



FACT SHEET

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VirginiaDOT.org

Elizabeth River Tunnels

225 State Street
Berkley Plaza
Norfolk, VA 23523-1099
Phone: (757) 494-2400/2401
Fax: (757) 494-2437

The Downtown Tunnel

- The Downtown Tunnel is known as the Norfolk-Portsmouth Bridge Tunnel and the First Tunnel.
- It consists of parallel tunnel tubes beneath the Southern Branch of the Elizabeth River.
- The tunnel also has a connecting drawbridge, the Berkley Bridge, which extends over the Elizabeth River Eastern Branch.
- The first tube, which is now the westbound lanes, opened May 23, 1952 and is 3,350 feet in length from the tunnel entrance to the exit.
- The second tube, the eastbound lanes, opened March 4, 1987 and is 3,813 feet from entrance to exit.

Interesting Facts:

- The lowest point of the Downtown Tunnel is 92 feet below the lowest expected water level based on the tide.
- The tunnel's average daily traffic in 1953 was 12,900 vehicles.
- The tunnel's average monthly traffic in 2004 was 3 million vehicles.
- ~~Tolls were originally placed on both the Midtown and the Downtown Tunnels but were removed on August 1, 1986.~~
- No pedestrians or bicyclists are allowed to travel through either the Midtown or Downtown Tunnel.
- The Downtown Tunnel carries the highest traffic volume of any tunnel in Hampton Roads.

The Midtown Tunnel

- The Midtown Tunnel is known as the Norfolk-Portsmouth Tunnel and the Second Tunnel.
- It consists of a single two-way tube beneath the main channel of the Elizabeth River.
- The tunnel opened September 6, 1962 and is 4,194 feet from entrance to exit.
- Average daily traffic in 1963 was 8,400 vehicles.
- The tunnel's average monthly traffic in 2004 was 900,000 vehicles.
- The lowest point of the Midtown Tunnel is 87.8 feet below the lowest expected water level.
- There is only one flood gate, protecting the Norfolk side of the tunnel.

(MORE)

Downtown and Midtown Tunnel Restrictions

- **Maximum Vehicle Height:** 13 feet 6 inches
- **Maximum Vehicle Width:** 1. Up to 8 feet 6 inches (without permit)
2. From 8 feet 6 inches to 11 feet (with permit)
- **Maximum Weight:** 80,000 pounds

Tunnel Personnel: **Tyrone Brown, Facility Manager**
O: 757-727-4804 C: 757--592-8087

Darrell Southerland, Bridge Tunnel Maintenance Superintendent
O: 757-494-2409 C: 757-328-1201

Emergency Contacts:

- Administration Building: (757) 494-2400 / 2401 (8 a.m. – 5 p.m., Monday - Friday)
- Downtown Control Room: (757) 494-2424 / 2425 (after 5 p.m. and weekends)
- Midtown Control Room: (757) 683-8119 / 823-8425 (after 5 p.m. and weekends)

Additional Information on the Midtown Tunnel:

- The tunnel flooded on September 18 during Hurricane Isabel
- The tunnel reopened on October 15, several days earlier than planned
- The Midtown Tunnel flood gate was not fully tested for at least two years prior to Isabel
- Partial tests monitored pulley and motor systems to ensure that they were working, but did not fully seat the gate
- A steel plate covers the gap in the roadway where the tunnel gate locks into place. It is bolted into place, but can still be dislodged and will sometimes fly out into traffic. To prevent this sort of incident, the plate was tack welded into place. This type of welding is supposed to be easily broken during an emergency. Workers were able to remove the four bolts during the storm, but were unable to break the weld before they were overwhelmed with water.
- Water levels rose more quickly than the 2 hour warning period that the tunnel's alarm systems are supposed to provide for
- Several tunnel workers tried to remove the plate through dangerous conditions during the hurricane, risking their lives
- A VDOT truck was only thing lost in the tunnel
- 44 million gallons of water entered the tunnel
- Repairs to the tunnel are estimated at \$2 million
- The tunnel suffered substantial electrical and mechanical damage, however, it was not damaged structurally. We hired a contractor, Garner Environmental, to remove the water and sediment. When the water was cleared of the tunnel, we fully inspected its structural integrity, repaired damaged electrical and mechanical components, replaced and cleaned ceiling tiles and repaved the approaches.

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Hampton Roads District

Tunnel

Traffic Volume

and

Stoppage Reports

for

June 2008

Reporting Facilities:

Elizabeth River Downtown Tunnel

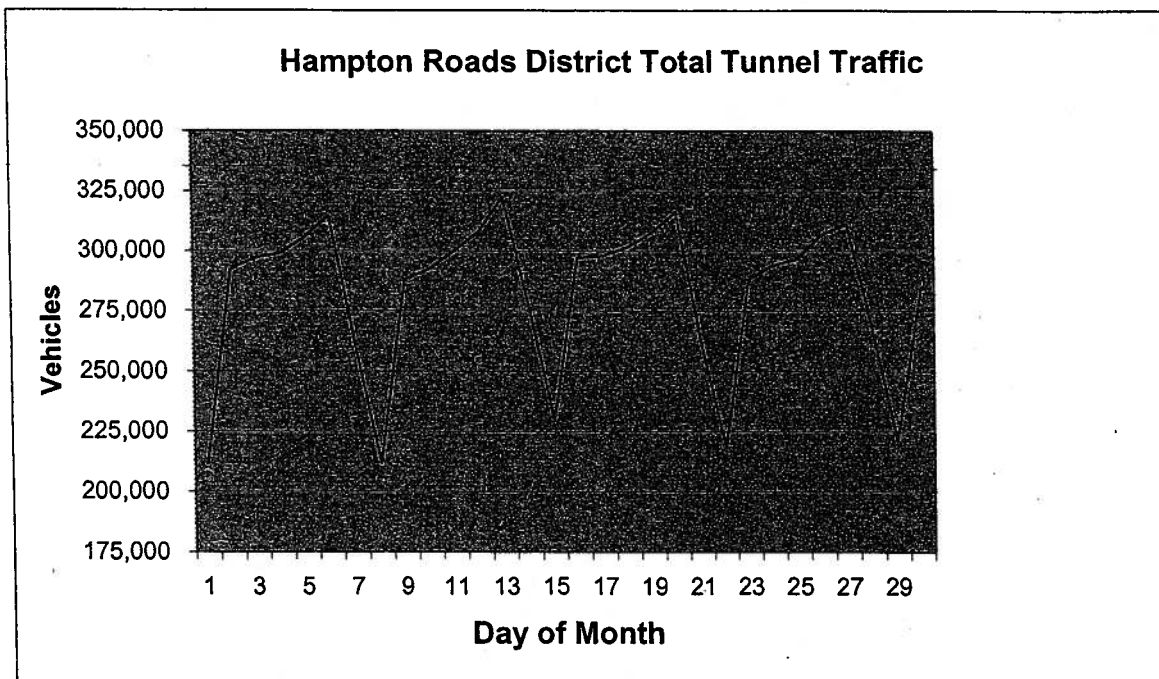
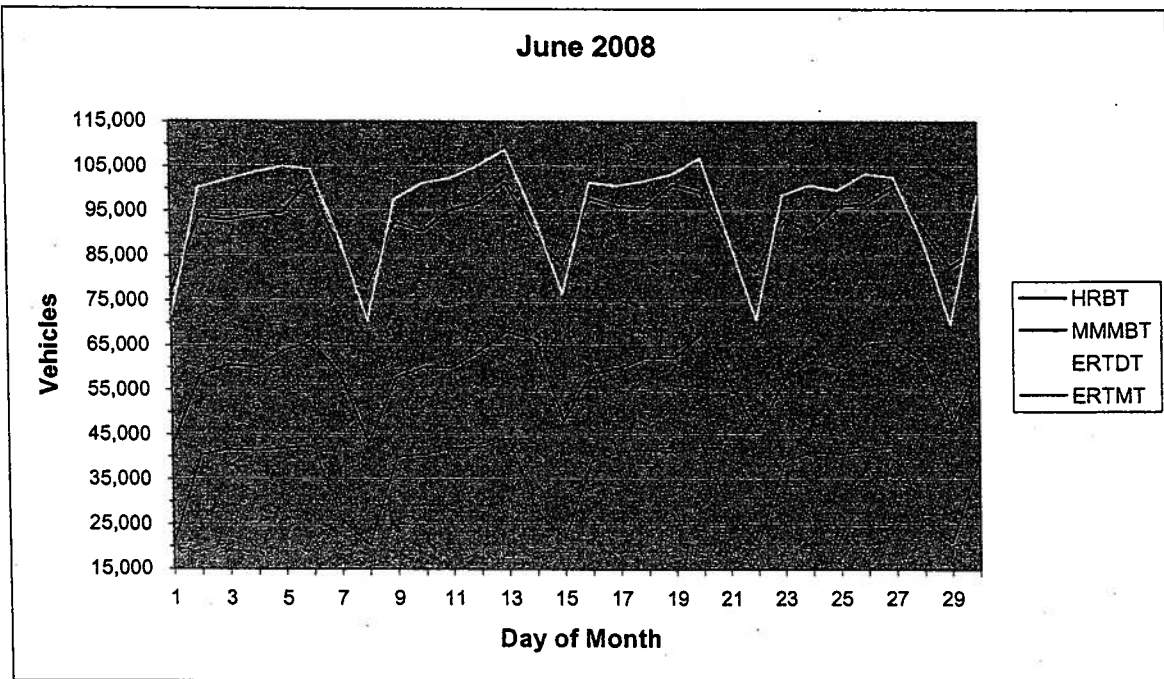
Elizabeth River Midtown Tunnel

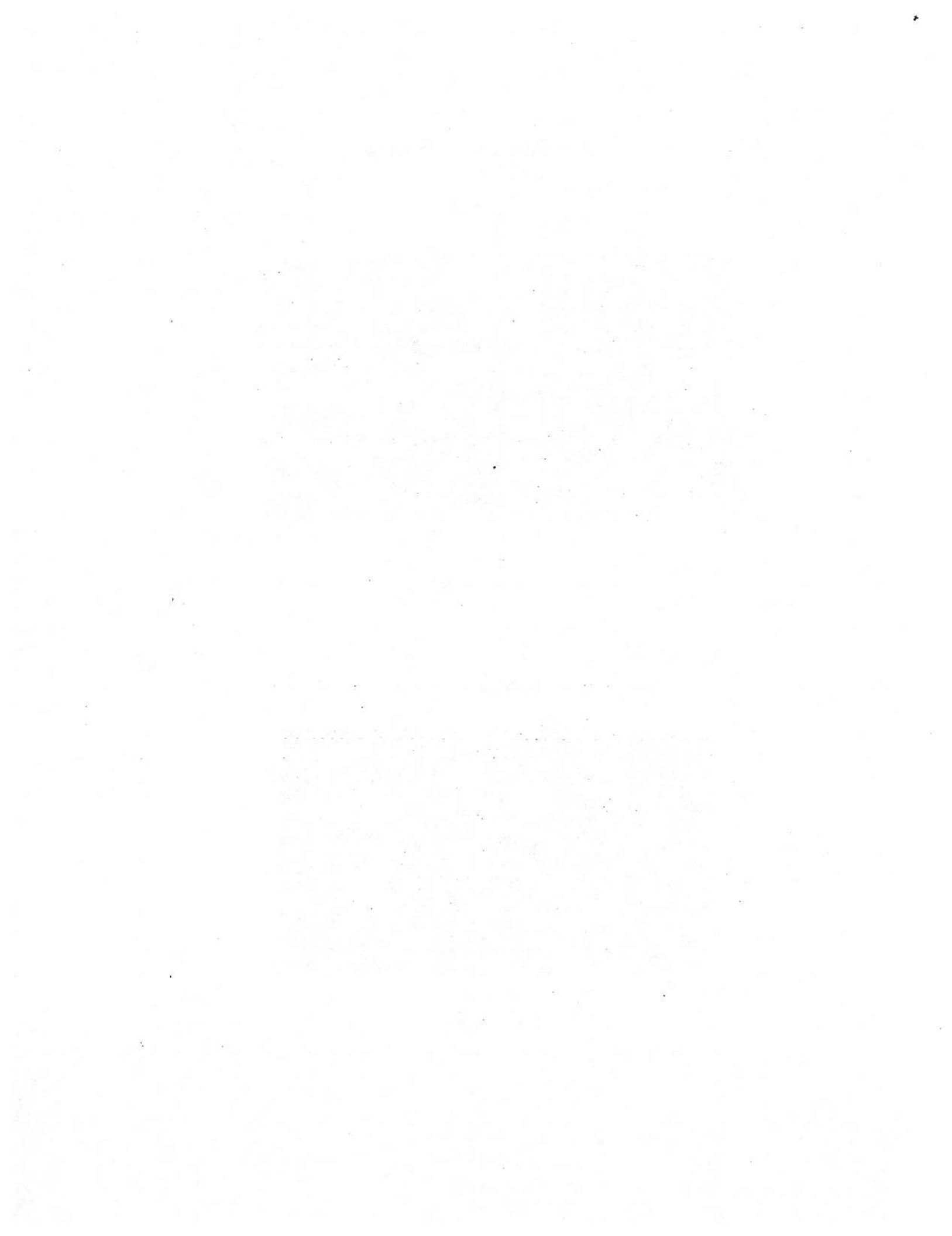
Hampton Roads Bridge Tunnel

Monitor Merrimac Memorial Bridge Tunnel



June Tunnel Volumes





Elizabeth River Downtown Tunnel
Traffic Count Comparison

June 2007				June 2008			
<u>Day</u>	<u>E/Bound</u>	<u>W/Bound</u>	<u>Total</u>	<u>Day</u>	<u>E/Bound</u>	<u>W/Bound</u>	<u>Total</u>
1	53043	55945	108,988	1	34264	37144	71,408
2	51764	55117	106,881	2	47456	52771	100,227
3	36904	39737	76,641	3	48193	53725	101,918
4	49122	49646	98,768	4	48900	54745	103,645
5	50124	52022	102,146	5	50191	54825	105,016
6	52145	52652	104,797	6	49528	55042	104,570
7	52057	53552	105,609	7	43797	45458	89,255
8	52738	55893	108,631	8	33832	36544	70,376
9	45558	47269	92,827	9	47121	50550	97,671
10	37642	40292	77,934	10	47948	53331	101,279
11	48989	51355	100,344	11	48909	53456	102,365
12	50321	52547	102,868	12	50621	54555	105,176
13	50363	52634	102,997	13	52454	56315	108,769
14	48221	52036	100,257	14	45736	48202	93,938
15	52802	57404	110,206	15	35913	40521	76,434
16	47424	48753	96,177	16	49059	52371	101,430
17	38317	41142	79,459	17	49200	51570	100,770
18	49721	51705	101,426	18	48322	53475	101,797
19	50693	51426	102,119	19	49679	53708	103,387
20	48246	49579	97,825	20	52305	54686	106,991
21	51428	54719	106,147	21	43518	45715	89,233
22	53790	57702	111,492	22	33637	37007	70,644
23	45288	46804	92,092	23	47272	51340	98,612
24	36318	41066	77,384	24	48598	52247	100,845
25	48303	51768	100,071	25	48034	51673	99,707
26	49696	53945	103,641	26	49445	53943	103,388
27	50671	54527	105,198	27	49555	53137	102,692
28	51033	55551	106,584	28	43270	45447	88,717
29	52324	55744	108,068	29	33186	36657	69,843
30	45290	46770	92,060	30	47826	50792	98,618
Total	1,450,335	1,529,302	2,979,637	Total	1,377,769	1,490,952	2,868,721
Sum	Jun-07	2,979,637					
Sum	Jun-08	2,868,721		3.72%	Decrease	Monthly total change	
ADT	Jun-07	99,321					
ADT	Jun-08	95,624		3.72%	Decrease	Daily average change	

Elizabeth River Midtown Tunnel
Traffic Count Comparison

June 2007				June 2008			
<u>Day</u>	<u>E/Bound</u>	<u>W/Bound</u>	<u>Total</u>	<u>Day</u>	<u>E/Bound</u>	<u>W/Bound</u>	<u>Total</u>
1	21064	20526	41,590	1	10699	9649	20,348
2	15	39	54	2	21756	18587	40,343
3	4101	1786	5,887	3	20890	20718	41,608
4	19369	16678	36,047	4	20146	21152	41,298
5	20614	21283	41,897	5	21060	20880	41,940
6	20357	21407	41,764	6	22063	20448	42,511
7	20701	21602	42,303	7	13431	12469	25,900
8	21189	20585	41,774	8	9923	10268	20,191
9	14325	12859	27,184	9	19971	19999	39,970
10	10330	11099	21,429	10	20498	20107	40,605
11	19920	20015	39,935	11	21323	20659	41,982
12	20654	20929	41,583	12	21288	20789	42,077
13	21646	21792	43,438	13	22940	21349	44,289
14	21426	22047	43,473	14	14401	13325	27,726
15	21632	20453	42,085	15	10635	11103	21,738
16	13393	12668	26,061	16	19791	19183	38,974
17	10004	10626	20,630	17	20672	20587	41,259
18	20775	19301	40,076	18	20661	20998	41,659
19	19998	21271	41,269	19	20627	20464	41,091
20	19874	21402	41,276	20	20828	21482	42,310
21	21113	21097	42,210	21	14290	13159	27,449
22	21049	20793	41,842	22	19073	10677	20,750
23	13120	12641	25,761	23	19794	19196	38,990
24	10077	10944	21,021	24	20641	20551	41,192
25	20283	19700	39,983	25	20492	20189	40,681
26	20133	19664	39,797	26	20914	20674	41,588
27	20850	21214	42,064	27	21341	20881	42,222
28	21432	22083	43,515	28	13162	12384	25,546
29	21067	20635	41,702	29	10085	10834	20,919
30	13325	12598	25,923	30	20576	19226	39,802
Total	523,836	519,737	1,043,573	Total	544,971	531,987	1,076,958
Sum	Jun-07	1,043,573					
Sum	Jun-08	1,076,958		3.20%	Increase	Monthly total change	
ADT	Jun-07	34,786					
ADT	Jun-08	35,899		3.20%	Increase	Daily average change	

ELIZABETH RIVER MIDDTOWN TUNNEL (Rt. 58)

Traffic Stoppage Report

June 2008

Shift	10PM - 6AM Shift		6AM - 2PM Shift		2PM - 10PM Shift		Total
	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	
Stoppage	2	1	7	5	6	9	20
Measure	3	1	2	2	4	4	10
Turned Around	2	1	1	2	5	1	12
Inspected			2	5	2	1	10
Assess			1				1
Other							0
Missed	30	30	13	10	9	9	101
Total	37	33	26	22	26	20	164

Overheight Vehicles:

Overheight Vehicles Stopped and Measured:
 Westbound: 70 Eastbound: 170 **Total: 240**

Overheight Vehicles Turned Around:
 Westbound: 33 Eastbound: 116 **Total: 149**

Overheight Vehicles Stopped for Same Month of 2007: **Total: 135**

Vehicle Inspections:

Route 58 East (Sta. 15) 523
 Route 58 East (Sta. 16) 364
 Route 58 West (Sta. 12) 747
Total: 1,634
Same Month 2007 Total 1,420

ELIZABETH RIVER DOWNTOWN TUNNEL (E-264)

Traffic Stoppage Report

June 2008

	10PM - 6AM Shift				6AM - 2PM Shift				2PM - 10PM Shift				Total
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	
Reflected V. Inspected	1	2	1	3	1	13	4	10	4	10	11	12	69
Penalties	1	2	1	3	1	2	1	1	2	1		1	11
Other	5	1	2	2	5	3	3	4	2	7	8	4	41
Accident	1	1	1	1	3	8	1	4	4	7			30
Missed Inspections	5		2	2	4		2	3		2		3	21
Penalty	2	14	2	8	8	32	12	21	12	28	21	20	150

Overheight Vehicles:

Overheight Vehicles Stopped and Measured:
 Westbound: 612 Eastbound: 388 Total: 1,000

Overheight Vehicles Turned Around:
 Westbound: 433 Eastbound: 186 Total: 619

Overheight Vehicles Stopped Total for Same Month of 2007: Total: 1,288 Berkeley Bridge Draw Openings: 50

Vehicle Inspections:

264 (E) / Desnoire: 1,588
 264 (E) / Ramp D: 868
 464 (W): 1,191
 264 (W): 1,710
 Total: 5,357
 Same Month 2007 Total: 5,093