

June 18, 2019

MEMORANDUM TO: Michael Haley
Central Corridor Development Engineer
NCDOT Planning and Programming / Corridor Studies Division

FROM: Matthew Quesenberry, PE
HNTB North Carolina, PC

SUBJECT: Final Traffic Forecast for STIP Project I-6054 B & C
I-40 Widening to a 6-Lane or 8-Lane Interstate,
Buncombe and Haywood Counties

The NCDOT Transportation Planning Division (TPD) has reviewed and approved this traffic forecast for I-6054 B & C for delivery as of June 12, 2019.

Please find attached the 2019 / 2040 Project-Level Final Traffic Forecast for State Transportation Improvement Program (STIP) I-6054 B & C. STIP Project I-6054 B & C includes the widening of I-40 to either a 6-lane or 8-lane interstate facility from the Monte Vista Road (SR 1224) grade separation (approximately half a mile west of the Exit 44 / US 19 / US 23 (Smoky Park Highway) interchange) to the Exit 31 / NC 215 (Champion Drive) / Buckeye Cove Road (SR 1582) interchange in Buncombe and Haywood Counties. The traffic forecast for this project was requested by Michael Haley of the NCDOT Planning and Programming / Corridor Studies Division in November 2018 as part of the 2018 Traffic Forecasting Limited Services Agreement (LSA) to be performed by HNTB North Carolina, P.C.

Currently, Segment C of STIP Project I-6054 is the only project segment not completely designated as an "Unfunded Future Year" project in the STIP. STIP Project I-6054C is currently programmed for planning and environmental study only in the 2018 – 2027 STIP, approved by the NCDOT Board of Transportation on August 3, 2017 and most recently revised on June 7, 2019. The Draft 2020 – 2029 STIP was released on January 10, 2019 and currently proposes programming for I-6054C right-of-way and utility work to begin in fiscal year 2029 with construction work currently unfunded.

The traffic forecast study area for I-6054 B & C includes a total of 4 existing I-40 interchanges, 1 proposed I-40 interchange, key intersections adjacent to the I-40 interchanges, and grade-separated roadways that traverse I-40. The following scenarios are included in this forecast:

- 2019 Base Year No-Build (BYNB)
- 2040 Future Year No-Build (FYNB) With I-4759
- 2040 Future Year Build (FYB) 6-Lane With I-4759
- 2040 FYB 8-Lane With I-4759
- 2040 FYB 6-Lane Excluding I-4759
- 2040 FYB 8-Lane Excluding I-4759

Five 2040 Future Year scenarios were completed in this traffic forecast – three with and two without STIP Project I-4759 assumed complete, which will be a new I-40 interchange at Liberty Road (SR 1228), approximately two miles west of Exit 44 / US 19 / US 23 (Smoky Park Highway). The multiple scenarios with and without I-4759 allow for an analysis of the traffic volume impacts that a potential Liberty Road interchange at I-40 would have on the forecast study. It is assumed in all 2040 FYB scenarios that include I-4759, that Liberty Road (SR 1228) will remain a two-lane undivided facility north of I-40 and will be widened to a four-lane facility (including median) south of I-40. Liberty Road (SR 1228) will be re-aligned near existing location just south of the I-40 interchange and will then be entirely on new location until intersecting with US 19 / US 23 (Smoky Park Highway) at the NC 151 (Pisgah Highway) intersection.

Dogwood Road (SR 1220) will be re-aligned so that it will not directly intersect US 19 / US 23 (Smokey Park Highway) but will instead intersect the new Liberty Road facility 0.15 miles north of US 19 / US 23 (Smokey Park Highway). STIP Project I-4759 design information provided is per the I-4759 Finding of No Significant Impact (FONSI) Document completed on January 16, 2018. This forecast is the first forecast to assume that Liberty Road (SR 1228) will be widened to a four-lane divided facility south of I-40.

Previously completed project-level traffic forecasts that are nearby the I-6045 B & C traffic forecast study area and considered relevant include the nearby forecasts for I-4700 / I-4400 (I-26 Widening), U-6048 (Roadway Upgrades), I-2513 (I-26 Connector and Widening), and I-4759 (New I-40 interchange at Liberty Road (SR 1228)). Additionally, the traffic forecast for Strategic Transportation Investments (STI) Project H172245 / STIP Project I-6054A is currently being developed by HNTB in coordination with the development of this traffic forecast.

Travel Demand Model

The 2010 FBRMPO Travel Demand Model, (v1.2, adopted on September 27, 2018) was used in the development of this traffic forecast. The model has a Base Year of 2010 and a Future Year of 2040. Additionally, the North Carolina Statewide Model (NCSTM) Generation 2.3, delivered on February 14, 2018, was used in the development of this traffic forecast. The model has a 2011 Base Year and a 2040 Future Year.

Interpolation

To determine any intermediate years, straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2040.

Certain assumptions were made in the development of the forecast and include the following items.

Fiscal Constraint

Within a Metropolitan Planning Organization (MPO), future year traffic forecasts assume construction of projects listed within an MPO's Metropolitan Transportation Plan (MTP). This traffic forecast is consistent with the current French Broad River Metropolitan Planning Organization (FBRMPO) 2040 MTP, which was adopted on September 24, 2015 and most recently amended on May 24, 2018.

Development Activity

There are multiple potential developments in the study area, but none are anticipated to substantially affect traffic volumes in the study area. All recent and planned developments are assumed to be included in the official Base Year and Future Year FBRMPO TDM socioeconomic data sets.

Forecast Methodology

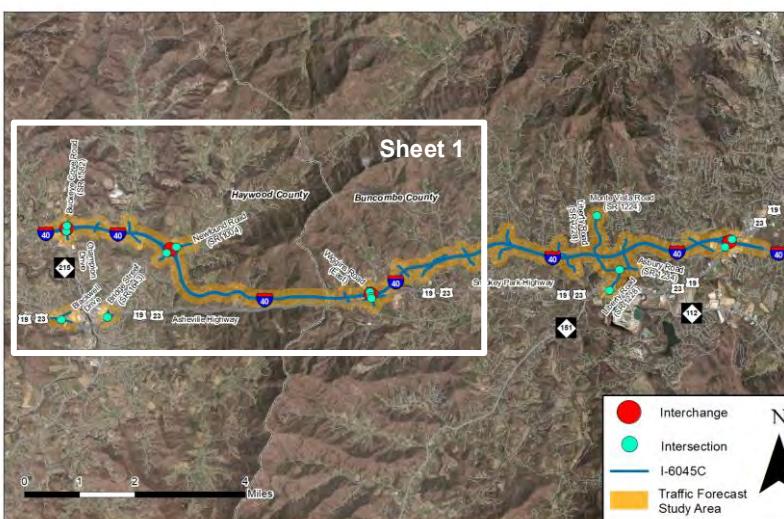
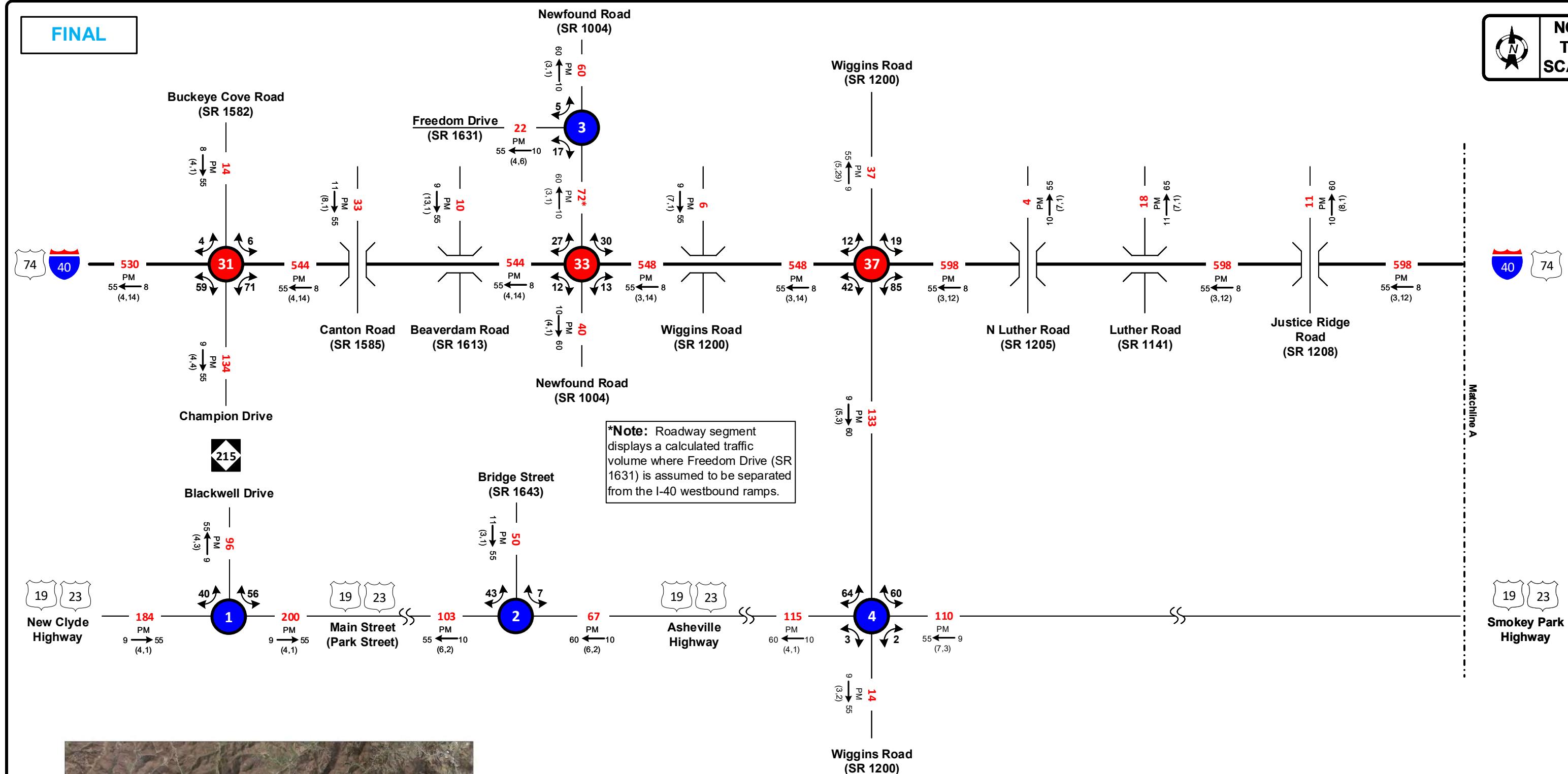
The 2019 BYNB traffic estimate volumes and design factors were developed by considering recent historic AADT, the projection of historic AADT to 2019, project specific count data, and applying engineering judgement. The 2040 FYNB With I-4759 traffic forecast volumes were developed using historic AADT growth rates, extrapolations of historical AADT volumes, and growth percentages calculated from the FBRMPO TDM. The 2040 FYB scenarios were developed using diversion rates derived from FYB model runs relative to FYNB With I-4759 model run and engineering judgement.

If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, please request updated projections. If you have any questions or I can be of further assistance, please do not hesitate to call me at (919) 424-0449 or e-mail me at mquesenberry@hntb.com.

cc:

Keith Dixon, NCDOT Transportation Planning Division
James Upchurch, NCDOT Transportation Planning Division
Hannah K. Cook, NCDOT Division 13
Steve Williams, NCDOT Division 14
Jim Dunlop, PE, NCDOT Congestion Management Section
Brenda Moore, PE, CPM, NCDOT Roadway Design Unit
Clark Morrison, PhD, PE, NCDOT Pavement Management Unit
Tristan Winkler, FBRMPO
NCDOT Traffic Forecasting GIS Support

FINAL



2019 ANNUAL AVERAGE DAILY TRAFFIC

BASE YEAR NO-BUILD

With PM Peak Hour Design Factors

Sheet 1 of 2

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

= Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K → PM
(d,t)

K Design Hour Factor (%)

PM PM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

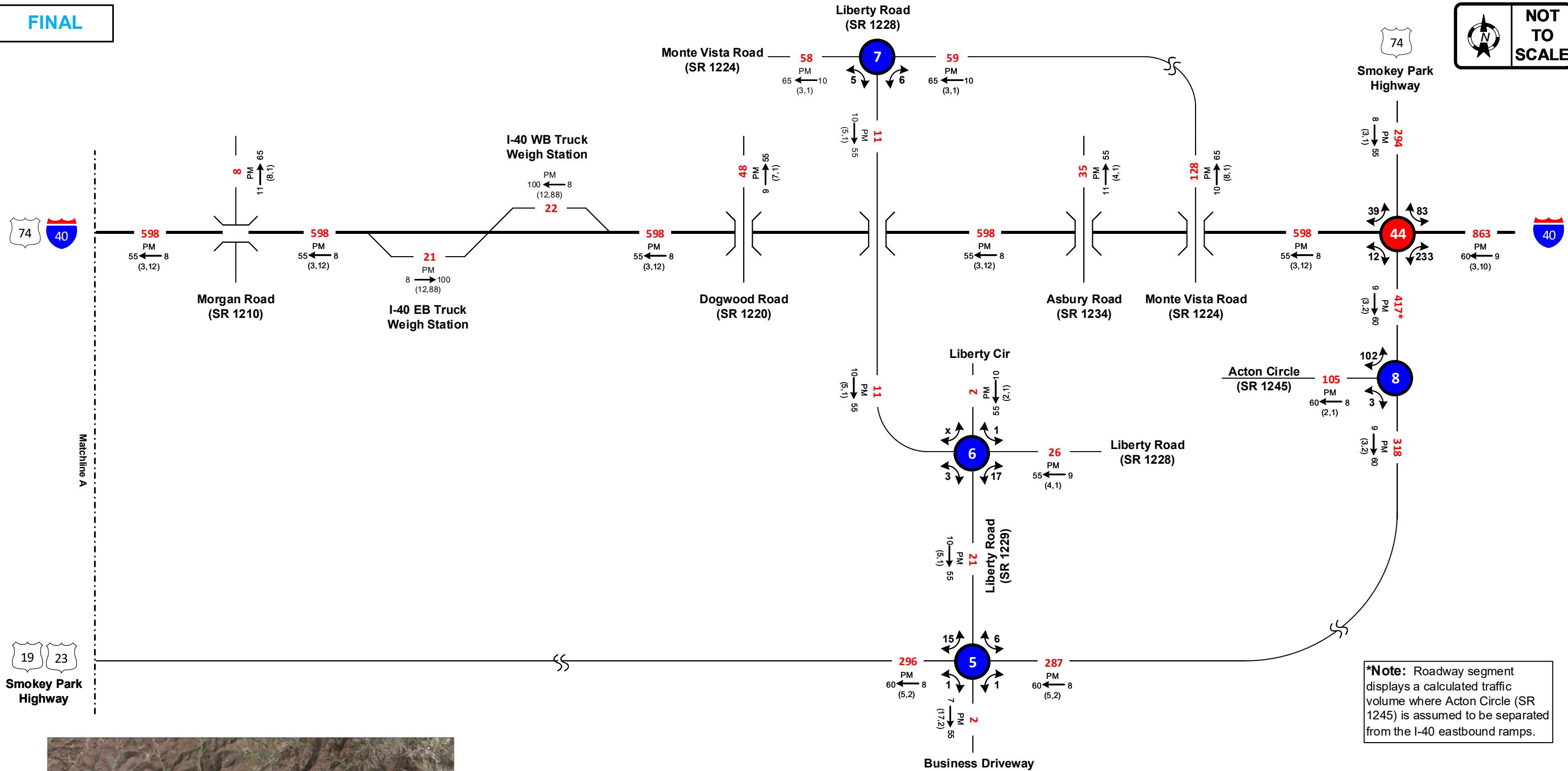
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

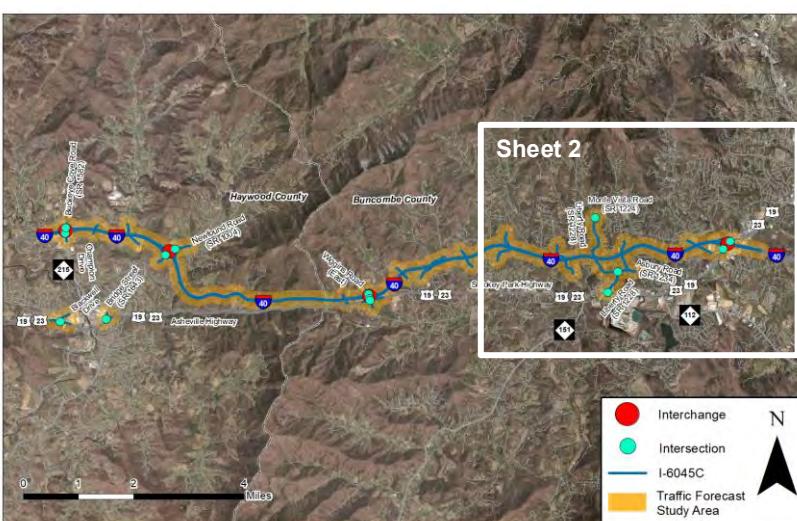
LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



*Note: Roadway segment displays a calculated traffic volume where Acton Circle (SR 1245) is assumed to be separated from the I-40 eastbound ramps.



2019 ANNUAL AVERAGE DAILY TRAFFIC

BASE YEAR NO-BUILD

With PM Peak Hour Design Factors Sheet 2 of 2

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K ————— PM → D
(d,t)

K Design Hour Factor (%)

PM PM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

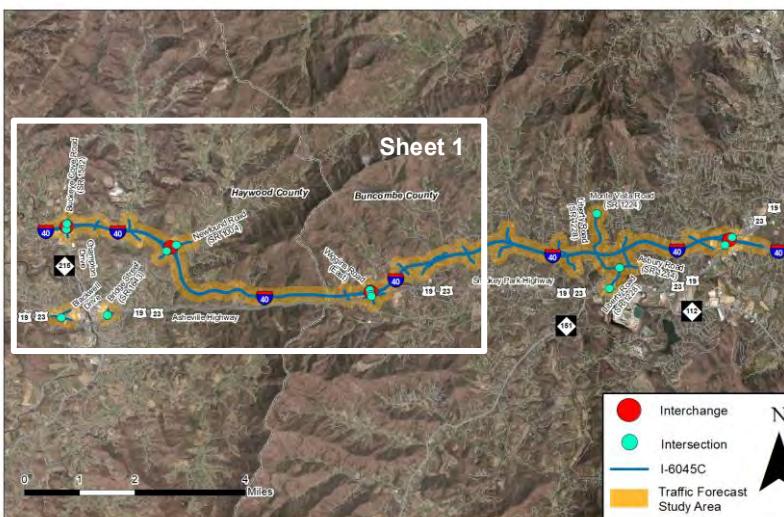
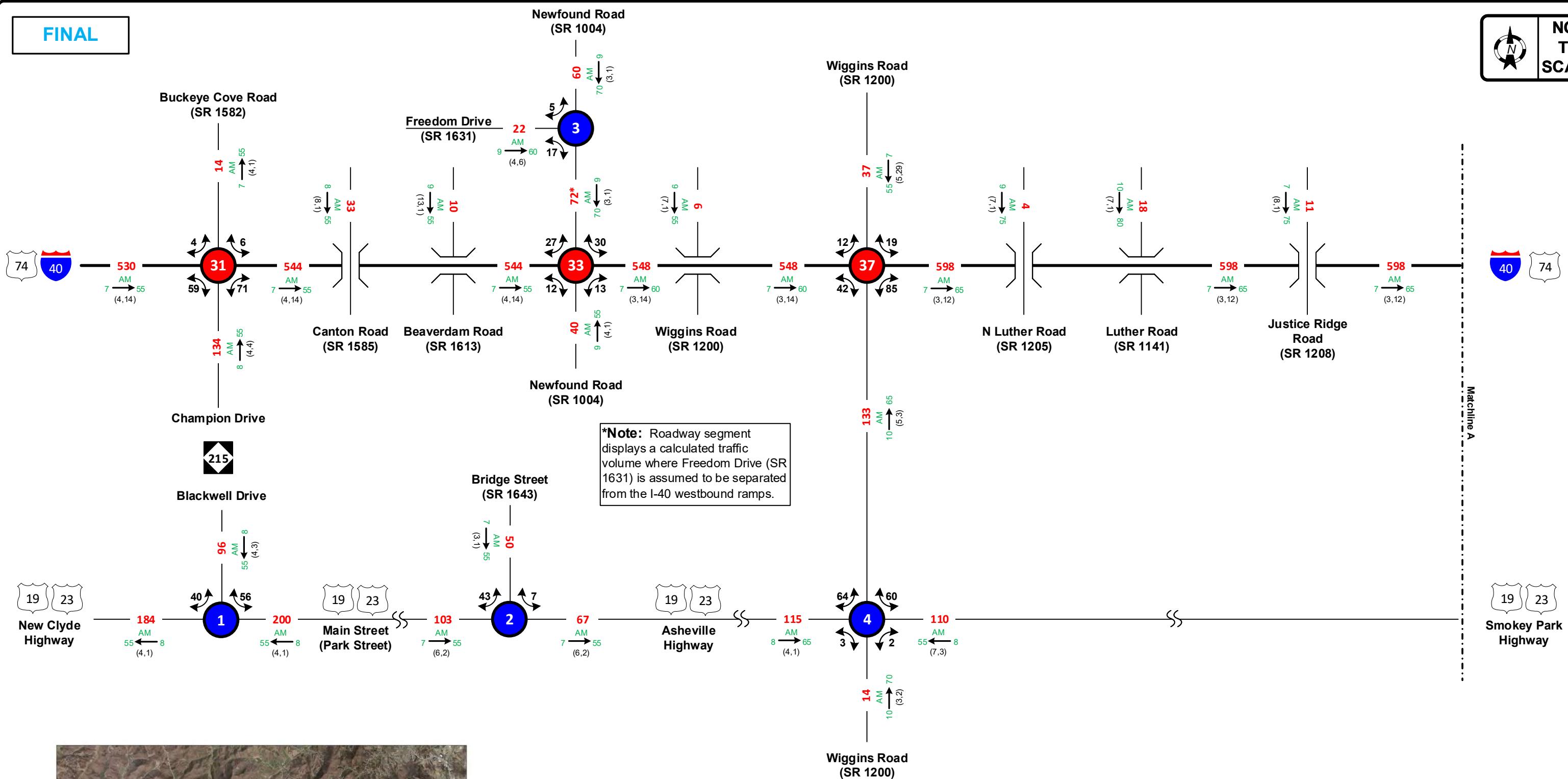
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

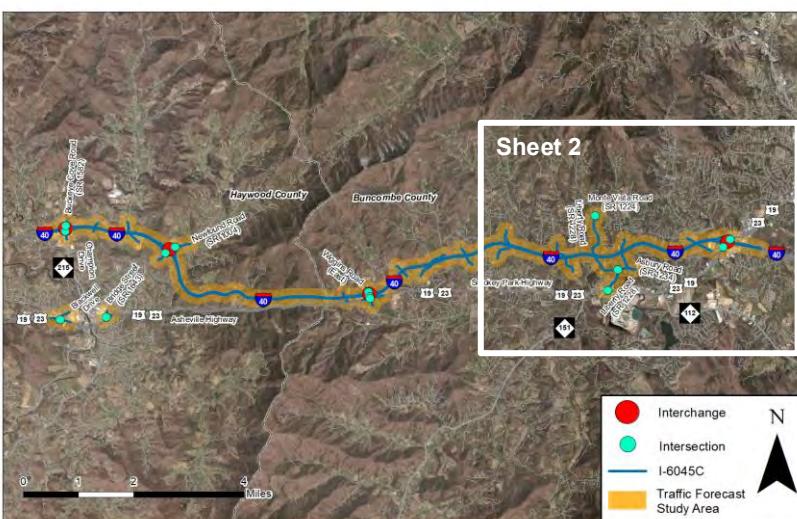
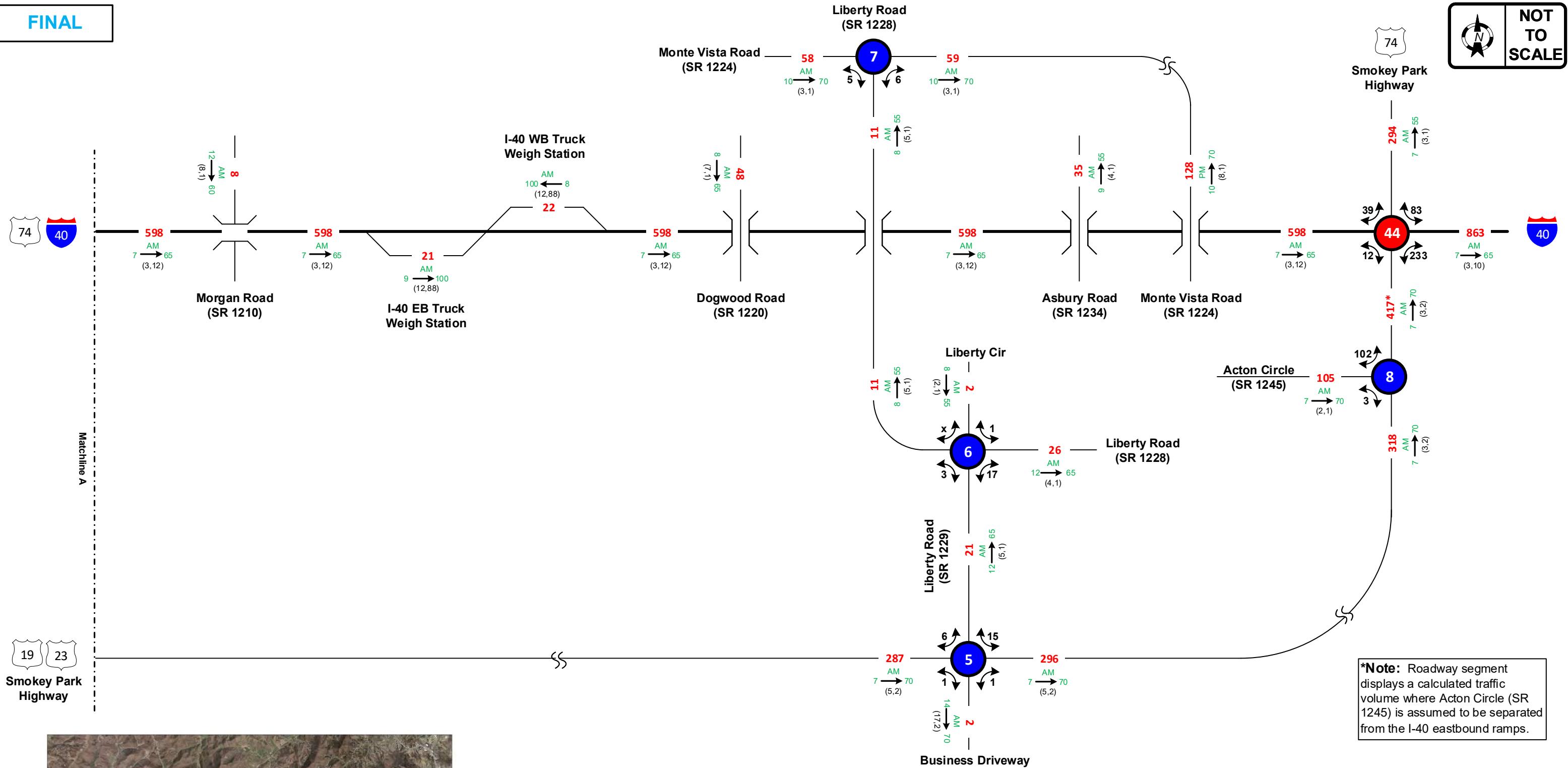
FINAL



2019 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND		STIP: I-6054 B & C	WBS: 34263.1.1
= Study Area Intersection ID = Study Area Interchange (ID # Corresponds to Exit #) = Bridge Overpass		COUNTY: Buncombe/Haywood	DIVISION: 13/14
= No. of Vehicles Per Day (VPD) in 100s 1- Less than 50 VPD X Movement Prohibited		PREPARED BY: HNTB North Carolina, PC	PROJECT: I-40 Widening to 6- or 8-Lane Interstate
Design Hour Factor (%) AM PM Peak Period D Peak Hour Directional Split (%) Indicates Direction of D (d,t) Duals, TT-STs (%)		LOCATION: NC 215 (Exit 31) to Monte Vista Road	DATE: June 2019

FINAL



2019 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} { = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K → AM (d,t)

K Design Hour Factor (%)

AM AM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

BASE YEAR NO-BUILD

With AM Peak Hour Design Factors Sheet 2 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

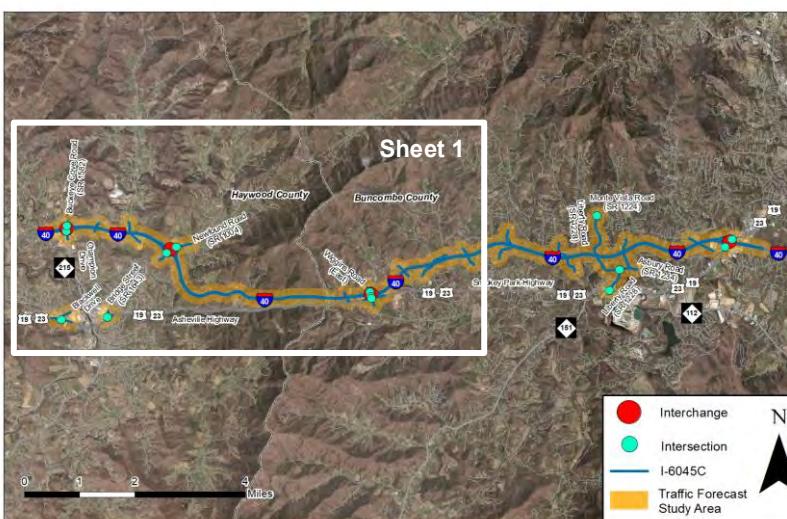
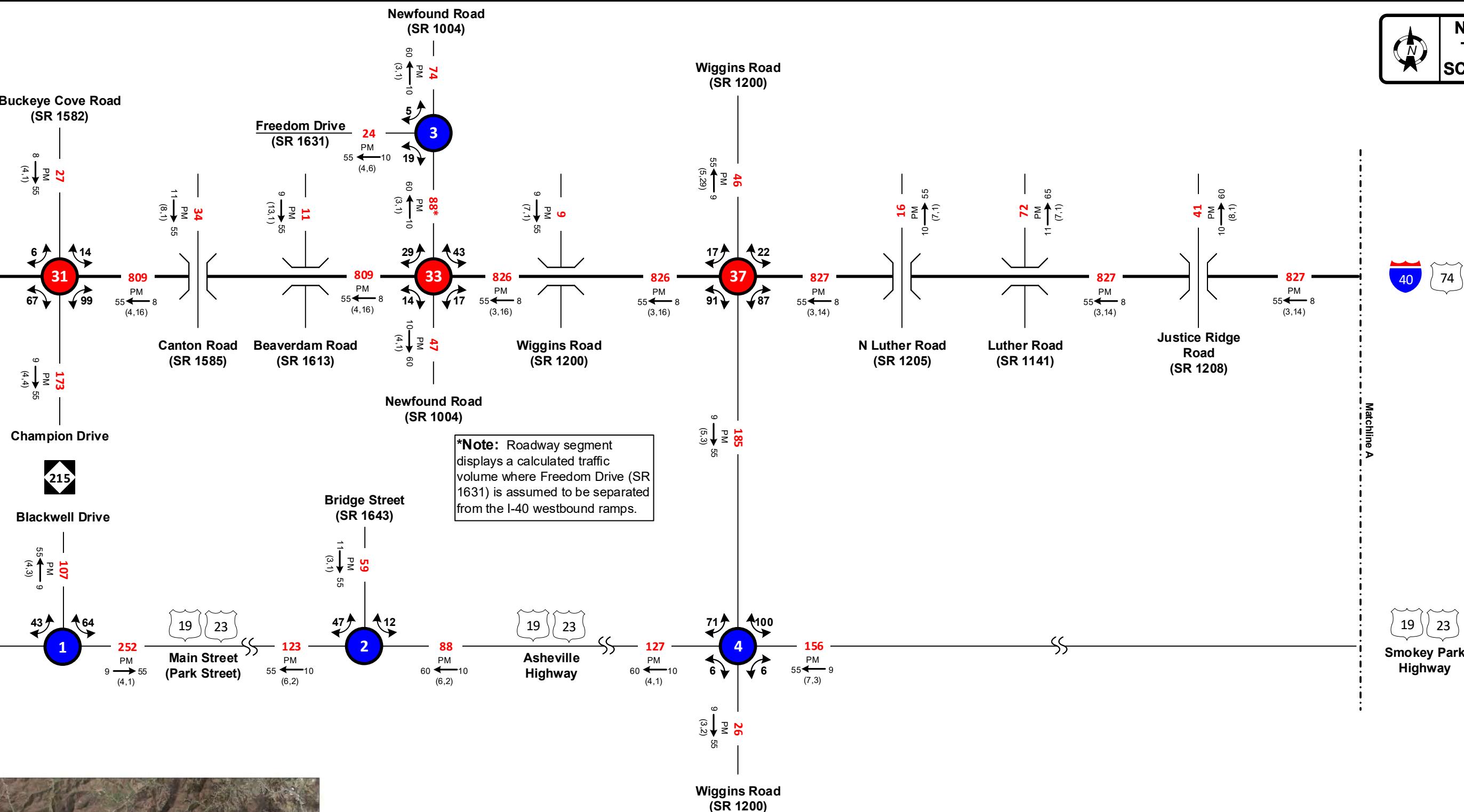
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

- # = Study Area Intersection ID
- # = Study Area Interchange (ID # Corresponds to Exit #)
- } { = Bridge Overpass

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- X Movement Prohibited

K → PM
(d,t)

- K Design Hour Factor (%)
- PM PM Peak Period
- D Peak Hour Directional Split (%)
- Indicates Direction of D
- (d,t) Duals, TT-STs (%)

FUTURE YEAR NO-BUILD WITH I-4759 With PM Peak Hour Design Factors

Sheet 1 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

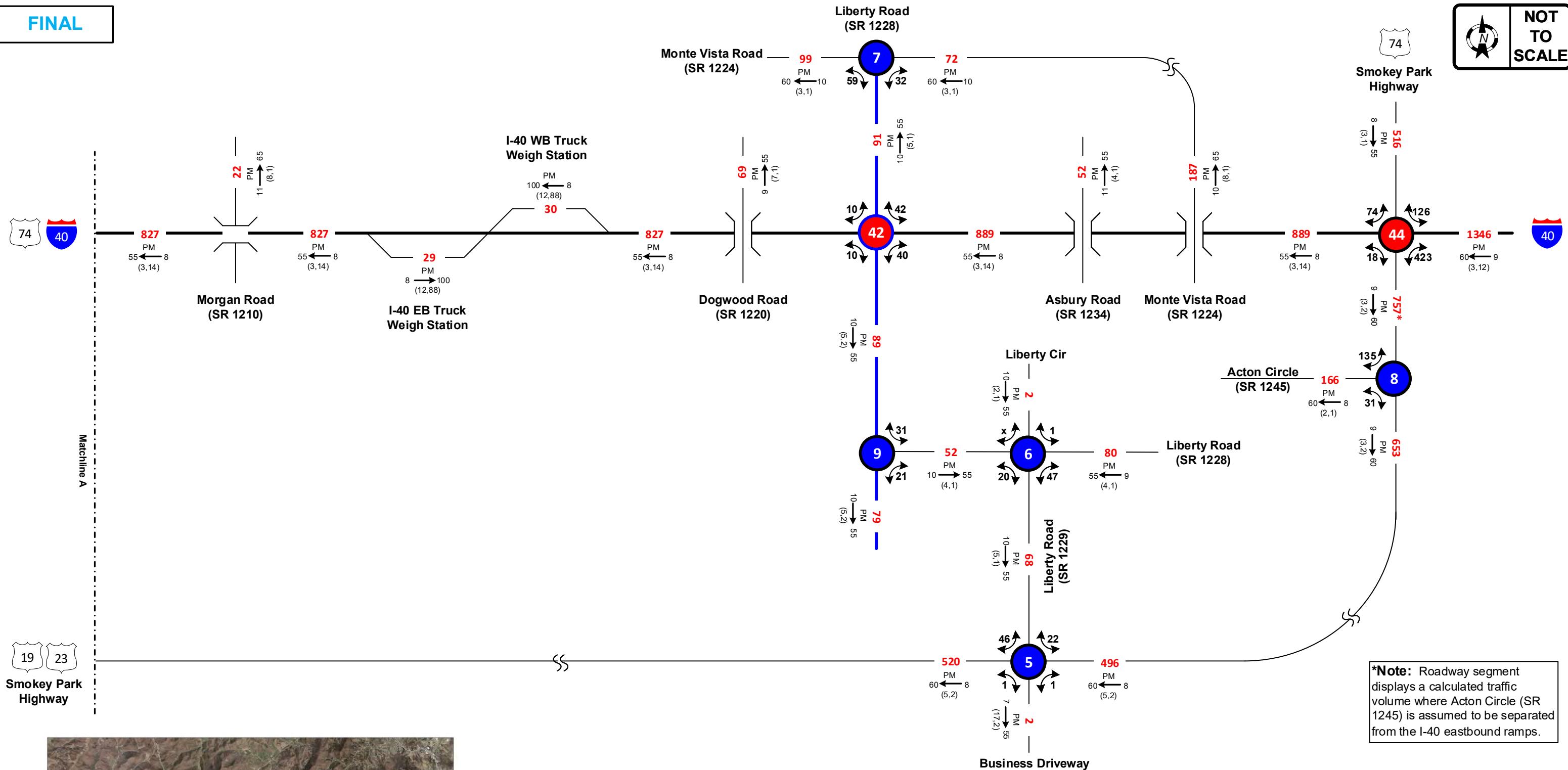
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

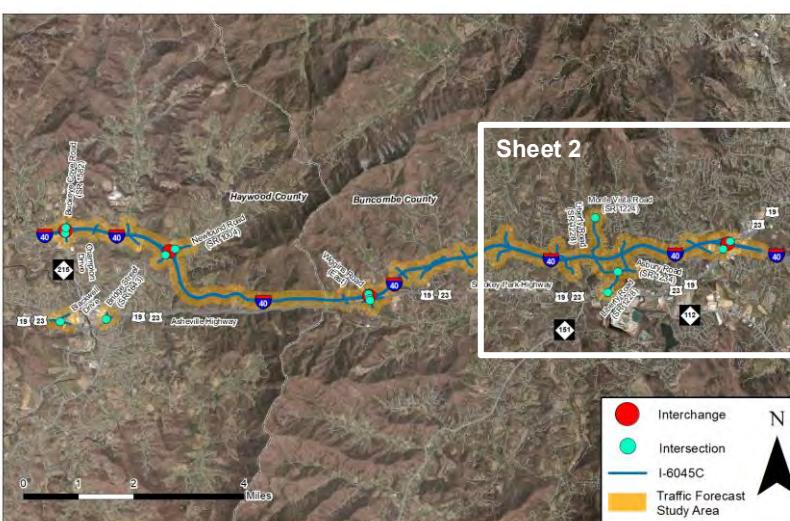
LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



*Note: Roadway segment displays a calculated traffic volume where Acton Circle (SR 1245) is assumed to be separated from the I-40 eastbound ramps.



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} { = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K ————— PM → D
(d,t)

K Design Hour Factor (%)

PM PM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

FUTURE YEAR NO-BUILD WITH I-4759 With PM Peak Hour Design Factors

Sheet 2 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

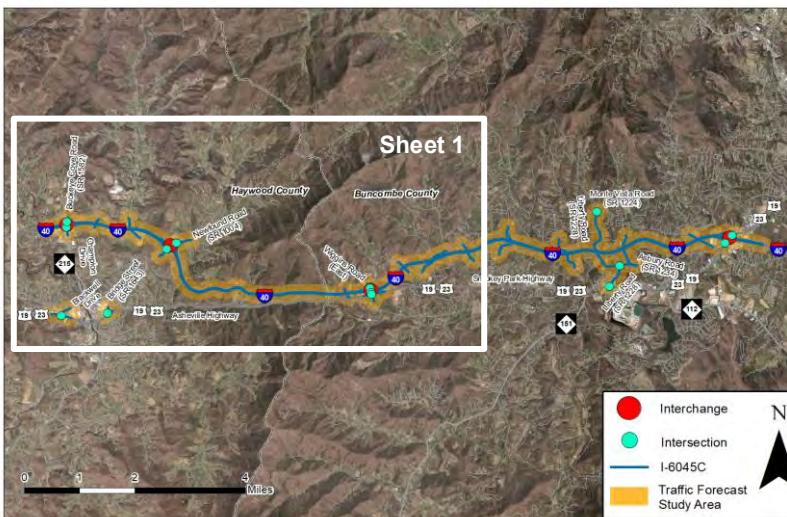
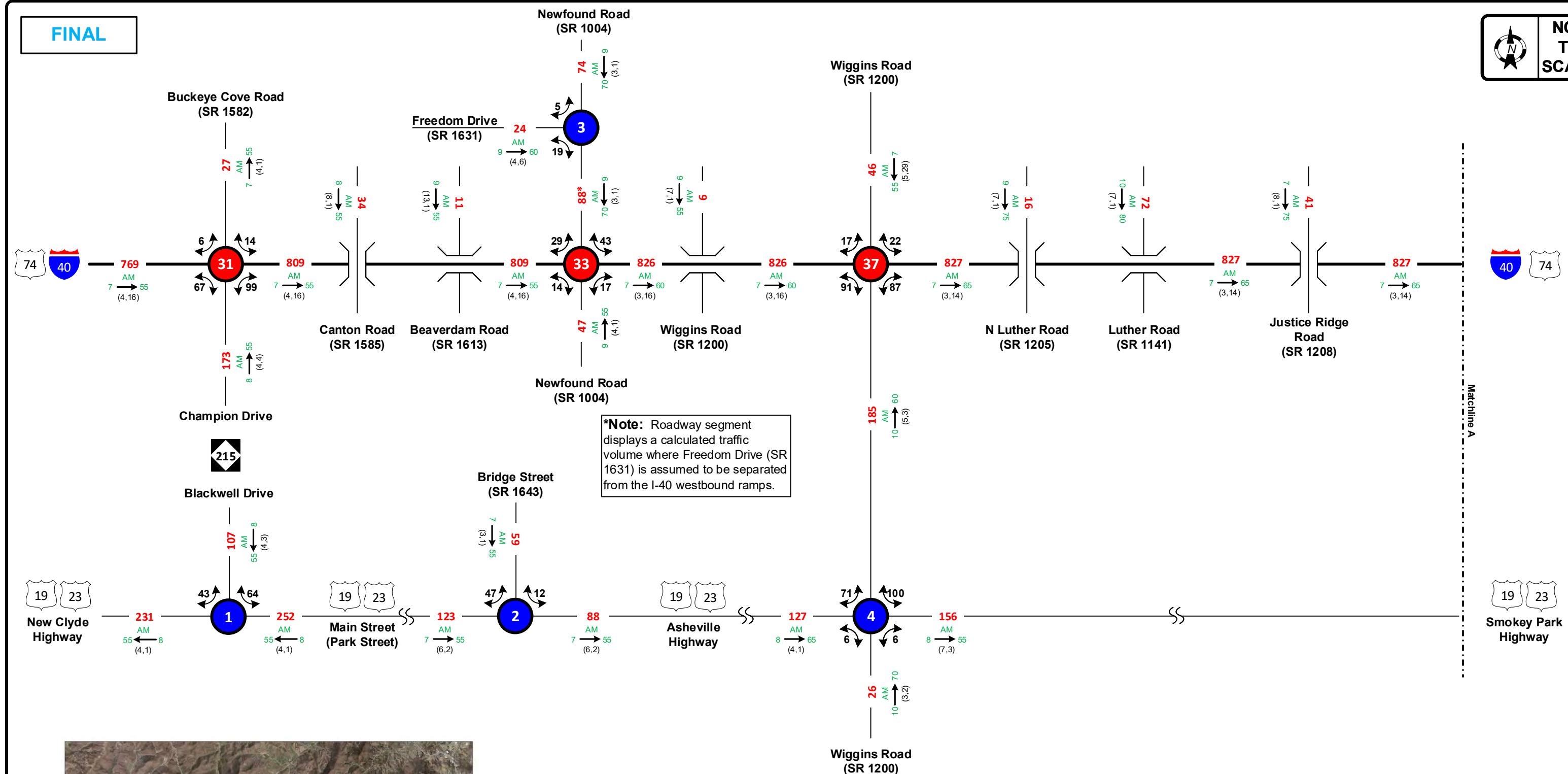
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

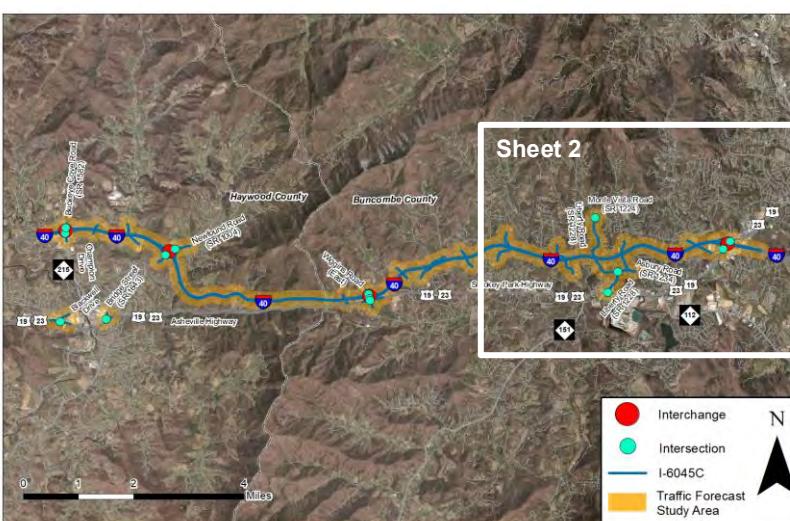
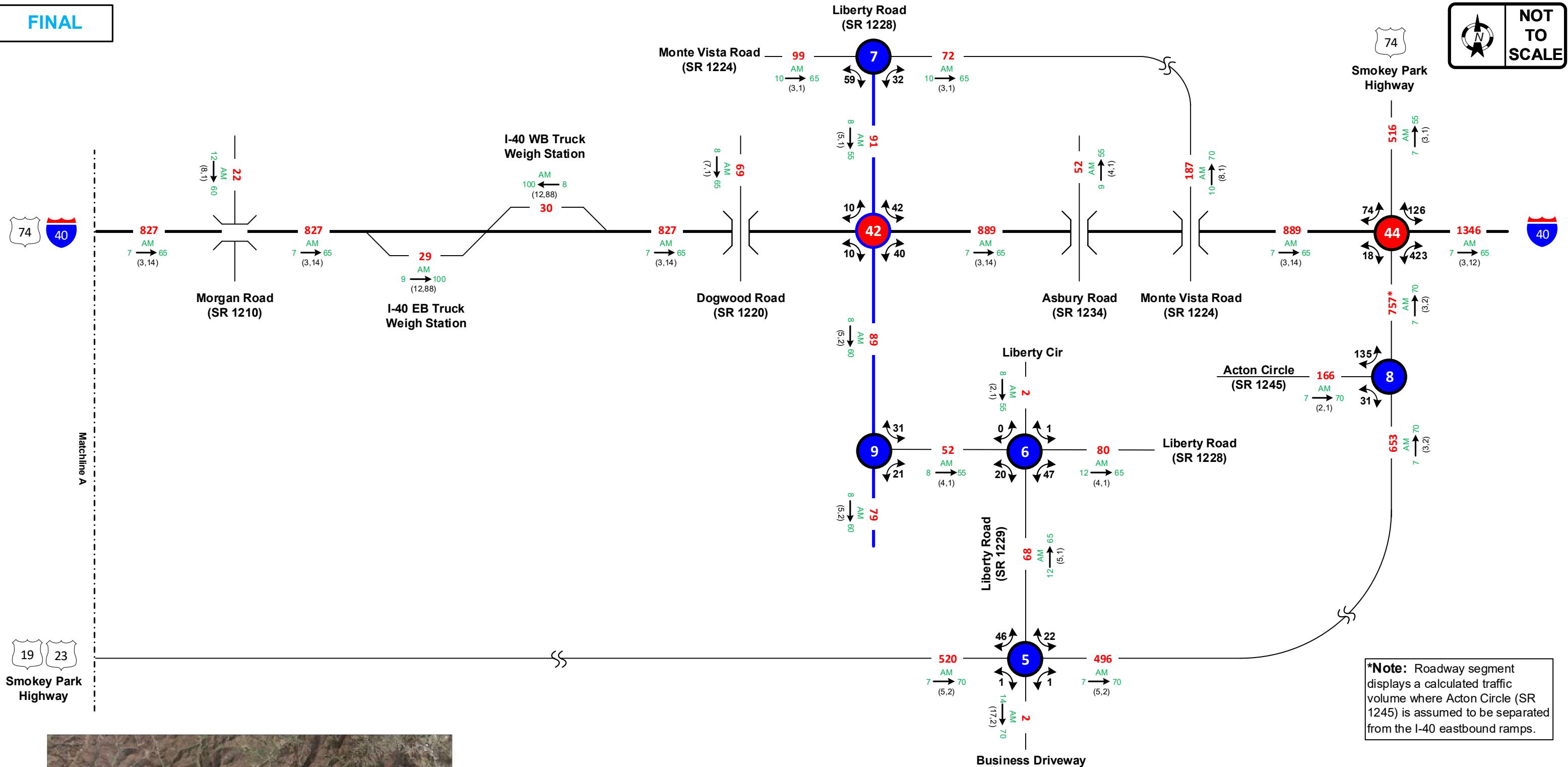
LEGEND

- = Study Area Intersection ID
- = Study Area Interchange (ID # Corresponds to Exit #)
- = Bridge Overpass

- ### No. of Vehicles Per Day (VPD) in 1000s
- 1- Less than 50 VPD
- X Movement Prohibited

STIP: I-6054 B & C	WBS: 34263.1.1
COUNTY: Buncombe/Haywood	DIVISION: 13/14
PREPARED BY: HNTB North Carolina, PC	
PROJECT: I-40 Widening to 6- or 8-Lane Interstate	
LOCATION: NC 215 (Exit 31) to Monte Vista Road	
DATE: June 2019	

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

= Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K → AM (d,t)

K Design Hour Factor (%)

AM AM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

FUTURE YEAR NO-BUILD WITH I-4759 With AM Peak Hour Design Factors

Sheet 2 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

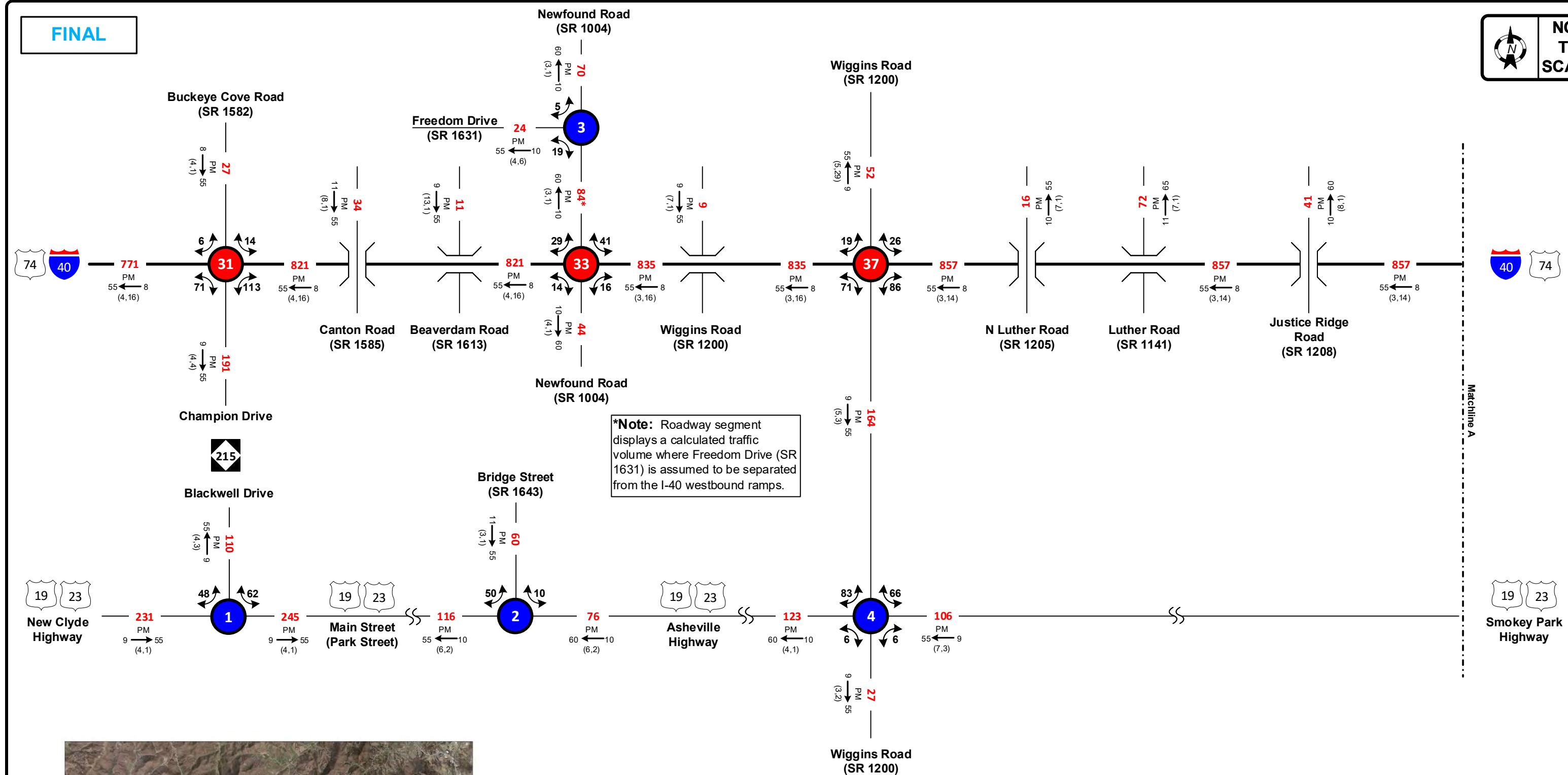
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040

ANNUAL AVERAGE
DAILY TRAFFICFUTURE YEAR BUILD 6-LANE WITH I-4759
With PM Peak Hour Design Factors

Sheet 1 of 2

LEGEND

- # = Study Area Intersection ID
- # = Study Area Interchange (ID # Corresponds to Exit #)
- } { = Bridge Overpass

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- X Movement Prohibited

K ————— PM
(d,t)

- K Design Hour Factor (%)
- PM PM Peak Period
- D Peak Hour Directional Split (%)
- Indicates Direction of D
- (d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

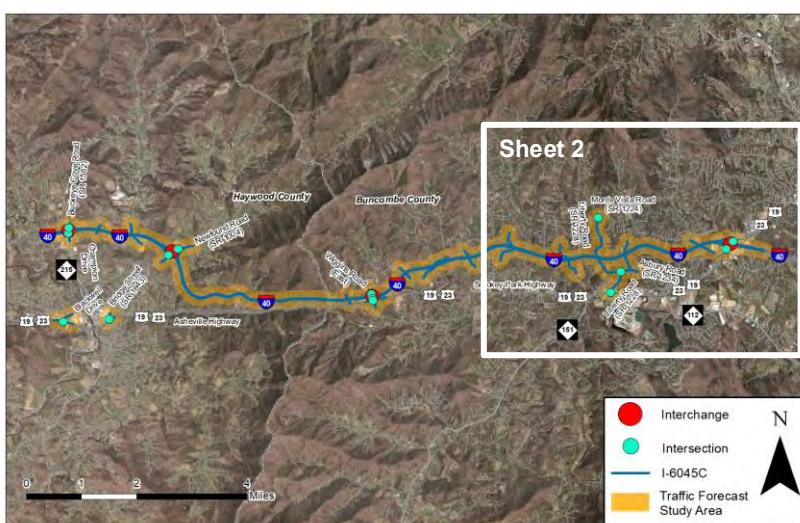
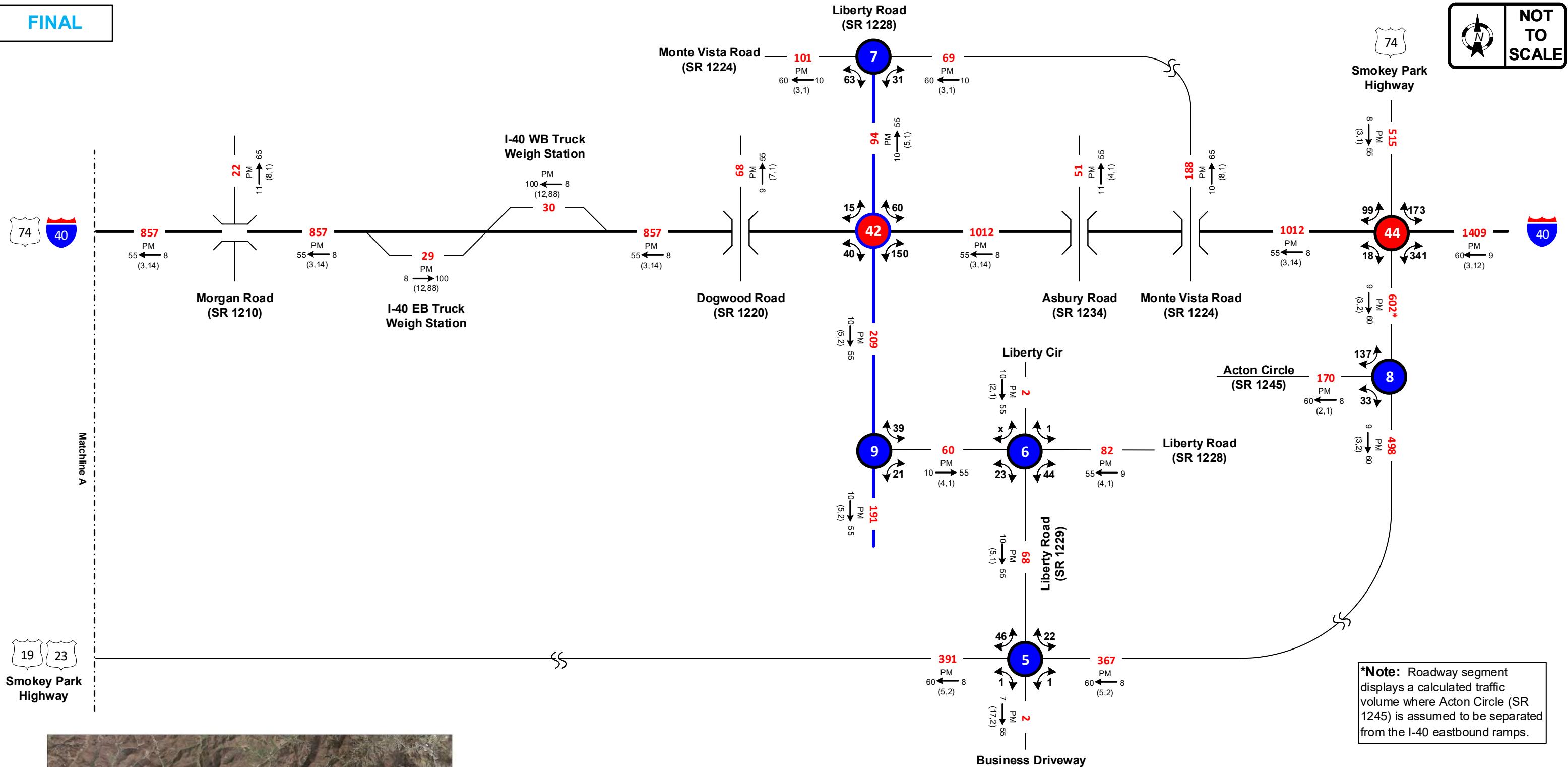
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} { = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

FUTURE YEAR BUILD 6-LANE WITH I-4759 With PM Peak Hour Design Factors

Sheet 2 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

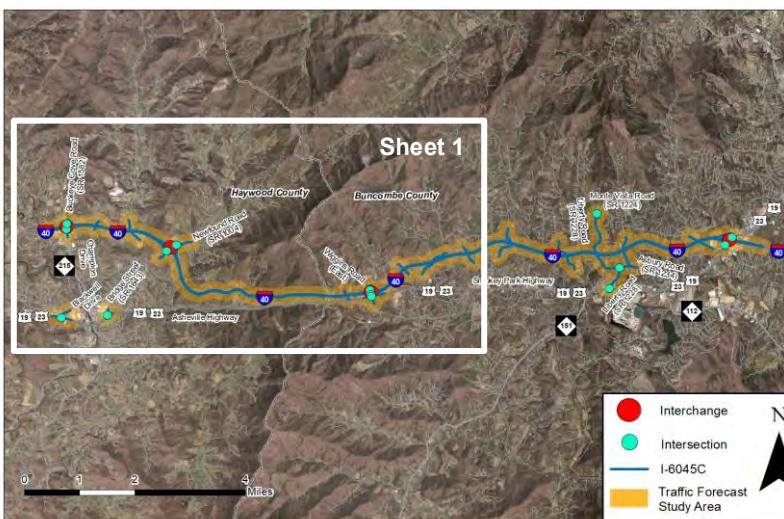
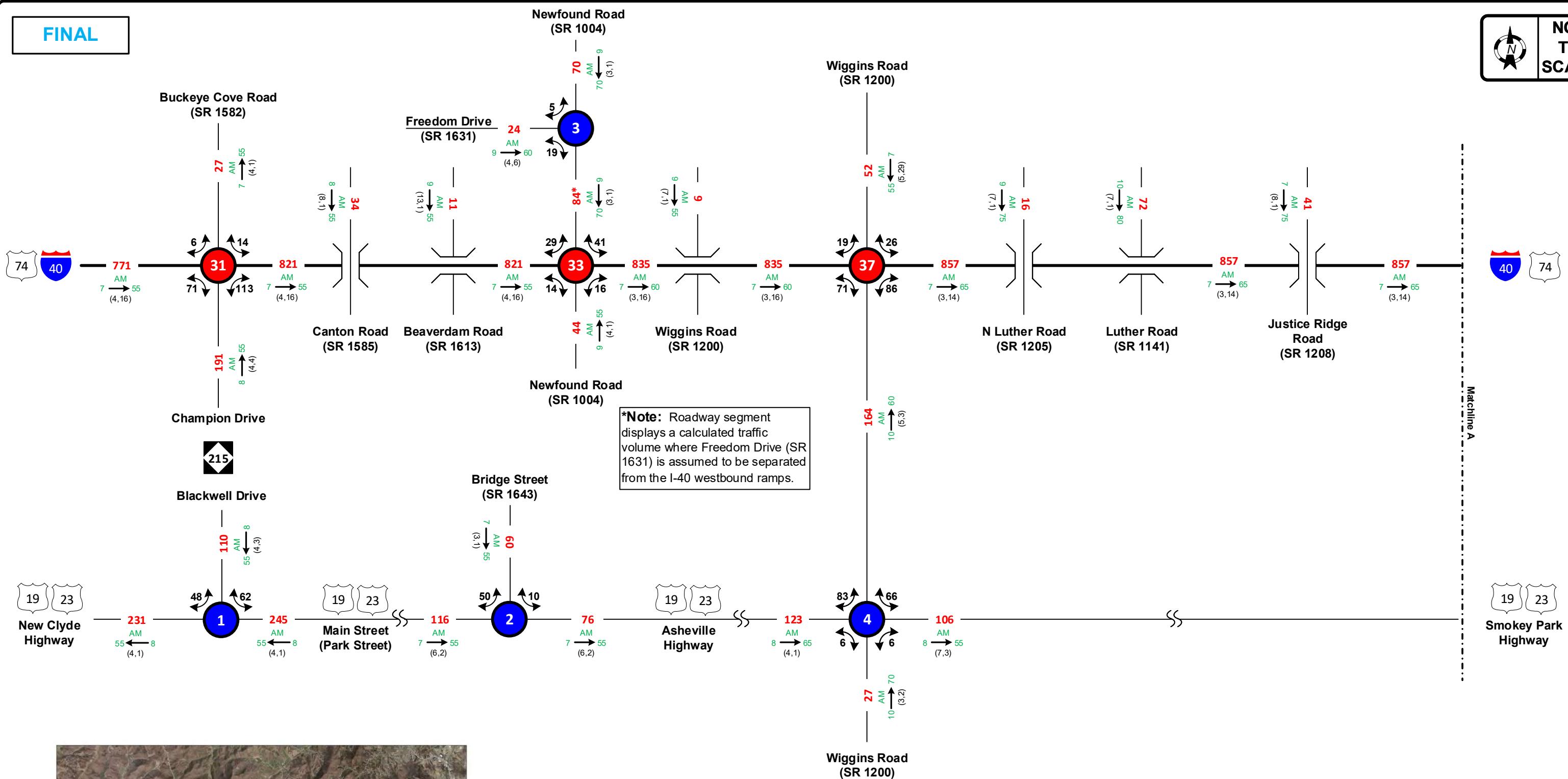
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

FUTURE YEAR BUILD 6-LANE WITH I-4759 With AM Peak Hour Design Factors

LEGEND

- # = Study Area Intersection ID
- # = Study Area Interchange (ID # Corresponds to Exit #)
- } { = Bridge Overpass

- ### No. of Vehicles Per Day (VPD) in 1000s
- 1- Less than 50 VPD
- X Movement Prohibited

- K Design Hour Factor (%)
- AM AM Peak Period
- D Peak Hour Directional Split (%)
- Indicates Direction of D
- (d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

PREPARED BY: HNTB North Carolina, PC

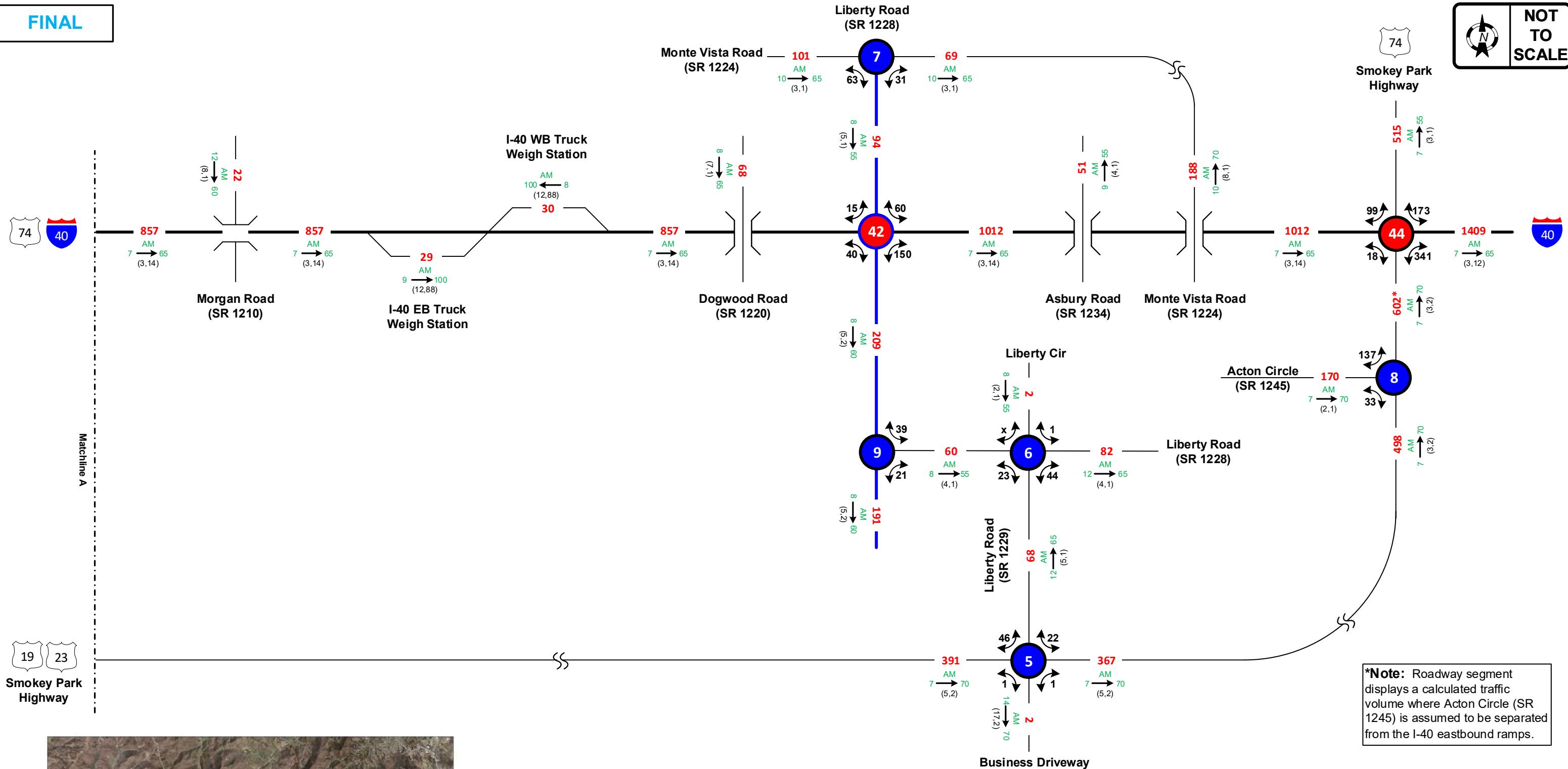
PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

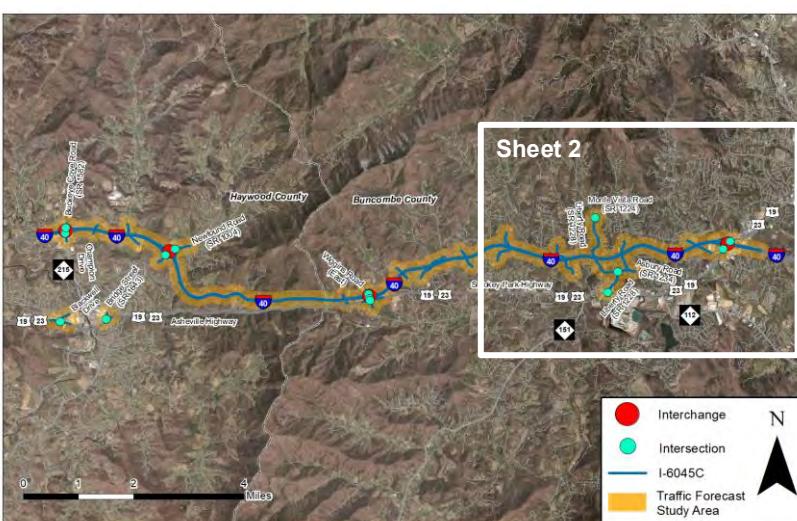
DATE: June 2019

FINAL



NOT
TO
SCALE


*Note: Roadway segment displays a calculated traffic volume where Acton Circle (SR 1245) is assumed to be separated from the I-40 eastbound ramps.



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} { = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K — AM (d,t) → D

K Design Hour Factor (%)

AM AM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

FUTURE YEAR BUILD 6-LANE WITH I-4759

With AM Peak Hour Design Factors

Sheet 2 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

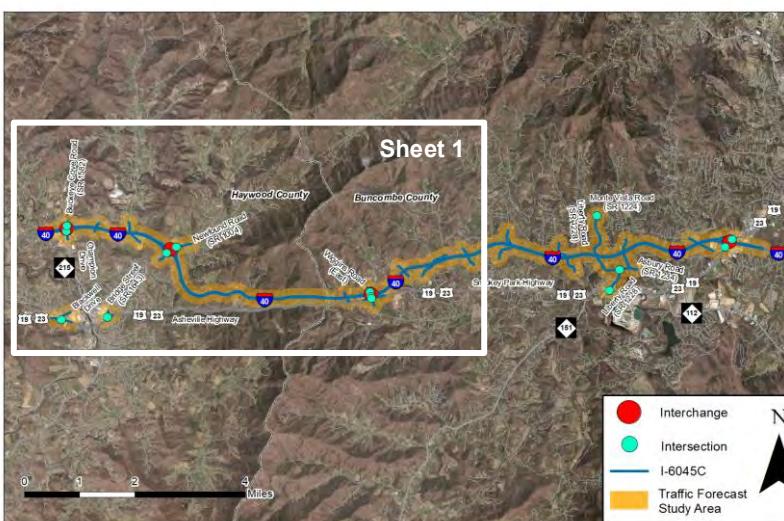
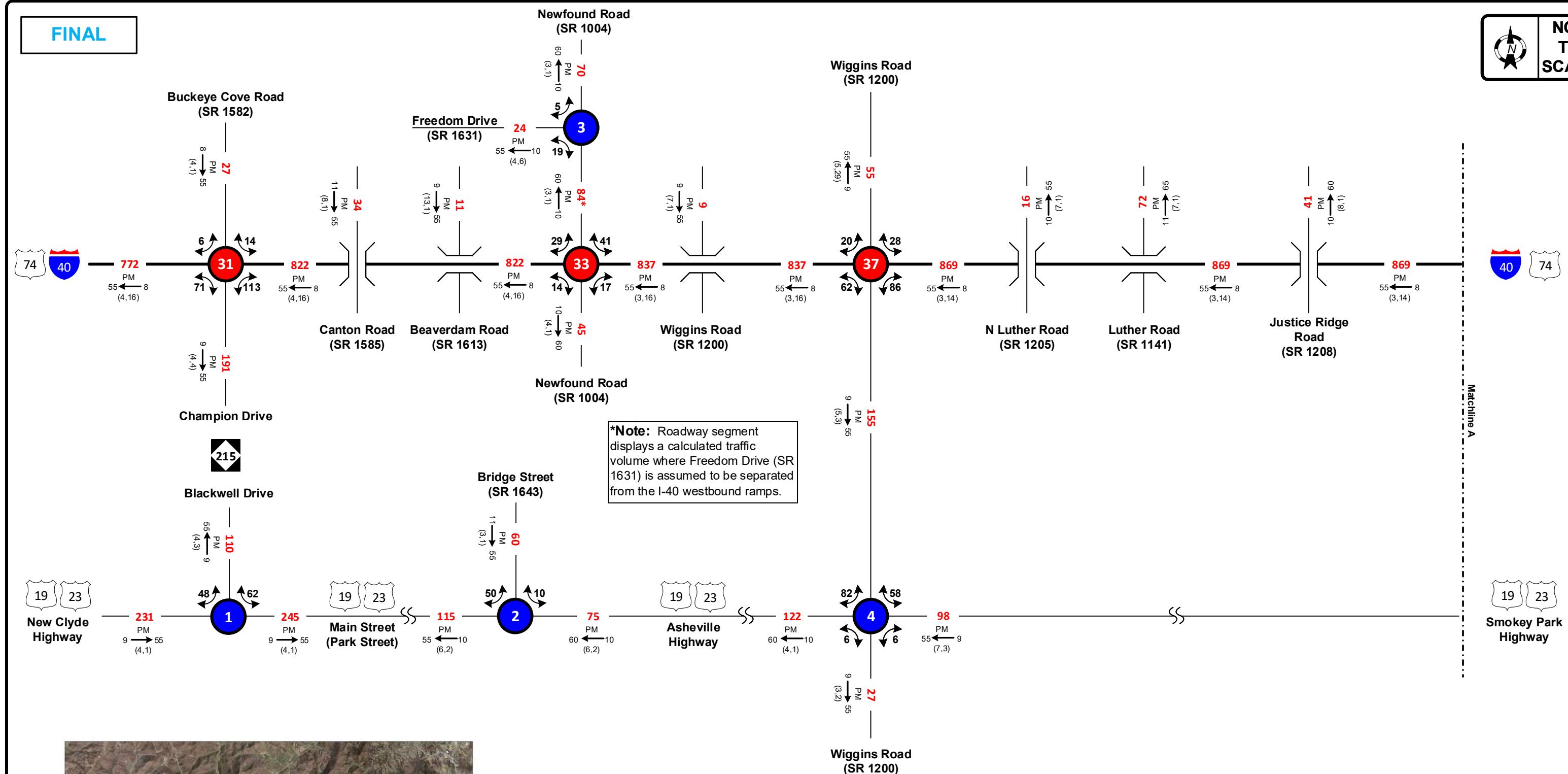
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

FUTURE YEAR BUILD 8-LANE WITH I-4759 With PM Peak Hour Design Factors

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} { = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K → PM (d,t)
K Design Hour Factor (%)
PM PM Peak Period
D Peak Hour Directional Split (%)
→ Indicates Direction of D
(d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

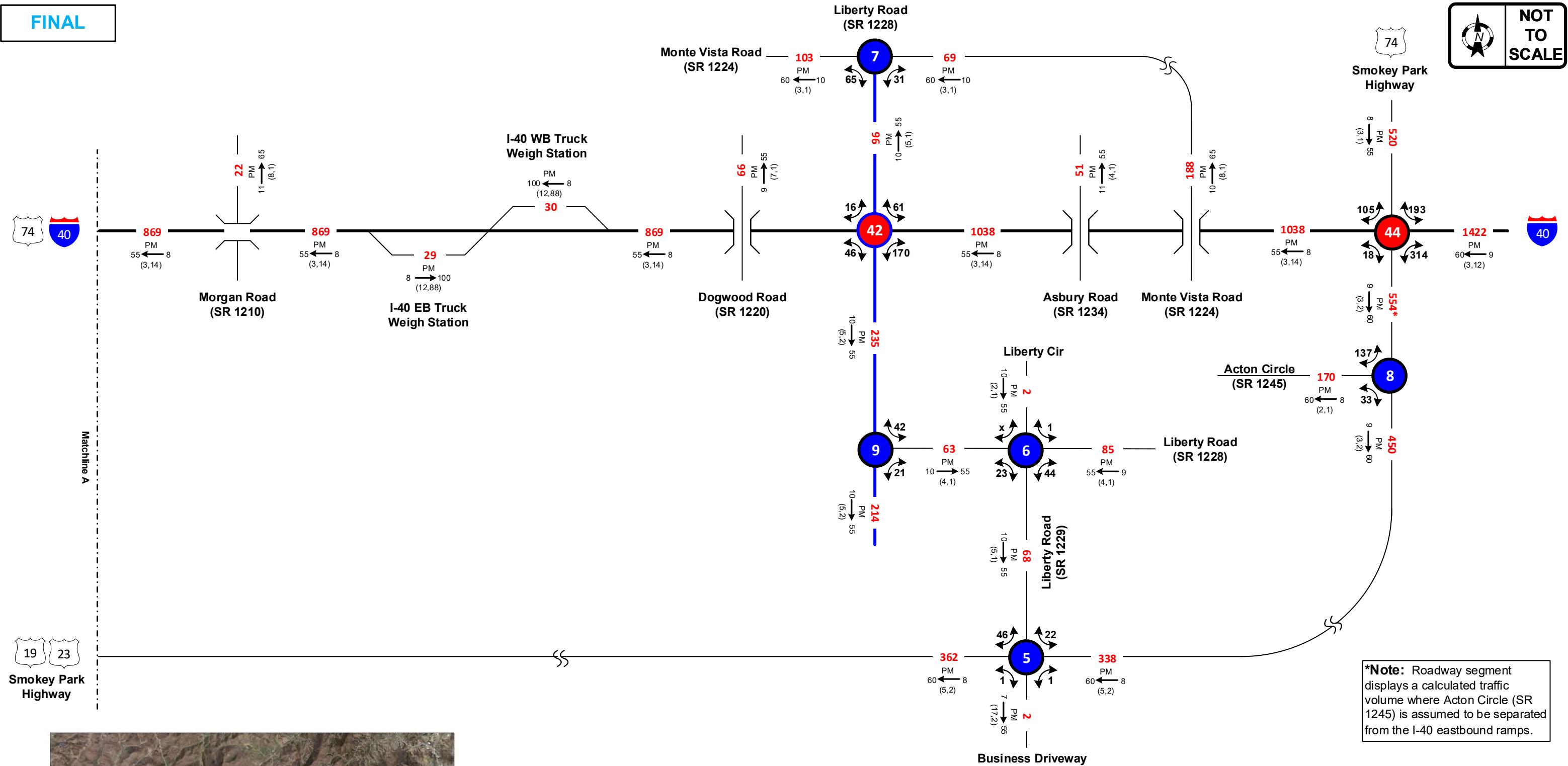
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} { = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

FUTURE YEAR BUILD 8-LANE WITH I-4759 With PM Peak Hour Design Factors

Sheet 2 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

K → PM
(d,t)

K Design Hour Factor (%)

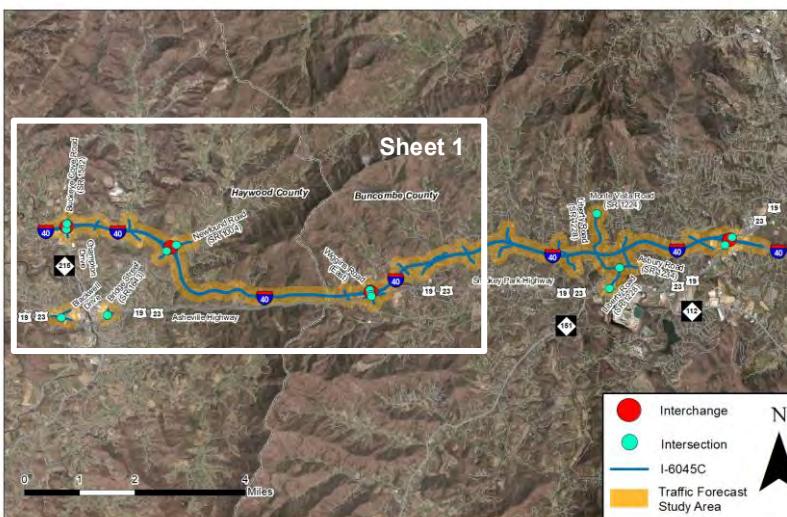
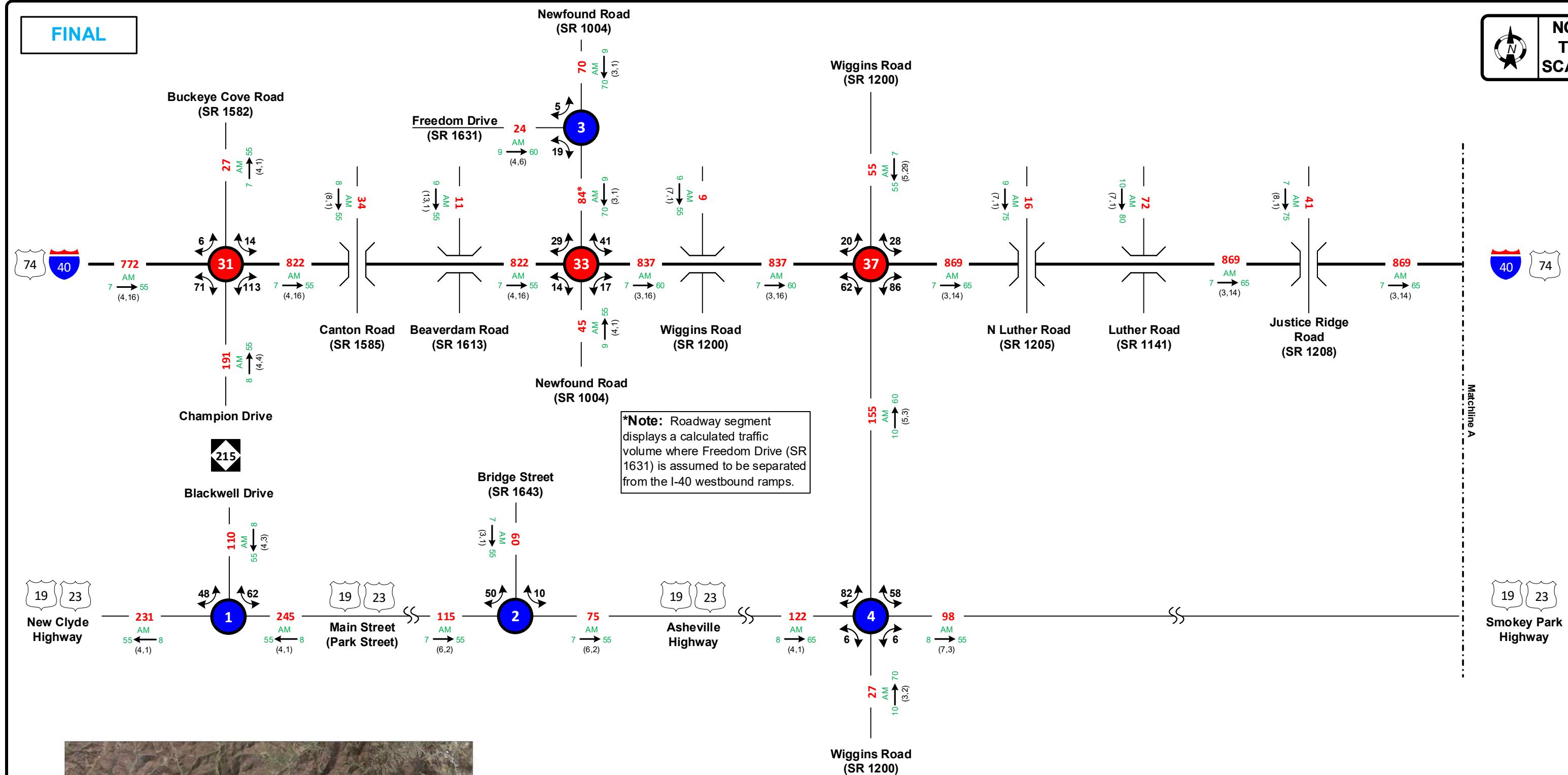
PM PM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

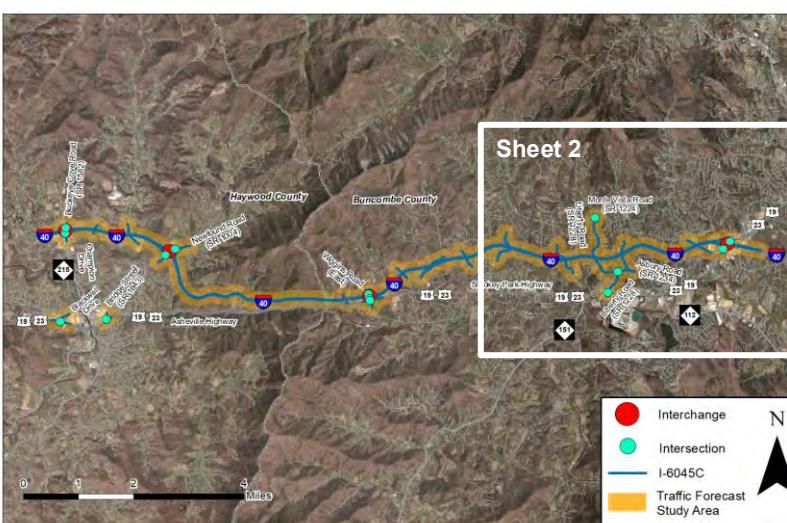
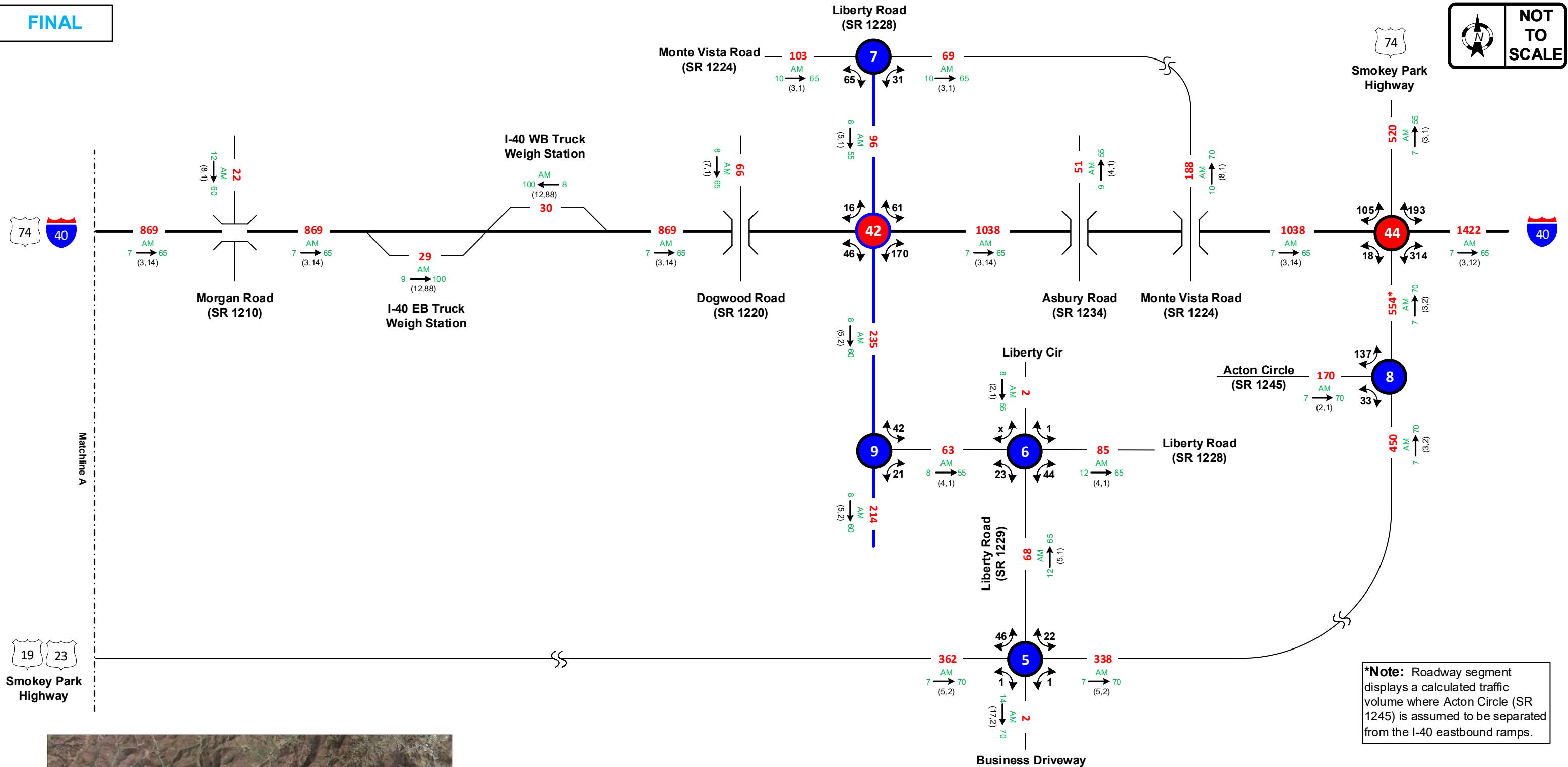
FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND		STIP: I-6054 B & C	WBS: 34263.1.1
	= Study Area Intersection ID	COUNTY: Buncombe/Haywood	DIVISION: 13/14
	= Study Area Interchange (ID # Corresponds to Exit #)	PREPARED BY: HNTB North Carolina, PC	
	= Bridge Overpass	PROJECT: I-40 Widening to 6- or 8-Lane Interstate	
###	No. of Vehicles Per Day (VPD) in 100s	LOCATION: NC 215 (Exit 31) to Monte Vista Road	
1-	Less than 50 VPD		
X	Movement Prohibited		
K	Design Hour Factor (%)		
AM	AM Peak Period		
D	Peak Hour Directional Split (%)		
→	Indicates Direction of D		
(d,t)	Duals, TT-STs (%)		
		DATE: June 2019	

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} { = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

LEGEND

K → AM (d,t)

K Design Hour Factor (%)

AM AM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

FUTURE YEAR BUILD 8-LANE WITH I-4759 With AM Peak Hour Design Factors

Sheet 2 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

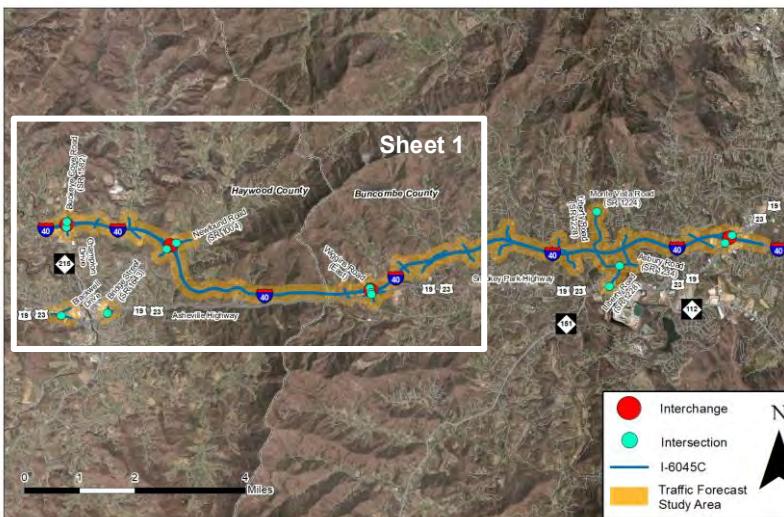
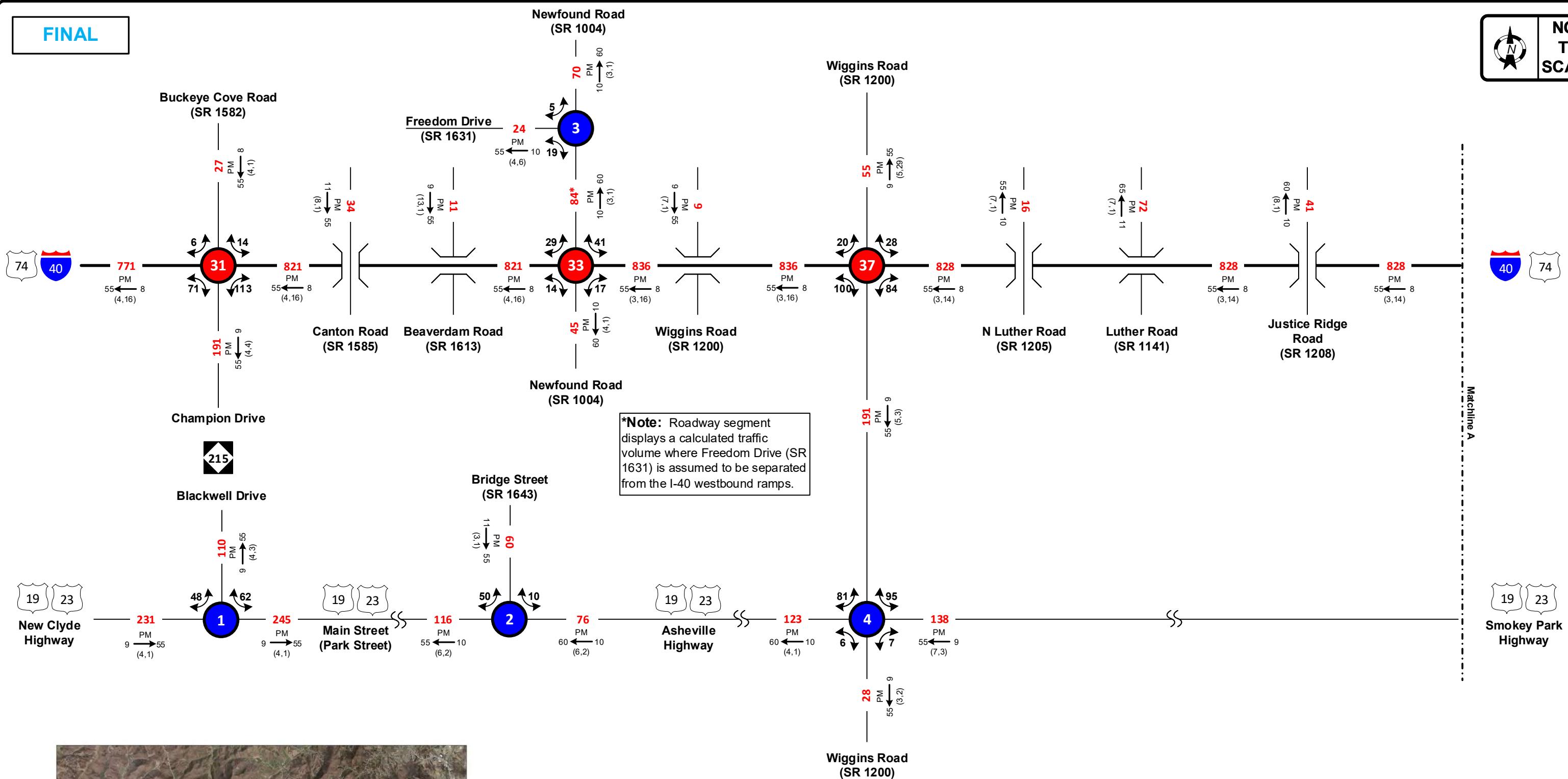
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

FUTURE YEAR BUILD 6-LANE EXCLUDING I-4759 With PM Peak Hour Design Factors

Sheet 1 of 2

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} { = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K → PM (d,t)

K Design Hour Factor (%)

AM PM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

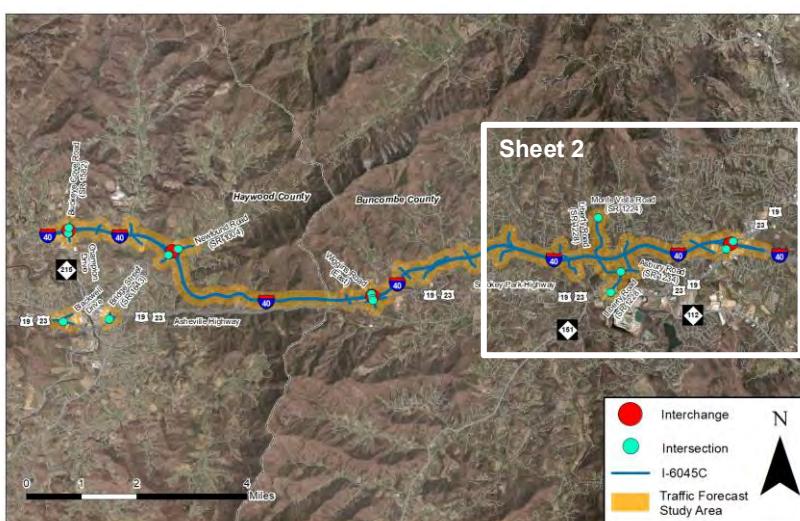
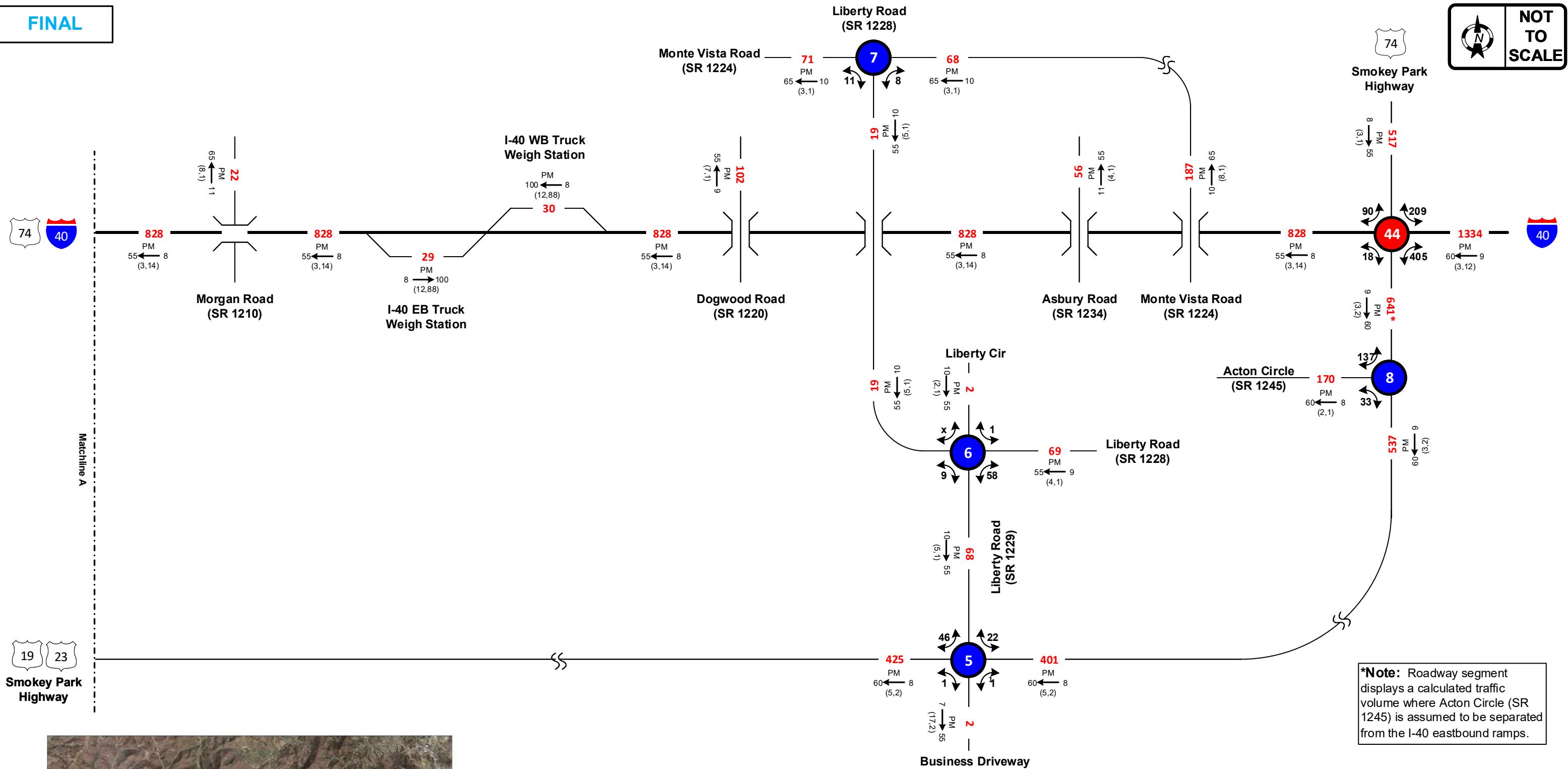
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

} = Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K AM (d,t) → D

FUTURE YEAR BUILD 6-LANE EXCLUDING I-4759

With PM Peak Hour Design Factors

Sheet 2 of 2

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

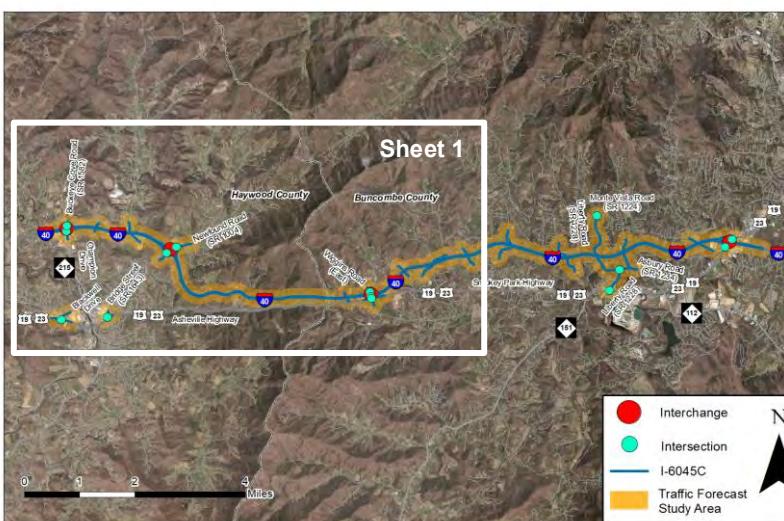
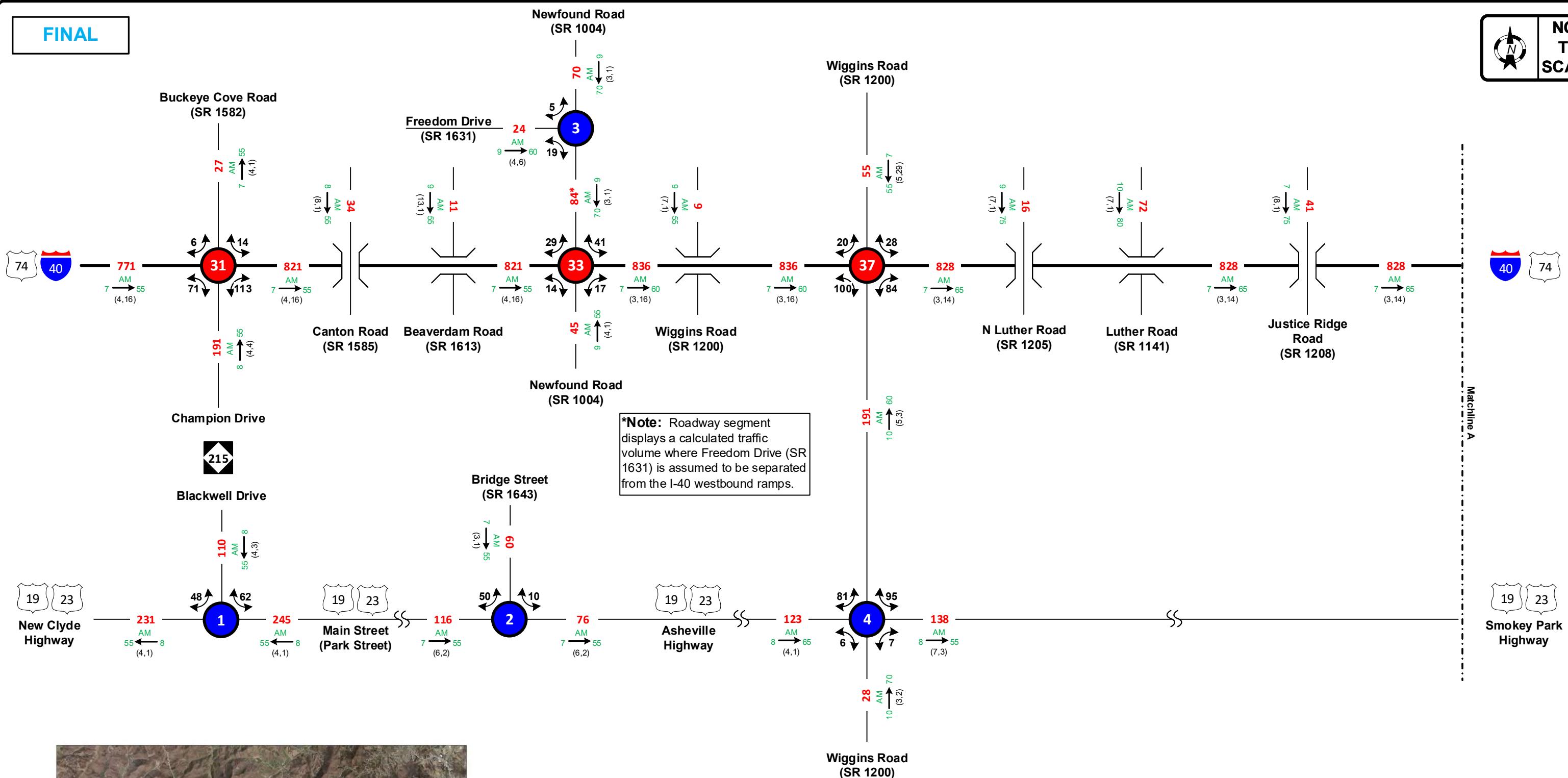
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

FUTURE YEAR BUILD 6-LANE EXCLUDING I-4759 With AM Peak Hour Design Factors

Sheet 1 of 2

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

= Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K Design Hour Factor (%)
AM AM Peak Period
D Peak Hour Directional Split (%)
→ Indicates Direction of D
(d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

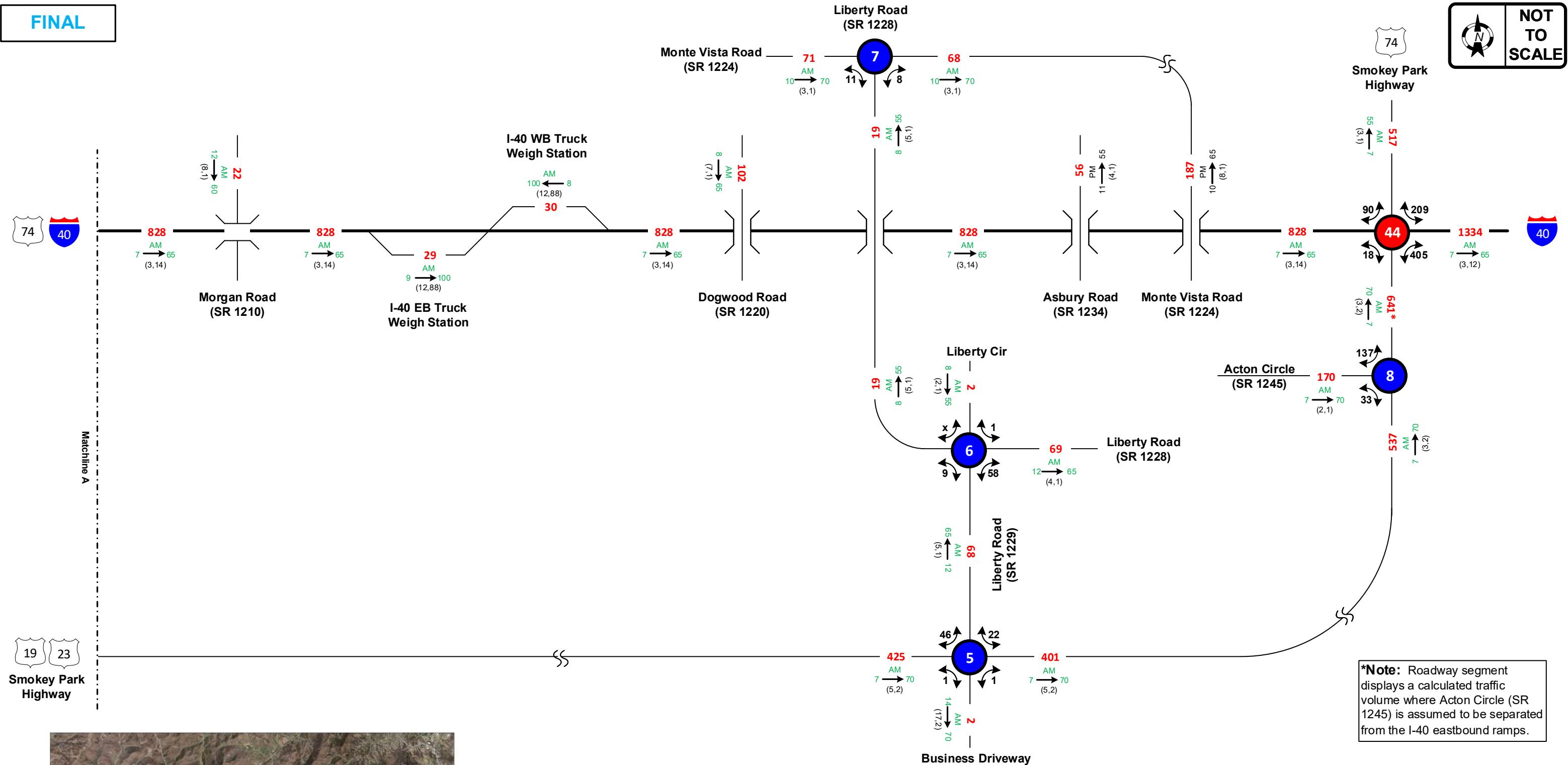
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

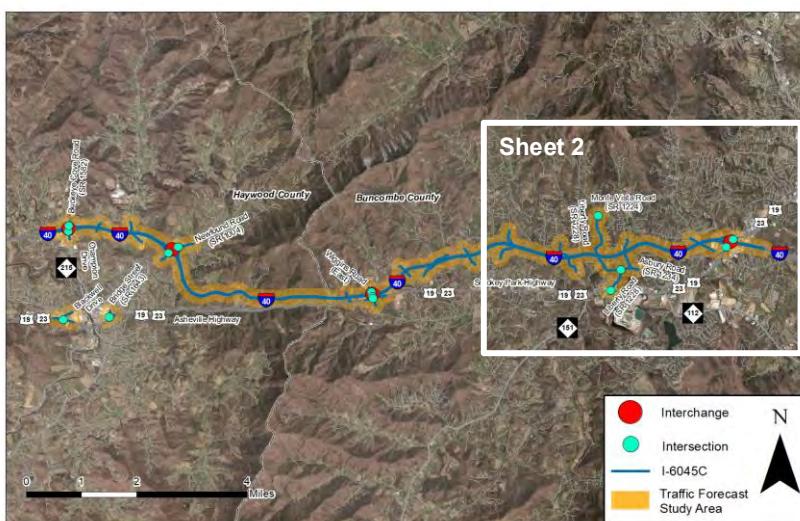
LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



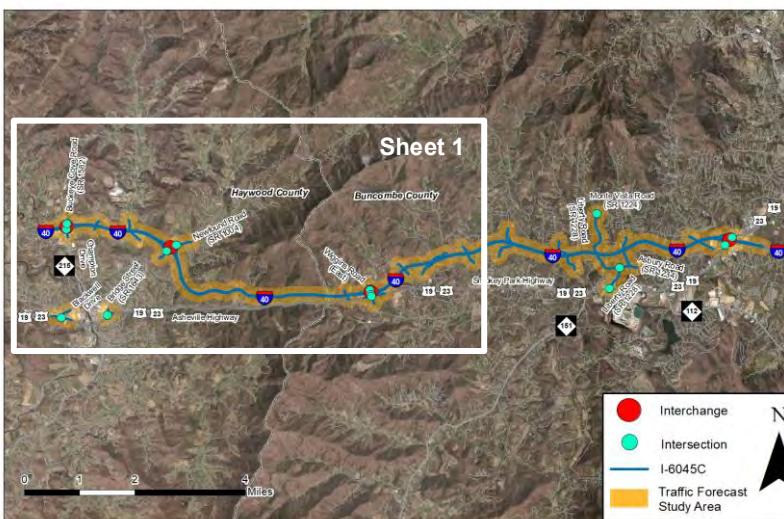
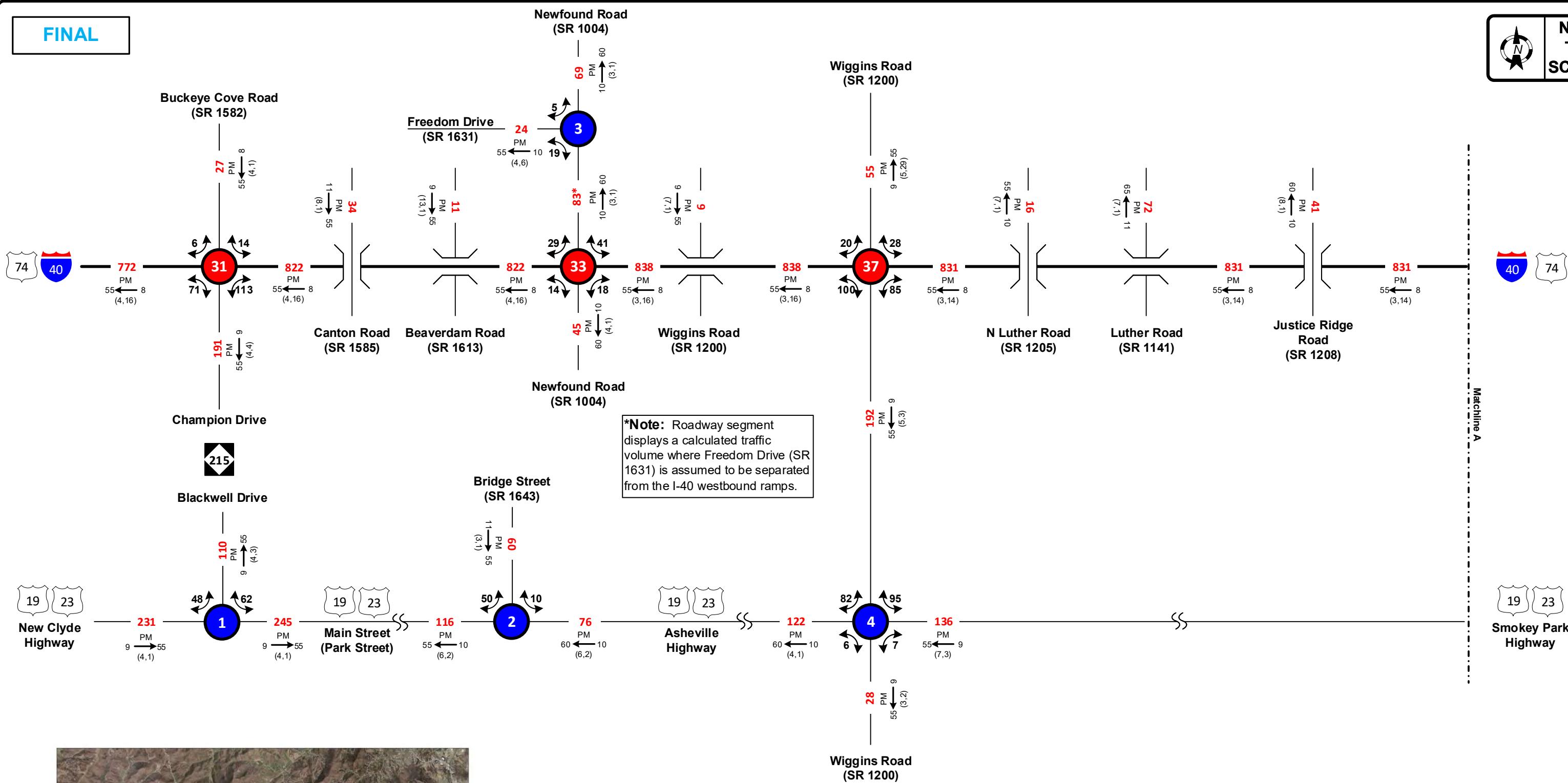
*Note: Roadway segment displays a calculated traffic volume where Acton Circle (SR 1245) is assumed to be separated from the I-40 eastbound ramps.



2040 ANNUAL AVERAGE DAILY TRAFFIC

LEGEND		STIP: I-6054 B & C	WBS: 34263.1.1
	= Study Area Intersection ID	AM (d,t)	COUNTY: Buncombe/Haywood
	= Study Area Interchange (ID # Corresponds to Exit #)	K Design Hour Factor (%)	DIVISION: 13/14
	= Bridge Overpass	AM Peak Period	PREPARED BY: HNTB North Carolina, PC
###	No. of Vehicles Per Day (VPD) in 100s	D Peak Hour Directional Split (%)	PROJECT: I-40 Widening to 6- or 8-Lane Interstate
1-	Less than 50 VPD	→ Indicates Direction of D	LOCATION: NC 215 (Exit 31) to Monte Vista Road
X	Movement Prohibited	(d,t) Duals, TT-STs (%)	DATE: June 2019

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

FUTURE YEAR BUILD 8-LANE EXCLUDING I-4759 With PM Peak Hour Design Factors

Sheet 1 of 2

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

= Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K → PM (d,t)

K Design Hour Factor (%)

AM PM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

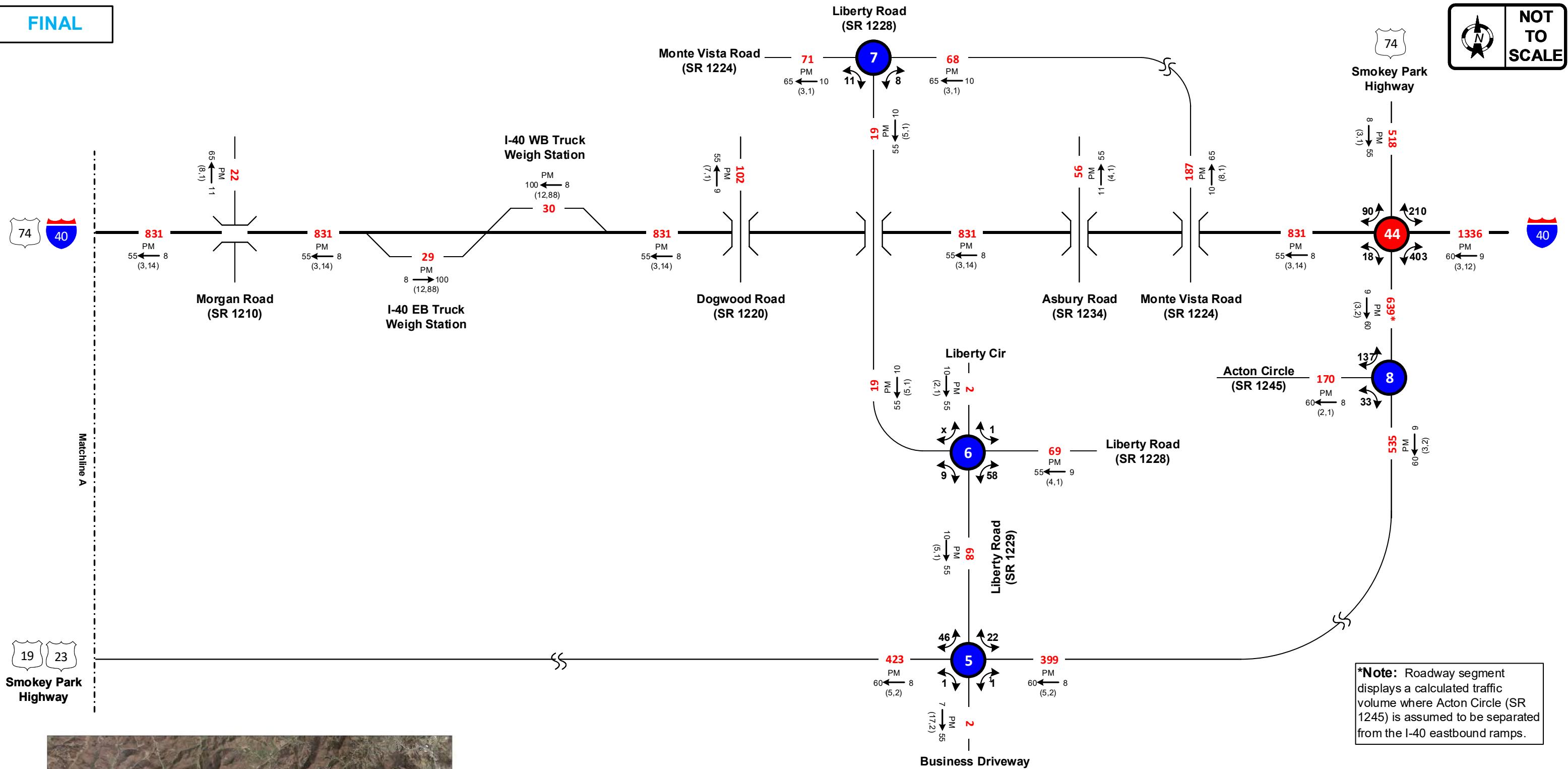
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL



2040

**ANNUAL AVERAGE
DAILY TRAFFIC**

FUTURE YEAR BUILD 8-LANE EXCLUDING I-4759

With PM Peak Hour Design Factors

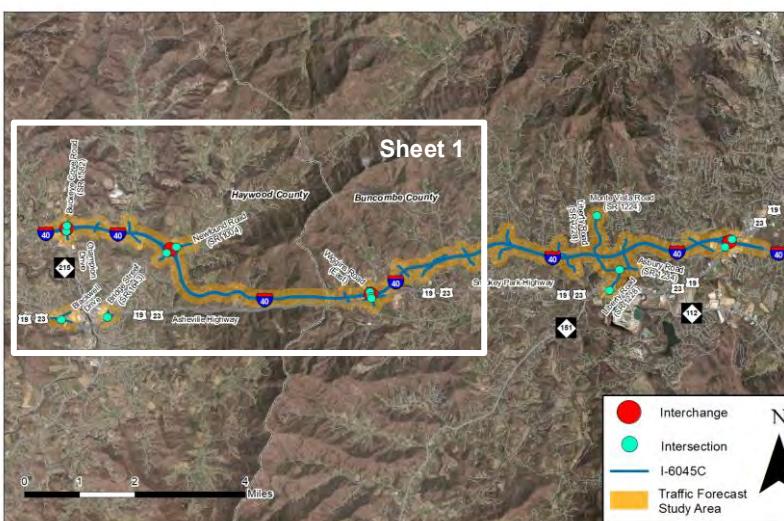
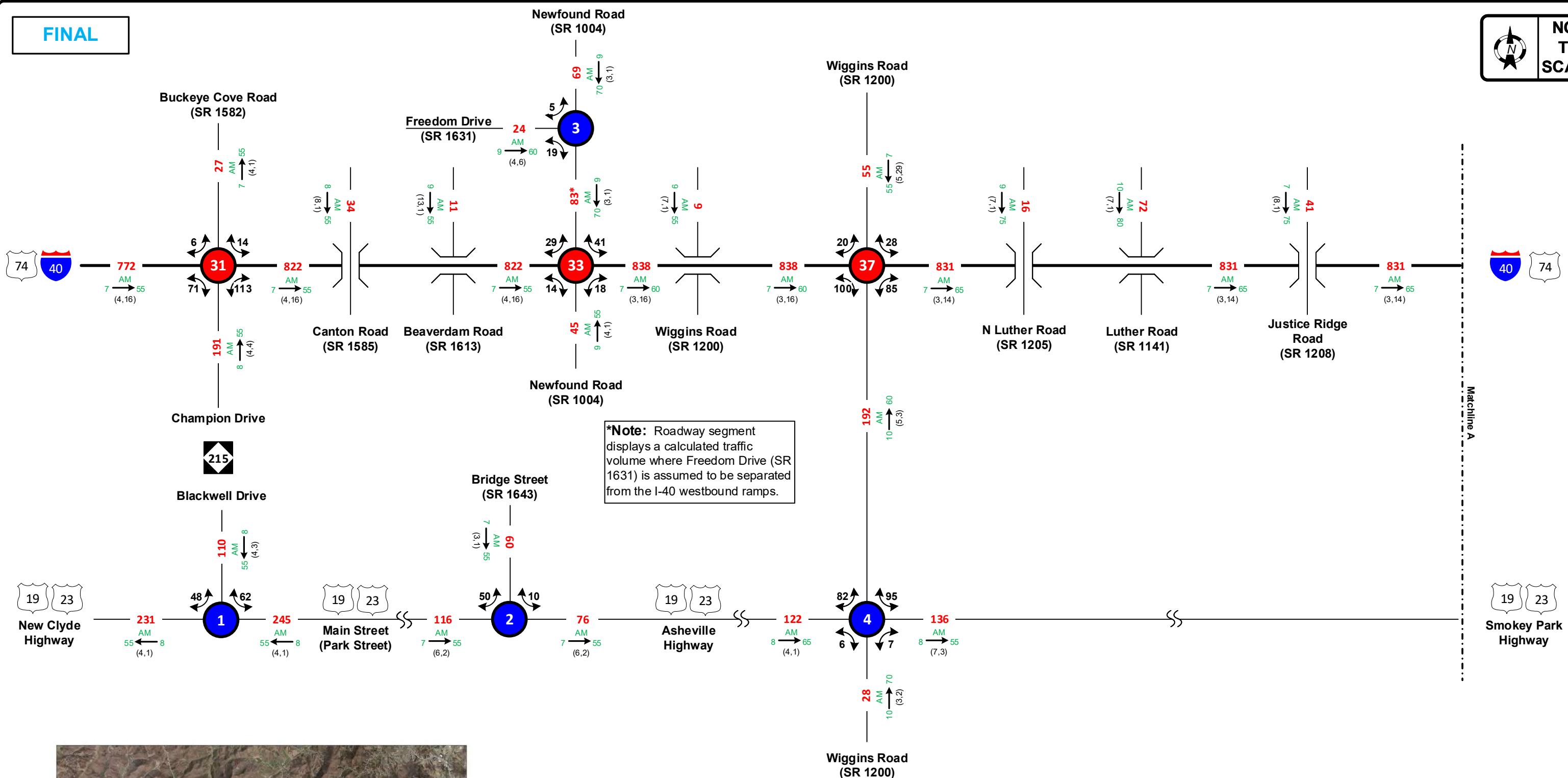
Sheet 2 of 2

LEGEND

- | | | | | |
|-----------------------|----------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------|
| # | = Study Area Intersection ID | |  | (d, t) |
| # | = Study Area Interchange
(ID # Corresponds to Exit #) | ### No. of Vehicles Per Day (VPD) in 100s | K | Design Hour Factor (%) |
| | | 1- Less than 50 VPD | PM | PM Peak Period |
| | | X Movement Prohibited | D | Peak Hour Directional Split (%) |
| } { = Bridge Overpass | | | → (d, t) | Indicates Direction of D
Duals, TT-STs (%) |

***Note:** Roadway segment displays a calculated traffic volume where Acton Circle (SR 1245) is assumed to be separated from the I-40 eastbound ramps.

FINAL



2040 ANNUAL AVERAGE DAILY TRAFFIC

FUTURE YEAR BUILD 8-LANE EXCLUDING I-4759 With AM Peak Hour Design Factors

Sheet 1 of 2

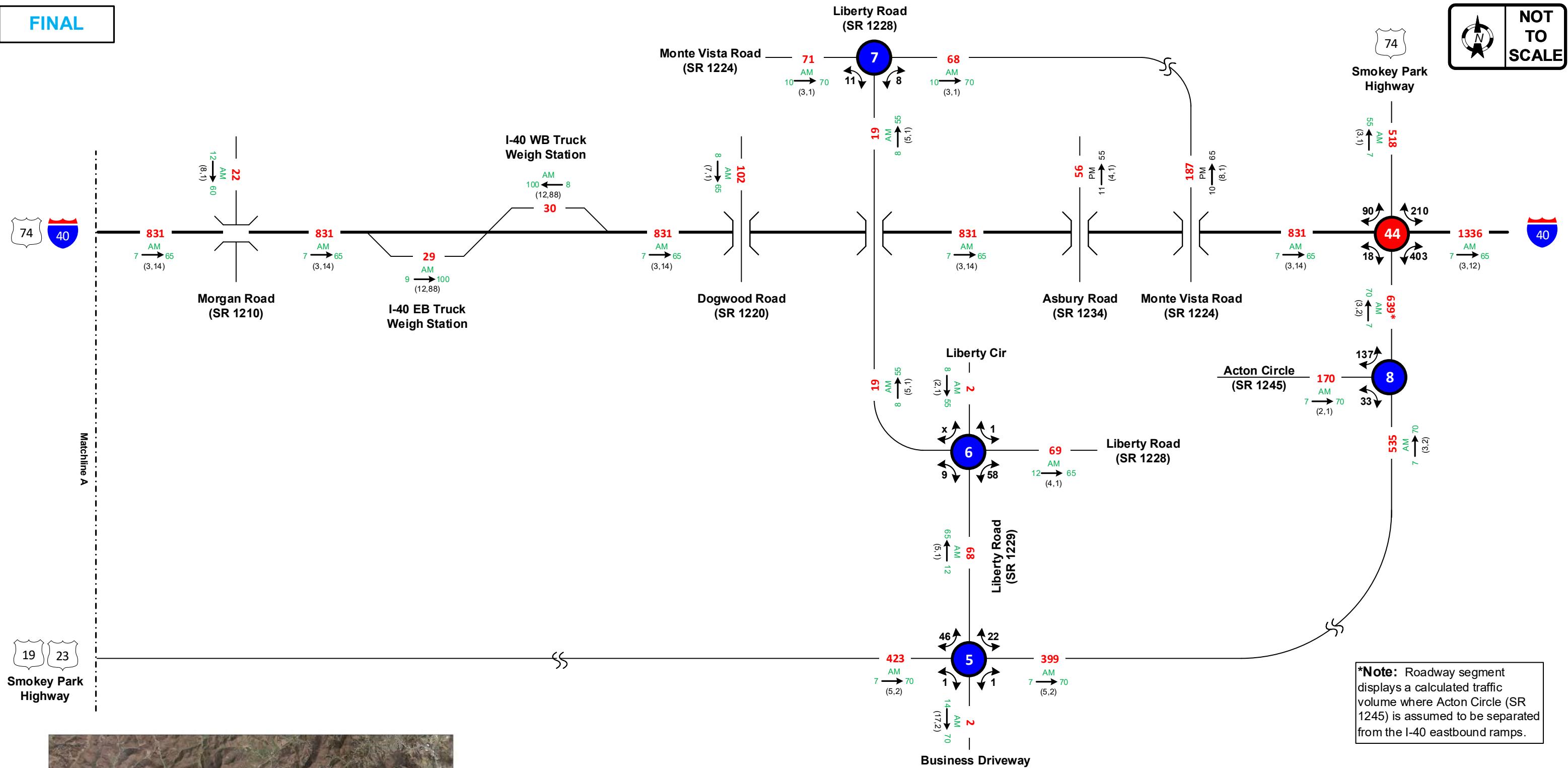
LEGEND

- = Study Area Intersection ID
- = Study Area Interchange (ID # Corresponds to Exit #)
- = Bridge Overpass

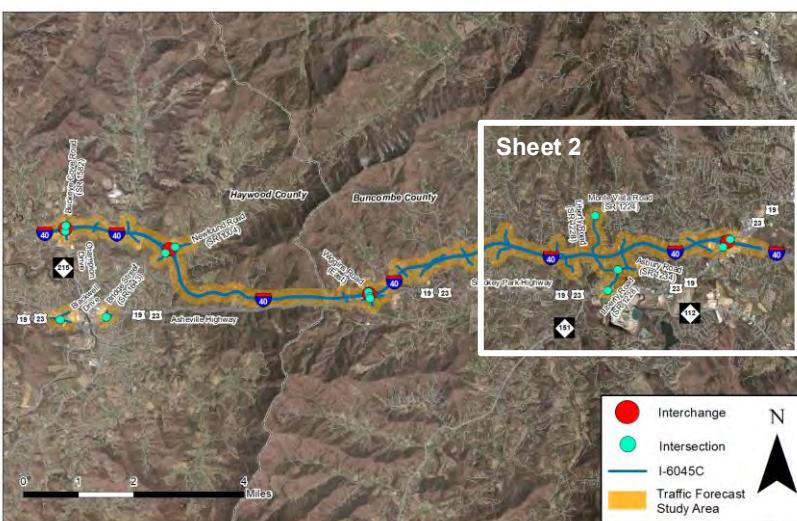
- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- X Movement Prohibited

STIP: I-6054 B & C	WBS: 34263.1.1
COUNTY: Buncombe/Haywood	DIVISION: 13/14
PREPARED BY: HNTB North Carolina, PC	
PROJECT: I-40 Widening to 6- or 8-Lane Interstate	
LOCATION: NC 215 (Exit 31) to Monte Vista Road	
DATE: June 2019	

FINAL



*Note: Roadway segment displays a calculated traffic volume where Acton Circle (SR 1245) is assumed to be separated from the I-40 eastbound ramps.



2040 ANNUAL AVERAGE DAILY TRAFFIC

FUTURE YEAR BUILD 8-LANE EXCLUDING I-4759 With AM Peak Hour Design Factors

Sheet 2 of 2

LEGEND

= Study Area Intersection ID

= Study Area Interchange (ID # Corresponds to Exit #)

= Bridge Overpass

No. of Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

K ————— AM (d,t) D

K Design Hour Factor (%)

AM AM Peak Period

D Peak Hour Directional Split (%)

→ Indicates Direction of D

(d,t) Duals, TT-STs (%)

STIP: I-6054 B & C WBS: 34263.1.1

COUNTY: Buncombe/Haywood DIVISION: 13/14

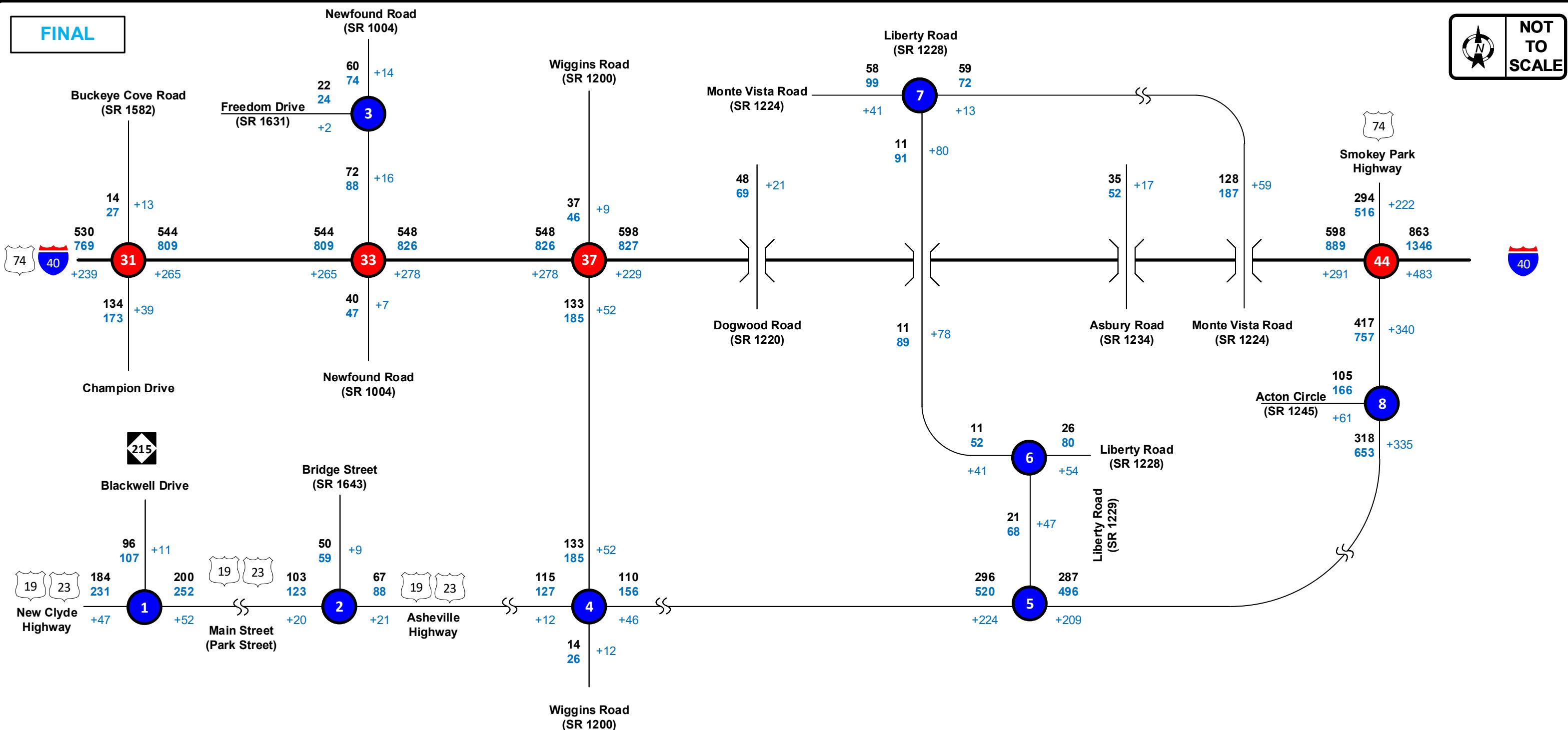
PREPARED BY: HNTB North Carolina, PC

PROJECT: I-40 Widening to 6- or 8-Lane Interstate

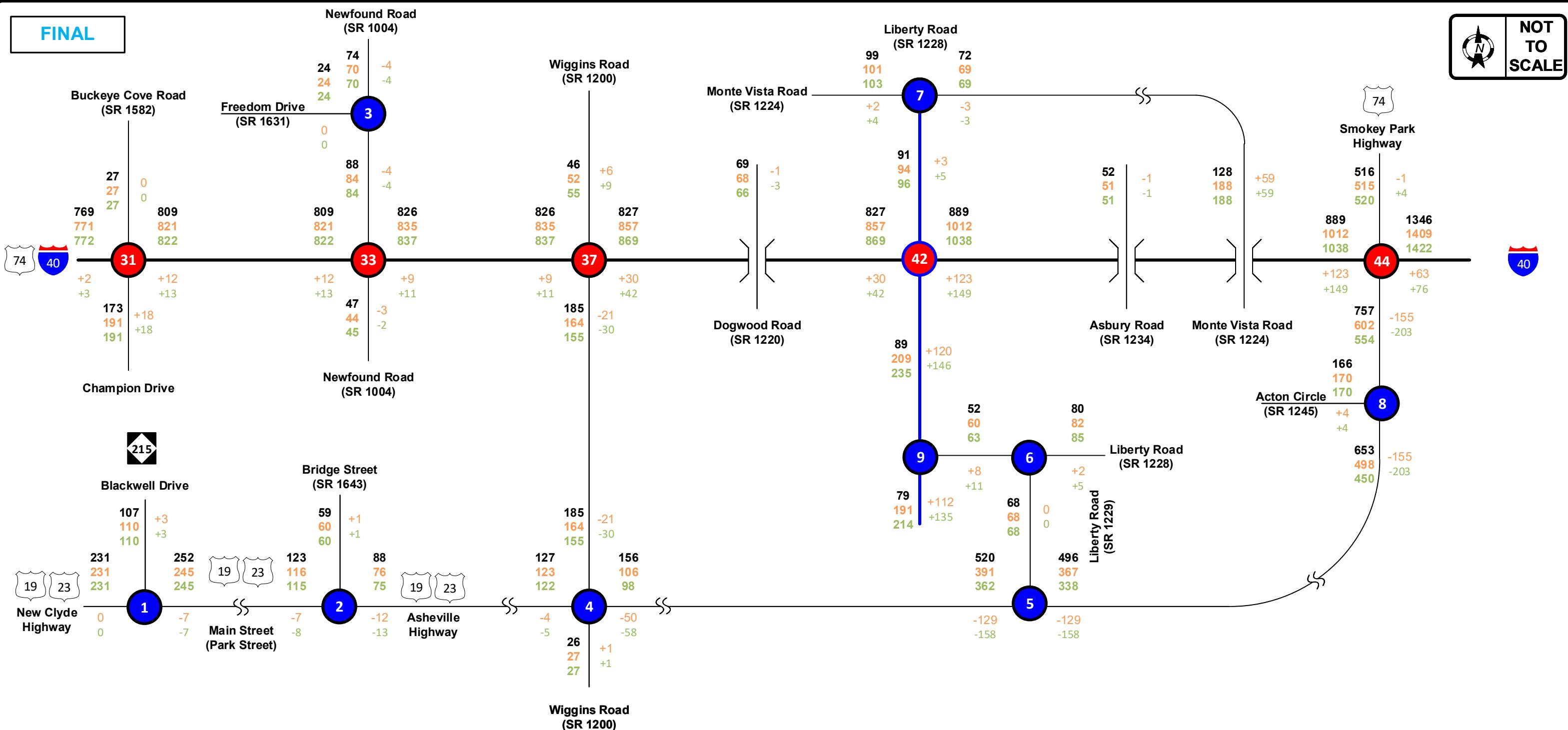
LOCATION: NC 215 (Exit 31) to Monte Vista Road

DATE: June 2019

FINAL

 NOT TO SCALE


FINAL

 NOT TO SCALE
**LEGEND**

- ### No. of Vehicles Per Day (VPD) (in 100s) – **2040 FYNB WITH I-4759 Scenario**
- ### VPD (in 100s) – **2040 FYB 6-LANE WITH I-4759 Scenario**
- ### VPD (in 100s) – **2040 FYB 8-LANE WITH I-4759 Scenario**
- ## Difference in VPD (in 100s) between **2040 FYNB WITH I-4759** and **2040 FYB 6-LANE WITH I-4759** Scenarios
- ## Difference in VPD (in 100s) between **2040 FYNB WITH I-4759** and **2040 FYB 8-LANE WITH I-4759** Scenarios

 = Study Area Intersection ID

 = Study Area Interchange (ID # Corresponds to Exit #)

 = Overpass

 = Underpass

FINAL



NOT
TO
SCALE
