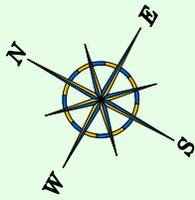


**i. I-95/MD 543 Interchange Option 1A: Diamond with ETL
Median Access Ramps**

This option was dropped due to failing level-of service (LOS F) at the GPL ramps to southbound I-95 for the year 2030. Other interchange options providing better 2030 LOS were retained for detailed study. (*see Figure 72*)



-  GENERAL PURPOSE LANES
-  EXPRESS TOLL LANES
-  PROPOSED BRIDGE / OVERPASS
-  EXISTING 108-INCH WATER MAIN
-  TRAFFIC FLOW
-  TRAFFIC SIGNALS
-  APPROXIMATE RIGHT-OF-WAY LINE

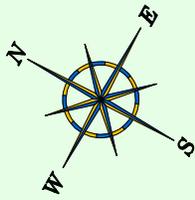


**FIGURE 72 - EXPRESS TOLL LANE - MD 543 INTERCHANGE
OPTION 1A: DIAMOND WITH ETL MEDIAN ACCESS RAMPS**

j. I-95/MD 543 Interchange Option 1B: Diamond with ETL Flyover Access Ramps

This option was dropped due to a combination of environmental impacts and traffic. (*see Figure 73*)

- The flyover ramps proposed would require three additional structures over James Run, resulting in significant stream and forest impacts.
- The flyover ramp from I-95 northbound to MD 543 impacts the Bush Declaration Area (4(f) resource).
- This option provided a similar 2030 LOS as other retained interchange options having fewer impacts.



-  GENERAL PURPOSE LANES
-  EXPRESS TOLL LANES
-  PROPOSED BRIDGE / OVERPASS
-  EXISTING 108-INCH WATER MAIN
-  TRAFFIC FLOW
-  TRAFFIC SIGNALS
-  APPROXIMATE RIGHT-OF-WAY LINE

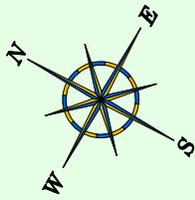


**FIGURE 73 - EXPRESS TOLL LANE - MD 543 INTERCHANGE
OPTION 1B: DIAMOND WITH ETL FLYOVER ACCESS RAMPS**

k. I-95/MD 543 Interchange Option 2: Tight Diamond with ETL Flyover Access Ramps

This option was dropped due to a combination of environmental impacts and traffic. (*see Figure 74*)

- The flyover ramps proposed would require three additional structures over James Run, resulting in significant stream and forest impacts.
- The flyover ramp from I-95 northbound to MD 543 impacts the Bush Declaration Area (4(f) resource).
- This option had a failing level-of service (LOS F) for the year 2030.
- The high volume of left turning motorists on MD 543 northbound to I-95 southbound would effectively require that the two intersections operate as one intersection due to limited ability to store turning vehicles. This would mean longer queues, longer cycle lengths and poorer traffic operations.



- GENERAL PURPOSE LANES
- EXPRESS TOLL LANES
- PROPOSED BRIDGE / OVERPASS
- EXISTING 108-INCH WATER MAIN
- TRAFFIC FLOW
- TRAFFIC SIGNALS
- APPROXIMATE RIGHT-OF-WAY LINE

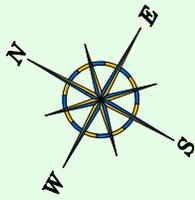


**FIGURE 74 - EXPRESS TOLL LANE - MD 543 INTERCHANGE
OPTION 2: TIGHT DIAMOND WITH ETL FLYOVER ACCESS RAMPS**

I. I-95/MD 543 Interchange Option 3: Single Point Urban Diamond with ETL Flyover Access Ramps

This option was dropped due to issues involving environmental impacts, traffic and maintenance. (*see Figure 75*)

- The flyover ramps proposed would require three additional structures over James Run, resulting in significant stream and forest impacts.
- The flyover ramp from I-95 northbound to MD 543 impacts the Bush Declaration Area (4(f) resource).
- The 2030 interchange volumes are not compatible with a single point urban diamond resulting in LOS F.
- During future re-decking of the bridge in this option, it would not be possible to maintain the operation of the single point urban diamond. The interchange would have to be converted to a tight diamond, which was shown to have insufficient capacity under option 2 and would require significant temporary pavement construction.



-  GENERAL PURPOSE LANES
-  EXPRESS TOLL LANES
-  PROPOSED BRIDGE / OVERPASS
-  EXISTING 108-INCH WATER MAIN
-  TRAFFIC FLOW
-  TRAFFIC SIGNALS
-  APPROXIMATE RIGHT-OF-WAY LINE



FIGURE 75- EXPRESS TOLL LANE - MD 543 INTERCHANGE
OPTION 3: SINGLE POINT URBAN DIAMOND WITH ETL FLYOVER ACCESS RAMPS

**m. I-95/MD 543 Interchange Option 4A: Partial Cloverleaf –
Single Loop with ETL Median Access Ramps**

This option was dropped due to the combination of commercial displacements and traffic. (*see Figure 76*)

- The proposed loop ramp and outer connection ramp in the northeast quadrant of the interchange will require one commercial displacement.
- It was determined after further traffic studies that the loop ramp in the northeast quadrant was not necessary for this interchange to function at an acceptable LOS in 2030.
- This option provides a similar LOS as other retained interchange options having fewer impacts.



- GENERAL PURPOSE LANES
- EXPRESS TOLL LANES
- PROPOSED BRIDGE / OVERPASS
- EXISTING 108-INCH WATER MAIN
- TRAFFIC FLOW
- TRAFFIC SIGNALS
- APPROXIMATE RIGHT-OF-WAY LINE

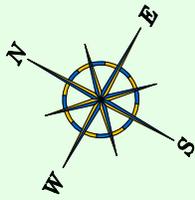


**FIGURE 76 - EXPRESS TOLL LANE - I-95 AT MD 543 INTERCHANGE OPTION 4A:
PARTIAL CLOVERLEAF - SINGLE LOOP WITH ETL MEDIAN ACCESS RAMPS**

**n. I-95/MD 543 Interchange Option 4B: Partial Cloverleaf –
Single Loop with ETL Median Access Ramps**

This option was dropped due to a combination of environmental impacts and traffic. (*see Figure 77*)

- The flyover ramps proposed would require three additional structures over James Run, resulting in significant stream and forest impacts.
- The flyover ramp from I-95 northbound to MD 543 impacts the Bush Declaration Area (4(f) resource).
- This option provided a similar 2030 LOS as other retained interchange options having fewer impacts.



-  GENERAL PURPOSE LANES
-  EXPRESS TOLL LANES
-  PROPOSED BRIDGE / OVERPASS
-  EXISTING 108-INCH WATER MAIN
-  TRAFFIC FLOW
-  TRAFFIC SIGNALS
-  APPROXIMATE RIGHT-OF-WAY LINE

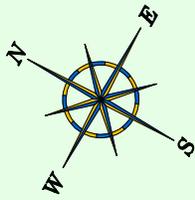


**FIGURE 77 - EXPRESS TOLL LANE - MD 543 INTERCHANGE
 OPTION 4B: PARTIAL CLOVERLEAF - SINGLE LOOP WITH ETL FLYOVER ACCESS RAMPS**

o. I-95/MD 543 Interchange Option 5A: Partial Cloverleaf – Triple Loop with ETL Median Access Ramps

This option was dropped due to the combination of environmental impacts, commercial displacements and traffic. (*see Figure 78*)

- The loop ramp and outer connection ramp in the southwest quadrant of this interchange had significant stream and forest impacts.
- The loop ramp and outer connection ramp in the northeast quadrant of the interchange will require one commercial displacement.
- It was determined after further traffic studies that the loop ramp in the southwest quadrant was not necessary for this interchange to function at an acceptable LOS in 2030.
- The movement from I-95 southbound to MD 543 southbound has relatively low traffic volumes that could be handled from the outer directional ramp. The removal of the loop would eliminate a weave section along I-95 southbound.



-  GENERAL PURPOSE LANES
-  EXPRESS TOLL LANES
-  PROPOSED BRIDGE / OVERPASS
-  EXISTING 108-INCH WATER MAIN
-  TRAFFIC FLOW
-  TRAFFIC SIGNALS
-  APPROXIMATE RIGHT-OF-WAY LINE

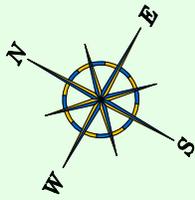


**FIGURE 78 - EXPRESS TOLL LANE - MD 543 INTERCHANGE
OPTION 5A: PARTIAL CLOVERLEAF - TRIPLE LOOP WITH ETL MEDIAN ACCESS RAMPS**

p. I-95/MD 543 Interchange Option 5B: Partial Cloverleaf - Triple Loop with ETL Flyover Access Ramps

This option was dropped due to the combination of environmental impacts, commercial displacements and traffic. (*see Figure 79*)

- The flyover ramps proposed would require three additional structures over James Run, resulting in significant stream and forest impacts.
- The flyover ramp from I-95 northbound to MD 543 impacts the Bush Declaration Area (4(f) resource).
- The loop ramp and outer connection ramp in the southwest quadrant of this interchange had significant stream and forest impacts.
- The loop ramp and outer connection ramp in the northeast quadrant of the interchange will require one commercial displacement.
- It was determined after further traffic studies that loop ramp in the southwest quadrant was not necessary for this interchange to function at an acceptable LOS in 2030.
- The movement from I-95 southbound to MD 543 southbound has relatively low traffic volumes that could be handled from the outer directional ramp. The removal of the loop would eliminate a weave section along I-95 southbound.



-  GENERAL PURPOSE LANES
-  EXPRESS TOLL LANES
-  PROPOSED BRIDGE / OVERPASS
-  EXISTING 108-INCH WATER MAIN
-  TRAFFIC FLOW
-  TRAFFIC SIGNALS
-  APPROXIMATE RIGHT-OF-WAY LINE



**FIGURE 79 - EXPRESS TOLL LANE - MD 543 INTERCHANGE
OPTION 5B: PARTIAL CLOVERLEAF - TRIPLE LOOP WITH ETL FLYOVER ACCESS RAMPS**

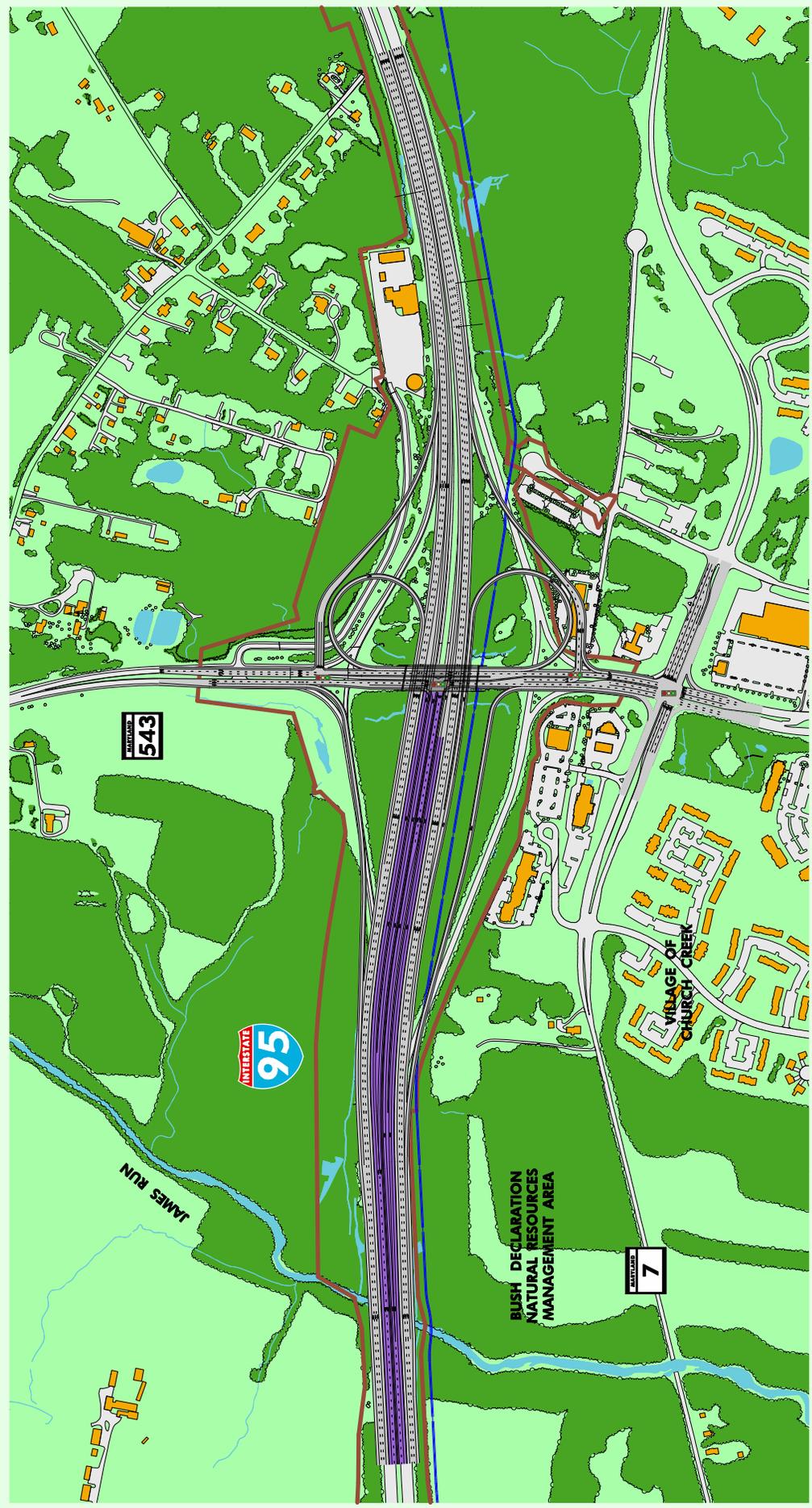
**q. I-95/MD 543 Interchange Option 6A: Partial Cloverleaf –
Double Loop with ETL Median Access Ramps**

This option was dropped due to the combination of environmental impacts, commercial displacements and traffic. (*see Figure 80*)

- The loop ramp and outer connection ramp in the northeast quadrant of the interchange will require one commercial displacement.
- It was determined after further traffic studies that the loop ramp in the northeast quadrant was not necessary for this interchange to function at an acceptable LOS in 2030.
- This option provides a similar LOS as other retained interchange options having fewer impacts.



- GENERAL PURPOSE LANES
- EXPRESS TOLL LANES
- PROPOSED BRIDGE / OVERPASS
- EXISTING 108-INCH WATER MAIN
- TRAFFIC FLOW
- TRAFFIC SIGNALS
- APPROXIMATE RIGHT-OF-WAY LINE

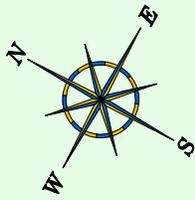


**FIGURE 80 - EXPRESS TOLL LANE - I-95 AT MD 543 INTERCHANGE OPTION 6A:
PARTIAL CLOVERLEAF - DOUBLE LOOP WITH ETL MEDIAN ACCESS RAMPS**

**r. I-95/MD 543 Interchange Option 6B: Partial Cloverleaf –
Double Loop with ETL Flyover Access Ramps**

This option was dropped due to the combination of environmental impacts, commercial displacements and traffic. (*see Figure 81*)

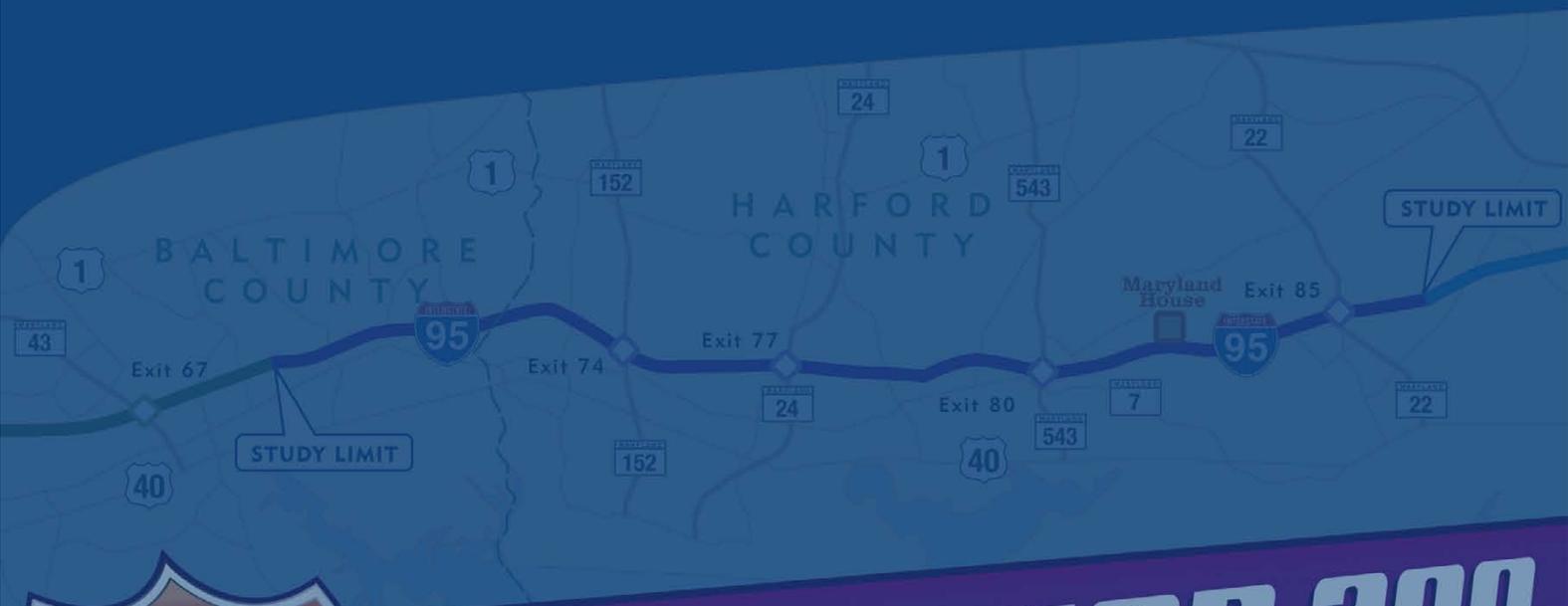
- The flyover ramps proposed would require three additional structures over James Run, resulting in significant stream and forest impacts.
- The flyover ramp from I-95 northbound to MD 543 impacts the Bush Declaration Area (4(f) resource).
- The proposed loop ramp and outer connection ramp in the northeast quadrant of the interchange will require one commercial displacement.
- It was determined after further traffic studies that loop ramp in the northeast quadrant was not necessary for this interchange to function at an acceptable LOS in 2030.
- By dropping this option it would eliminate a weave section along MD 543 northbound.



-  GENERAL PURPOSE LANES
-  EXPRESS TOLL LANES
-  PROPOSED BRIDGE / OVERPASS
-  EXISTING 108-INCH WATER MAIN
-  TRAFFIC FLOW
-  TRAFFIC SIGNALS
-  APPROXIMATE RIGHT-OF-WAY LINE



**FIGURE 81 - EXPRESS TOLL LANE - MD 543 INTERCHANGE
OPTION 6B: PARTIAL CLOVERLEAF - DOUBLE LOOP WITH ETL FLYOVER ACCESS RAMPS**



SECTION 200