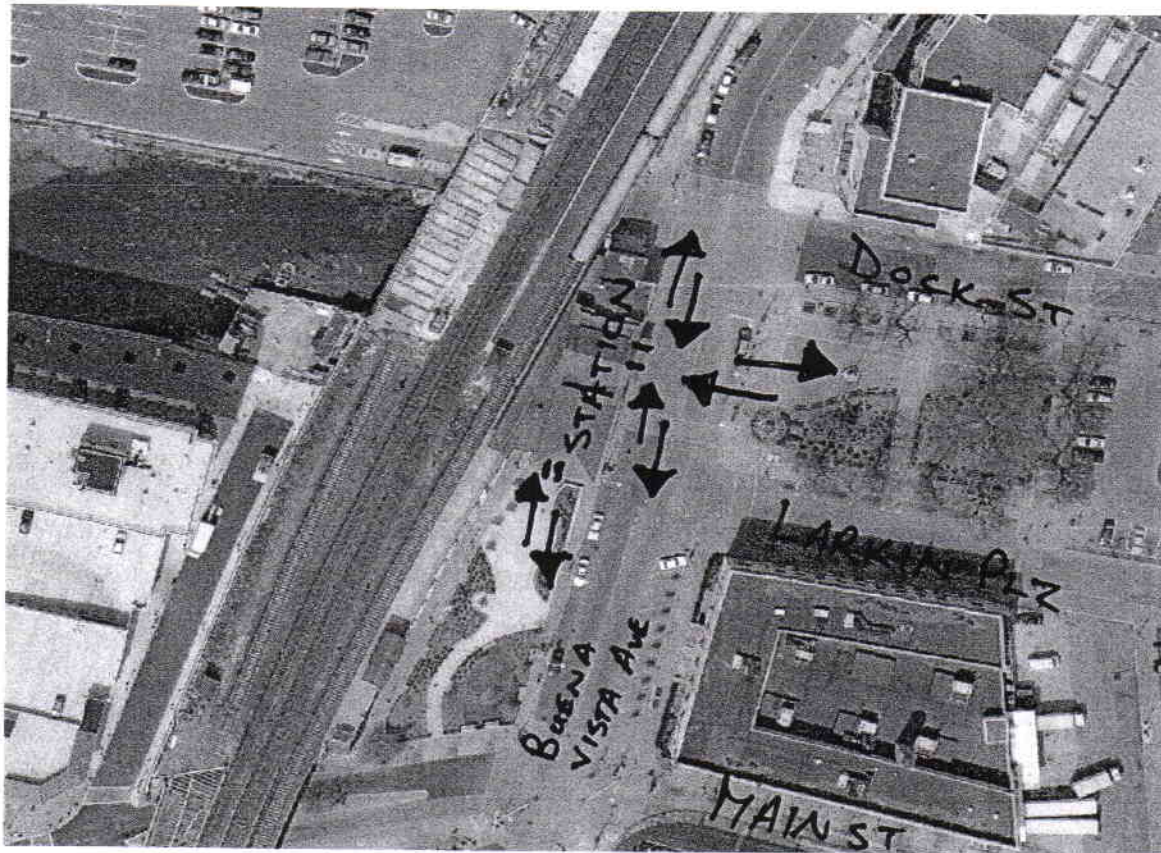
At LOS F, all walking speeds are severely restricted, and forward progress is made only by shuffling. There is frequent, unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.



LOCATION #1

YONKERS TRAIN STATION SPOT COUNT

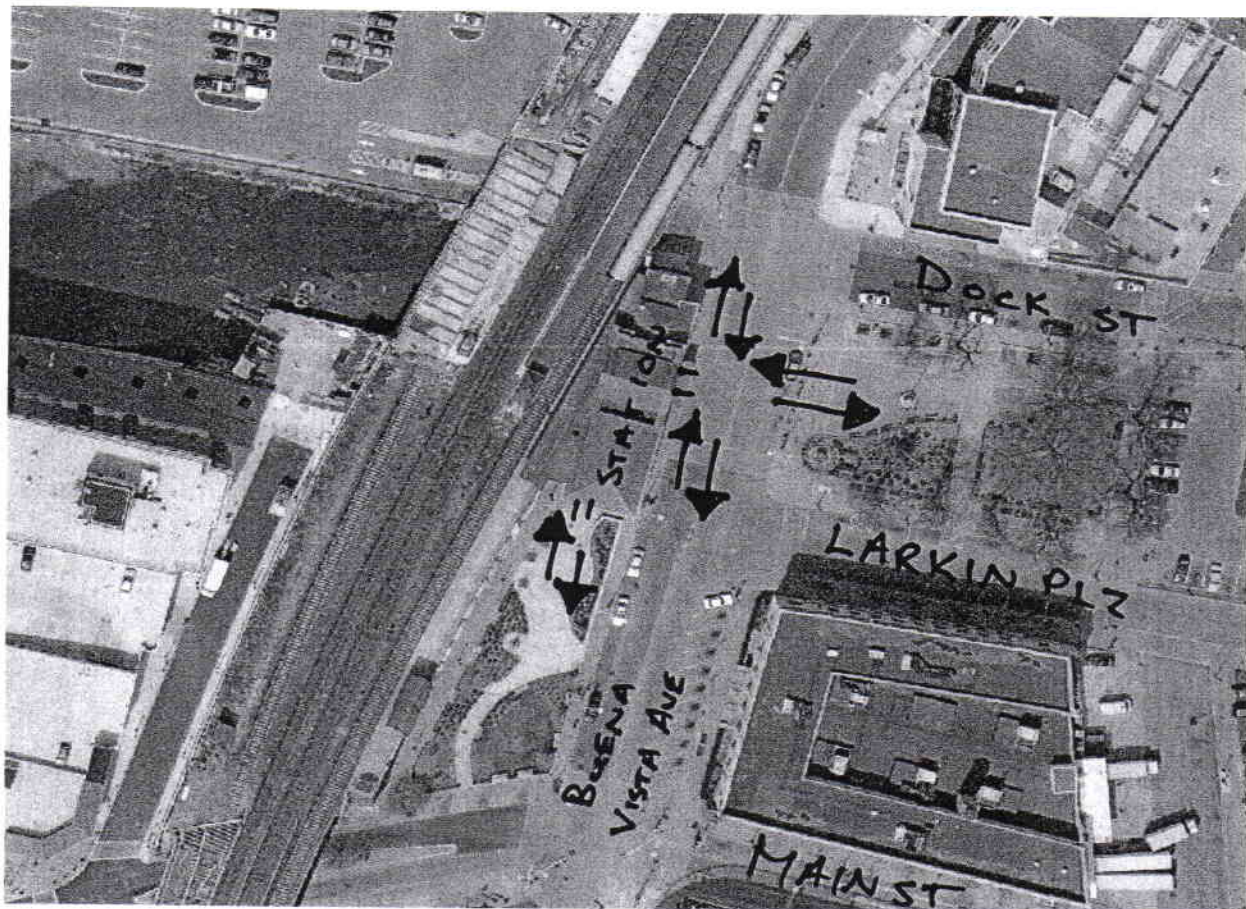
	IN FROM				OUT TO			
	SOUTH	EAST	NORTH	TOTAL	NORTH	EAST	SOUTH	TOTAL
4:00 - 4:15 PM	1	7	0	8	0	9	2	11
4:15 - 4:30 PM	2	18	4	24	1	19	3	23
4:30 - 4:45 PM	0	6	0	6	3	12	4	19
4:45 - 5:00 PM	4	15	0	19	0	22	6	28
5:00 - 5:15 PM	0	8	0	8	0	40	2	42
5:15 - 5:30 PM	2	14	0	16	0	24	8	32
5:30 - 5:45 PM	0	4	0	4	0	31	5	36
5:45 - 6:00 PM	1	3	0	4	0	50	20	70
6:00 - 6:15 PM	0	5	0	5	0	35	16	51
6:15 - 6:30 PM	0	4	0	4	0	22	12	34



LOCATION #1

YONKERS TRAIN STATION SPOT COUNT

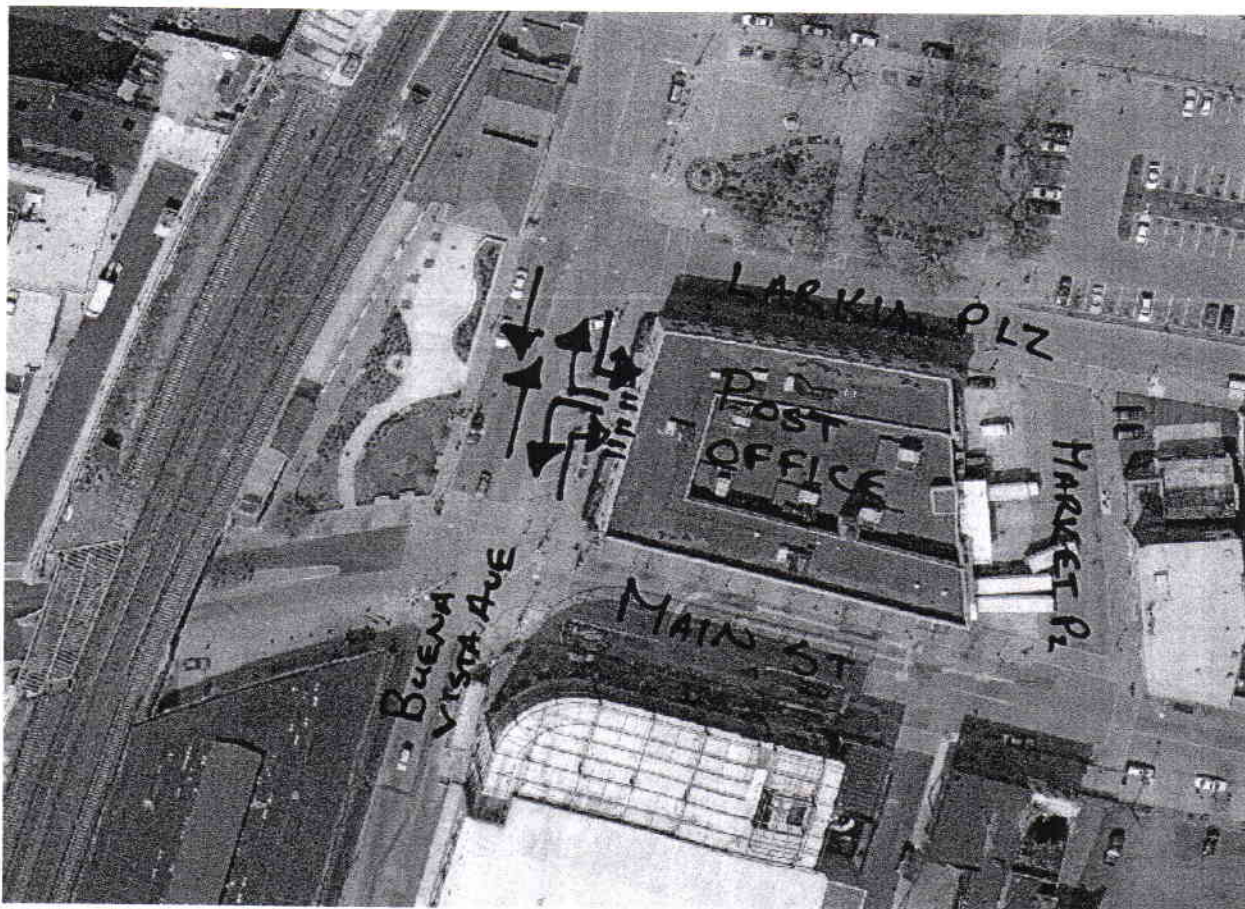
	IN FROM				OUT TO			
	SOUTH	EAST	NORTH	TOTAL	NORTH	EAST	SOUTH	TOTAL
7:00 - 7:15 AM	2	15	0	17	2	4	1	7
7:15 - 7:30 AM	3	27	0	30	1	5	1	7
7:30 - 7:45 AM	7	32	0	39	0	7	0	7
7:45 - 8:00 AM	9	55	0	64	5	12	1	18
8:00 - 8:15 AM	13	35	0	48	3	18	1	22
8:15 - 8:30 AM	6	11	0	17	0	3	1	4
8:30 - 8:45 AM	6	39	0	45	1	11	0	12
8:45 - 9:00 AM	3	12	0	15	3	18	9	30



LOCATION #2

YONKERS POST OFFICE SPOT COUNT

	TRAVELING FROM			ENTRY			EXIT		
	NORTH	SOUTH	TOTAL	NORTH	SOUTH	TOTAL	NORTH	SOUTH	TOTAL
7:00 - 7:15 AM	2	1	3	3	1	4	3	1	4
7:15 - 7:30 AM	3	1	4	2	1	3	3	1	4
7:30 - 7:45 AM	3	0	3	3	1	4	3	1	4
7:45 - 8:00 AM	3	0	3	2	3	5	2	0	2
8:00 - 8:15 AM	4	3	7	6	1	7	8	3	11
8:15 - 8:30 AM	3	0	3	4	3	7	5	2	7
8:30 - 8:45 AM	1	8	9	2	2	4	4	1	5
8:45 - 9:00 AM	5	4	9	4	0	4	5	1	6

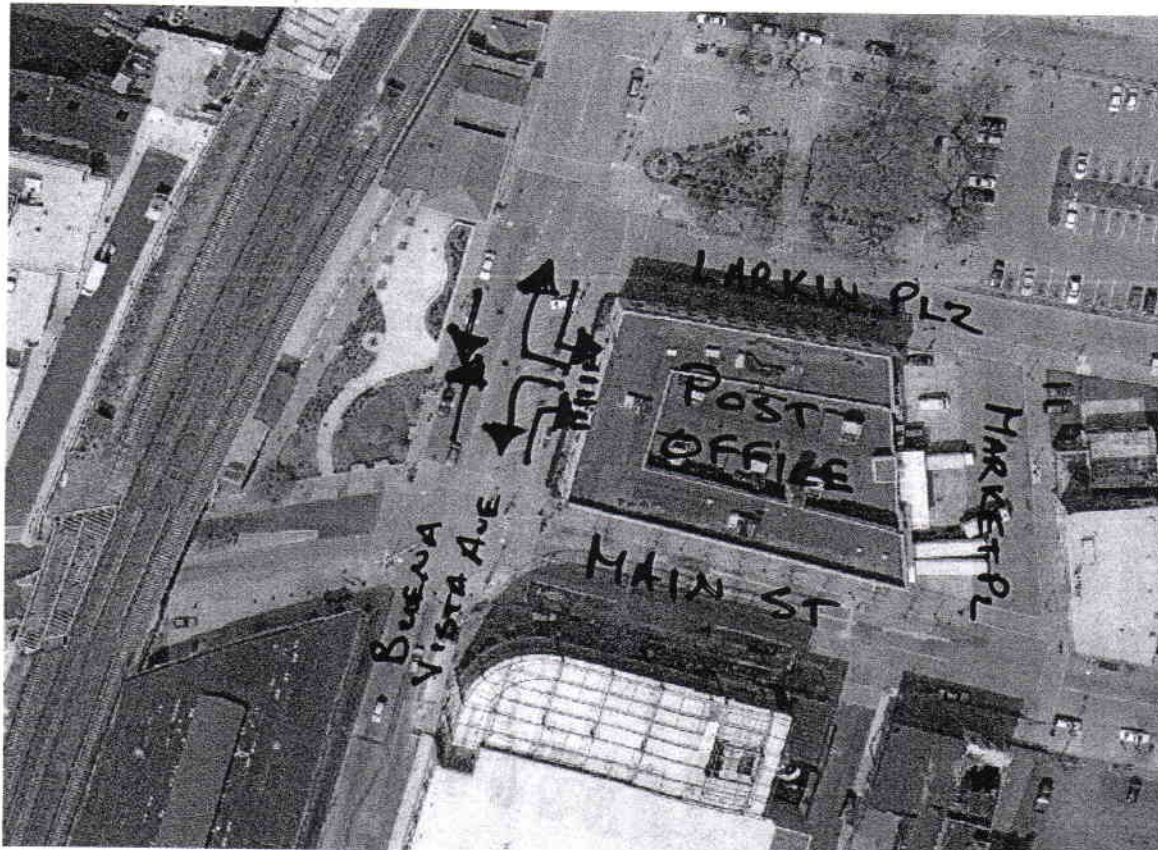


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LOCATION # 2

YONKERS TRAIN STATION SPOT COUNT

	TRAVELING FROM			ENTRY			EXIT		
	NORTH	SOUTH	TOTAL	NORTH	SOUTH	TOTAL	NORTH	SOUTH	TOTAL
4:00 - 4:15 PM	3	6	9	13	4	17	10	3	13
4:15 - 4:30 PM	0	8	8	6	1	7	0	1	1
4:30 - 4:45 PM	6	8	10	5	0	5	5	0	5
4:45 - 5:00 PM	8	3	11	9	0	9	8	1	9
5:00 - 5:15 PM	14	5	19	4	2	6	4	0	4
5:15 - 5:30 PM	5	3	8	5	3	8	3	4	7
5:30 - 5:45 PM	6	4	10	5	4	9	8	0	8
5:45 - 6:00 PM	5	6	11	3	4	7	8	1	9
6:00 - 6:15 PM	5	2	7	4	6	10	2	6	8
6:15 - 6:30 PM	2	3	5	8	4	12	4	1	5



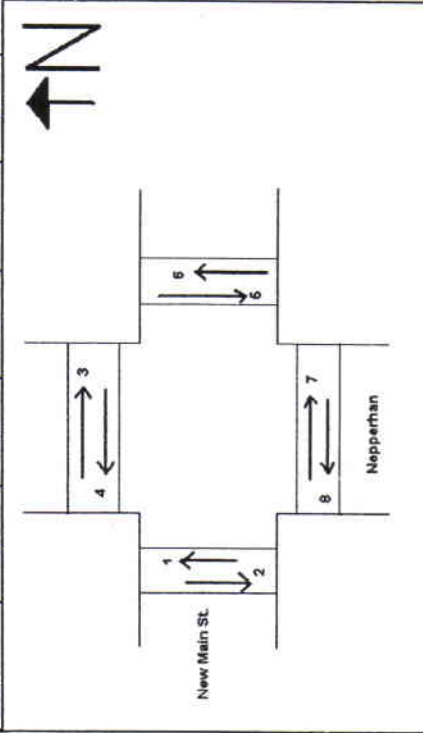
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2

LOCATION # 3

ETC PEDESTRIAN COUNT FORM - Bruckner/Sheridan Expressway Counts

Intersection: Nepperhan Ave & New Main St. Date: 1-Jun-05  
 Location:

Time	N. Crosswalk		W. Crosswalk		E. Crosswalk		S. Crosswalk	
	3	4	1	2	5	6	7	8
7:00-7:15	3	4	1	2	5	6	7	8
7:15-7:30	3	34	2	10	4		4	4
7:30-7:45	8	39		9	2		3	10
7:45-8:00	5	32	1	3		2	1	1
8:00-8:15	12	39	1	11	3	3	1	5
8:15-8:30	14	20		12	1			5
8:30-8:45	12	17		4	5		1	5
8:45-9:00	8	20		6	11	1	1	2
Totals	11	28	1	11	5	1	1	3
	73	229	5	66	31	7	11	35
4:00-4:15	45	25		2	1	7	4	4
4:15-4:30	57	24	2	6	1	4	4	8
4:30-4:45	39	46	3	3	2	2	3	11
4:45-5:00	41	20	2	3	2	6	8	12
5:00-5:15	61	29	3	5	1	1	14	3
5:15-5:30	45	28	6	14	3		14	6
5:30-5:45	57	31	7	2	5	12	6	3
5:45-6:00	65	21	3	2		1	7	5
Total	410	224	26	37	12	33	60	52

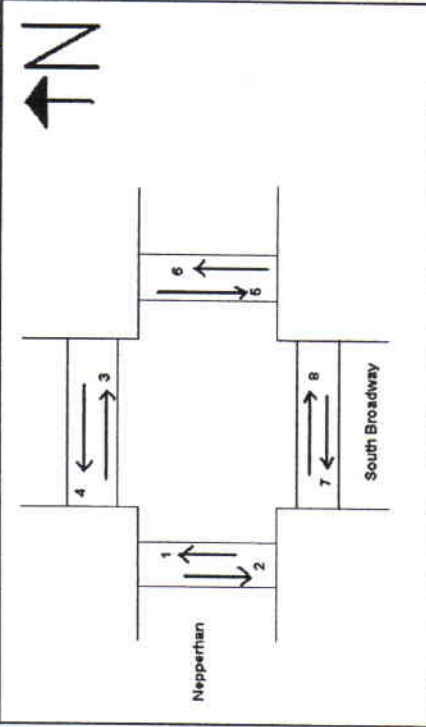


LOCATION # 4

ETC PEDESTRIAN COUNT FORM - Bruckner/Sheridan Expressway Counts

Intersection: Nepperhan Ave & South Broadway Date: 1-Jun-05  
 Location:

Time	N. Crosswalk		W. Crosswalk		E. Crosswalk		S. Crosswalk	
	3	4	1	2	5	6	7	8
7:00-7:15	5	1	7	4	6	3	1	
7:15-7:30	1		15	6	12	1	2	
7:30-7:45	1	2	11	2		3	4	3
7:45-8:00			12	13	3	8	2	2
8:00-8:15	1	4	9	10	2	8	4	3
8:15-8:30	1		20	7	2	5	2	3
8:30-8:45	2		10	11	6	8	2	4
8:45-9:00		2	16	5	13	3	2	1
<b>Totals</b>	<b>11</b>	<b>9</b>	<b>100</b>	<b>58</b>	<b>26</b>	<b>53</b>	<b>20</b>	<b>19</b>
4:00-4:15	4		20	15	3	11	4	2
4:15-4:30	3	2	16	16	3	13	2	1
4:30-4:45	5	4	14	15	2	5	1	2
4:45-5:00	2	2	20	18	14	1	5	
5:00-5:15		3	21	23	1	3	2	1
5:15-5:30	2	4	10	15	6	3	4	7
5:30-5:45	3	4	21	15	3	4	8	5
5:45-6:00	2	1	10	7	2	1	2	
<b>Total</b>	<b>21</b>	<b>20</b>	<b>132</b>	<b>124</b>	<b>34</b>	<b>41</b>	<b>28</b>	<b>18</b>

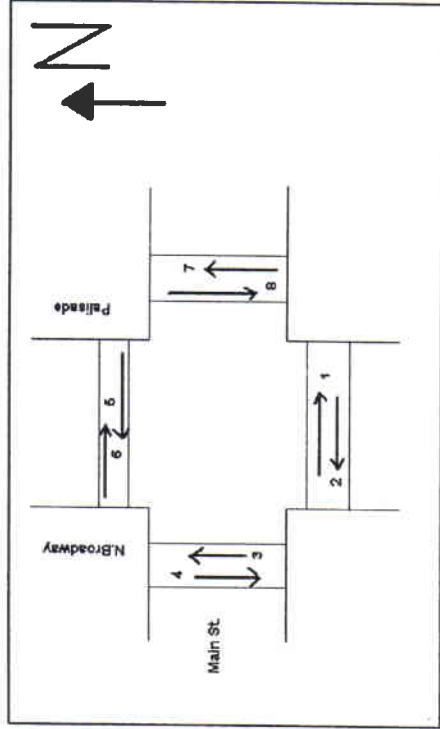


LOCATION # 6/47

ETC PEDESTRIAN COUNT FORM - Bruckner/Sheridan Expressway Counts

Intersection: Main St. & N Broadway & Palisade Date: 3-May-05  
 Location:

Time	N. Crosswalk		W. Crosswalk		E. Crosswalk		S. Crosswalk	
	5	6	3	4	7	8	1	2
7:00-7:15	6	13	4	1	2	7	66	19
7:15-7:30	51	11	29	29	15	33	44	40
7:30-7:45	6	5	26	33	16	46	23	18
7:45-8:00	23	9	16	21	9	36	35	15
8:00-8:15	27	23	32	22	12	42	18	22
8:15-8:30	18	6	16	43	15	20	42	12
8:30-8:45	33	17	26	35	19	18	19	24
8:45-9:00	22	25	26	36	18	36	29	13
Totals	100	71	100	136	64	116	108	71
4:00-4:15	50	25	11	13	35	21	53	35
4:15-4:30	44	29	25	47	13	35	43	23
4:30-4:45	35	33	24	37	14	35	47	22
4:45-5:00	36	24	12	28	29	41	39	23
5:00-5:15	25	17	9	11	23	28	44	19
5:15-5:30	29	7	27	30	16	13	44	30
5:30-5:45	17	10	20	22	23	27	36	21
5:45-6:00	26	14	17	23	15	8	33	35
Total	97	48	73	86	77	76	157	105



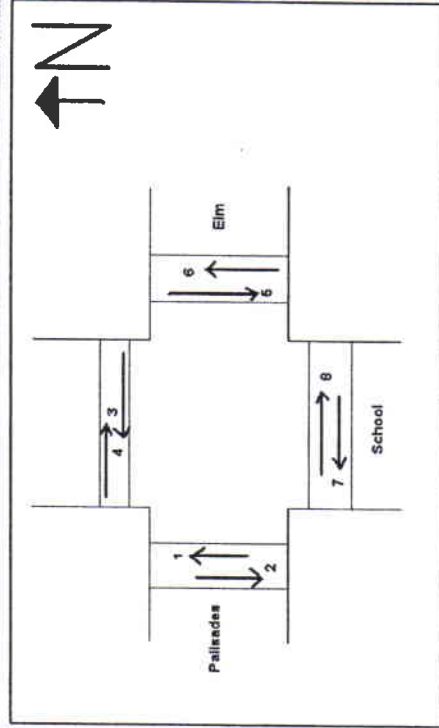
LOCATION # 9

ETC PEDESTRIAN COUNT FORM - Bruckner/Sheridan Expressway Counts

Intersection: Palisades & Elm Date: 12-May-05

Location:

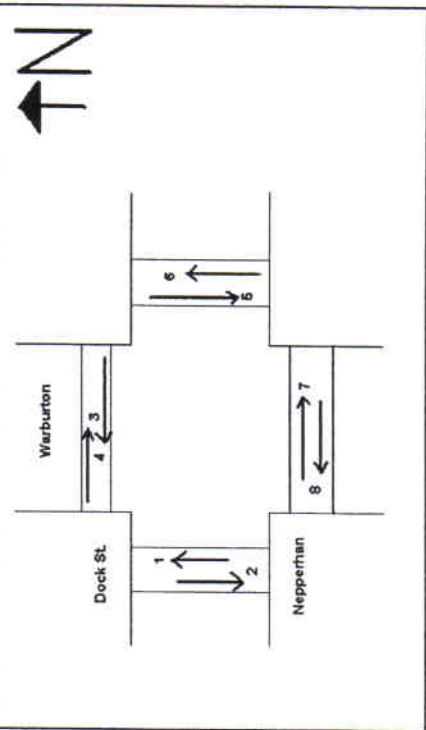
Time	N. Crosswalk		W. Crosswalk		E. Crosswalk		S. Crosswalk	
	3	4	1	2	5	6	7	8
7:00-7:15	8	16	3	1	13	8	6	2
7:15-7:30	16	20	8	6	26	10	12	5
7:30-7:45	9	22	3	6	11	15	11	7
7:45-8:00	3	10	7	7	14	10	12	3
8:00-8:15	9	13	10	4	11	5	12	3
8:15-8:30	4	9	1	1	7	2	9	5
8:30-8:45	14	15	2	1	16	6	18	2
8:45-9:00	3	9	4	9	6		8	1
<b>Totals</b>	<b>30</b>	<b>47</b>	<b>20</b>	<b>13</b>	<b>48</b>	<b>23</b>	<b>51</b>	<b>13</b>
4:00-4:15	21	24	7	19	5	4	10	21
4:15-4:30	29	21	7	2	2	1	18	25
4:30-4:45	8	12	8	3	6		18	7
4:45-5:00	12	20	1	12	4	3	13	20
5:00-5:15	16	37		4	1	4	11	20
5:15-5:30	16	17	6	4	1		4	11
5:30-5:45	18	12	5	10	6	3	9	14
5:45-6:00	27	15	3	5	13	9	11	12
<b>Total</b>	<b>77</b>	<b>81</b>	<b>14</b>	<b>23</b>	<b>21</b>	<b>16</b>	<b>35</b>	<b>57</b>



ETC PEDESTRIAN COUNT FORM - Bruckner/Sheridan Expressway Counts

Intersection: Warburton & Nepperhan Date: 4-May-05  
 Location: \_\_\_\_\_

Time	N. Crosswalk		W. Crosswalk		E. Crosswalk		S. Crosswalk	
7:00-7:15	3	4	1	2	5	6	7	8
7:15-7:30	60	2	3	7	5			
7:30-7:45	11	1	1	3	12	2	1	
7:45-8:00	30	1	7	9	7	2	1	1
8:00-8:15	20	5	3	4	6	1	1	
8:15-8:30	16	3	1	7	18	3	2	2
8:30-8:45	29	2	2	3	9	3	2	1
8:45-9:00	1		6	6	1	2	2	2
Totals	40	10	5	11	24	3	2	5
	207	24	28	50	82	16	11	11
4:00-4:15	70	2	9	32	8	5	7	3
4:15-4:30	32	13	2	7	3	2	1	2
4:30-4:45	59		7	20	2	5	3	7
4:45-5:00	51	4	5	13		4	3	4
5:00-5:15	48	4	4	12	7	3	2	3
5:15-5:30	65	2	8	28	3	4	4	5
5:30-5:45	2		14	8		1	3	3
5:45-6:00	32	1	4	18	1	3	1	2
Total	359	26	53	138	24	27	24	29

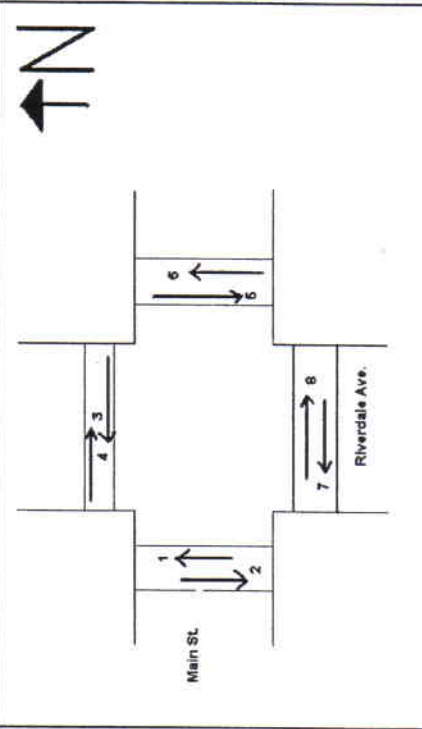


Location # 25

ETC PEDESTRIAN COUNT FORM - Bruckner/Sheridan Expressway Counts

Intersection: Riverdale Ave & Main St. Date: 17-May-05  
 Location:

Time	N. Crosswalk		W. Crosswalk		E. Crosswalk		S. Crosswalk	
	3	4	1	2	5	6	7	8
7:00-7:15	4	10	4		9	1	6	16
7:15-7:30	1	8	8	5	7		3	12
7:30-7:45	2	8	9	5	5	1	4	3
7:45-8:00	7	12	4	9	5	6	11	7
8:00-8:15	4	15	6	10	10	9	4	1
8:15-8:30	3	13	4	6	6	6	2	1
8:30-8:45	5	16	10	10	6	7	2	1
8:45-9:00	8	14	10	7	4	9	1	4
Totals	34	96	55	52	52	39	33	45
4:00-4:15	20	9	7	14	9	3	7	5
4:15-4:30	6	10	2	24	8	14	7	1
4:30-4:45	15	12	13	16	11	5	2	3
4:45-5:00	9	13	5	32	4	8	9	8
5:00-5:15	12	9	11	21	3	10	13	12
5:15-5:30	4	6	9	29	7	8	1	9
5:30-5:45	19	12	5	17	6	14	5	7
5:45-6:00	19	15	5	20	4	4	7	3
Total	104	86	57	173	52	66	51	48



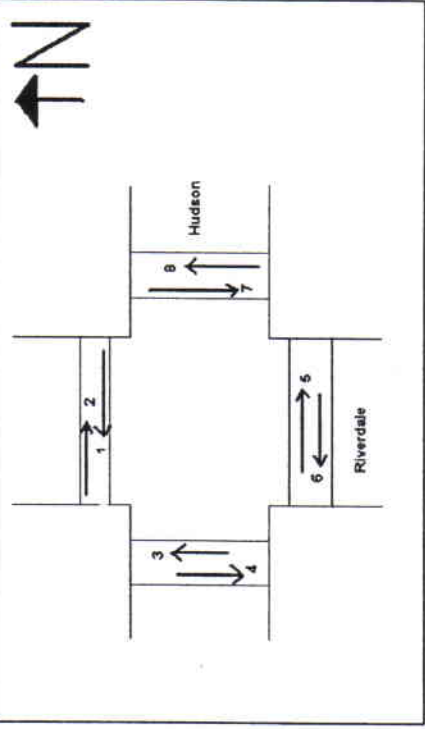
LOCATION # 26

ETC PEDESTRIAN COUNT FORM - Bruckner/Sheridan Expressway Counts

Intersection: Riverdale & Hudson Date: 17-May-05

Location:

Time	N. Crosswalk		W. Crosswalk		E. Crosswalk		S. Crosswalk	
	1	2	3	4	7	8	5	6
7:00-7:15	2	2	11	6	15	2	4	8
7:15-7:30	1	3	11	8	13	3	4	6
7:30-7:45	2	1	1	5	15	3	3	2
7:45-8:00	6	5	1	6	9	5	2	3
8:00-8:15	5	3	2	6	8	9	12	5
8:15-8:30	1		3	2	6	2	8	6
8:30-8:45	3	2	2	9	6	6	13	9
8:45-9:00	1	1		2	5	9	3	9
<b>Totals</b>	<b>21</b>	<b>17</b>	<b>31</b>	<b>44</b>	<b>77</b>	<b>39</b>	<b>49</b>	<b>48</b>
4:00-4:15		3	9	9	8	15	12	20
4:15-4:30		6	4	2	14	30	15	16
4:30-4:45		1	3	2	16	15	32	7
4:45-5:00		5	1	10	4	5	25	11
5:00-5:15		2	3	5	4	8	27	9
5:15-5:30		2		7	9	11	34	4
5:30-5:45		2		1	3	7	24	8
5:45-6:00		2		4	3	11	28	3
<b>Total</b>	<b>19</b>	<b>8</b>	<b>43</b>	<b>36</b>	<b>80</b>	<b>198</b>	<b>94</b>	<b>110</b>



LOCATION # 2.7

ETC PEDESTRIAN COUNT FORM - Bruckner/Sheridan Expressway Counts

Intersection: Riverdale & Prospect Date: 17-May-05

Location:

Time	N. Crosswalk		W. Crosswalk		E. Crosswalk		S. Crosswalk	
	3	4	1	2	5	6	7	8
7:00-7:15	22	3	43		3	35	4	14
7:15-7:30	41	9	50	3		59	3	10
7:30-7:45	17	4	27	2	9	22	6	8
7:45-8:00	18	17	32	11	6	35	6	7
8:00-8:15	24	3	31	13	5	31	11	9
8:15-8:30	16	8	20	9	12	18	10	4
8:30-8:45	7	10	21	18	7	16	7	6
8:45-9:00	32	11	28	10	11	15	7	10
<b>Totals</b>	<b>177</b>	<b>65</b>	<b>252</b>	<b>66</b>	<b>53</b>	<b>231</b>	<b>54</b>	<b>68</b>
4:00-4:15	6	19	20	31	5	30	18	7
4:15-4:30	11	8	22	19	18	24	4	4
4:30-4:45	12	8	17	20	6	17	10	10
4:45-5:00	9	5	23	19	17	13	13	5
5:00-5:15	4	16	26	18	18	15	15	6
5:15-5:30	5	8	22	36	36	13	13	15
5:30-5:45	9	11	35	40	20	12	12	10
5:45-6:00	14	7	13	20	17	9	13	4
<b>Total</b>	<b>70</b>	<b>82</b>	<b>178</b>	<b>203</b>	<b>137</b>	<b>133</b>	<b>98</b>	<b>61</b>

