HERITAGE HEIGHTS SECONDARY PLAN
FUTURE 2051 TRANSPORTATION MODELLING ASSESSMENT OF NETWORK ALTERNATIVES

Transportation Master Plan
Appendix E

BRAMPTON

Heritage Heights
Landowners Group

BA Group

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1.0 FUTURE BASE

This section presents the weekday morning (AM) and afternoon (PM) future 2051 mesoscopic modelling results (link volumes and volume-to-capacity ratios) for the base Heritage Heights transportation network outlined in this TMP.

Figure 1: Future 2051 Base Conditions – Corridor Volumes – AM Peak Hour

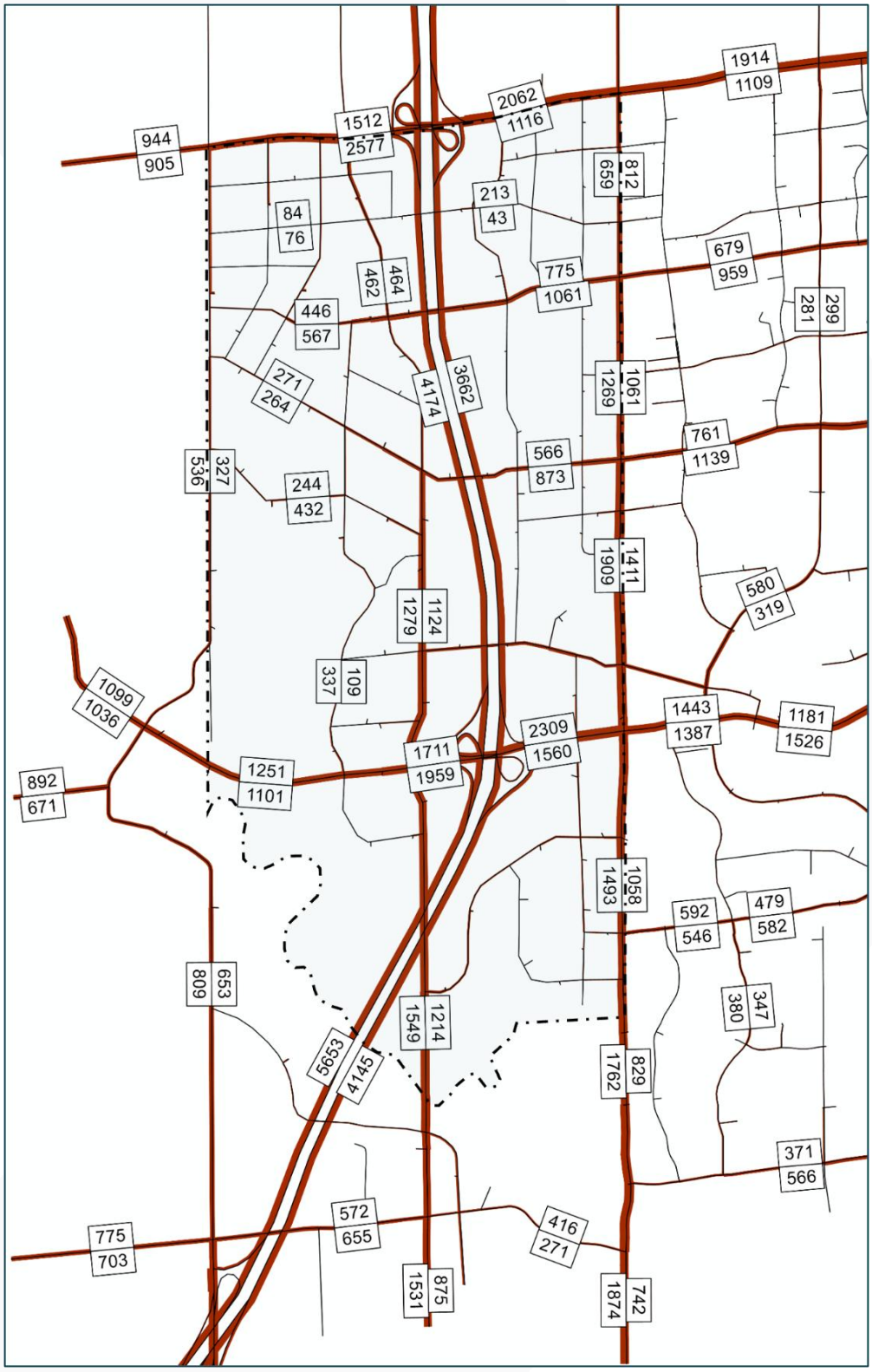


Figure 2: Future 2051 Base Conditions – Corridor V/C Ratios – AM Peak Hour

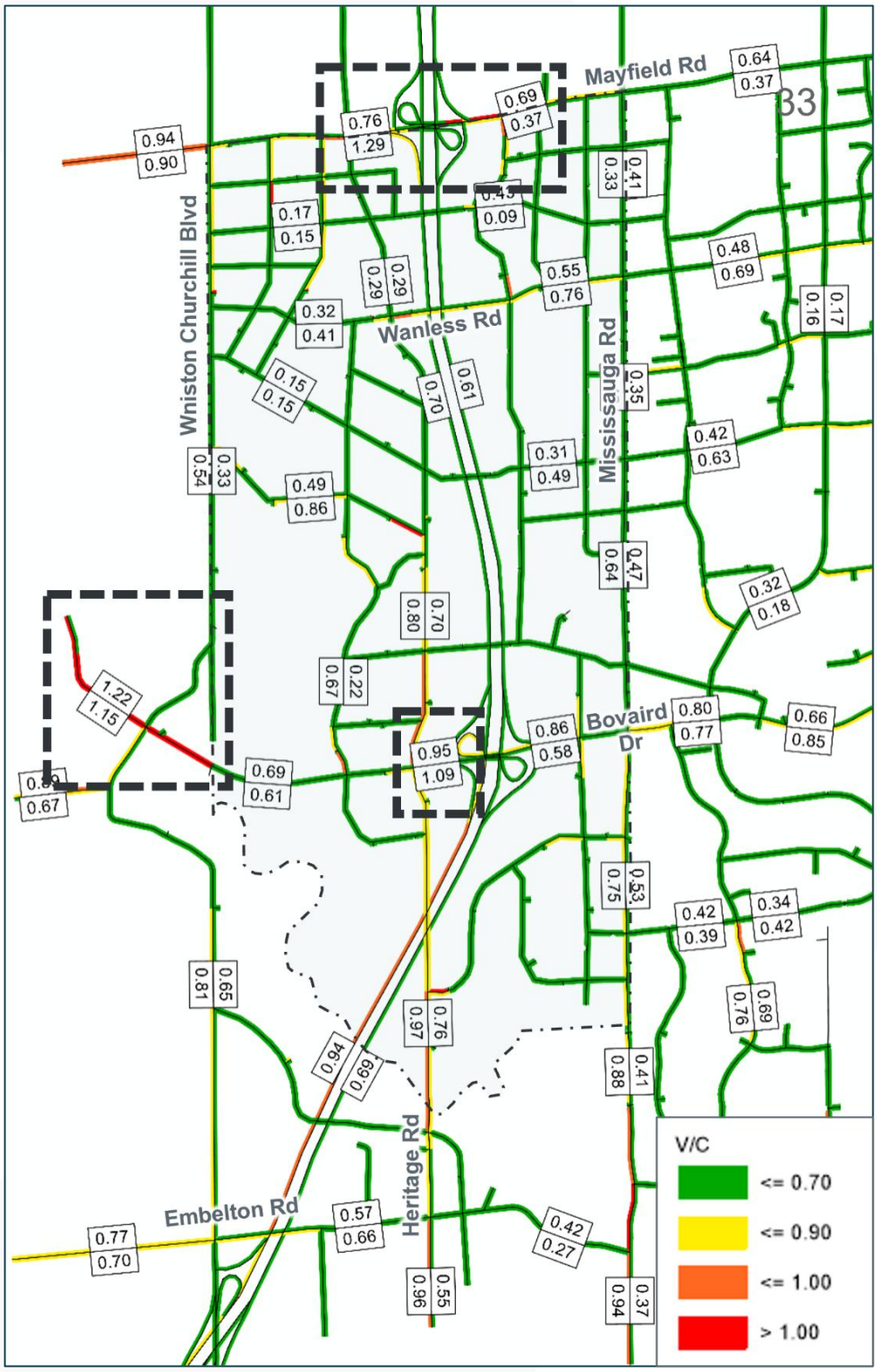


Figure 3: Future 2051 Base Conditions – Corridor Volumes – PM Peak Hour

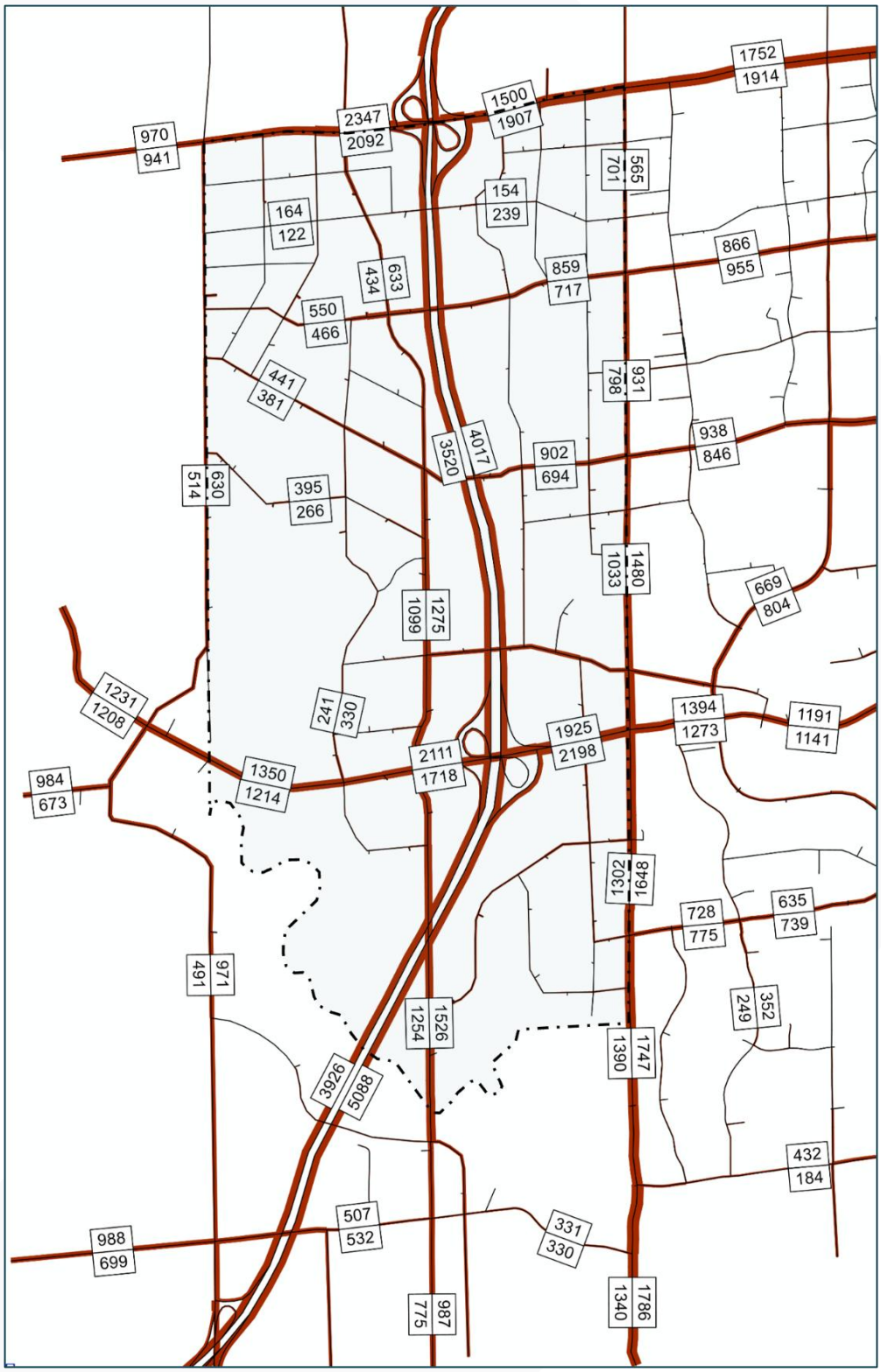
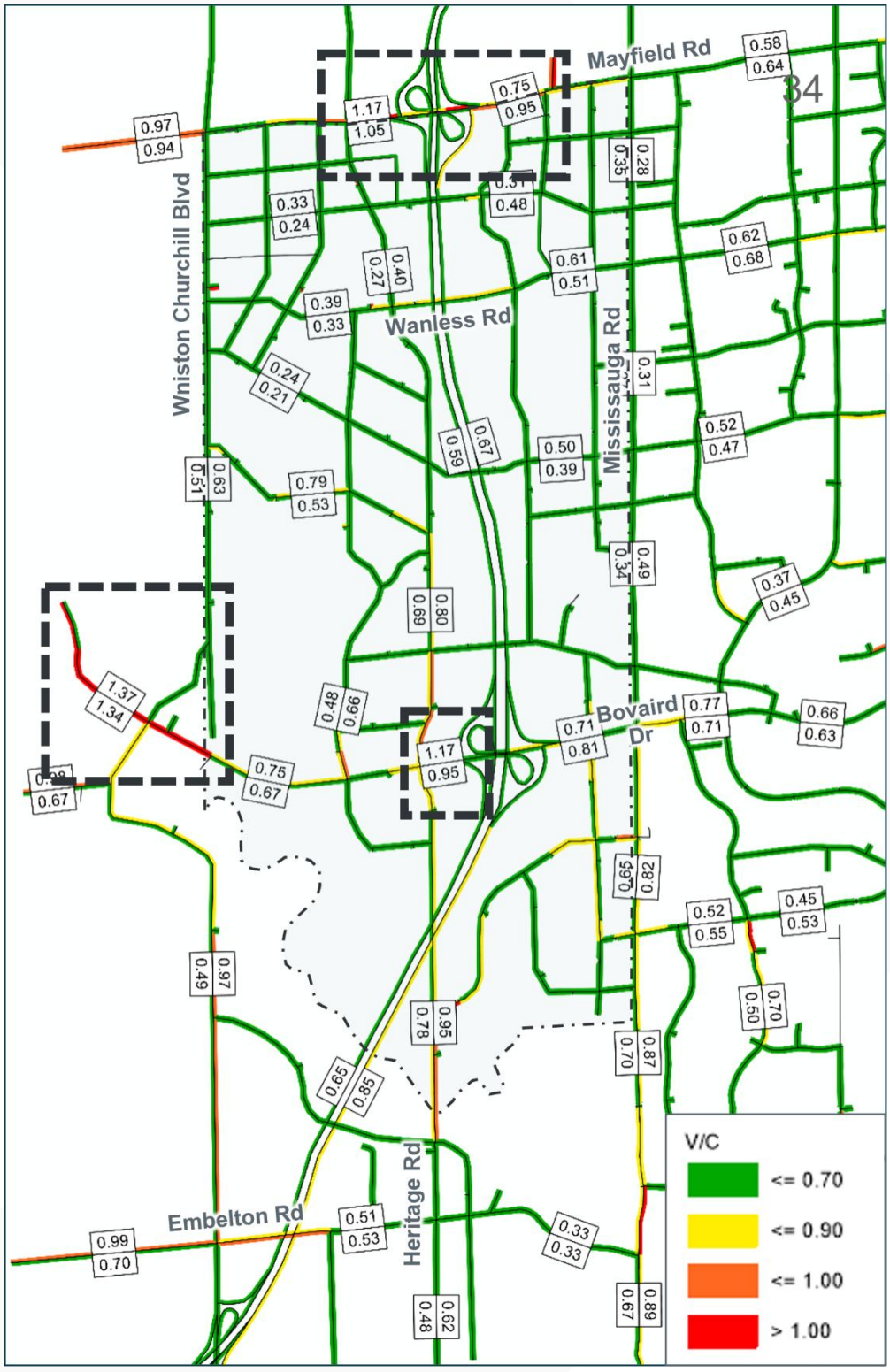


Figure 4: Future 2051 Base Conditions – Corridor V/C Ratios – PM Peak Hour



2.0 FUTURE BASE AND RECOMMENDED LONG LIST ALTERNATIVES

Table 1 below summarizes the long list of alternatives and highlights the specific alternatives that were recommended and adopted without requiring further evaluation. This section presents the weekday morning (AM) and afternoon (PM) future 2051 mesoscopic modelling results (link volumes and volume-to-capacity ratios) for the Heritage Heights transportation network that represents the base conditions transportation network plus the recommended long list alternatives (A, B, and D) outlined in **Table 1**. This road network scenario will be referred to as the "Refined Base" network.

Table 1 Long List of Alternatives

#	Long List Network Alternative	Type	Description	Assessment Result
A	Bovaird Drive & Mayfield Road	Road Widening	Widenings to 6-lanes along Mayfield Road and Bovaird Drive extended westward to Heritage Road	**Recommended Adopted.** Does not require further evaluation.
B	Sandalwood Pkwy & Winston Churchill Blvd (52-6, 52-7)	Road Alignment	Re-alignment of the planned Sandalwood Parkway terminating at Wanless Drive.	**Recommended Adopted.** Does not require further evaluation.
C	Precinct 52-3 Road Network	Road Alignment, Crossing of Existing or Planned Constraints	Realignment of Nightjar Drive (Deuce Street), extension of Goderich Drive (Ace Avenue), and realignment of Pinnacle Parkway to avoid wetland features.	**Carried Forward for Further Evaluation (Section 3.0)**
D	Williams Extension / Doubles Drive (52-1)	Road Alignment	Realignment of Doubles Drive and Williams Parkway reflecting emerging Precinct Planning	**Recommended Adopted.** Does not require further evaluation.
E	East-West Connection Focus Area (Inter-Regional)	Crossings of Existing or Planned Constraints	Continuation of previously studied Norval Hamlet 'East-West Connection Focus Area' as identified in the 2010 Halton-Peel Boundary Area Transportation Study (HPBATS). Widening, By-Pass, or Do Nothing to address potential future traffic capacity constraints.	**Carried Forward for Further Evaluation (Section 4.0)**
F	Buick Boulevard (52-2)	Crossings of Existing or Planned Constraints	Extension of Buick Boulevard (Crossing Natural Heritage) to Pinnacle Parkway	**Carried Forward for Further Evaluation (Section 5.0)**
G	North-South Rail Crossing (52-5, 52-6)	Crossings of Existing or Planned Constraints	Re-evaluation of Secondary Plan CN railway crossing and related road alignments.	**Carried Forward for Further Evaluation (Section 6.0)**

Figure 5: Future 2051 Refined Base Conditions – Corridor Volumes – AM Peak Hour

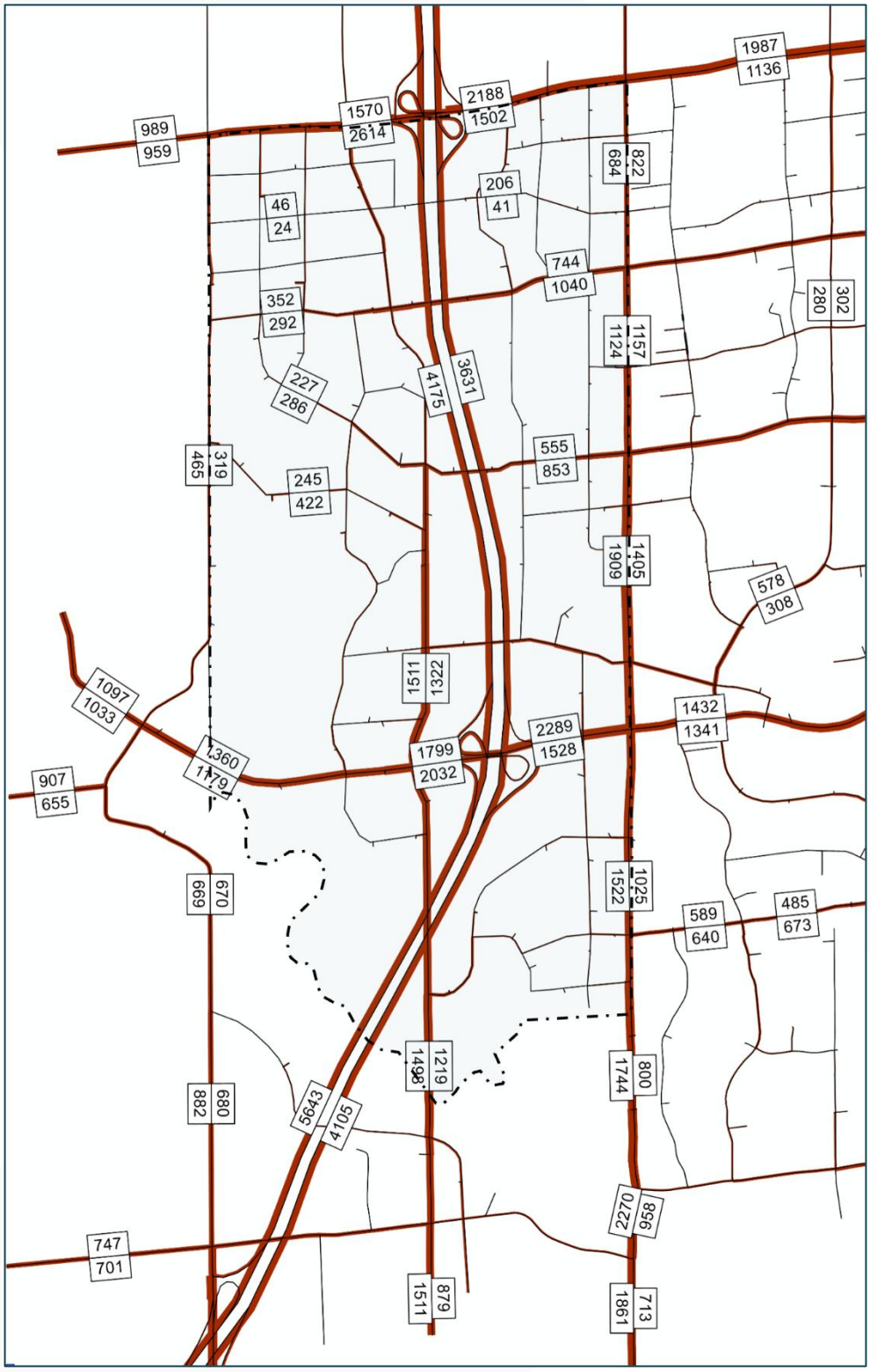


Figure 6: Future 2051 Refined Base Conditions – Corridor V/C Ratios – AM Peak Hour

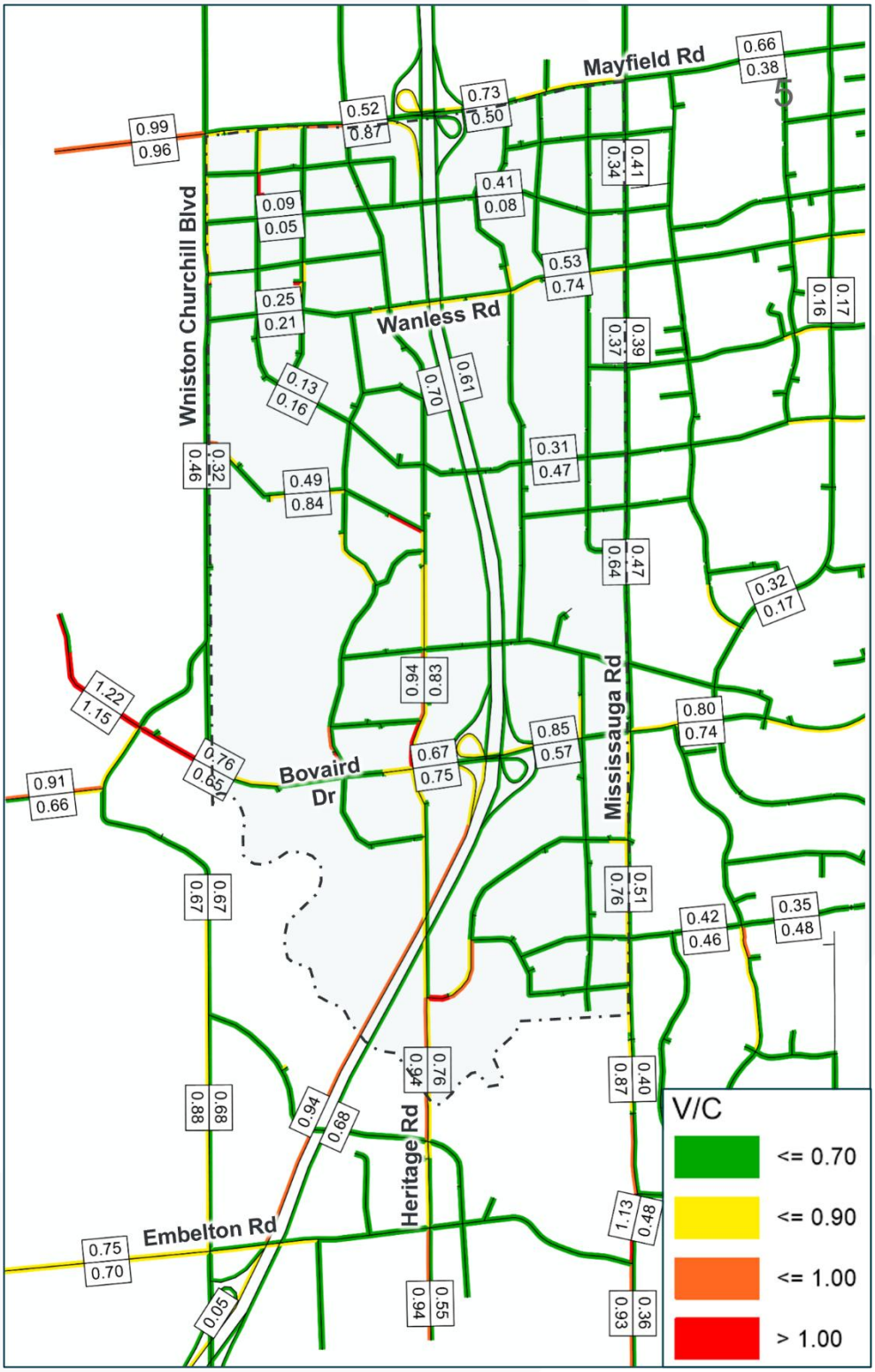


Figure 7: Future 2051 Refined Base Conditions – Corridor Volumes – PM Peak Hour

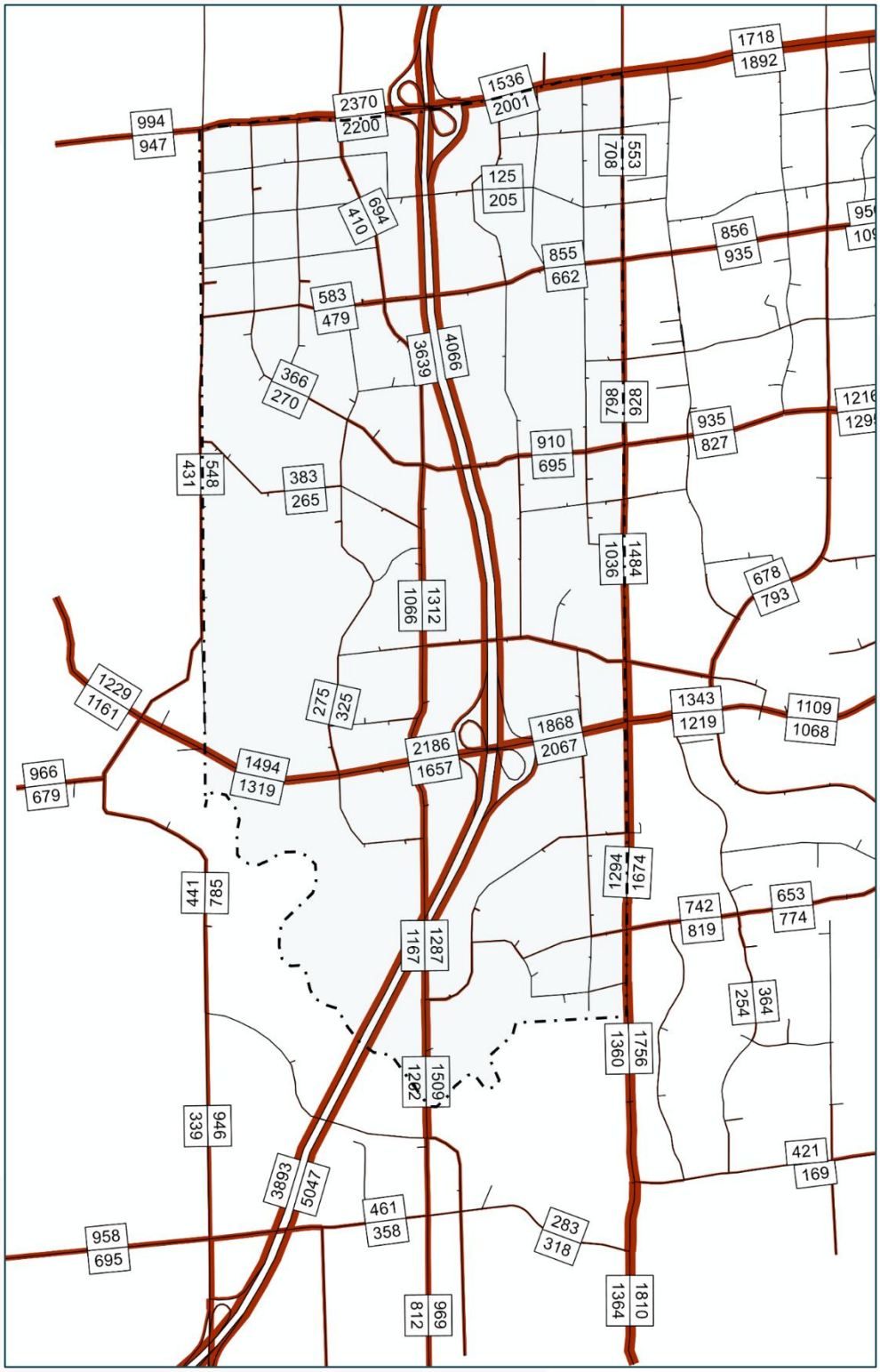
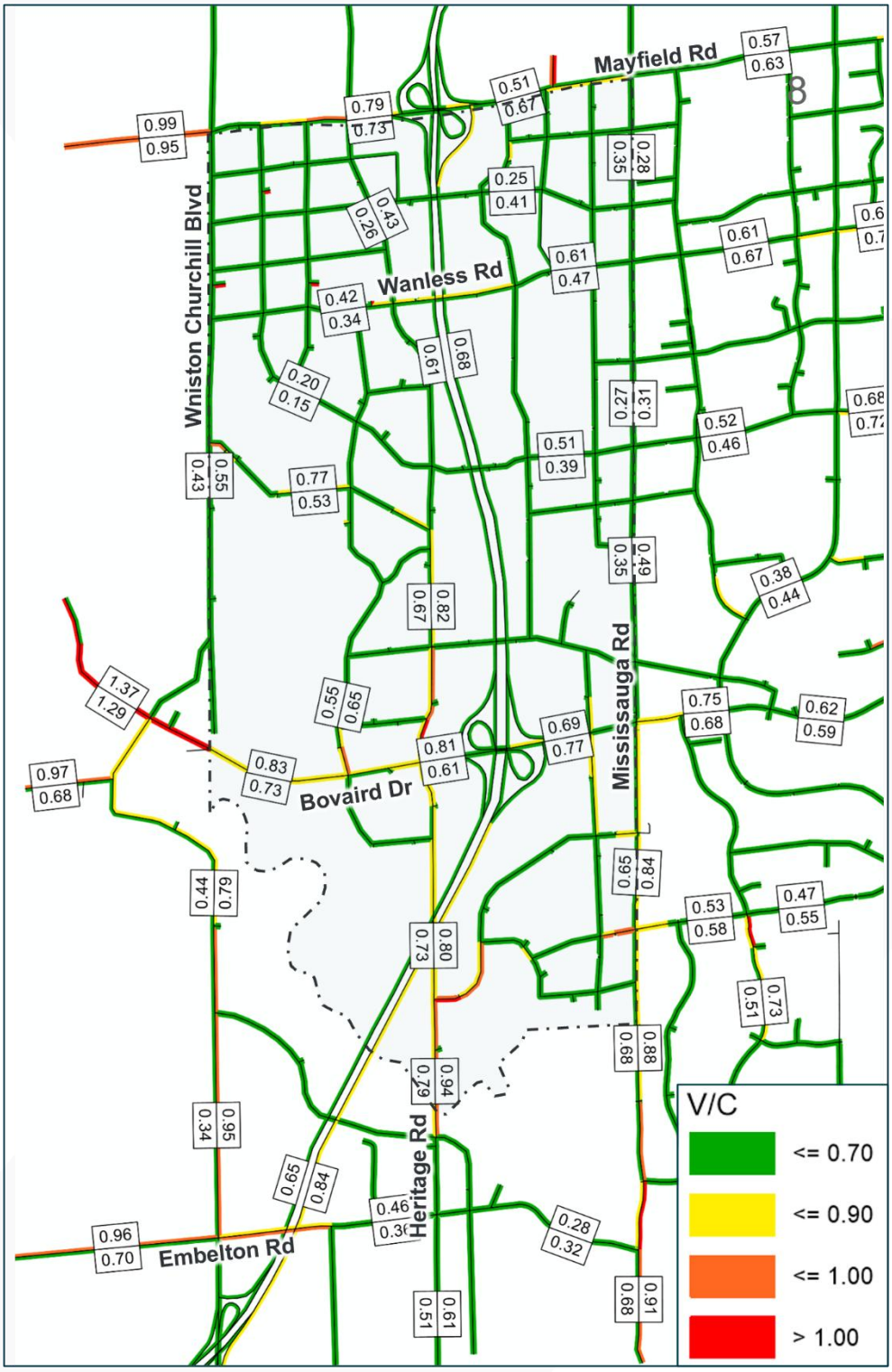


Figure 8: Future 2051 Refined Base Conditions – Corridor V/C Ratios – PM Peak Hour



3.0 SHORT LIST ALTERNATIVE C – PRECINCT 52-3 ROAD NETWORK REALIGNMENT

Long List C alternatives consider Precinct 52-3 collector road network configurations that aim to avoid wetland features, mitigate impacts to surrounding landowners in Precinct 52-3, and maintain connectivity throughout the Precinct.

A comparison of the Long List Alternative C is illustrated in **Figure 9.**

Option 2 considers terminating Nightjar Drive at Serve Street, extending Goderich Drive across Highway 413, and maintaining north-south continuity along Pinnacle Parkway.

Option 3 considers terminating Nightjar Drive at Serve Street, extending Goderich Drive across Highway 413, and maintaining east-west continuity along Goderich Drive

Option 3a seeks a balance between objectives and impacts to landowners while maintaining the integrity of the collector road network required to support the Secondary Plan.

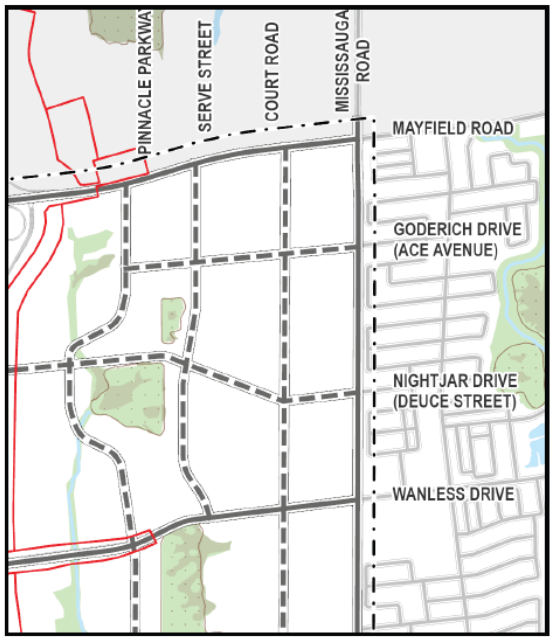
Option 3a captures the following key modifications:

- Removal of Pinnacle Parkway through the lands owned by Catholic Cemeteries & Funeral Services (CCFS).
- Re-alignment of Serve Street (in place of Pinnacle Parkway) to intersect with Mayfield Road opposite the future Highway 413 transit station access, while mitigating impacts to environmental features.
- Alignment of Serve Street to intersect Wanless Drive abutting the east side of 2212 and 2214 Wanless Drive.
- Realignment of Goderich Drive to maintain continuity of a future east-west crossing of Highway 413 and to provide a normalized intersection with Serve Street.
- Maintaining Court Road and Nightjar Drive as previously contemplated.

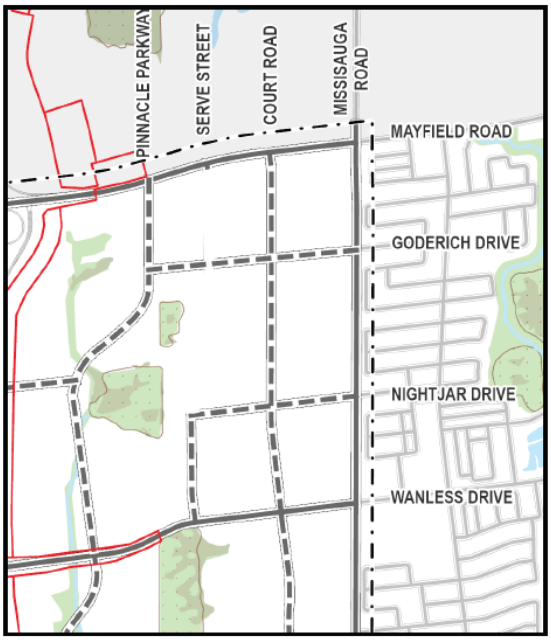
The precise alignment (not removal) of collector roads that may limit individual impacts to properties may continue to be explored through Precinct Planning, in response to more detailed studies and development applications

This section presents a comparison of the weekday morning (AM) and afternoon (PM) road network operations associated with each of the alternatives for Short List C. For the purposes of assessing the alternatives, the “refined base” network will be treated as the base to which options for Short List C are compared to.

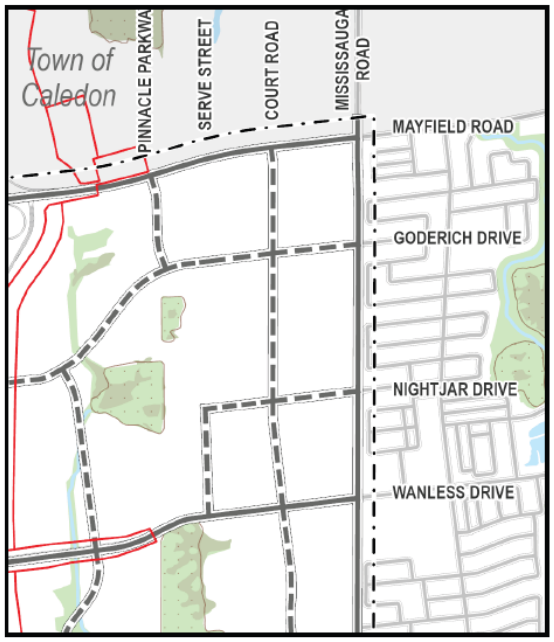
Figure 9: Short List Alternative C



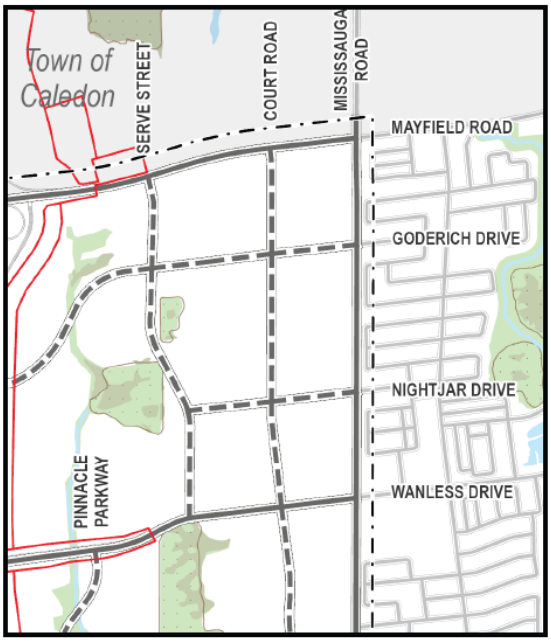
OPTION 1:
SECONDARY PLAN ROAD NETWORK



OPTION 2:
CONTINUOUS NORTH-SOUTH CONNECTIOI



OPTION 3:
CONTINUOUS EAST-WEST CONNECTION



OPTION 3A:
CONTINUOUS EAST-WEST CONNECTION
PINNACLE / SERVE REALIGNMENT

Figure 10: Future 2051 Short List C – Refined Base Conditions – Corridor Volumes – AM Peak Hour

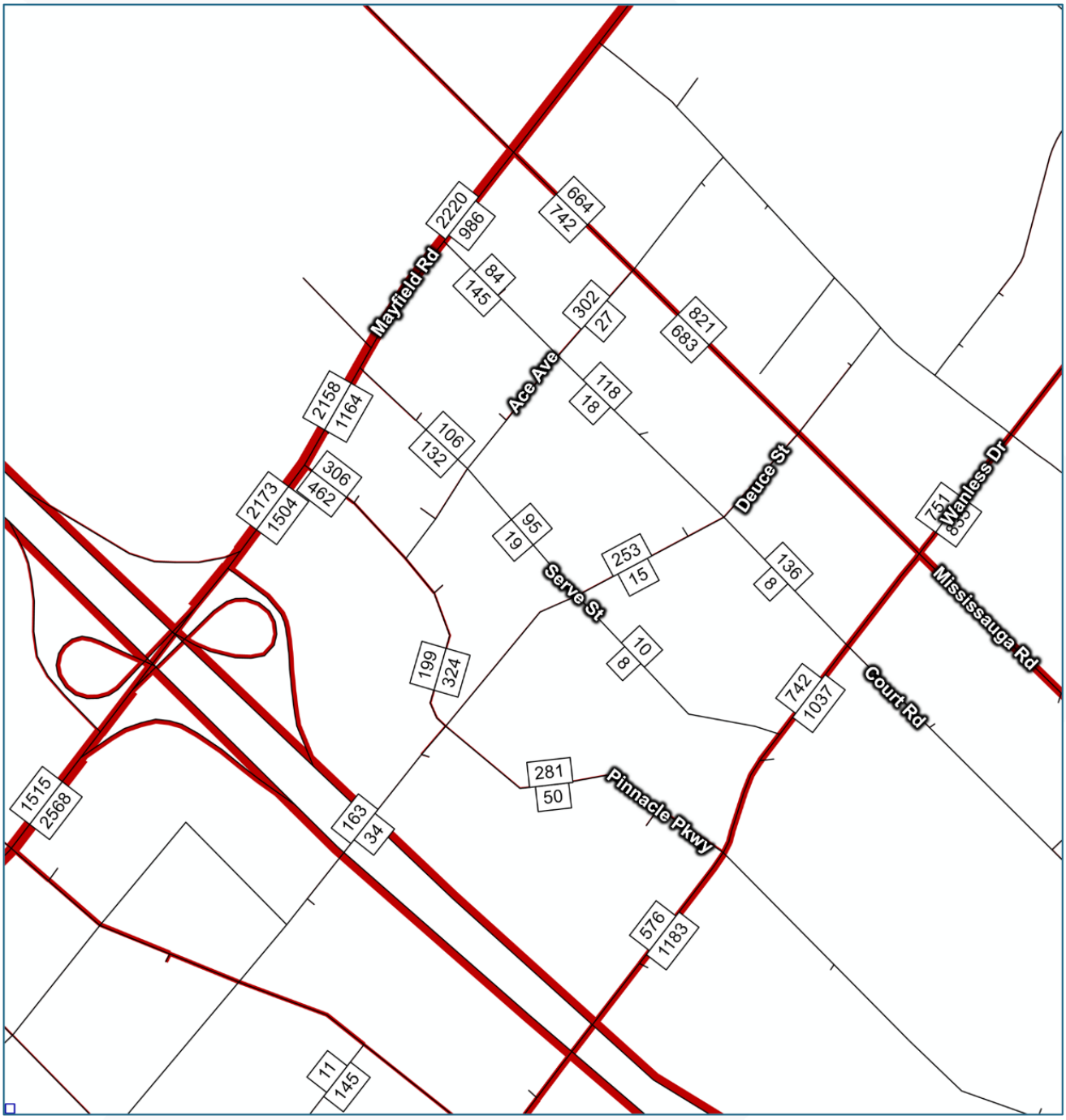


Figure 11: Future 2051 Short List C – Refined Base Conditions – V/C Ratios – AM Peak Hour

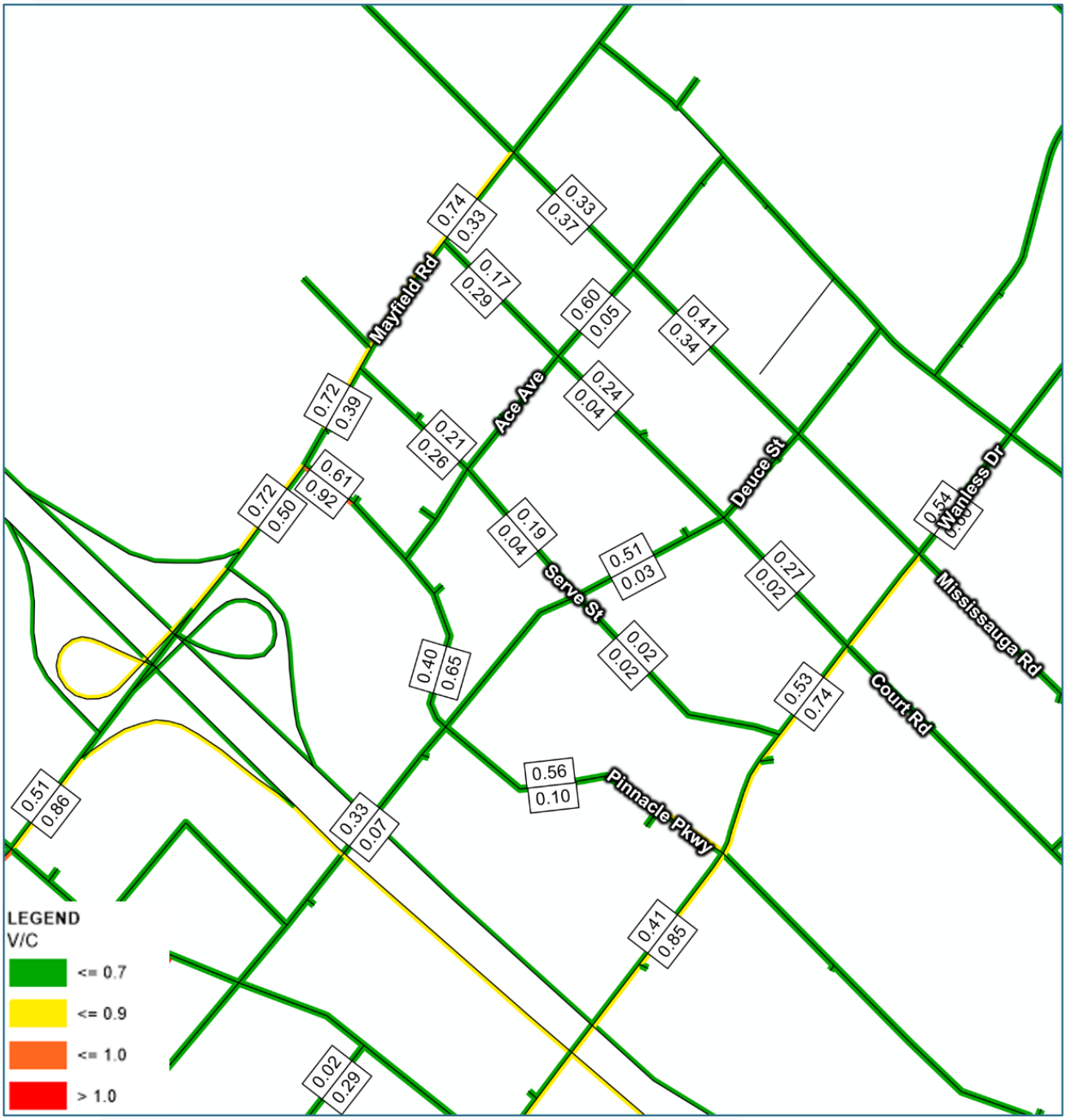


Figure 12: Future 2051 Short List C – Option 2, Continuous NS Connection – Corridor Volumes – AM Peak Hour

Figure 13: Future 2051 Short List C – Option 2, Continuous NS Connection – V/C Ratios – AM Peak Hour

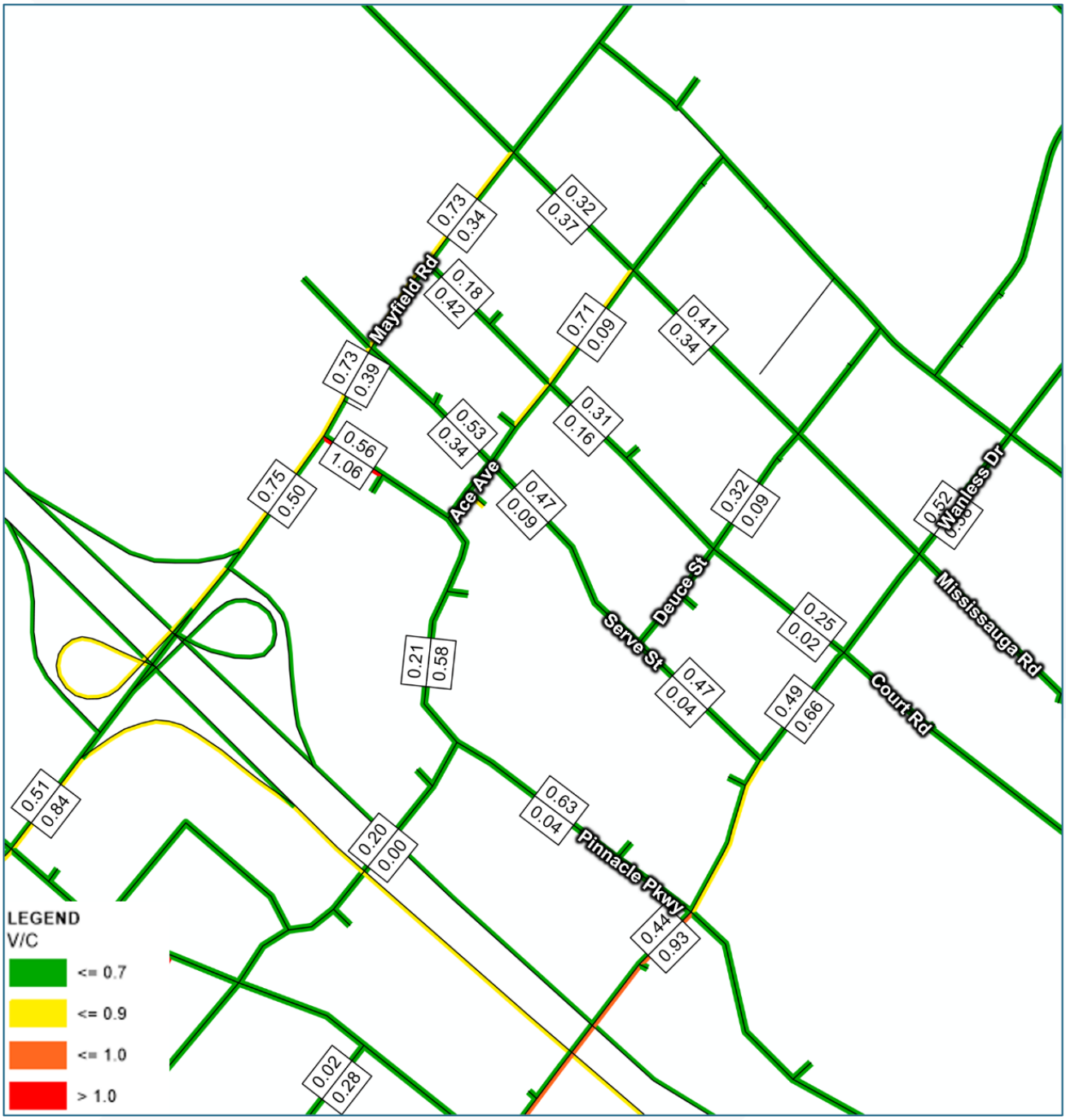


Figure 14: Future 2051 Short List C – Option 3, Continuous EW Connection – Corridor Volumes – AM Peak Hour

Figure 15: Future 2051 Short List C – Option 3, Continuous EW Connection – V/C Ratios – AM Peak Hour

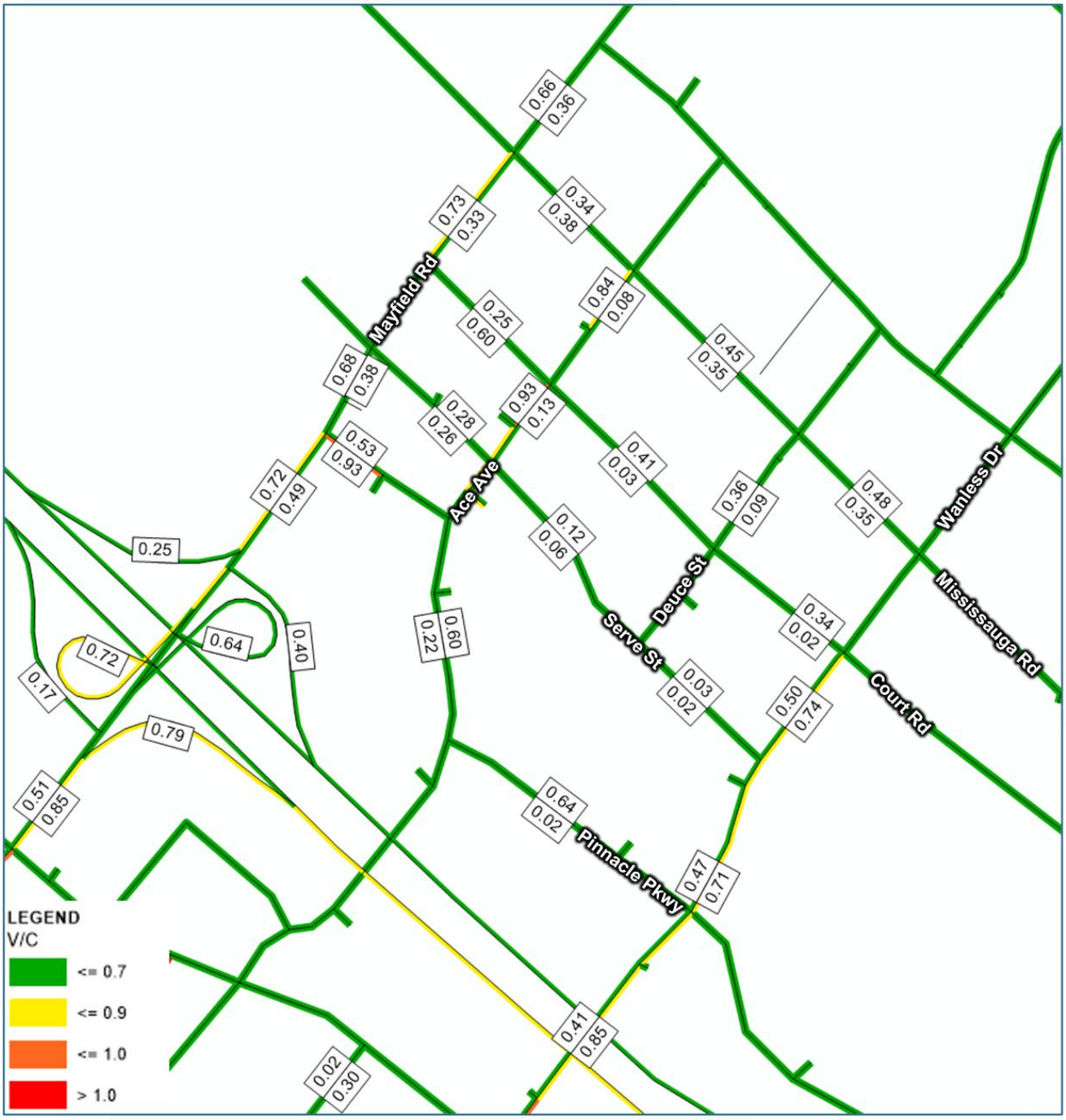


Figure 16: Future 2051 Short List C – Option 3a, Continuous EW Connection – Corridor Volumes – AM Peak Hour

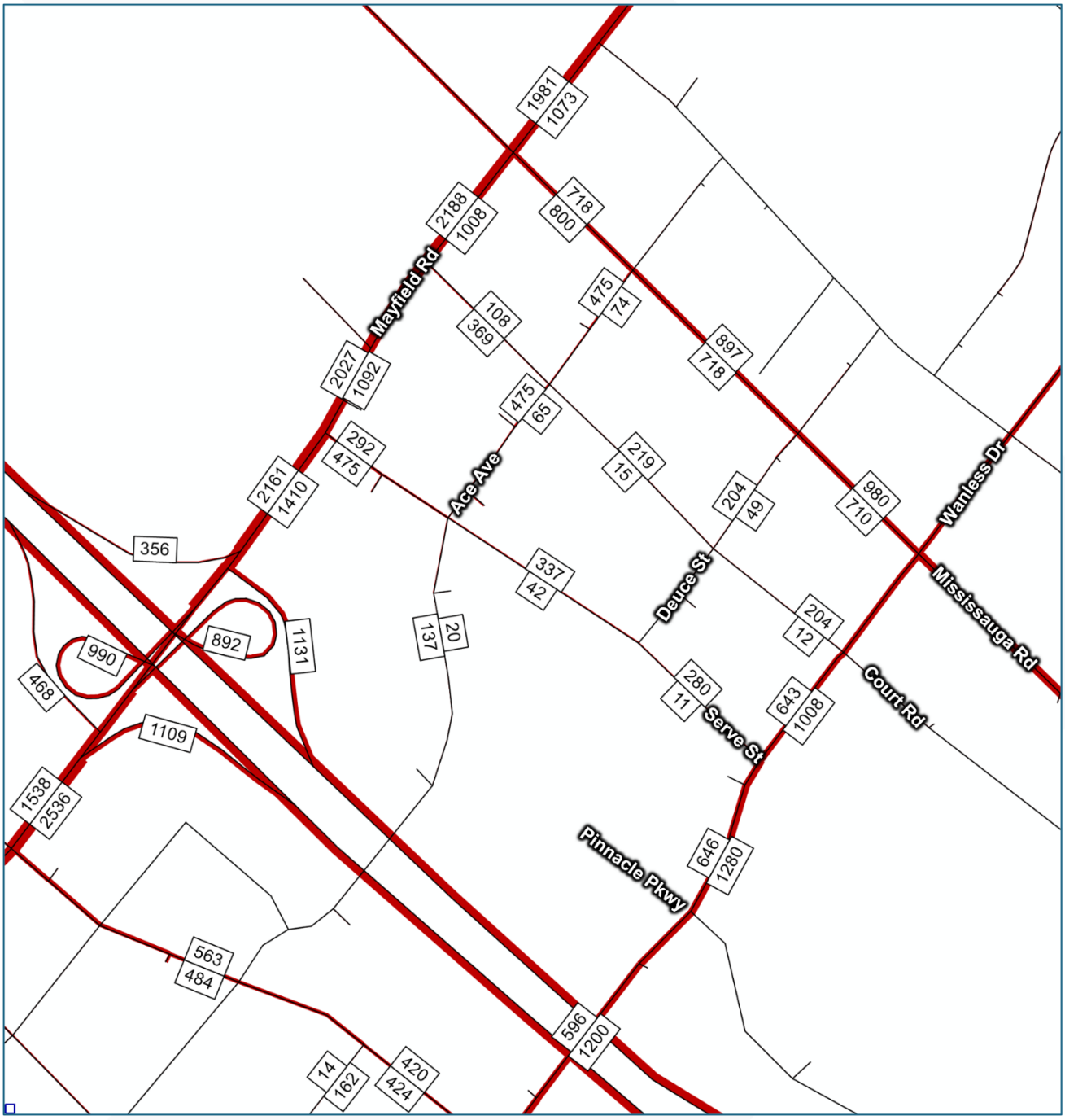


Figure 17: Future 2051 Short List C – Option 3a, Continuous EW Connection – V/C Ratios – AM Peak Hour

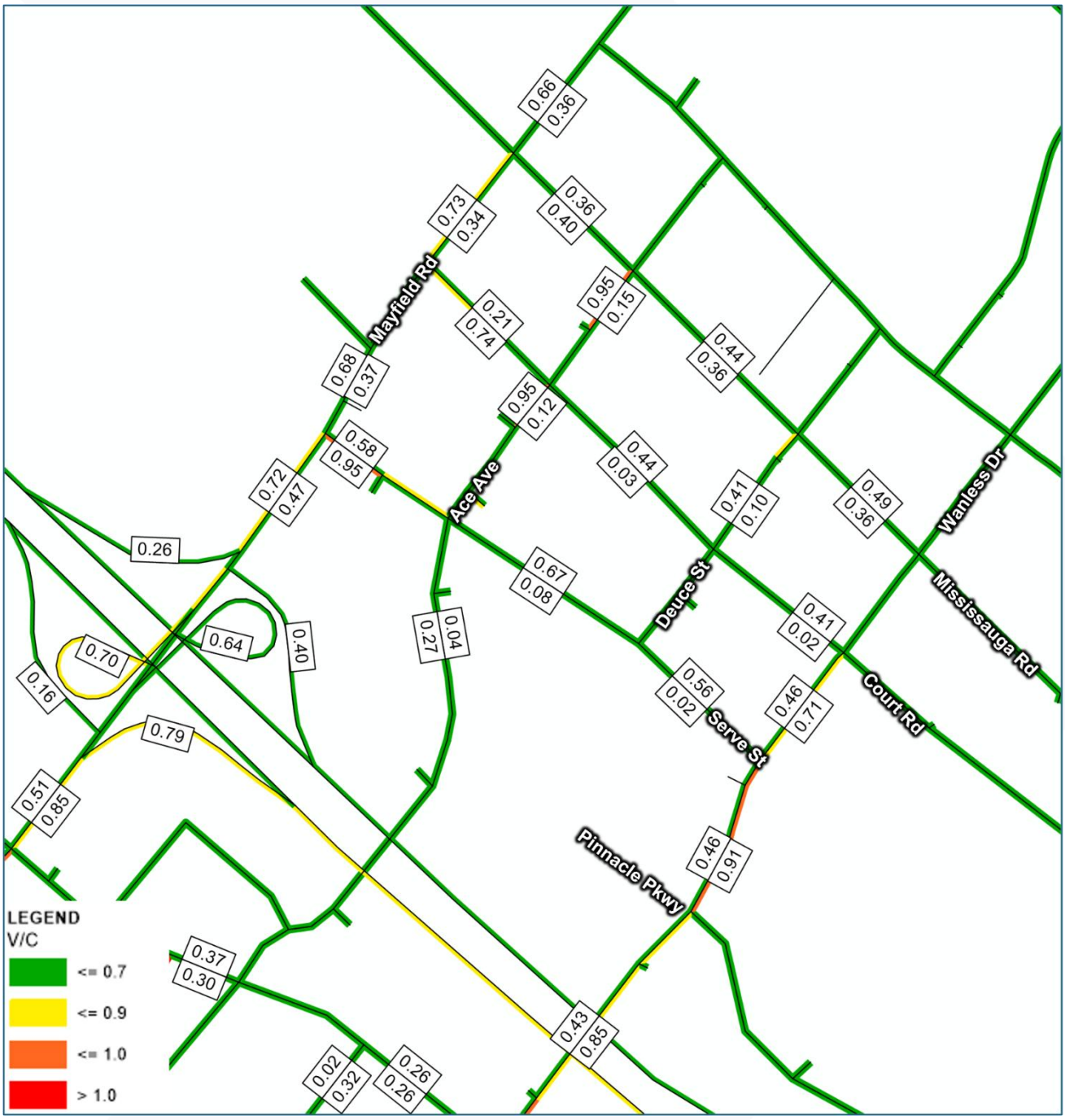


Figure 18: Future 2051 Short List C – Refined Base Conditions – Corridor Volumes – PM Peak Hour

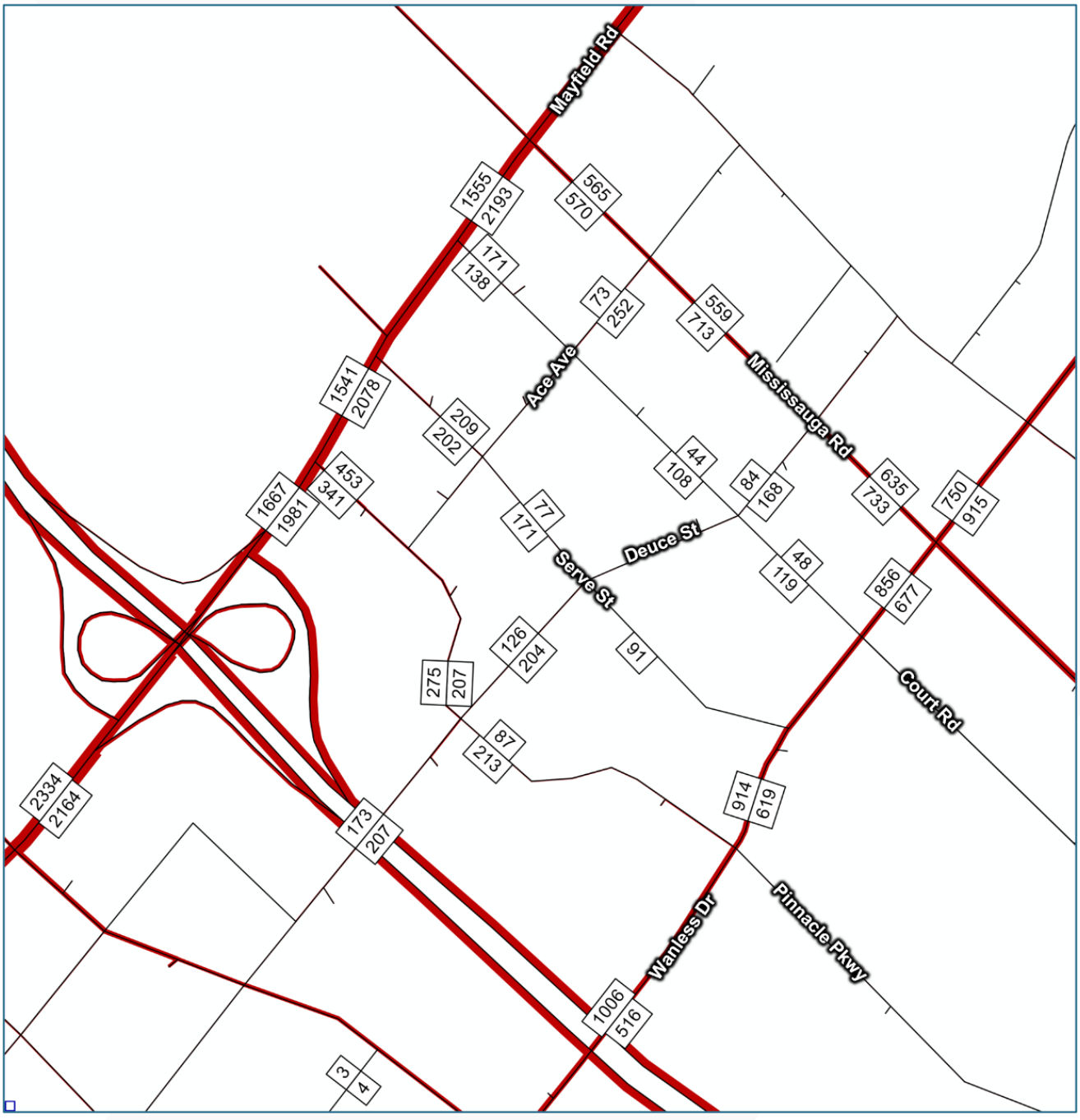


Figure 19: Future 2051 Short List C – Refined Base Conditions – V/C Ratios – PM Peak Hour

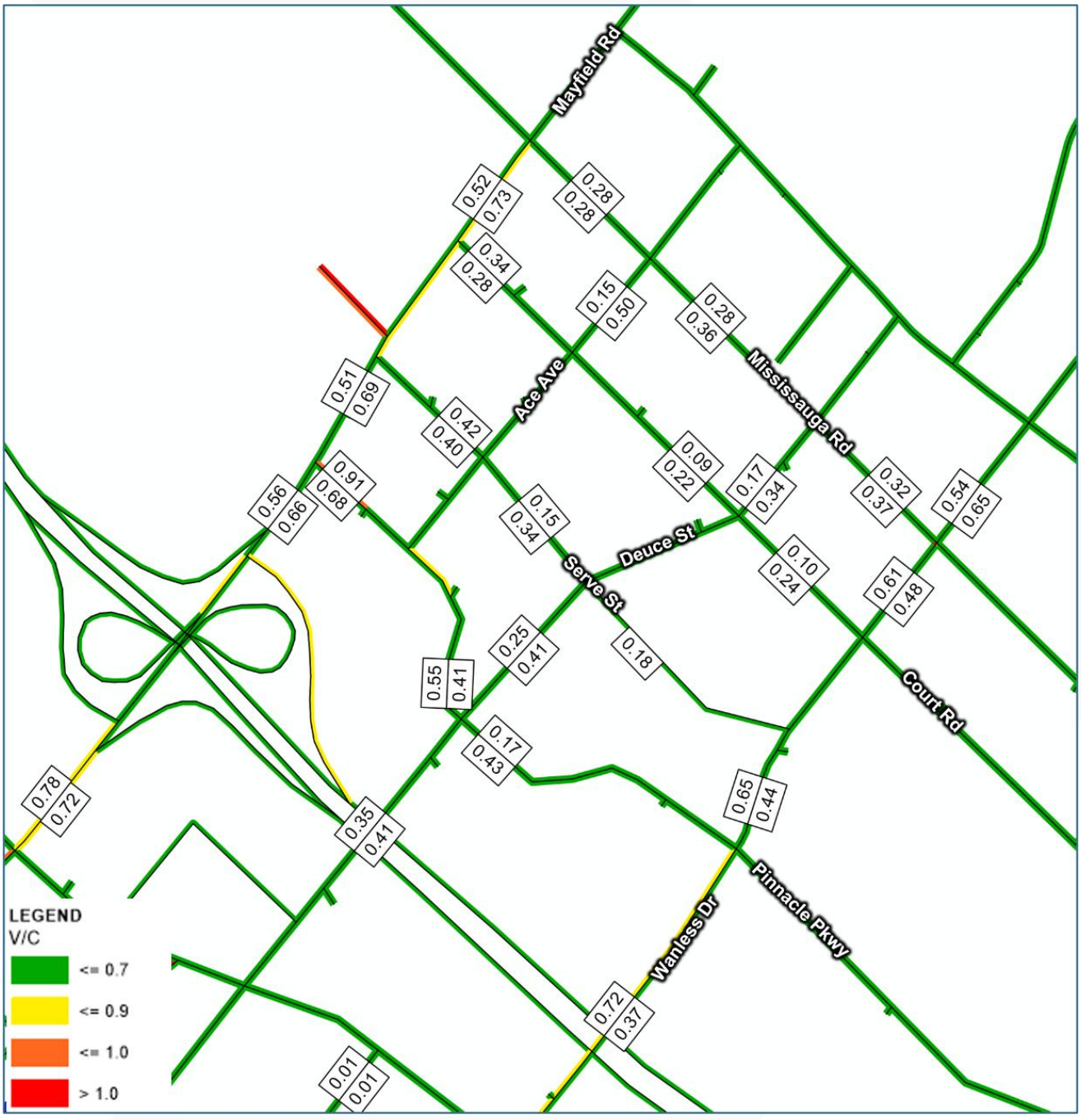


Figure 20: Future 2051 Short List C – Option 2, Continuous NS Connection – Corridor Volumes – PM Peak Hour

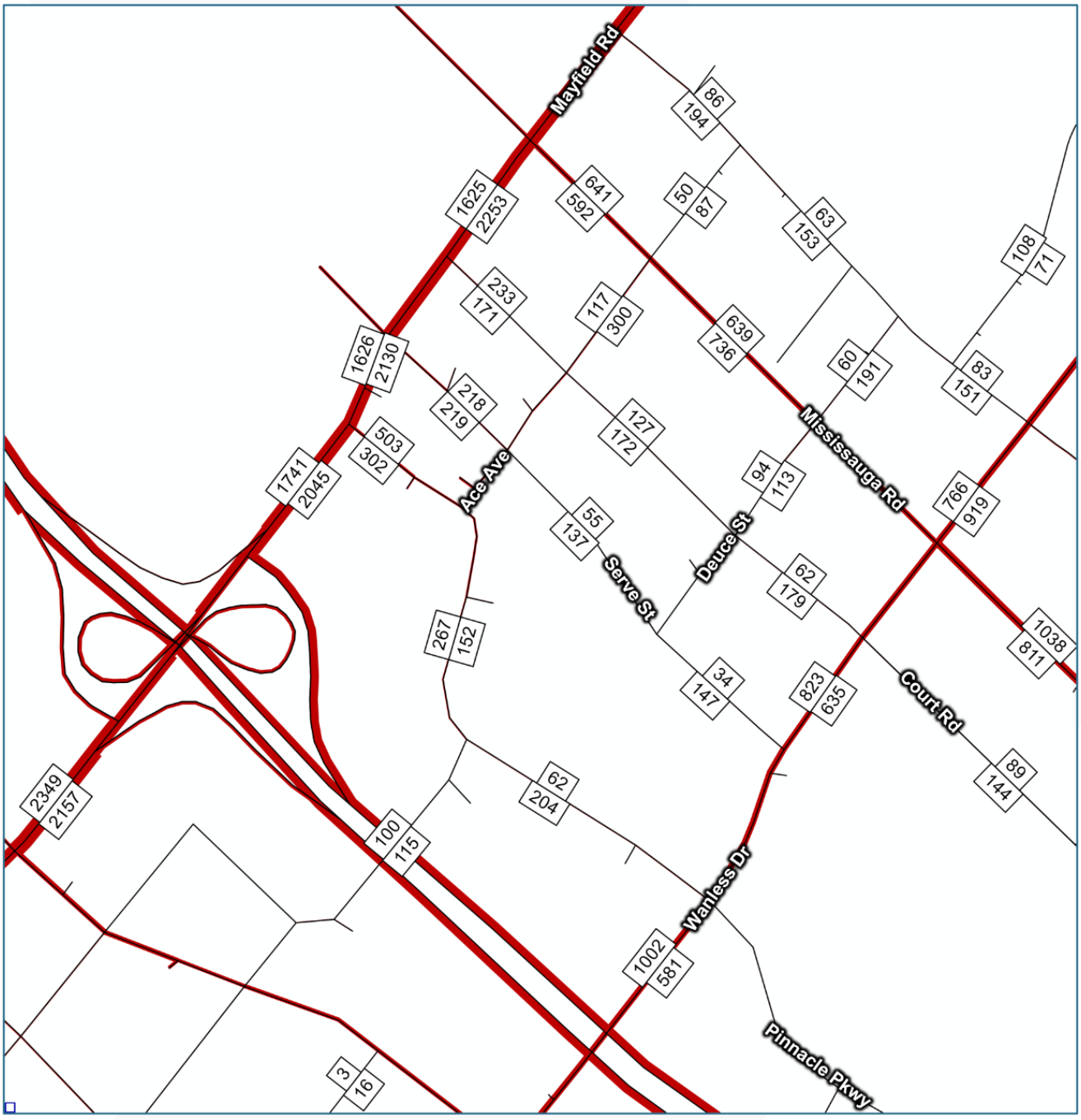


Figure 21: Future 2051 Short List C – Option 2, Continuous NS Connection – V/C Ratios – PM Peak Hour

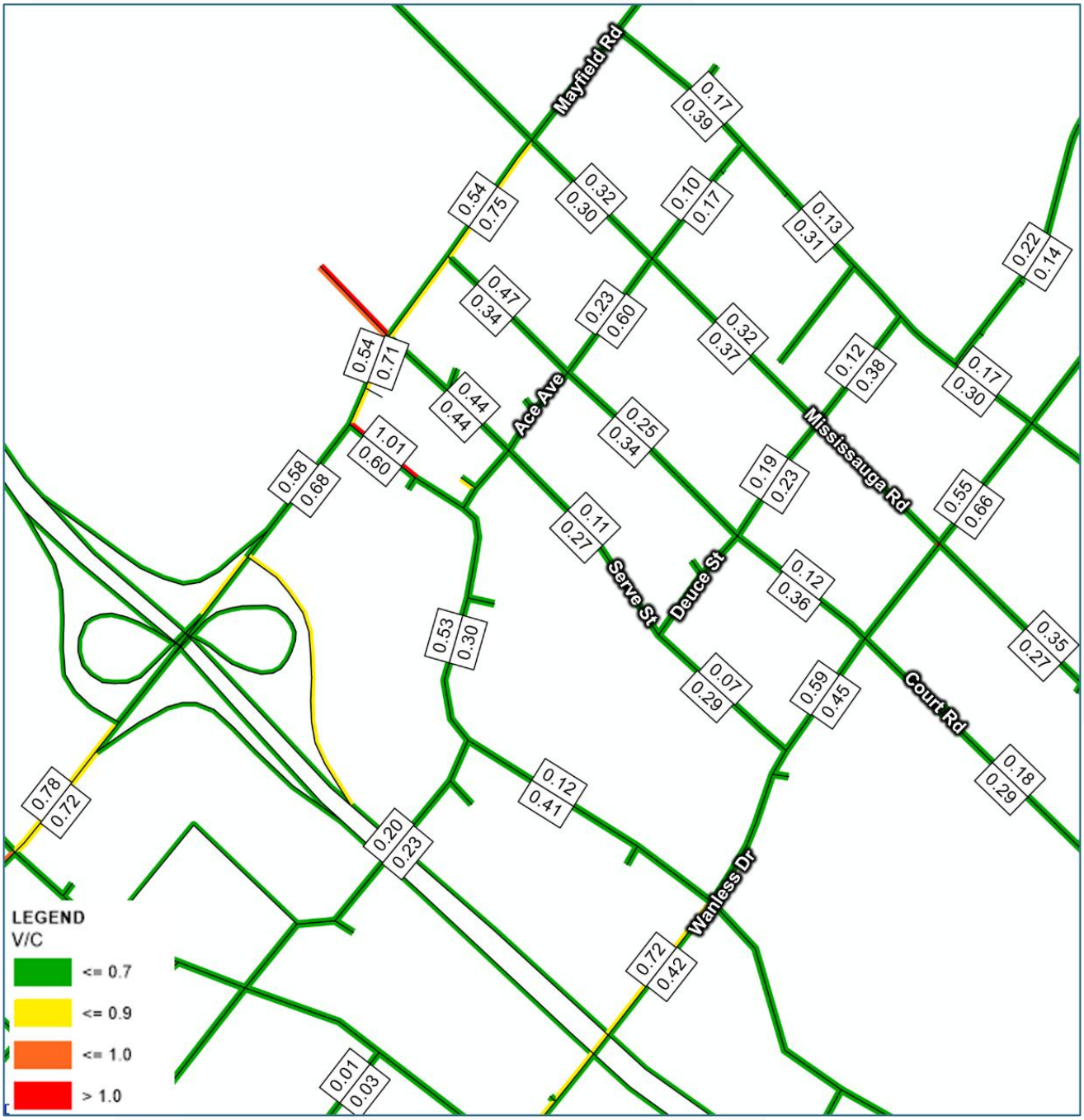


Figure 22: Future 2051 Short List C – Option 3, Continuous EW Connection – Corridor Volumes – PM Peak Hour

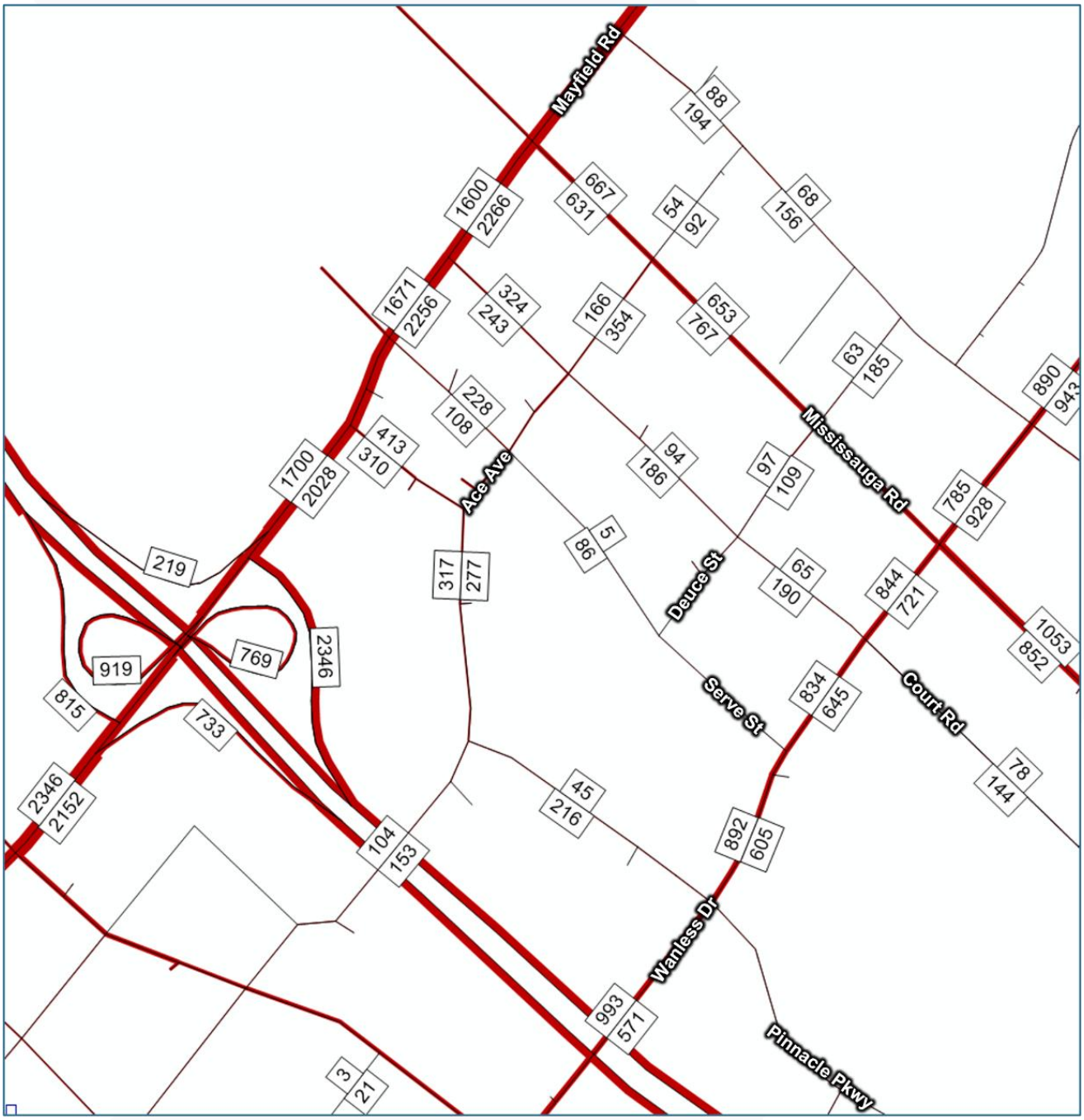


Figure 23: Future 2051 Short List C – Option 3, Continuous EW Connection – V/C Ratios – PM Peak Hour

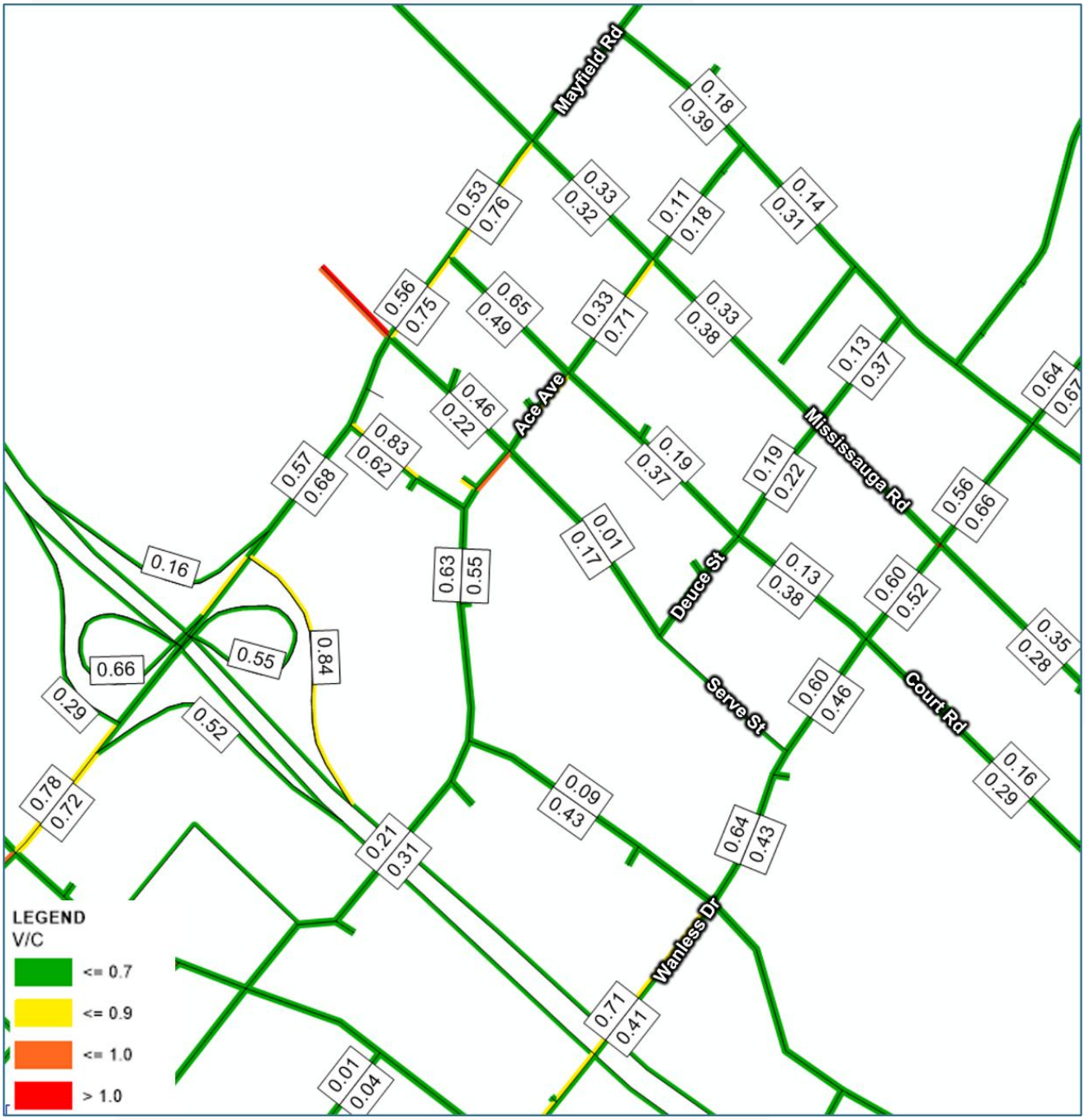


Figure 24: Future 2051 Short List C – Option 3a, Continuous EW Connection – Corridor Volumes – PM Peak Hour

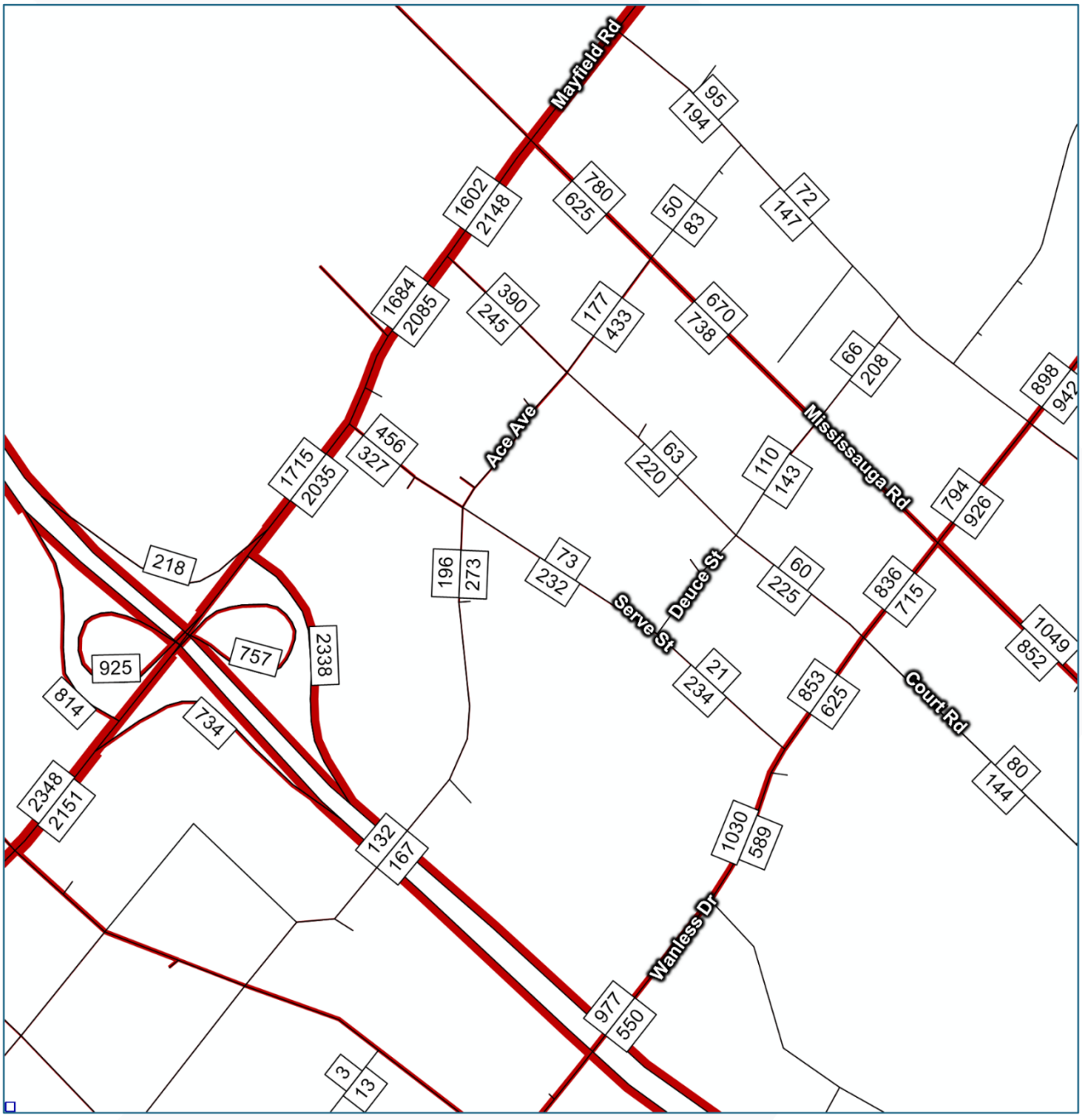
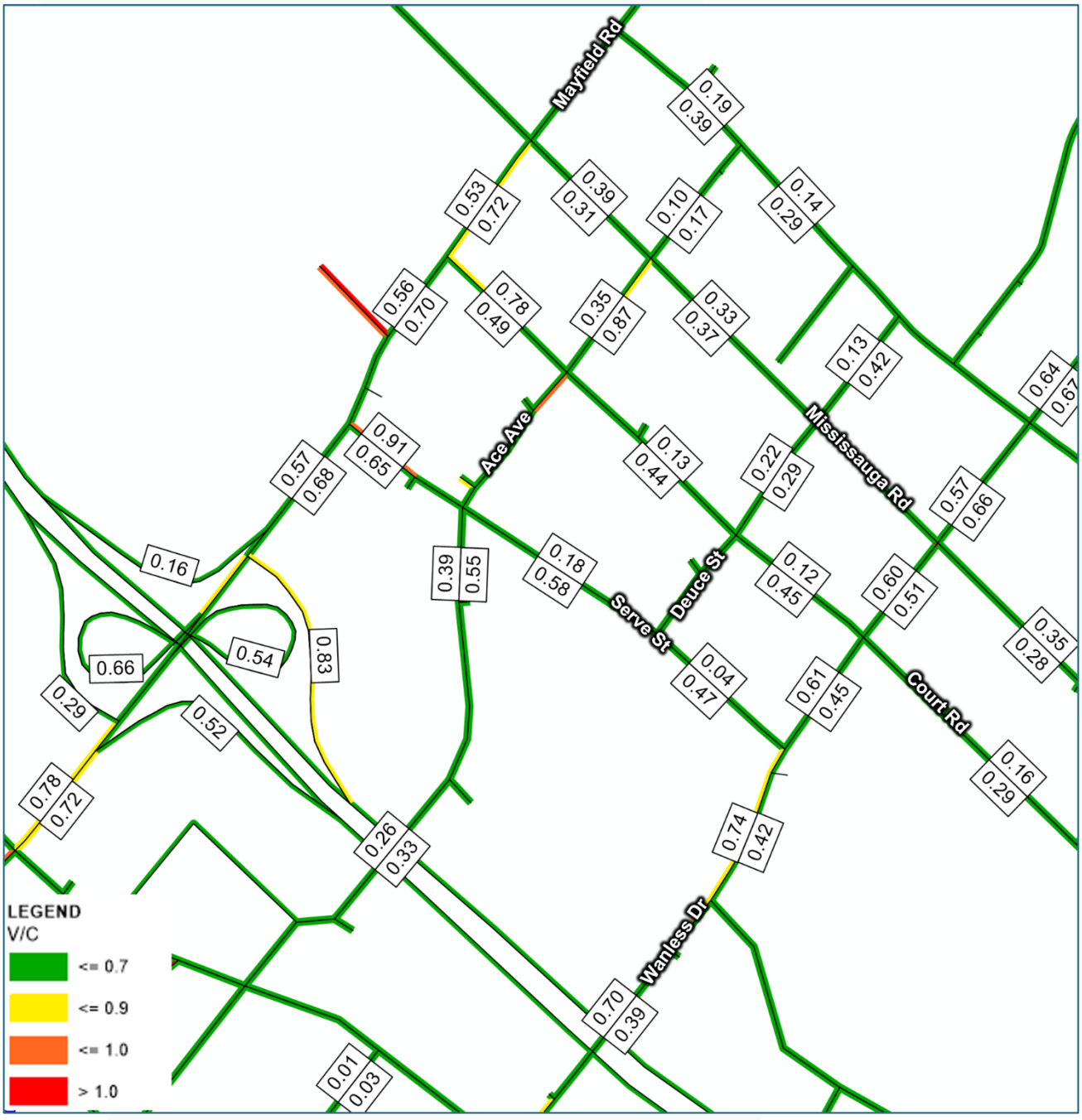


Figure 25: Future 2051 Short List C – Option 3, Continuous EW Connection – Corridor Volumes – PM Peak Hour



Short List Alternative C Recommendation:

Adopt Option 3a that:

- mitigates bisecting wetland/woodland features and maintains a continuous east-west crossing of future Highway 413 (i.e. Goderich Drive) between employment areas in Precincts 52-3 and 52-7; and,
- maintains two north-south collector roads, Serve Street and continuous Court Road that extend from Wanless Drive to Mayfield Road connecting both future Caledon lands and Precinct 52-2.
- mitigates impacts to surrounding landowners.

The continuous alignment of Pinnacle Parkway tying Precincts 52-3 and 52-2 West (e.g. Option 3) is the ideal and technically preferred transportation solution. However, analysis of Option 3a has confirmed that an offset intersection of Pinnacle Parkway-Serve Street along Wanless Drive, can be accommodated in the context of mitigating property impacts and natural features.

See Section 6.4 in the Heritage Heights TMP for further recommendations and considerations for Precinct 52-3.

4.0 SHORT LIST ALTERNATIVE E – EAST-WEST CONNECTION FOCUS AREA

Modelling of future 2051 conditions re-confirm capacity constraints in the East-West Connection Focus Area that were identified by the Halton-Peel Boundary Area Transportation Study (HPBATS).

Short List E alternatives consider a widening, by-pass or do nothing within the Secondary Plan East-West Connection Focus Area to address modelled future capacity constraints of Bovaird Drive (Highway 7) through Norval.

A comparison of the Long List Alternative E alternatives is illustrated in **Figure 26.**

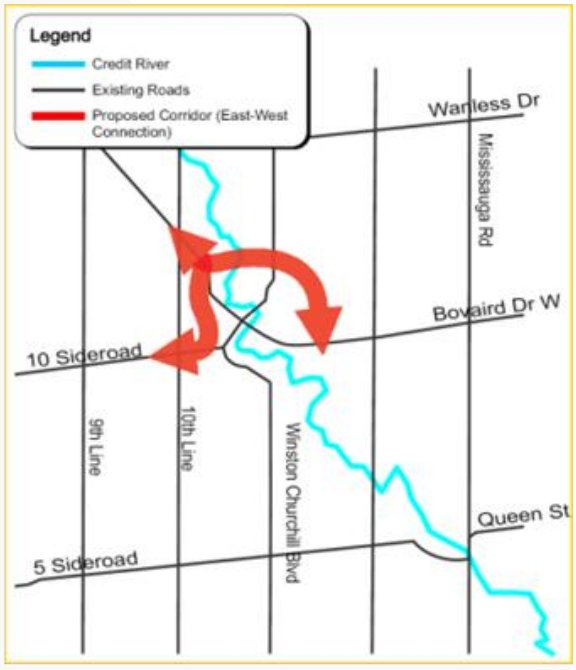
Alternatives to existing Bovaird Drive – Highway 7 through Norval include:

- **Option 1 – Do Nothing** considers no change to existing conditions.
- **Option 2 – North By-Pass** considers a new road link through the Credit River Valley and Greenbelt north of Norval.
- **Option 3 – South By-Pass** considers a new road link through the Credit River Valley and Greenbelt south of Norval.
- **Option 4 – Widen Bovaird Drive – Highway 7** considers widening Bovaird Drive / Highway 7 through Norval

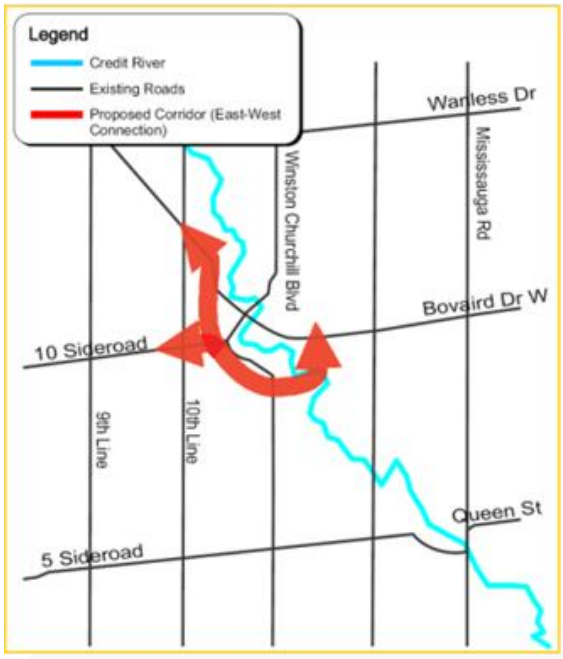
This section presents a comparison of the weekday morning (AM) and afternoon (PM) road network operations associated with each of the alternatives for Short List E. For the purposes of assessing the alternatives, the “refined base” network will be treated as the base to which options for Short List E are compared to.

Figure 26: Short List Alternative E

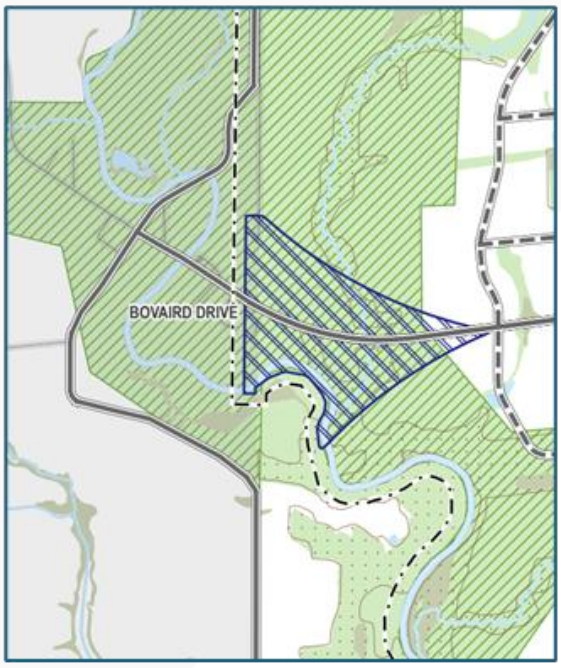
OPTION 1: DO NOTHING



OPTION 2: NORTH BY-PASS



OPTION 3: SOUTH BY-PASS



OPTION 4: WIDEN BOVAIRD DR/HWY 7

Figure 27: Future 2051 Short List E – Option 1, Do Nothing – Corridor Volumes – AM Peak Hour

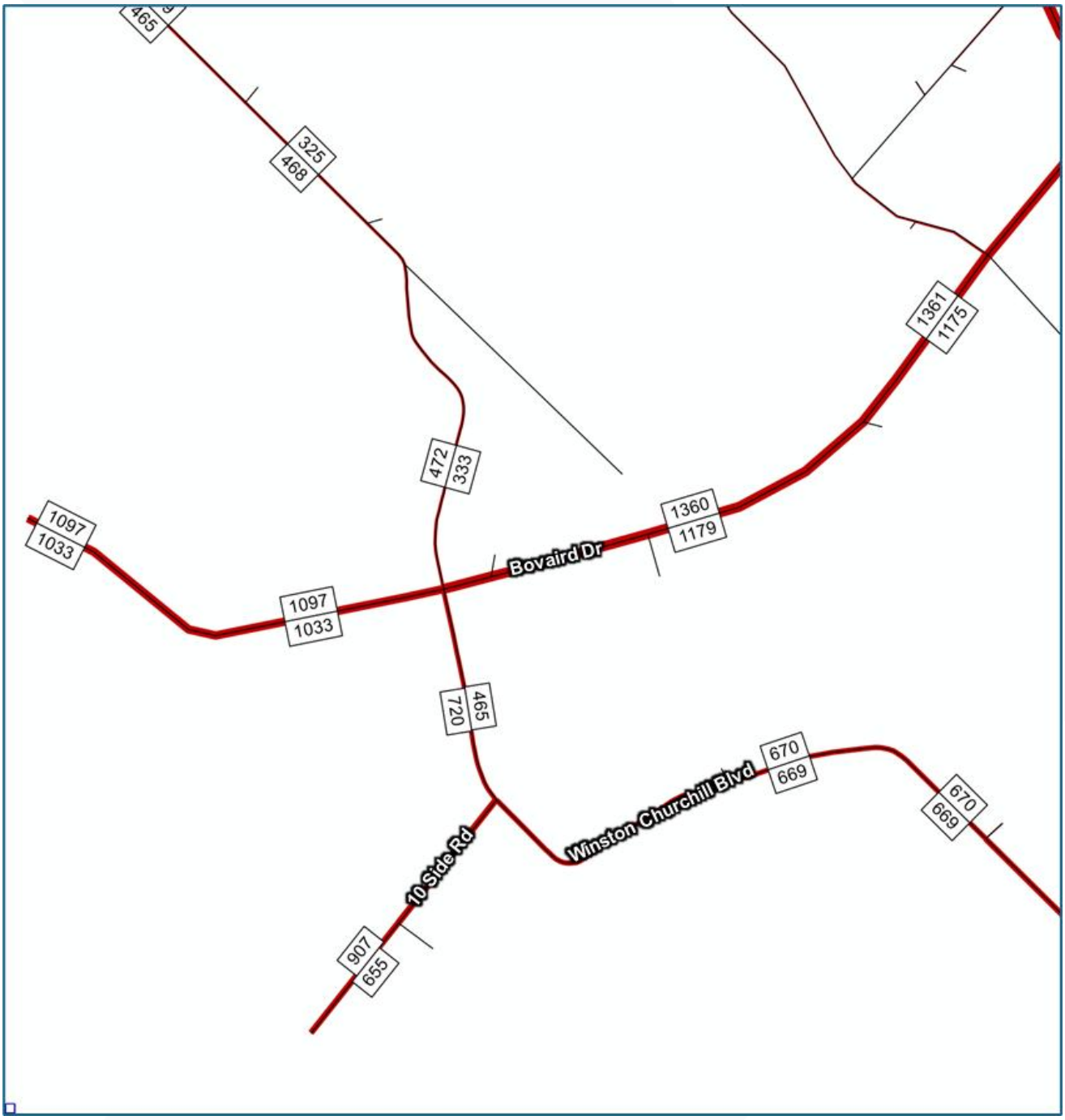


Figure 28: Future 2051 Short List E – Option 1, Do Nothing – V/C Ratios – AM Peak Hour

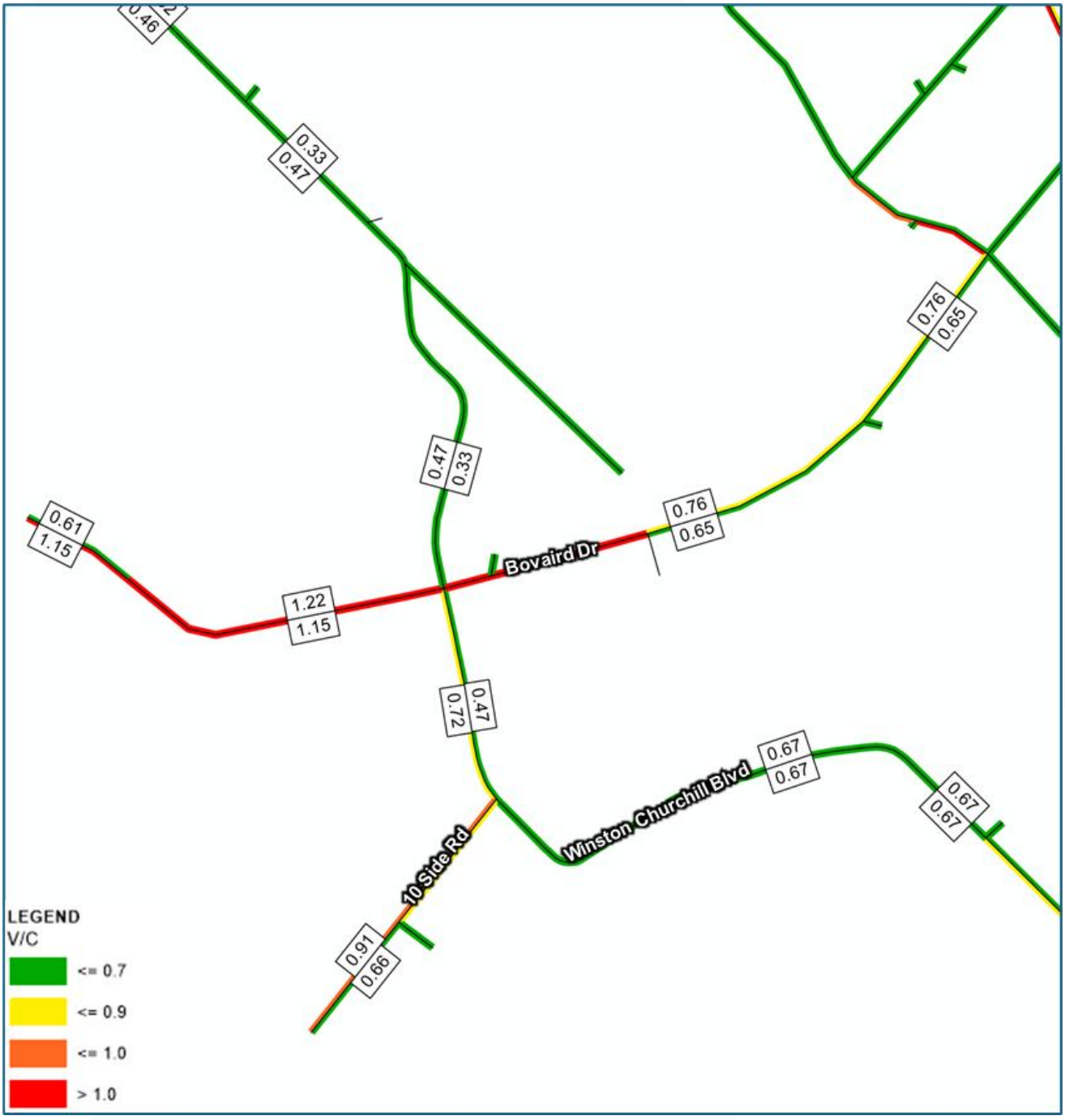


Figure 29: Future 2051 Short List E – Option 2, North Bypass – Corridor Volumes – AM Peak Hour

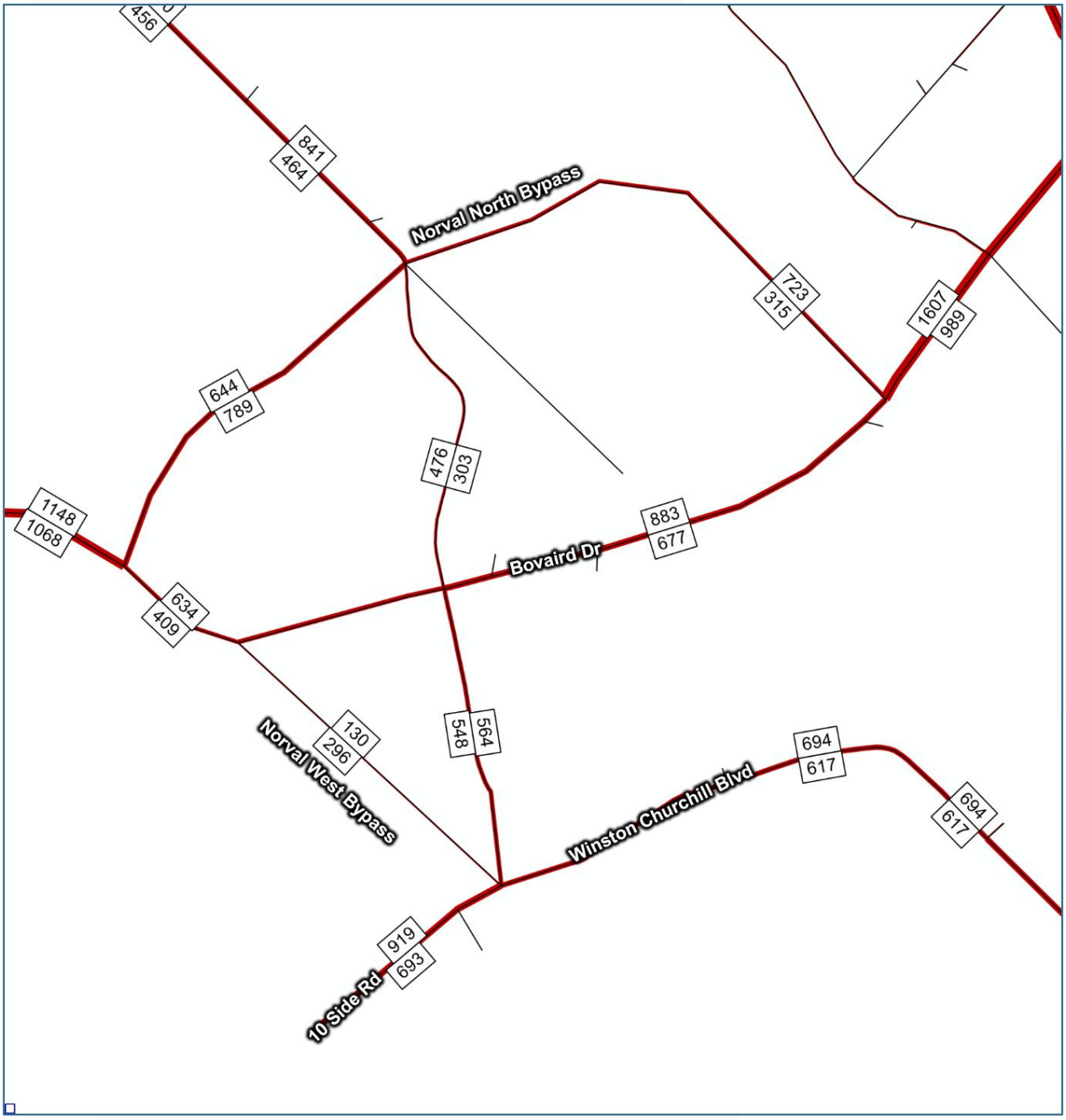


Figure 30: Future 2051 Short List E – Option 2, North Bypass – V/C Ratios – AM Peak Hour

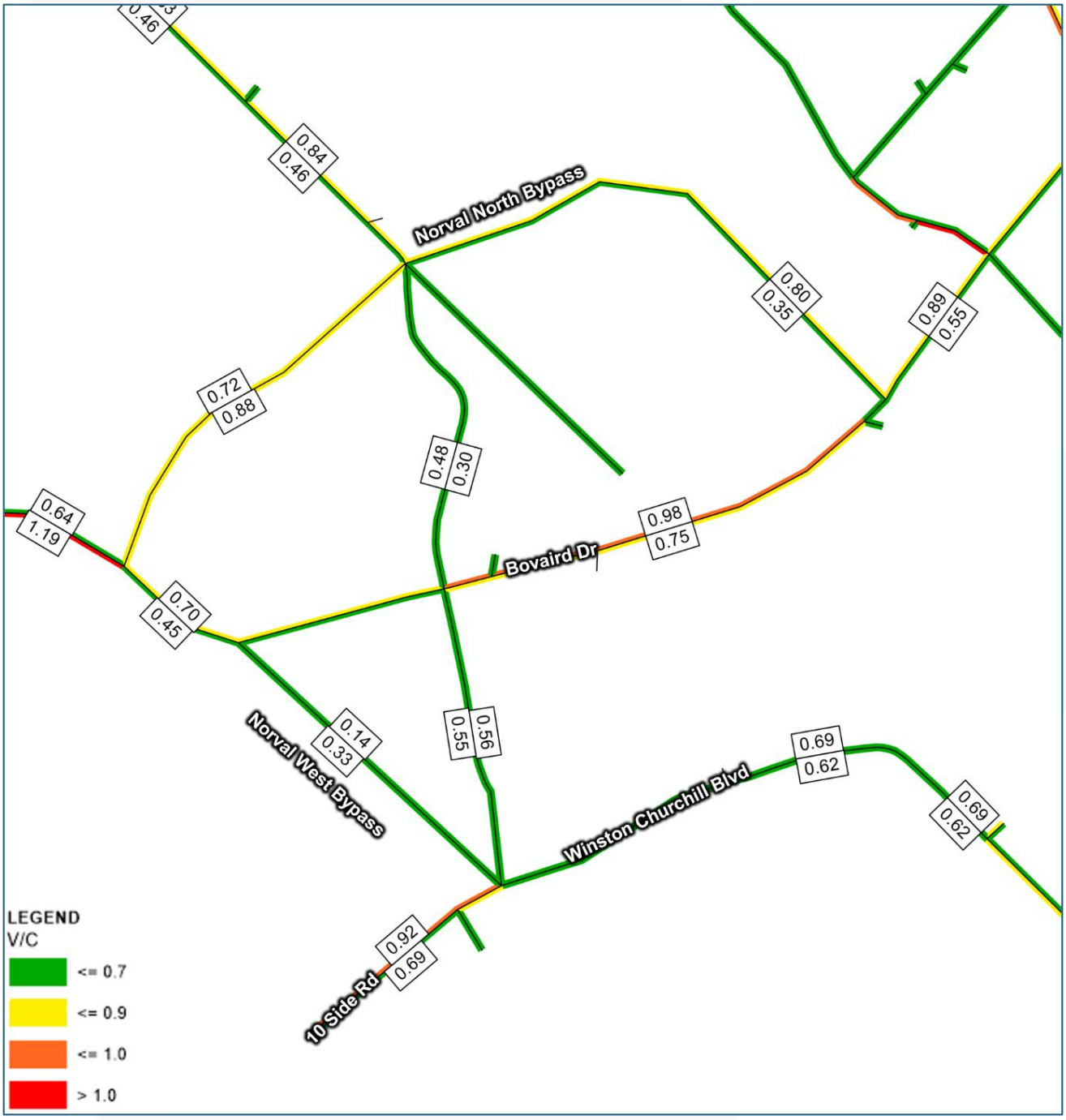


Figure 31: Future 2051 Short List E – Option 3, South Bypass – Corridor Volumes – AM Peak Hour

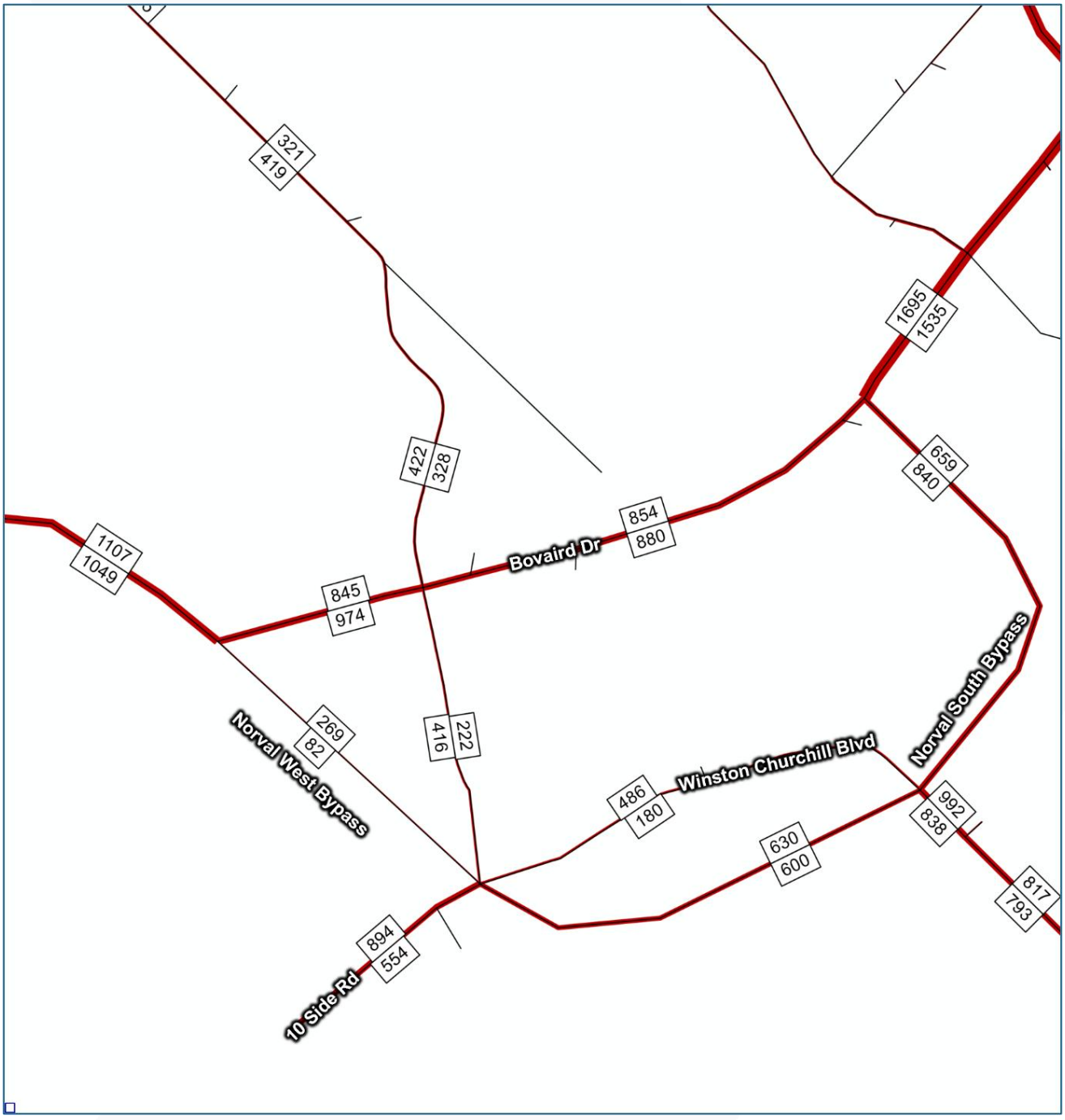


Figure 32: Future 2051 Short List E – Option 3, South Bypass – V/C Ratios – AM Peak Hour

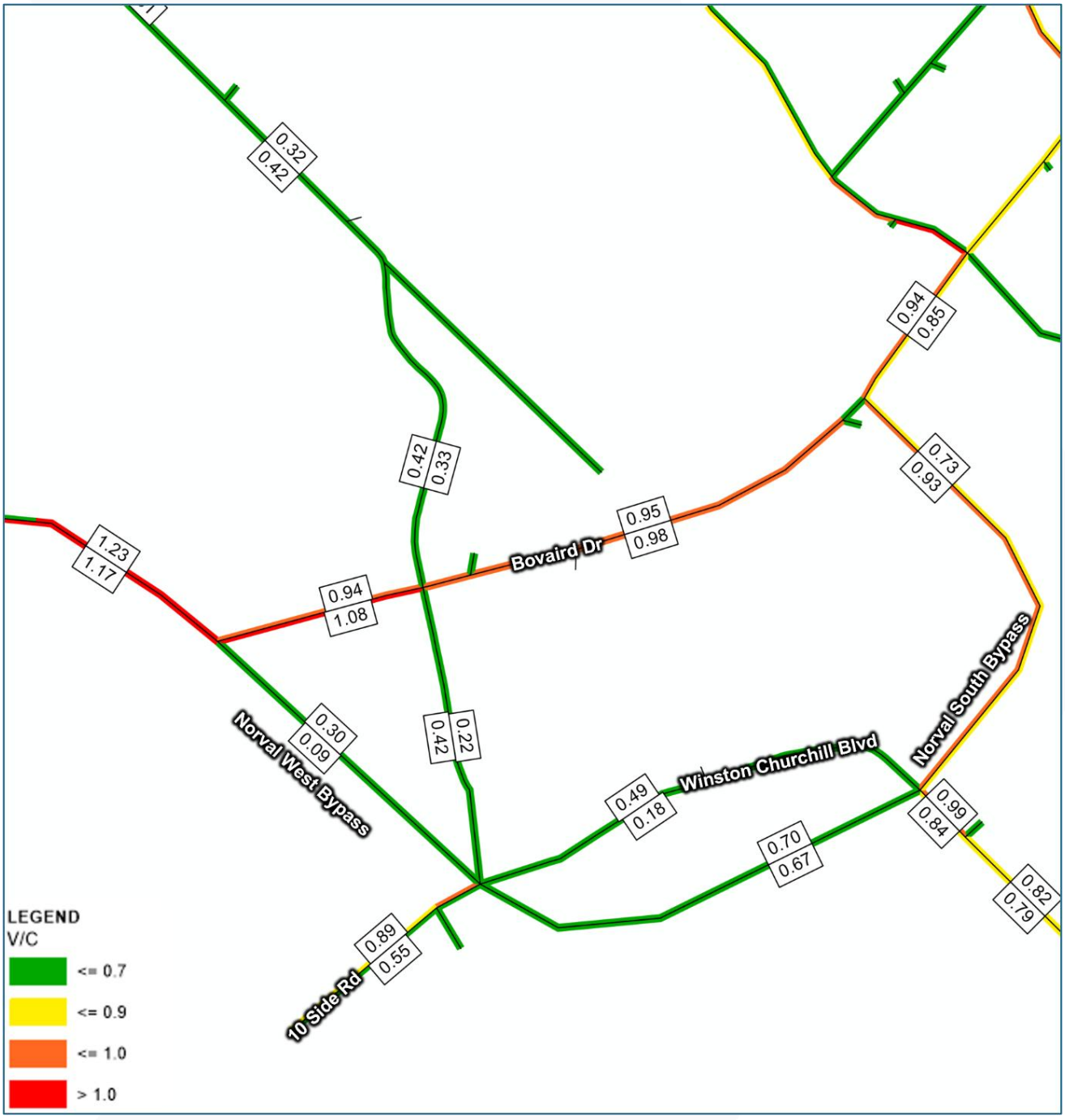


Figure 33: Future 2051 Short List E – Option 4, Bovaird Dr Widening – Corridor Volumes – AM Peak Hour

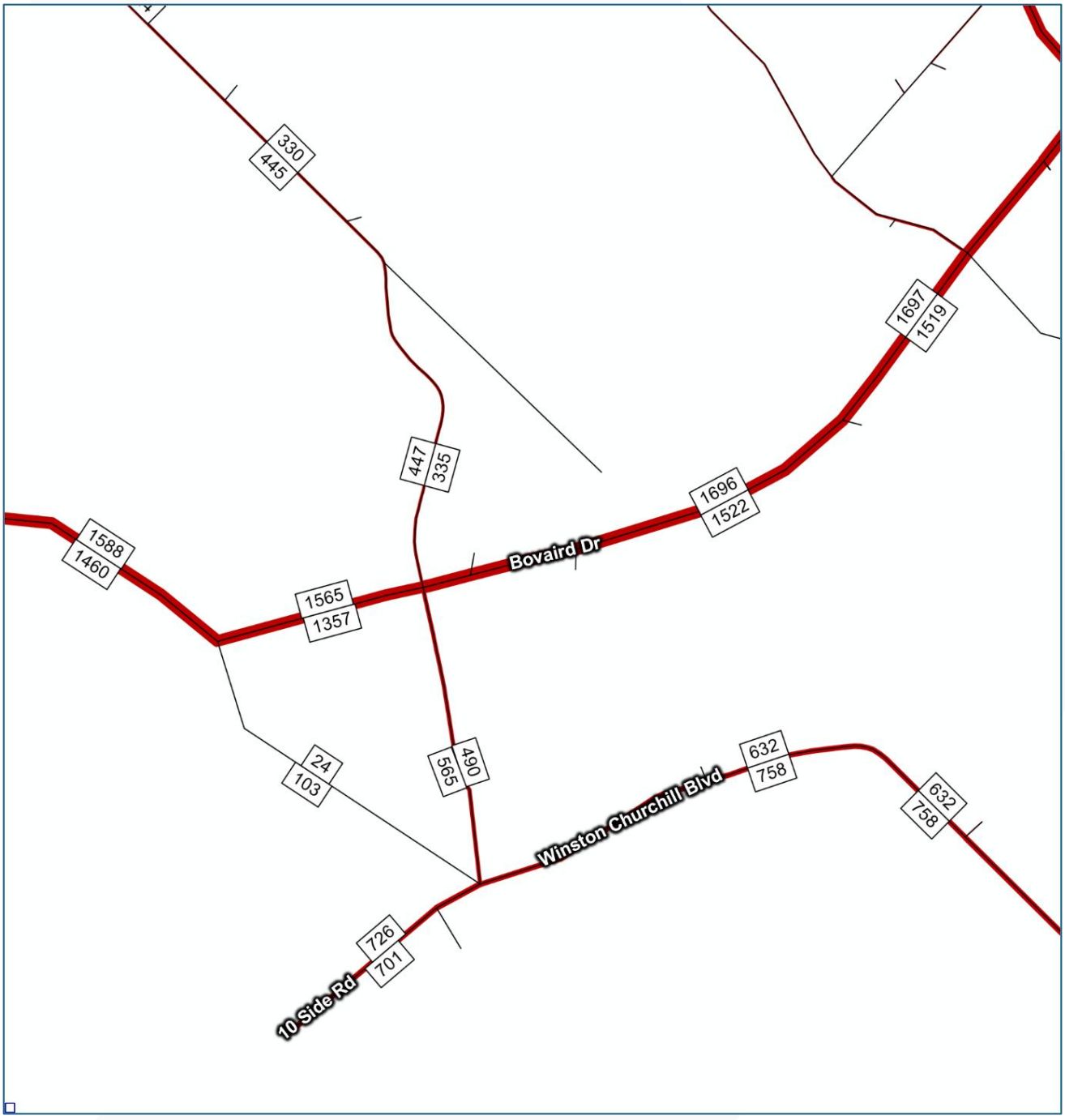


Figure 34: Future 2051 Short List E – Option 4, Bovaird Dr Widening – V/C Ratios – AM Peak Hour

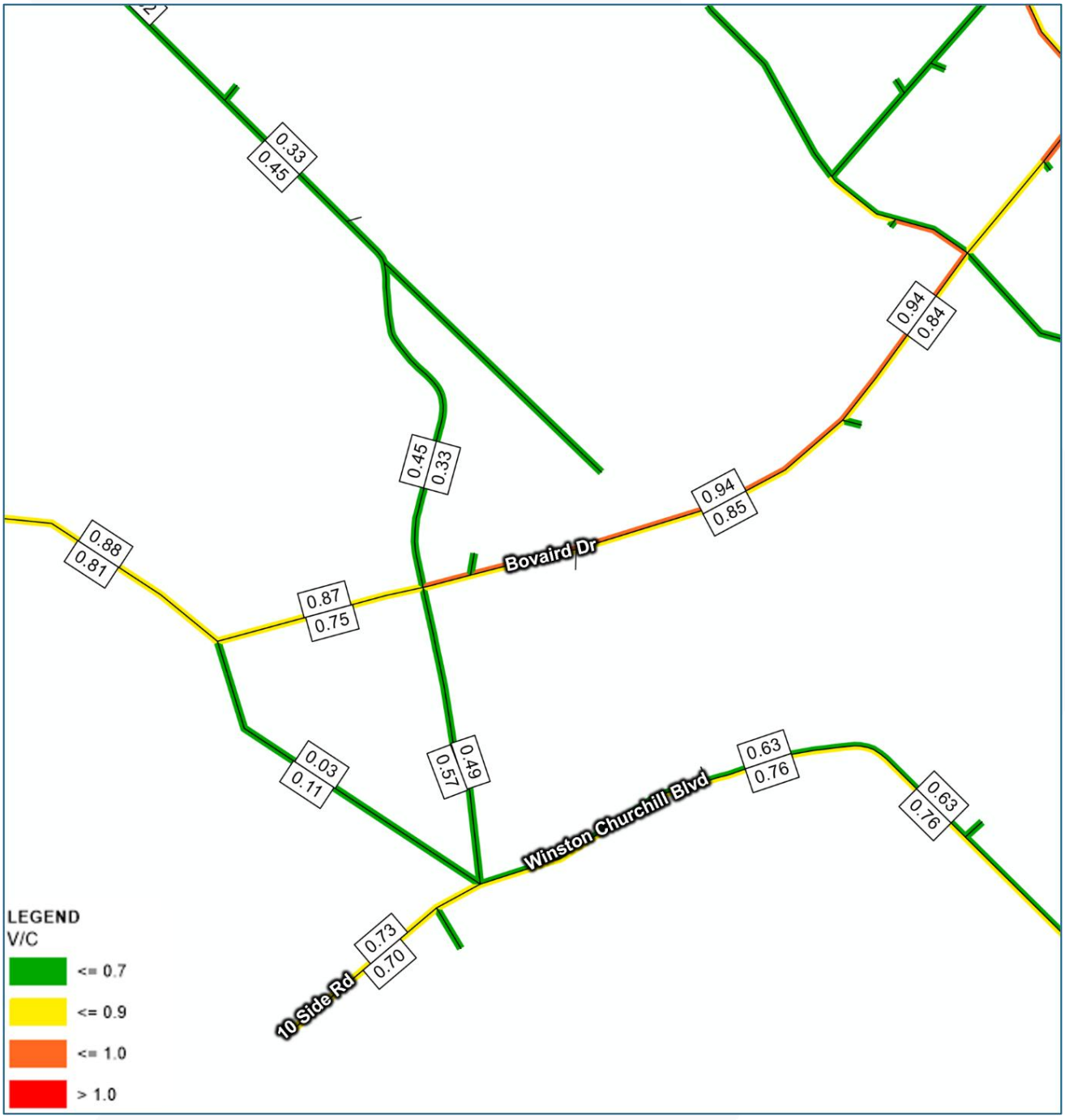


Figure 35: Future 2051 Short List E – Option 1, Do Nothing – Corridor Volumes – PM Peak Hour

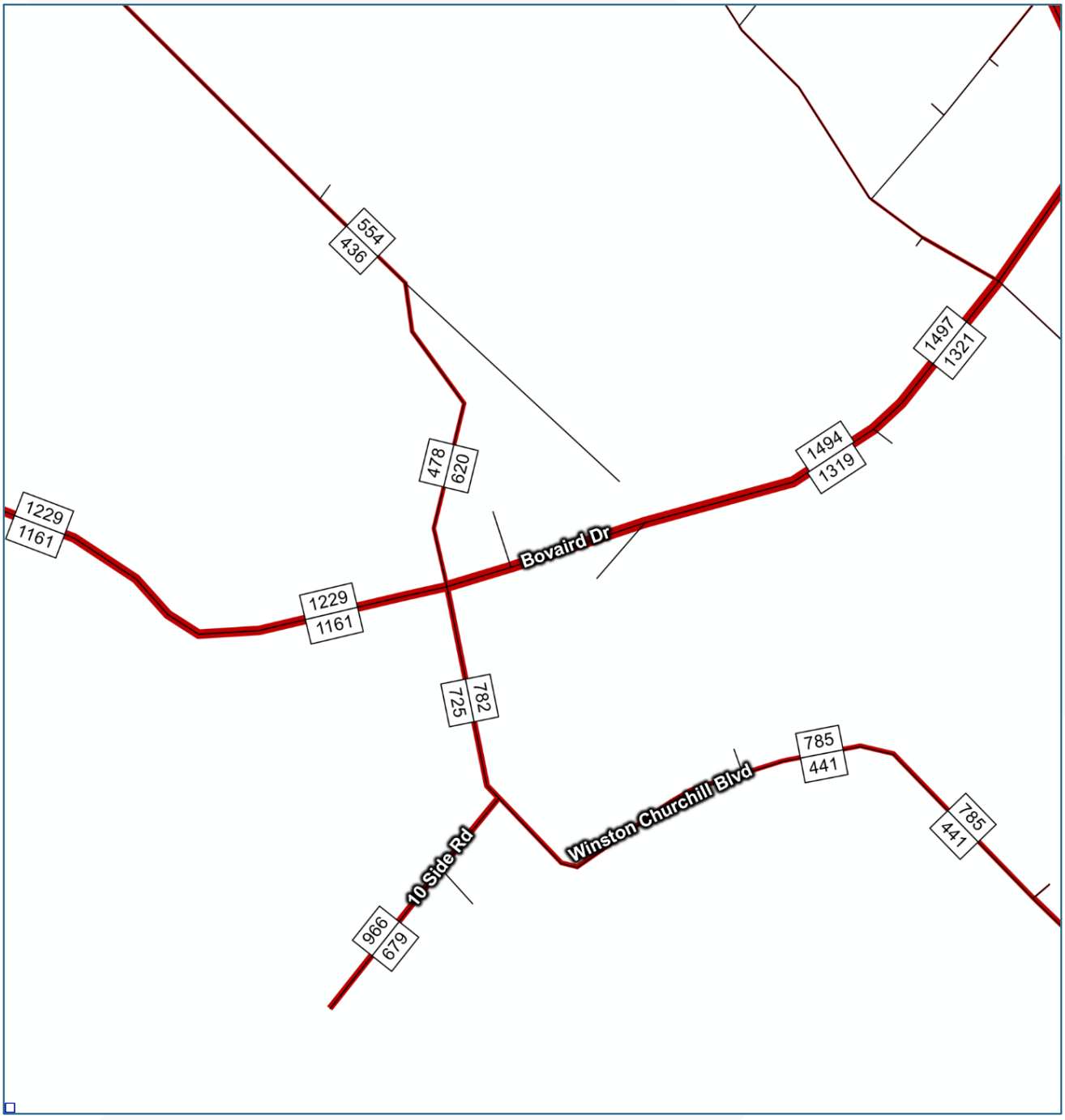


Figure 36: Future 2051 Short List E – Option 1, Do Nothing – V/C Ratios – PM Peak Hour

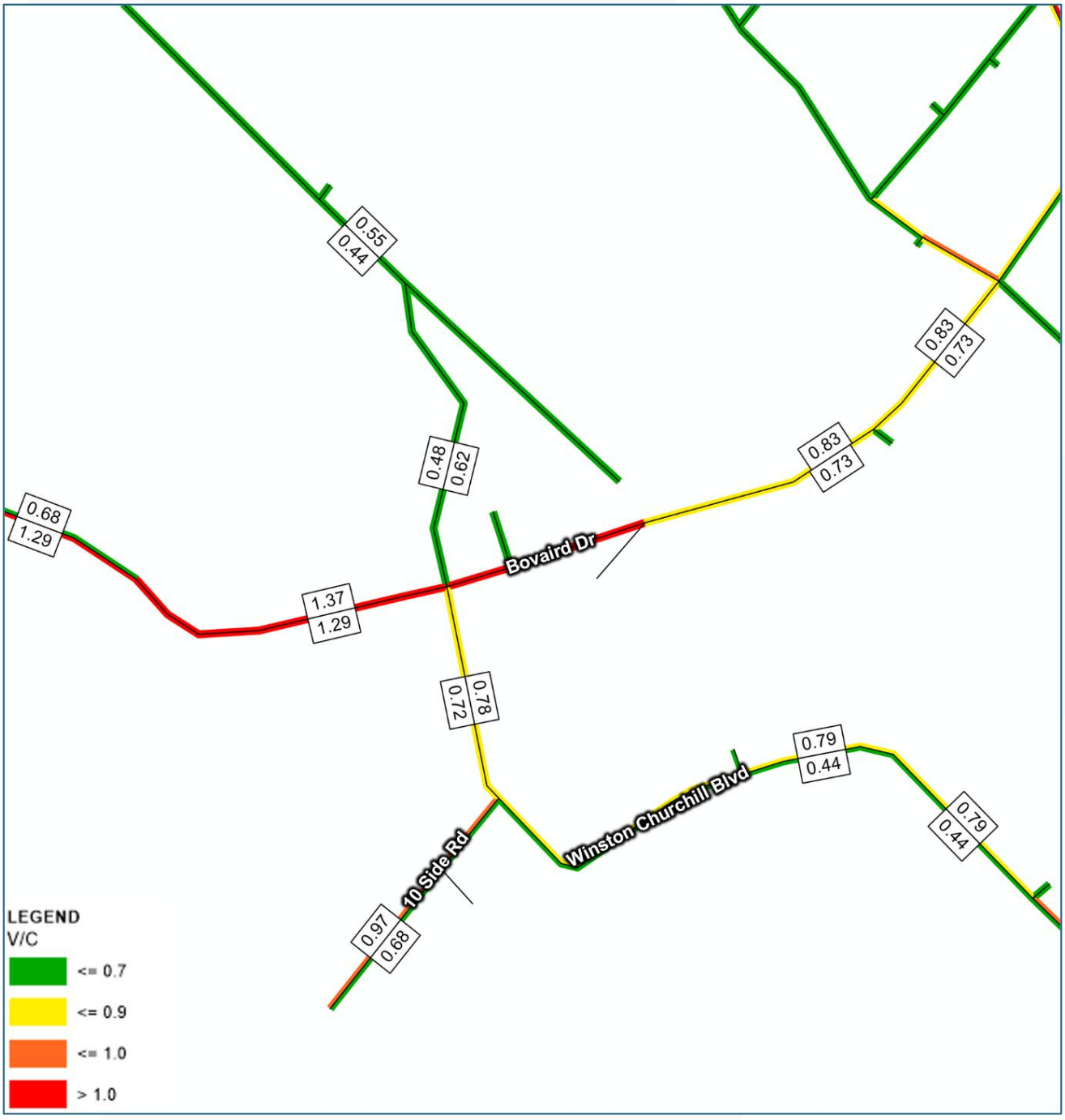


Figure 37: Future 2051 Short List E – Option 2, North Bypass – Corridor Volumes – PM Peak Hour

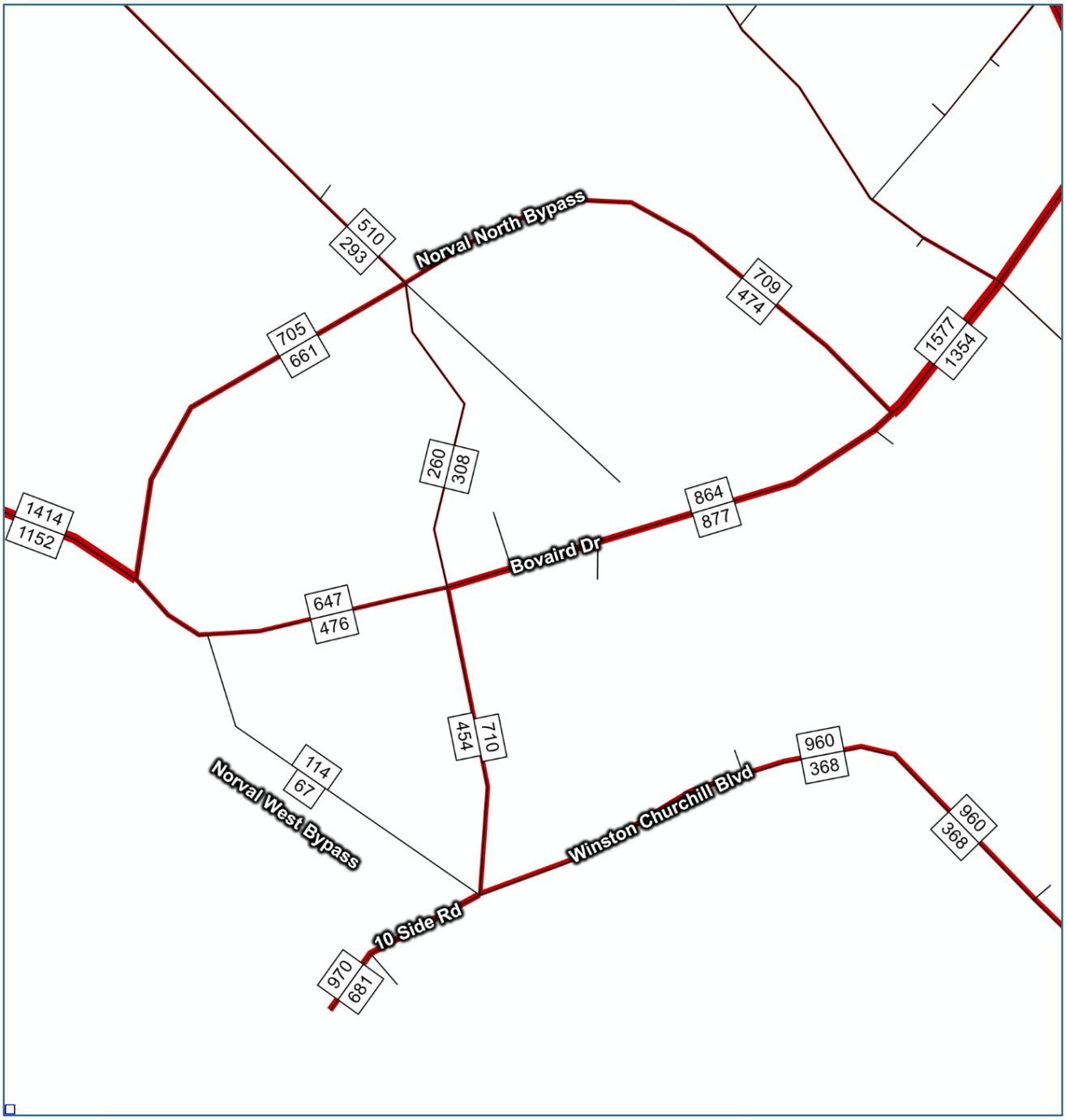


Figure 38: Future 2051 Short List E – Option 2, North Bypass – V/C Ratios – PM Peak Hour

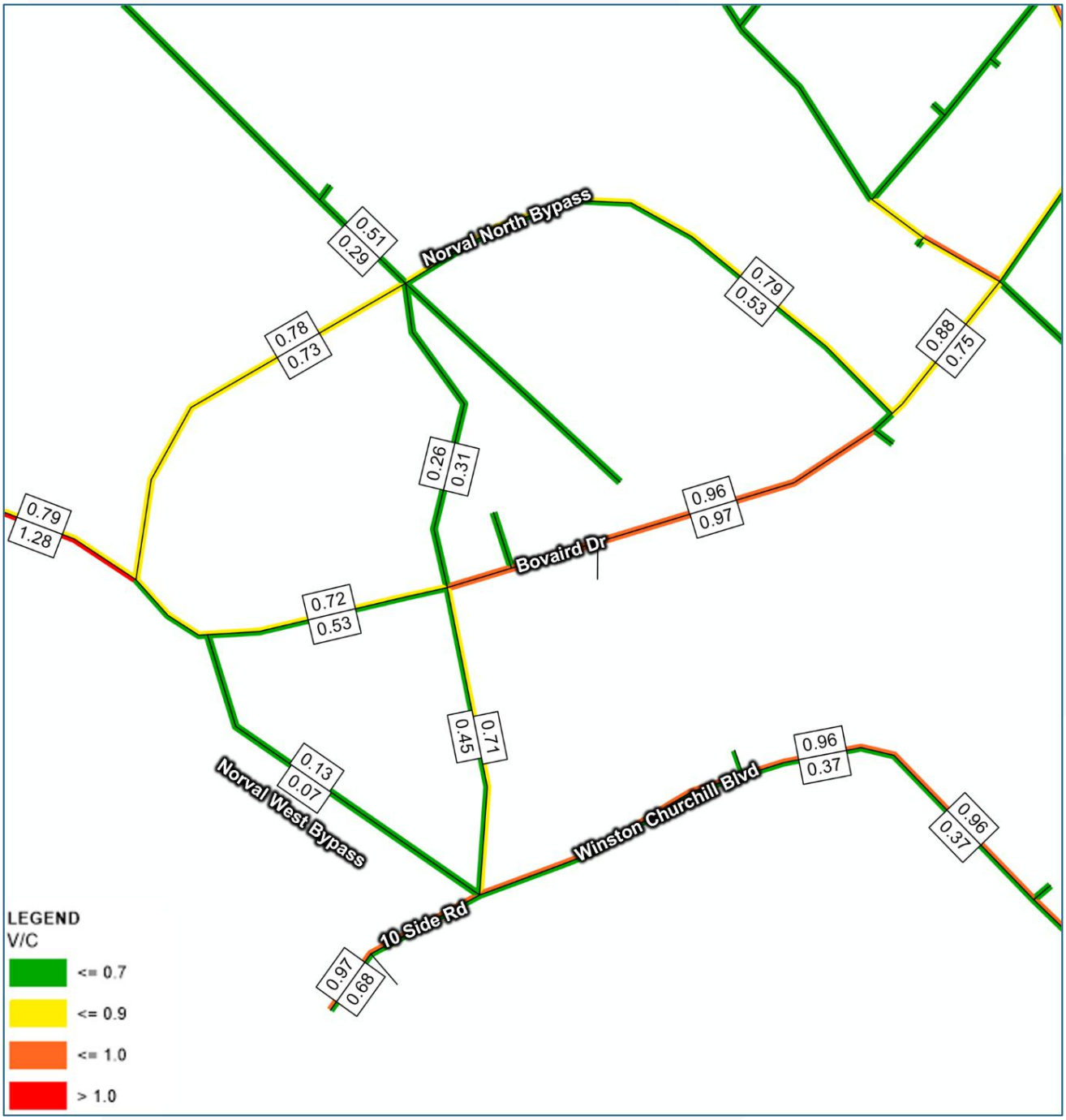


Figure 39: Future 2051 Short List E – Option 3, South Bypass – Corridor Volumes – PM Peak Hour

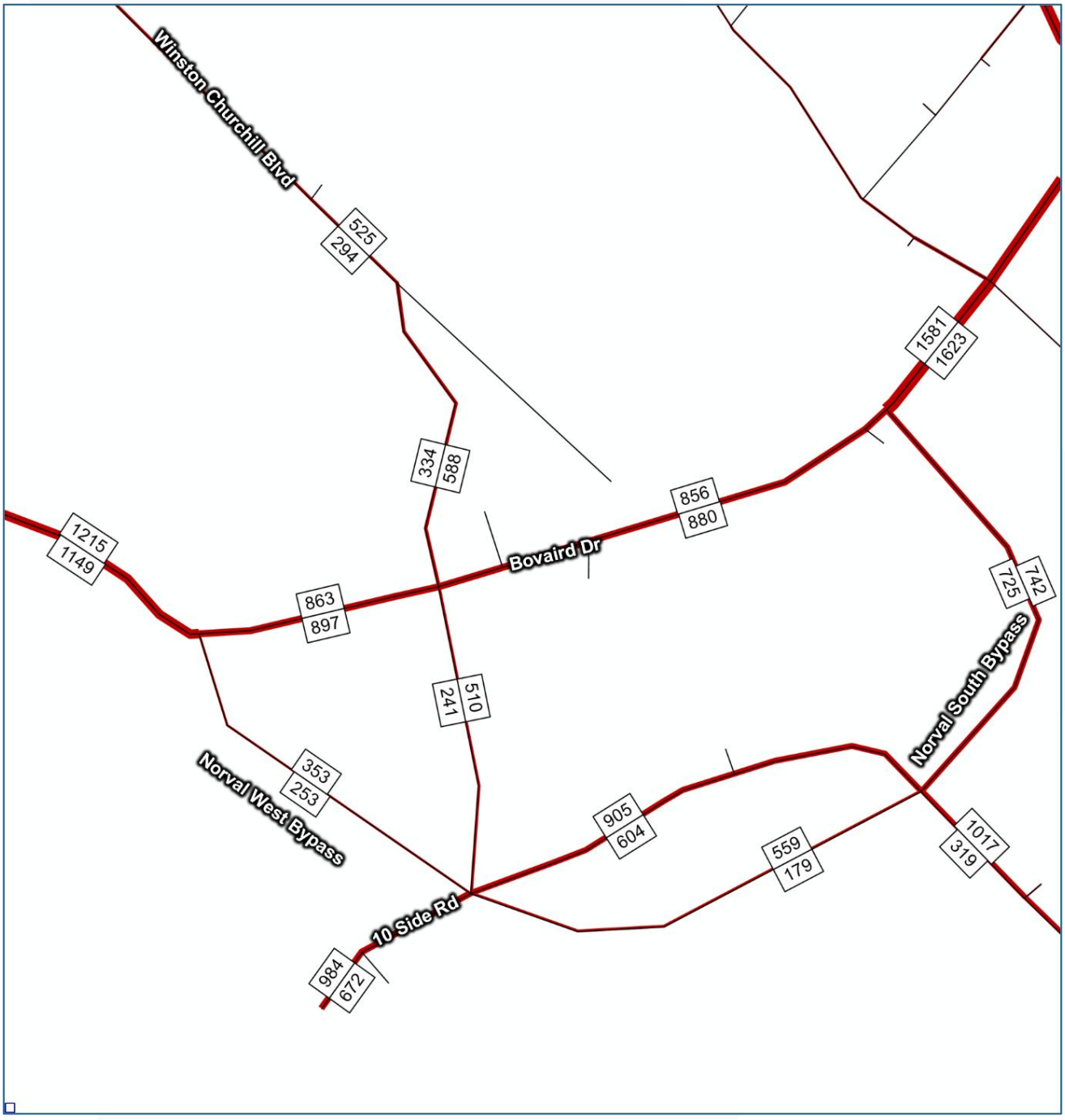


Figure 40: Future 2051 Short List E – Option 3, South Bypass – V/C Ratios – PM Peak Hour

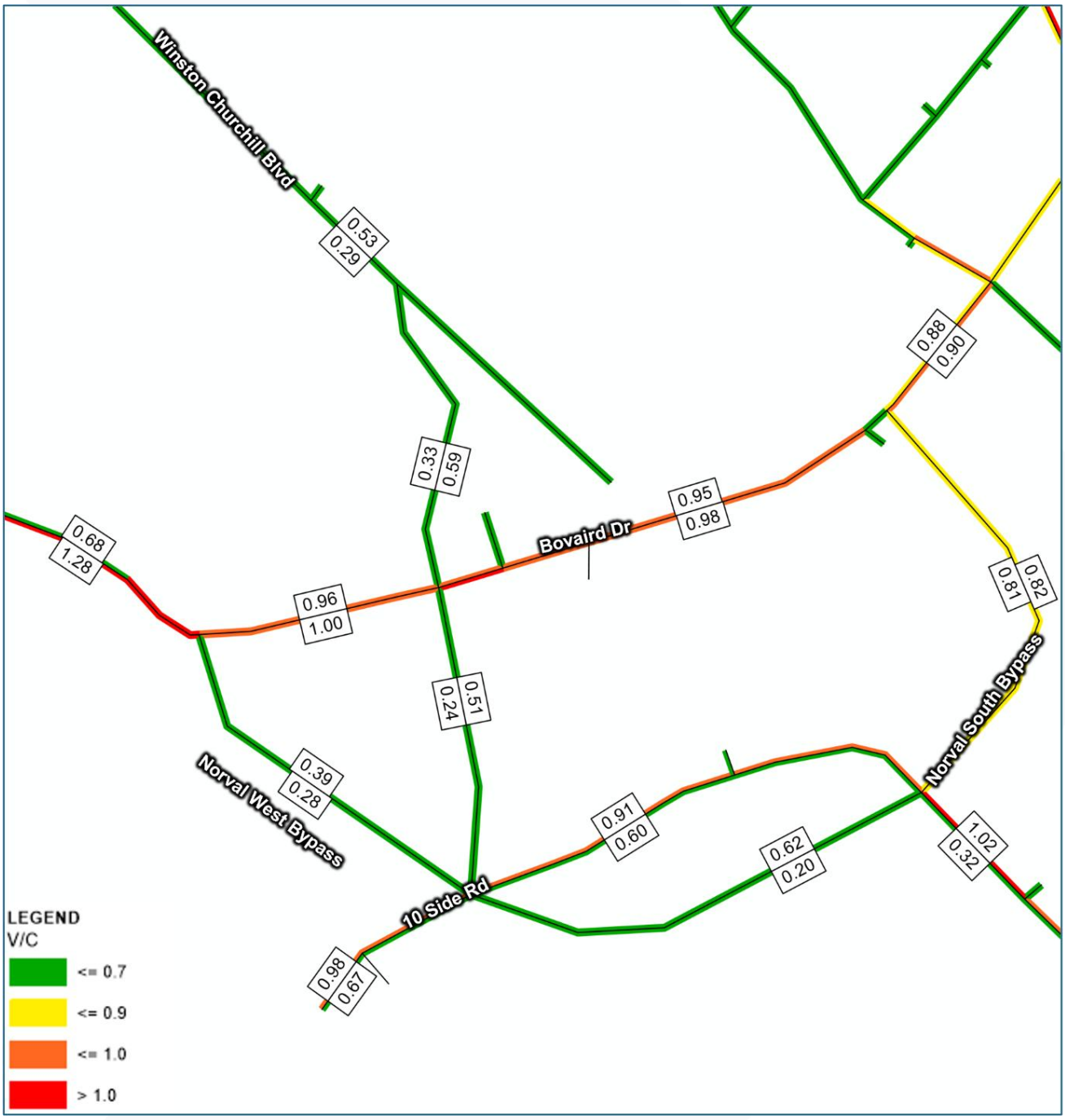


Figure 41: Future 2051 Short List E – Option 4, Bovaird Dr Widening – Corridor Volumes – PM Peak Hour

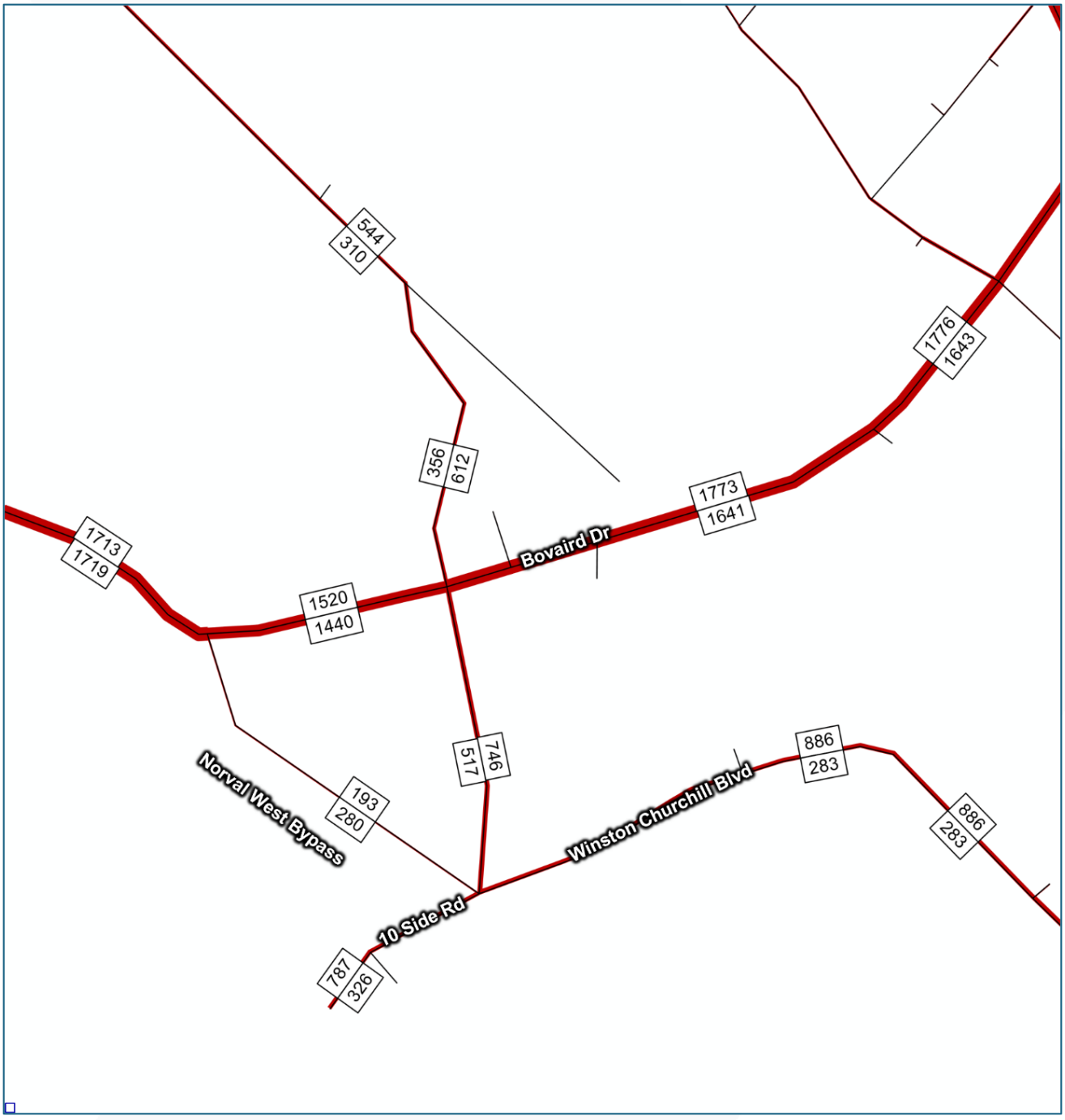
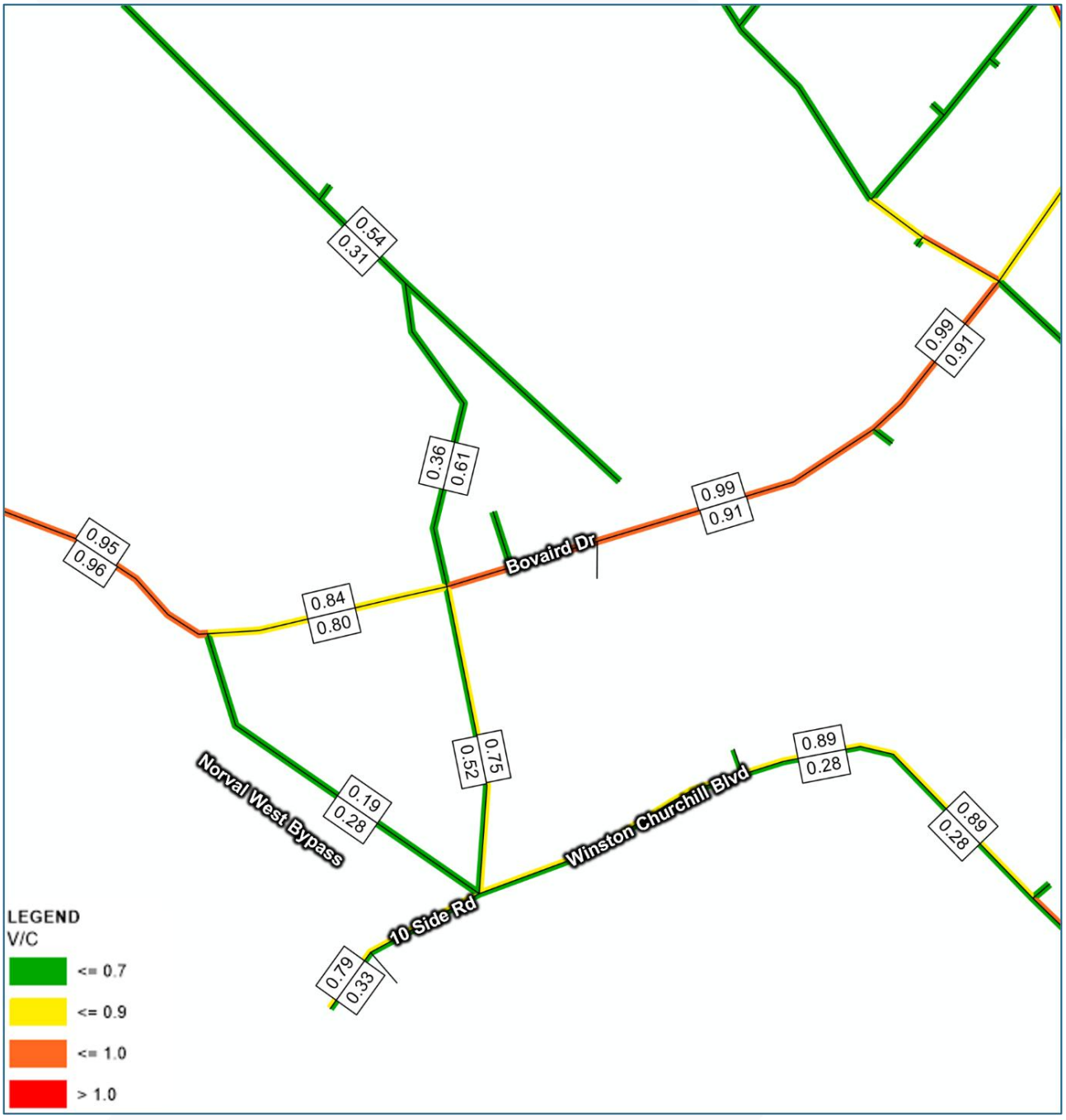


Figure 42: Future 2051 Short List E – Option 4, Bovaird Dr Widening – V/C Ratios – PM Peak Hour



Short List Alternative E Recommendations:

- Screening out Option 1 “Do-Nothing”.
- Carrying forward By-Pass and Widening Options as part of future study by Municipal Partners of HPBATS.

5.0 SHORT LIST ALTERNATIVE F – EXTENSION OF BUICK BOULEVARD (52-2)

Long List F alternatives consider the extension of Buick Boulevard to Pinnacle Parkway, to address balance of street connectivity, recognizing environmental impacts, as well as a realignment of Court Road that straightens out the section at Buick Boulevard.

A comparison of the Long List Alternative F alternatives is illustrated in **Figure 43**.

The alternative alignment provides an improved fine-grained street network within Precinct 52-2 for all modes.

This section presents a comparison of the weekday morning (AM) and afternoon (PM) road network operations associated with each of the alternatives for Short List F. For the purposes of assessing the alternatives, the "refined base" network will be treated as the base to which the alternative network for Short List F is compared to.

Figure 43: Long List Alternative F

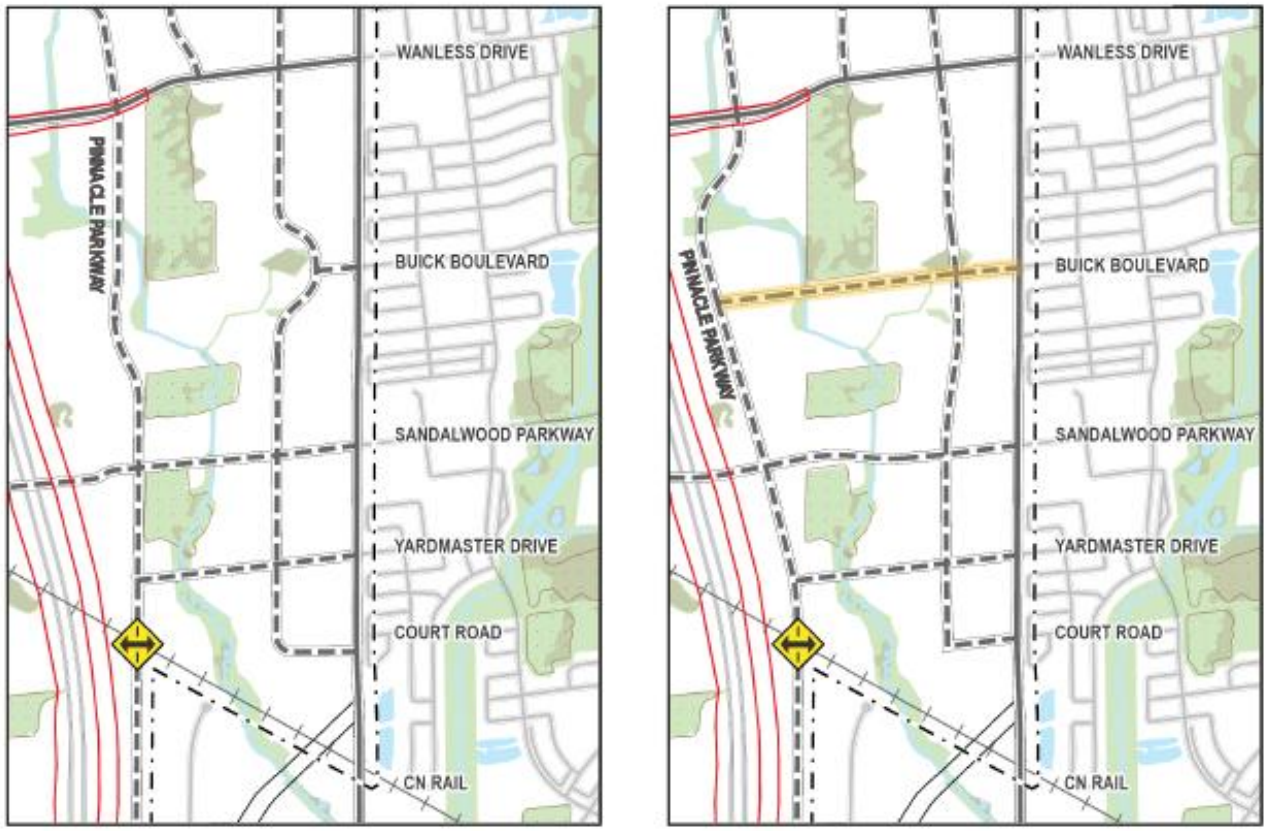


Figure 44: Future 2051 Short List F – Base – Corridor Volumes – AM Peak Hour

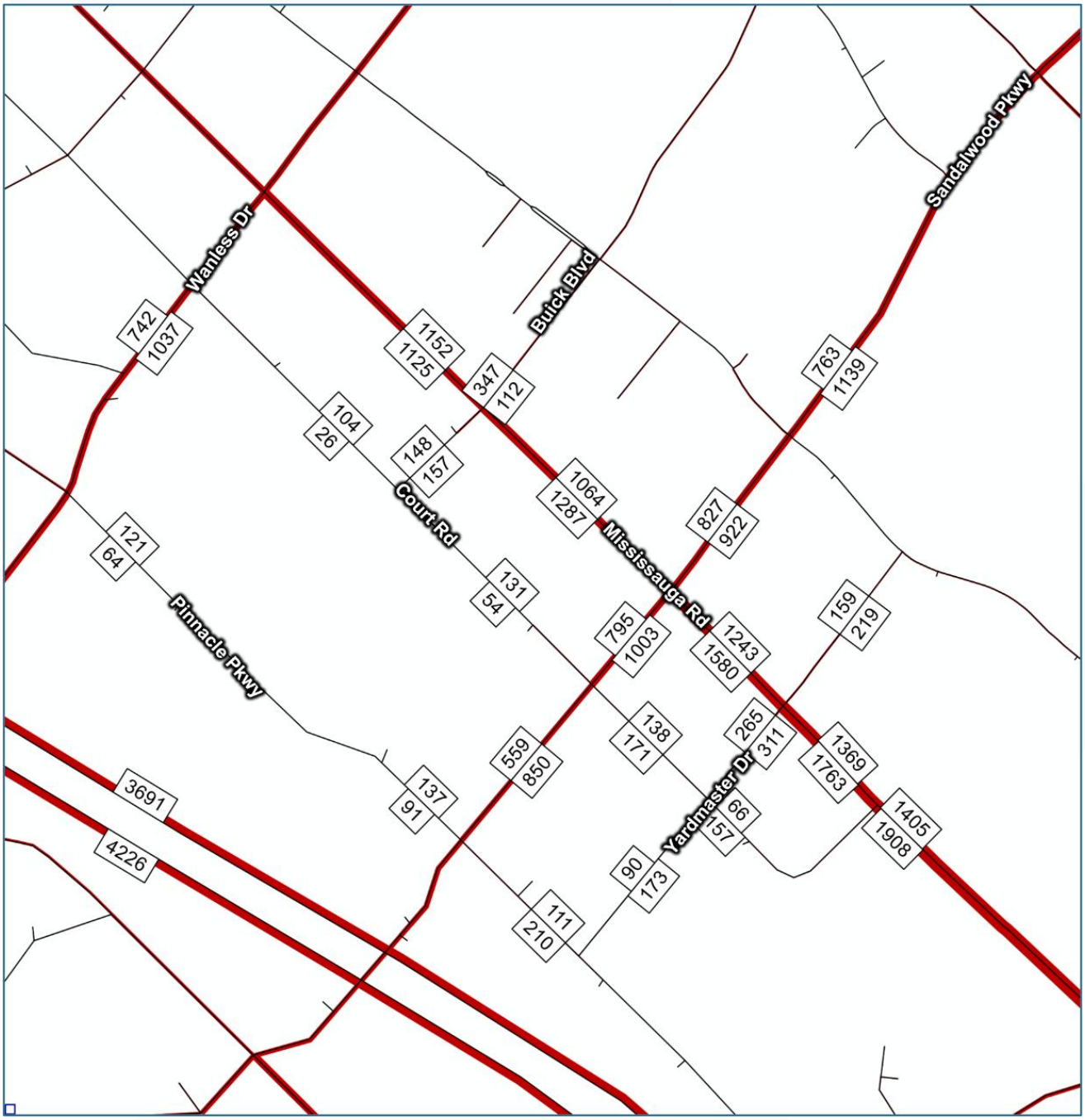


Figure 45: Future 2051 Short List F – Base – V/C Ratios – AM Peak Hour

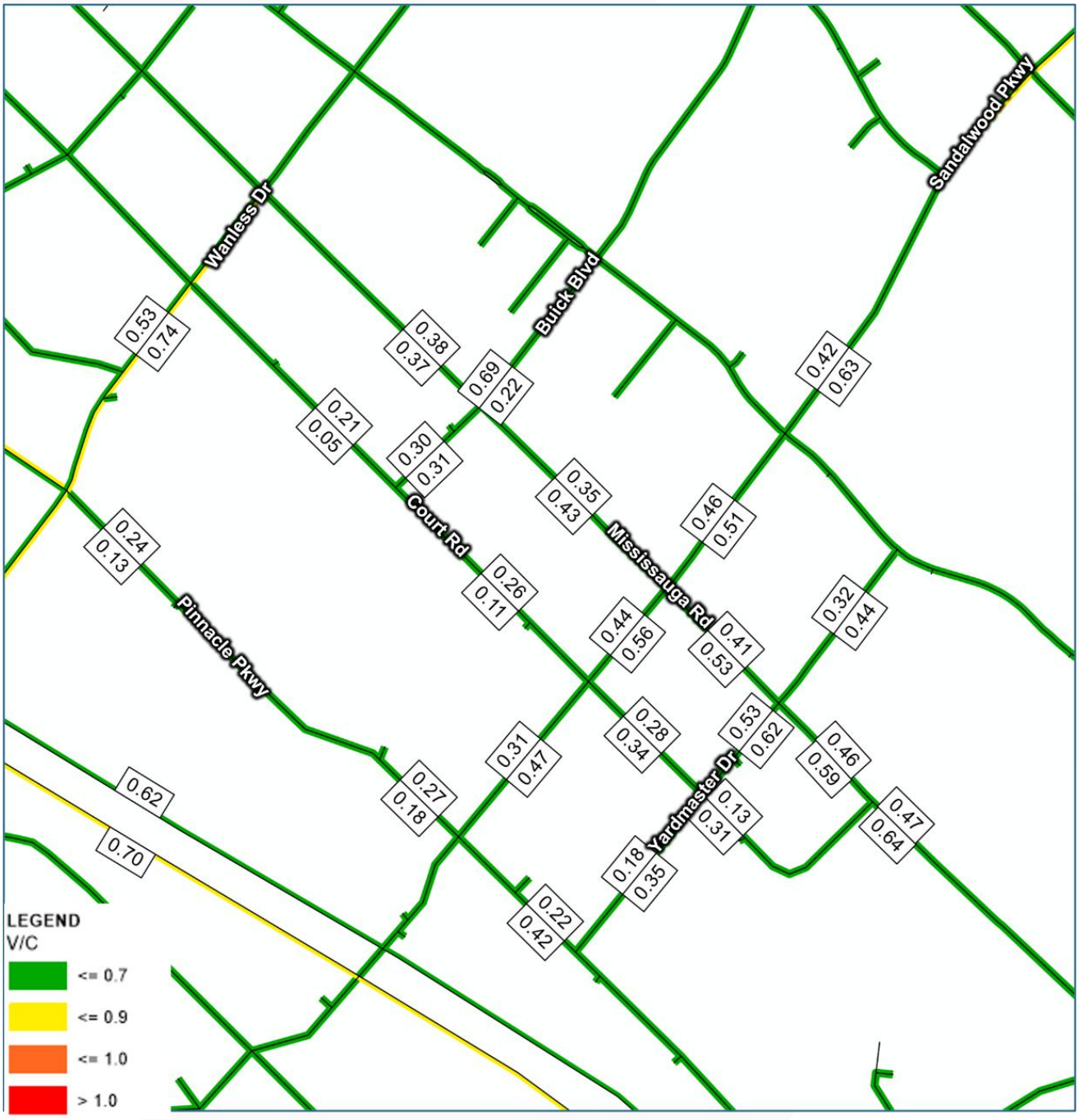


Figure 46: Future 2051 Short List F – Option 2, Buick Boulevard Extension to Pinnacle Parkway – Corridor Volumes – AM Peak Hour

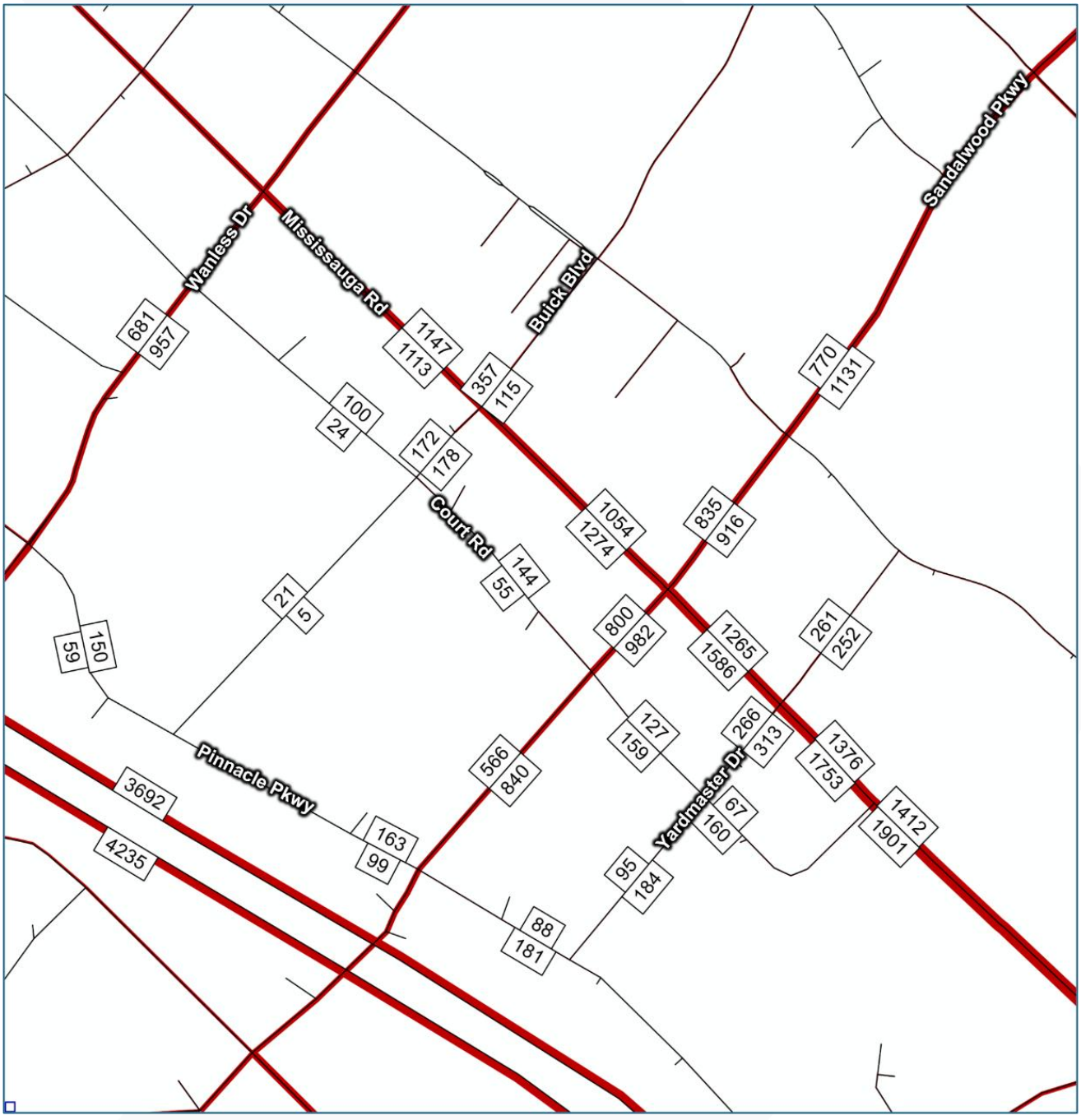


Figure 47: Future 2051 Short List F – Option 2, Buick Boulevard Extension to Pinnacle Parkway – V/C Ratios – AM Peak Hour

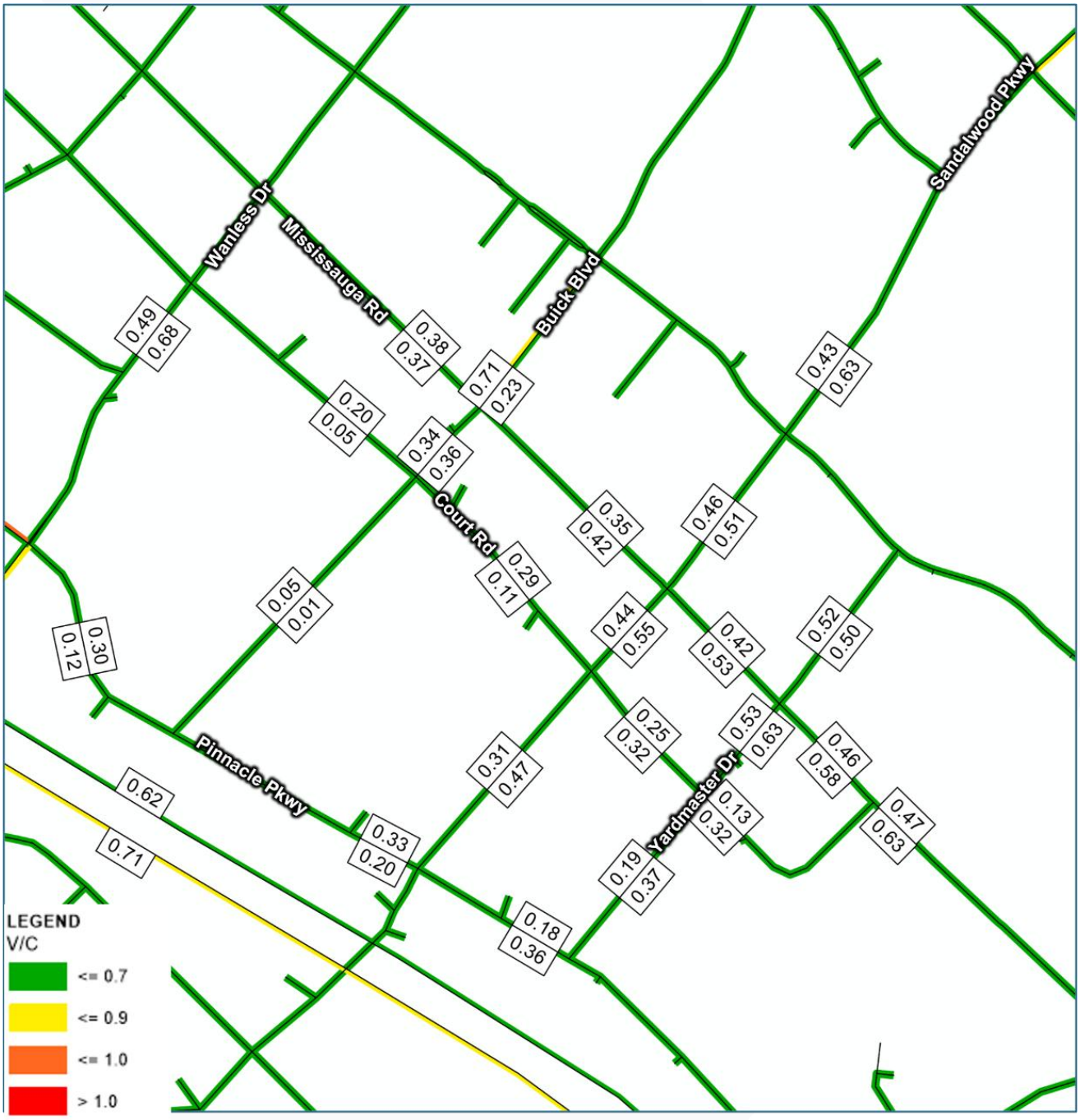


Figure 48: Future 2051 Short List F – Base – Corridor Volumes – PM Peak Hour

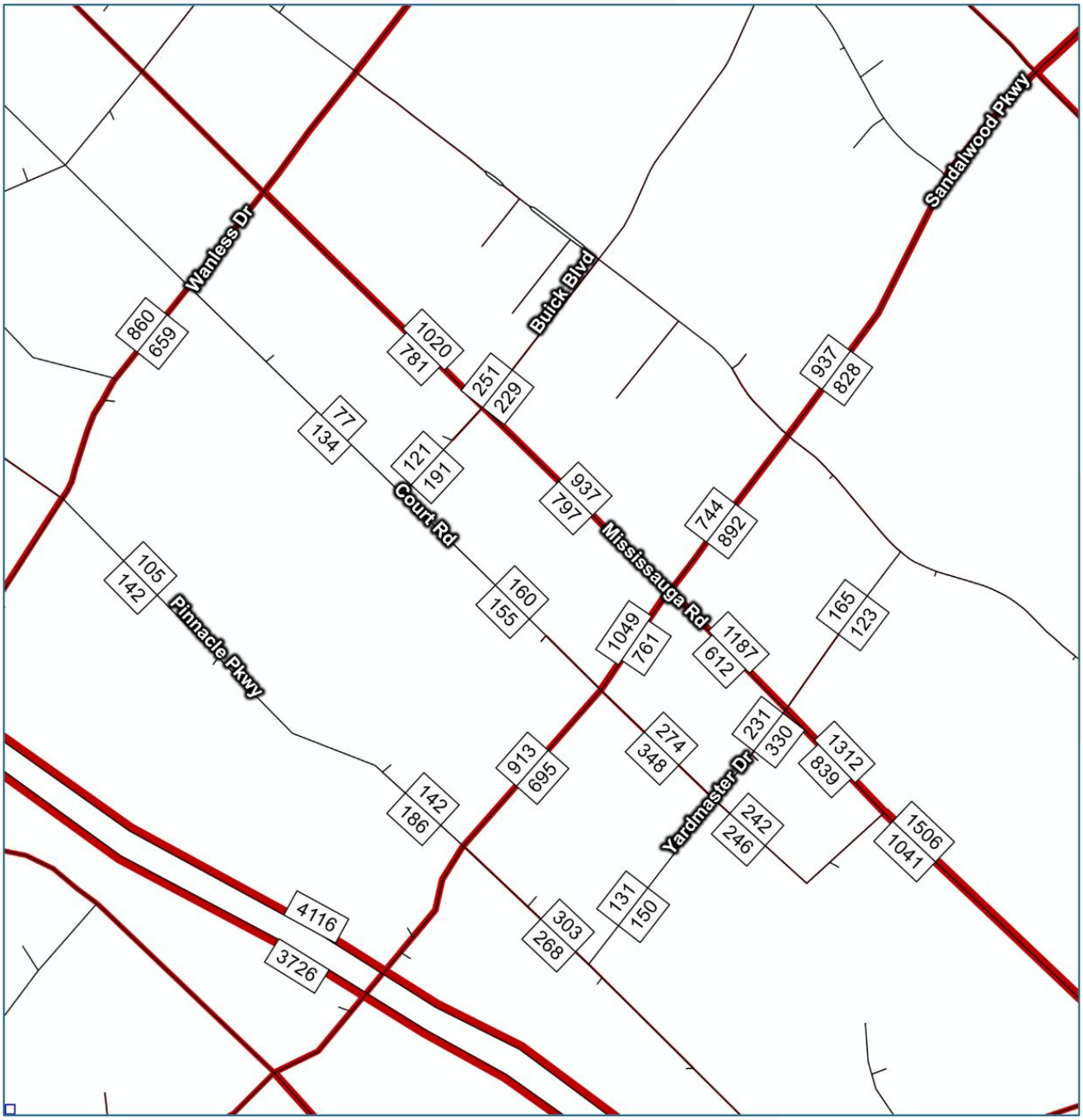


Figure 49: Future 2051 Short List F – Base – V/C Ratios – PM Peak Hour

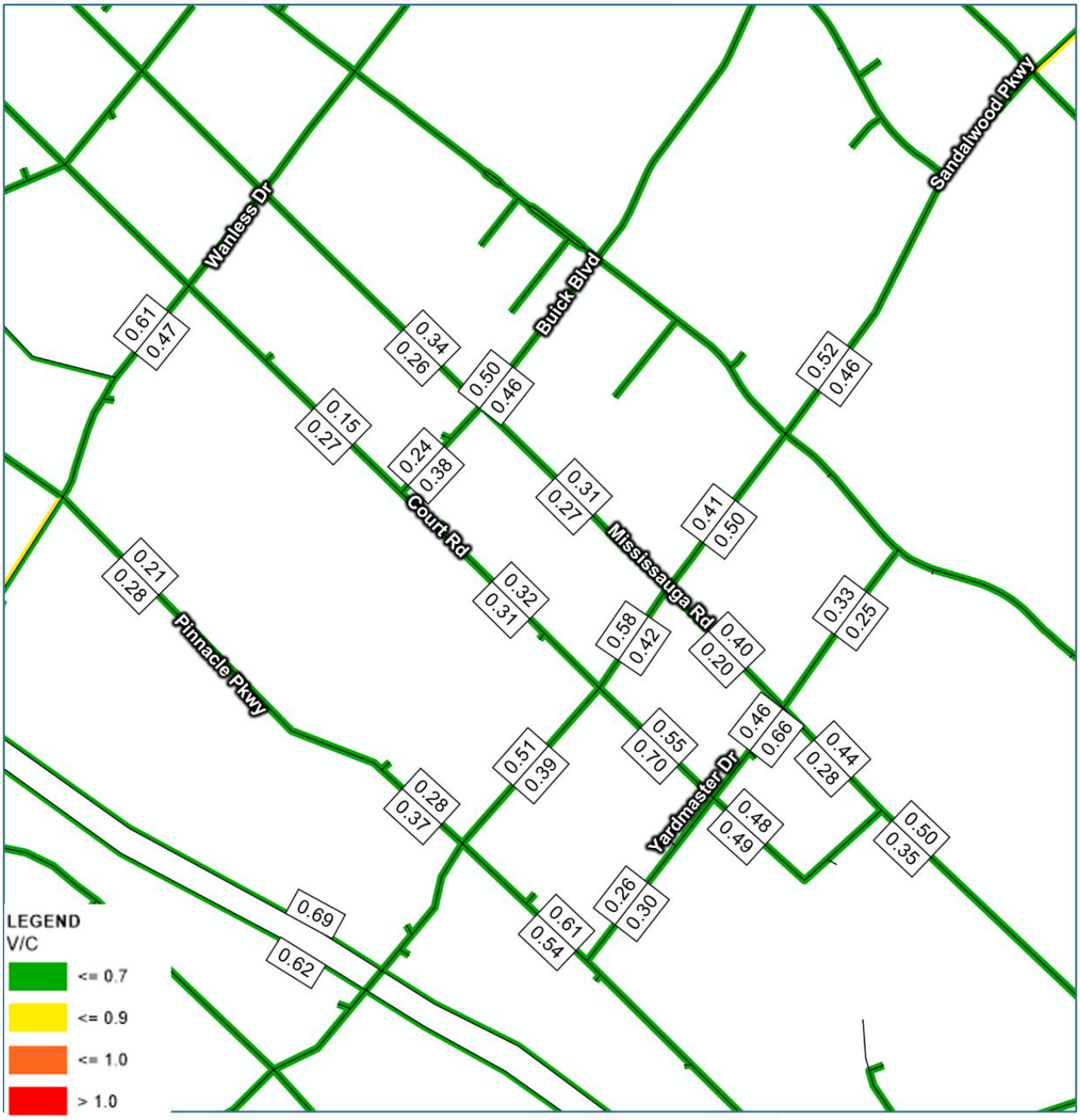


Figure 50: Future 2051 Short List F – Option 2, Buick Boulevard Extension to Pinnacle Parkway – Corridor Volumes – PM Peak Hour

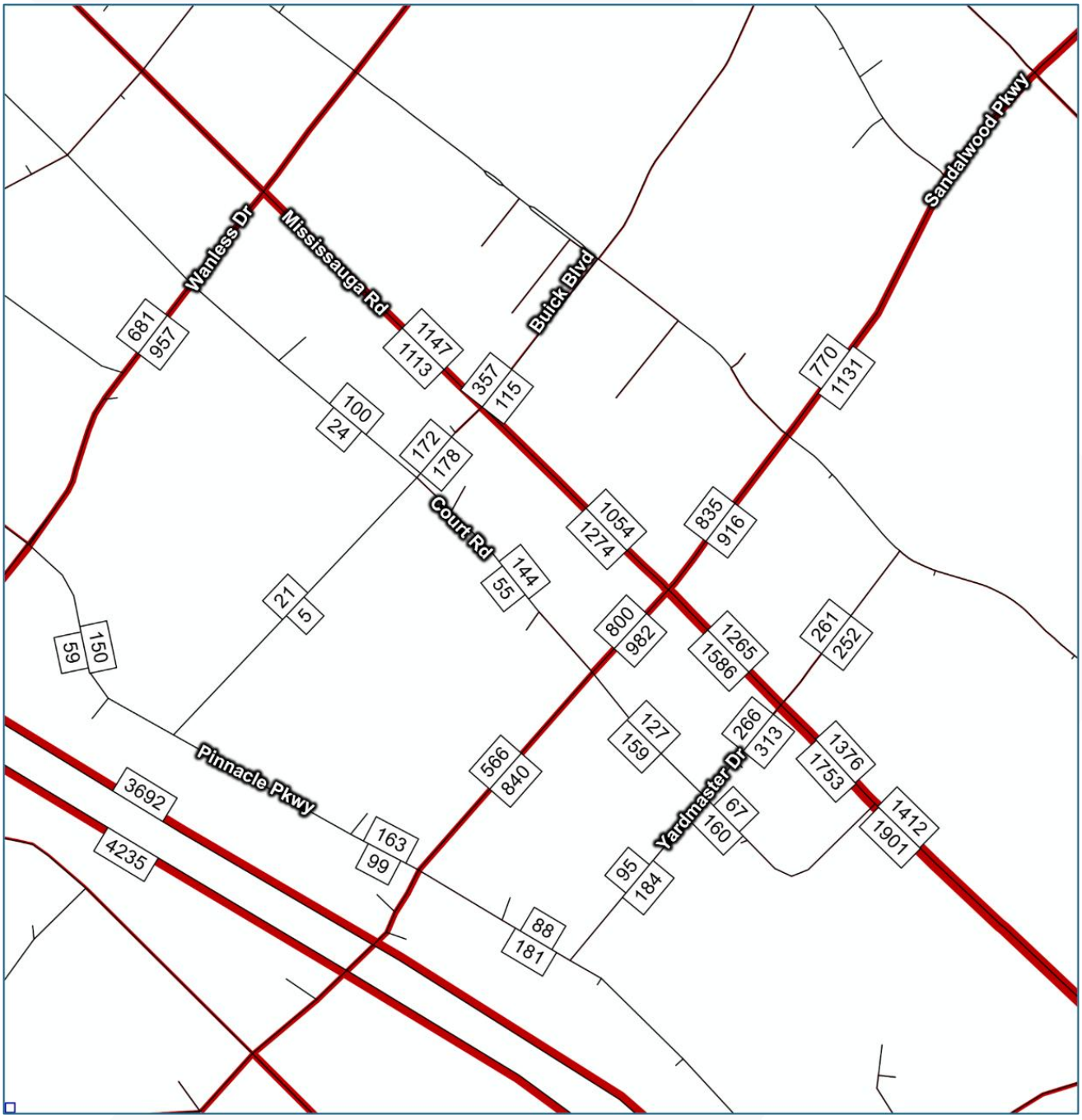
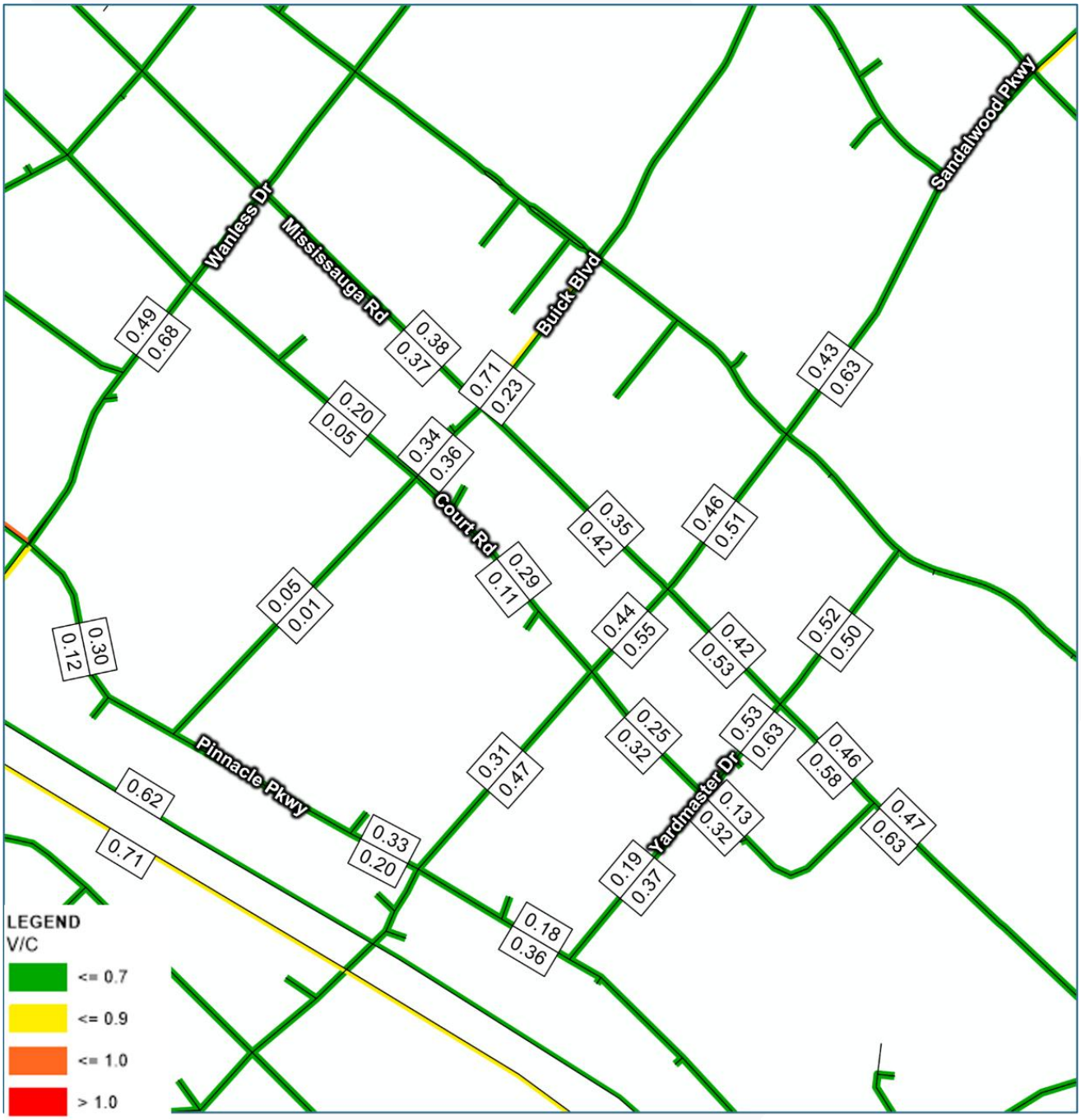


Figure 51: Future 2051 Short List F – Option 2, Buick Boulevard Extension to Pinnacle Parkway – V/C Ratios – PM Peak Hour



Short List Alternative F Recommendation:

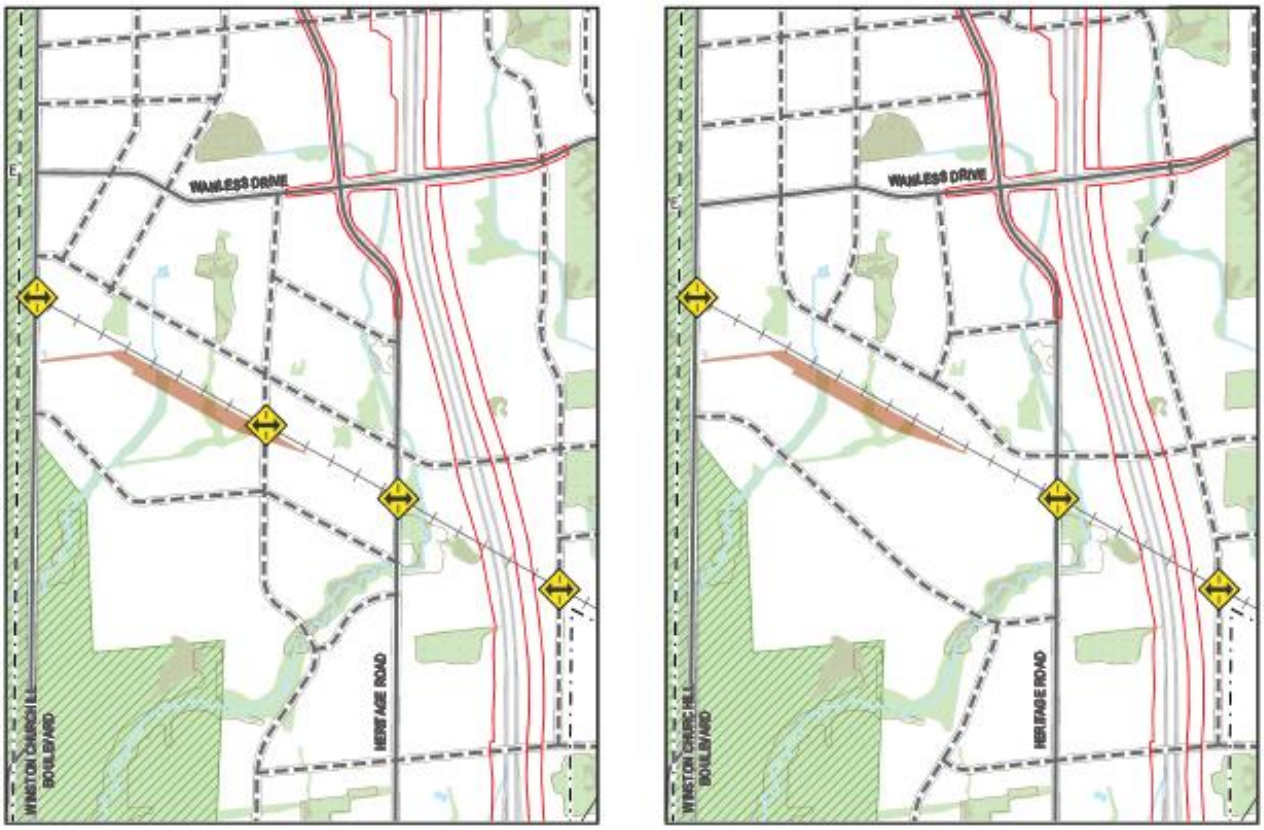
- Adopt Option 3, that establishes an active transportation crossing only, along the Buick Boulevard alignment between the east and west sides of Precinct 52-2.

6.0 SHORT LIST ALTERNATIVE G – NORTH SOUTH RAIL CROSSING (52-5 / 52-6)

Short List G alternatives consider re-evaluating the need for a CN Railway crossing and related road alignments to address balance of street connectivity, recognizing CN railway and Metrolinx Layover Facility impacts.

A comparison of the Long List Alternative G alternatives is illustrated in **Figure 52.**

Figure 52: Long List Alternative G



SECONDARY PLAN
RAIL CROSSING

MODIFICATION
REMOVE RAIL CROSSING

This section presents a comparison of the weekday morning (AM) and afternoon (PM) road network operations associated with each of the alternatives for Short List G. For the purposes of assessing the alternatives, the "refined base" network will be treated as the base to which the alternative network for Short List G is compared to.

Figure 53: Future 2051 Short List G – Option 1, Refined Base – Corridor Volumes – AM Peak Hour

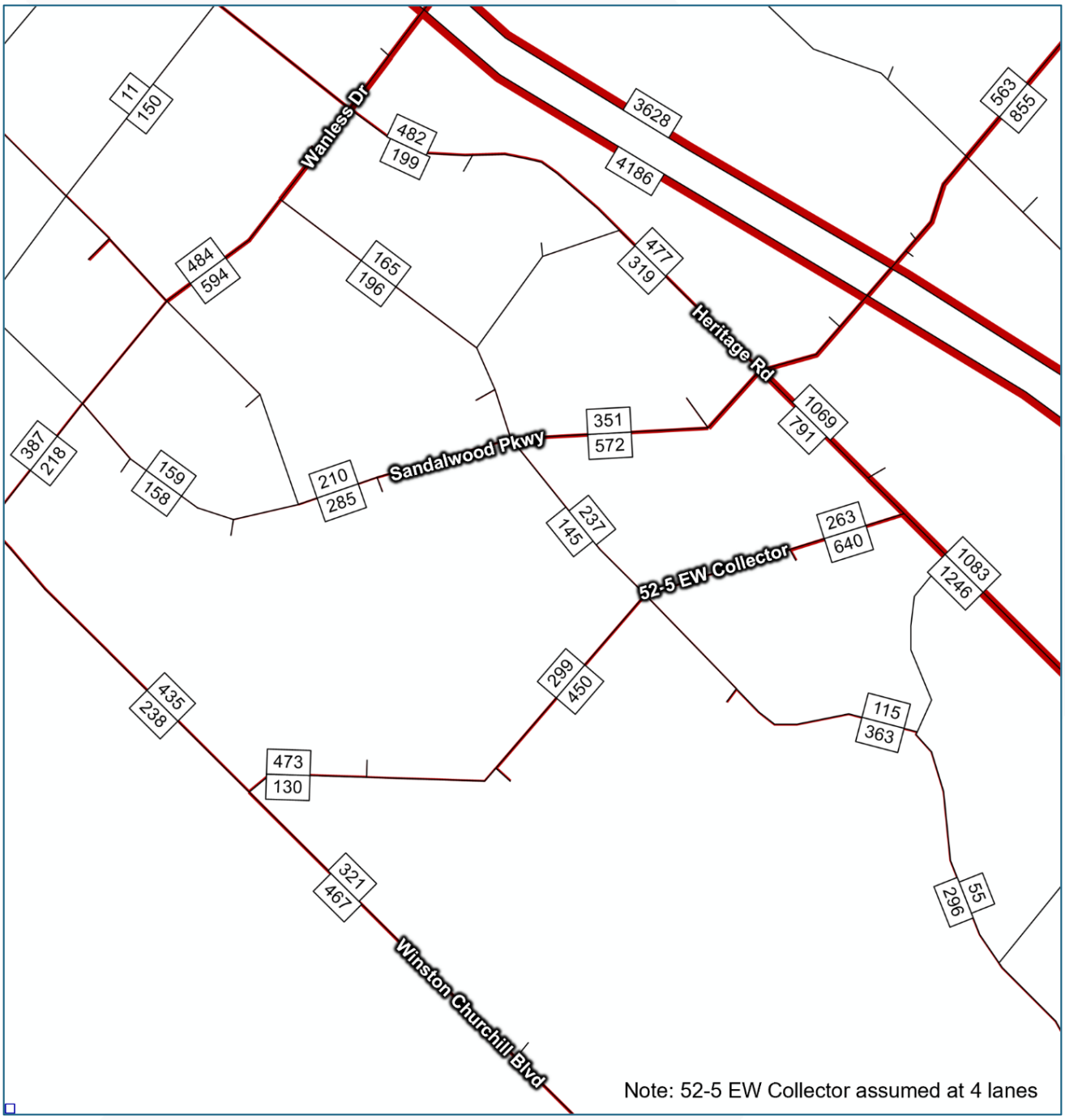


Figure 54: Future 2051 Short List G – Option 1, Refined Base – V/C Ratios – AM Peak Hour

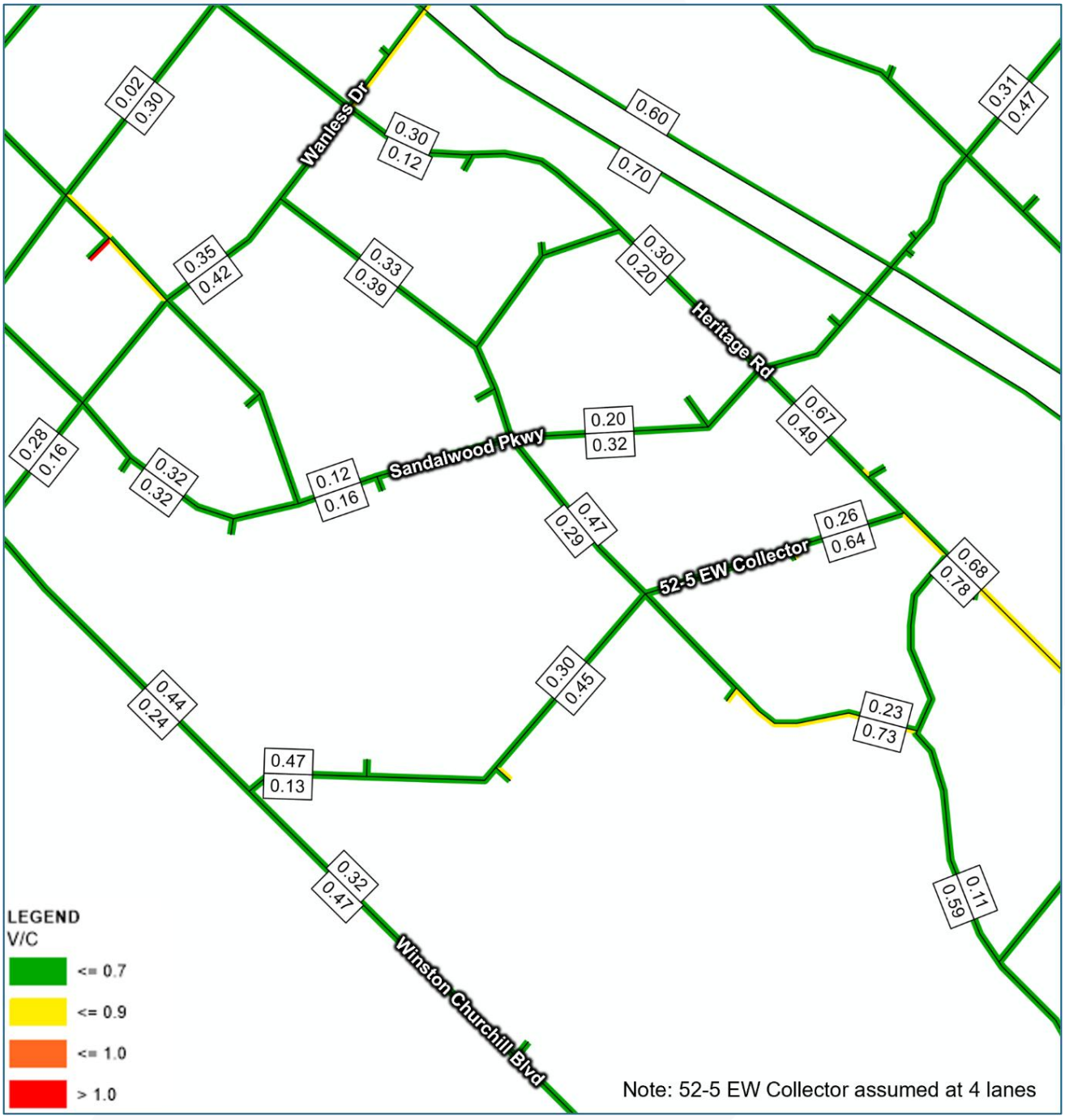


Figure 55: Future 2051 Short List G – Option 2, Remove Rail Crossing – Corridor Volumes – AM Peak Hour

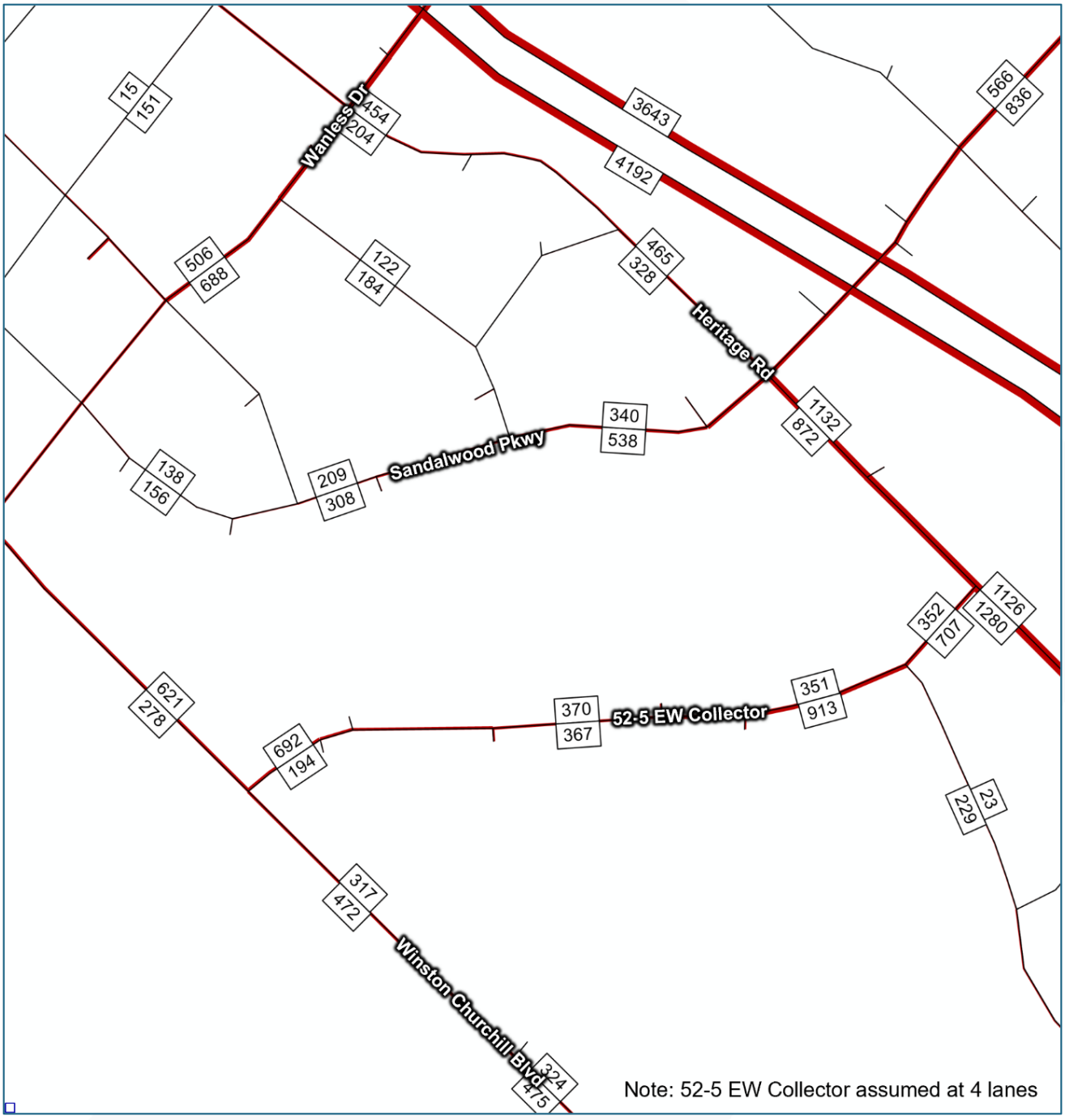


Figure 56: Future 2051 Short List G – Option 2, Remove Rail Crossing – V/C Ratios – AM Peak Hour

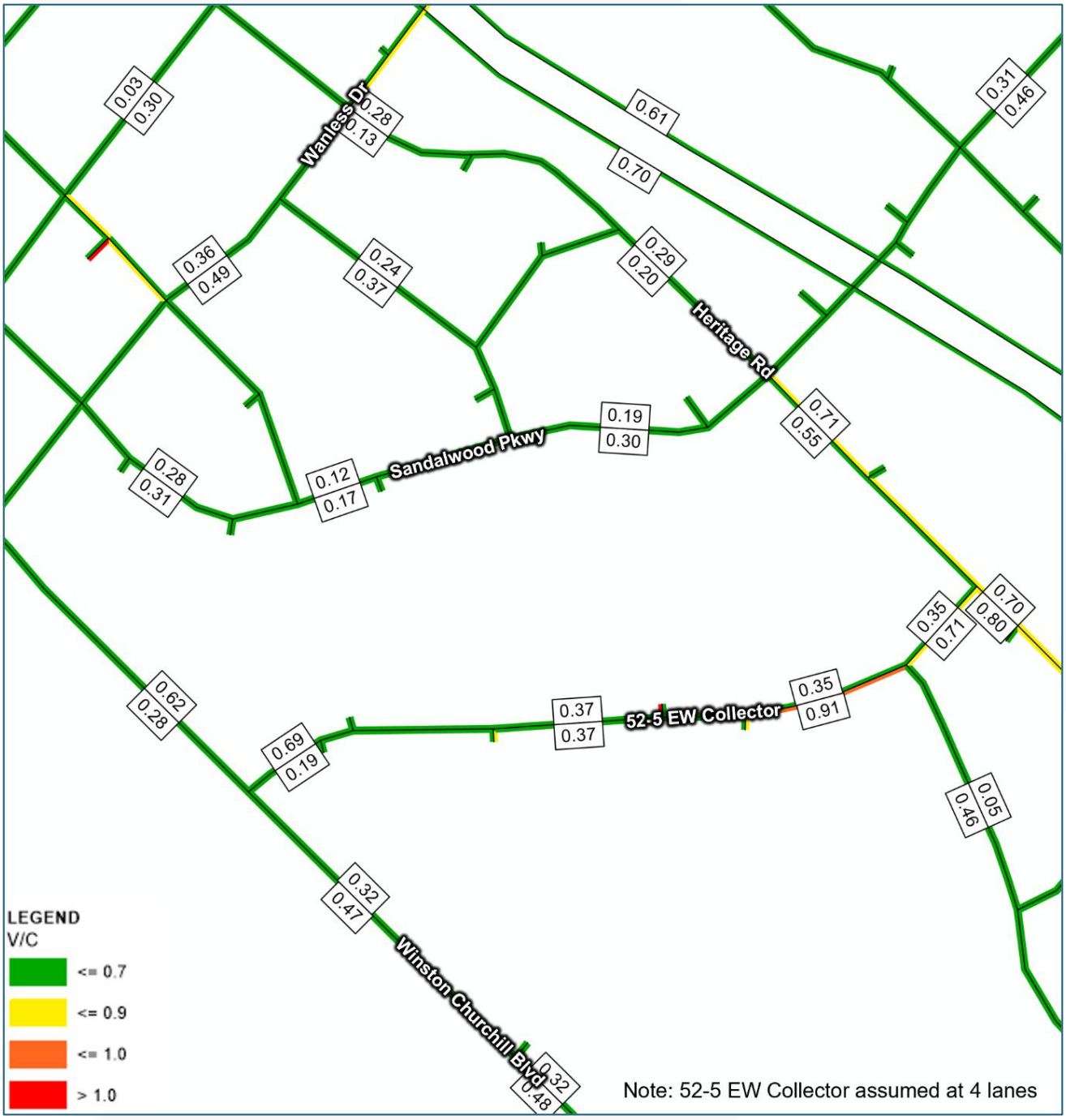


Figure 57: Future 2051 Short List G – Option 1, Refined Base – Corridor Volumes – PM Peak Hour

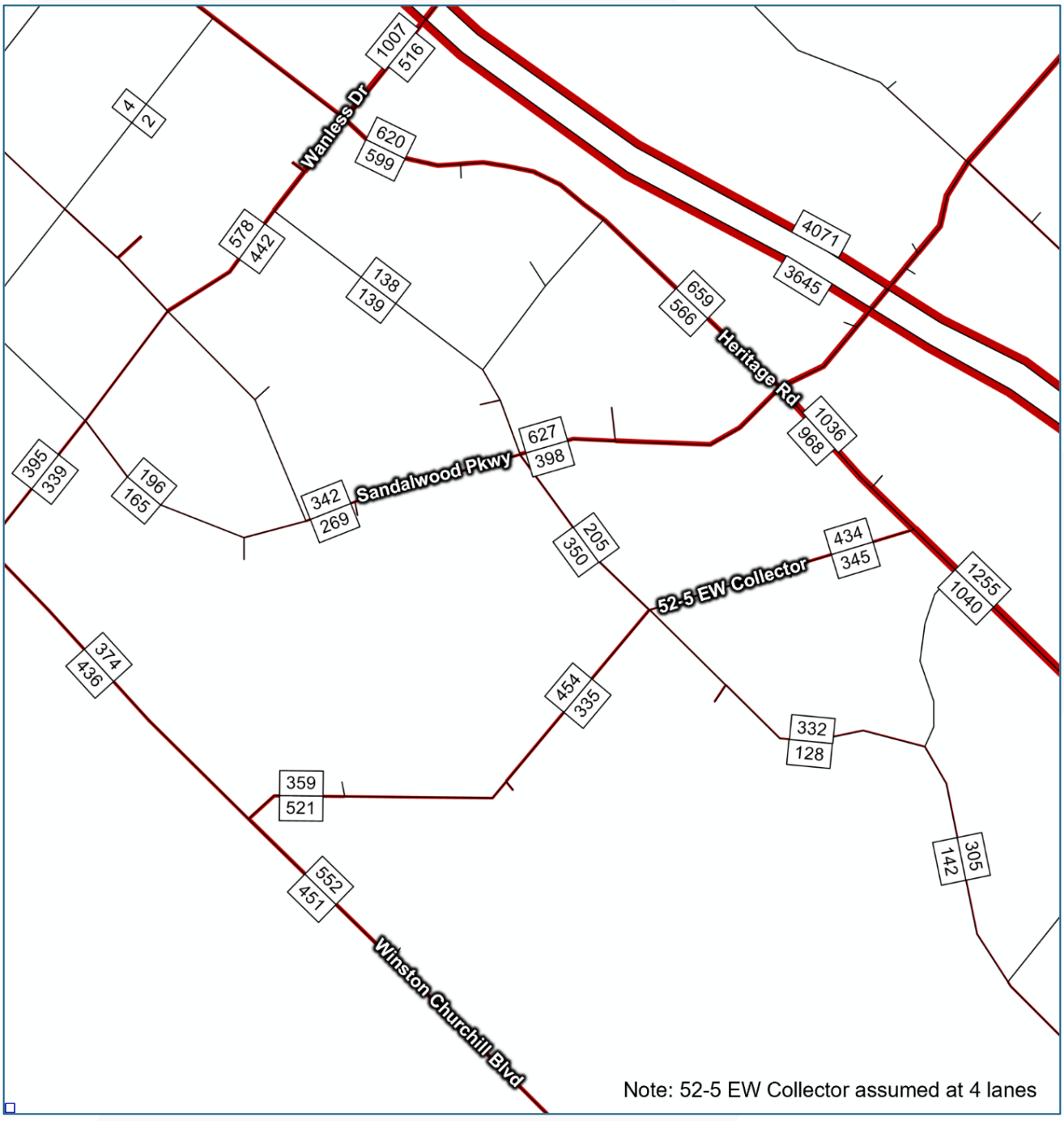


Figure 58: Future 2051 Short List G – Option 1, Refined Base – V/C Ratios – PM Peak Hour

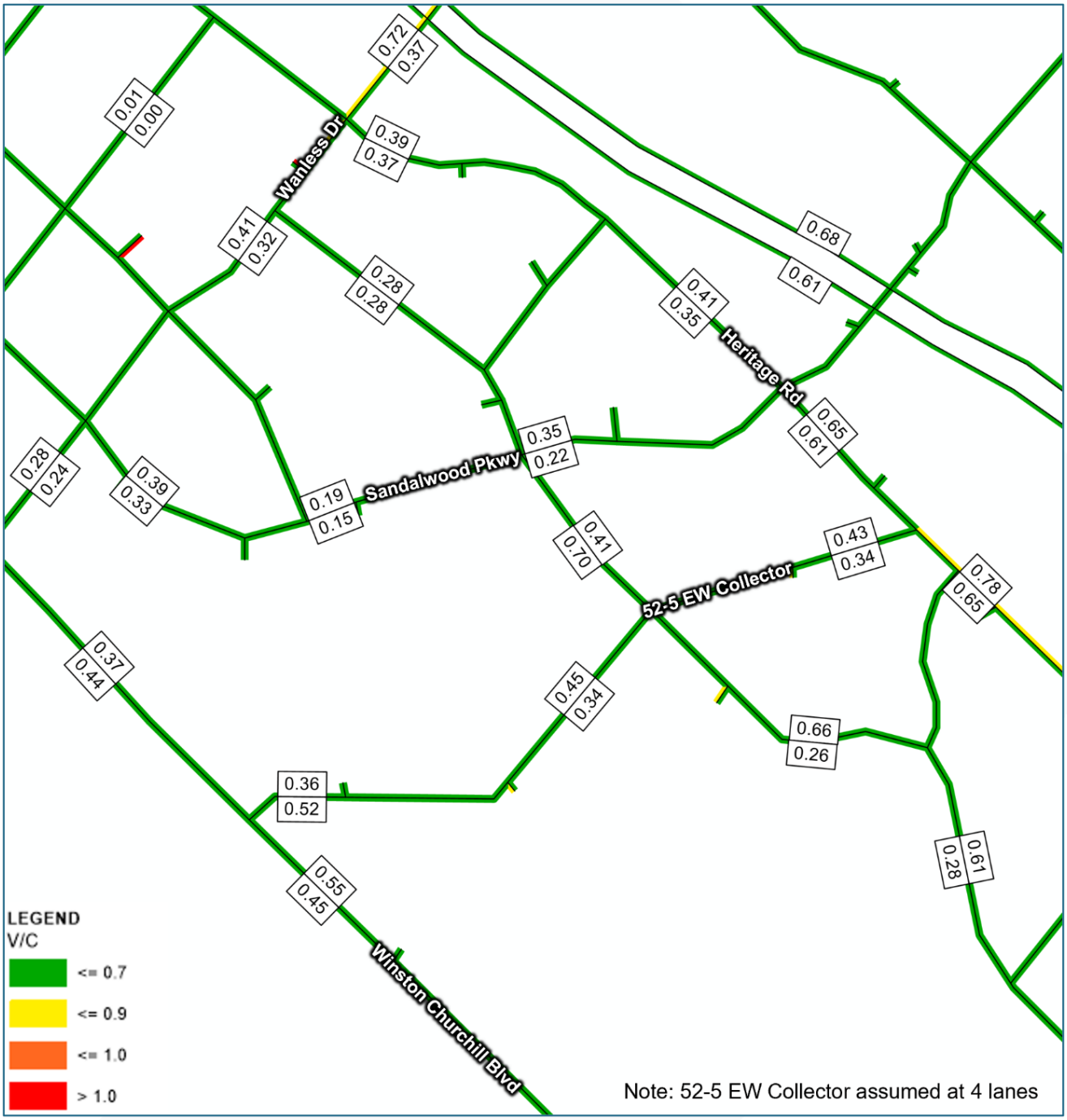


Figure 59: Future 2051 Short List G – Option 2, Remove Rail Crossing – Corridor Volumes – PM Peak Hour

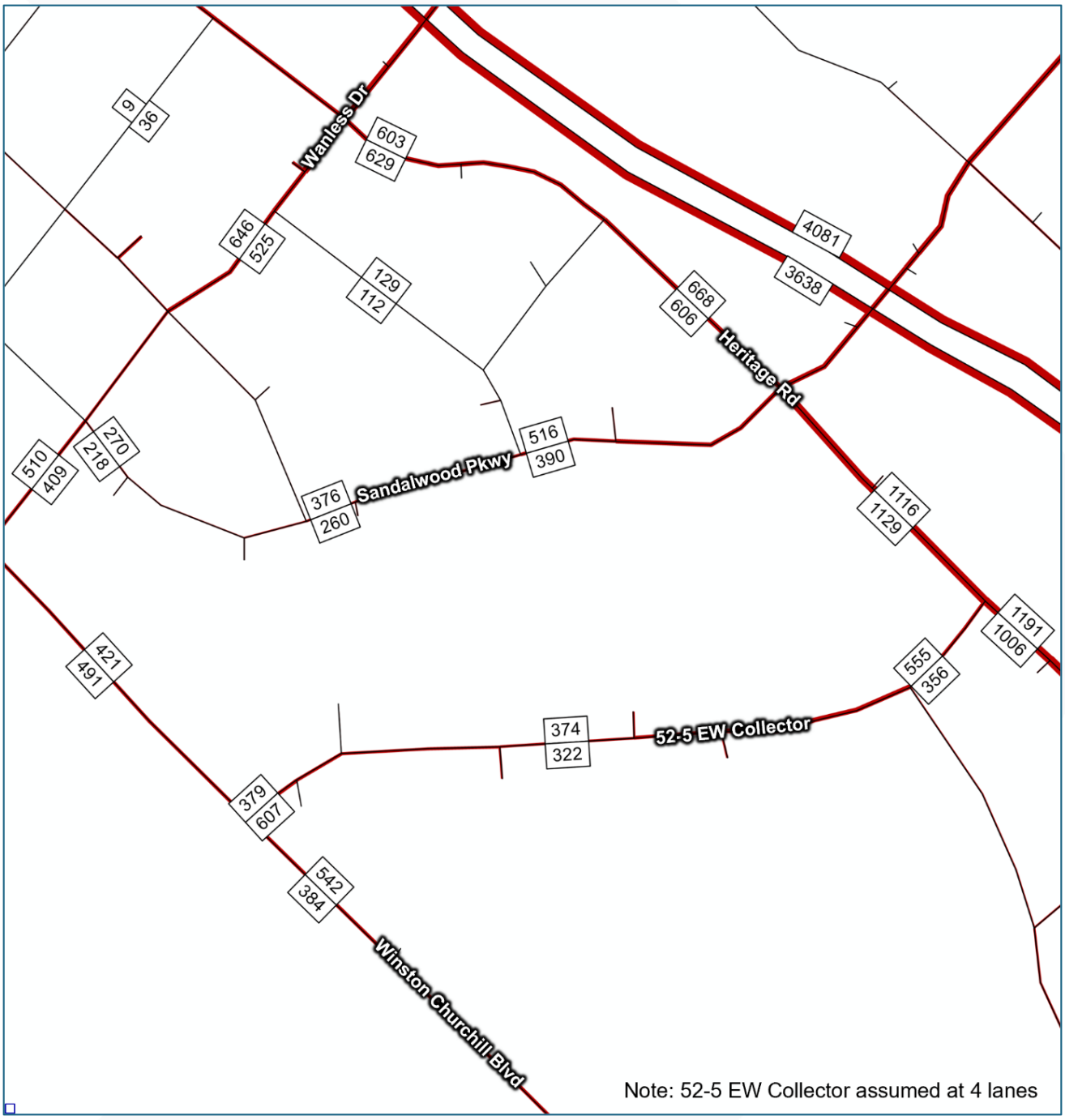
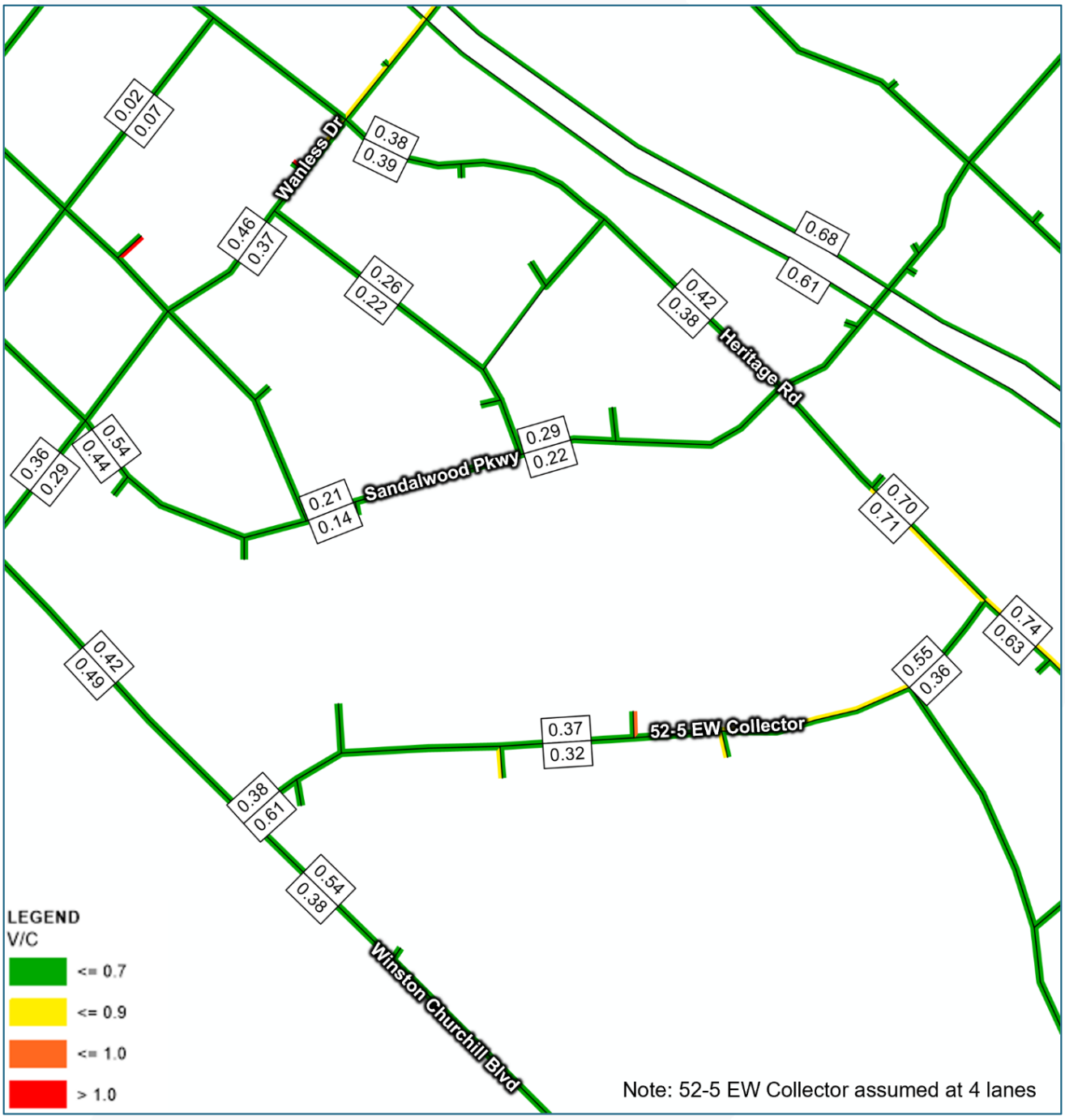


Figure 60: Future 2051 Short List G – Option 2, Remove Rail Crossing – V/C Ratios – PM Peak Hour



Short List Alternative G Recommendation:

- Adopt Option 3, that establishes an active transportation crossing only, over the CN Rail Corridor between Precincts 52-5 and 52-6.