



Appendix E

Tier I Alternative Concept Descriptions

SR 21 Corridor Study
Phase I Final Report

ALT 1

- Northern Section **WIDENING**
 - Widen to six lanes, including intersection improvements
- Central Section **WIDENING**
 - Widen to six lanes, including intersection improvements
- Southern Section **WIDENING**
 - Widen to six lanes between Bourne Avenue (SR 307) and Smith Avenue

ALT 2

- Northern Section **WIDENING w/ FLYOVERS at I-95**
 - Widen to six lanes between the Effingham County line and JDL Parkway
 - Construct flyover: northbound I-95 to northbound SR 21 (north of SR 30)
 - Construct flyover: southbound I-95 to southbound SR 21 (south of O’Leary Road)
- Central Section **WIDENING w/ GRADE SEPARATION**
 - Eliminate Bonnybridge Road connection and relocate Bonnybridge Road connection to JDL Parkway/Pierce Avenue Interchange
 - Implement grade separation at Gulfstream Road/Crossgate Road
 - Eliminate Grange Road connection (Grange Road cul-de-sac)
 - Implement grade separation at Bourne Avenue (SR 307)
 - Widen to six lanes between JDL Parkway and Bourne Avenue (SR 307)
- Southern Section **WIDENING**
 - Widen to six lanes between Bourne Avenue (SR 307) and Smith Avenue

ALT 3

- Northern Section **ELEVATED LANES on SR 21**
 - Construct four elevated lanes above SR 21, from north of SR 30 to JDL Parkway
 - Construct flyovers:
 - Northbound I-95 to southbound elevated lanes
 - Southbound I-95 to southbound elevated lanes
 - Northbound elevated lanes to southbound I-95
 - Northbound elevated lanes to northbound I-95
 - Widen to six lanes between SR 30 and O’Leary Road
- Central Section **ELEVATED LANES on SR 21**
 - Construct four elevated lanes above SR 21 between JDL Parkway and SR 307 with two “slip ramps” connecting to SR 21 between JDL Parkway and Gulfstream/Crossgate Road
- Southern Section **ELEVATED LANES on SR 21**
 - Construct four elevated lanes above SR 21 between Bourne Avenue (SR 307) and I-516 (between Exit 7 and Exit 8) with two “slip ramps” connecting to SR 21 north of Smith Avenue

ALT 4

- Northern Section **WEST LOOP HIGHWAY w/ NEW INTERCHANGE at I-95**
 - Construct a collector-distributor road system adjacent to I-95 between JDL Parkway and SR 21
 - Construct a four-lane facility on new location looping to the east beginning with ramps to and from SR 21 north of SR 30 and connecting to elevated lanes over SR 21 between Hendley Road and International Trade Parkway, including an interchange with SR 30 and an interchange with the new I-95 collector-distributor road system.
 - Construct four elevated lanes above SR 21, between the new location facility's southern terminus and JDL Parkway.
- Central Section ***ELEVATED LANES on SR 21***
 - Construct four elevated lanes above SR 21 between JDL Parkway and SR 307 with two “slip ramps” connecting to SR 21 between JDL Parkway and Gulfstream/Crossgate Road
- Southern Section ***ELEVATED LANES on SR 21***
 - Construct four elevated lanes above SR 21 between Bourne Avenue (SR 307) and I-516 (between Exit 7 and Exit 8) with two “slip ramps” connecting to SR 21 north of Smith Avenue

ALT 5

- Northern Section **WEST LOOP HIGHWAY w/ NEW INTERCHANGE at I-95**
 - Construct a collector-distributor road system adjacent to I-95 between JDL Parkway and SR 21
 - Construct a four-lane facility on new location looping to the east beginning with ramps to and from SR 21 north of SR 30 and connecting to elevated lanes over SR 21 between Hendley Road and International Trade Parkway, including an interchange with SR 30 and an interchange with the new I-95 collector-distributor road system.
 - Construct four elevated lanes above SR 21, between the new location facility's southern terminus and JDL Parkway.
- Central Section ***CONNECT to and WIDEN JIMMY DeLOACH CONNECTOR***
 - Widen the JDL Connector to six lanes, including a truck-only lane in each direction
 - To the north, connect the elevated lanes on SR 21 to the JDL Connector north of Pierce Avenue
 - To the south, connect the JDL Connector to the elevated lanes on SR 21 between Bourne Avenue (SR 307) and Smith Avenue
- Southern Section ***ELEVATED LANES on SR 21***
 - Construct four elevated lanes above SR 21 between Bourne Avenue (SR 307) and I-516 (between Exit 7 and Exit 8) with two “slip ramps” connecting to SR 21 north of Smith Avenue

ALT 6

- Northern Section ***EAST LOOP HIGHWAY w/ NEW INTERCHANGE at I-95***
 - Construct a four-lane facility on new location looping to the west, beginning with ramps to and from SR 21 (north of SR 30) and connecting to elevated lanes over SR 21 between Hendley Road and International Trade Parkway.
 - Construct a new, partial interchange with I-95 including ramps connecting I-95 southbound to the new facility southbound and the new facility northbound to I-95 northbound.
 - Construct collector-distributor lanes connecting the new interchange to the SR 21 interchange
 - Construct four elevated lanes above SR 21, between the new location facility's southern terminus and the JDL Connector.
- Central Section ***CONNECT to and WIDEN JIMMY DeLOACH CONNECTOR***
 - Widen the JDL Connector to six lanes, including a truck-only lane in each direction
 - To the north, connect the elevated lanes on SR 21 to the JDL Connector north of Pierce Avenue
 - To the south, connect the JDL Connector to the elevated lanes on SR 21 between Bourne Avenue (SR 307) and Smith Avenue
- Southern Section ***ELEVATED LANES on SR 21***
 - Construct four elevated lanes above SR 21 between Bourne Avenue (SR 307) and I-516 (between Exit 7 and Exit 8) with two “slip ramps” connecting to SR 21 north of Smith Avenue

ALT 7

- Northern Section ***WEST LOOP HIGHWAY w/ NEW INTERCHANGE at I-95***
 - Construct a collector-distributor road system adjacent to I-95 between JDL Parkway and SR 21
 - Construct a four-lane facility on new location looping to the east beginning with ramps to and from SR 21 north of SR 30 and connecting to elevated lanes over SR 21 between Hendley Road and International Trade Parkway, including an interchange with SR 30 and an interchange with the new I-95 collector-distributor road system.
 - Construct four elevated lanes above SR 21, between the new location facility's southern terminus and JDL Parkway.
- Central Section ***CONNECT to and WIDEN JIMMY DeLOACH CONNECTOR***
 - Widen the JDL Connector to six lanes, including a truck-only lane in each direction
 - To the north, connect the elevated lanes on SR 21 to the JDL Connector north of Pierce Avenue
 - To the south, connect the JDL Connector to the new location facility described below

- Southern Section ***NEW HIGHWAY to I-16 near I-516***
 - Construct a four-lane facility on new location between the JDL Connector and a new interchange with I-16 (described below). This facility runs roughly parallel to the CSX track and includes a bridge over SR 21 and construction of a new interchange with US 80
 - Construct a collector-distributor road system adjacent to I-16 between Chatham Parkway and I-516, adding new through lanes for I-16 within the I-516 interchange and converting the existing through lanes on I-16 into components of the collector-distributor road system
 - Construct a new, full-movement interchange, connecting the new location facility with the new I-16 collector-distributor road system between Chatham Parkway and I-516

ALT 8

- Northern Section ***WEST LOOP HIGHWAY w/ NEW INTERCHANGE at I-95***
 - Construct a collector-distributor road system adjacent to I-95 between JDL Parkway and SR 21
 - Construct a four-lane facility on new location looping to the east beginning with ramps to and from SR 21 north of SR 30 and connecting to elevated lanes over SR 21 between Hendley Road and International Trade Parkway, including an interchange with SR 30 and an interchange with the new I-95 collector-distributor road system.
 - Construct four elevated lanes above SR 21, between the new location facility's southern terminus and JDL Parkway.
- Central Section ***CONNECT to and WIDEN JIMMY DeLOACH CONNECTOR***
 - Widen the JDL Connector to six lanes, including a truck-only lane in each direction
 - To the north, connect the elevated lanes on SR 21 to the JDL Connector north of Pierce Avenue
 - To the south, connect the JDL Connector to the new location facility described below
- Southern Section ***NEW HIGHWAY to I-16 near SR 307***
 - Construct a four-lane facility on new location between the JDL Connector and a new interchange with I-16 (described below). This facility runs roughly parallel to and east of Bourne Avenue (SR 307) and includes construction of a bridge over SR 21 and new interchange with US 80
 - Construct new "trumpet" interchange with I-16, between SR 307 and Chatham Parkway.
 - Construct a third eastbound lane on I-16 between SR 307 and the new interchange

ALT 9

- Northern Section ***WEST LOOP HIGHWAY w/ NEW INTERCHANGE at I-95***
 - Construct a collector-distributor road system adjacent to I-95 between JDL Parkway and SR 21
 - Construct a four-lane facility on new location looping to the east beginning with ramps to and from SR 21 north of SR 30 and connecting to elevated lanes over SR 21 between Hendley Road and International Trade Parkway, including an interchange with SR 30 and an interchange with the new I-95 collector-distributor road system.
 - Construct four elevated lanes above SR 21, between the new location facility's southern terminus and JDL Parkway.
- Central Section ***CONNECT to and WIDEN JIMMY DeLOACH CONNECTOR***
 - Widen the JDL Connector to six lanes, including a truck-only lane in each direction
 - To the north, connect the elevated lanes on SR 21 to the JDL Connector north of Pierce Avenue
 - To the south, connect the JDL Connector to the elevated lanes on SR 25 facility
- Southern Section ***ELEVATED LANES on SR 25***
 - Construct four elevated lanes parallel to the Pipemakers Canal and then turning south onto an alignment above SR 25 between Smith Avenue and I-516 (between Exit 7 and Exit 8)

ALT 10

- Northern Section ***ELEVATED LANES on SR 21***
 - Construct four elevated lanes above SR 21, from north of SR 30 to JDL Parkway
 - Construct flyovers:
 - Northbound I-95 to southbound elevated lanes
 - Southbound I-95 to southbound elevated lanes
 - Northbound elevated lanes to southbound I-95
 - Northbound elevated lanes to northbound I-95
 - Widen to six lanes between SR 30 and O'Leary Road
- Central Section ***CONNECT to and WIDEN JIMMY DeLOACH CONNECTOR***
 - Widen the JDL Connector to six lanes, including a truck-only lane in each direction
 - To the north, connect the elevated lanes on SR 21 to the JDL Connector north of Pierce Avenue
 - To the south, connect the JDL Connector to the elevated lanes on SR 21 between Bourne Avenue (SR 307) and Smith Avenue
- Southern Section ***ELEVATED LANES on SR 21***
 - Construct four elevated lanes above SR 21 between Bourne Avenue (SR 307) and I-516 (between Exit 7 and Exit 8) with two "slip ramps" connecting to SR 21 north of Smith Avenue

ALT 11

- Northern Section ***ELEVATED LANES on SR 21***
 - Construct four elevated lanes above SR 21, from north of SR 30 to JDL Parkway
 - Construct flyovers:
 - Northbound I-95 to southbound elevated lanes
 - Southbound I-95 to southbound elevated lanes
 - Northbound elevated lanes to southbound I-95
 - Northbound elevated lanes to northbound I-95
 - Widen to six lanes between SR 30 and O'Leary Road
- Central Section ***CONNECT to and WIDEN JIMMY DeLOACH CONNECTOR***
 - Widen the JDL Connector to six lanes, including a truck-only lane in each direction
 - To the north, connect the elevated lanes on SR 21 to the JDL Connector north of Pierce Avenue
 - To the south, connect the JDL Connector to the new location facility described below
- Southern Section ***NEW HIGHWAY to I-16 near I-516***
 - Construct a four-lane facility on new location between the JDL Connector and a new interchange with I-16 (described below). This facility runs roughly parallel to the CSX track and includes a bridge over SR 21 and construction of a new interchange with US 80
 - Construct a collector-distributor road system adjacent to I-16 between Chatham Parkway and I-516, adding new through lanes for I-16 within the I-516 interchange and converting the existing through lanes on I-16 into components of the collector-distributor road system
 - Construct a new, full-movement interchange, connecting the new location facility with the new I-16 collector-distributor road system between Chatham Parkway and I-516