CITY WATER TUNNEL SHAFT 33B
PEDESTRIAN APPENDICES:

1. SURVEY SHEETS

2. INTERSECTION GEOMETRIES

3. DATA REDUCTION SHEETS

4. HCS
   A. Chapter 4.10-Preferred Shaft Site 59th/1st

   B. Chapter 5.10-Water Main Scenario A

   C. Chapter 5.10-Water Main 59th/61st

   D. Chapter 8.10-Alternate Shaft Site 54th/2nd

Shaft 33B to City Water Tunnel No. 3

On-Street Pedestrian Counts

SURVEY DATE: December 21, 2004

SURVEY PERIOD:

AM Peak Period	7:00 AM	to	9:00 AM
MD Peak Period	12:00 PM	to	2:00 PM
PM Peak Period	4:00 PM	to	6:00 PM

LOCATION: 59th Street at First Avenue

Time Period			North Crosswalk		South Crosswalk		East Crosswalk		West Crosswalk		Corner				Sidewalk: West side of First Avenue between 60th and 59th Streets												South side of 59th Street between First and Second Avenues		North side of 59th Street between First and Second Avenues	
			EB	WB	EB	WB	NB	SB	NB	SB	NE	SE	SW	NW	NB	SB	EB	WB	NB	SB	EB	WB	EB	WB	NB	SB	EB	WB	EB	WB
7:00 AM	-	7:15 AM	0	3	10	5	11	2	3	3	0	2	17	7	9	5											18	12	5	4
7:15 AM	-	7:30 AM	2	3	11	10	13	15	14	11	1	2	17	4	14	10											24	20	3	5
7:30 AM	-	7:45 AM	4	8	21	12	11	15	8	18	0	2	31	7	12	20											39	23	4	4
7:45 AM	-	8:00 AM	5	8	19	11	21	12	7	23	3	5	29	6	14	25											43	26	3	1
8:00 AM	-	8:15 AM	1	3	21	22	18	31	11	26	1	5	28	2	9	25											34	47	0	4
8:15 AM	-	8:30 AM	6	4	32	40	29	17	20	25	0	3	50	7	21	20											54	56	4	5
8:30 AM	-	8:45 AM	2	1	42	25	32	34	10	26	2	6	37	3	8	33											54	46	1	2
8:45 AM	-	9:00 AM	6	6	33	38	50	33	17	36	2	8	42	3	17	30											55	55	1	2
Peak Time Period			6	6	33	38	50	33	17	36	2	8	42	3	17	30	0	0	0	0	0	0	0	0	0	0	55	55	1	2

LOCATION: 59th Street at First Avenue

Time Period			North Crosswalk		South Crosswalk		East Crosswalk		West Crosswalk		Corner				Sidewalk: West side of First Avenue between 60th and 59th Streets												South side of 59th Street between First and Second Avenues		North side of 59th Street between First and Second Avenues	
			EB	WB	EB	WB	NB	SB	NB	SB	NE	SE	SW	NW	NB	SB	EB	WB	NB	SB	EB	WB	EB	WB	NB	SB	EB	WB	EB	WB
12:00 PM	-	12:15 PM	15	5	17	30	39	43	30	31	2	13	35	8	27	25											37	36	19	4
12:15 PM	-	12:30 PM	9	14	22	19	62	35	21	26	4	15	14	5	24	24											36	32	7	3
12:30 PM	-	12:45 PM	10	18	21	23	61	46	11	30	8	9	26	25	19	36											39	50	12	12
12:45 PM	-	1:00 PM	7	5	26	25	68	53	12	30	6	11	26	13	22	28											47	40	10	7
1:00 PM	-	1:15 PM	10	6	37	23	81	56	28	21	7	10	31	7	31	16											69	36	4	3
1:15 PM	-	1:30 PM	10	14	26	23	55	63	40	26	6	5	36	6	39	23											51	40	5	4
1:30 PM	-	1:45 PM	9	7	19	25	65	54	30	31	5	13	18	5	30	35											43	49	9	3
1:45 PM	-	2:00 PM	20	10	38	28	76	53	38	33	0	11	25	2	29	31											49	40	3	3
Peak Time Period			29	10	38	28	76	53	38	33	0	11	25	2	29	31	0	0	0	0	0	0	0	0	0	0	49	40	3	3

LOCATION: 59th Street at First Avenue

Time Period			North Crosswalk		South Crosswalk		East Crosswalk		West Crosswalk		Corner				Sidewalk: West side of First Avenue between 60th and 59th Streets												South side of 59th Street between First and Second Avenues		North side of 59th Street between First and Second Avenues	
			EB	WB	EB	WB	NB	SB	NB	SB	NE	SE	SW	NW	NB	SB	EB	WB	NB	SB	EB	WB	EB	WB	NB	SB	EB	WB	EB	WB
4:00 PM	-	4:15 PM	12	13	20	49	42	57	24	29	4	9	24	9	25	27											48	67	3	5
4:15 PM	-	4:30 PM	6	15	26	45	54	53	29	34	6	14	20	4	30	28											59	76	4	3
4:30 PM	-	4:45 PM	10	10	26	39	47	59	30	28	4	20	26	5	30	30											44	60	3	7
4:45 PM	-	5:00 PM	14	6	29	25	58	47	24	26	6	10	48	8	25	30											56	60	6	8
5:00 PM	-	5:15 PM	14	12	23	28	59	73	26	37	4	9	32	6	30	27											47	59	7	8
5:15 PM	-	5:30 PM	7	15	34	49	66	65	33	56	4	12	39	8	29	38											56	58	2	5
5:30 PM	-	5:45 PM	15	11	36	24	76	58	29	32	1	4	41	4	27	33											60	45	7	1
5:45 PM	-	6:00 PM	13	12	51	27	94	47	36	26	6	14	32	6	43	24											69	42	5	2
Peak Time Period			15	11	36	24	76	58	29	32	1	4	41	4	27	33	0	0	0	0	0	0	0	0	0	0	60	45	7	1

Shaft 33B to City Water Tunnel No. 3

On-Street Pedestrian Counts

SURVEY DATE: March 30, 2004

SURVEY PERIOD:

AM Peak Period	7:00 AM	to	9:00 AM
MD Peak Period	12:00 PM	to	2:00 PM
PM Peak Period	4:00 PM	to	6:00 PM

LOCATION: 54th Street at Second Avenue

Time Period			North Crosswalk		South Crosswalk		East Crosswalk		West Crosswalk		Corner				Sidewalk															
																	East side of Second Avenue between 55th and 54th Streets		North side of 54th Street between Second Avenue and First		South side of 54th Street between Second Avenue and First									
			EB	WB	EB	WB	NB	SB	NB	SB	NE	SE	SW	NW	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	NB	SB	EB	WB	EB	WB
7:00 AM	-	7:15 AM	23	17	14	23	13	10			18	17					33	21	10	18	11	32								
7:15 AM	-	7:30 AM	22	10	18	24	7	24			12	7					26	22	19	25	27	30								
7:30 AM	-	7:45 AM	20	13	28	25	18	15			14	18					22	23	25	21	31	44								
7:45 AM	-	8:00 AM	24	21	28	52	27	27			9	19					33	30	20	25	34	52								
8:00 AM	-	8:15 AM	16	36	20	54	30	44			11	30					28	46	19	43	29	60								
8:15 AM	-	8:30 AM	26	43	19	53	28	33			11	30					28	30	28	34	21	73								
8:30 AM	-	8:45 AM	26	44	30	52	17	53			17	39					35	44	22	46	35	71								
8:45 AM	-	9:00 AM	29	47	42	58	37	54			14	38					34	52	26	51	46	57								
Peak Time Period			29	47	42	58	37	54	0	0	14	38	0	0	0	0	34	52	26	51	46	57	0	0	0	0	0	0	0	0

LOCATION: 54th Street at Second Avenue

Time Period			North Crosswalk		South Crosswalk		East Crosswalk		West Crosswalk		Corner				Sidewalk															
																	East side of Second Avenue between 55th and 54th Streets		North side of 54th Street between Second Avenue and First		South side of 54th Street between Second Avenue and First									
			EB	WB	EB	WB	NB	SB	NB	SB	NE	SE	SW	NW	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	NB	SB	EB	WB	EB	WB
12:00 PM	-	12:15 PM	36	25	32	25	47	51			18	8					47	42	22	29	39	35								
12:15 PM	-	12:30 PM	45	30	41	25	28	48			8	7					48	39	23	25	41	29								
12:30 PM	-	12:45 PM	44	28	31	27	29	50			28	29					38	51	28	28	34	35								
12:45 PM	-	1:00 PM	32	44	28	30	34	32			13	15					43	42	20	22	33	25								
1:00 PM	-	1:15 PM	33	36	37	22	36	34			21	6					39	50	29	30	32	29								
1:15 PM	-	1:30 PM	31	33	25	35	42	36			9	15					36	36	16	28	27	32								
1:30 PM	-	1:45 PM	24	49	25	27	36	36			14	12					41	50	19	31	26	31								
1:45 PM	-	2:00 PM	31	30	33	35	21	33			10	7					39	52	23	25	32	26								
Peak Time Period			44	28	31	27	29	50	0	0	28	29	0	0	0	0	38	51	28	28	34	35	0	0	0	0	0	0	0	0

LOCATION: 54th Street at Second Avenue

Time Period			North Crosswalk		South Crosswalk		East Crosswalk		West Crosswalk		Corner				Sidewalk															
																	East side of Second Avenue between 55th and 54th Streets		North side of 54th Street between Second Avenue and First		South side of 54th Street between Second Avenue and First									
			EB	WB	EB	WB	NB	SB	NB	SB	NE	SE	SW	NW	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	NB	SB	EB	WB	EB	WB
4:00 PM	-	4:15 PM	33	31	21	28	38	33			4	12					34	48	25	24	31	29								
4:15 PM	-	4:30 PM	22	27	31	42	37	43			7	23					35	36	21	29	44	38								
4:30 PM	-	4:45 PM	26	30	41	42	24	33			6	22					29	35	23	21	35	51								
4:45 PM	-	5:00 PM	22	16	35	35	25	27			7	12					40	41	25	29	39	32								
5:00 PM	-	5:15 PM	21	20	44	31	43	31			8	16					35	38	25	18	40	42								
5:15 PM	-	5:30 PM	30	31	55	42	41	40			8	24					48	40	27	29	55	42								
5:30 PM	-	5:45 PM	28	13	40	30	39	33			16	17					58	49	36	26	47	36								
5:45 PM	-	6:00 PM	47	35	63	28	65	41			6	23					76	49	39	22	58	44								
Peak Time Period			28	13	40	30	39	33	0	0	16	17	0	0	0	0	58	49	26	25	47	36	0	0	0	0	0	0	0	0

City Water Tunnel Shaft 33B

On-Street Pedestrian Counts

SURVEY DATE:	April 21, 2005			
SURVEY PERIOD:	**AM Peak Period**	7:00 AM	to	9:00 AM
	MD Peak Period	12:00 PM	to	2:00 PM
	PM Peak Period	4:00 PM	to	6:00 PM
	Average Peak Hour Factor:			

Time Period			East side of First Avenue between 59th and 58th Streets				
			NB	SB			
7:00 AM	-	7:15 AM	16	17	33		
7:15 AM	-	7:30 AM	26	24	50		
7:30 AM	-	7:45 AM	18	33	51		
7:45 AM	-	8:00 AM	28	38	66		
8:00 AM	-	8:15 AM	23	35	58		
8:15 AM	-	8:30 AM	45	46	91		
8:30 AM	-	8:45 AM	52	60	112	52	60
8:45 AM	-	9:00 AM	47	58	105		
Peak Time Period			**0**	**0**	**112**	**52**	**60**
12:00 PM	-	12:15 PM	27	25	52		
12:15 PM	-	12:30 PM	46	33	79		
12:30 PM	-	12:45 PM	36	44	80		
12:45 PM	-	1:00 PM	58	45	103		
1:00 PM	-	1:15 PM	51	58	109		
1:15 PM	-	1:30 PM	41	51	92		
1:30 PM	-	1:45 PM	75	42	117	75	42
1:45 PM	-	2:00 PM	50	43	93		
Peak Time Period			**0**	**0**	**117**	**75**	**42**
4:00 PM	-	4:15 PM	48	65	113		
4:15 PM	-	4:30 PM	51	74	125		
4:30 PM	-	4:45 PM	72	57	129		
4:45 PM	-	5:00 PM	69	57	126		
5:00 PM	-	5:15 PM	70	73	143		
5:15 PM	-	5:30 PM	69	54	123		
5:30 PM	-	5:45 PM	77	82	159	77	82
5:45 PM	-	6:00 PM	66	72	138		
Peak Time Period			**0**	**0**	**159**	**77**	**82**

Time Period			East side of First Avenue between 58th and 57th Streets				
			NB	SB			
7:00 AM	-	7:15 AM	30	39	69		
7:15 AM	-	7:30 AM	43	61	104		
7:30 AM	-	7:45 AM	27	69	96		
7:45 AM	-	8:00 AM	58	84	142		
8:00 AM	-	8:15 AM	35	83	118		
8:15 AM	-	8:30 AM	68	76	144		
8:30 AM	-	8:45 AM	58	116	174	58	116
8:45 AM	-	9:00 AM	45	101	146		
Peak Time Period			**0**	**0**	**174**	**58**	**116**
12:00 PM	-	12:15 PM	52	83	135		
12:15 PM	-	12:30 PM	87	103	190	87	103
12:30 PM	-	12:45 PM	70	63	133		
12:45 PM	-	1:00 PM	72	69	141		
1:00 PM	-	1:15 PM	68	74	142		
1:15 PM	-	1:30 PM	40	72	112		
1:30 PM	-	1:45 PM	81	61	142		
1:45 PM	-	2:00 PM	57	61	118		
Peak Time Period			**0**	**0**	**190**	**87**	**103**
4:00 PM	-	4:15 PM	75	78	153		
4:15 PM	-	4:30 PM	93	78	171		
4:30 PM	-	4:45 PM	87	61	148		
4:45 PM	-	5:00 PM	80	77	157		
5:00 PM	-	5:15 PM	86	48	134		

5:15 PM	-	5:30 PM	86	98	184		
5:30 PM	-	5:45 PM	91	81	172		
5:45 PM	-	6:00 PM	97	92	189	97	92
Peak Time Period			0	0	189	97	92

Time Period			East side of First Avenue between 57th and 56th Streets				
			NB	SB			
7:00 AM	-	7:15 AM	27	33	60		
7:15 AM	-	7:30 AM	32	38	70		
7:30 AM	-	7:45 AM	36	82	118		
7:45 AM	-	8:00 AM	33	60	93		
8:00 AM	-	8:15 AM	44	61	105		
8:15 AM	-	8:30 AM	51	71	122		
8:30 AM	-	8:45 AM	56	70	126	56	70
8:45 AM	-	9:00 AM	44	82	126	44	82
Peak Time Period			**0**	**0**	**126**	**56**	**82**
12:00 PM	-	12:15 PM	69	60	129		
12:15 PM	-	12:30 PM	67	70	137		
12:30 PM	-	12:45 PM	70	100	170	70	100
12:45 PM	-	1:00 PM	59	67	126		
1:00 PM	-	1:15 PM	56	56	112		
1:15 PM	-	1:30 PM	57	97	154		
1:30 PM	-	1:45 PM	81	86	167		
1:45 PM	-	2:00 PM	73	69	142		
Peak Time Period			**0**	**0**	**170**	**70**	**100**
4:00 PM	-	4:15 PM	74	106	180		
4:15 PM	-	4:30 PM	52	91	143		
4:30 PM	-	4:45 PM	76	91	167		
4:45 PM	-	5:00 PM	72	87	159		
5:00 PM	-	5:15 PM	56	58	114		
5:15 PM	-	5:30 PM	74	103	177		
5:30 PM	-	5:45 PM	113	81	194	113	81
5:45 PM	-	6:00 PM	84	88	172		
Peak Time Period			**0**	**0**	**194**	**113**	**81**

Time Period			East side of First Avenue between 56th and 55th Streets				
			NB	SB			
7:00 AM	-	7:15 AM	23	19	42		
7:15 AM	-	7:30 AM	13	32	45		
7:30 AM	-	7:45 AM	38	26	64		
7:45 AM	-	8:00 AM	38	37	75		
8:00 AM	-	8:15 AM	58	53	111		
8:15 AM	-	8:30 AM	46	55	101		
8:30 AM	-	8:45 AM	119	79	198	119	79
8:45 AM	-	9:00 AM	138	36	174		
Peak Time Period			**0**	**0**	**198**	**119**	**79**
12:00 PM	-	12:15 PM	53	42	95		
12:15 PM	-	12:30 PM	68	69	137		
12:30 PM	-	12:45 PM	64	49	113		
12:45 PM	-	1:00 PM	60	76	136		
1:00 PM	-	1:15 PM	70	73	143		
1:15 PM	-	1:30 PM	60	62	122		
1:30 PM	-	1:45 PM	75	70	145	75	70
1:45 PM	-	2:00 PM	58	64	122		
Peak Time Period			**0**	**0**	**145**	**75**	**70**
4:00 PM	-	4:15 PM	63	64	127		
4:15 PM	-	4:30 PM	75	78	153		
4:30 PM	-	4:45 PM	69	58	127		
4:45 PM	-	5:00 PM	60	56	116		
5:00 PM	-	5:15 PM	63	64	127		
5:15 PM	-	5:30 PM	86	76	162	86	76
5:30 PM	-	5:45 PM	66	58	124		
5:45 PM	-	6:00 PM	69	73	142		
Peak Time Period			**0**	**0**	**162**	**86**	**76**