Traffic and Transportation Technical Report Appendices
Prepared in Support of the Supplemental Environmental Impact Statement

VDOT
U.S. Department of Transportation
Federal Highway Administration
April 2017
APPENDIX A:
2040 NO-BUILD
TRAFFIC VOLUMES AND ANALYSIS
Legend

xxx,xxx Weekday Daily Volume

2040 No-Build
Weekday Daily Volumes
I-64 Corridor

April 2017
Figure A.1-3
## 2040 No-Build

### Weekday Daily Volumes

#### I-664 Corridor

<table>
<thead>
<tr>
<th>Location</th>
<th>L Lane</th>
<th>T Lane</th>
<th>R Lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen Road</td>
<td>7,400</td>
<td>4,300</td>
<td>11,700</td>
</tr>
<tr>
<td>Chestnut Avenue</td>
<td>4,900</td>
<td>2,300</td>
<td>3,900</td>
</tr>
<tr>
<td>Roanoke Avenue</td>
<td>5,000</td>
<td>2,400</td>
<td>4,400</td>
</tr>
</tbody>
</table>

### Legend

- **xx,xxx** Weekday Daily Volume
Legend

**xx,xxx** Weekday Daily Volume
Legend

xxx (xxx) AM (PM) Peak Hour Volume

2040 No-Build
Peak Hour Volumes
I-64 Corridor

April 2017
Figure A.2-1
Legend

xxxx (xxxx) AM (PM) Peak Hour Volume

2040 No-Build

Peak Hour Volumes

I-64 Corridor

April 2017

Figure A.2-3
###Legend

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM (PM) Peak Hour Volume</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

###2040 No-Build

####Peak Hour Volumes

**I-664 Corridor**

<table>
<thead>
<tr>
<th>Location</th>
<th>AM Volumes</th>
<th>PM Volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen Road</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roanoke Avenue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend**

- AM (PM) Peak Hour Volume

**Map of I-664 Corridor with Peak Hour Volumes**

- Aberdeen Road: 175 (185) AM, 445 (685) PM
- Roanoke Avenue: 85 (95) AM, 80 (85) PM

**Figure A.2-6**

*Source: Virginia Department of Transportation (VDOT)*
Legend

xxx (xxx) AM (PM) Peak Hour Volume

2040 No-Build
Peak Hour Volumes
I-664 Corridor

April 2017
Figure A.2-10
Legend

x.xxx (x.xxx) AM (PM) Peak Hour Volume

2040 No-Build
Peak Hour Volumes
VA 164 Corridor

April 2017 Figure A.2-13
Legend

x.xxx (x.xxx) AM (PM) Peak Hour Volume

2040 No-Build
Peak Hour Volumes
VA 164 Corridor

April 2017 Figure A.2-14
Legend

| x,xxx (x,xxx) | AM (PM) Peak Hour Volume |

2040 No-Build

Peak Hour Volumes

VA 164 Corridor

April 2017

Figure A.2-15
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

101 series 1-64 Eastbound
200 series 1-64 Westbound
300 series 1-564 Eastbound
400 series 1-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

101 - Mainline: D (D)
102 - Weave: F (F)
103 - Mainline: D (D)
104 - Merge: D (D)
105 - Merge: D (D)
106 - Mainline: D (D)
107 - Diverge: D (D)

223 - Mainline: C (C)
224 - Diverge: C (C)
225 - Mainline: C (C)
226 - Diverge: C (C)
227 - Mainline: C (C)
228 - Mainline: C (C)
229 - Mainline: C (C)

2040 No-Build

Level of Service

I-64 Corridor

April 2017

Figure A.3-1
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound
Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
I-64 Corridor
April 2017
Figure A.3-2
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

103 series 1-64 Eastbound
203 series 1-64 Westbound
303 series 1-564 Eastbound
403 series 1-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service

I-64 Corridor

April 2017

Figure A.3-4
Legend

X  (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series  I-664 Eastbound/Southbound

600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
I-664 Corridor

April 2017  Figure A.3-5
Legend

AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
I-664 Corridor

April 2017  Figure A.3-6
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
I-664 Corridor

April 2017
Figure A.3-7
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
I-664 Corridor

April 2017

Figure A.3-8
Legend

<table>
<thead>
<tr>
<th>X (X)</th>
<th>AM (PM) Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 series</td>
<td>I-664 Eastbound/Southbound</td>
</tr>
<tr>
<td>600 series</td>
<td>I-664 Westbound/Northbound</td>
</tr>
</tbody>
</table>

Numbered items correspond to freeway segments, evaluated using HCS

Lettered items correspond to intersections, evaluated using Synchro

Figure A.3-9
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
I-664 Corridor
April 2017
Figure A.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

- 500 series I-664 Eastbound/Southbound
- 600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
I-664 Corridor
April 2017  Figure A.3-11

Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

- 500 series I-664 Eastbound/Southbound
- 600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
I-664 Corridor
April 2017  Figure A.3-11
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build
Level of Service
VA 164 Corridor

April 2017

Figure A.3-12
Legend
X (X)  AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
700 series  VA 164 Eastbound
800 series  VA 164 Westbound
Lettered items correspond to intersections, evaluated using Synchro
APPENDIX B:
2040 ALTERNATIVE A
TRAFFIC VOLUMES AND ANALYSIS
Legend

xx,xxx  Weekday Daily Volume

NOT TO SCALE
### 2040 Alternative A

#### Weekday Daily Volumes

**I-664 Corridor**

**April 2017**

**Figure B.1-6**

<table>
<thead>
<tr>
<th>Node</th>
<th>Direction</th>
<th>Aberdeen Road</th>
<th>Chestnut Avenue</th>
<th>Roanoke Avenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>R</td>
<td>10,000</td>
<td>5,000</td>
<td>800</td>
</tr>
<tr>
<td>2</td>
<td>T</td>
<td>5,000</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>3</td>
<td>T</td>
<td>3,000</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td>4</td>
<td>L</td>
<td>2,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
</tbody>
</table>

**Legend**

- **xx,xxx** Weekday Daily Volume
- **NOT TO SCALE**
Legend

xxx Weekday Daily Volume
NOT TO SCALE

2040 Alternative A
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure B.1-9
Figure B.1-11

2040 Alternative A
Weekday Daily Volumes
I-664 Corridor

April 2017

Legend

**xx,xxx** Weekday Daily Volume

NOT TO SCALE
Legend

x,xxx (x,xxx) AM/PM Peak Hour Volume

NOT TO SCALE

2040 Alternative A
Peak Hour Volumes
I-64 Corridor

April 2017

Figure B.2-3
Legend

AM (PM) Peak Hour Volume

NOT TO SCALE

HRCS SEIS

Hampton Roads Crossing Study SEIS

2040 Alternative A
Peak Hour Volumes
I-664 Corridor

April 2017
Figure B.2-6

Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE
2040 Alternative A
Peak Hour Volumes
VA 164 Corridor

Legend

\( x,xxx (x,xxx) \) AM (PM) Peak Hour Volume

NOT TO SCALE

Figure B.2-13
Legend
x,x,x (x,x,x) AM/PM Peak Hour Volume
NOT TO SCALE
Figure B.2-15

2040 Alternative A
Peak Hour Volumes
VA 164 Corridor

Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE
Legend
X (X) AM/PM Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound
Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative A
Level of Service
I-64 Corridor
Figure B.3-3
April 2017
100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Legend
X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

126 - Diverge: F (D)
301 - Mainline: A (B)
302 - Merge: A (B)
AK - Signalized: B (C)
361 - Mainline: A (B)
362 - Merge: A (B)
363 - Mainline: A (B)
Intermodal Connector
461 - Mainline: B (A)
462 - Diverge: B (A)

Lettered items correspond to intersections, evaluated using Synchro

204 - Lane Add F (D)
201 - Mainline E (D)
202 - Diverge E (D)
401 - Mainline D (A)
402 - Merge: D (B)
403 - Weave: C (A)
405 - Diverge: C (A)
406 - Mainline B (A)
463 - Mainline B (A)

2040 Alternative A
Level of Service
I-64 Corridor
April 2017
Figure B.3-4
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

503 series I-664 Eastbound/Southbound
509 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative A
Level of Service
I-664 Corridor

April 2017

Figure B.3-5
Legend

**X** (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

- 508 - Diverge: C (B)
- 509 - Mainline: C (B)
- 510 - Weave: C (B)
- 511 - Mainline: C (B)
- 513 - Mainline: C (B)
- 512 - Merge: C (B)
- 514 - Mainline: C (B)
- 516 - Mainline: C (B)
- 517 - Merge: C (B)
- 518 - Mainline: C (B)
- 519 - Mainline: C (B)
- 520 - Mainline: C (B)

Lettered items correspond to intersections, evaluated using Synchro

- P - Stop Control: B (B)
- S - Signalized: A (B)
- T - Signalized: A (B)
- U - Signalized: B (B)
- Q - Signalized: B (B)
- R - Signalized: C (B)
- O - Signalized: C (A)

2040 Alternative A
Level of Service
I-664 Corridor

April 2017
Figure B.3-6
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

Figure B.3-8

HCRS SEIS
Hampton Roads Crossing Study SEIS

2040 Alternative A
Level of Service
I-664 Corridor

April 2017
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative A
Level of Service
I-664 Corridor

April 2017
Figure B.3-9
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

555 series I-664 Eastbound/Southbound

450 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative A

Level of Service

I-664 Corridor

April 2017

Figure B.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative A

Level of Service

I-664 Corridor

April 2017

Figure B.3-11
Legend

X (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series  VA 164 Eastbound
800 series  VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure B.3-15

2040 Alternative A
Level of Service
VA 164 Corridor

April 2017
APPENDIX C:
2040 ALTERNATIVE B
TRAFFIC VOLUMES AND ANALYSIS
Legend

xxx Weekday Daily Volume

NOT TO SCALE

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T</td>
<td>L</td>
<td>Armistead Ave</td>
</tr>
<tr>
<td>R</td>
<td>12,000</td>
<td>15,100</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>16,000</td>
<td>4,100</td>
<td></td>
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</table>

I-64 Corridor

2040 Alternative B
Weekday Daily Volumes

April 2017  
Figure C.1-1
Weekday Daily Volumes
I-664 Corridor

2040 Alternative B

Legend

Weekday Daily Volume

NOT TO SCALE
Figure C.1-11

2040 Alternative B
Weekday Daily Volumes
I-664 Corridor

April 2017

Legend

** xx,xxx Weekday Daily Volume

NOT TO SCALE
Legend

xx,xxx Weekday Daily Volume

NOT TO SCALE

2040 Alternative B
Weekday Daily Volumes
VA 164 Corridor

April 2017
Figure C.1-12
NOT TO SCALE

Legend
xx,xxx Weekday Daily Volume

Hampton Roads Crossing Study SEIS
Virginia Department of Transportation

2040 Alternative B
Weekday Daily Volumes
VA 164 Corridor
April 2017

Figure C.1-14
NOT TO SCALE

Legend

Notes

Exhibit is intended to show traffic volumes only. Craney Island Connector and I-64 Connector final alignment to be determined. Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

2040 Alternative B

Weekday Daily Volumes

Elizabeth River Connectors

April 2017

Figure C.1-16
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

2040 Alternative B
Peak Hour Volumes
I-64 Corridor

April 2017 Figure C.2-1
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE
Legend

xxx (xxx) AM (PM) Peak Hour Volume

NOT TO SCALE
Legend

x,xxx (x,xxx) AM/PM Peak Hour Volume

NOT TO SCALE

---

**2040 Alternative B**

**Peak Hour Volumes**

**I-664 Corridor**

April 2017

Figure C.2-6
Legend

 x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

2040 Alternative B
Peak Hour Volumes
I-664 Corridor

April 2017
Figure C.2-8
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE
Legend

x.xxx (x.xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

2040 Alternative B
Peak Hour Volumes
I-664 Corridor

April 2017

Figure C.2-10
Legend
x,xxx (x,xxx) AM (PM) Peak Hour Volume
NOT TO SCALE

2040 Alternative B
Peak Hour Volumes
I-664 Corridor

April 2017
Figure C.2-11
Legend

- xxx (xxx) AM (PM) Peak Hour Volume

NOT TO SCALE
2040 Alternative B
Peak Hour Volumes
VA 164 Corridor
April 2017  Figure C.2-14
Legend

- 8,xxx (2,xxx) AM (PM) Peak Hour Volume
- NOT TO SCALE

Notes

Exhibit is intended to show traffic volumes only.
Craney Island Connector and I-564 Connector final alignment to be determined.
Hampton Boulevard Interchange at Intermediate Connector final configuration to be determined.
Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

2040 Alternative B
Peak Hour Volumes
Elizabeth River Connectors

April 2017
Figure C.2-16
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

101 series I-64 Eastbound
201 series I-64 Westbound
301 series 255 Eastbound
401 series 255 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure C.3-1
Legend
X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series 1-64 Eastbound
200 series 1-64 Westbound
300 series 1-564 Eastbound
400 series 1-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative B
Level of Service
I-64 Corridor
April 2017
Figure C.3-2
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>126</td>
<td>Diverge: F</td>
<td>(F)</td>
</tr>
<tr>
<td>301</td>
<td>Mainline: A</td>
<td>(B)</td>
</tr>
<tr>
<td>302</td>
<td>Merge: A</td>
<td>(B)</td>
</tr>
<tr>
<td></td>
<td>Signalized: B</td>
<td>(C)</td>
</tr>
<tr>
<td></td>
<td>Mainline: A</td>
<td>(B)</td>
</tr>
<tr>
<td></td>
<td>Mainline: C</td>
<td>(B)</td>
</tr>
<tr>
<td>306</td>
<td>Merge: B</td>
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<td>307</td>
<td>Mainline: B</td>
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<td>308</td>
<td>Diverge: B</td>
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<td></td>
<td>Mainline: F</td>
<td>(D)</td>
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<td>309</td>
<td>Mainline: B</td>
<td>(F)</td>
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<td>127</td>
<td>Merge: F</td>
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<td>304</td>
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<td>Merge: E</td>
<td>(B)</td>
</tr>
<tr>
<td>403</td>
<td>Weave: D</td>
<td>(A)</td>
</tr>
<tr>
<td>405</td>
<td>Diverge: B</td>
<td>(A)</td>
</tr>
<tr>
<td>406</td>
<td>Mainline: A</td>
<td>(A)</td>
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<td>201</td>
<td>Mainline: E</td>
<td>(D)</td>
</tr>
<tr>
<td>202</td>
<td>Diverge: E</td>
<td>(D)</td>
</tr>
<tr>
<td>203</td>
<td>Mainline: D</td>
<td>(C)</td>
</tr>
<tr>
<td>204</td>
<td>Lane Add: E</td>
<td>(D)</td>
</tr>
</tbody>
</table>

2040 Alternative B
Level of Service
I-64 Corridor

April 2017
Figure C.3-4
Legend

X (X)  AM/PM  Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative B
Level of Service
I-664 Corridor

April 2017  Figure C.3-5
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

- 508 Diverge: C (B)
- 509 Mainline: C (B)
- 510 Weave: C (B)
- 511 Mainline: B (B)
- 512 Merge: B (B)
- 513 Mainline: C (B)
- 514 Mainline: A (B)
- 515 Mainline: B (B)
- 516 Mainline: C (B)
- 517 Merge: D (B)
- 518 Mainline: C (B)
- 519 Mainline: C (B)
- 520 Diverge: C (B)
- 521 Mainline: C (B)
- 522 Mainline: C (B)
- 523 Diverge: C (B)

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative B
Level of Service
I-664 Corridor

April 2017 Figure C.3-6

VDOT Virginia Department of Transportation
US Department of Transportation Federal Highway Administration
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS.

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro.

2040 Alternative B
Level of Service
I-664 Corridor

April 2017

Figure C.3-7
Legend

X (X) AM/PM level of service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro.

2040 Alternative B
Level of Service
I-664 Corridor
April 2017 Figure C.3-8
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

Legend

BB - Stop Control: F (F)
AL - Signalized: A (A)
AM - Signalized: E (F)
BA - Signalized: A (B)
532 - Diverge: A (B)
533 - Mainline: A (C)
534 - Merge: B (B)
535 - Mainline: B (D)
536 - Merge: C (F)
622 - Mainline: D (B)
623 - Weave: D (B)
624 - Mainline: D (B)
625 - Merge: C (B)
BH - Yield Control: C (C)

2040 Alternative B
Level of Service
I-664 Corridor

April 2017
Figure C.3-9
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative B
Level of Service
I-664 Corridor

April 2017
Figure C.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

551 - Diverge: D (D)
552 - Mainline: C (C)
553 - Weave: C (C)
554 - Mainline: C (C)
555 - Merge: F (D)
557 - Diverge: C (B)
556 - Mainline: F (E)
558 - Diverge: C (B)
559 - Mainline: B (B)
601 - Mainline: A (C)
602 - Weave: F (F)
603 - Mainline: C (B)
604 - Merge: C (B)
605 - Mainline: D (C)
606 - Merge: F (C)

2040 Alternative B

Level of Service

I-664 Corridor

April 2017

Figure C.3-11
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative B
Level of Service
VA 164 Corridor

April 2017
Figure C.3-12
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative B
Level of Service
VA 164 Corridor
April 2017 Figure C.3-13
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative B
Level of Service
VA 164 Corridor

April 2017 Figure C.3-14
Notes

- Exhibit is intended to show traffic volumes only.
- Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.
- Hampton Boulevard Interchange at Intermediate Connector final configuration to be determined.
- Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

Legend

- X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

- 900 series James River Connectors Eastbound/Northbound
- 1000 series James River Connectors Westbound/Southbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative B
Level of Service
Elizabeth River Connectors
April 2017
Figure C.3-16
APPENDIX D:

2040 ALTERNATIVE C

TRAFFIC VOLUMES AND ANALYSIS
Legend

xx,xxx Weekday Daily Volume

NOT TO SCALE

2040 Alternative C
Weekday Daily Volumes
I-64 Corridor

April 2017
Figure D.1-2
Legend

xx,xxx Weekday Daily Volume

NOT TO SCALE

2040 Alternative C
Weekday Daily Volumes
I-64 Corridor

April 2017
Figure D.1-3
Legend

**Legend**

**Legend**

- xx.xxx Weekday Daily Volume

**NOT TO SCALE**

**Legend**

**Legend**

- **Legend**

**2040 Alternative C**

**Weekday Daily Volumes**

**I-664 Corridor**

April 2017

Figure D.1-8
Legend

NOT TO SCALE

Notes

Exhibit is intended to show traffic volumes only. Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined. Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

2040 Alternative C

Weekday Daily Volumes
Elizabeth River Connectors

April 2017

Figure D.1-16
Legend

1,xxx (x,xxx): AM (PM) Peak Hour Volume
NOT TO SCALE

2040 Alternative C
Peak Hour Volumes
I-64 Corridor

April 2017
Figure D.2-1
2040 Alternative C
Peak Hour Volumes

VA 164 Corridor

Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

HRC SEIS
Hampton Roads Crossing Study SEIS

US 17

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April 2017

Figure D.2-12
Legend

NOT TO SCALE

Notes

The exhibit is intended to show traffic volumes only.

Craney Island Connector, I-664 Connector, and I-564 Connector final alignment to be determined.

Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

2040 Alternative C
Peak Hour Volumes

Elizabeth River Connectors

April 2017

Figure D.2-16
Legend
X (X) AM/PM Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
101 series  I-64 Eastbound
102 series  I-64 Westbound
204 series  I-64 Eastbound
485 series  I-64 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-64 Corridor
April 2017
Figure D.3-1
Legend

X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-64 Corridor

April 2017
Figure D.3-3
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-64 Corridor

April 2017

Figure D.3-4
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-664 Corridor

April 2017  Figure D.3-5
Legend
X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-664 Corridor
April 2017
Figure D.3-6
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-664 Corridor

April 2017

Figure D.3-7
Legend
X (X) AM/PM Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-664 Corridor
April 2017  Figure D.3-8
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-664 Corridor

April 2017
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
I-664 Corridor

April 2017
Figure D.3-10
Legend

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2040 Alternative C
Level of Service
I-664 Corridor

April 2017
Figure D.3-11
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
VA 164 Corridor

April 2017
Figure D.3-12
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure D.3-13

2040 Alternative C
Level of Service
VA 164 Corridor

April 2017
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
700 series VA 164 Eastbound
800 series VA 164 Westbound
Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C
Level of Service
VA 164 Corridor
April 2017
Figure D.3-14
Legend
X (X) AM/PM Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
700 series VA 164 Eastbound
800 series VA 164 Westbound
Lettered items correspond to intersections, evaluated using Synchro

VA - Signalized: A (B)
AY - Signalized: B (A)
AX - Signalized: C (B)

728 - Diverge: C (B)
727 - Diverge: B (A)
726 - Lane Add: B (C)

807 - Lane Drop: B (D)
806 - Mainline: A (B)
805 - Merge: A (B)
804 - Merge: A (B)
803 - Mainline: A (B)
802 - Weave: A (B)

2040 Alternative C
Level of Service
VA 164 Corridor
April 2017
Figure D.3-15
Legend

X (X) AM (PM) Level of Service

Notes

Exhibit is intended to show traffic volumes only.
Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.
Hampton Boulevard Interchange at Intermediate Connector final configuration to be determined.
Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

Numbered items correspond to freeway segments, evaluated using HCS

1000 series - James River Connectors Westbound/Southbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative C

Level of Service

Elizabeth River Connectors

April 2017

Figure D.3-16
APPENDIX E:
2040 ALTERNATIVE D
TRAFFIC VOLUMES AND ANALYSIS
**Legend**

**xx,xxx** Weekday Daily Volume

NOT TO SCALE

---

**2040 Alternative D**

**Weekday Daily Volumes**

**I-64 Corridor**

April 2017  Figure E.1-1
Legend

xx,xxx Weekday Daily Volume
NOT TO SCALE

2040 Alternative D
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure E.1-8
NOT TO SCALE

Legend

xx,xxx Weekday Daily Volume

Notes

Exhibit is intended to show traffic volumes only. Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined. Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

2040 Alternative D
Weekday Daily Volumes
Elizabeth River Connectors

April 2017
Figure E.1-16
Legend

- x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

2040 Alternative D
Peak Hour Volumes
I-664 Corridor
April 2017
Figure E.2-6
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

2040 Alternative D
Peak Hour Volumes
I-664 Corridor

April 2017
Figure E.2-7
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<td>65 (130)</td>
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Legend

x,xxx (x,xxx) AM/PM Peak Hour Volume

NOT TO SCALE
2040 Alternative D
Peak Hour Volumes
I-664 Corridor

Legend

T,xxx (T,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE
Legend

x,xxx (x,xxx) AM/PM Peak Hour Volume

NOT TO SCALE

2040 Alternative D
Peak Hour Volumes
VA 164 Corridor

April 2017
Figure E.2-13
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume
NOT TO SCALE

2040 Alternative D
Peak Hour Volumes
VA 164 Corridor

April 2017  Figure E.2-14
Exhibit is intended to show traffic volumes only.

Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.

Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

**Legend**

- 1,xxx (1,xxx) AM (PM) Peak Hour Volume

**Notes**

- Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined.
- Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.
- Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound
Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
Level of Service
I-64 Corridor
April 2017
Figure E.3-1
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure E.3-2

2040 Alternative D
Level of Service
I-64 Corridor

April 2017
Legend

X (X)  AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series  I-64 Eastbound
200 series  I-64 Westbound
300 series  I-564 Eastbound
400 series  I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
Level of Service
I-64 Corridor

April 2017  Figure E.3-3
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
Level of Service
I-64 Corridor

April 2017 Figure E.3-4
Legend

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<tr>
<td>500 series</td>
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<td>600 series</td>
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2040 Alternative D
Level of Service
I-664 Corridor
April 2017
Figure E.3-5
Legend
X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
I-664 Corridor
Figure E.3-6

Legend
X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

Figure E.3-7

2040 Alternative D
Level of Service
I-664 Corridor
April 2017
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

See James River Connectors Sheet for I-664/I-644 Connector LOS Results
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
Level of Service
I-664 Corridor
April 2017  Figure E.3-9
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series | I-664 Eastbound/Southbound
600 series | I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
Level of Service
I-664 Corridor
April 2017
Figure E.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

- 501 series: I-664 Eastbound/Southbound
- 600 series: I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
Level of Service
I-664 Corridor

April 2017

Figure E.3-11
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
Level of Service
VA 164 Corridor

April 2017
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Alternative D
Level of Service
VA 164 Corridor

April 2017
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
761 - Mainline: B (A)
AP - Signalized: A (A)

762 - Lane Drop: B (B)

763 - Mainline: B (A)
AT - Signalized: A (A)

764 - Weave: B (B)

723 - Mainline: C (B)
AR - Stop Control: B (B)

724 - Merge: A (C)
AU - Stop Control: B (B)

725 - Mainline: C (B)
AV - Stop Control: B (C)

704 - Merge: B (C)
AP - Signalized: D (A)

705 - Merge: B (C)

706 - Lane Add: A (C)

2040 Alternative D
Level of Service
VA 164 Corridor
April 2017
Figure E.3-14
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro
Exhibit is intended to show traffic volumes only. Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined. Hampton Boulevard Interchange at Intermediate Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus. Numbered items correspond to freeway segments, evaluated using HCS 900 series James River Connectors Eastbound/Northbound 1000 series James River Connectors Westbound/Southbound Lettered items correspond to intersections, evaluated using Synchro
APPENDIX F:
2028 NO-BUILD
TRAFFIC VOLUMES AND ANALYSIS
Legend

xxxx Weekday Daily Volume

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Settlers Landing Rd

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Settlers Landing Rd

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2028 No-Build
Weekday Daily Volumes
I-64 Corridor

April 2017  Figure F.1-2
Legend

**Legend**

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**I-64 Corridor**

April 2017

Figure F.1-4
Legend

**xx,xxx** Weekday Daily Volume

2028 No-Build
Weekday Daily Volumes
I-664 Corridor

April 2017

Figure F.1-6

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2028 No-Build
Peak Hour Volumes
I-64 Corridor

Legend

4,xxx (4,xxx) AM (PM) Peak Hour Volume

Figure F.2-1
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume
Legend
x,xxx (x,xxx) AM (PM) Peak Hour Volume

2028 No-Build
Peak Hour Volumes
I-64 Corridor
April 2017
Figure F.2-3
Legend

xxx (xxx) AM (PM) Peak Hour Volume

2028 No-Build
Peak Hour Volumes
I-664 Corridor

April 2017
Figure F.2-5
Figure F.2-7

Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

2028 No-Build

Peak Hour Volumes

I-664 Corridor

April 2017
### 2028 No-Build

**Peak Hour Volumes**

**I-664 Corridor**

*April 2017*

**Legend**

- x.xxx [x.xxx] AM (PM) Peak Hour Volume

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**US 17**

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**US 17**

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**No-Build**

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**College Dr**

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<td></td>
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</tbody>
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---

**No-Build**

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>T</th>
<th>L</th>
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<tbody>
<tr>
<td>1,465 (3,090)</td>
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<td>R</td>
<td></td>
</tr>
<tr>
<td>1,360 (2,380)</td>
<td>T</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>1,265 (2,380)</td>
<td>T</td>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>

---

**Legend**

- x.xxx [x.xxx] AM (PM) Peak Hour Volume
### Legend

**x,xxx (x,xxx)** AM (PM) Peak Hour Volume

### 2028 No-Build

**Peak Hour Volumes**

**I-664 Corridor**

*Figure F.2-10*

<table>
<thead>
<tr>
<th>Location</th>
<th>AM 1 (595)</th>
<th>PM 1 (595)</th>
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<tbody>
<tr>
<td>Pughsville Road</td>
<td>305 (450)</td>
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<td>305 (450)</td>
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<td>305 (450)</td>
<td>305 (450)</td>
<td>305 (450)</td>
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<tr>
<td>Highbridge Road</td>
<td>555 (615)</td>
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<td>555 (615)</td>
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<td>555 (615)</td>
<td>555 (615)</td>
<td>555 (615)</td>
</tr>
<tr>
<td>Dock Landing Road</td>
<td>425 (405)</td>
<td>425 (405)</td>
<td>425 (405)</td>
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<td>425 (405)</td>
<td>425 (405)</td>
<td>425 (405)</td>
<td>425 (405)</td>
</tr>
</tbody>
</table>

*Note: Values are in thousands.*
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

2028 No-Build
Peak Hour Volumes

I-664 Corridor

April 2017 Figure F.2-11
Legend

xxx (xxx) AM (PM) Peak Hour Volume

2028 No-Build
Peak Hour Volumes
VA 164 Corridor

April 2017  Figure F.2-13
Legend

X (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series  I-64 Eastbound
200 series  I-64 Westbound
300 series  I-564 Eastbound
400 series  I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure F.3-3

2028 No-Build
Level of Service
I-64 Corridor
April 2017

VDOT
Hampton Roads Crossing Study SEIS
U.S. Department of Transportation
Federal Highway Administration
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

101 series I-64 Eastbound
201 series I-64 Westbound
301 series I-564 Eastbound
401 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
I-64 Corridor

April 2017

Figure F.3-4
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
I-664 Corridor

April 2017
Figure F.3-5
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

Date: April 2017

Figure F.3-6

2028 No-Build
Level of Service
I-664 Corridor

VDOT
Virginia Department of Transportation
Federal Highway Administration
Legend
X (X) AM/PM Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
I-664 Corridor
April 2017 Figure F.3-8
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

505 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
I-664 Corridor

April 2017

Figure F.3-9
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
I-664 Corridor

April 2017
Figure F.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

551 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
I-664 Corridor

April 2017

Figure F.3-11

<table>
<thead>
<tr>
<th>Numbered Items</th>
<th>Level of Service</th>
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<tbody>
<tr>
<td>551</td>
<td>D (D)</td>
</tr>
<tr>
<td>552</td>
<td>D (C)</td>
</tr>
<tr>
<td>553</td>
<td>C (C)</td>
</tr>
<tr>
<td>554</td>
<td>C (C)</td>
</tr>
<tr>
<td>555</td>
<td>F (E)</td>
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<tr>
<td>556</td>
<td>F (C)</td>
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<td>557</td>
<td>C (B)</td>
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<td>558</td>
<td>C (B)</td>
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<td>559</td>
<td>B (B)</td>
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<tr>
<td>601</td>
<td>A (C)</td>
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<tr>
<td>602</td>
<td>F (F)</td>
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<td>603</td>
<td>C (B)</td>
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</tr>
<tr>
<td>605</td>
<td>D (C)</td>
</tr>
<tr>
<td>606</td>
<td>D (C)</td>
</tr>
</tbody>
</table>
Legend

X (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
700 series  VA 164 Eastbound
800 series  VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
VA 164 Corridor

April 2017  Figure F.3-12
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
VA 164 Corridor
April 2017

Figure F.3-13
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
VA 164 Corridor

April 2017

Figure F.3-14
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 No-Build
Level of Service
VA 164 Corridor
April 2017
APPENDIX G:

2028 ALTERNATIVE A

TRAFFIC VOLUMES AND ANALYSIS
2028 Alternative A
Weekday Daily Volumes
I-664 Corridor

April 2017

Figure G.1-5
Legend

Weekday Daily Volume
NOT TO SCALE

2028 Alternative A
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure G.1-8
**Legend**

- **xx,xxx**  Weekday Daily Volume
- **NOT TO SCALE**

**2028 Alternative A**

**Weekday Daily Volumes**

**I-664 Corridor**

**April 2017**

Figure G.1-9
Legend

**Weekday Daily Volume**

NOT TO SCALE
Figure G.2-1

2028 Alternative A
Peak Hour Volumes
I-64 Corridor

April 2017
### 2028 Alternative A
#### Peak Hour Volumes
##### I-664 Corridor

**Figure G.2-5**

<table>
<thead>
<tr>
<th>Location</th>
<th>AM (xxx)</th>
<th>PM (xxx)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-664 Ramp</td>
<td>305 (195)</td>
<td>465 (230)</td>
</tr>
<tr>
<td>I-664 Ramp</td>
<td>155 (130)</td>
<td>80 (45)</td>
</tr>
<tr>
<td>220 (380)</td>
<td>40 (22)</td>
<td>275 (545)</td>
</tr>
<tr>
<td>235 (415)</td>
<td>405 (375)</td>
<td>205 (290)</td>
</tr>
<tr>
<td>395 (750)</td>
<td>265 (510)</td>
<td>325 (285)</td>
</tr>
<tr>
<td>265 (510)</td>
<td>4,720 (2,535)</td>
<td>4,685 (2,715)</td>
</tr>
<tr>
<td>200 (155)</td>
<td>3,140 (5,085)</td>
<td>205 (290)</td>
</tr>
<tr>
<td>830 (1,155)</td>
<td>1,355 (1,975)</td>
<td>60 (45)</td>
</tr>
<tr>
<td>1,550 (740)</td>
<td>3,135 (1,975)</td>
<td>235 (415)</td>
</tr>
<tr>
<td>4,685 (2,715)</td>
<td>235 (415)</td>
<td>125 (130)</td>
</tr>
<tr>
<td>3,140 (5,085)</td>
<td>235 (415)</td>
<td>125 (130)</td>
</tr>
<tr>
<td>830 (1,155)</td>
<td>1,355 (1,975)</td>
<td>60 (45)</td>
</tr>
</tbody>
</table>

Legend:
- xxx (xxx) AM (PM) Peak Hour Volume
- NOT TO SCALE
<table>
<thead>
<tr>
<th>Location</th>
<th>Eastbound AM</th>
<th>Eastbound PM</th>
<th>Westbound AM</th>
<th>Westbound PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen Road</td>
<td>475 (975) T</td>
<td>250 (215) R</td>
<td>105 (345) L</td>
<td>435 (750) T</td>
</tr>
<tr>
<td>Aberdeen Road</td>
<td>345 (930)</td>
<td>295 (285) L</td>
<td>30 (30)</td>
<td>120 (45)</td>
</tr>
<tr>
<td>Chestnut Avenue</td>
<td>265 (265) L</td>
<td>48 (48) R</td>
<td>65 (300)</td>
<td>705 (445) T</td>
</tr>
<tr>
<td>Chestnut Avenue</td>
<td>250 (250)</td>
<td>50 (50) R</td>
<td>60 (60)</td>
<td>80 (80)</td>
</tr>
<tr>
<td>Roanoke Avenue</td>
<td>35 (55) R</td>
<td>155 (275) L</td>
<td>15 (15)</td>
<td>10 (10)</td>
</tr>
<tr>
<td>Roanoke Avenue</td>
<td>30 (30) L</td>
<td>230 (275) T</td>
<td>185 (380)</td>
<td>220 (285)</td>
</tr>
<tr>
<td>Roanoke Avenue</td>
<td>5 (5) R</td>
<td>115 (135) L</td>
<td>15 (15)</td>
<td>10 (10)</td>
</tr>
<tr>
<td>Roanoke Avenue</td>
<td>5 (5) L</td>
<td>55 (55) T</td>
<td>15 (15)</td>
<td>10 (10)</td>
</tr>
<tr>
<td>Roanoke Avenue</td>
<td>15 (25) L</td>
<td>55 (55) T</td>
<td>15 (15)</td>
<td>10 (10)</td>
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</table>

2028 Alternative A

Peak Hour Volumes

I-664 Corridor

April 2017

Figure G.2-6
Legend

x,xxx (x.xxx)  AM (PM) Peak Hour Volume

NOT TO SCALE

2028 Alternative A
Peak Hour Volumes
I-664 Corridor

April 2017  Figure G.2-8
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

101 series I-64 Eastbound
201 series I-64 Westbound
301 series I-564 Eastbound
401 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure G.3-1

2028 Alternative A
Level of Service
I-64 Corridor

April 2017
Legend
X (X)  AM/PM Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
100 series  I-64 Eastbound
200 series  I-64 Westbound
300 series  I-564 Eastbound
400 series  I-564 Westbound
Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A
Level of Service
I-64 Corridor

April 2017
Figure G.3-2
Legend

<table>
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<tr>
<th>X (X)</th>
<th>AM (PM) Level of Service</th>
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</thead>
<tbody>
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<td>100</td>
<td>I-64 Eastbound</td>
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<td>190</td>
<td>I-64 Westbound</td>
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<tr>
<td>200</td>
<td>I-64 Eastbound</td>
</tr>
<tr>
<td>280</td>
<td>I-64 Westbound</td>
</tr>
<tr>
<td>300</td>
<td>I-66 Eastbound</td>
</tr>
<tr>
<td>380</td>
<td>I-66 Westbound</td>
</tr>
<tr>
<td>400</td>
<td>I-564 Eastbound</td>
</tr>
<tr>
<td>480</td>
<td>I-564 Westbound</td>
</tr>
</tbody>
</table>

Lettered items correspond to intersections, evaluated using Synchro.
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
103 series I-64 Eastbound
203 series I-64 Westbound
303 series I-564 Eastbound
403 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A
Level of Service
I-64 Corridor

April 2017
Figure G.3-4
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A
Level of Service
I-664 Corridor
April 2017 Figure G.3-7

Legend
X (X) AM (PM) Level of Service

Y - Signalized: C (B)
W - Signalized: B (B)
V - Signalized: C (C)
AC - Signalized: B (B)
AB - Signalized: C (C)
AA - Stop Control: A (B)
X - Signalized: A (B)
AF - Signalized: B (B)
AE - Signalized: A (B)
AD - Signalized: B (B)
514 - Diverge: C (B)
515 - Mainline: B (B)
516 - Diverge: A (A)
517 - Mainline: B (B)
518 - Merge: B (B)
637 - Diverge: C (C)
638 - Mainline: C (C)
639 - Weave: C (D)
640 - Mainline: C (D)
641 - Lane Add: B (D)
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

Figure G.3-9
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A
Level of Service
I-664 Corridor

April 2017 Figure G.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A

Level of Service

I-664 Corridor

April 2017

Figure G.3-11
Legend

X (X)  AM (PM)  Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series  VA 164 Eastbound
800 series  VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A
Level of Service
VA 164 Corridor
April 2017  Figure G.3-12
Legend

X (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series  VA 164 Eastbound
800 series  VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A
Level of Service
VA 164 Corridor

April 2017  Figure G.3-13
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A
Level of Service
VA 164 Corridor
April 2017
Figure G.3-14
Legend
X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative A
Level of Service
VA 164 Corridor

April 2017
Figure G.3-15
APPENDIX H:
2028 ALTERNATIVE B
TRAFFIC VOLUMES AND ANALYSIS
Legend
xx,xxx  Weekday Daily Volume
NOT TO SCALE

2028 Alternative B
Weekday Daily Volumes
I-64 Corridor

April 2017  Figure H.1-2
Legend

xx,xxx Weekday Daily Volume

NOT TO SCALE
Figure H.1-10

Legend

\textit{xxxx} Weekday Daily Volume

\textit{NOT TO SCALE}
Legend

xxx Weekday Daily Volume
NOT TO SCALE

2028 Alternative B
Weekday Daily Volumes
VA 164 Corridor
April 2017
Figure H.1-13
EXHIBIT IS INTENDED TO SHOW TRAFFIC VOLUMES ONLY.
CRANEY ISLAND CONNECTOR AND I-564 CONNECTOR FINAL ALIGNMENT TO BE DETERMINED.
HAMPTON BOULEVARD INTERCHANGE AT INTERMODAL CONNECTOR FINAL CONFIGURATION TO BE DETERMINED.
REFER TO VA 164 SHEET 3 FOR DETAILED INTERCHANGE VOLUMES AT CRANEY ISLAND CONNECTOR SOUTHERN TERMINUS.
Legend

x,xxx (x,xxx)  AM (PM) Peak Hour Volume

NOT TO SCALE

Figure H.2-2

2028 Alternative B
Peak Hour Volumes
I-64 Corridor

April 2017
Legend

xxx (xxx) AM (PM) Peak Hour Volume
NOT TO SCALE
### Legend

- **xxxx (xxxx)** AM/PM Peak Hour Volume

- **NOT TO SCALE**

### 2028 Alternative B

#### Peak Hour Volumes

#### I-664 Corridor

<table>
<thead>
<tr>
<th>Route</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phugsville Road</td>
<td>305 (600)</td>
<td>550 (300)</td>
</tr>
<tr>
<td></td>
<td>410 (515)</td>
<td>375 (125)</td>
</tr>
<tr>
<td>Highville Road</td>
<td>530 (540)</td>
<td>750 (645)</td>
</tr>
<tr>
<td></td>
<td>330 (555)</td>
<td>160 (115)</td>
</tr>
<tr>
<td>I-664</td>
<td>305 (235)</td>
<td>240 (110)</td>
</tr>
<tr>
<td></td>
<td>445 (315)</td>
<td>200 (70)</td>
</tr>
<tr>
<td>Dock Landing Road</td>
<td>305 (245)</td>
<td>240 (110)</td>
</tr>
<tr>
<td></td>
<td>445 (315)</td>
<td>200 (70)</td>
</tr>
<tr>
<td>I-664</td>
<td>255 (95)</td>
<td>450 (250)</td>
</tr>
<tr>
<td></td>
<td>280 (125)</td>
<td>220 (125)</td>
</tr>
</tbody>
</table>

*Figure H.2-10*
Figure H.2-11

2028 Alternative B
Peak Hour Volumes
I-664 Corridor

April 2017

Legend

xxx (xxx) AM (PM) Peak Hour Volume

NOT TO SCALE
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

2028 Alternative B
Peak Hour Volumes
VA 164 Corridor

April 2017

Figure H.2-12
2028 Alternative B
Peak Hour Volumes
VA 164 Corridor

Legend
x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

Roadway

Legend
x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

VDOT
Virginia Department of Transportation

2028 Alternative B
Peak Hour Volumes
VA 164 Corridor

April 2017
Figure H.2-14
Legend

- 1,000 (2,060) AM (PM) Peak Hour Volume
- NOT TO SCALE

Notes

Exhibit is intended to show traffic volumes only.
Craney Island Connector and I-564 Connector final alignment to be determined.
Hampden Boulevard Interchange at Intermodal Connector final configuration to be determined.
Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

2028 Alternative B

Peak Hour Volumes

Elizabeth River Connectors

April 2017

Figure H.2-16
Legend

<table>
<thead>
<tr>
<th>X (X)</th>
<th>AM (PM)</th>
<th>Level of Service</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Numbered items correspond to freeway segments, evaluated using HCS</td>
</tr>
<tr>
<td>101</td>
<td>Mainline</td>
<td>D (D)</td>
</tr>
<tr>
<td>102</td>
<td>Weave</td>
<td>F (F)</td>
</tr>
<tr>
<td>103</td>
<td>Mainline</td>
<td>C (C)</td>
</tr>
<tr>
<td>104</td>
<td>Merge</td>
<td>D (D)</td>
</tr>
<tr>
<td>105</td>
<td>Merge</td>
<td>D (D)</td>
</tr>
<tr>
<td>106</td>
<td>Mainline</td>
<td>D (D)</td>
</tr>
<tr>
<td>107</td>
<td>Diverge</td>
<td>D (D)</td>
</tr>
<tr>
<td>108</td>
<td>Mainline</td>
<td>D (D)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>201</td>
<td>Mainline</td>
<td>C (C)</td>
</tr>
<tr>
<td>202</td>
<td>Diverge</td>
<td>D (D)</td>
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<tr>
<td>203</td>
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<td>C (C)</td>
</tr>
<tr>
<td>204</td>
<td>Diverge</td>
<td>C (C)</td>
</tr>
<tr>
<td>205</td>
<td>Mainline</td>
<td>F (D)</td>
</tr>
<tr>
<td>206</td>
<td>Weave</td>
<td>F (D)</td>
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<tr>
<td>207</td>
<td>Mainline</td>
<td>C (D)</td>
</tr>
</tbody>
</table>

2028 Alternative B
Level of Service
I-64 Corridor

April 2017  Figure H.3-1
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series  I-64 Eastbound
200 series  I-64 Westbound
300 series  I-564 Eastbound
400 series  I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Level of Service
I-64 Corridor

April 2017  Figure H.3-2
Numbered items correspond to freeway segments, evaluated using HCS

100 series  I-64 Eastbound
200 series  I-64 Westbound
300 series  I-564 Eastbound
400 series  I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Legend

X (X)  AM (PM) Level of Service

120 - Diverge: C (C)
121 - Merge: C (C)
122 - Mainline: C (C)
123 - Merge: D (D)
124 - Mainline: D (D)
125 - Weave: F (F)
205 - Mainline: C (C)
206 - Merge: D (C)
207 - Mainline: D (D)
208 - Diverge: D (D)
209 - Mainline: C (C)
210 - Diverge: C (C)
211 - Mainline: C (C)
212 - Merge: C (C)
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

101 series I-64 Eastbound
201 series I-64 Westbound
301 series I-64 Eastbound
401 series I-64 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Level of Service
I-64 Corridor

April 2017
Figure H.3-4
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

Figure H.3-5
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series
I-664 Eastbound/Southbound
600 series
I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Level of Service
I-664 Corridor

April 2017
Figure H.3-6
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B

Level of Service

I-664 Corridor

April 2017

Figure H.3-7
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Level of Service
1-664 Corridor

Figure H.3-8
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Level of Service
I-664 Corridor

April 2017
Legend

**X (X)** AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B

Level of Service

I-664 Corridor

April 2017

Figure H.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure H.3-12
Legend
X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

750 series VA 164 Eastbound
850 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Level of Service
VA 164 Corridor

April 2017
Figure H.3-13
Legend

X (X)  AM (PM)  Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
700 series  VA 164 Eastbound
800 series  VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Level of Service
VA 164 Corridor

April 2017  Figure H.3-14
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Level of Service
VA 164 Corridor

April 2017
Figure H.3-15
Exhibit is intended to show traffic volumes only.
Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.
Hampton Boulevard Interchange at Intermediate Connector final configuration to be determined.
Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

Legend

Notes

Numbered items correspond to freeway segments, evaluated using HCS

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative B
Elizabeth River Connectors
April 2017
Figure H.3-16
APPENDIX I:
2028 ALTERNATIVE C
TRAFFIC VOLUMES AND ANALYSIS
Figure I.1-3

Legend

<table>
<thead>
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2028 Alternative C
Weekday Daily Volumes
I-64 Corridor

April 2017

Figure I.1-3
Figure I.1-4

2028 Alternative C
Weekday Daily Volumes
I-64 Corridor

April 2017

Legend

xxx Weekday Daily Volume
NOT TO SCALE
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<td>I-664 Ramp</td>
<td>40,100 41,800</td>
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<tr>
<td>Powhatan Pkwy</td>
<td>10,500 12,100 52,200 52,100</td>
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<tr>
<td>I-664 Corridor</td>
<td>4,700 5,400 5,100 4,800</td>
</tr>
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<td>I-664 Corridor</td>
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<td>I-664 Corridor</td>
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Legend

- xx.xxx Weekday Daily Volume
- NOT TO SCALE

2028 Alternative C
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure I.1-5
Legend

xxx Weekday Daily Volume

NOT TO SCALE

2028 Alternative C
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure I.1-8
Legend

xx,xxx Weekday Daily Volume

NOT TO SCALE

2028 Alternative C
Weekday Daily Volumes
I-664 Corridor

April 2017

Figure I.1-9
Legend

** xx,xxx Weekday Daily Volume

NOT TO SCALE

2028 Alternative C
Weekday Daily Volumes
I-664 Corridor

April 2017  Figure I.1-11
2028 Alternative C
Weekday Daily Volumes
VA 164 Corridor

April 2017
Figure I.1-13

Legend

xx,xxx Weekday Daily Volume
NOT TO SCALE
Legend

xx.xxx Weekday Daily Volume

NOT TO SCALE

2028 Alternative C
Weekday Daily Volumes
VA 164 Corridor

April 2017  Figure I.1-15
NOT TO SCALE

Legend

xx,xxx Weekday Daily Volume

Notes

Exhibit is intended to show traffic volumes only.
Craney Island Connector, 1-664 Connector and 1-564 Connector final alignment to be determined.
Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined.
Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

Elizabeth River Connectors

2028 Alternative C

Weekday Daily Volumes

Figure I.1-16

April 2017
2028 Alternative C
Peak Hour Volumes
I-64 Corridor

April 2017

Figure I.2-2
**Legend**

- 

**2028 Alternative C**

**Peak Hour Volumes**

**I-64 Corridor**

April 2017

Figure I.2-3

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<th>PM (xxx)</th>
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*NOT TO SCALE*
Legend

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<td></td>
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NOT TO SCALE
NOT TO SCALE

Legend

- xx,xxx AM (PM) Peak Hour Volume

2028 Alternative C
Peak Hour Volumes
I-664 Corridor

April 2017
Figure I.2-6
Legend

x.xxx (x.xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

2028 Alternative C

Peak Hour Volumes

VA 164 Corridor

April 2017

Figure 1.2-12
2028 Alternative C
Peak Hour Volumes
VA 164 Corridor
April 2017
Figure I.2-13

Legend
xxx (xxx) AM (PM) Peak Hour Volume
NOT TO SCALE
Legend

x.xxx (x.xxx) AM (PM) Peak Hour Volume
NOT TO SCALE

2028 Alternative C
Peak Hour Volumes
VA 164 Corridor
April 2017
Figure I.2-14
### 2028 Alternative C
#### Peak Hour Volumes
VA 164 Corridor

**Legend**

- x,xxx (x,xxx) AM (PM) Peak Hour Volume
- NOT TO SCALE

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<th>Location</th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleveland St</td>
<td>25 (15)</td>
<td>175 (265)</td>
</tr>
<tr>
<td>Westwood Dr</td>
<td>30 (85)</td>
<td>25 (35)</td>
</tr>
</tbody>
</table>

**Figure I.2-15**

*Source: Hampton Roads Crossing Study SEIS*

*April 2017*
NOT TO SCALE

Legend

Notes

Exhibit is intended to show traffic volumes only. Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.

Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
100 series 1-64 Eastbound
200 series 1-64 Westbound
300 series 1-656 Eastbound
400 series 1-656 Westbound
Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
1-64 Corridor
April 2017 Figure I.3-1
Legend

X (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series  I-64 Eastbound
200 series  I-64 Westbound
300 series  I-564 Eastbound
400 series  I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
I-64 Corridor

April 2017  Figure 1.3-2
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-66 Eastbound
200 series I-66 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
I-64 Corridor

April 2017
Figure I.3-3
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
103 series I-64 Eastbound
203 series I-64 Westbound
303 series I-564 Eastbound
403 series I-564 Westbound
Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
I-64 Corridor
April 2017
Figure 1.3-4
Legend

X (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
I-664 Corridor

April 2017  Figure I.3-5
Legend

X (X) AM PM Level of Service
Numbered items correspond to freeway segments, evaluated using HCS

500 series 1464 Eastbound/Southbound
600 series 1464 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
I-664 Corridor
April 2017 Figure I.3-6
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
I-664 Corridor
April 2017
Figure I.3-7
SEE JAMES RIVER CONNECTORS SHEET FOR I-64/I-664 CONNECTOR LOS RESULTS

Legend
X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
I-664 Corridor

April 2017
Figure I.3-8
Legend

X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
I-664 Corridor

April 2017
Figure 1.3-9
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C

Level of Service

I-664 Corridor

April 2017

Figure I.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
VA 164 Corridor

April 2017  Figure I.3-13
2028 Alternative C
Level of Service
VA 164 Corridor

April 2017
Figure I.3-14
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

707 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
VA 164 Corridor

April 2017
Figure I.3-15
Exhibit is intended to show traffic volumes only.
Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.
Hampton Boulevard Interchange at Intermediate Connector final configuration to be determined.
Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

Numbered items correspond to freeway segments, evaluated using HCS

905 series  James River Connectors Eastbound/Northbound
1000 series  James River Connectors Westbound/Southbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative C
Level of Service
Elizabeth River Connectors
April 2017  Figure I.3-16
APPENDIX J:

2028 ALTERNATIVE D

TRAFFIC VOLUMES AND ANALYSIS
Legend

- **xx,xxx** Weekday Daily Volume
- **NOT TO SCALE**
Legend

xx,xxx Weekday Daily Volume

NOT TO SCALE
Legend

Weekday Daily Volume
NOT TO SCALE

2028 Alternative D
Weekday Daily Volumes
I-664 Corridor

Figure J.1-6

April 2017

Hampton Roads Crossing Study SEIS

Virginia Department of Transportation
Federal Highway Administration
Legend

xx,xxx  Weekday Daily Volume

NOT TO SCALE

2028 Alternative D
Weekday Daily Volumes
I-664 Corridor

April 2017  Figure J.1-8
**Legend**

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**2028 Alternative D**

**Weekday Daily Volumes**

**I-664 Corridor**

April 2017

Figure J.1-9
Legend

xx,xxx Weekday Daily Volume

NOT TO SCALE

2028 Alternative D
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure J.1-10
2028 Alternative D
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure J.1-11
<table>
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<td><strong>2028 Alternative D</strong></td>
<td><strong>Figure J.1-13</strong></td>
</tr>
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**Legend**

- xx,xxx Weekday Daily Volume

**NOT TO SCALE**
2028 Alternative D
Weekday Daily Volumes
VA 164 Corridor

April 2017
Figure J.1-14
Notes

Exhibit is intended to show traffic volumes only. Craney Island Connector, I-694 Connector and I-564 Connector final alignment to be determined. Hampton Boulevard interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

Legend

xx,xxx Weekday Daily Volume

NOT TO SCALE

2028 Alternative D
Weekday Daily Volumes
Elizabeth River Connectors

April 2017
Figure J.1-16
Legend

xxx (xxx) AM (PM) Peak Hour Volume
NOT TO SCALE

2028 Alternative D
Peak Hour Volumes
I-64 Corridor

April 2017  Figure J.2-1
Legend

x.xxx (x.xxx) AM/PM Peak Hour Volume

NOT TO SCALE
Legend

x,xxx (x,xxx) AM/PM Peak Hour Volume
NOT TO SCALE

2028 Alternative D
Peak Hour Volumes
I-664 Corridor

April 2017
Figure J.2-8
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume
NOT TO SCALE
Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.

NOT TO SCALE

Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

Notes
Exhibit is intended to show traffic volumes only. Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined. Hampton Boulevard Interchange at Intermodal Connector final configuration to be determined. Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

HRCS SEIS

2028 Alternative D

Peak Hour Volumes

Elizabeth River Connectors

April 2017

Figure J.2-16
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
I-64 Corridor

April 2017
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series: I-64 Eastbound
200 series: I-64 Westbound
300 series: I-564 Eastbound
400 series: I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D

Level of Service

I-64 Corridor

April 2017

Figure J.3-2
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
I-664 Corridor

April 2017

Figure J.3-5
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
I-664 Corridor

April 2017
Figure J.3-6
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
I-664 Corridor
April 2017 Figure J.3-7
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

See James River Connectors Sheet for I-664/I-64 Connector LOS Results

2028 Alternative D
Level of Service
I-664 Corridor

April 2017

Figure J.3-8
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D

Level of Service

I-664 Corridor

April 2017

Figure J.3-9
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
I-664 Corridor

April 2017
Figure J.3-10
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series 1-664 Eastbound/Southbound
600 series 1-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
I-664 Corridor

April 2017 Figure J.3-11
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
VA 164 Corridor

April 2017
Legend

- X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure J.3-13

2028 Alternative D
Level of Service
VA 164 Corridor

April 2017
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
VA 164 Corridor

April 2017

Figure J.3-14
Legend
X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
700 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
VA 164 Corridor

April 2017
Figure J.3-15
Legend

Notes

Exhibit is intended to show traffic volumes only.

Craney Island Connector, I-664 Connector and I-564 Connector final alignment to be determined.

Hampton Boulevard Interchange at Intermediate Connector final configuration to be determined.

Refer to VA 164 Sheet 3 for detailed interchange volumes at Craney Island Connector Southern Terminus.

Numbered items correspond to freeway segments, evaluated using HCS

Lettered items correspond to intersections, evaluated using Synchro

2028 Alternative D
Level of Service
Elizabeth River Connectors
April 2017
Figure J.3-16
APPENDIX K:
TRAVEL DEMAND MODEL OUTPUT FOR FORECAST SEGMENTS
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<th>PM Congested Travel Time (Minutes)</th>
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<td>NB A B C D</td>
<td>NB A B C D</td>
</tr>
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May 25, 2016
## 2034 HRCS Travel Demand Model Output

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## Model Output
(Updated for 2040 HRTPO Model)

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(Updated for 2040 HRTPO Model)

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(Updated for 2040 HRTPO Model)

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APPENDIX L:
NAVY AND PORT FACILITY TRIP INFORMATION
Table 1

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<th>2034 Daily VHT Savings (Vehicle hours)</th>
<th>2034 Annual VHT Savings (Vehicle hours)</th>
<th>2034 Annual Value of Time Saved (Savings $)</th>
<th>2034 Annual Person Hours of VHT Saved (person hours)</th>
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Assumed $18/hr for value of time.

Table 7

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These are the trip distribution from Navy base to HRBT and MMBBT respectively for different scenarios.

Table 8

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<td>10.05%</td>
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These are the trip distribution from Port (VIT, VEC, PMT and Crane Island) to HRBT and MMBBT respectively for different scenarios.

Table 2

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In HRTPO model report, the congested VHT are defined for facility type interstates or freeway, whole day VC ratio equal or greater than 0.89 for other facilities, whole day VC ratio equal or greater than 0.892
### Table 3
Norfolk International Terminals PM peak period travel time to Externals zone 94 (minutes)

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### Table 4
Virginia International Gateway PM peak period travel time to Externals zone 439 (minutes)

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### Table 5
Craney Island PM peak period travel time to Externals zone 432 (minutes)

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### Table 6
Portsmouth Marine Terminals PM peak period travel time to Externals zone 462 (minutes)

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<tr>
<th></th>
<th>US7 W</th>
<th>I-64 W</th>
<th>US460 W</th>
<th>US58 W</th>
</tr>
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<tbody>
<tr>
<td>No Build</td>
<td>152.52</td>
<td>92.12</td>
<td>66.36</td>
<td>77.01</td>
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<tr>
<td>Alt A</td>
<td>145.64</td>
<td>87.04</td>
<td>66.27</td>
<td>72.93</td>
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<tr>
<td>Alt B</td>
<td>145.29</td>
<td>85.76</td>
<td>64.67</td>
<td>71.5</td>
</tr>
<tr>
<td>Alt C</td>
<td>141.29</td>
<td>82.17</td>
<td>64.32</td>
<td>71.2</td>
</tr>
<tr>
<td>Alt D</td>
<td>138.24</td>
<td>79.64</td>
<td>63.25</td>
<td>70.74</td>
</tr>
</tbody>
</table>
APPENDIX M:
TRIP ORIGIN INFORMATION BY ALTERNATIVE (FROM HRTPO)
Hampton Roads Crossing - Alternative A
2040 Trip Locations

1 Dot = 100 Trip Ends
There are two trip ends for each trip, one at the place of origin and one at the destination.

Hampton Roads Crossing - Alternative B
2040 Trip Locations

1 Dot = 100 Trip Ends
There are two trip ends for each trip, one at the place of origin and one at the destination.
1 Dot = 100 Trip Ends
There are two trip ends for each trip, one at the place of origin and one at the destination.

Hampton Roads Crossing - Alternative C
2040 Trip Locations

Hampton Roads Crossing - Alternative D
2040 Trip Locations
APPENDIX N:
2040 UPDATED NO-BUILD TRAFFIC VOLUMES AND ANALYSES
Legend

xx,xxx Weekday Daily Volume

<table>
<thead>
<tr>
<th></th>
<th>EB HOV</th>
<th>WB HOV</th>
<th>EB LANE</th>
<th>WB LANE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bellinger Blvd</td>
<td>9,600</td>
<td>14,300</td>
<td>2,000</td>
<td>14,200</td>
</tr>
<tr>
<td>Bainbridge Ave</td>
<td>17,100</td>
<td>17,500</td>
<td>6,600</td>
<td>25,400</td>
</tr>
<tr>
<td>Intermodal Connector</td>
<td>11,100</td>
<td>13,000</td>
<td>26,200</td>
<td>32,600</td>
</tr>
</tbody>
</table>

2040 No-Build (Updated)

Weekday Daily Volumes

I-64 Corridor

April 2017

Figure N.1-4
## 2040 No-Build (Updated)

### Weekday Daily Volumes

#### I-664 Corridor

<table>
<thead>
<tr>
<th>Location</th>
<th>Weekday Daily Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powhatan Pkwy</td>
<td>4,000</td>
</tr>
<tr>
<td>I-664 Corridor</td>
<td>50,000</td>
</tr>
</tbody>
</table>

**Legend**

- xx,xxx Weekday Daily Volume

---

**Figure N.1-5**

*VDOT Hampton Roads Crossing Study SEIS*

*April 2017*
Legend

xx,xxx Weekday Daily Volume

2040 No-Build (Updated)
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure N.1-7
Legend
xx,xxx Weekday Daily Volume

2040 No-Build (Updated)
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure N.1-9
Fig. N.1-12

Legend

xx,xxx Weekday Daily Volume

2040 No-Build (Updated)

Weekday Daily Volumes

VA 164 Corridor

April 2017
Legend

x.xxx (x.xxx) AM (PM) Peak Hour Volume

2040 No-Build (Updated)
Peak Hour Volumes
I-64 Corridor

April 2017
Figure N.2-2
Legend

- xxx (xxx) AM (PM) Peak Hour Volume

2040 No-Build (Updated)
Peak Hour Volumes
I-64 Corridor

April 2017

Figure N.2-3
Figure N.2-5

Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume

2040 No-Build (Updated)

Peak Hour Volumes

I-664 Corridor

April 2017
Figure N.2-8

Legend

\[ x,xxx (x,xxx) \] AM (PM) Peak Hour Volume

2040 No-Build (Updated)

Peak Hour Volumes

I-664 Corridor

April 2017

Figure N.2-8
Legend
xxxx (x,xxx) AM (PM) Peak Hour Volume
Legend

x.xxx (x.xxx) AM (PM) Peak Hour Volume

2040 No-Build (Updated)

Peak Hour Volumes

I-664 Corridor

April 2017

Figure N.2-10
Legend

x,xxx (x,xxx) AM (PM) Peak Hour Volume
Legend

xxx (xxx) AM (PM) Peak Hour Volume
<table>
<thead>
<tr>
<th>Location</th>
<th>AM Peak Hour Volume</th>
<th>PM Peak Hour Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wyatt Dr</td>
<td>(5)</td>
<td>(210)</td>
</tr>
<tr>
<td>VIG Blvd</td>
<td>0 (0)</td>
<td>175 (50)</td>
</tr>
<tr>
<td>Norfolk Rd</td>
<td>185 (75)</td>
<td>105 (125)</td>
</tr>
<tr>
<td>VIG Blvd</td>
<td>0 (0)</td>
<td>85 (290)</td>
</tr>
<tr>
<td>VIG Blvd</td>
<td>50 (90)</td>
<td>35 (95)</td>
</tr>
<tr>
<td>VIG Blvd</td>
<td>10 (10)</td>
<td>20 (15)</td>
</tr>
<tr>
<td>VIG Blvd</td>
<td>10 (10)</td>
<td>5 (5)</td>
</tr>
<tr>
<td>VIG Blvd</td>
<td>10 (10)</td>
<td>15 (35)</td>
</tr>
<tr>
<td>VIG Blvd</td>
<td>10 (10)</td>
<td>35 (95)</td>
</tr>
<tr>
<td>VIG Blvd</td>
<td>20 (10)</td>
<td>5 (5)</td>
</tr>
</tbody>
</table>

Legend:
- x,xxx (x,xxx) AM (PM) Peak Hour Volume

2040 No-Build (Updated)
Peak Hour Volumes
VA 164 Corridor

April 2017
Figure N.2-14
Legend

k.xxx (k.xxx) AM (PM) Peak Hour Volume

2040 No-Build (Updated)
Peak Hour Volumes
VA 164 Corridor

April 2017
Figure N.2-15
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
101 series I-64 Eastbound
105 series I-64 Westbound
305 series I-564 Eastbound
405 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build (Updated)
Level of Service
I-64 Corridor

April 2017

Figure N.3-1
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

HRCs SEIS
Hampton Roads Corridor SEIS

2040 No-Build (Updated)
Level of Service
I-64 Corridor

April 2017
Figure N.3-2
Legend
X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS:
100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro:

Figure N.3-3

2040 No-Build (Updated)
Level of Service
I-64 Corridor

April 2017
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build (Updated)
Level of Service
I-664 Corridor
April 2017
Figure N.3-6
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build (Updated)
Level of Service
I-664 Corridor
April 2017
Figure N.3-7
Legend

X (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series  I-664 Eastbound/Southbound
600 series  I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build (Updated)
Level of Service
I-664 Corridor

April 2017  Figure N.3-9
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

HD - Signalized: B (B)
BE - Signalized: B (B)
547 - Diverge: E (E)
548 - Mainline: D (D)
549 - Merge: E (D)
550 - Mainline: E (D)
607 - Mainline: D (C)
608 - Diverge: D (D)
609 - Mainline: D (C)
610 - Merge: E (C)
611 - Mainline: E (D)
612 - Diverge: E (D)
613 - Mainline: D (C)
614 - Weave: C (E)
615 - Mainline: D (C)
616 - Merge: E (C)
542 - Diverge: E (E)
543 - Mainline: D (D)
544 - Weave: C (C)
545 - Mainline: D (D)
546 - Merge: E (E)
617 - Mainline: E (C)
618 - Diverge: E (C)
619 - Mainline: D (C)
620 - Merge: D (C)
621 - Weave: C (E)

HD - Signalized: C (D)
BD - Signalized: A (B)
537 - Mainline: C (C)
538 - Diverge: D (E)
539 - Mainline: C (D)
540 - Merge: E (D)
541 - Mainline: D (D)
617 - Mainline: E (C)
618 - Diverge: E (C)
619 - Mainline: D (C)
620 - Merge: D (C)
621 - Weave: C (E)

2040 No-Build (Updated)
Level of Service
I-664 Corridor

April 2017 Figure N.3-10
Legend

<table>
<thead>
<tr>
<th>X (X)</th>
<th>AM (PM) Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 series</td>
<td>I-664 Eastbound/Southbound</td>
</tr>
<tr>
<td>600 series</td>
<td>I-664 Westbound/Northbound</td>
</tr>
</tbody>
</table>

Numbered items correspond to freeway segments, evaluated using HCS

Lettered items correspond to intersections, evaluated using Synchro

I-664 Corridor

April 2017

2040 No-Build (Updated)

Level of Service

I-664 Corridor

Figure N.3-11
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

701 series VA 164 Eastbound
800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build (Updated)

Level of Service
VA 164 Corridor

April 2017

Figure N.3-12
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

703 series VA 164 Eastbound

803 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure N.3-13
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series VA 164 Eastbound

800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 No-Build (Updated)

Level of Service

VA 164 Corridor

April 2017

Figure N.3-14
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS 700 series VA 164 Eastbound 800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

AZ - Signalized: B (B) AW - Signalized: A (A) AY - Signalized: D (B) AX - Signalized: C (C) 726 - Lane Add: C (B) 727 - Diverge: D (D) 728 - Diverge: C (B) 729 - Mainline: C (B) 730 - Merge: C (B) A1 - Signalized: C (C) A2 - Signalized: B (D) AW - Signalized: A (A) 731 - Weave: B (A) 802 - Weave: B (B) 803 - Mainline: A (C) 804 - Merge: B (D) 805 - Merge: B (E) 806 - Mainline: B (C) 807 - Lane Drop: C (E)
APPENDIX O:
2040 PREFERRED ALTERNATIVE TRAFFIC VOLUMES AND ANALYSES
Legend

xxx  Weekday Daily Volume

NOT TO SCALE

2040 Preferred Alternative
Weekday Daily Volumes
I-64 Corridor

April 2017
Figure O.1-2
Legend

Legend

Weekday Daily Volume
NOT TO SCALE

2040 Preferred Alternative
Weekday Daily Volumes
I-64 Corridor

April 2017
Figure O.1-3
Legend

**xx,xxx** Weekday Daily Volume

*NOT TO SCALE*

**2040 Preferred Alternative**
**Weekday Daily Volumes**
**I-64 Corridor**

April 2017  
Figure O.1-4
NOT TO SCALE

Legend

XX,XXX Weekday Daily Volume

I-664 Corridor

2040 Preferred Alternative

**Weekday Daily Volumes**

April 2017

Figure O.1-5
Legend

Weekday Daily Volume

NOT TO SCALE

2040 Preferred Alternative
Weekday Daily Volumes
I-664 Corridor

April 2017
Figure O.1-6
Legend

1. Weekday Daily Volume

NOT TO SCALE

HRCS SEIS
Hampton Roads Crossing Study SEIS
2040 Preferred Alternative
Weekday Daily Volumes
I-664 Corridor

April 2017

Figure O.1-10
Figure O.1-11

2040 Preferred Alternative
Weekday Daily Volumes
I-664 Corridor

April 2017
2040 Preferred Alternative
Peak Hour Volumes
I-664 Corridor

April 2017
Figure O.2-6
Legend
x,xxx (x,xxx) AM (PM) Peak Hour Volume
NOT TO SCALE

2040 Preferred Alternative
Peak Hour Volumes
I-664 Corridor

April 2017
Figure O.2-7
### Legend

- **x,xxx (x,xxx)** AM (PM) Peak Hour Volume
- **NOT TO SCALE**

### 2040 Preferred Alternative

**Peak Hour Volumes**

**I-664 Corridor**

April 2017  
Figure O.2-11
Legend

XXX (XXX) AM (PM) Peak Hour Volume
NOT TO SCALE

2040 Preferred Alternative

Peak Hour Volumes
VA 164 Corridor

April 2017
Figure O.2-12
Legend

\(x,xxx\) (\(x.xxx\)) AM (PM) Peak Hour Volume

NOT TO SCALE
Legend

x,xxx (xxx) AM (PM) Peak Hour Volume

NOT TO SCALE

Figure O.2-15
**Legend**

<table>
<thead>
<tr>
<th>X (X)</th>
<th>AM/PM Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Mainline: D (C)</td>
</tr>
<tr>
<td>102</td>
<td>Weave: F (F)</td>
</tr>
<tr>
<td>103</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>104</td>
<td>Merge: D (D)</td>
</tr>
<tr>
<td>105</td>
<td>Merge: E (D)</td>
</tr>
<tr>
<td>106</td>
<td>Mainline: E (D)</td>
</tr>
<tr>
<td>107</td>
<td>Diverge: D (D)</td>
</tr>
<tr>
<td>223</td>
<td>Mainline: D (C)</td>
</tr>
<tr>
<td>224</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>225</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>226</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>227</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>228</td>
<td>Weave: F (E)</td>
</tr>
<tr>
<td>229</td>
<td>Mainline: C (D)</td>
</tr>
<tr>
<td>230</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>231</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>232</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>233</td>
<td>Mainline: D (D)</td>
</tr>
<tr>
<td>234</td>
<td>Mainline: D (D)</td>
</tr>
</tbody>
</table>

Numbered items correspond to freeway segments, evaluated using HCS.

100 series 104 Eastbound
200 series 104 Westbound
300 series 105 Eastbound
400 series 105 Westbound

Lettered items correspond to intersections, evaluated using Synchro.

**2040 Preferred Alternative**

**Level of Service**

**I-64 Corridor**

*April 2017* Figure O.3-1
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series I-64 Eastbound
200 series I-64 Westbound
300 series I-564 Eastbound
400 series I-564 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Preferred Alternative
Level of Service
I-64 Corridor

April 2017
Figure O.3-2
Legend

**Legend**

<table>
<thead>
<tr>
<th>X (X)</th>
<th>AM (PM)</th>
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</thead>
<tbody>
<tr>
<td>100</td>
<td>104 Eastbound</td>
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<tr>
<td>200</td>
<td>104 Westbound</td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>105 Eastbound</td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>105 Westbound</td>
<td></td>
</tr>
</tbody>
</table>

**Legend**

| 119   | Diverge: C (C) |
| 120   | Mainline: C (C) |
| 121   | Merge: D (C) |
| 122   | Mainline: D (C) |
| 123   | Merge: D (C) |
| 124   | Mainline: D (C) |
| 125   | Weave: F (F) |
| 126   | Merge: D (D) |
| 127   | Mainline: D (D) |
| 211   | Merge: D (D) |
| 220   | Merge: D (D) |
| 221   | Mainline: D (D) |

**Legend**

<table>
<thead>
<tr>
<th>2040 Preferred Alternative</th>
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</thead>
<tbody>
<tr>
<td>Level of Service</td>
</tr>
<tr>
<td>I-64 Corridor</td>
</tr>
</tbody>
</table>

**Legend**

| 205   | Mainline: D (D) |
| 206   | Merge: D (D) |

April 2017 | Figure O.3-3
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

100 series 100 Eastbound
200 series 100 Westbound
300 series 304 Eastbound
400 series 304 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Preferred Alternative
Level of Service
I-64 Corridor

April 2017
Figure O.3-4
Legend

X (X) AM (FM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Preferred Alternative

Level of Service

I-664 Corridor

April 2017

Figure O.3-6
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Preferred Alternative

Level of Service

I-664 Corridor

April 2017

Figure O.3-7
Legend

X (X) AM/PM Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

500 series I-664 Eastbound/Southbound

600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Preferred Alternative

Level of Service

I-664 Corridor

April 2017
**Legend**

<table>
<thead>
<tr>
<th>X (X)</th>
<th>AM (PM) Level of Service</th>
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</thead>
<tbody>
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<td>Numbered items correspond to freeway segments, evaluated using HCS</td>
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</tr>
<tr>
<td>500 series</td>
<td>I-664 Eastbound/Southbound</td>
</tr>
<tr>
<td>600 series</td>
<td>I-664 Westbound/Northbound</td>
</tr>
<tr>
<td>Lettered items correspond to intersections, evaluated using Synchro</td>
<td></td>
</tr>
</tbody>
</table>

---

**2040 Preferred Alternative**

**Level of Service**

I-664 Corridor

April 2017

Figure O.3-9
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound

Lettered items correspond to intersections, evaluated using Synchro
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
500 series I-664 Eastbound/Southbound
600 series I-664 Westbound/Northbound
Lettered items correspond to intersections, evaluated using Synchro

Figure O.3-11
Legend

X (X)  AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

700 series  VA 164 Eastbound
800 series  VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

Figure O.3-12
Legend
X (X) AM (PM) Level of Service
Numbered items correspond to freeway segments, evaluated using HCS
700 series VA 164 Eastbound
800 series VA 164 Westbound
Lettered items correspond to intersections, evaluated using Synchro

2040 Preferred Alternative
Level of Service
VA 164 Corridor
April 2017
Figure O.3-13
Legend

- X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

- 705 series VA 164 Eastbound
- 800 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Preferred Alternative
Level of Service
VA 164 Corridor

April 2017
Figure O.3-14
Legend

X (X) AM (PM) Level of Service

Numbered items correspond to freeway segments, evaluated using HCS

785 series VA 164 Eastbound
895 series VA 164 Westbound

Lettered items correspond to intersections, evaluated using Synchro

2040 Preferred Alternative
Level of Service
VA 164 Corridor

April 2017

Figure O.3-15
APPENDIX P:
PHOTO DOCUMENTATION
The photographs in this appendix illustrate the recurring congestion experienced along I-64 on the approaches to the Hampton Roads Bridge Tunnel (HRBT). Photos were collected from VDOT archives (undated); taken in April 2017 during field visits conducted by the project team; or captured in April 2017 from VDOT’s web-based 511 traveler information system.

**EASTBOUND I-64**

Photo 1: AM Travel Conditions

Photo 2: Mallory Street On Ramp to Eastbound I-64 (AM)

Photo 3: Traffic held at eastbound tunnel portal due to unknown incident (PM)

Photo 4: Eastbound I-64 approaching HRBT
Photo 5: Eastbound I-64 approaching HRBT near Mallory Street (AM)

Photo 6: I-64 north of HRBT

Photo 7: Eastbound I-64 entering HRBT

Photo 6: I-64 north of HRBT
WESTBOUND I-64

Photo 8: PM Travel Conditions

Photo 9: Westbound I-64 departing HRBT (PM)

Photo 10: I-64 south of HRBT (PM)

Photo 11: Westbound I-64 approaching HRBT (AM)