

Appendix C—Alternatives Development and Screening Report

Part 2

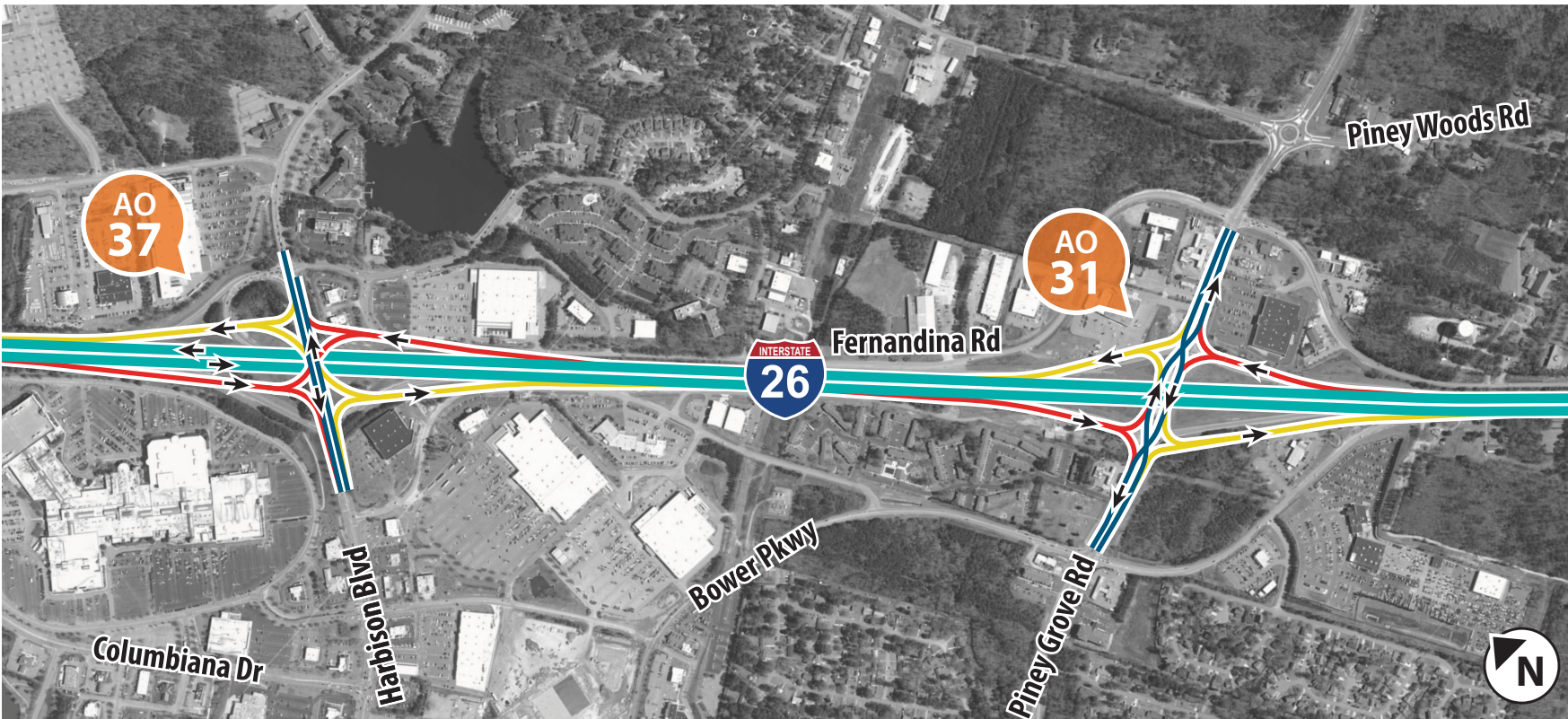
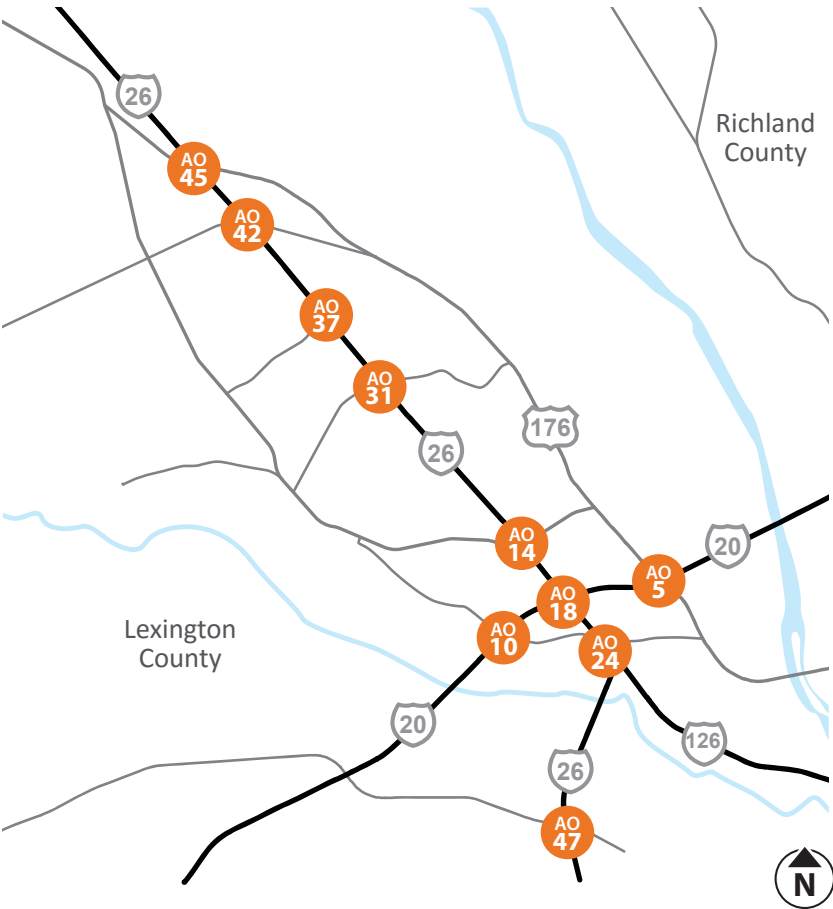
Appendix C—Representative Alternatives (RA1-RA9) and Recommended Preferred Alternative (Sheets 1-11)

(continued)

REPRESENTATIVE ALTERNATIVE 2

Key Features Include:

- The proposed directional interchange with interior rights at the I-26 and I-20 junction, which eliminates all loop ramps in the interchange.
- Includes the widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- New collector-distributor lanes.
- Proposed new local roadway connections between I-126 and US 176/Bush River Road Interchange improvements at each interchange from: Harbison Boulevard to US 378 on I-26; from Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- Proposed new local roadway connections would be provided between I-126 and US 176/Bush River Road.
- The elimination of the existing interchange at I-26 and Bush River Road.



REPRESENTATIVE ALTERNATIVE 2

LEGEND

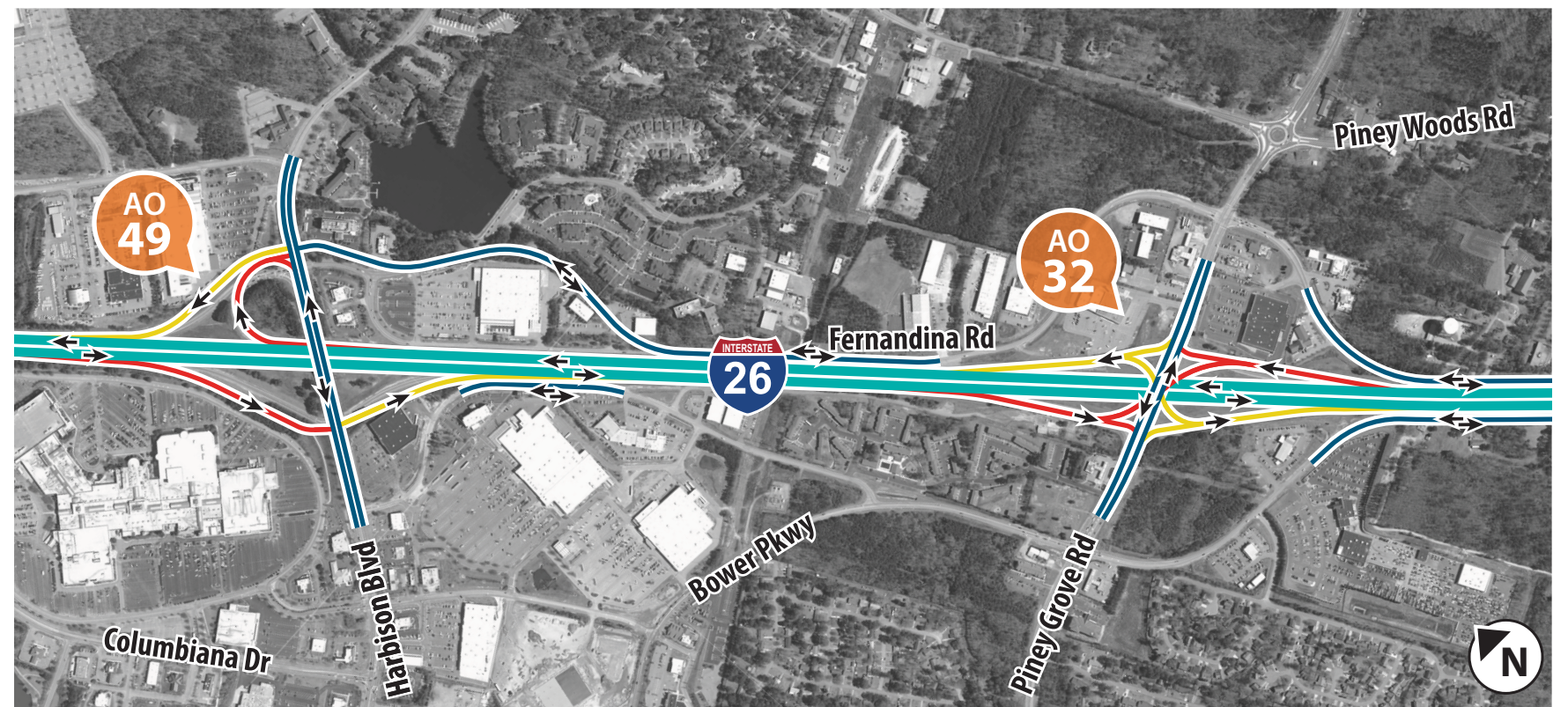
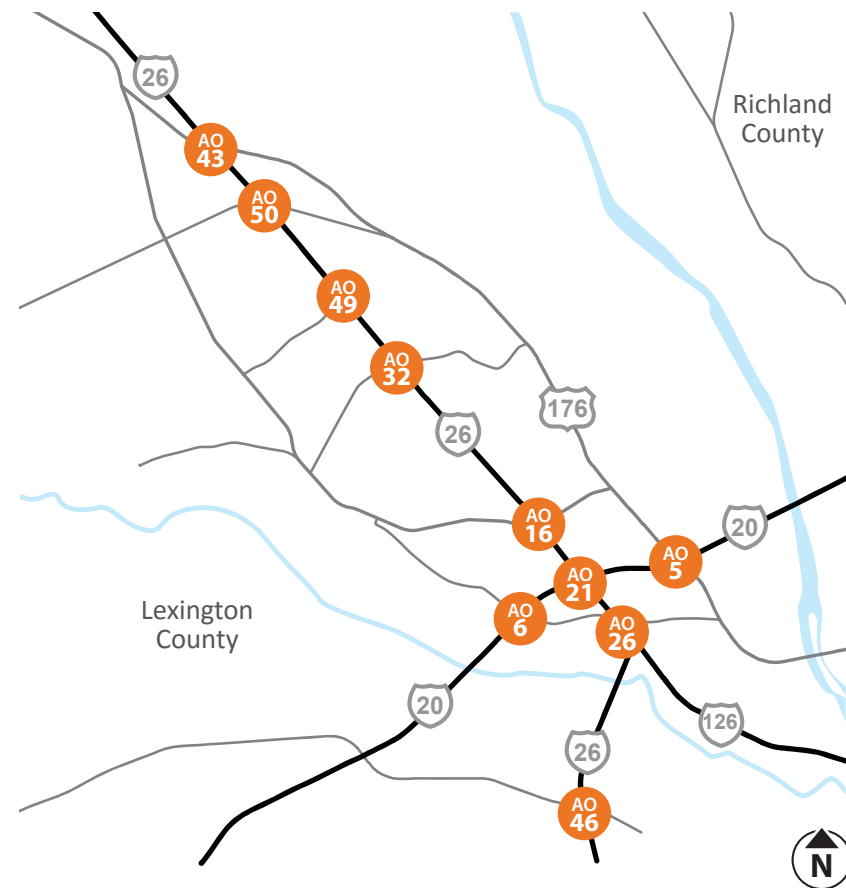
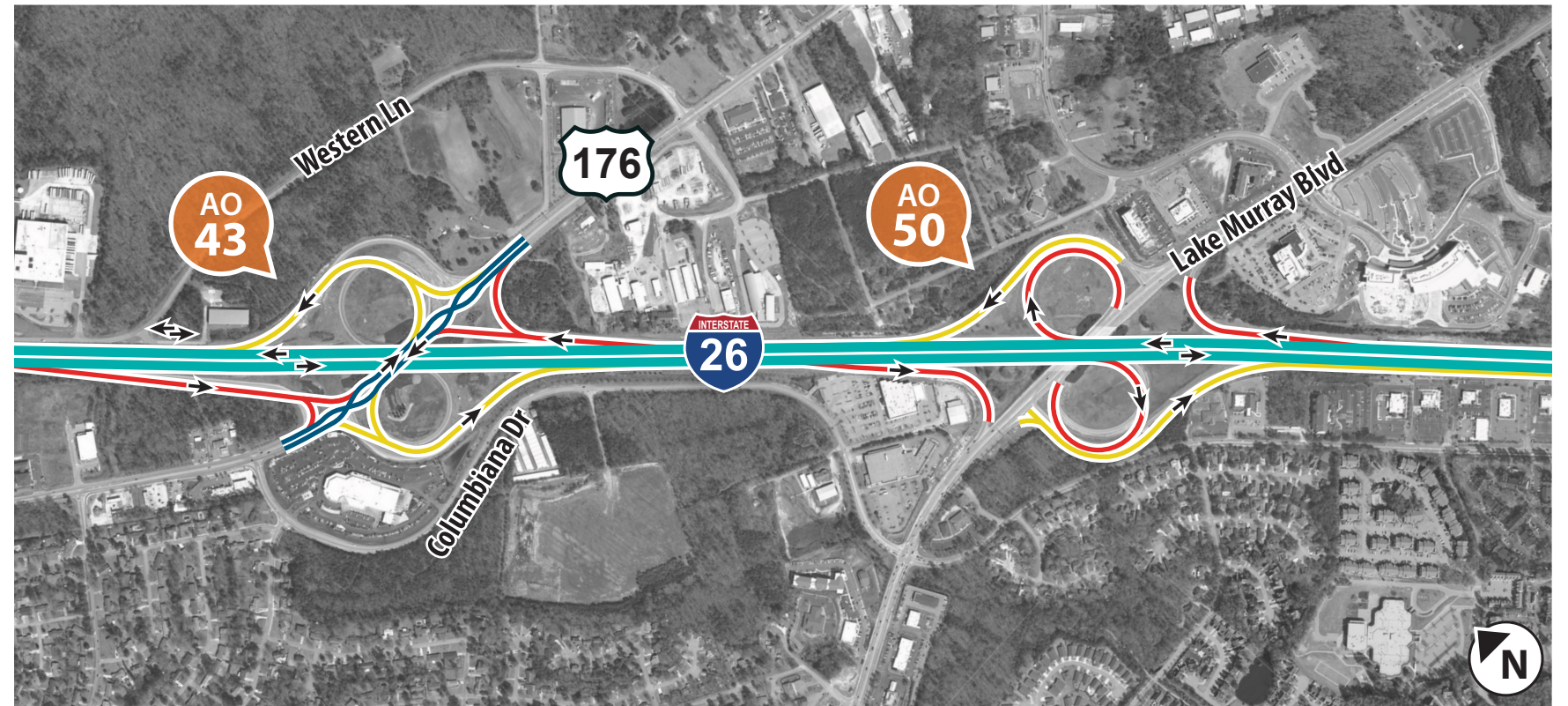
- Main Interstate
 - Connector
 - On-ramp
 - Off-ramp
 - New Roadway
- AO 1 Interchange Alternative
- ➔ Travel Direction



REPRESENTATIVE ALTERNATIVE 3

Key Features Include:

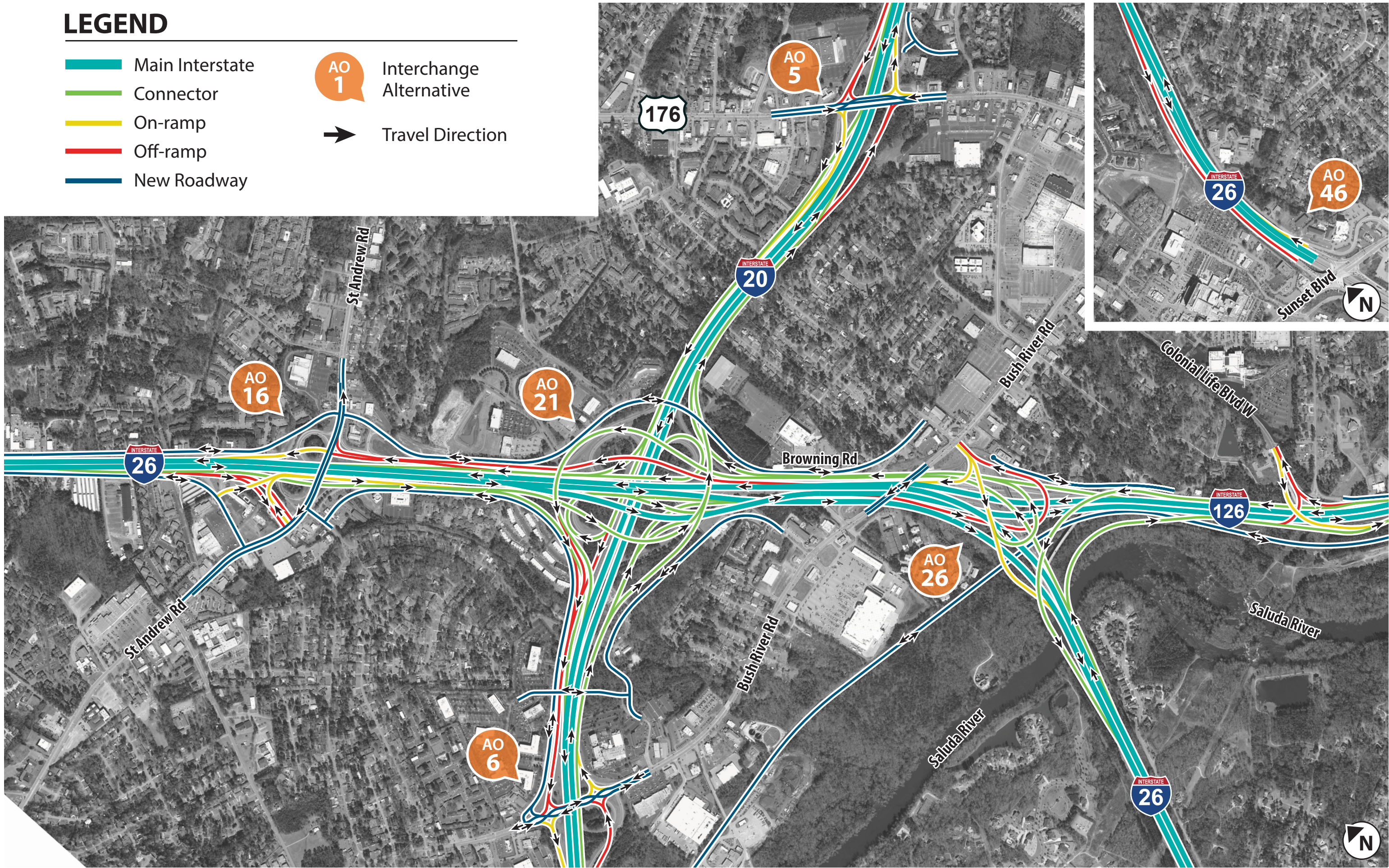
- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- New collector-distributor lanes.
- Interchange improvements at each interchange from: Harbison Boulevard to US 378 on I-26; from Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- A proposed turbine interchange at the I-26 and I-20 junction along with braided ramps that cross over each other through the middle of the proposed turbine interchange.
- The complete re-design of the existing interchange at I-26 and Bush River Road.
- The existing I-26 interchange at Broad River Road would convert to a diverging diamond interchange and this alternative would replace the existing I-20 and I-26 bridges over the railroad line and on I-126 approaching the Riverbanks Zoo.
- A connector bridge over I-20 between Bush River Road and I-26 is proposed to provide local network connectivity over I-20 without direct access to the freeway.



REPRESENTATIVE ALTERNATIVE 3

LEGEND

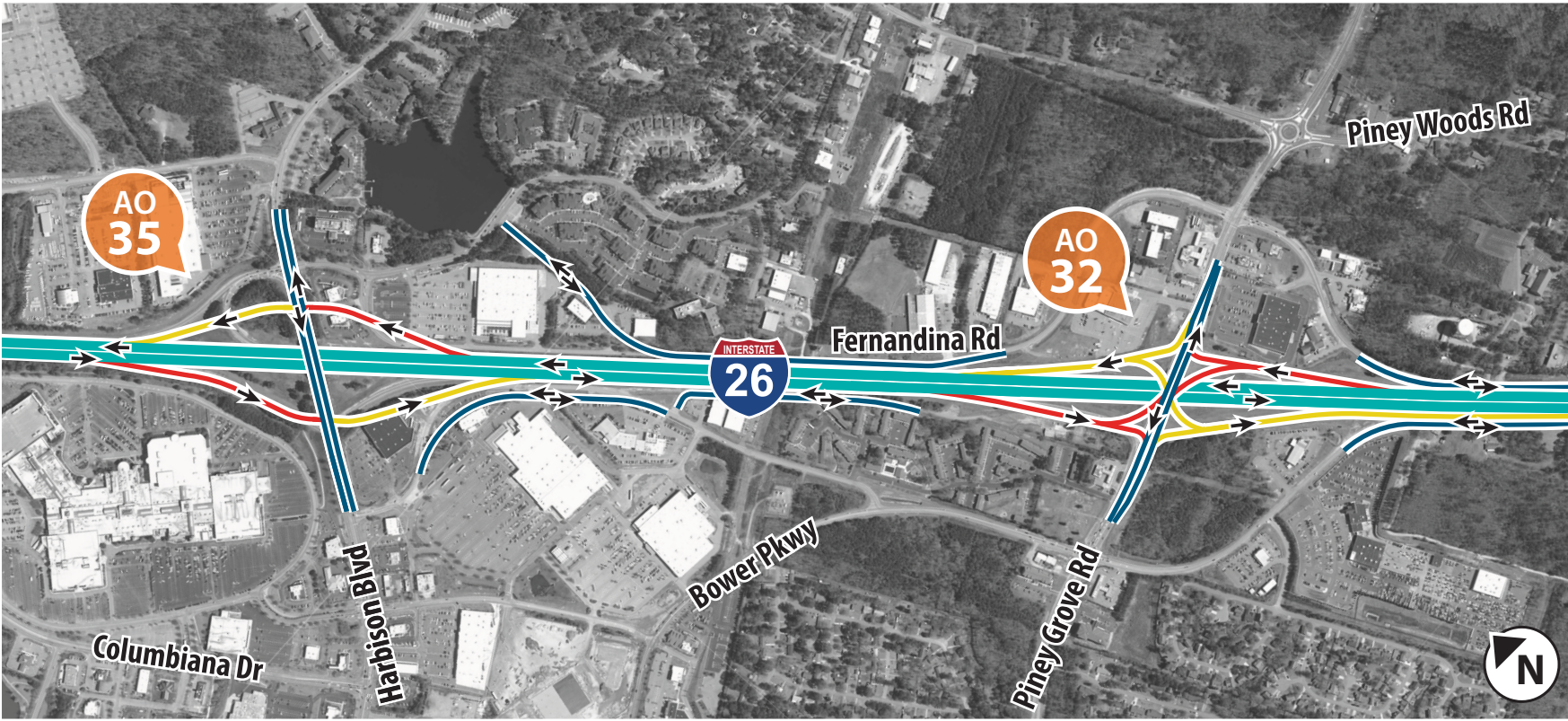
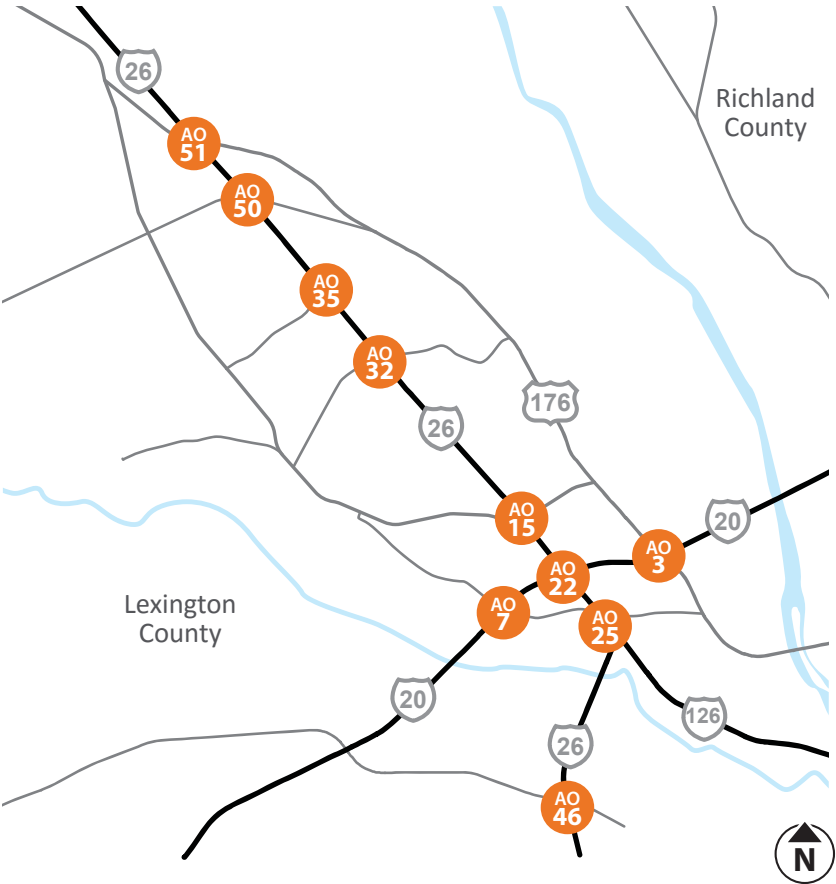
- Main Interstate
- Connector
- On-ramp
- Off-ramp
- New Roadway
- Interchange Alternative
- Travel Direction



REPRESENTATIVE ALTERNATIVE 4

Key Features Include:

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126, new collector-distributor lanes, new local roadway connections between I-126 and Bush River Road.
- Interchange improvements at each interchange from: Harbison Boulevard to US 378 on I-26; from Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- The proposed semi-directional interchange with two loop ramps at the I-26 and I-20 junction.
- The modification of the existing interchange at I-26 and Bush River Road. Instead, the existing flyover would be re-constructed from I-126 westbound to I-26 eastbound, and access to I-26 from I-20 would be provided by the I-20/Bush River Road interchange to the proposed I-26 and Bush River Road interchange.



REPRESENTATIVE ALTERNATIVE 4

LEGEND

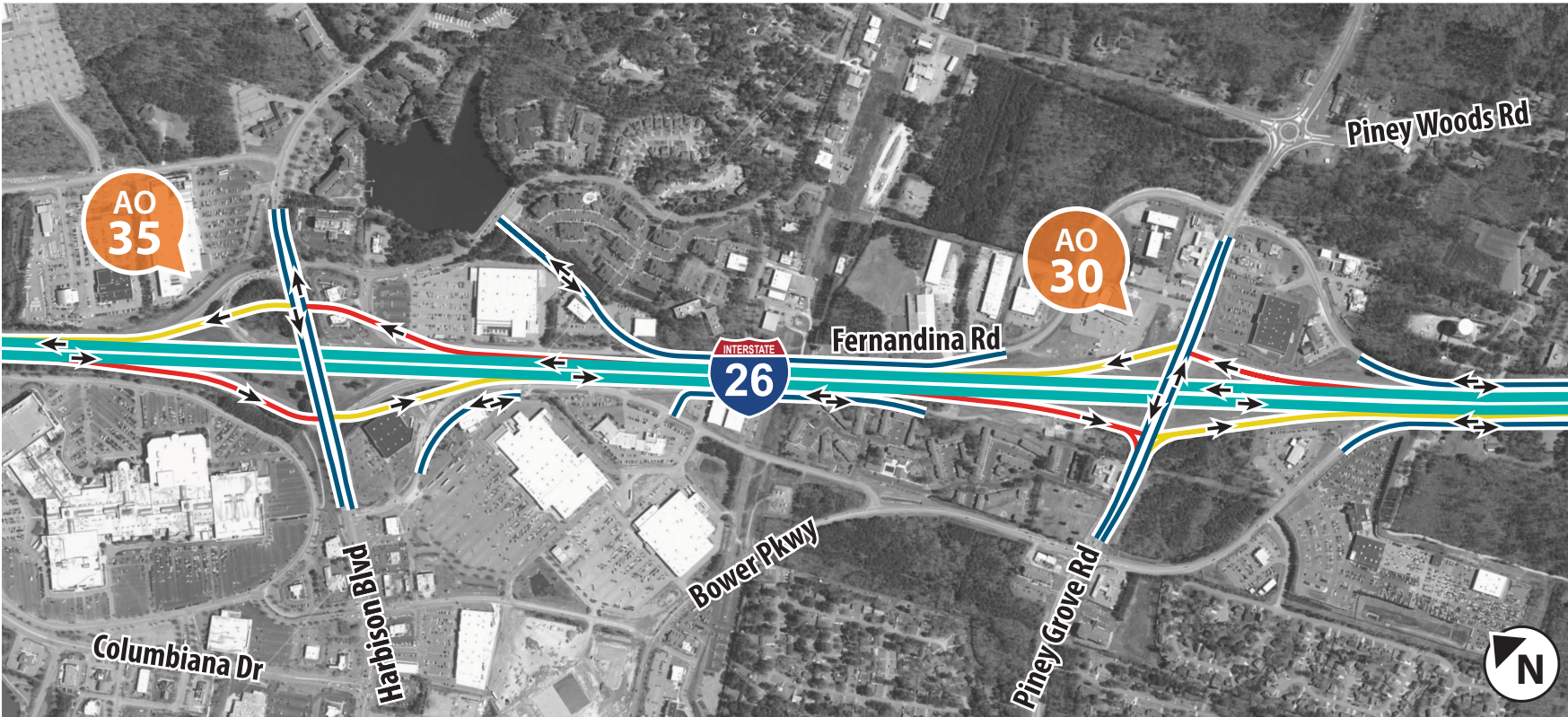
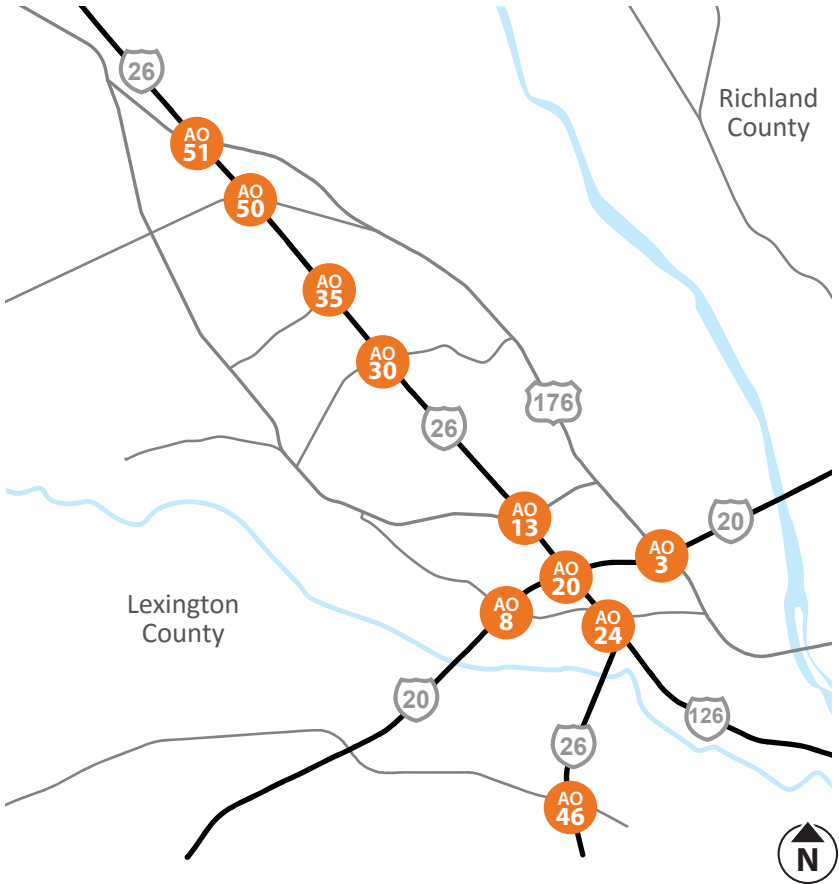
- Main Interstate
- Connector
- On-ramp
- Off-ramp
- New Roadway
- Interchange Alternative
- Travel Direction



REPRESENTATIVE ALTERNATIVE 5

Key Features Include:

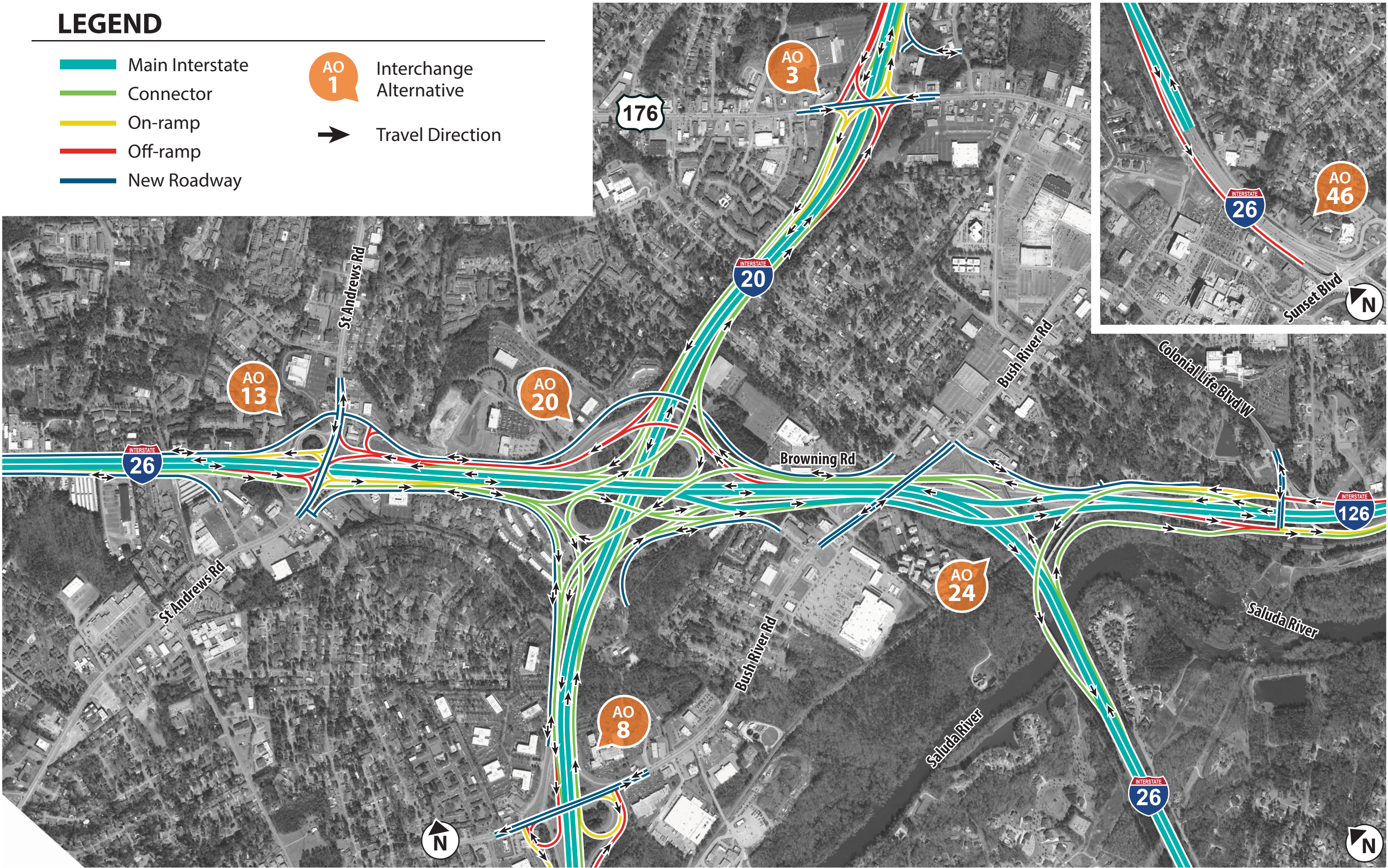
- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- New collector-distributor lanes.
- Interchange improvements at each interchange from: Harbison Boulevard to US 378 on I-26; from Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- The proposed turbine directional interchange at the I-26 and I- 20 junction, which eliminates 2 loop ramps and reconfigures the other loop ramps in the interchange. A proposed turbine directional interchange consists of three roadway levels that traverse around a central bridge. The third level is the directional ramps from I-26 to I-20.
- The elimination of the existing interchange at I-26 and Bush River Road and instead providing access to Bush River Road from the full-access interchange at Colonial Life Boulevard. By removing the direct connection between Bush River Road and I-26, traffic conflict points and weaving maneuvers between Bush River Road and the I-20/I-26 interchange would be eliminated, thereby reducing traffic congestion/disruption and improving traffic flow on I- 26.



REPRESENTATIVE ALTERNATIVE 5

LEGEND

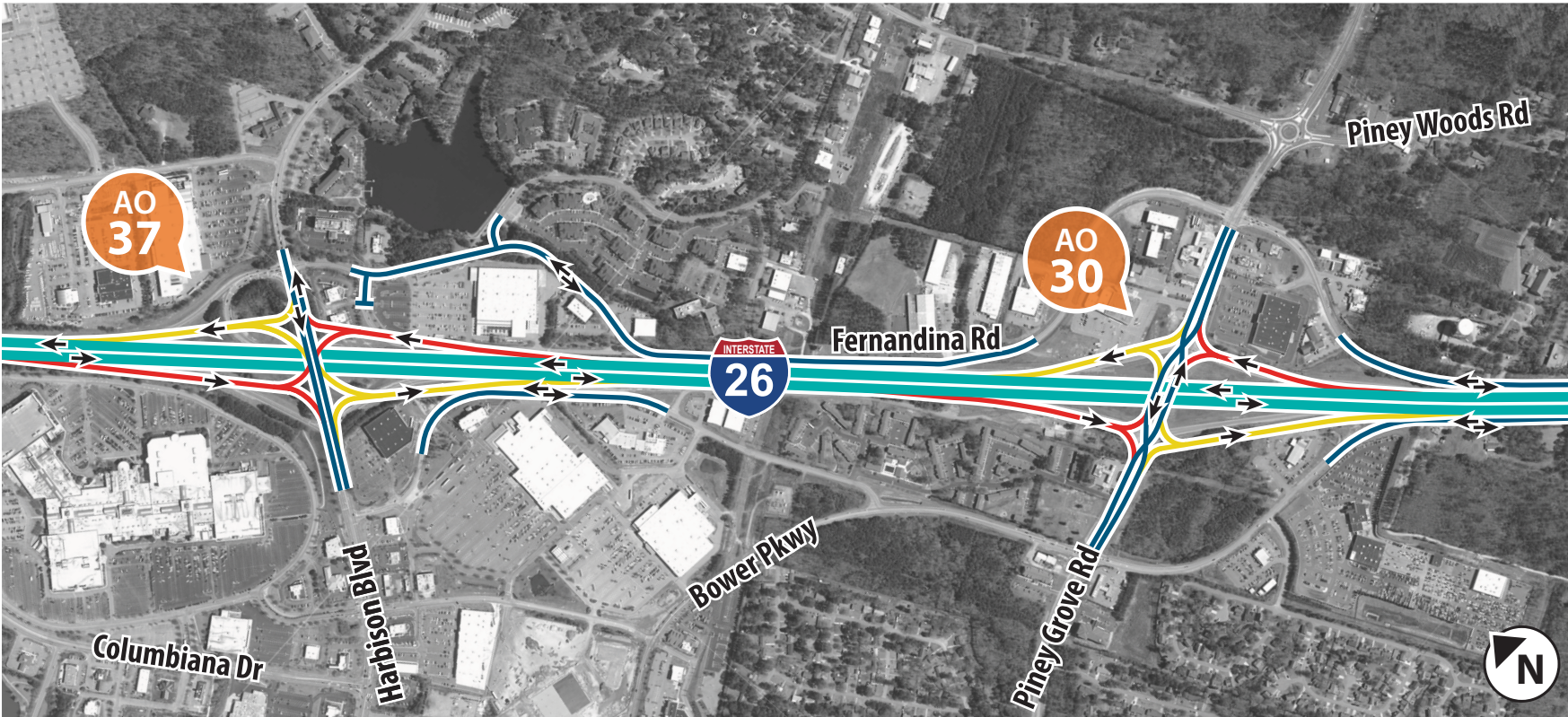
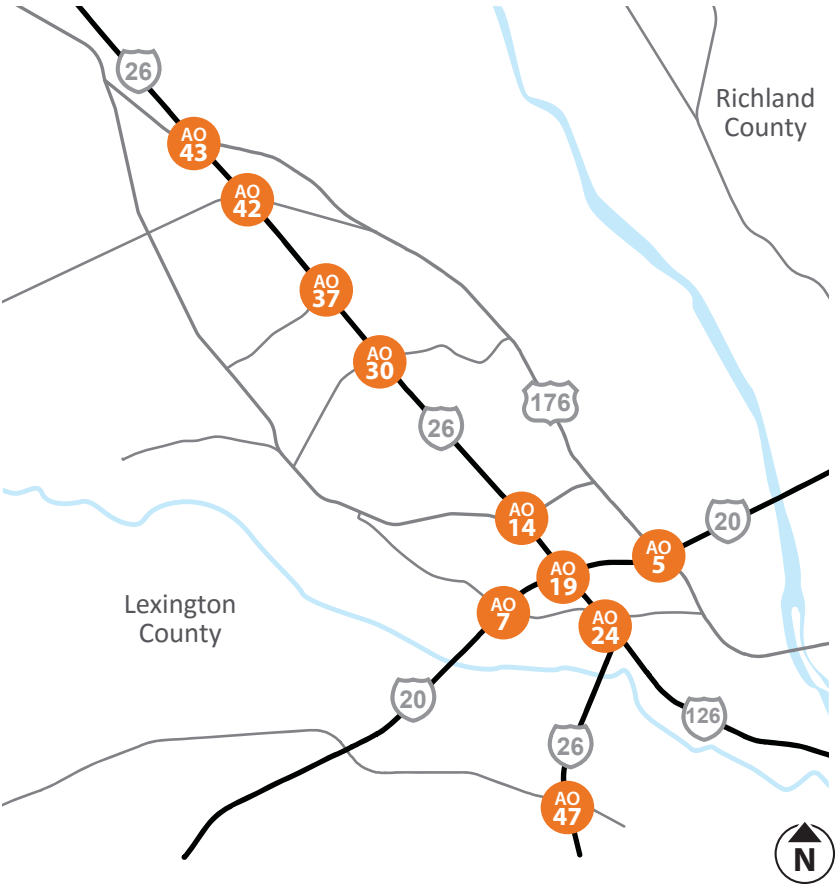
- Main Interstate
- Connector
- On-ramp
- Off-ramp
- New Roadway
- Interchange Alternative
- Travel Direction



REPRESENTATIVE ALTERNATIVE 6

Key Features Include:

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126, new collector-distributor lanes, new local roadway connections between I-126 and Bush River Road.
- Interchange improvements from at each interchange from: Harbison Boulevard to US 378 on I 26; from west of Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126. Additionally, a proposed new interchange would be added at I-126 and Colonial Life Boulevard.
- Proposed new local roadway connections would be provided between St. Andrews Road and Bush River Road so that traffic does not need to travel through the interchange of I-26 and I-20.
- The proposed collector-distributor lanes on I-20 eastbound and I-20 westbound west of Bush River Road would require a wider new I-20 bridge over the Saluda River.
- A proposed directional interchange with a loop and ramp from I-20 westbound to I-26 eastbound at the I-26 and I-20 junction.
- The elimination of the existing interchange at I-26 and Bush River Road and instead providing access to Bush River Road from the full-access interchange at Colonial Life Boulevard. The proposed improvements to the existing I-26 and I-126 interchange, would require new I-26 bridges over the Saluda River.
- The elimination of the loop ramps for left-turning vehicles and conversion of three existing I-26 interchanges (Broad River Road, Piney Grove Road, and St. Andrews Road) to diverging diamond interchange (DDI) configurations.



REPRESENTATIVE ALTERNATIVE 6

LEGEND

- Main Interstate
- Connector
- On-ramp
- Off-ramp
- New Roadway
- Interchange Alternative
- Travel Direction

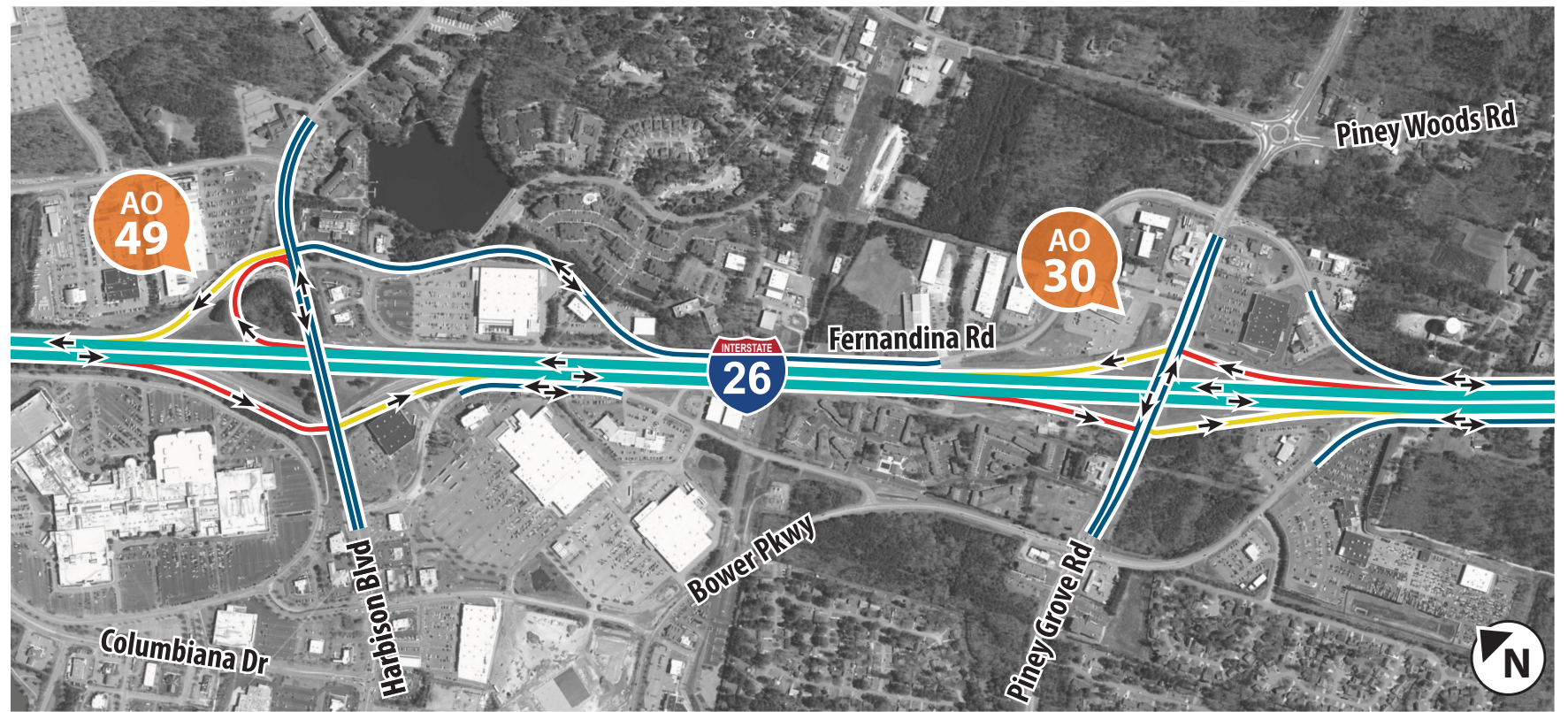
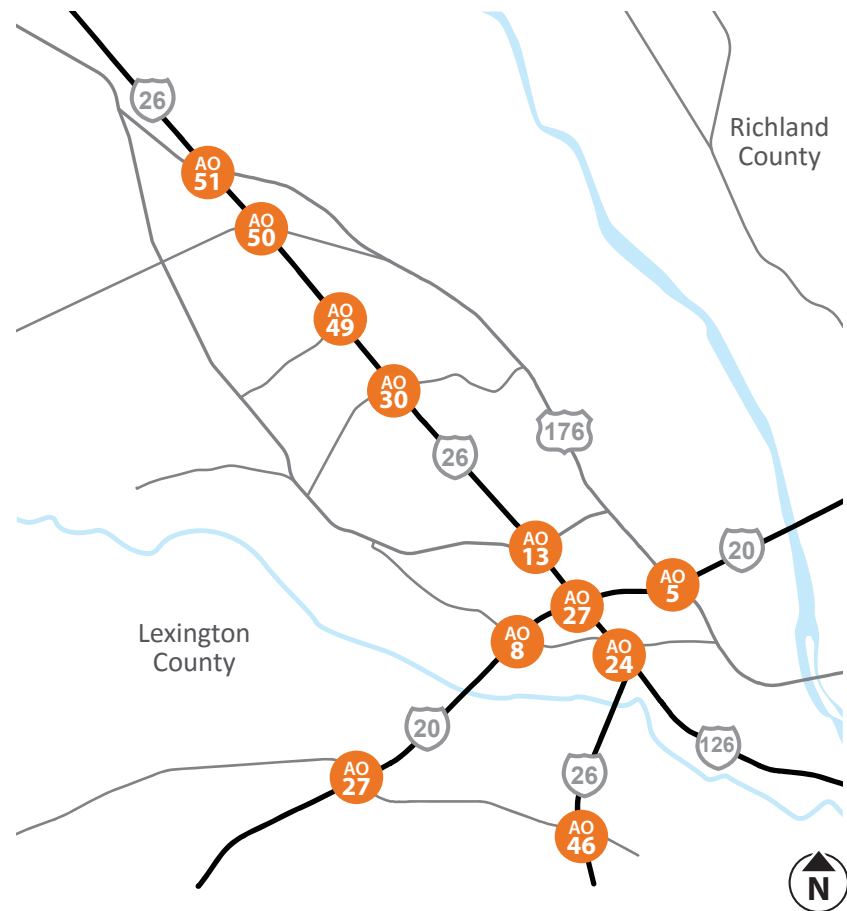


REPRESENTATIVE ALTERNATIVE 7

Key Features Include:

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- New collector-distributor lanes, and interchange improvements at each interchange from: Harbison Boulevard to US 378 on I-26; from Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- A proposed new interchange would be added at I-126 and Colonial Life Boulevard and a new offset interchange via ramp highway would be proposed paralleling the Saluda River.
- The proposed directional interchange with a loop from I-20 westbound to I-26 eastbound at the I-26 and I-20 junction as well as a new location four-lane ramp highway extending from I-20 west of Bush River Road to I-26 just south of the I-26/I-126 interchange.
- The elimination of the existing interchange at I-26 and Bush River Road providing access to a revised I-126 at Colonial Life Blvd interchange.

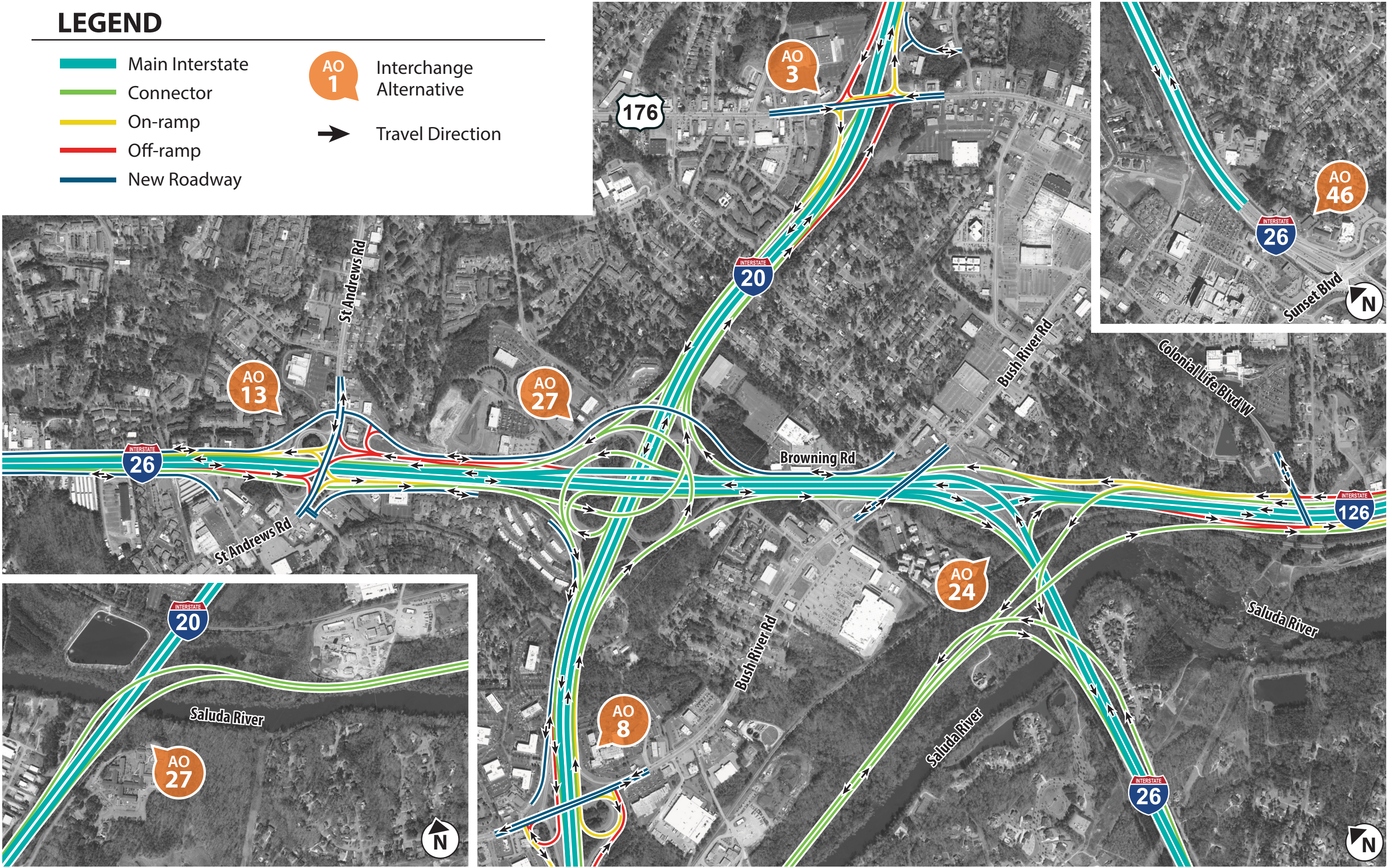
This alternative was retained for additional analysis because it significantly improves overall operational performance due to the direct connection of I-126 with I-20; reduced merge/diverge points on I-26; improved the existing roadway with more driver friendly designs; it deviates traffic volumes from portions of the mainline and intersections; and minimizes traffic disruptions.



REPRESENTATIVE ALTERNATIVE 7

LEGEND

- Main Interstate
- Connector
- On-ramp
- Off-ramp
- New Roadway
- Interchange Alternative
- Travel Direction

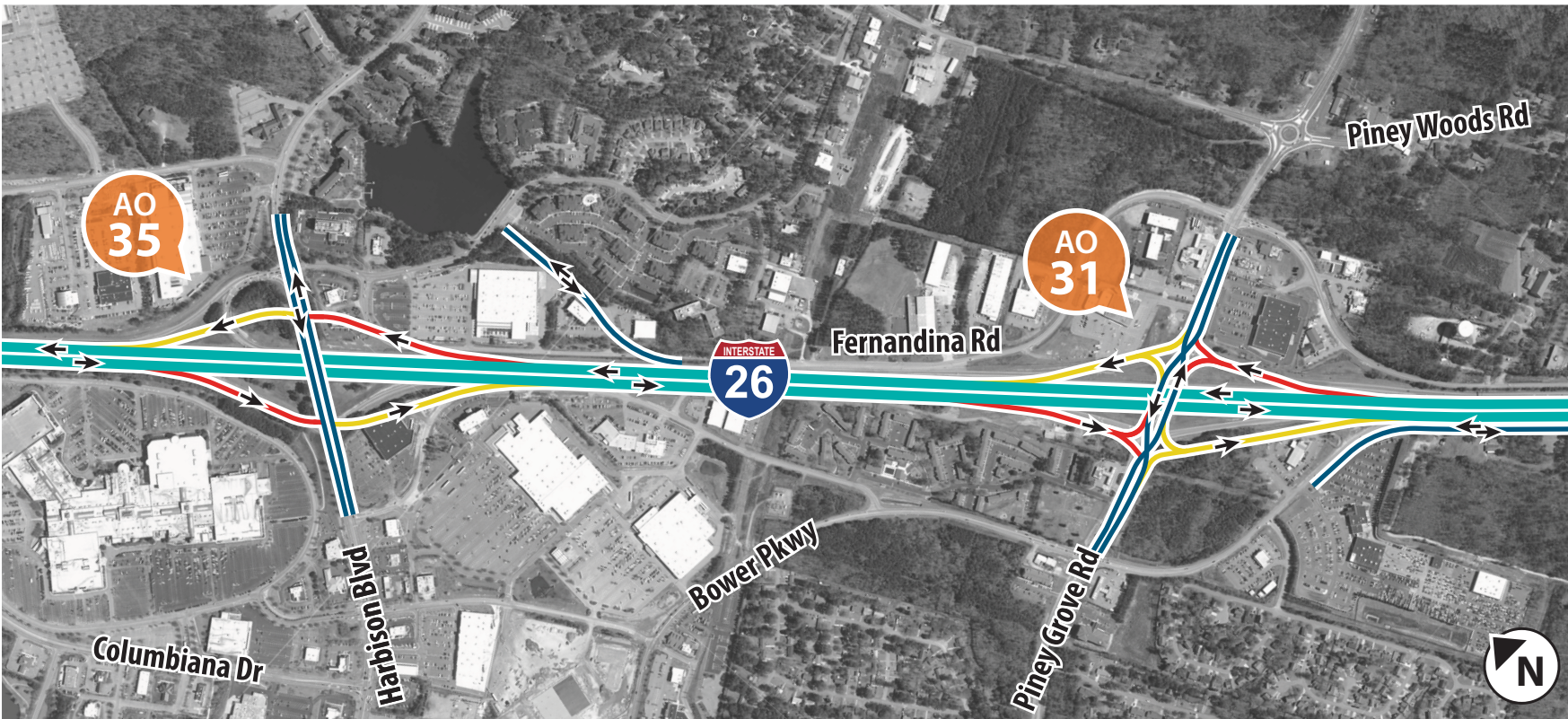
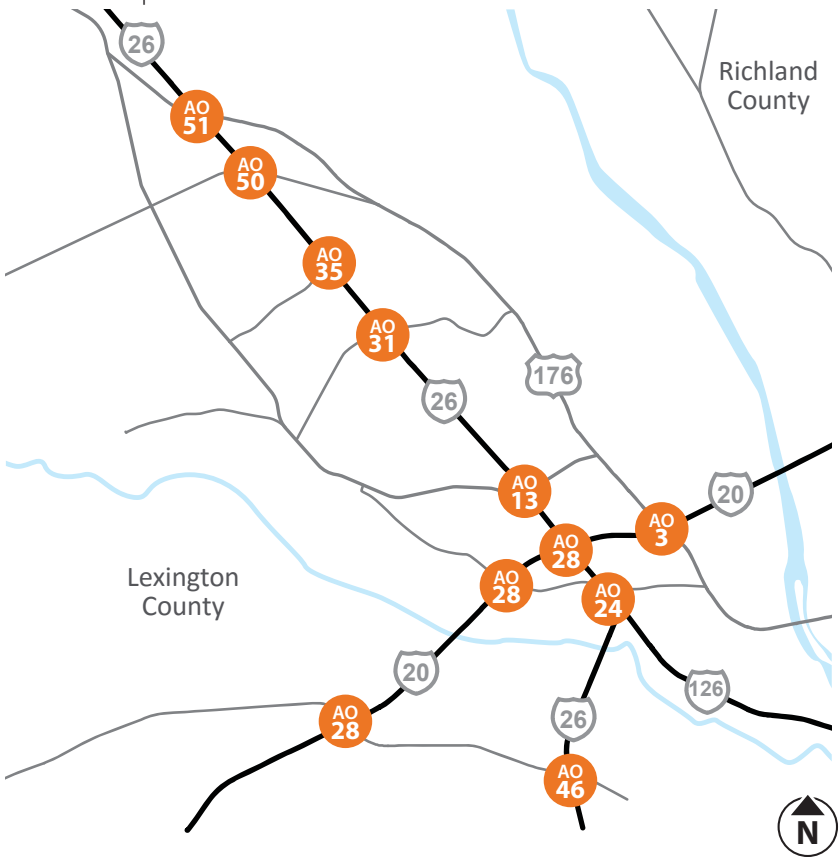


REPRESENTATIVE ALTERNATIVE 8

Key Features Include:

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126, new collector-distributor lanes, and interchange improvements at each interchange from: Harbison Boulevard to US 378 on I-26; from Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- A proposed new interchange would be added at I-126 and Colonial Life Boulevard and a new offset interchange via ramp highway would be proposed paralleling the Saluda River.
- Includes a new location four-lane roadway (east-west) extending from I-20 west of Bush River Road to I-26 just south of the I-26/I-126 interchange with a new interchange at Bush River Road. The new location east-west roadway parallel to the Saluda River provides connections between I-20 and I-26 without having to travel through the proposed directional interchange at I-20 and I-26.
- The modification of the existing interchanges of Bush River Road at I-26 and I-20. The existing I-26 westbound to I-126 eastbound ramp would be relocated south of its current location. Access to I-126 from I-20 would be provided by the new location roadway interchange.

This alternative was retained for additional analysis because it provides a moderate improvement to operational performance, significant improvement to the overall travel through the corridor. The addition of a connection to Bush River Rd as a feature of the new alignment connecting I-126 and I-20, and removal of connections to the mainlines, are contributors to the improvement.



REPRESENTATIVE ALTERNATIVE 8

LEGEND

- Main Interstate
- Connector
- On-ramp
- Off-ramp
- New Roadway
- Interchange Alternative
- Travel Direction



REPRESENTATIVE ALTERNATIVE 9

Key Features Include:

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126 and interchange improvements at each interchange from: Harbison Boulevard to US 378 on I-26; from US 378 to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- A proposed new interchange would be added at I-126 and I-26 and a new location I-126 would be proposed paralleling south of the Saluda River along with the elimination of the existing cloverleaf interchange at the I-20 and I-26 junction.
- The elimination of the existing cloverleaf interchange at the I-20 and I-26 junction and proposed new interchange at I-126 and I-26 along with a proposed new location four-lane freeway between I-20 and I-126.
- The modification of the existing interchange at I-26 and Bush River Road. Additionally, I-20 traffic can access I-126 via the new location east-west roadway.

