Appendix A-3
Non-Standard and Non-Conforming Features
Recommended to be Retained

Appendix A-3
Non-Standard and Non-Conforming Features Recommended to be Retained

A-3.1: Non-Standard Features Table and Justification – Viaduct Alternative

A-3-2: Non-Conforming Feature Table and Justification – Viaduct Alternative

A-3-3: Non-Standard Feature Table and Justification – Community Grid Alternative

A-3-4: Non-Conforming Feature Table and Justification – Community Alternative

Appendix A.3.1

Non-Standard Features to be Retained – Viaduct Alternative

The Non-Standard Features recommended to be retained under the Viaduct Alternative are listed in Table A.3.1, followed by the Non-Standard Feature Justification forms.

Table A.3.1
Non-Standard Features Recommended to be Retained – Viaduct Alternative

Location	Design Element (1)	Design Criteria (2)	Proposed Design	NSF Justification Form (3)
Northbound I-81 – Horizontal Curve #1	HSSD	570 ft.	438 ft.	A-3-1-01
Northbound I-81 – Horizontal Curve #2	HSSD	570 ft.	495 ft.	A-3-1-02
Southbound I-81 – Horizontal Curve #3	HSSD	570 ft.	507/509 ft.	A-3-1-03
Southbound I-81 – Horizontal Curve #4	HSSD	570 ft.	426/443 ft.	A-3-1-04
Eastbound I-690 – Horizontal Curve #6	HSSD	570 ft.	509 ft.	A-3-1-05
I-81 Northern Segment, Butternut St. to Hiawatha Blvd.	Left and Right Shoulder Width	10 ft.	7 ft.	A-3-1-06
Interstate Ramp – Southbound I-81 off-ramp to North Clinton Street	Horizontal Curve	214 ft.	167 ft.	A-3-1-07
Almond Street, Renwick Avenue to Burt Street	Horizontal Curve	371 ft.	160 ft.	A-3-1-08
Fineview Place	Horizontal Curve	188 ft.	40 ft.	A-3-1-09
Renwick Avenue	HSSD	220 ft.	190 ft.	A-3-1-10
Van Buren Street, Renwick Avenue to Henry Street	Grade	8% max.	15.52%	A-3-1-11
Erie Boulevard, vicinity of Almond Street	Shared Lane Width	13 ft.	11 ft.	A-3-1-12
Crouse Avenue, Waverly Ave. to Genesee St.	Shared Lane Width	13 ft.	12 ft.	A-3-1-13
Van Buren Street, Renwick Avenue to Irving Avenue	Shared Lane Width	13 ft.	12 ft.	A-3-1-14

Notes:
1) HSSD = Horizontal Stopping Sight Distance
2) Refer to Design Criteria Tables in **Appendix C-6.3.**
3) Refer to the following pages for Non-Standard Feature Justification Forms.

Justification Number A-3-1-01

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81 Northbound - Viaduct Alternative		
Project Type: New Construction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 51,700 (2050)	**% Trucks:** 16	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: Curve #1 - H10 STA. 61+50 TO H10 STA. 78+50 (See Note 1)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.047177 Long: -76.142421 **TO** Lat: 43.051038 Long: -76.145183

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 570'	**Design Speed:** 60 mph
Existing Value: 280'	**Recommended Speed - Existing:** 35 mph
Proposed Value: 438'. (See Note 2)	**Recommended Speed - Proposed:** 50 mph

2. Accident Analysis

Current Accident Rate[1]**:** 6.74 ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 (Note 3) ◉ **acc/mvm** ○ **acc/mev**
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 4

3. Cost Estimates

Cost to fully meet standards: $10.1 Million .See note 5	**Cost(s) for incremental improvements:** $6.9 Million. See note 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Appropriate curve warning signs will be posted, and the Advisory Speed (W13-1P) plaque may be used as supplement of warning signs to indicate the non-standard HSSD condition. An open rail system was also considered and dismissed because it would be difficult to maintain, result in long term operational issues, and would be inconsistent with the Department's bridge rail policy in Chapter 6 (Section 6.3.3.1) of the Bridge Manual.

5. Compatibility with Adjacent Segments and Future Plans

Over-widening of the inside shoulder to a maximum of 12 feet to increase HSSD is consistent with other curves in the area and there are no future plans for adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

Two approaches were evaluated to fully meet standards:
1)Additional over-widening of the inner side shoulder (from 12ft to 25ft). See Note 5
2)Increasing the proposed curve radii from 1330ft to 2260ft would require realignment of the entire interchange area, resulting in a design similar to Alternative Option V-2 and significantly increasing the number of building impacts See Note 7

7. Proposed Treatment (i.e., recommendation)

Provide a 12' max shoulder width to mitigate the non-standard stopping sight distance. Provide warning signs as appropriate.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification
A-3-1-01
(Attachment)

1. Non-Standard Horizontal Stopping Sight Distance (HSSD) condition applies to the inside travel lane only as sight distance is controlled by the concrete bridge barrier that is located at edge of proposed shoulder (See Figure 1).
2. Proposed minimum HSSD of 438 feet (inner lane) meets 50mph HSSD design standard and is based on providing a widened 12' shoulder on the inside of the curve for the length of the curve. If a standard 4-foot shoulder were provided, the minimum HSSD would be 379 feet.
3. Rate reported is crashes per million vehicle miles (acc/mvm) for linear highway segments. The Statewide Crash Rate is from the published *Average Crash Rates for State Highways By Facility Type* (Based on crash data January 1, 2015 to December 31, 2016), based on an Urban, Divided 4 lane highway.
4. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 89 crashes occurred within this curve segment, of which 33 crash was identified to be potentially related to the existing non-standard sight distance feature. The number of crashes potentially related to the existing non-standard feature equates to 34% of total crashes, and an crash rate of 2.27 acc/mvm. The proposed design includes an incremental improvement (shoulder widened to 12 ft.) which would increase the HSSD approximately 56 % above the existing HSSD and also achieve nearly 77 % of the design criteria standard. In addition, the proposed design has corrected all other non-standard features and the non-standard HSSD applies only to the inner most lane (the other travel lanes meet HSSD criteria, see Figure 1).
5. The cost estimate is based on one potential approach to fully meet the standard for HSSD, which is providing additional widening of the inner side shoulder width from 12 ft. to 25 ft. along the length of the curve. (See note 7 for another potential approach). While widening the inside shoulder an additional 13 feet would satisfy the HSSD criteria for this curve, there are other concerns that this would introduce. Additional concerns include; potentially encouraging unauthorized use of the wider shoulder as a travel lane, snow removal and de-icing logistics during winter weather and increased long term maintenance costs. The estimated cost to over-widen the shoulder of this curve is $10.1 M, but this curve is just one of five curves within the interchange area that would need to be widened above what is proposed to meet HSSD criteria. The total cost to over-widen the shoulder of all five curves is estimated to be $26.0 M.
6. The design criterion for the left shoulder along this segment of I-81 is 4 feet. If a 4-foot wide left shoulder were provided, the resultant HSSD would be 379 feet (inner lane). By increasing the left shoulder width to 12 feet, the resultant HSSD increases to 438 feet, which is a significant improvement over the existing HSSD and represents an improvement to 77%, of the Design Criteria standard. Further increasing HSSD would increase costs and/or property impacts and provide little to no additional crash reduction benefit. The cost estimate for the incremental improvements is $6.9 Million.
7. A second potential approach to fully meeting the HSSD for this curve (see note 5) would be to provide a flatter horizontal curve. By increasing the radius of the proposed curve from the current design of 1330 ft. to 2260 ft., HSSD for this curve would meet design criteria. However, because of the complex geometry through the main I-81/I-690 Interchange, it is not possible to modify the alignment of the curve without modifying the geometry of I-81 southbound, I-690 westbound, I-690 eastbound and many of the interconnect ramps. This level of modification would essentially mimic alternative option V-2, which would result in approximately twelve (12) additional building impacts, nine (9) of which are on or eligible for listing on the National Register of Historic Places. The additional ROW impact costs that would be associated with fully meeting the HSSD criteria are estimated to be $20.0 M. In addition, several of these building could also present additional social and economic impacts as well as unique relocation challenges. For example:
    a. Nettleton Commons is a large building having both commercial and residential uses. As this building contains approximately 60 apartments and several businesses, acquisition of the building would impact a large number of residents and businesses in the core downtown area.
    b. Samaritan Center is located in the former St. John the Evangelist church and currently serves approximately 300 meals a day to those in need as part of their breakfast and dinner service. Acquisition of this building could cause a disruption to these critical services and negatively impact those that depend on this critical service. In addition, prior to their opening at this location, they had

encountered overwhelming neighborhood opposition at another proposed location, so if impacted, it is anticipated this would be a difficult and sensitive relocation.

c. The Community Reentry Center is operated by the Federal Bureau of Prisons as a halfway house for helping to transition released federal prisoners back into society. Recent attempts to relocate this facility proved to be controversial as community concerns included proximity to churches, homes, libraries and schools, so if this building is impacted by this project, it is anticipated this would present difficult and unique relocation challenges.

d. Snowden Apartments is a very large apartment building with nearly 200 apartments and 350 residents. But this building is also very unique in that nearly 80% of the residents are under the supervision of the NYS Department of Corrections and Community Service as parolees' who are registered sex offenders. If this building is impacted, it is anticipated that it would present unique and difficult relocation challenges.

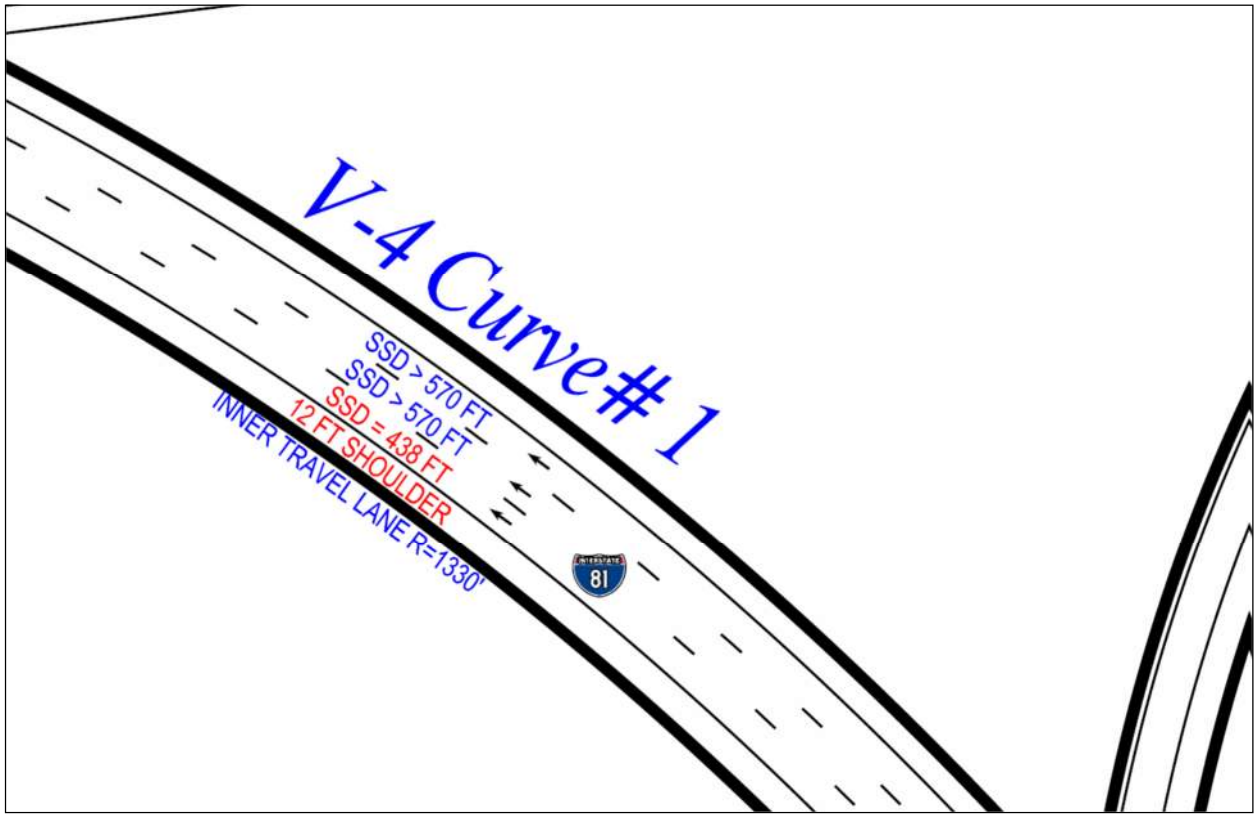


Figure 1

Justification Number A-3-1-02

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81 Northbound - Viaduct Alternative		
Project Type: New Construction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 50,000 (2050)	**% Trucks:** 16	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: Curve 2 - H10 STA. 89+50 TO H10 STA. 101+50 (Note 1)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.052017° Long: -76.149006° **TO** Lat: 43.054184° Long: -76.152315°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 570'	**Design Speed:** 60 mph
Existing Value: 259'	**Recommended Speed - Existing:** 35 mph
Proposed Value: 495' See Note 1&2	**Recommended Speed - Proposed:** 55 mph

2. Accident Analysis

Current Accident Rate[1]**:** 5.09 ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 Note 3 ◉ **acc/mvm** ○ **acc/mev**
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 4

3. Cost Estimates

Cost to fully meet standards: $0.8 Million .See Note 5	**Cost(s) for incremental improvements:** $1.1 Million. See Note 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Appropriate curve warning signs will be posted, and the Advisory Speed (W13-1) plaque may be used as supplement of warning signs to indicate the non-standard HSSD condition. An open rail system was also considered and dismissed because it would be difficult to maintain, result in long term operational issues, and would be inconsistent with the Department's bridge rail policy in Chapter 6 (Section 6.3.3.1) of the Bridge Manual.

5. Compatibility with Adjacent Segments and Future Plans

Over-widening of the inside shoulder to a maximum of 12 feet to increase HSSD is consistent with other curves in the area and there are no future plans for adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

Two approaches were evaluated to fully meet standards:
1)Additional over-widening of the inner side shoulder (from 12ft to 18ft). See Note 5
2)Increasing the proposed curve radii from 1693ft to 2260ft would require realignment of the entire interchange area, resulting in a design similar to Alternative Option V-2 and significantly increasing the number of building impacts See Note 7

7. Proposed Treatment (i.e., recommendation)

Provide a 12' max shoulder width to mitigate the non-standard stopping sight distance. Provide warning signs as appropriate.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification
A-3-1-02
(Attachment)

1. Non-Standard Horizontal Stopping Sight Distance (HSSD) condition applies to inside travel lane only as sight distance is controlled by the concrete bridge barrier that is located at edge of proposed shoulder (See Figure 1).
2. Proposed minimum HSSD of 495 feet meets 55 mph design standard and, is based on providing a widened 12 ft. shoulder on the inside of the curve for the length of the curve. If a standard 10-foot shoulder were provided, the minimum HSSD would be 466 ft.
3. Rate reported is crashes per million vehicle miles (acc/mvm) for linear highway segments. The Statewide Crash Rate is from the published *Average Crash Rates for State Highways By Facility Type* (Based on crash data January 1, 2015 to December 31, 2016), based on an Urban, Divided 4 lane highway.
4. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 57 crashes occurred in this curve segment, of which 30 crash was identified to be potentially related to the existing non-standard sight distance feature. The number of crashes potentially related to the existing non-standard feature equates to 53% of total crashes, and a crash rate of 2.68 acc/mvm). The proposed design includes an incremental improvement (shoulder widened to 12 ft.) which would increase the HSSD approximately 91% Above the existing HSSD and also achieve nearly 87% of the design criteria standard. In addition, the non-standard HSSD applies only to the inner most lane (the other lanes all meet HSSD criteria, see Figure 1).
5. The cost estimate is based on one potential approach to fully meet the standard for HSSD, which is providing additional widening of the inner side shoulder width from 12 ft. to 18 ft. along the length of the curve. (See note 7 for another potential approach). While widening the inside shoulder an additional 6ft would satisfy the HSSD criteria for this curve, there are other concerns that this would introduce. Additional concerns include; potentially encouraging unauthorized use of the wider shoulder as a travel lane, snow removal and de-icing logistics during winter weather and increased long term maintenance costs. The estimated cost to over-widen the shoulder of this curve is $0.8 M, but this curve is just one of five curves within the interchange area that would need to be widened above what is proposed to meet HSSD criteria. The total cost to over-widen the shoulder of all five curves is estimated to be $26.0 M.
6. The design criterion for the right shoulder along this segment of I-81 is 10 feet. If a 10-foot wide right shoulder were provided, the resultant HSSD would be 466 ft. By increasing the right shoulder width to 12 feet, the resultant HSSD increases to 495 feet, which is a significant improvement over the existing HSSD and represents an improvement to 87% of the Design Criteria standard. The cost estimate for the incremental improvements is $1.1 Million.
7. A second potential approach to fully meeting the HSSD for this curve (see note 5) would be to provide a flatter horizontal curve. By increasing the radius of the proposed curve from the current design of 1693ft to 2260 ft., HSSD for this curve would meet design criteria. However, because of the complex geometry through the main I-81/I-690 Interchange, it is not possible to modify the alignment of the curve without modifying the geometry of I-81 southbound, I-690 westbound, I-690 eastbound and many of the interconnect ramps. This level of modification would essentially mimic alternative option V-2, which would result in approximately twelve (12) additional building impacts, nine (9) of which are on or eligible for listing on the National Register of Historic Places. The additional ROW impact costs that would be associated with fully meeting the HSSD criteria are estimated to be $20.0 M. In addition, several of these building could also present additional social and economic impacts as well as unique relocation challenges. For example:
    a. Nettleton Commons is a large building having both commercial and residential uses. As this building contains approximately 60 apartments and several businesses, acquisition of the building would impact a large number of residents and businesses in the core downtown area.
    b. The Community Reentry Center is operated by the Federal Bureau of Prisons as a halfway house for helping to transition released federal prisoners back into society. Recent attempts to relocate this facility proved to be controversial as community concerns included proximity to churches, homes, libraries and schools, so if this building is impacted by this project, it is anticipated this would present difficult and unique relocation challenges.

c. Snowden Apartments is a very large apartment building with nearly 200 apartments and 350 residents. But this building is also very unique in that nearly 80% of the residents are under the supervision of the NYS Department of Corrections and Community Service as parolees' who are registered sex offenders. If this building is impacted, it is anticipated that it would present unique and difficult relocation challenges.

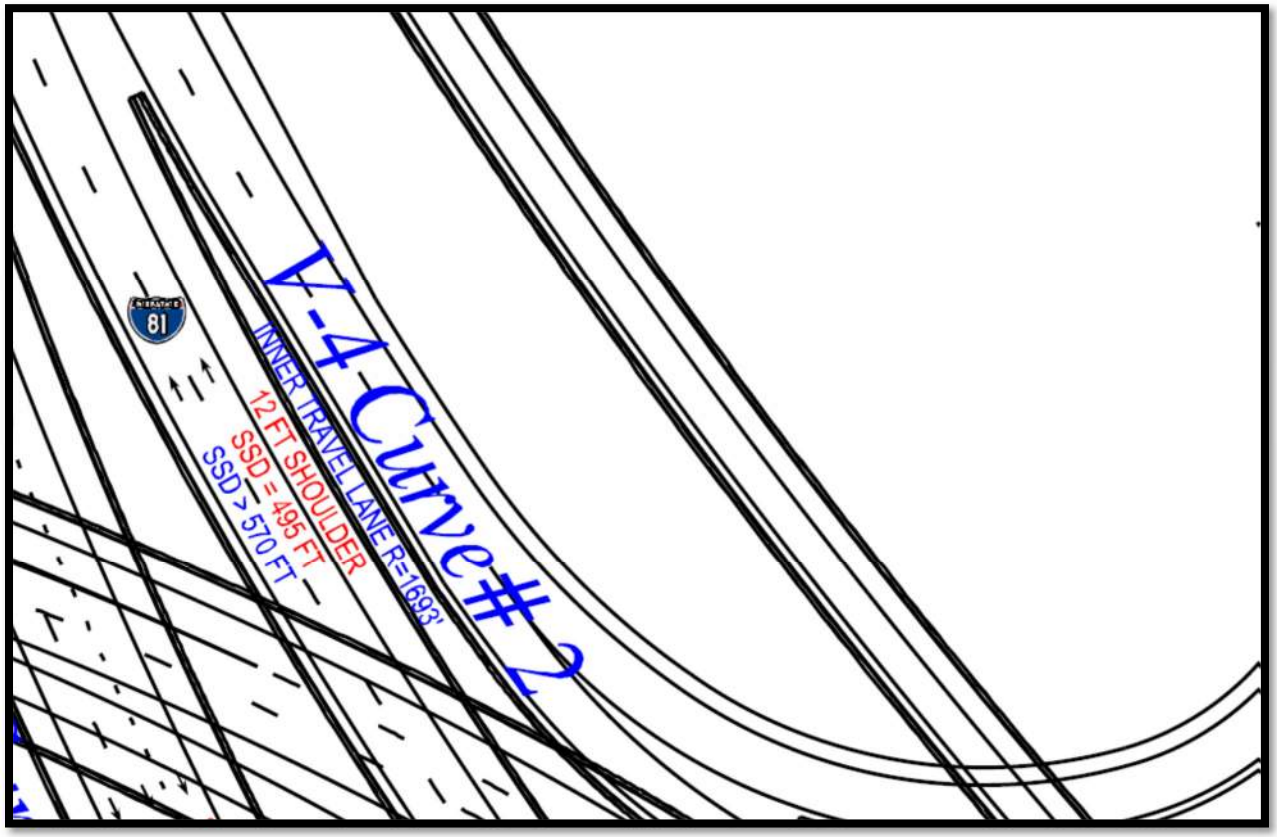


Figure 1

Justification Number A-3-1-03

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81 Southbound - Viaduct Alternative		
Project Type: New Construction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 48,100 (2050)	**% Trucks:** 16	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: Curve 3 - H20 STA. 207+50 TO H20 STA. 192+00 See Note 1

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.055148° Long: -76.153002° **TO** Lat: 43.051753° Long: -76.149745°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 570'	**Design Speed:** 60 mph
Existing Value: 264'	**Recommended Speed - Existing:** 35 mph
Proposed Value: 507'/509' See note 1&2	**Recommended Speed - Proposed:** 55 mph

2. Accident Analysis

Current Accident Rate[1]**:** 2.67 ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 (Note 3) ◉ **acc/mvm** ○ **acc/mev**
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 4

3. Cost Estimates

Cost to fully meet standards: $2.5 Million .See note 5	**Cost(s) for incremental improvements:** $5.1 Million. See note 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Appropriate curve warning signs will be posted, and the Advisory Speed (W13-1) plaque may be used as supplement of warning signs to indicate the non-standard HSSD condition. An open rail system was also considered and dismissed because it would be difficult to maintain, result in long term operational issues, and would be inconsistent with the Department's bridge rail policy in Chapter 6 (Section 6.3.3.1) of the Bridge Manual.

5. Compatibility with Adjacent Segments and Future Plans

Over-widening of the inside shoulder to a maximum of 12 feet to increase HSSD is consistent with other curves in the area and there are no future plans for adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

Two approaches were evaluated to fully meet standards:
1)Additional over-widening of the inner side shoulder (from 12ft to 17ft). See Note 5
2)Increasing the proposed curve radii from 1788ft to 2260ft would require realignment of the entire interchange area, resulting in a design similar to Alternative Option V-2 and significantly increasing the number of building impacts See Note 7

7. Proposed Treatment (i.e., recommendation)

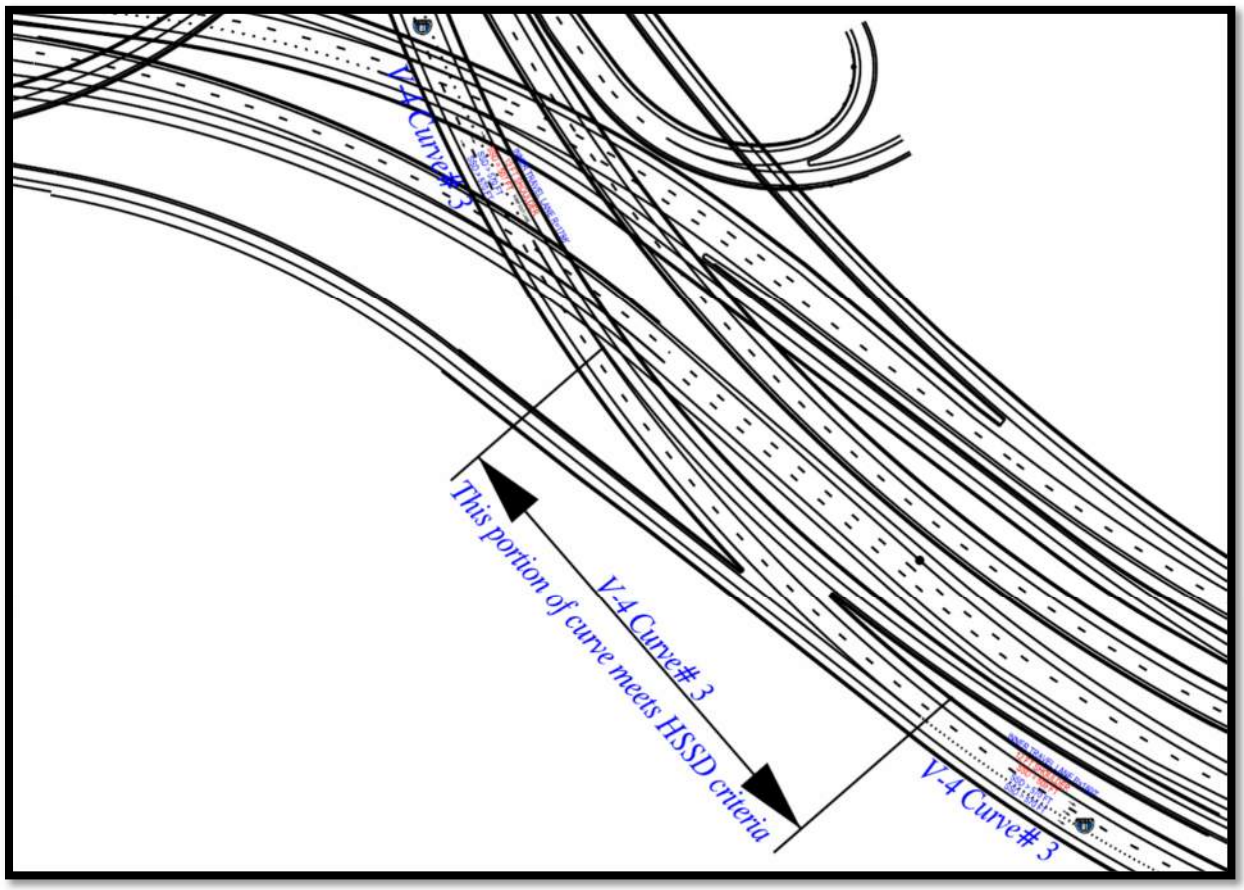
Provide a 12' max shoulder width to mitigate the non-standard stopping sight distance. Provide warning signs as appropriate.

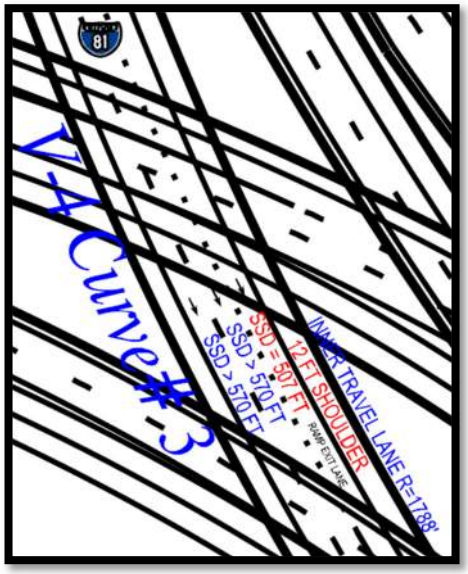
[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification
A-3-1-03
(Attachment)

1. Non-Standard Horizontal Stopping Sight Distance (HSSD) condition applies to inside travel lane only as sight distance is controlled by the concrete bridge barrier that is located at edge of proposed shoulder (See Figure 1).
2. Proposed minimum HSSD of 507 ft./509 ft. meets 55 mph HSSD design standard and, is based on providing a widened 12 ft. shoulder on the inside of the curve for the length of the curve. If a standard 4-foot shoulder were provided, the minimum HSSD would be 378 feet.
3. Rate reported is crashes per million vehicle miles (acc/mvm) for linear highway segments. The Statewide Crash Rate is from the published *Average Crash Rates for State Highways By Facility Type* (Based on crash data January 1, 2015 to December 31, 2016), based on an Urban, Divided 4 lane highway.
4. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 33 crashes occurred in this curve segment, of which 18 crash was identified to be potentially related to the existing non-standard sight distance feature. The number of crashes potentially related to the existing non-standard feature equates to 55% of total crashes and a crash rate of 1.45 acc/mvm). The proposed design includes an incremental improvement (shoulder widened to 12 ft.) which would increase the HSSD approximately 92% above the existing HSSD and also achieve nearly 89% of the design criteria standard. In addition, the non-standard HSSD applies only to the inner most lane (the other lanes all meet HSSD criteria, see Figure 1).
5. The cost estimate is based on one potential approach to fully meet the standard for HSSD, which is providing additional widening of the inner side shoulder width from 12 ft. to 17 ft. along the length of the curve. (See note 7 for another potential approach). While widening the inside shoulder an additional 5 feet would satisfy the HSSD criteria for this curve, there are other concerns that this would introduce. Additional concerns include; potentially encouraging unauthorized use of the wider shoulder as a travel lane, snow removal and de-icing logistics during winter weather and increased long-term maintenance costs. The estimated cost to over-widen the shoulder of this curve is $2.5 M, but this curve is just one of five curves within the interchange area that would need to be widened above what is proposed to meet HSSD criteria. The total cost to over-widen the shoulder of all five curves is estimated to be $26.0 M.
6. The design criterion for the left shoulder along this segment of I-81 is 4 feet. If a 4-foot wide left shoulder were provided, the resultant HSSD would be 378 feet. By increasing the left shoulder width to 12 feet, the resultant HSSD increases to 507 ft./509 ft., which is a significant improvement over the existing HSSD and represents an improvement to 89% of the Design Criteria standard. The cost estimate for the incremental improvements is $5.1 Million.
7. A second potential approach to fully meeting the HSSD for this curve (see note 5) would be to provide a flatter horizontal curve. By increasing the radius of the proposed curve from the current design of 1788/1800 ft. to 2260 ft., HSSD for this curve would meet design criteria. However, because of the complex geometry through the main I-81/I-690 Interchange, it is not possible to modify the alignment of the curve without modifying the geometry of I-81 northbound, I-690 westbound, I-690 eastbound and many of the interconnect ramps. This level of modification would essentially mimic alternative option V-2, which would result in approximately twelve (12) additional building impacts, nine (9) of which are on or eligible for listing on the National Register of Historic Places. The additional ROW impact costs that would be associated with fully meeting the HSSD criteria are estimated to be $20.0 M. In addition, several of these building could also present additional social and economic impacts as well as unique relocation challenges. For example:
    a. Nettleton Commons is a large building having both commercial and residential uses. As this building contains approximately 60 apartments and several businesses, acquisition of the building would impact a large number of residents and businesses in the core downtown area.
    b. The Community Reentry Center is operated by the Federal Bureau of Prisons as a halfway house for helping to transition released federal prisoners back into society. Recent attempts to relocate this facility proved to be controversial as community concerns included proximity to churches, homes, libraries and schools, so if this building is impacted by this project, it is anticipated this would present difficult and unique relocation challenges.
    c. Snowden Apartments is a very large apartment building with nearly 200 apartments and 350 residents. But this building is also very unique in that nearly 80% of the residents are under the

supervision of the NYS Department of Corrections and Community Service as parolees' who are registered sex offenders. If this building is impacted, it is anticipated that it would present unique and difficult relocation challenges.





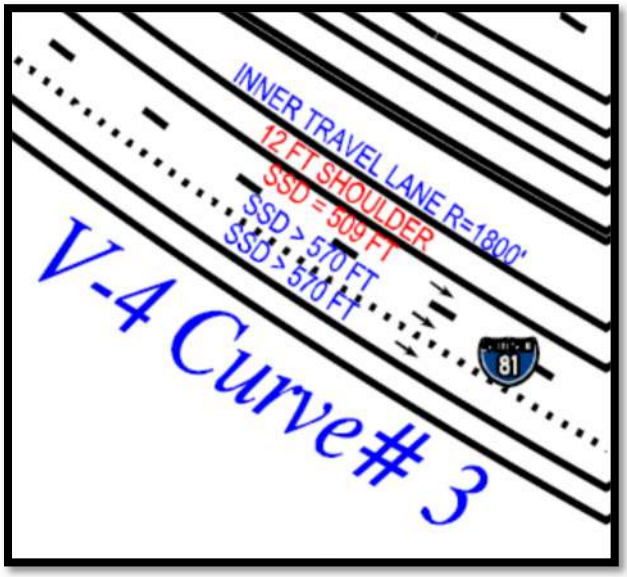


Figure 1

Justification Number A-3-1-04

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81 Southbound - Viaduct Alternative		
Project Type: New Construction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 48,100 (2050)	**% Trucks:** 16	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: Curve 4 - H20 STA. 185+50 TO H20 STA. 171+00 See Note 1.

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.051013° Long: -76.147175° **TO** Lat: 43.048781° Long: -76.143413°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 570'	**Design Speed:** 60 mph
Existing Value: 462'	**Recommended Speed - Existing:** 35 mph
Proposed Value: 426'/443' See note 1&2	**Recommended Speed - Proposed:** 50 mph

2. Accident Analysis

Current Accident Rate[1]**:** 3.07 ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 Note 3 ◉ **acc/mvm** ○ **acc/mev**
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 4

3. Cost Estimates

Cost to fully meet standards: $8.6 Million .See note 5	**Cost(s) for incremental improvements:** $1.4 Million. See note 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Appropriate curve warning signs will be posted, and the Advisory Speed (W13-1) plaque may be used as supplement of warning signs to indicate the non-standard HSSD condition. An open rail system was also considered and dismissed because it would be difficult to maintain, result in long term operational issues, and would be inconsistent with the Department's bridge rail policy in Chapter 6 (Section 6.3.3.1) of the Bridge Manual.

5. Compatibility with Adjacent Segments and Future Plans

Over-widening of the inside shoulder to a maximum of 12 feet to increase HSSD is consistent with other curves in the area and there are no future plans for adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

Two approaches were evaluated to fully meet standards:
1)Additional over-widening of the inner side shoulder (from 12ft to 27ft). See Note 5
2)Increasing the proposed curve radii from 1364ft to 2260ft would require realignment of the entire interchange area, resulting in a design similar to Alternative Option V-2 and significantly increasing the number of building impacts See Note 7

7. Proposed Treatment (i.e., recommendation)

Provide a 12' max shoulder width to mitigate the non-standard stopping sight distance. Provide warning signs as appropriate.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification
A-3-1-04
(Attachment)

1. Non-Standard Horizontal Stopping Sight Distance (HSSD) condition applies to the inside “Exit Only” lane and the middle decision lane as it pertains to traffic that is exiting to the Harrison Street Exit Ramp as sight distance is controlled by the concrete bridge barrier that is located at edge of proposed shoulder. Traffic in the two southbound thru lanes, including the middle decision lane that is continuing southbound on I-81 meets HSSD criteria. (See Figure 1).
2. Proposed minimum HSSD of 443/426 feet, (inner “Exit Only" lane) meets 50 mph HSSD design standard and the proposed minimum HSSD of 570/553 feet (middle decision lane for exiting traffic only) meets 55 mph HSSD design standard, and is based on providing a widened 12 ft. shoulder on the inside of the curve for the length of the curve. Thru traffic in the middle decision lane that is continuing southbound on I-81 SB would meet HSSD design criteria. If a standard 10-foot shoulder were provided, the minimum HSSD would be 418/402 feet (inner “Exit Only” lane) and 560/534 feet (middle decision lane for exiting traffic only).
3. Rate reported is crashes per million vehicle miles (acc/mvm) for linear highway segments. The Statewide Crash Rate is from the published *Average Crash Rates for State Highways By Facility Type* (Based on crash data January 1, 2015 to December 31, 2016), based on an Urban, Divided 4 lane highway.
4. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 38 crashes occurred in this curve segment – of which 15 crashes were identified to be potentially related to the existing non-standard sight distance feature. The number of crashes potentially related to the existing non-standard feature equates to 39% of total crashes, and a crash rate of 1.21 acc/mvm). The proposed design would slightly decrease the HSSD for the inner lane approximately 4% below the existing HSS but still achieve nearly 75% of the design criteria standard. The middle decision lane for exiting traffic will achieve approximately 97% of the design criteria. The non-standard HSSD applies only to the inner most lane and the middle decision lane for exiting traffic (the other lanes all meet HSSD criteria, see Figure 1.
5. The cost estimate is based on one potential approach to fully meet the standard for HSSD, which is providing additional widening of the inner side shoulder width from 12 ft. to 24ft/27 ft. along the length of the curve. (See note 7 for another potential approach). While widening the inside shoulder an additional 12 ft./15 ft. would satisfy the HSSD criteria for this curve, there are other concerns that this would introduce. Additional concerns include; potentially encouraging unauthorized use of the wider shoulder as a travel lane, snow removal and de-icing logistics during winter weather, increased long term maintenance costs and a reduced offset to one (1) building. As shown on Figure 2, over widening of the shoulder to meet HSSD would potentially increase impacts to building #12B by reducing the offset from the building to the elevated highway from 24 ft. to12 ft. The estimated cost to over-widen the shoulder of this curve is $8.6 M, but this curve is just one of five curves within the interchange area that would need to be widened above what is proposed to meet HSSD criteria. The total cost to over-widen the shoulder of all five curves is estimated to be $26.0 M.
6. The design criterion for the right shoulder along this segment of I-81 is 10 feet. If a 10-foot wide left shoulder were provided, the resultant HSSD would be 402-418 feet (inner lane), 534 feet (middle lane). By increasing the right shoulder width to 12 feet, the resultant HSSD increases to 426-443 feet (inner lane), 553 feet (middle lane), which is a significant improvement over the existing HSSD and represents an improvement to 75-78% (inner lane), 97% (middle lane) of the Design Criteria standard. The cost estimate for incremental improvement is $1.4 Million.
7. A second potential approach to fully meeting the HSSD for this curve (see note 5) would be to provide a flatter horizontal curve. By increasing the radius of the proposed curve from the current design of 1364/1260 ft to 2260 ft. and retaining a standard tangent length between curves 3 and 4 (see Figure 3), HSSD for through lanes of this curve would meet 60 MPH design criteria but the HSSD for a limited length of the ramp exit only lane would meet 50 MPH design criteria (see Figure 4). Use of this flatter curve would avoid direct impacts to six (6) buildings impacted by the current configuration but would require the acquisition of six (6) other buildings and substantially reduce the offset to three (3) buildings as noted below. In addition, this is one of five curves in the interchange area and the additional ROW impact costs that would be associated with fully meeting the HSSD criteria for all five curves is estimated to be $20.0 M. The follow summarizes the specific ROW impacts of realigning only this one curve.

a. Buildings 10, 12A, 13, 14, 31 and 32 would no longer be directly impacted, but buildings 3, 12B, 12C, 12D, 35 and 36 would be directly impacted by flattening the curve. As buildings 12A, 12B and 12D are on or eligible for listing on the National Register of Historic Places, the net effect of the realignment is one (1) additional eligible resource would be directly impacted.
b. While buildings 10, 12A and 13 would no longer be directly impacted by the flatter curve, they would still be relatively close (22', 50' and 3'), respectively to the edge of the realigned highway.
c. The offset from the highway to the building on the NW corner of Washington/Townsend would be reduced from 120' to 63'.
d. The offset from the highway to the building on the SE corner of Washington/Townsend would be reduced from 80' to 26'.
e. The offset from the highway to the building on the NW corner of Genesee/McBride would be reduced from 60' to 38'.

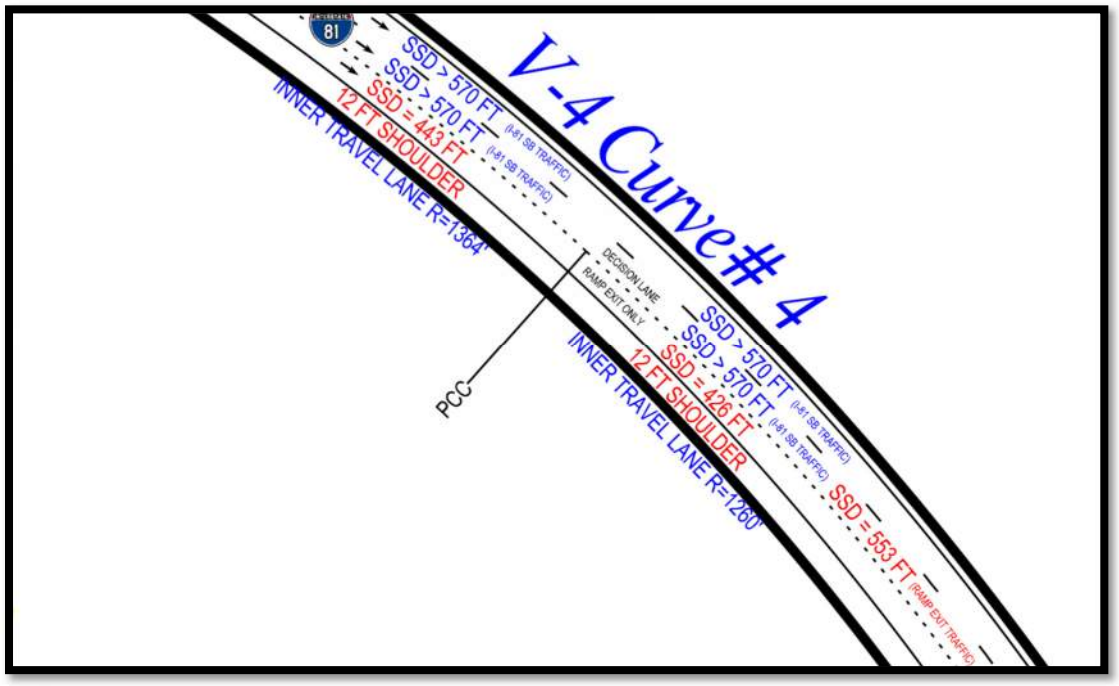


Figure 1

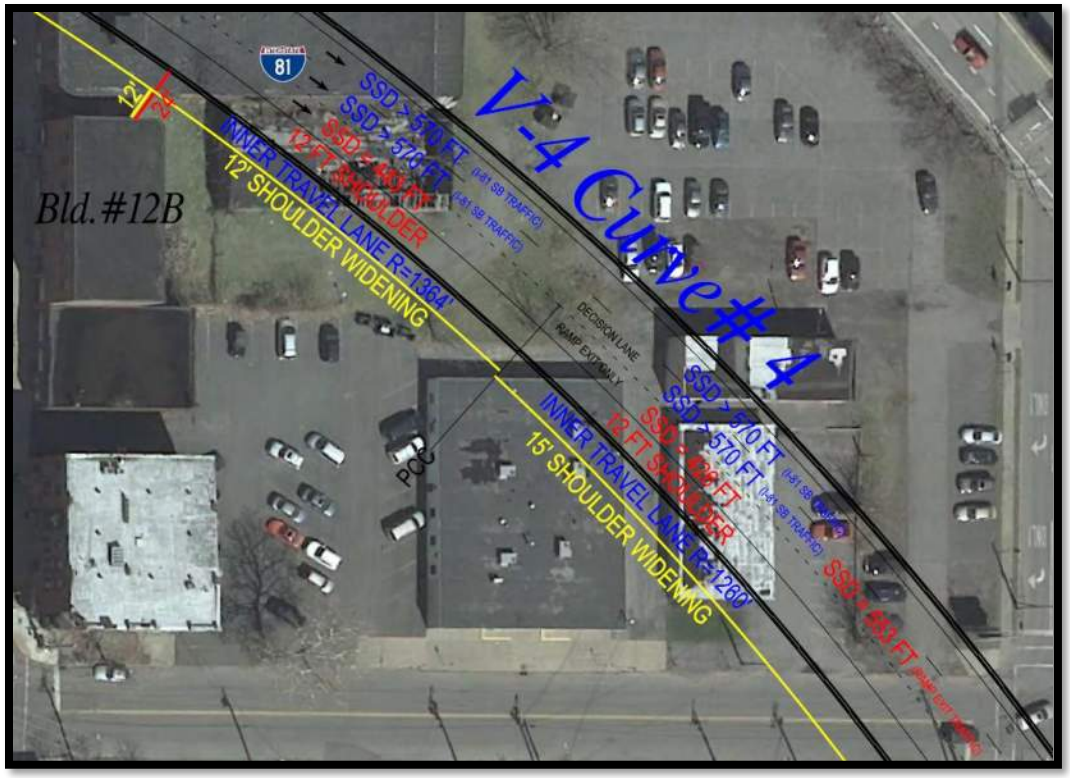


Figure 2 - Current Design

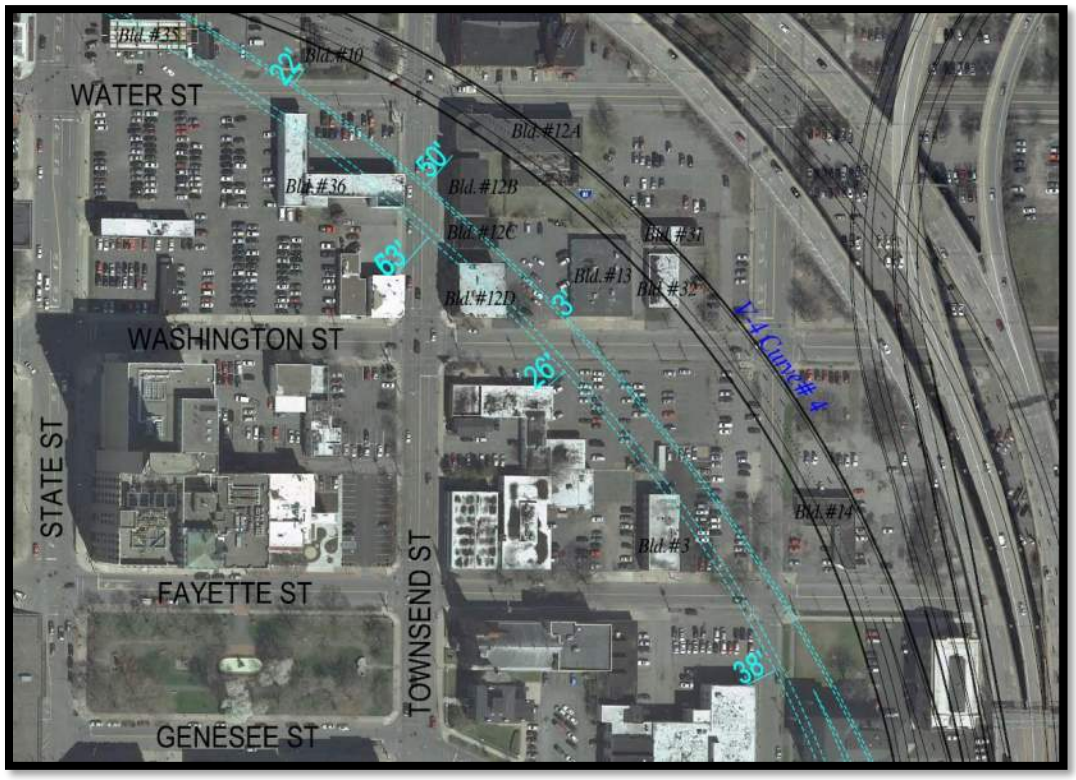


Figure 3

Figure 4 – Flatter Curve

Justification Number A-3-1-05

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-690 Eastbound - Viaduct Alternative		
Project Type: New Construction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 44,600 (2050)	**% Trucks:** 16	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: Curve 6 - H30 STA. 42+00 TO H30 STA. 56+00 See Note 1.

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.052805° Long: -76.151041° **TO** Lat: 43.051242° Long: -76.146321°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 570'	**Design Speed:** 60 mph
Existing Value: 337'	**Recommended Speed - Existing:** 35 mph
Proposed Value: 509' See note 1&2	**Recommended Speed - Proposed:** 55 mph

2. Accident Analysis

Current Accident Rate[1]**:** 1.71 ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 Note 3 ◉ **acc/mvm** ○ **acc/mev**
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 4

3. Cost Estimates

Cost to fully meet standards: $4.0 Million. See note 5	**Cost(s) for incremental improvements:** $7.0 Million. See note 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Appropriate curve warning signs will be posted, and the Advisory Speed (W13-1) plaque may be used as supplement of warning signs to indicate the non-standard HSSD condition. An open rail system was also considered and dismissed because it would be difficult to maintain, result in long term operational issues, and would be inconsistent with the Department's bridge rail policy in Chapter 6 (Section 6.3.3.1) of the Bridge Manual.

5. Compatibility with Adjacent Segments and Future Plans

Over-widening of the inside shoulder to a maximum of 12 feet to increase HSSD is consistent with other curves in the area and there are no future plans for adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

Two approaches were evaluated to fully meet standards:
1)Additional over-widening of the inner side shoulder (from 12ft to 77ft). See Note 5
2)Increasing the proposed curve radii from 1800ft to 2260ft would require realignment of the entire interchange area, resulting in a design similar to Alternative Option V-2 and significantly increasing the number of building impacts See Note 7

7. Proposed Treatment (i.e., recommendation)

Provide a 12' max shoulder width to mitigate the non-standard stopping sight distance. Provide warning signs as appropriate.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification
A-3-1-05
(Attachment)

1. Non-Standard Horizontal Stopping Sight Distance (HSSD) condition applies to inside travel lane only as sight distance is controlled by the concrete bridge barrier that is located at edge of proposed shoulder (See Figure 1).
2. Proposed minimum HSSD of 509 feet meets 55 mph HSSD design standard and is based on providing a widened 12 ft. shoulder on the inside of the curve for the length of the curve. If a standard 4-foot shoulder were provided, the minimum HSSD would be 379 feet.
3. Rate reported is crashes per million vehicle miles (acc/mvm) for linear highway segments. The Statewide Crash Rate is from the published *Average Crash Rates for State Highways By Facility Type* (Based on crash data January 1, 2015 to December 31, 2016), based on an Urban, Divided 4 lane highway.
4. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 29 crashes occurred in this curve segment, of which 9 crashes were identified to be potentially related to the existing non-standard sight distance feature. The number of crashes potentially related to the existing non-standard feature equates to 31% of total crashes, and a crash rate of 0.53 acc/mvm). The proposed design includes an incremental improvement (shoulder widened to 12') which would increase the HSSD approximately 51% Above the existing HSSD and also achieve nearly 89% of the design criteria standard. In addition, the non-standard HSSD applies only to the inner most lane (the other lanes all meet HSSD criteria, see Figure 1).
5. The cost estimate is based on one potential approach to fully meet the standard for HSSD, which is providing additional widening of the inner side shoulder width from 12 ft. to 17 ft. along the length of the curve. (See note 7 for another potential approach). While widening the inside shoulder an additional 5 feet would satisfy the HSSD criteria for this curve, there are other concerns that this would introduce. Additional concerns include; potentially encouraging unauthorized use of the wider shoulder as a travel lane, snow removal and de-icing logistics during winter weather and increased long term maintenance costs. The estimated cost to over-widen the shoulder of this curve is $4.0 M, but this curve is just one of five curves within the interchange area that would need to be widened above what is proposed to meet HSSD criteria. The total cost to over-widen the shoulder of all five curves is estimated to be $26.0 M.
6. The design criterion for the left shoulder along this segment of I-81 is 4 feet. If a 4-foot wide left shoulder were provided, the resultant HSSD would be 379 feet. By increasing the left shoulder width to 12 feet, the resultant HSSD increases to 509 feet, which is a significant improvement over the existing HSSD and represents an improvement to 89% of the Design Criteria standard. The cost estimate for incremental improvement is $7.0 Million.
7. A second potential approach to fully meeting the HSSD for this curve (see note 5) would be to provide a flatter horizontal curve. By increasing the radius of the proposed curve from the current design of 1800 ft. to 2260 ft., HSSD for this curve would meet design criteria. However, because of the complex geometry through the main I-81/I-690 Interchange, it is not possible to modify the alignment of the curve without modifying the geometry of I-690 westbound, I-81 northbound, I-81 southbound and many of the interconnect ramps. This level of modification would essentially mimic alternative option V-2, which would result in approximately twelve (12) additional building impacts, nine (9) of which are on or eligible for listing on the National Register of Historic Places. The additional ROW impact costs that would be associated with fully meeting the HSSD criteria are estimated to be $20.0 M. In addition, several of these building could also present additional social and economic impacts as well as unique relocation challenges. For example:
    a. Nettleton Commons is a large building having both commercial and residential uses. As this building contains approximately 60 apartments and several businesses, acquisition of the building would impact a large number of residents and businesses in the core downtown area.
    b. The Community Reentry Center is operated by the Federal Bureau of Prisons as a halfway house for helping to transition released federal prisoners back into society. Recent attempts to relocate this facility proved to be controversial as community concerns included proximity to churches, homes, libraries and schools, so if this building is impacted by this project, it is anticipated this would present difficult and unique relocation challenges.

c. Snowden Apartments is a very large apartment building with nearly 200 apartments and 350 residents. But this building is also very unique in that nearly 80% of the residents are under the supervision of the NYS Department of Corrections and Community Service as parolees' who are registered sex offenders. If this building is impacted, it is anticipated that it would present unique and difficult relocation challenges.

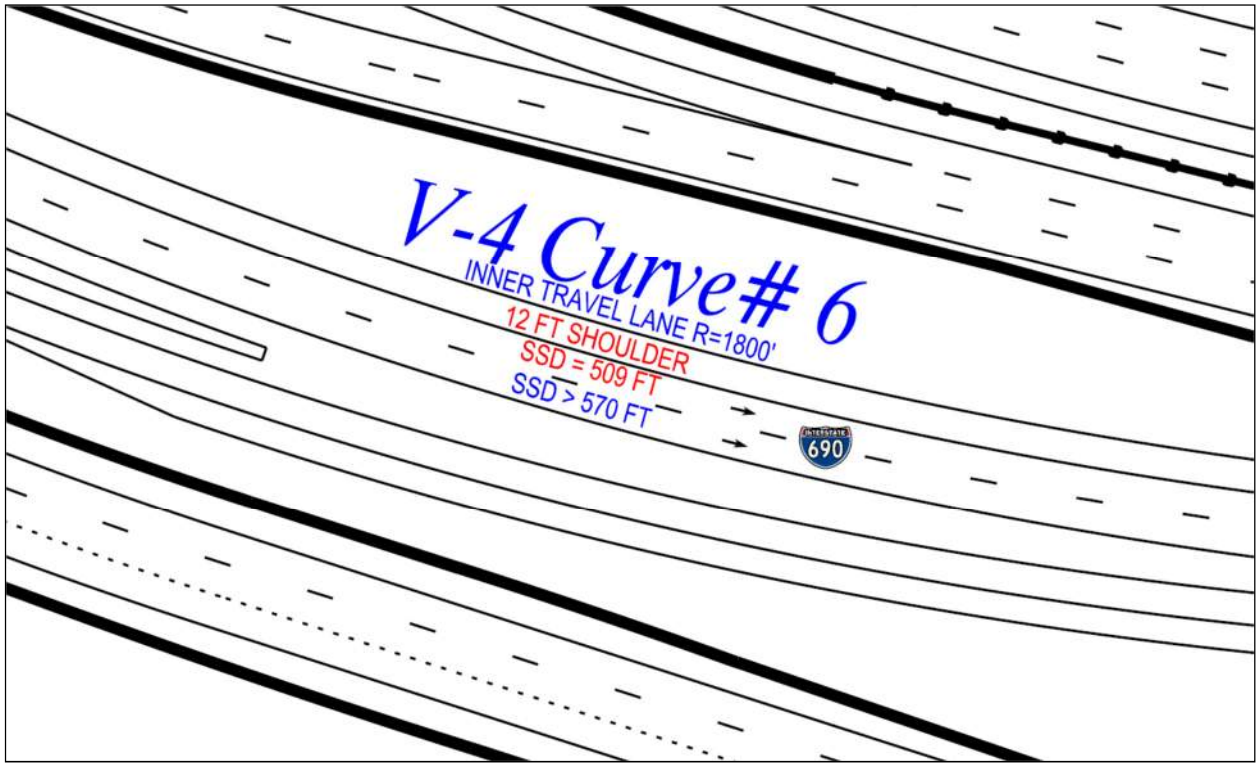


Figure 1

Justification Number A-3-1-06

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81 Northern Segment, Butternut St. to Hiawatha Blvd. - Viaduct Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 46,512 NB; 48,487 SB	**% Trucks:** 16	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Shoulder Width

Location: I-81 NB STA H10 122+50 TO H10 126+50; I-81 SB STA H20 215+00 TO H20 234+80

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.056992° Long: -76.153650° **TO** Lat: 43.061850° Long: -76.157273°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 10 ft. Left and Right	**Design Speed:** 60 mph
Existing Value: 3 ft. Left, 6 ft. Right	**Recommended Speed - Existing:** 55 mph
Proposed Value: Varies 7 to 10 ft. Left and 7 to 10 ft. Right (see note 1)	**Recommended Speed - Proposed:** 55 mph

2. Accident Analysis

Current Accident Rate[1]**:** 2.77 ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 (note 5) ◉ **acc/mvm** ○ **acc/mev**
From 09/01/2014 **to** 08/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 4.

3. Cost Estimates

Cost to fully meet standards: 0.20M + ROW & Building Acquisition (Note 2)	**Cost(s) for incremental improvements:** 0 (Note 3)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Provide standard 10 ft. left and right shoulders widths to extent practical and provide limited sections of 7 ft. shoulder in select locations to avoid significant increases in property and building impacts (see Note 1).

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

NB STA H20 122+50 TO H10 126+50 Right Shoulder: in order to provide a left side (inner side of curve) shoulder width of 10 ft, the maximum right shoulder width could be provided is 7 ft (vs. 10' right shoulder criteria), for a total length of ~400 ft, to avoid impacting Adirondack Furniture building; SB STA R20 215+00 TO H20 234+80 Left Shoulder: provide 7 ft left side shoulder to avoid impacts to the building south of Spencer Street, and to the building south of W. Division St., including access to the area behind the building where a transformer is located. The proposed I-81 median barrier width would be reduced to 3 ft between the cross bridges to provide room for a 7 ft left shoulder width except at the cross bridges, where the shoulder width

7. Proposed Treatment (i.e., recommendation)

In the northbound direction, provide 10 ft left and right side shoulders except from NB STA H10 122+50 to H10 126+50, where a right shoulder width of 7 ft would be used adjacent to the existing retaining wall to be retained. In the southbound direction, provide 10 ft left and right shoulders except from SB STA H20 215+00 to H20 234+80, where a left shoulder width of 7 ft (4 ft adjacent to bridge piers) would be used.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification
A-3-1-06
(Attachment)

1. Along the northern segment of the I-81 Viaduct project, between Butternut Street and Hiawatha Boulevard, I-81 consists of 4 travel lanes in both directions for approximately 1.3 miles. The adjacent I-81 segment to the south is a 4-lane highway (2 lanes in each direction) as the additional lanes either begin or end as ramp lanes in the vicinity of Butternut Street. The adjacent I-81 segment to the north, consists of extended miles of 6 lane highway. It is anticipated that at some point in the future, the adjacent segment further north would be reconstructed, and at that time, the median side shoulders would be widened to meet current design criteria. Within this northern segment of the I-81 Viaduct project, it is proposed that both the left shoulder along the median side and the outside right shoulders would meet the current 10' width criteria for both bounds of highway, except for two sections:

   I-81 NB STA H10 122+50 TO H10 126+50

   To provide for a uniform 10' left shoulder width, a relatively short length (400 feet) of right-side shoulder would be limited to 7 feet, due to the proximity of an existing large retaining wall and the Adirondack Furniture building;

   I-81 SB STA H20 215+00 TO H20 234+80

   Between Spencer and Butternut streets, additional alignment shifting would cause significant additional property impacts, including impacts to the building just south of Spencer Street (706 N. Clinton Street) and to the building south of W. Division Street (311 Genant Drive). As a result, a total length of approximately 1,980 feet of left side shoulder would be non-standard. But as an incremental improvement, a width of 7 feet of left shoulder width would be achieved by reducing the median width from 6 feet to 3 feet, except at the Spencer Street Bridge, where a short length of 4-foot shoulder would be needed adjacent to the bridge pier.

2. The cost estimate is based on the cost estimate report dated January 11, 2018, to fully meet the standard of 10' shoulder width, which is providing additional widening of the shoulder width from 7 ft. to 10 ft. within the two separate areas described above. While widening the left shoulder an additional 4 feet would satisfy the 10' shoulder criteria, there are other concerns that this would introduce. Additional concerns include: impacts to the existing retaining wall and furniture store on the east side of NB I-81 and impacts to two buildings on the west side of SB I-81, south of Spencer St. as described above. The total cost to further widen the shoulders in these two segments from 7 feet to 10 feet is estimated to be $0.20 M, plus ROW impact costs.

3. The cost of incremental improvements is included in the revised base design.

4. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 160 crashes occurred along this highway segment, of which 20 crashes were identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 12.5% of total crashes, and a crash rate of 0.35 acc/mvm). The proposed design includes an incremental improvement (shoulder widened to 7-10' of both sides from 3' Left and 6' Right shoulder width) which would increase approximately 67-130% Above the existing shoulder width and achieve 70-100% of the design criteria standard.

5. Rate reported is crashes per million vehicle miles (acc/mvm) for linear highway segments. The Statewide Crash Rate is from the published *Average Crash Rates for State Highways By Facility Type* (Based on crash data January 1, 2015 to December 31, 2016), based on an Urban, Divided 4 lane highway.

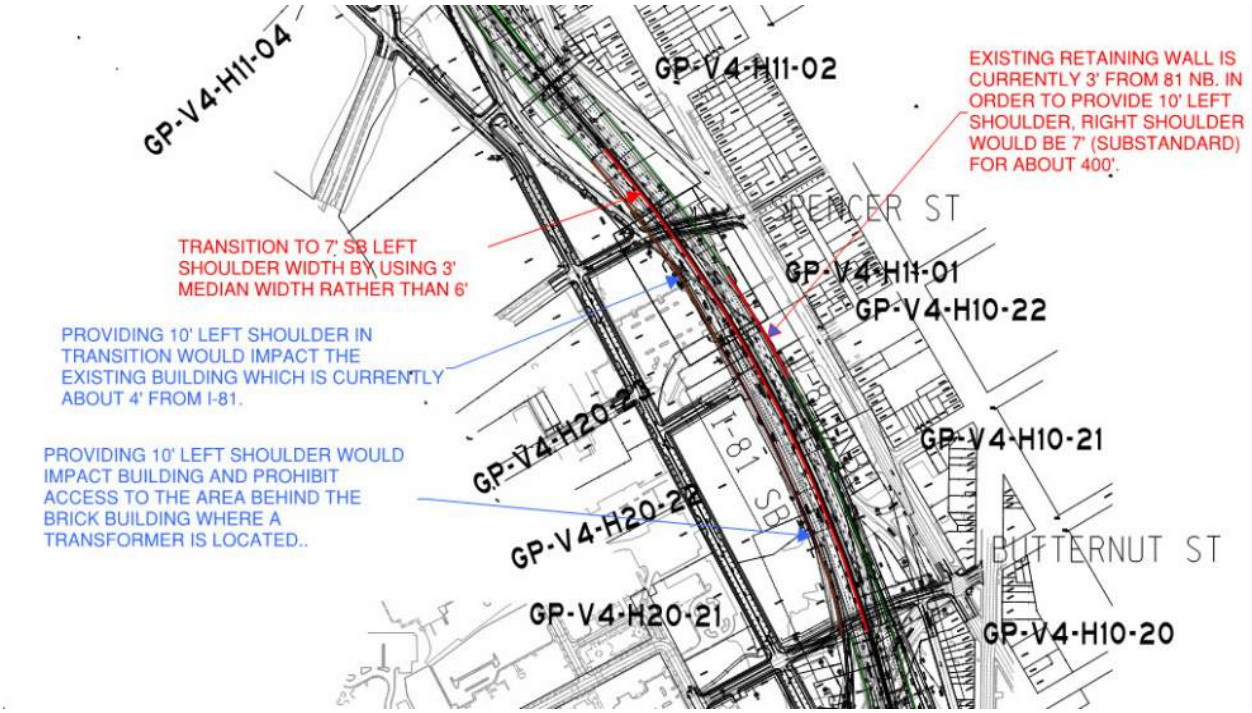

GP-V4-H11-04
GP-V4-H11-02
EXISTING RETAINING WALL IS CURRENTLY 3' FROM 81 NB. IN ORDER TO PROVIDE 10' LEFT SHOULDER, RIGHT SHOULDER WOULD BE 7' (SUBSTANDARD) FOR ABOUT 400'.
SPENCER ST
TRANSITION TO 7' SB LEFT SHOULDER WIDTH BY USING 3' MEDIAN WIDTH RATHER THAN 6'
GP-V4-H11-01
GP-V4-H10-22
PROVIDING 10' LEFT SHOULDER IN TRANSITION WOULD IMPACT THE EXISTING BUILDING WHICH IS CURRENTLY ABOUT 4' FROM I-81.
GP-V4-H20-22
GP-V4-H10-21
I-81 SB
PROVIDING 10' LEFT SHOULDER WOULD IMPACT BUILDING AND PROHIBIT ACCESS TO THE AREA BEHIND THE BRICK BUILDING WHERE A TRANSFORMER IS LOCATED..
GP-V4-H20-21
BUTTERNUT ST
GP-V4-H10-20

Figure 1

Justification Number A-3-1-07

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81 Southbound Off-Ramp to North Clinton Street - Viaduct Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 5617	**% Trucks:** 5%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius

Location: R27 STA 10+23 to R27 STA 13+27 (See Attachment)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.065820 Long: -76.163120 **TO** Lat: 43.065084 Long: -76.162942

Latitude and Longitude (Point Feature) Lat: N/A Long: N/A

Standard Value: 214'	**Design Speed:** 30 mph
Existing Value: N/A New Construction	**Recommended Speed - Existing:** 30 mph on
Proposed Value: 167'	**Recommended Speed - Proposed:** 25 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.43 ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A New Contruction

3. Cost Estimates

Cost to fully meet standards: N/A (see note 1)	**Cost(s) for incremental improvements:** N/A (see note 2)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Overhead curve warning and signal ahead signs will be placed in advance of the curve. Chevron alignments signs will be placed along the curve, as per the MUTCD.

5. Compatibility with Adjacent Segments and Future Plans

No future plans for adjacent segments of this ramp.

6. Other Factors

e.g., social, economic, and environmental

Providing a standard curve radius would require that North Clinton Street be relocated further west creating extensive ROW impacts with adjacent property and not relocating North Clinton Street would create a skewed intersection at North Clinton Street. (See Attached Figure)

7. Proposed Treatment (i.e., recommendation)

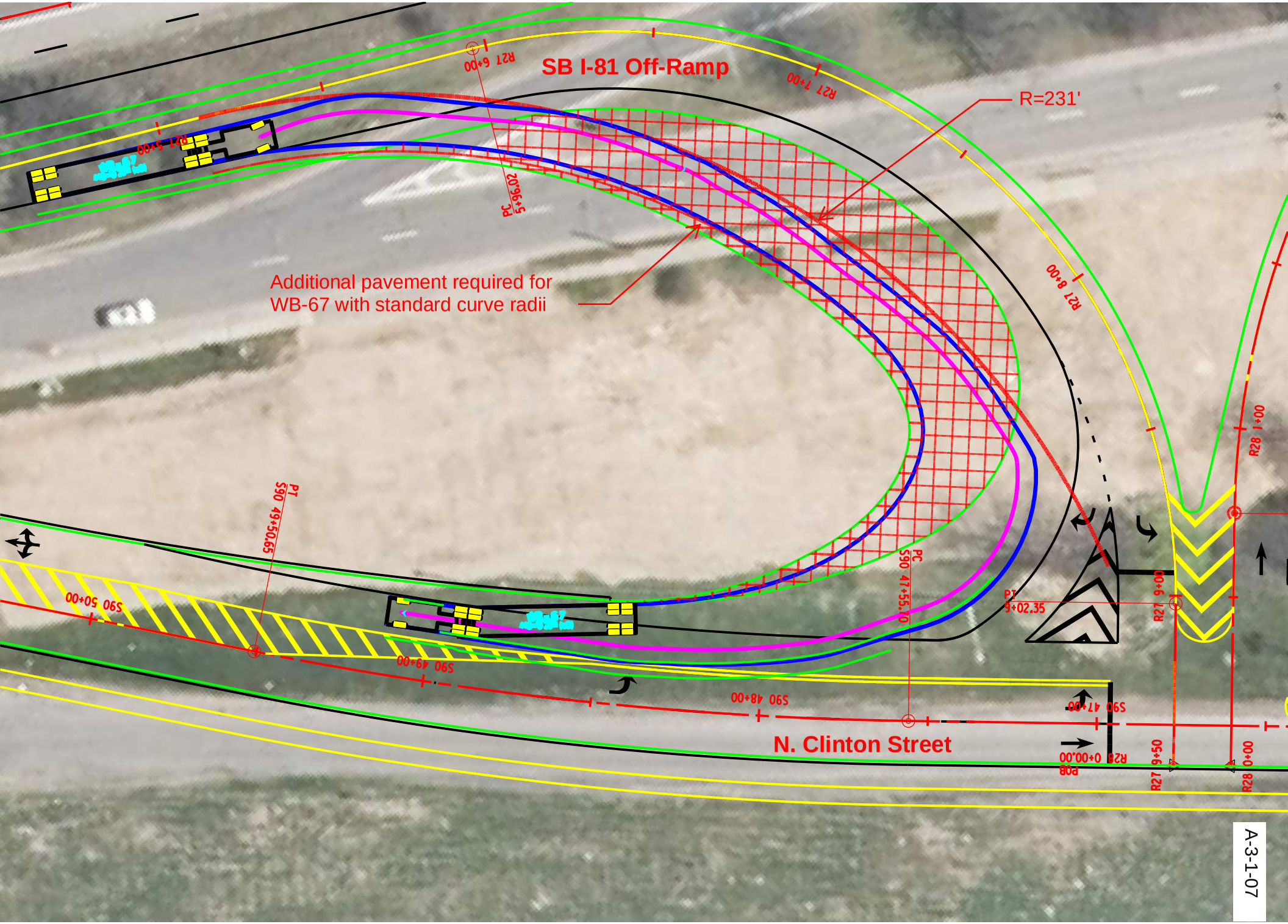
Propose non-standard curve radius with curve warning signs, signal ahead signs and chevron alignments signs.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Nonstandard Feature Justification
A-3-1-07
(Attachment)

1. The Proposed Design meets horizontal curve criteria for a 25 mph design speed. Providing a standard curve radius would require the relocation of North Clinton Street to the west creating extensive ROW impacts with adjacent property or create a skewed intersection at North Clinton Street. Providing a skewed intersection (see attached figure) would significantly widen the throat of the intersection to provide for truck turns. A much wider intersection could increase deliver confusion. Additionally, the non-standard curve is immediately adjacent to the new signalized intersection between the new off-ramp and North Clinton which is expected to cause traffic to be traveling well below the design speed.

2. Similarly, there are no feasible incremental improvements (see note 1).


SB I-81 Off-Ramp
R=231'
Additional pavement required for
WB-67 with standard curve radii
N. Clinton Street
A-3-1-07

Justification Number A-3-1-08

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Almond Street, Renwick Avenue to Burt Street - Viaduct Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Principal Arterial - Other		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 11,600(2050)	**% Trucks:** 3	○ NHS ◉ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius

Location: S74 STA 108+30 TO STA 111+35 (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.037531° Long: -76.141385° **TO** Lat: 43.038076° Long: -76.142102°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 371'	**Design Speed:** 35 mph
Existing Value: 150'	**Recommended Speed - Existing:** 25 mph
Proposed Value: 160'	**Recommended Speed - Proposed:** 25 mph

2. Accident Analysis

Current Accident Rate[1]**:** 0 ○ acc/mvm ◉ acc/mev	**Statewide Accident Rate:** 0.19 ○ acc/mvm ◉ acc/mev
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ○ Yes ◉ No

Anticipated accident rates, severity, and costs:

During the three-year analysis period from September 1, 2014 through August 31, 2017, there is no accident occurred on this segment.

3. Cost Estimates

Cost to fully meet standards: $1.7 Million Note 1	**Cost(s) for incremental improvements:** $1.5 Million. Note 2

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Curve warnings signs and delineation will be installed on both the southbound and westbound approaches to the curve. In addition, the implementation of signalized control at the Almond Street/Van Buren Street/Renwick Avenue intersection is anticipated to slow vehicles approaching the curve from the westbound direction. The existing intersection induces speeding in the westbound direction due to the lack of traffic control.

5. Compatibility with Adjacent Segments and Future Plans

The proposed design is consistent with the existing condition and adjacent segments. There are no further plans to further modify adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

Two options were evaluated to improve the curve. Figure 1 shows the additional impact of incrementally improving the the curve radius to 250ft. (30 mph), which would cause additional right of way impacts, including impacts to the existing parking lot and encroach close to an existing parking garage, while only providing marginal improvements. Figure 2 shows the additional impacts that would be caused by providing a standard curve radii (371 ft., 35 mph), which include more severe right of way impacts, including impacts to the Syracuse University Parking Garage to the north of Van Buren Street requiring demolition and acquisition of adjacent property.

7. Proposed Treatment (i.e., recommendation)

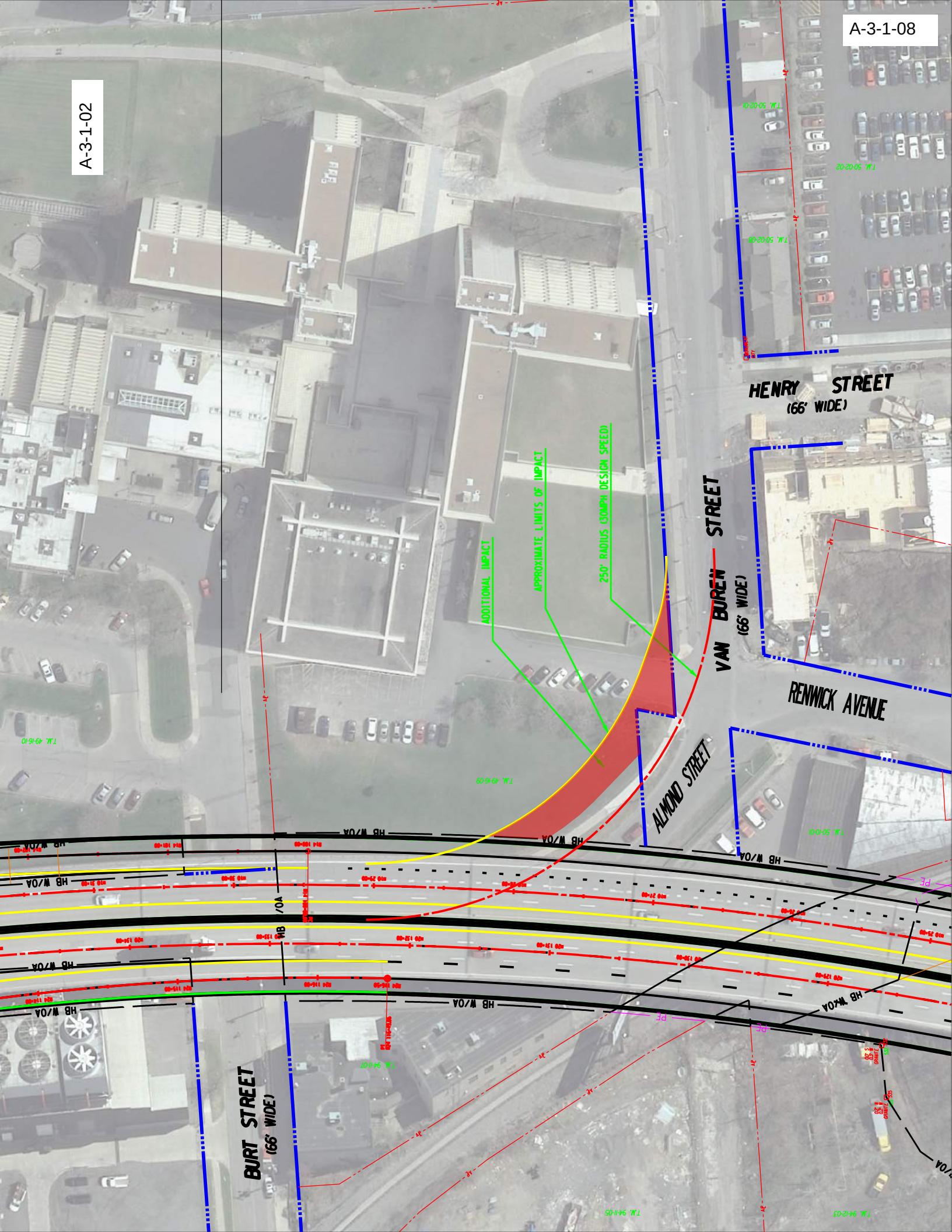
Retain proposed non-standard curve radii with Curve Warning signs and delineation.

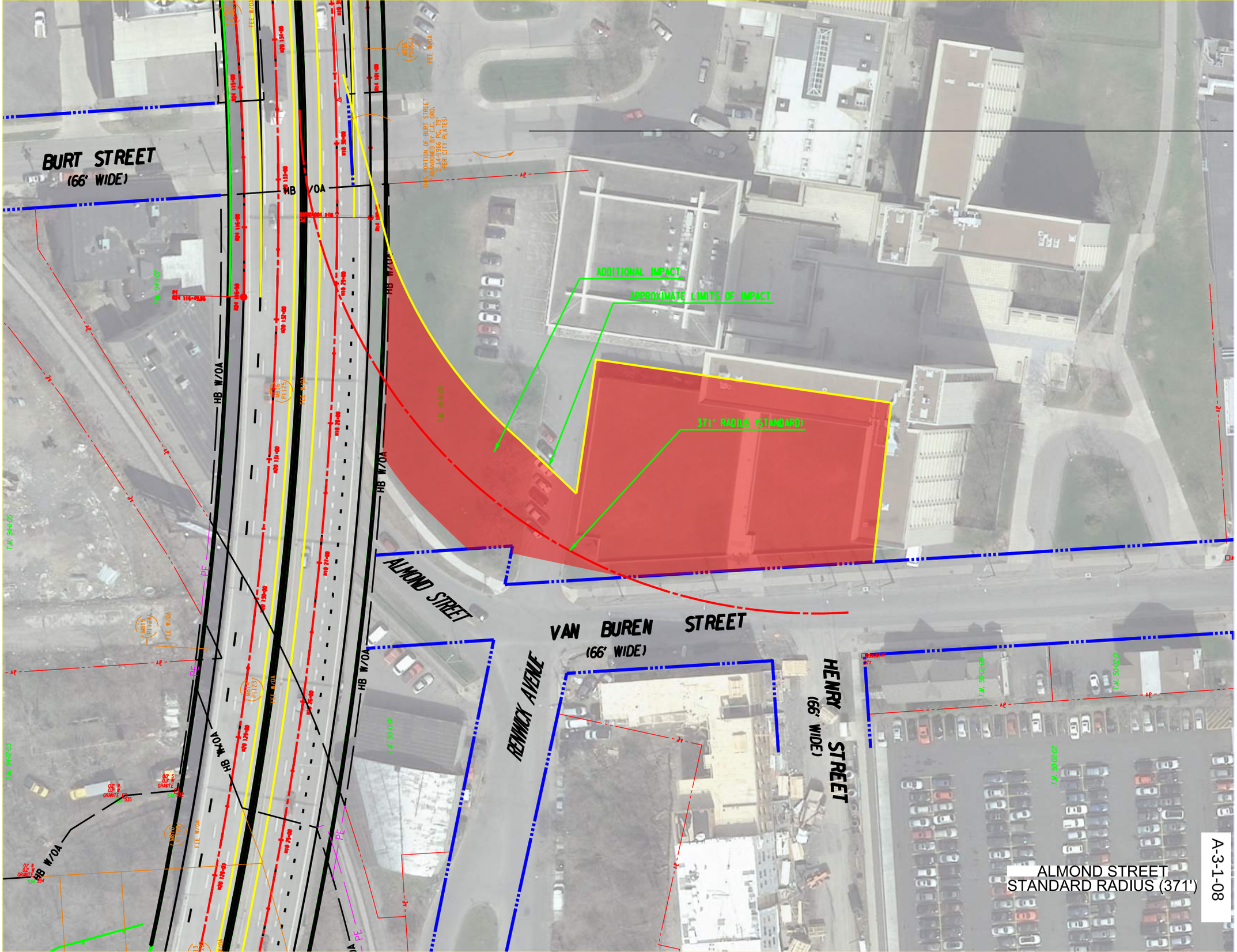
[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification
A-3-1-08
(Attachment)

1. The cost estimate of $1.7 Million includes estimated construction costs, permanent land acquisition costs and temporary easement costs that would be necessary to fully meet design standards. This includes acquisition and demolition of the Syracuse University Parking Garage to the north of Van Buren Street.

2. The incremental improvement cost estimate of $1.5 Million is based on the estimated construction costs associated with constructing a 250-ft. curve radius (30 mph design), as well as additional property acquisition costs and temporary easement costs.


A-3-1-02
A-3-1-08
HENRY STREET
(66' WIDE)
VAN BUREN STREET
(66' WIDE)
RENWICK AVENUE
ALMOND STREET
BURT STREET
(66' WIDE)
ADDITIONAL IMPACT
APPROXIMATE LIMITS OF IMPACT
250' RADIUS (30MPH DESIGN SPEED)
HB W/OA


BURT STREET
(66' WIDE)
HB W/OA
ADDITIONAL IMPACT
APPROXIMATE LIMITS OF IMPACT
371' RADIUS (STANDARD)
ALMOND STREET
VAN BUREN STREET
(66' WIDE)
RENWICK AVENUE
HENRY STREET
(66' WIDE)
A-3-1-08
ALMOND STREET
STANDARD RADIUS (371')

Justification Number A-3-1-09

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Fineview Place - Viaduct Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Local		**Design Classification (AASHTO Class):** Local - Urban	
ADT: 8,900 (2050)	**% Trucks:** 3	○ NHS ◉ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius

Location: S73 STA 101+08 TO 101+73 (At intersection with Renwick Ave) (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.036738° Long: -76.141753° **TO** Lat: 43.036882° Long: -76.141624°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 188'	**Design Speed:** 30 mph
Existing Value: 12'	**Recommended Speed - Existing:** 15 mph
Proposed Value: 40'	**Recommended Speed - Proposed:** 15 mph

2. Accident Analysis

Current Accident Rate[1]**:** 0.91 ○ acc/mvm ◉ acc/mev	**Statewide Accident Rate:** 0.19 ○ acc/mvm ◉ acc/mev
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ Yes ○ No

Anticipated accident rates, severity, and costs:

During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of one crash occurred on the segment of Renwick Ave, between MLK East and Van Buren St., and was identified to be potentially related to the existing non-standard Horizontal Curve Radius on Fineview Place near the intersection with Renwick Avenue. The number of crashes potentially related to the existing non-standard features equates to 100% of the total crashes, and a crash rate of 0.91 acc/mev.

3. Cost Estimates

Cost to fully meet standards: Infeasible due to geographic constraints.	**Cost(s) for incremental improvements:** Improvements are not feasible

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Curve warning signs and delineation may be installed on the northbound approach to the curve. Since the curve is located adjacent to the intersection with Renwick Ave., mitigation in the southbound direction is not warranted since vehicles will be turning into the curve from Renwick Avenue at turning speeds.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with existing conditions and adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

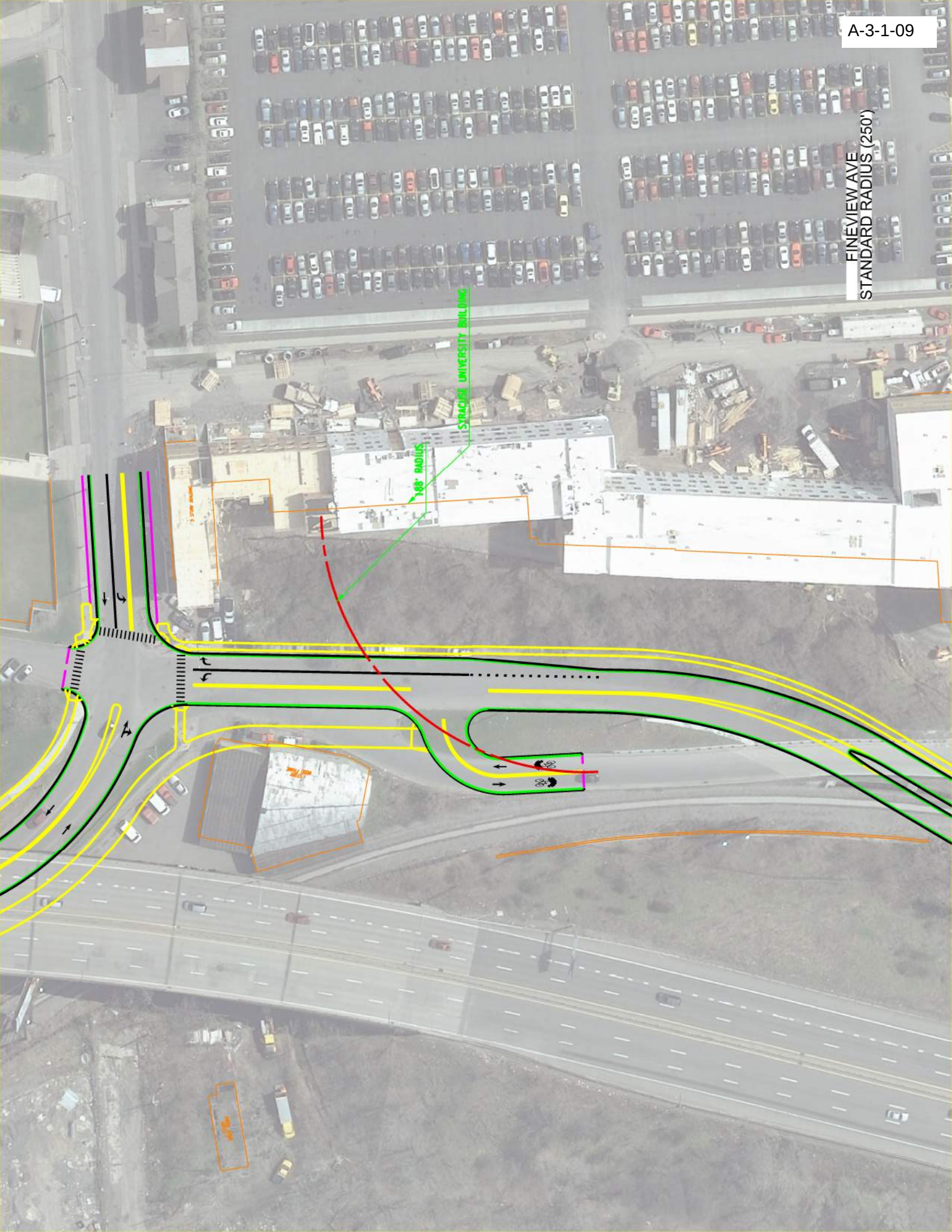
Due to geographic constraints, it is infeasible to fit a standard curve radius or to improve on the recommended curve. Due to the close proximity of the railroad, Renwick Ave., and the Syracuse University Housing building, even a modest increase would require realigning Renwick Ave. to the east, This would result in severe property impacts to the east. In addition, providing the proposed radius, would allow Fineview Place to intersect with Renwick Ave. at a near right angle and provide sufficient separation between the Almond St./Van Buren St./Renwick Ave. and the Renwick Ave./Fineview Pl. intersections. The increase in traffic along Renwick Ave. warrants additional separation between these 2 intersections to minimize conflicts.

7. Proposed Treatment (i.e., recommendation)

Provide non-standard horizontal curve radius with curve warning signs and delineation on the northbound approach to the curve.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

A-3-1-09


FINEVIEW AVE
STANDARD RADIUS (250')
SYRACUSE UNIVERSITY BUILDING
188' RADIUS

Justification Number A-3-1-10

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Renwick Ave - Viaduct Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Minor Arterial		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 14,700 (2050)	**% Trucks:** 3	○ NHS ◉ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: S72 STA 107+00 TO STA 109+00, Southbound Direction Only (Near Fineview Place bridge)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.036428° Long: -76.141562° **TO** Lat: 43.036929° Long: -76.141518°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 220'	**Design Speed:** 35 mph
Existing Value: 190'	**Recommended Speed - Existing:** 25 mph
Proposed Value: 190'	**Recommended Speed - Proposed:** 25 mph

2. Accident Analysis

Current Accident Rate[1]**:** 0.59 ○ acc/mvm ◉ acc/mev	**Statewide Accident Rate:** 0.19 ○ acc/mvm ◉ acc/mev
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ Yes ○ No

Anticipated accident rates, severity, and costs:

During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of one crash occurred on this segment, and was identified to be potentially related to the existing non-standard Horizontal Sight Distance in the southbound direction. The number of crashes potentially related to the existing non-standard features equates to 100% of the total crashes, and a crash rate of 0.59 acc/mev.

3. Cost Estimates

Cost to fully meet standards: $15.0 M	**Cost(s) for incremental improvements:** No incremental improvements

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Curve warning signs will be installed

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

Sight distance restriction only applies to the Southbound lane of Renwick Avenue. Providing standard stopping sight distance would require reconstruction of the Fineview Place and Railroad bridges and retaining walls. The Fineview place bridge and retaining walls are less than 10 years old.

7. Proposed Treatment (i.e., recommendation)

Retain existing non-standard stopping sight distance

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Justification Number A-3-1-11

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Van Buren Street - Viaduct Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Minor Arterial		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 17,200 (2050)	**% Trucks:** 3	◯ NHS ◯ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Maximum Grade

Location: Between Renwick Avenue and Genesee Street

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.037566 Long: -76.14072 **TO** Lat: 43.037529 Long: -76.141485

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 8%	**Design Speed:** 35 mph
Existing Value: 15.52%	**Recommended Speed - Existing:** 15 mph
Proposed Value: 15.52%	**Recommended Speed - Proposed:** 15 mph

2. Accident Analysis

Current Accident Rate[1]**:** 0.68 ◯ acc/mvm ◉ acc/mev	**Statewide Accident Rate:** 0.19 ◯ acc/mvm ◉ acc/mev
From 9/1/2014 **to** 8/31/2017	**Is the Nonstandard Feature a contributing factor?** ◯ Yes ◉ No

Anticipated accident rates, severity, and costs:

During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 5 crashes occurred on this segment, of which none of the crashes were identified to be potentially related to the existing non-standard grade (>8%) of Van Buren Street. The number of crashes potentially related to the existing non-standard grade equates to 0% of the total crashes, and a crash rate of 0 acc/mev.

3. Cost Estimates

Cost to fully meet standards: $7.0 M	**Cost(s) for incremental improvements:** N incremental improvements

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

A W7-1a (Hill with Grade) sign will be placed near the top of the non-standard grade to warn drivers in the downhill direction.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. there are no future plans to modify adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

Providing a standard grad would raise the proposed elevations about 11' near the intersection of Van Buren St/Almond St/Renwick Ave. this would require raising the grade of Renwick Ave and Almond Street to a max grade of 8% to meet Van Buren St. Raising elevations at this intersection would likely require severing the Burt Street intersection the acquisition of the SHA Administration building and potential access impacts to the Syracuse University Steam Plant. In addition, the Viaduct would have to further elevated, the driveway leading to the Syracuse University Parking Garage on the north side of Van Buren St. Would need to be closed and retaining walls would be required to avoid impacts to the railroad.

7. Proposed Treatment (i.e., recommendation)

Retain existing non-standard grad of 15.52%

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Justification Number A-3-1-12

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Erie Boulevard - Viaduct Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Principal Arterial - Other		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: varies 5,850 - 8,430 (2050)	**% Trucks:** 3	◉ NHS ○ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Vicinity of Almond Street

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.050910° Long: -76.152175° **TO** Lat: 43.050712° Long: -76.136458°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 11 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 11 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ◉ acc/mvm ○ acc/mev	**Statewide Accident Rate:** N/A ◉ acc/mvm ○ acc/mev
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ Yes ◉ No

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, there is a designated bicycle facility on Water Street (Empire State Trail) which is directly adjacent to Erie Boulevard and more conducive to bicycle use (see attached figure).

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Designated bicycle infrastructure is provided on an adjacent street (Water Street) which is part of the Empire State Trail systems (see attached figure).

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

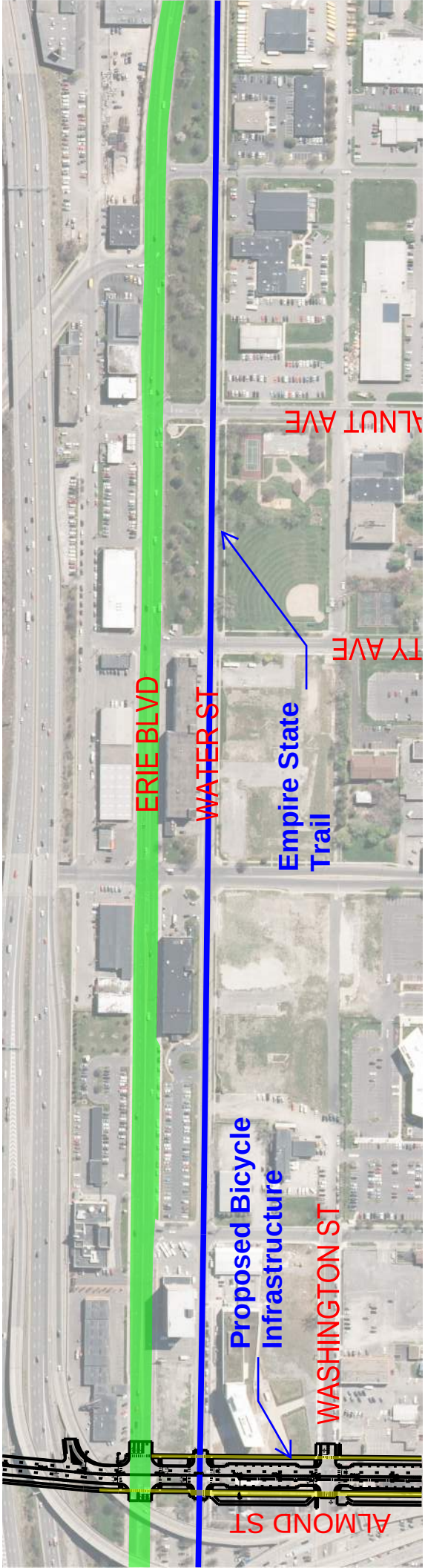
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on Erie Boulevard. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this instance, the parallel route is the designated Empire State Trail on Water Street, which has a much lower traffic volume, and is more conducive to mixed use traffic. The addition of signing to direct bicyclists to designated facilities will be considered during final design.

7. Proposed Treatment (i.e., recommendation)

Retain existing lane width of 11 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


ALNUT AVE
TY AVE
ERIE BLVD
WATER ST
Empire State
Trail
Proposed Bicycle
Infrastructure
WASHINGTON ST
ALMOND ST

Justification Number A-3-1-13

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Crouse Avenue - Viaduct Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Principal Arterial - Other		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 3050 (2050)	**% Trucks:** 3%	◯ NHS ◉ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Waverly Avenue and Genesee Street

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.040552° Long: -76.136733° **TO** Lat: 43.052200° Long: -76.136427°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 12 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 12 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ◯ acc/mvm ◯ acc/mev	**Statewide Accident Rate:** N/A ◯ acc/mvm ◯ acc/mev
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ◯ Yes ◯ No

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, there is a designated bicycle facility on University Avenue (Connective Corridor) to the east and the proposed bicycle facilities on Almond Street to the west, which are more conducive to bicycle use (see attached figure).

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

For the portion of Crouse Avenue between Waverly Avenue and Genesee Street, designated bicycle infrastructure is provided on parallel north-south city streets (Almond Street to the west and University Avenue to the east).

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

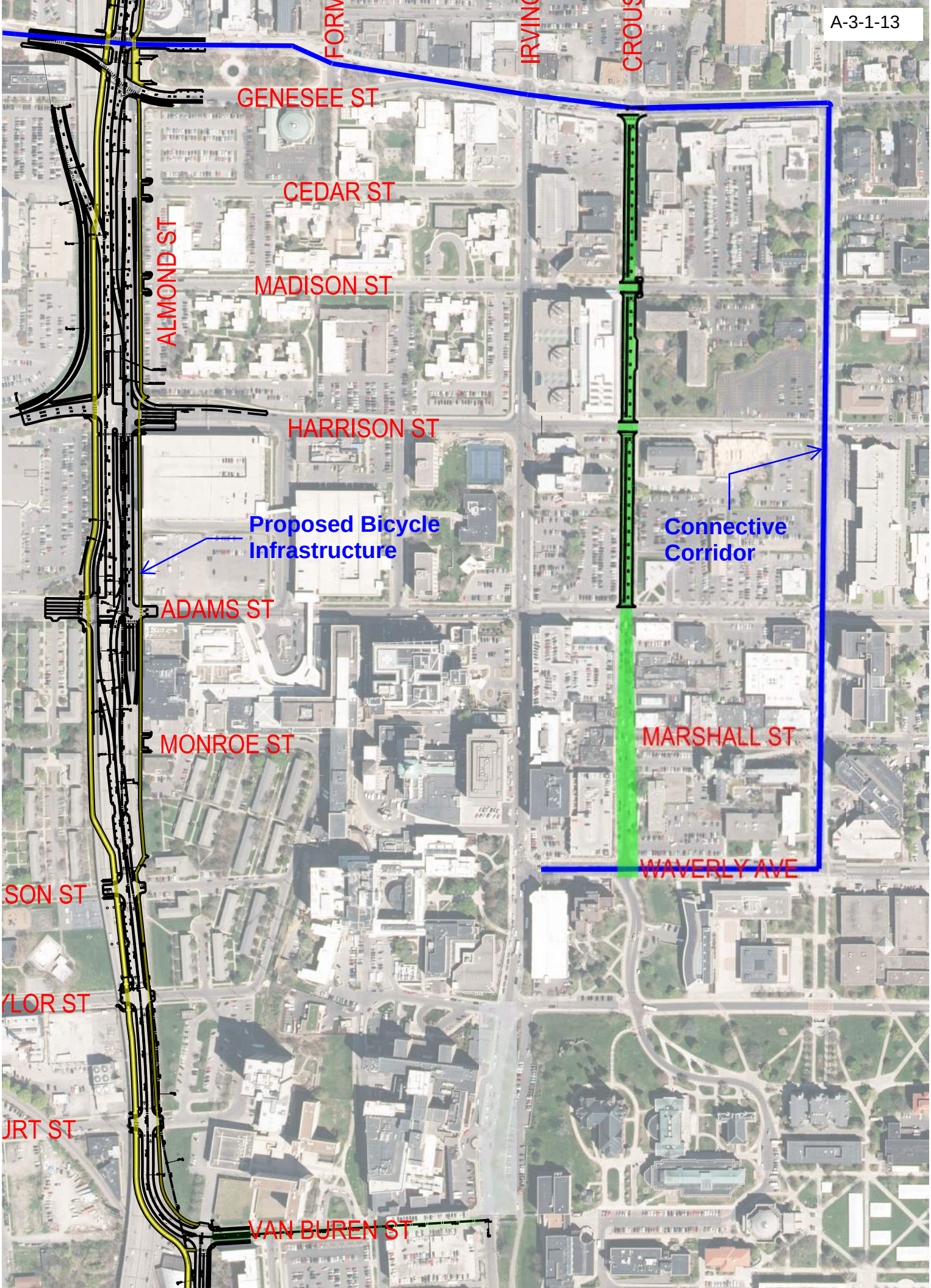
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on this segment of Crouse Avenue. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this instance, the parallel route is being provided on Almond Street to the west and University Avenue to the East, which are more conducive to bicycle use. The addition of signing to direct bicyclists to designated facilities will be considered during final design.

7. Proposed Treatment (i.e., recommendation)

Retain lane width of 12 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


GENESEE ST
CEDAR ST
ALMOND ST
MADISON ST
HARRISON ST
Proposed Bicycle Infrastructure
Connective Corridor
ADAMS ST
MONROE ST
MARSHALL ST
WAVERLY AVE
VAN BUREN ST

Justification Number A-3-1-14

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Van Buren Street - Viaduct Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Minor Arterial		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 14,275 (2050)	**% Trucks:** 3%	○ NHS ◉ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Almond Street and Irving Avenue

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.037537° Long: -76.141476° **TO** Lat: 43.037663° Long: -76.138257°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 12 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 12 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ acc/mvm ○ acc/mev	**Statewide Accident Rate:** N/A ○ acc/mvm ○ acc/mev
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ Yes ○ No

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, there is a designated bicycle facility on Fineview Place which will connect the shared use path along Almond Street with Raynor Avenue. See Item 6 and attached figure.

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

For Van Buren Street, designated bicycle infrastructure is provided on a parallel east-west city street (Raynor Avenue). See attached figure

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

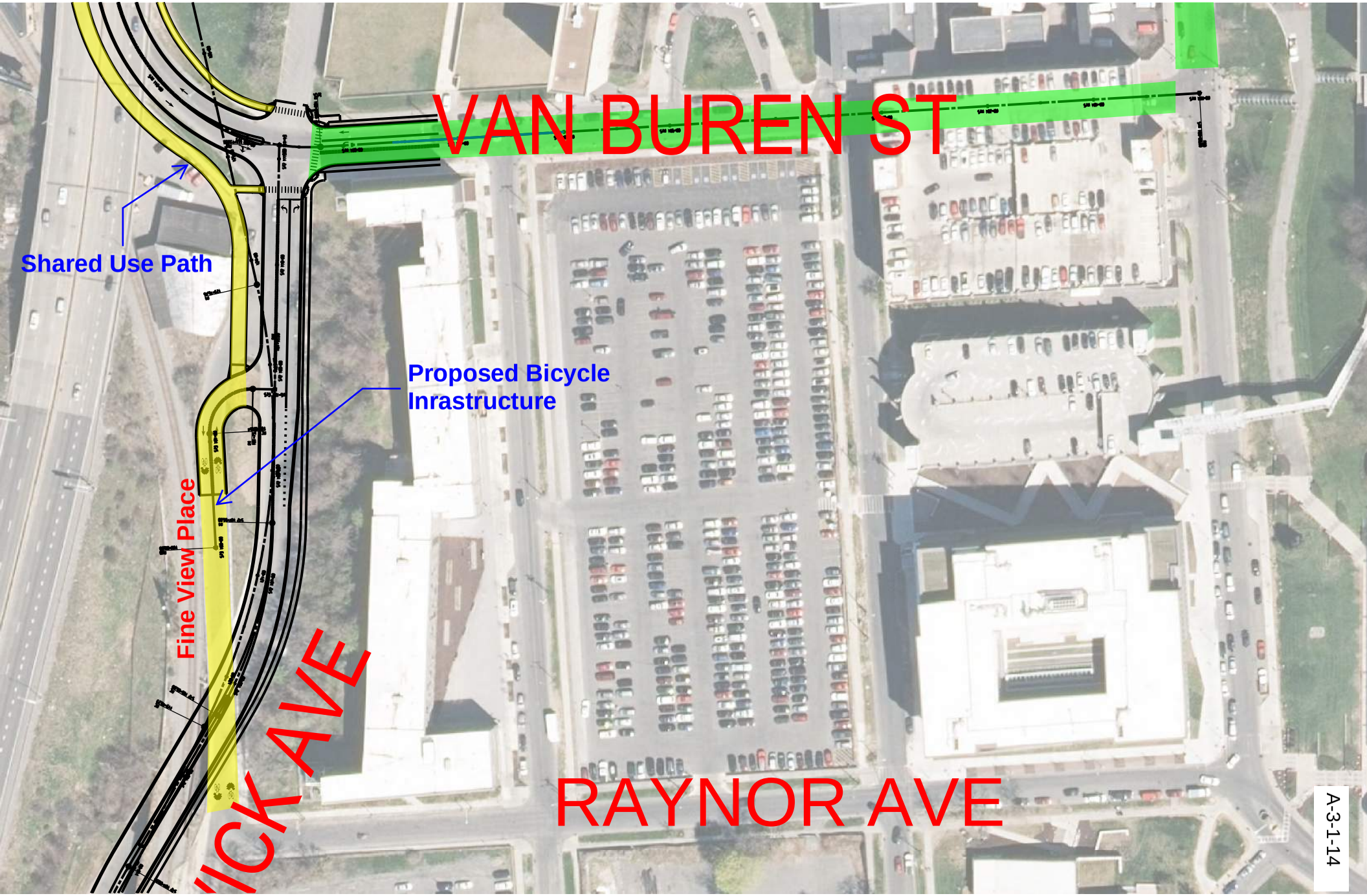
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on Van Buren Street. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, Van Buren Street is very steep (>15%) and not conducive to bicycle use and alternate bicycle facilities are available. In this instance, Fineview Place which has a much lower traffic volume, and is more conducive to mixed use traffic, will be marked as a shared lane, connecting the proposed shared use path along Almond Street to Raynor Avenue and Irving Avenue. The addition of signing to direct bicyclists to designated facilities will

7. Proposed Treatment (i.e., recommendation)

Retain lane width of 12 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


VAN BUREN ST
Shared Use Path
Proposed Bicycle
Inrastructure
Fine View Place
RAYNOR AVE
A-3-1-14

Appendix A.3.2
Non-Conforming Features to be Retained – Viaduct Alternative

The Non-Conforming Features recommended to be retained under the Viaduct Alternative are listed in Table A.3.2, followed by Non-Conforming Feature justification for each element.

Table A.3.2
Non-Conforming Features Recommended to be Retained Viaduct Alternative[1]

Location	Design Element	Recommended Design Standard [2]	Proposed Design [1]	Justification
NB I-81, H10 STA 124+54 to 125+60	Broken Back Curve	1500 ft.	106 ft.	1
WB I-690, H40 STA 88+28 to STA 92+89	Broken Back Curve	1500 ft.	461 ft.	2
Ramp - SB I-81 to WB I-690, C21 STA 9+38 to STA 14+24	Broken Back Curve	1500 ft.	486 ft.	3
Ramp – WB I-690 to NB I-81, C41 STA 102+98 TO to STA 105+40	Broken Back Curve	1500 ft.	242 ft.	4
Ramp – EB I-690 to NB I-81, C31 STA 3+754+40	Compound Curve Ratio	1:2 Ratio	1:3.3 Ratio	5
NB I-81, EB I-690 on-ramp to Court St. off-ramp. H10 124+54 to H11 116+67	Ramp Spacing	2000 ft.	1221 ft.	6
NB I-81, Pearl St. on-ramp to WB I-690 on-ramp. H10 106+25 to 109+75	Ramp Spacing	1000 ft.	350 ft.	7
NB I-81, Harrison St. on-ramp to 690WB off-ramp. H10 65+89 to 84+58	Ramp Spacing	2000 ft.	1869 ft.	8
NB I-81, Colvin St. on-ramp to MLK East off-ramp.	Ramp Spacing	1600 ft.	1150 ft.	9
SB I-81, WB I-690 off-ramp to Clinton St. off-ramp. H20 STA 212+15 to 217+70	Ramp Spacing	1000 ft.	555 ft.	10
WB I-690, West St. on-ramp to Geddes St. off-ramp.	Ramp Spacing	1600 ft.	1378 ft.	11
EB I-690, West St. off-ramp to NB I-81 off-ramp. H30 11+98 to 20+66	Ramp Spacing	1000 ft.	868 ft.	12
NB I-81 On-Ramp at Pearl Street - Driveway at 400 Pearl Street. (3)	Control of Access	50 ft.	20 ft.	13 and Exhibit A-3-2-01 [3]
NB I-81 Off-Ramp at Adams Street - Proximity with Almond Street. (3)	Control of Access	50 ft.	20 ft.	14 and Exhibit A-3-2-02 [3]
NB I-81 Off-Ramp at Bear St. – Proximity to two driveways at 424 Sunset Ave and 2523 Lodi St. (3)	Control of Access	300 ft.	120 ft.	15 and Exhibit A-3-2-03 [3]

Appendix A.3.2
Non-Conforming Features to be Retained – Viaduct Alternative

Location	Design Element	Recommended Design Standard (2)	Proposed Design	Justification
Southbound I-481 weave between the Interchange 3W (Westbound NY-5) on-ramp and Exit 3E (Eastbound NY-5)	LOS (weave)	LOS D or better	LOS E (2056 PM)	16
Eastbound I-690 BFS between Exit 9 (Bear Street) and the Interchange 10 (N. Geddes Street) on-ramp	LOS (BFS)	LOS D or better	LOS E (2056 AM)	17
EB I-690 between Interchange 10 (N. Geddes St) on- ramp and Exit 11 (West St)	LOS (weave)	LOS D or better	LOS E (2056 AM)	18
Eastbound I-690 diverge at Exit 14 (Teall Avenue)	LOS (diverge)	LOS D or better	LOS E (2026 AM)	19
N./S. Geddes Street at Erie Boulevard W.	LOS (intersection)	LOS D or better	LOS E (2026 PM)	20
NY 5/E. Genesee Street at the southbound I-481 off-ramp.	LOS (intersection)	LOS D or better	LOS E (2056 PM)	21
NY 5/E. Genesee Street/Highbridge Road at Bridlepath Road/Lyndon Road	LOS (intersection)	LOS D or better	LOS E (2026 AM), LOS E (2056 AM), LOS E (2056 PM)	21
Comstock Avenue at Stratford Street	LOS (intersection)	LOS D or better	LOS E (2026 PM), LOS E (2056 AM), LOS F (2056 PM)	23
Teall Avenue at James Street	LOS (intersection)	LOS D or better	LOS E (2056 PM)	24

Notes:

1) When design advances, further refinements would attempt to further improve this feature.
2) Refer to Other Design Parameters in **Appendix C-6.4.**.
3) Also refer to the following pages for the Access Control Justification Forms (Exhibits A-3-2-01 to A-3-2-04).
4) LOS = Level of Service, BFS = Basic Freeway Segment.

Justification for retaining Non-Conforming Feature:

1. This broken back curve is in an area bounded by Destiny USA and Lodi Street. To avoid ROW impacts on either side, a short tangent section is necessary. This is an existing broken back curve that is being maintained.

Appendix A.3.2

Non-Conforming Features to be Retained – Viaduct Alternative

2. This broken back curve was necessary to avoid ROW impacts on either side of I-690. It is important to note that this broken back curve would be seldom noticeable to the driver as the following curve is flat enough to not require superelevation.
3. This broken back curve was necessary to achieve the vertical clearance over the westbound I-690 exit ramp to West Street while reducing ROW impacts.
4. This broken back curve was necessary to align the ramp such that vertical clearance was achieved under the eastbound I-690 to northbound I-81 ramp.
5. This broken back curve is located in an area where the exit ramp from eastbound I-690 begins to split to proceed to either northbound or southbound I-81. The recommended non-conforming tangent is necessary to meet ramp spacing criteria, balance the geometry of both movements on the ramp and the need to reduce ROW impacts.
6. This weaving segment is created by the inclusion of the missing connector from eastbound I-690 to northbound I-81. The proposed spacing reflects 61 percent of the recommended spacing. To achieve acceptable operations at this weaving segment, an additional exit lane was added to the Court St. off-ramp to reduce the number of weaving maneuvers.
7. This spacing represents two consecutive entrance ramps. This spacing was necessary to maintain connectivity from these ramps. The existing spacing is almost nonexistent as the two ramps join northbound I-81 at about the same point. The proposed spacing is a substantial improvement while providing a sufficient acceleration lane for the Pearl Street on-ramp that currently is too short.
8. The minor reduction in spacing for this weaving segment is a result of the proposed location of the northbound I-81 to westbound I-690 off-ramp. Increasing this ramp spacing would result in this ramp not achieving vertical clearance as it crosses over northbound I-81. The proposed spacing reflects 93 percent of the recommended spacing.
9. This reduced weaving segment is a result of introducing a northbound I-81 exit ramp to Martin Luther King East. To achieve acceptable operations at this weaving segment, an additional exit lane was added to the northbound I-81off-ramp to reduce the number of weaving maneuvers.
10. This spacing is an existing condition created by the two consecutive exits to North Franklin Street and North Clinton Street Under this alternative, the North Franklin Street off-ramp would be removed. The new southbound I-81 to westbound I-690 ramp would be placed downstream of the relocated North Clinton Street exit. The non-conforming ramp spacing would remain, but the rearranged ramps provide significantly improved spacing from existing condition. In addition, properly spaced overhead signing would be provided and would provide motorists with clear directions about which lane they should be in for their intended exit.

Appendix A.3.2

Non-Conforming Features to be Retained – Viaduct Alternative

11. This existing weaving segment would remain but improved as vehicles on westbound I-690 would only need to move over one lane to use the North Geddes Street exit ramp. The existing configuration forces drivers to move over two lanes to exit therefore increasing potential conflicts. Increasing the spacing between these ramps would require moving one of the two ramps, thus increasing ROW impacts.
12. This spacing is a result of the new eastbound I-690 off-ramp to northbound I-81. Properly spaced overhead signing would be provided and would provide clear directions to motorists which lane they should be in for their intended exit.
13. Closing the driveway would require acquisition of the business. Refer to Exhibit A-3-2-01. Refer to Access Control Justification form, Exhibit A-3-2-01 on following pages.
14. Elimination of northbound Almond Street is not in keeping with the project objectives of enhancing connectivity. Refer to Access Control Justification form, Exhibit A-3-2-02 on following pages.
15. Closing these driveways would impact two residences. Refer to Access Control Justification form, Exhibit A-3-2-03 on following pages.
16. The LOS E condition would only apply to a single horizon year peak hour. This segment operates at LOS F in the no build 2056 condition and the LOS is improved as a result of the project. This segment is outside the construction limits of this alternative. Additional mitigation would entail reconstructing the Interchange with RT 5 to create a partial cloverleaf interchange which combines the southbound exit ramps into one combined two lane exit and constructing a new ramp terminal intersection.
17. The LOS E condition is associated with the downstream weaving segment (19) and would only apply to a single horizon year peak hour and travel speeds would not drop significantly below posted speeds. This segment is outside the construction limits of this alternative. Additional mitigation would entail widening eastbound I-690 to provide an auxiliary lane which may increase ROW impacts.
18. The LOS E condition would only apply to a single horizon year peak hour and travel speeds would not drop below posted speeds. Additional mitigation would entail widening eastbound I-690 to provide an auxiliary lane which may increase ROW impacts.
19. The LOS E condition would only apply to a single peak hour and travel speeds would not drop below posted speeds. This segment is outside the construction limits of this alternative. Additional mitigation would entail widening eastbound I-690 to provide an auxiliary lane which may increase ROW impacts.
20. The LOS E condition would only apply to a single peak hour and queues would not extend into adjacent intersections during these periods. This location is outside the construction limits of this alternative. Mitigation would entail traffic signal hardware upgrades, signal retiming and lane restriping

Appendix A.3.2

Non-Conforming Features to be Retained – Viaduct Alternative

21. LOS E condition would only apply to a single peak hour. During this period, queues would not extend into adjacent intersections. This segment is outside the construction limits of this alternative and is located within a corridor that experiences significant congestion under the no build condition. Mitigation would entail installing a traffic signal.
22. The LOS E condition would apply to the opening and horizon year. This location would operate at unacceptable LOS in 2026 and 2056 under no build conditions and is outside the construction limits of this alternative. Mitigation would entail widening through the intersection to provide an additional eastbound auxiliary through lane onto SR-92
23. The LOS E and F condition would apply to the opening and horizon years and queues would not extend into adjacent intersections during these periods. This location would operate at unacceptable LOS in 2056 under no build conditions and is outside the construction limits of this alternative. Mitigation would entail installing a traffic signal.
24. The LOS E condition would only apply to a single peak hour and queues would not extend into adjacent intersections during these periods. This location is outside of the construction limits of this alternative. Mitigation would entail traffic signal hardware upgrades, signal retiming and lane restriping

Exhibit A-3-2-01
Access Control Justification

PIN:	3501.6	Route No. & Name:	I-81 Northbound On-Ramp at Pearl Street - Driveway at 400 Pearl Street
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	7,900	Design Speed	30 mph
DHV (2050)	1,030	% Trucks:	2.5%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	I-81 Northbound Entrance Ramp at Pearl Street - Driveway at 400 Pearl Street		Viaduct Alternative
Standard Value:	50 ft	Design Speed	30 mph
Existing Value:	20 ft		
Proposed Value:	20 ft		

2. Accident Analysis

Current Accident Rate:	0.42 acc/mvm	Statewide Accident Rate:	0.18 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No Incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. Driveway is expected to generate very few trips and therefore little risk of conflicts near the ramp terminal.

5. Compatibility with Future Plans for Adjacent Segments

No future plans for adjacent segments of this ramp

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

Closing the driveway would require acquisition of the business.

7. Recommendation

Retain existing non-standard control of access.


N. State Street
E. Belden Avenue
Hickory Street
400 pearl street
Driveway
Pearl Street
I-81 NB On-Ramp
New Parking Lot
Entrance
POB
R16 0+00.00
R16 0+00
R16 1+00
R16 2+00
PC
R16 1+77.61
R16 3+00
POB
R16A 0+00.00
R16A 0+00
R16A 1+00
PC
R16A 1+03.52

A-3-2-01

Exhibit A-3-2-02
Access Control Justification

PIN:	3501.6	Route No. & Name:	I-81 Northbound Off-Ramp at Adams Street - Proximity With Almond Street
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	7,185	Design Speed	30 mph
DHV (2050)	861	% Trucks:	5%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	I-81 Northbound Exit Ramp at Adams Street - Proximity With Almond Street		Viaduct Alternative
Standard Value:	50 ft	Design Speed	30 mph
Existing Value:	20 ft		
Proposed Value:	20 ft		

2. Accident Analysis

Current Accident Rate:	2.27 acc/mvm	Statewide Accident Rate:	0.23 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☒		NO ☐
If YES, describe how the feature contributes to accidents	There were a total of 103 crashes on Adams St near the existing ramp intersections between 9/1/2016 to 8/31/19, of which 19 were potentially related to the adjacent driveways, which equates to a crash rate of 0.42 acc/mvm.		

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	The proposed design improves the existing condition to the greatest extent feasible.

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve:

Elimination of the non-conforming feature would require either moving the exit ramp further south, which would increase ROW impacts or elimination of a section of northbound Almond Street, which is not feasible from a traffic accommodation standpoint or in keeping with the project objectives of enhancing connectivity.

the northbound off-ramp intersection. Additionally, the geometric improvements on Almond Street and the proposed signal phasing improvements will reduce the risk of conflicts.

5. Compatibility with Future Plans for Adjacent Segments

No future plans for adjacent segments of this ramp

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

Elimination of northbound Almond Street is not in keeping with the project objectives of enhancing connectivity.

7. Recommendation

Retain the non-conforming control of access as proposed under the Viaduct Alternative.

A-3-2-02

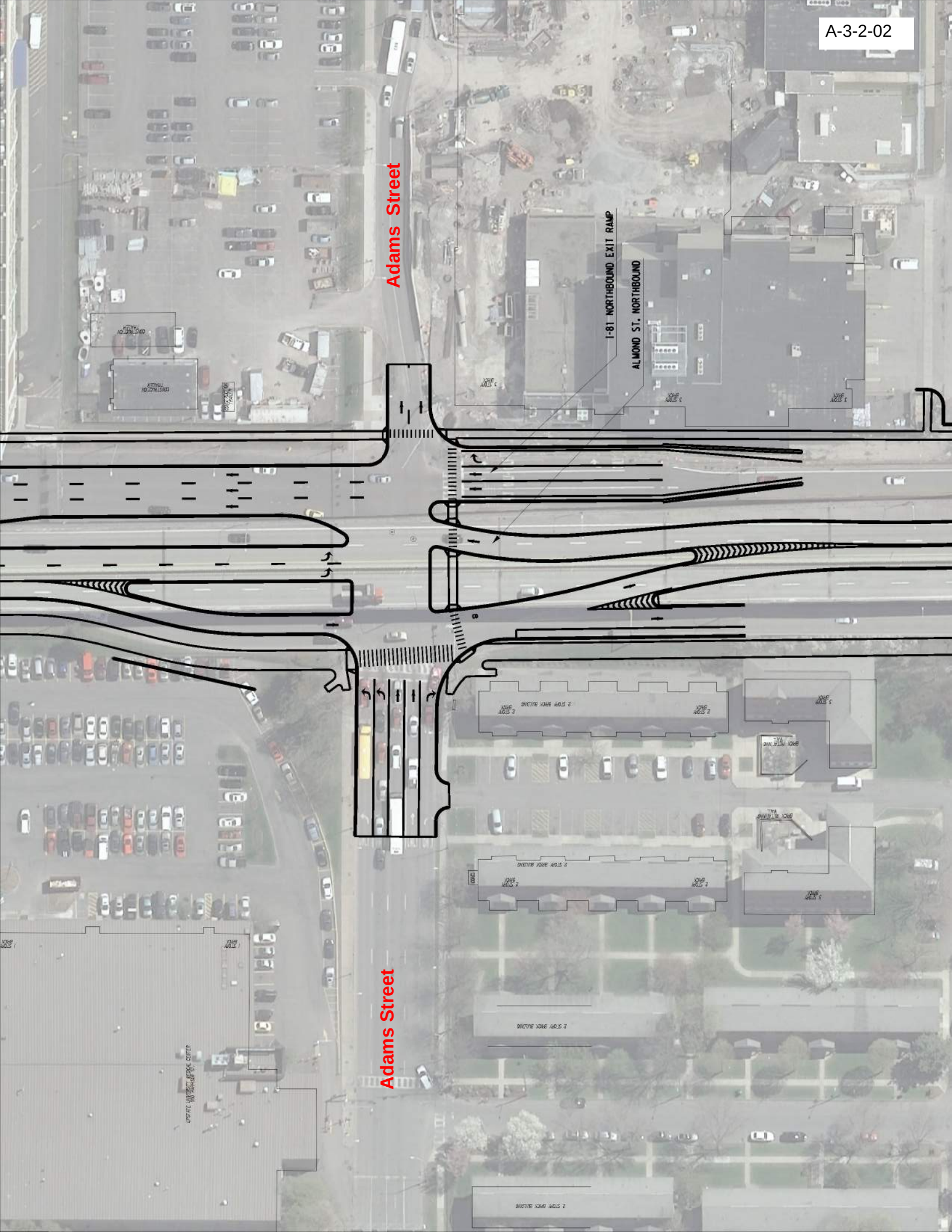

Adams Street
I-81 NORTHBOUND EXIT RAMP
ALMOND ST. NORTHBOUND
Adams Street

Exhibit A-3-2-03
Access Control Justification

PIN:	3501.6	Route No. & Name:	Northbound I-81 Off-Ramp at Bear St. - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	4859	Design Speed	30 mph
DHV (2050)	AM: 432, PM: 597	% Trucks:	AM: 4%, PM: 2%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Two driveways on the south side of Bear Street, one at 424 Sunset Ave. and one at 8523 Lodi St. (See Attached Sketch).		Viaduct Alternative
Standard Value:	300 FT	Design Speed	30 mph
Existing Value:	N/A, New Construction		
Proposed Value:	120 FT		

2. Accident Analysis

Current Accident Rate:	N/A, New Construction	Statewide Accident Rate:	
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐	Not Applicable, New Construction	NO ☐
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve two residences. In addition, there is a city street (Sunset Avenue) that is located between the off-ramp and the first driveway.

5. Compatibility with Future Plans for Adjacent Segments

These are existing residential driveways in an urban area which are consistent with adjacent segments and future plans.

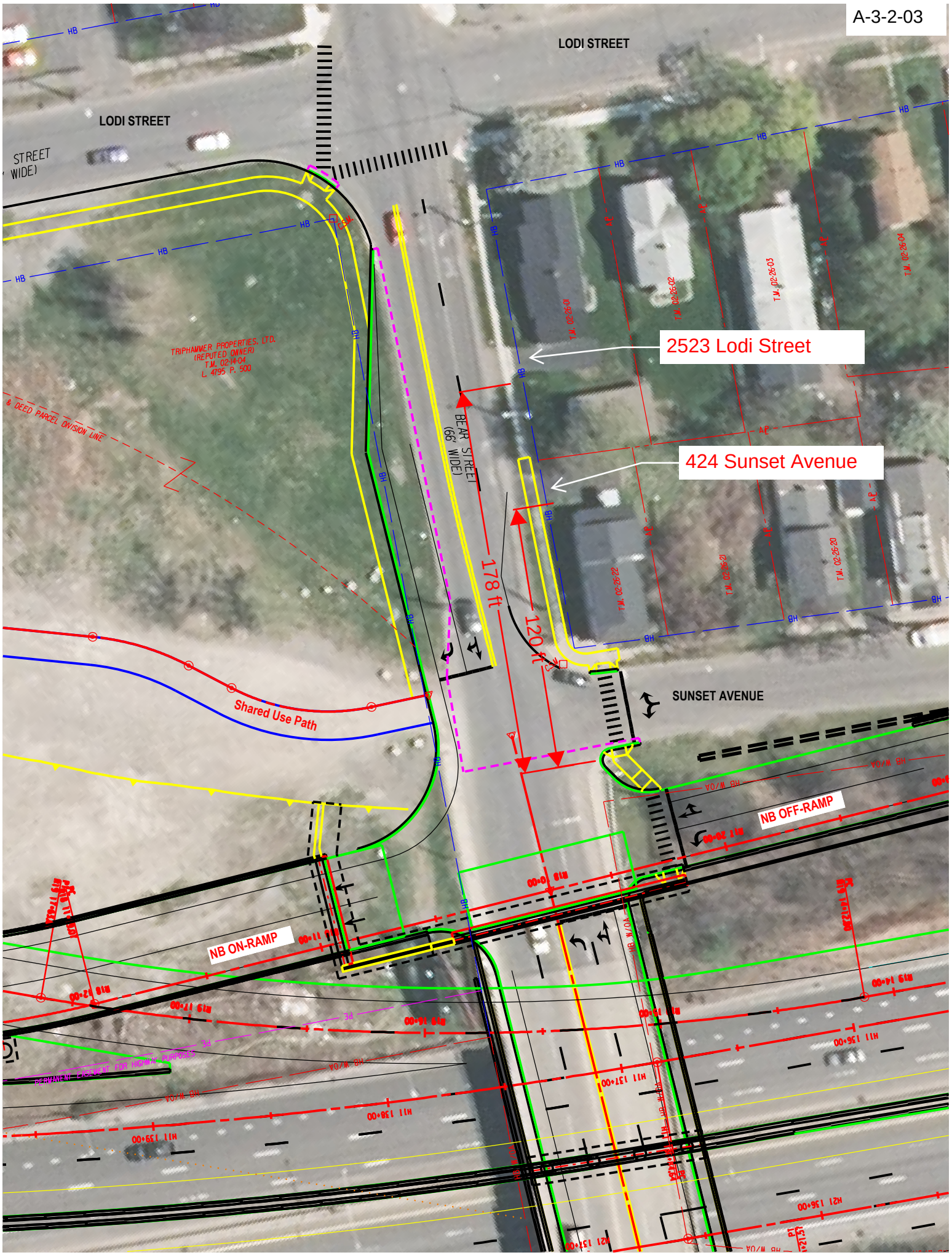
6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

Closing these driveways would likely require acquisition of the residences.

7. Recommendation

Retain non-conforming control of access to/from the existing driveways.

A-3-2-03


LODI STREET
LODI STREET
STREET
WIDE)
2523 Lodi Street
424 Sunset Avenue
BEAR STREET
(66' WIDE)
178 ft
120 ft
SUNSET AVENUE
Shared Use Path
NB OFF-RAMP
NB ON-RAMP
TRIPHAMMER PROPERTIES, LTD.
(REPUTED OWNER)
T.M. 02-14-04
L 4795 P. 500
DEED PARCEL DIVISION LINE

Appendix A.3.3

Non-Standard Features to be Retained – Community Grid Alternative

The Non-Standard Features recommended to be retained under the Community Grid Alternative are listed in Table A.3.3, followed by the Non-Standard Feature Justification forms.

Table A.3.3
Non-Standard Features Recommended to be Retained – Community Grid Alternative

Location	Design Element [1]	Design Criteria [2]	Proposed Design	NSF Justification Form [3]
Northbound I-81 (at south interchange)	HSSD	730 ft.	679/524 ft.	A-3-3-01
Southbound I-81 (at south interchange)	HSSD	730 ft.	542/703 ft.	A-3-3-02
Interstate Ramp, Southbound BL-81 to new Northbound I-81	HSSD	305 ft.	236 ft.	A-3-3-02a
Southbound I-81 (at north interchange)	HSSD	730 ft.	542/703 ft.	A-3-3-03
Northbound and southbound I-81, Route 5/92 to Kinne Rd.	Left Shoulder Width	10 ft.(3-lane) 4 ft.(2-lane)	5 ft. 2.5 ft.	A-3-3-03a
Northbound and southbound I-81, at Route 5/92 bridge area	Right Shoulder Width	10 ft.	2.5 ft.	A-3-3-03b
Southbound I-81 at Interchange 4	Horizontal Curve	1,815 ft.	1,235 ft.	A-3-3-03c
I-81 Northern Segment, Butternut St. to Hiawatha Blvd.	Left and Right Shoulder Width	10 ft.	7 ft.	A-3-3-04
Interstate Ramp, Eastbound I-690 off-ramp to Irving Ave.	Horizontal Curve	214 ft.	158 ft.	A-3-3-05
Interstate Ramp, Eastbound I-690 off-ramp to Irving Ave.	HSSD	200 ft.	129 ft.	A-3-3-06
Interstate Ramp, Westbound I-690 on-ramp from Irving Ave.	Horizontal Curve	214 ft.	159 ft.	A-3-3-07
Interstate Ramp, Southbound I-81 off-tamp to N. Clinton St.	Horizontal Curve	214 ft.	167 ft.	A-3-3-08
Van Buren Street, Almond Street to Henry Street	Grade	8% max.	15.52%	A-3-3-09
Genant Drive, N. Clinton St. to W. Division St.	Horizontal Curve	188 ft.	76 ft.	A-3-3-10
Erie Boulevard, Salina St. to Crouse Ave.	Shared Lane Width	13 ft.	12 ft.	A-3-3-11
Oswego Boulevard, Erie Blvd. to E. Willow St.	Shared Lane Width	13 ft.	12 ft.	A-3-3-12

Appendix A.3.3

Non-Standard Features to be Retained – Community Grid Alternative

Location	Design Element [1]	Design Criteria [2]	Proposed Design	NSF Justification Form [3]
Pearl Street, Erie Blvd. to BL 81 ramp.	Shared Lane Width	13 ft.	12 ft.	A-3-3-13
Harrison Street, Salina St. to State St.	Shared Lane Width	13 ft.	10.5 ft.	A-3-3-14
Crouse Avenue, Waverly Ave. to Genesee St.	Shared Lane Width	13 ft.	12 ft.	A-3-3-15
Irving Avenue, Van Buren St. to Erie Blvd.	Shared Lane Width	13 ft.	11 ft.	A-3-3-16
Van Buren Street, Almond St. to Irving Ave.	Shared Lane Width	13 ft.	12 ft.	A-3-3-17

Notes:

1) HSSD = Horizontal Stopping Sight Distance
2) Refer to Design Criteria Tables in **Appendix C-6.3.**
3) Refer to the following pages for Non-Standard Feature Justification Forms.

Justification Number A-3-3-01

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.6	**Route No. and Name:** I-81 Northbound at South Interchange - Communitiy Grid Alternative
Project Type: Reconstruction	☑ **National Network/Qualifying Highway** ☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate	**Design Classification (AASHTO Class):** Interstate -Urban
ADT: 8700 **% Trucks:** 10%	◉ **NHS** ○ **Non-NHS** **Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: STA H2 38+00 TO H2 STA 47+50 (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.002716 Long: -76.134350 **TO** Lat: 43.005822 Long: -76.133080

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 730 ft	**Design Speed:** 70 mph
Existing Value: N/A, New Construction	**Recommended Speed - Existing:** 15 mph uction
Proposed Value: 679 ft (Left Lane), 524 ft (Right Lane) (See note 1)	**Recommended Speed - Proposed:** 65 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - New Construction

3. Cost Estimates

Cost to fully meet standards: $3.2 Million (see note 2)	**Cost(s) for incremental improvements:** $0.4 Million (see note 3)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Right side shoulder will be constructed using a width of 12 ft., instead of the minimum 10 ft., on the bridge and approach to maximize sight distance around the bridge barrier. Highway guiderail to be box beam or cable to avoid sight line restrictions other than at bridge. R8-7 signs (Emergency Stopping Only) will be used on the bridge to discourage any voluntary stopping on the bridge that may create a hazard.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

See Attachment (note 4).

7. Proposed Treatment (i.e., recommendation)

Provide non-standard stopping sight distance with a 12 foot inside (right) shoulder on bridge and bridge approaches. Provide highway guiderail that will not cause sight line restrictions other than at the bridges.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

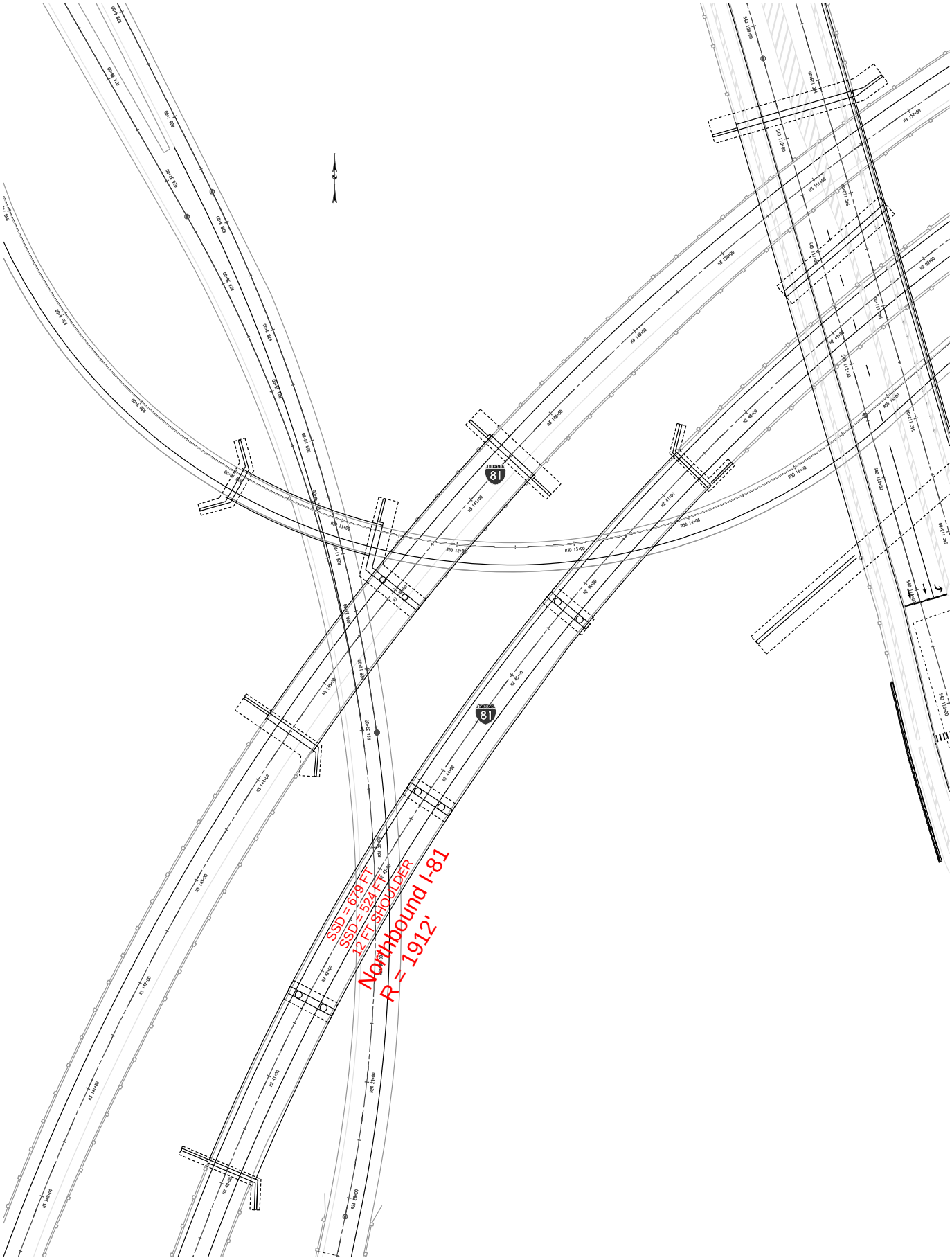
Nonstandard Feature Justification
A-3-3-01
(Attachment)

1. For the inside lane, the typical 10-foot shoulder width would provide a HSSD of 494 feet. Implementation of the incremental improvement, (widening shoulder to 12 feet), would provide an HSSD of 524 feet achieving approximately 72% of the design criteria. For the outside lane, the typical 10-foot shoulder width would provide a HSSD of 656 feet. Implementation of the incremental improvement (widening shoulder to 12 feet), would provide a HSSD of 679 feet achieving 93% of the design criteria.

2. The proposed design meets all other design standards except for HSSD at the bridge location (due to bridge barrier). One alternative evaluation to meet HSSD criteria was to over widen the shoulder from a standard of 10ft. to 29ft. An estimated $ 3.2 million construction cost is based on further widening of bridge shoulder from 12 feet to 29 feet and tapering the approach and trailing shoulders. Another option to fully meet standards is described in note 4.

3. An incremental improvement of over widening the shoulder to 12 feet was also considered and adopted. An estimated $0.4 million construction cost is based on widening the bridge shoulder from 10-foot standard to 12 feet and tapering the approach and trailing shoulder. See Attached Figure.

4. Trucks with a higher sightline, which compose of 10% of total traffic, will not be subjected to the restricted sight distance since they will be able to see over the barrier. Providing standard stopping sight distance would require a 29’ inside (right) shoulder on the bridge using the proposed curve radius. This 29’ wide shoulder may be mistaken for an additional travel lane and increase the risk of additional accidents. Flattening the radius to accommodate the required sight distance using a 12’ shoulder would create severe impacts in the southeast quadrant of the interchange. This would require acquisition of over 40 acres of property and demolition of numerous residences and high-rise buildings and was determined infeasible.


SSD = 679 FT
SSD = 524 FT
12 FT SHOULDER
Northbound I-81
R = 1912'

Justification Number A-3-3-02

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.6	**Route No. and Name:** I-81 southbound at South Interchange - Community Grid Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 9,100	**% Trucks:** 8%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: STA H3 144+00 TO STA H3 149+50 (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.005863 Long: -76.133327 **TO** Lat: 43.007364 Long: -76.131432

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 730 ft	**Design Speed:** 70 mph
Existing Value: N/A, New Construction	**Recommended Speed - Existing:** 15 mph uction
Proposed Value: 542 ft (Left Lane) 703 ft (Right Lane) (See note 1)	**Recommended Speed - Proposed:** 65 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - New Construction

3. Cost Estimates

Cost to fully meet standards: $1.7 Million (see note 2)	**Cost(s) for incremental improvements:** $1.5 Million (see note 3)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

The left side shoulder will be constructed using a width of 12', instead of the minimum 4', on the curve/bridge to maximize sight distance around the bridge barrier. The additional shoulder width also serves as extra space for any evasive maneuvering around obstructions in the left lane. Highway guiderail to be box beam or cable to avoid sight line restrictions other than at bridge. R8-7 signs (Emergency Stopping Only) will be used on the bridge to discourage any voluntary stopping on the bridge that may create a hazard.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

See Attachment (note 4).

7. Proposed Treatment (i.e., recommendation)

Provide non-standard stopping sight distance with a 12' inside (left) shoulder. Provide highway guiderail that will not cause sight line restrictions other than at the bridges.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

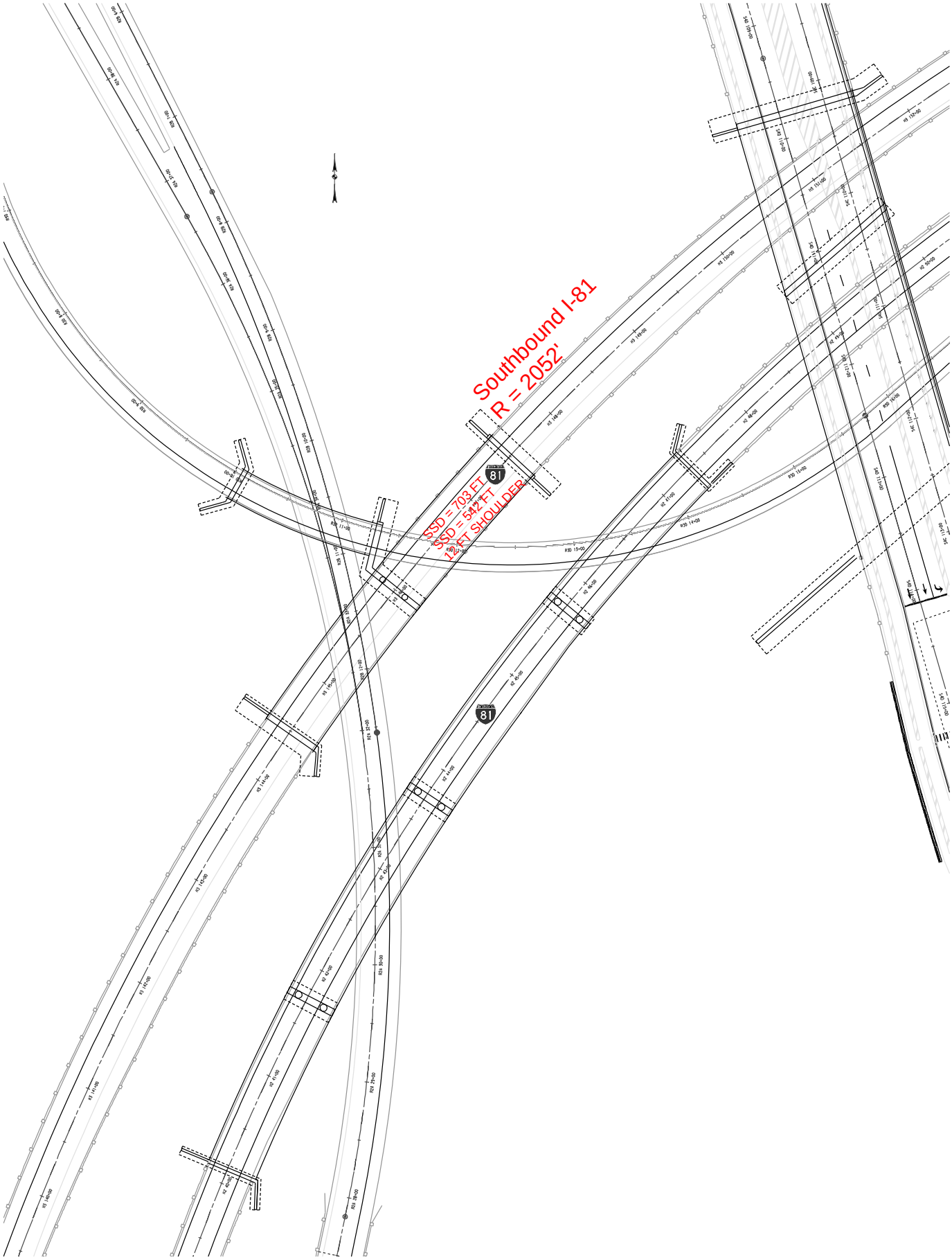
Nonstandard Feature Justification
A-3-3-02
(Attachment)

1. For the inside lane, the typical 4-foot shoulder width would provide a HSSD of 404 feet. Implementation of the incremental improvement, (widening shoulder to 12 feet), would provide an HSSD of 542 feet achieving approximately 74% of the design criteria. For the outside lane, the typical 4-foot shoulder width would provide a HSSD of 602 feet. Implementation of the incremental improvement (widening shoulder to 12 feet), would provide a HSSD of 703 feet achieving 96% of the design criteria.

2. The proposed design meets all other design standards except for HSSD at the bridge location (due to bridge barrier). One Alternative evaluation to meet HSSD criteria was to over widen the shoulder from a standard of 10 feet to 29 feet. An estimated $1.7 million construction cost is based on further widening of bridge shoulder from 12 feet to 27 feet and tapering approach and trailing the shoulders. Another option to fully meet standards is described in note 4.

3. An incremental improvement of over widening the shoulder to 12 feet was also considered and adopted. An estimated $1.5 million construction cost is based on widening the bridge shoulder from 4-foot standard to 12 feet and tapering the approach and trailing shoulders. See Attached Figure.

4. Trucks with a higher sightline, which compose of 8% of total traffic, will not be subjected to the restricted sight distance since they will be able to see over the barrier. Providing standard stopping sight distance would require a 27’ inside (left) shoulder on the bridge using the proposed curve radius. This 27’ wide shoulder may be mistaken for an additional travel lane and increase the risk of additional accidents. Flattening the radius to accommodate the required sight distance using a 12’ shoulder would create severe impacts in the southeast quadrant of the interchange. This would require acquisition of over 40 acres of property and demolition of numerous residences and high-rise buildings and was determined infeasible.


Southbound I-81
R = 2052'
SSD = 703 FT
SSD = 542 FT
7 FT SHOULDER
81
81

Justification Number A-3-3-02a

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.6	**Route No. and Name:** BL-81 Southbound to I-81 Northbound Ramp at South Interchange-Communitiy Grid Alternative
Project Type: Reconstruction	☑ **National Network/Qualifying Highway** ☐ **Access Highway**
Functional Class: Urban Principal Arterial - Other Freeway/Expressway	**Design Classification (AASHTO Class):** Other Freeway - Urban
ADT: N/A	**% Trucks:** N/A ◉ **NHS** ○ **Non-NHS** **Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: STA R3D 9+00 TO 11+45 (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.002716 Long: -76.134350 **TO** Lat: 43.005822 Long: -76.133080

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 305 ft	**Design Speed:** 40 mph
Existing Value: N/A, New Construction	**Recommended Speed - Existing:** 15 mph uction
Proposed Value: 236 ft (see note 1)	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 0.19 ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - New Construction

3. Cost Estimates

Cost to fully meet standards: $1.17 Million (see note 2)	**Cost(s) for incremental improvements:** $0.35 Million

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

The left side shoulder will be constructed using a width of 8', instead of the minimum 4', on the curve/bridge to improve horizontal sight distance around the bridge barrier. The additional shoulder width also serves as extra space for any evasive maneuvering around obstructions in the left lane. Highway guiderail to be box beam or cable to avoid sight line restrictions other than at bridge. R8-7 signs (Emergency Stopping Only) will be used on the bridge to discourage any voluntary stopping on the bridge that may create a hazard.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

See Attachment. (see note 3)

7. Proposed Treatment (i.e., recommendation)

Provide 8 foot wide left side shoulder on the bridge and bridge approach to provide an incremental improvement in the resultant non-standard stopping sight distance. Provide appropriate transition to highway guiderail that will not cause sight line restrictions other than at the bridge.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification

HSSD - BL-81 Southbound to I-81 Northbound Ramp at South Interchange-CG Alternative

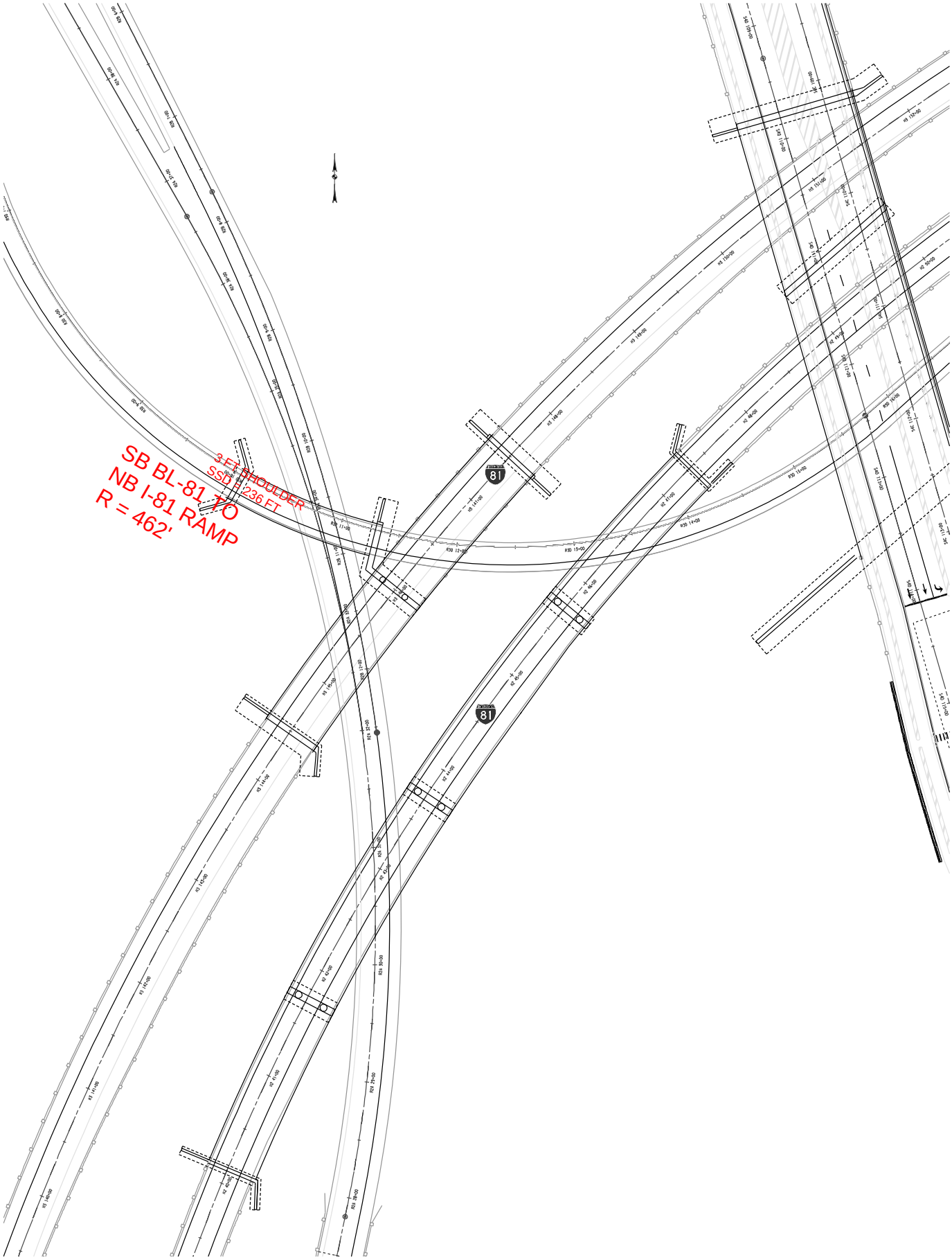
A-3-3-02a

(Attachment)

1. For the proposed southbound BL 81 to northbound I-81 ramp, the normal 4-foot wide left shoulder width would provide a HSSD of 202 feet (Design Standard = 305 feet) for the section of the ramp that is on a bridge and adjacent to bridge barrier. Trucks with a higher sightline, will not be subjected to the restricted sight distance since they will be able to see over the barrier. Implementation of an incremental improvement (widening shoulder to 8 feet, see note 2), would provide a HSSD of 236 feet achieving approximately 77% of the design standard.

2. The proposed design meets all other design standards except for HSSD at the bridge location (due to the bridge barrier). One alternative evaluated to meet HSSD criteria, was to over widen the shoulder to 17.5 feet. To further widen the left shoulder from the proposed 8-foot width to a 17.5-foot width would cost an additional $0.82 million, including tapering the approach and trailing shoulders. In addition, a 17.5-foot wide shoulder may be mistaken for an additional travel lane and increase the risk of additional accidents Another option to fully meet standards is described in note 3.

3. An alternative to over-widening the shoulder would be to flatten the horizontal curve radius to accommodate the required sight distance with a standard 4-foot wide shoulder. However, a flatter horizontal curve is not feasible as it would not fit without substantially changing the design of the interchange, which would inevitably require additional property acquisitions and result in other non-standard and/or non-conforming features.


SB BL-81 TO
NB I-81 RAMP
R = 462'
3 FT SHOULDER
SSD = 236 FT

Justification Number A-3-3-03

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.6	**Route No. and Name:** I-81 southbound at North Interchange - Community Grid Alternative
Project Type: Reconstruction	☑ **National Network/Qualifying Highway** ☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate	**Design Classification (AASHTO Class):** Interstate -Urban
ADT: 13,800	**% Trucks:** 12.7% ◉ **NHS** ○ **Non-NHS** **Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: STA H8 121+50 TO STA H8 152+00 (SeeAttached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.146512 Long: -76.109914 **TO** Lat: 43.140500 Long: -76.103513

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 730 ft	**Design Speed:** 70 mph
Existing Value: N/A New Construction	**Recommended Speed - Existing:** 15 mph ruction
Proposed Value: 542 ft (Left Lane) 703 ft (65 mph) (See note 1)	**Recommended Speed - Proposed:** 55 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - New Construction

3. Cost Estimates

Cost to fully meet standards: $8.7 Million (see note 2)	**Cost(s) for incremental improvements:** $4.5 Million (see note 3)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

The left side shoulder will be constructed using a width of 12', instead of the minimum 4', on the curve/bridge to maximize sight distance around the bridge barrier. The additional shoulder width also serves as extra space for any evasive maneuvering around obstructions in the left lane. Highway guiderail to be box beam or cable to avoid sight line restrictions other than at bridge. R8-7 signs (Emergency Stopping Only) will be used on the bridge to discourage any voluntary stopping on the bridge that may create a hazard.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

See Attachment (note 4).

7. Proposed Treatment (i.e., recommendation)

Provide non-standard stopping sight distance with a 12' inside (left) shoulder. Provide highway guiderail that will not cause sight line restrictions other than at the bridge.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

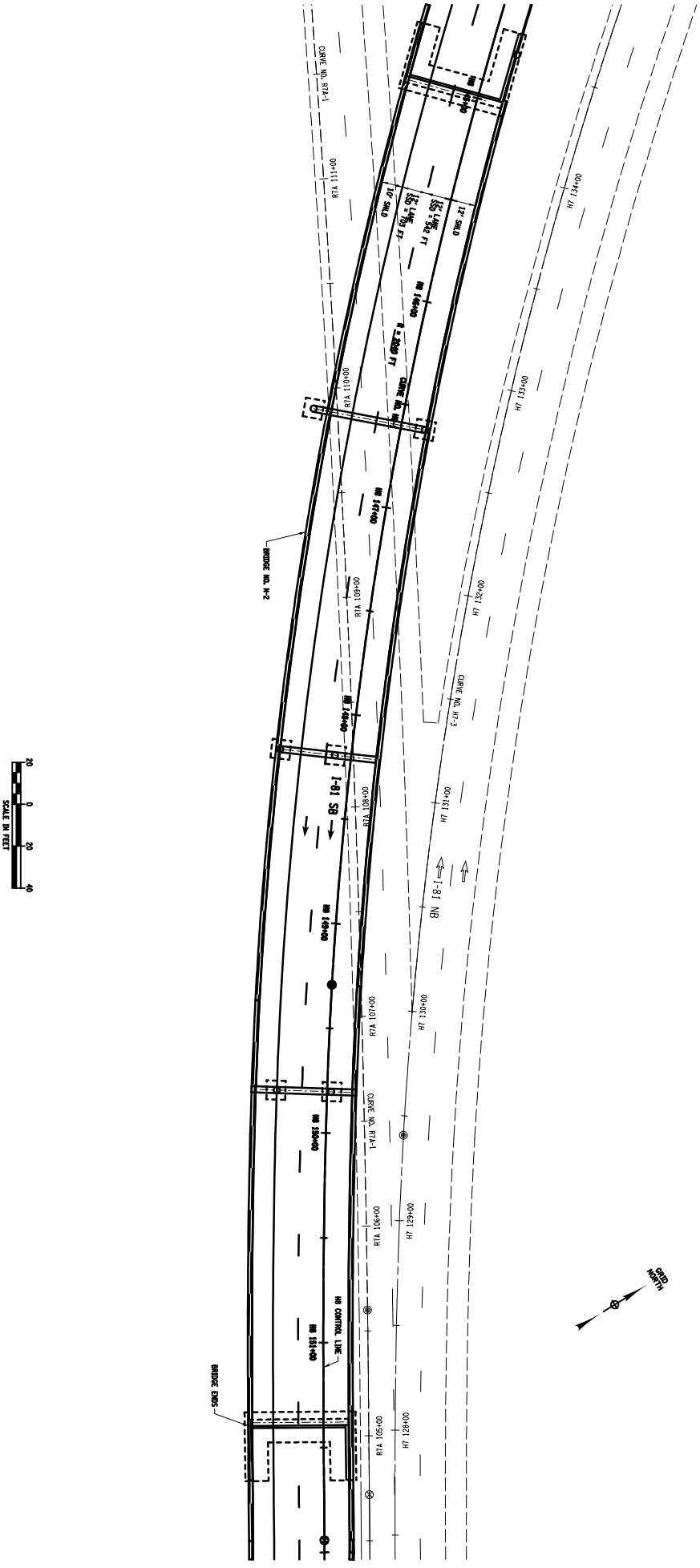
Nonstandard Feature Justification
A-3-3-03
(Attachment)

1. For the inside lane, the typical 4-foot shoulder width would provide a HSSD of 403 feet. Implementation of the incremental improvement, (widening shoulder to 12 feet), would provide an HSSD of 542 feet achieving approximately 74% of the design criteria. For the outside lane, the typical 4-foot shoulder width would provide a HSSD of 600. feet. Implementation of the incremental improvement (widening shoulder to 12 feet), would provide a HSSD of 703 feet achieving 96% of the design criteria.

2. The proposed design meets all other design standards except for HSSD at the bridge location (due to bridge barrier). One Alternative evaluation to meet HSSD criteria was to over widen the shoulder from a standard of 10 feet to 29 feet. An estimated $8.7 million construction cost is based on further widening of bridge shoulder from 12 feet to 27 feet and tapering the approach and trailing shoulders. Another option to fully meet standards is described in note 4.

3. An incremental improvement of over widening the shoulder to 12 feet was also considered and adopted. An estimated $ 4.5 million construction cost is based on widening the bridge shoulder from 4-foot standard to 12 feet and tapering the approach and trailing shoulder. See Attached Figure.

4. Trucks with a higher sightline, which compose of 12.7% of total traffic, will not be subjected to the restricted sight distance since they will be able to see over the barrier. Providing standard stopping sight distance would require a 27’ inside (left) shoulder on the bridges using the proposed curve radius. This 27’ wide shoulder may be mistaken for an additional travel lane and increase the risk of additional accidents. Flattening the radius to accommodate the required sight distance using a 12’ shoulder would create severe impacts in the northeast quadrant of the interchange. This would require acquisition of 20+ acres of property and demolition of 30+ residences in the Brigadier Drive neighborhood and was determined infeasible.


I-81 SB
I-81 NB
CURVE NO. RT-1
CURVE NO. HT-1
CURVE NO. HT-2
CURVE NO. HT-3
BRIDGE NO. I-2
BRIDGE ENDS
HB CONTROL LINE
HB 100+00
HB 101+00
HB 102+00
HB 103+00
HB 104+00
HB 105+00
HB 106+00
HB 107+00
HB 108+00
HB 109+00
HB 110+00
HB 111+00
RTA 105+00
RTA 106+00
RTA 107+00
RTA 108+00
RTA 109+00
RTA 110+00
RTA 111+00
HT 128+00
HT 129+00
HT 130+00
HT 131+00
HT 132+00
HT 133+00
HT 134+00
SCALE IN FEET
20
0
20
40
GRID NORTH

Justification Number A-3-3-03a

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81, Eastern Segment, Rte5 to Kinne Rd - Community Grid Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: NB-23890; SB-25680	**% Trucks:** NB-8%; SB-6%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Shoulder Width

Location: I-81 NB STA R6C 32+50 TO R6C 37+50 and I-81 SB STA R6C 32+50 TO R6C 37+50

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.056156° Long: -76.153300° **TO** Lat: 43.061359° Long: -76.156533°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 10 ft. Left (3 lane); 4 ft. Left (2 lane)	**Design Speed:** 70 mph
Existing Value: NB 2.5 ft (2 lane); SB 5 ft. (3 lane)	**Recommended Speed - Existing:** 65 mph
Proposed Value: NB 2.5 ft (2 lane); SB 5 ft. (3 lane)	**Recommended Speed - Proposed:** 65 mph

2. Accident Analysis

Current Accident Rate[1]**:** 1.60 (note 3) ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.14 ◉ **acc/mvm** ○ **acc/mev**
From Sep. 01, 2014 **to** Aug. 31, 2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 3.

3. Cost Estimates

Cost to fully meet standards: 2.58 M (Note 2)	**Cost(s) for incremental improvements:** N/A (Note 2)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

The existing left side shoulder widths across the existing bridges over Route 5/92 would be retained. The existing bridges are in good condition and would not otherwise require modification for this project. Widening the bridges to meet the shoulder width design standard would be implemented at a future date when the bridges are in need of rehabilitation or replacement.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

None.

7. Proposed Treatment (i.e., recommendation)

The existing non-standard left shoulder width in the Rte 5/92 bridge area, for both directions of freeway, will be retained. (See note 1)

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification

Left Shoulder Width – New I-81 Eastern Segment at Interchange 3 area - CG Alternative

A-3-3-03a

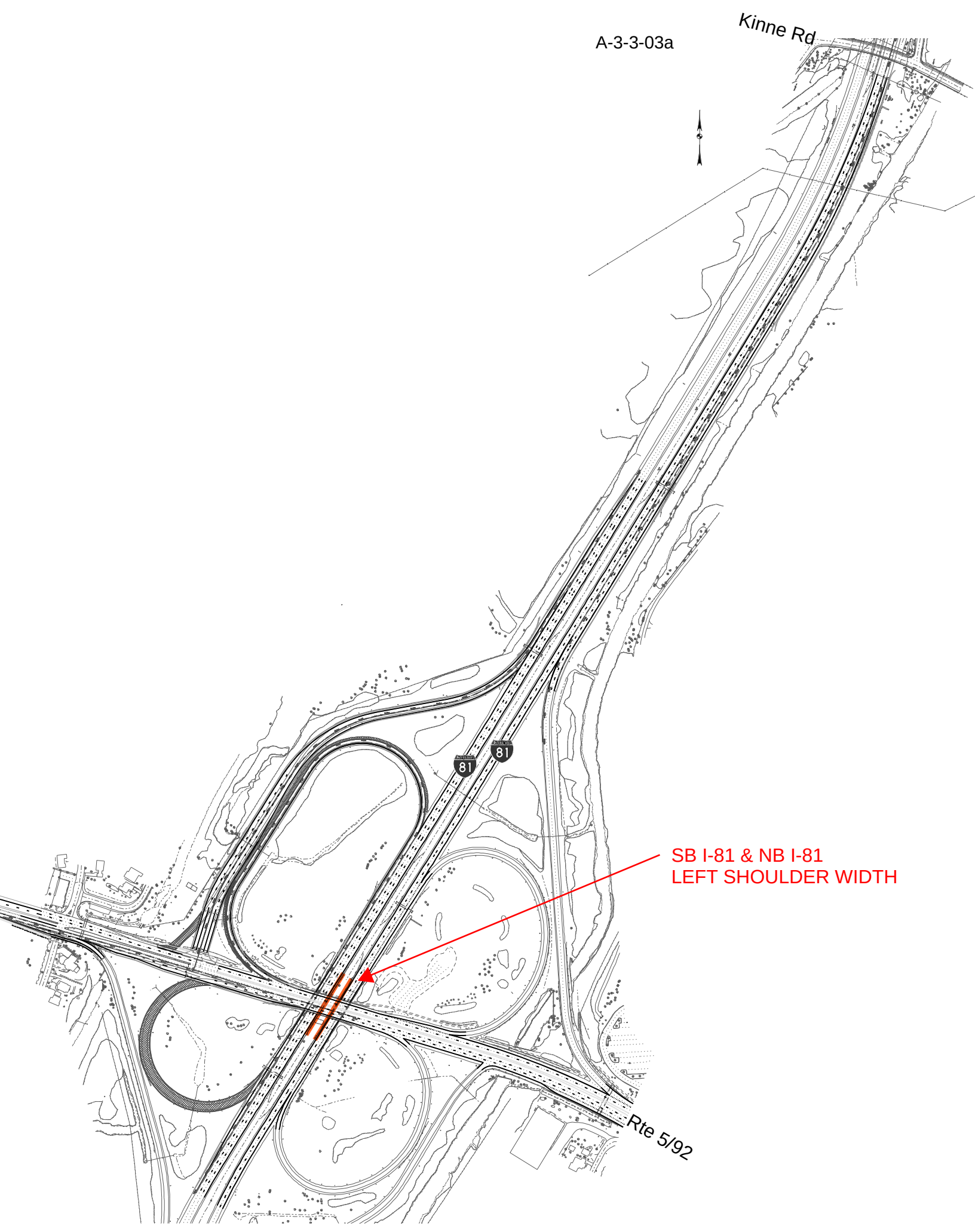
(Attachment)

1. Where re-designated I-81 crosses over Route 5/92, the left-side shoulders on the existing bridges in both directions, and their approaches (a distance of approximately 500 feet), are non-standard. The existing non-standard left shoulder width of about 2.5 feet (NB) and 5 feet (SB) are less than the 4-foot and 10-foot design standard, respectively. In addition, portions of re-designated I-81, between Route 5/92 and Kinne Road, a distance of approximately 4950 feet, include sections of freeway having 3 or more travel lanes. In the northbound direction, between the northbound on-ramp gore and Kinne Road, the northbound freeway section consists of 3 travel lanes plus an auxiliary lane. In the southbound direction, the entire section from just south of the Route 5/92 bridge to Kinne Road consists of 3-travel lanes. The existing left side shoulders on the highway segments are about 5-6 feet wide and will be widened to 10 feet as part of the project, but the existing shoulders on the bridges, will be retained. The existing bridges are in good condition and would not otherwise require modification for this project. Widening the bridges to meet the shoulder width design standard would be implemented at a future date when the bridges are in need of rehabilitation or replacement.

2. The cost estimate is based on widening the left side bridge shoulders to fully meet the design standard of 4 feet (northbound) or 10 feet (southbound) and replacement of 50 % of the bridge deck. The other 50% of the bridge deck is included in the "Right Side" shoulder estimate – see NSF Justification form A-3-3-03b. The cost estimate also includes widening the approach shoulders as needed to transition to the adjacent highway segments.

3. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 5 crashes occurred along NB I-481, of which 1 crash was identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 20% of total crashes, and a crash rate of 0.28 acc/mvm). Along the SB I-481 segment of this highway, a total of 33 crashes occurred during the analysis period, of which 2 crashes were identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 6.1% of total crashes, and a crash rate of 0.35 acc/mvm).

A-3-3-03a



Justification Number A-3-3-03b

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81, Eastern Segment at Rte5/92- Community Grid Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: NB-16220; SB-26670	**% Trucks:** NB-8%; SB-6%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Shoulder Width

Location: I-81 NB STA R6C 32+50 TO R6C 37+50; I-81 SB STA R6C 32+50 TO R6C 37+50

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.056156° Long: -76.153300° **TO** Lat: 43.061359° Long: -76.156533°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 10 ft. Right	**Design Speed:** 70 mph
Existing Value: 2.5 ft.	**Recommended Speed - Existing:** 65 mph
Proposed Value: 2.5 ft.	**Recommended Speed - Proposed:** 65 mph

2. Accident Analysis

Current Accident Rate[1]**:** 3.56 (note 3) ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.12 ◉ **acc/mvm** ○ **acc/mev**
From Sep. 01, 2014 **to** Aug. 31, 2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 3.

3. Cost Estimates

Cost to fully meet standards: 3.41 M (Note 2)	**Cost(s) for incremental improvements:** N/A (see Note 3)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

The existing right side shoulder widths across the existing bridges over Route 5/92 would be retained. The existing bridges are in good condition and would not otherwise require modification for this project. Widening the bridges to meet the shoulder width design standard would be implemented at a future date when the bridges are in need of rehabilitation or replacement.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

None.

7. Proposed Treatment (i.e., recommendation)

The existing non-standard right shoulder width in the Rte 5/92 bridge area, for both directions of freeway, will be retained. (See note 1)

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification

Right Shoulder Width – New I-81 Eastern Segment at Interchange 3 Area - CG Alternative

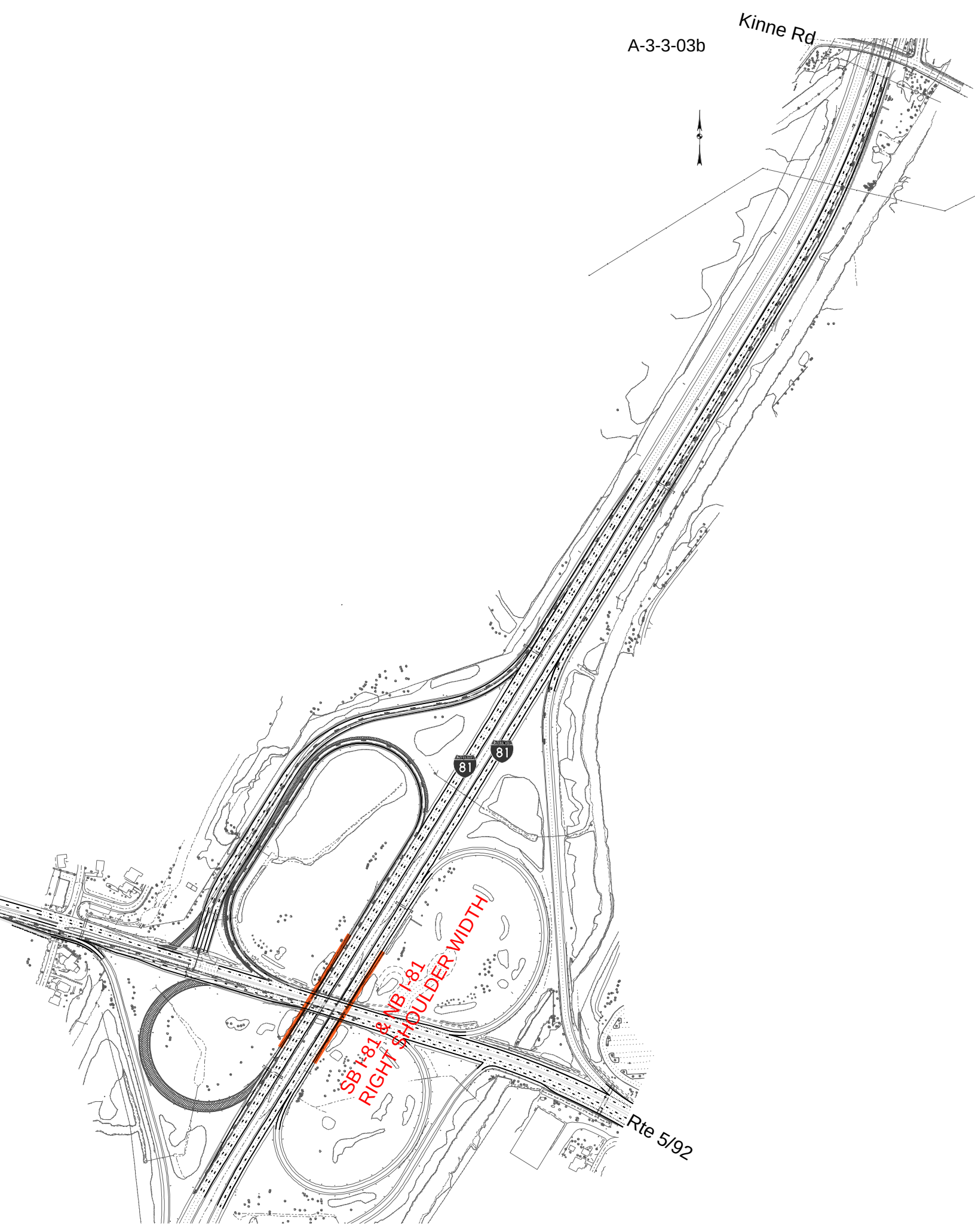
A-3-3-03b

(Attachment)

1. Where re-designated I-81 crosses over Route 5/92, the right-side shoulders on the existing bridges in both directions, and their approaches (a distance of approximately 500 feet), are non-standard. The existing non-standard right shoulder width of about 2.5 feet is less than the 10-foot design standard. The existing bridges are in good condition and would not otherwise require modification for this project. Widening the bridges to meet the shoulder width design standard would be implemented at a future date when the bridges are in need of rehabilitation or replacement.

2. The cost estimate is based on widening the right-side bridge shoulders to fully meet the design standard of 10 feet (both northbound and southbound) and replacement of 50 % of the bridge deck. The other 50% of the bridge deck is included in the "Left Side" shoulder estimate – see NSF Justification form A-3-3-03a. The cost estimate also includes widening the approach shoulders as needed to transition to the adjacent highway segments.

3. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 5 crashes occurred along NB I-481, of which 1 crash was identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 20% of total crashes, and a crash rate of 0.28 acc/mvm). Along the SB I-481 segment of this highway, a total of 33 crashes occurred during the analysis period, of which 2 crashes were identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 6.1% of total crashes, and a crash rate of 0.35 acc/mvm).


A-3-3-03b
Kinne Rd
81
81
SB I-81 & NB I-81
RIGHT SHOULDER WIDTH
Rte 5/92

Justification Number A-3-3-03c

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Southbound I-481 (Future I-81) at Interchange 4 - Community Grid Alternative
Project Type: Reconstruction	☑ **National Network/Qualifying Highway** ☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate	**Design Classification (AASHTO Class):** Interstate -Urban
ADT: 23,104 (southbound only)	**% Trucks:** 6% ◉ **NHS** ○ **Non-NHS** **Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius

Location: RM 481I 33012159 TO RM 481I 33012063 (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.053576 Long: -76.054176 **TO** Lat: 43.057175 Long: -76.053809

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 1815 ft @ 8% superelevation	**Design Speed:** 70 mph
Existing Value: 1235 ft	**Recommended Speed - Existing:** 55 mph
Proposed Value: 1235 ft @ existing superelevation	**Recommended Speed - Proposed:** 55 mph

2. Accident Analysis

Current Accident Rate[1]**:** 1.26 ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.14 ◉ **acc/mvm** ○ **acc/mev**
From 7/1/2016 **to** 6/30/2019	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

1.There were a total of 10 crashes at this location for the 3-year period, of which 6 crashes were potentially related to the non-standard feature. See note 1

3. Cost Estimates

Cost to fully meet standards: $ 6.2 Million (see note 2)	**Cost(s) for incremental improvements:** N/A (see note 3).

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Curve warning signs will be placed in advance of the curve.

5. Compatibility with Adjacent Segments and Future Plans

No future plans for adjacent segments of this ramp.

6. Other Factors

e.g., social, economic, and environmental

Providing a standard curve would require approximately 1,400 LF of mainline reconstruction as well as a retaining wall (see attached figure). The cost of the reconstruction would exceed the estimated safety benefit. See Notes 2 and 3.

7. Proposed Treatment (i.e., recommendation)

Propose retention of existing non-standard curve radii, add curve warning signs and continue NYSDOT monitoring.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification

Horizontal Curve – I-481 (Future I-81) at existing I-481 Interchange 4 - CG Alternative

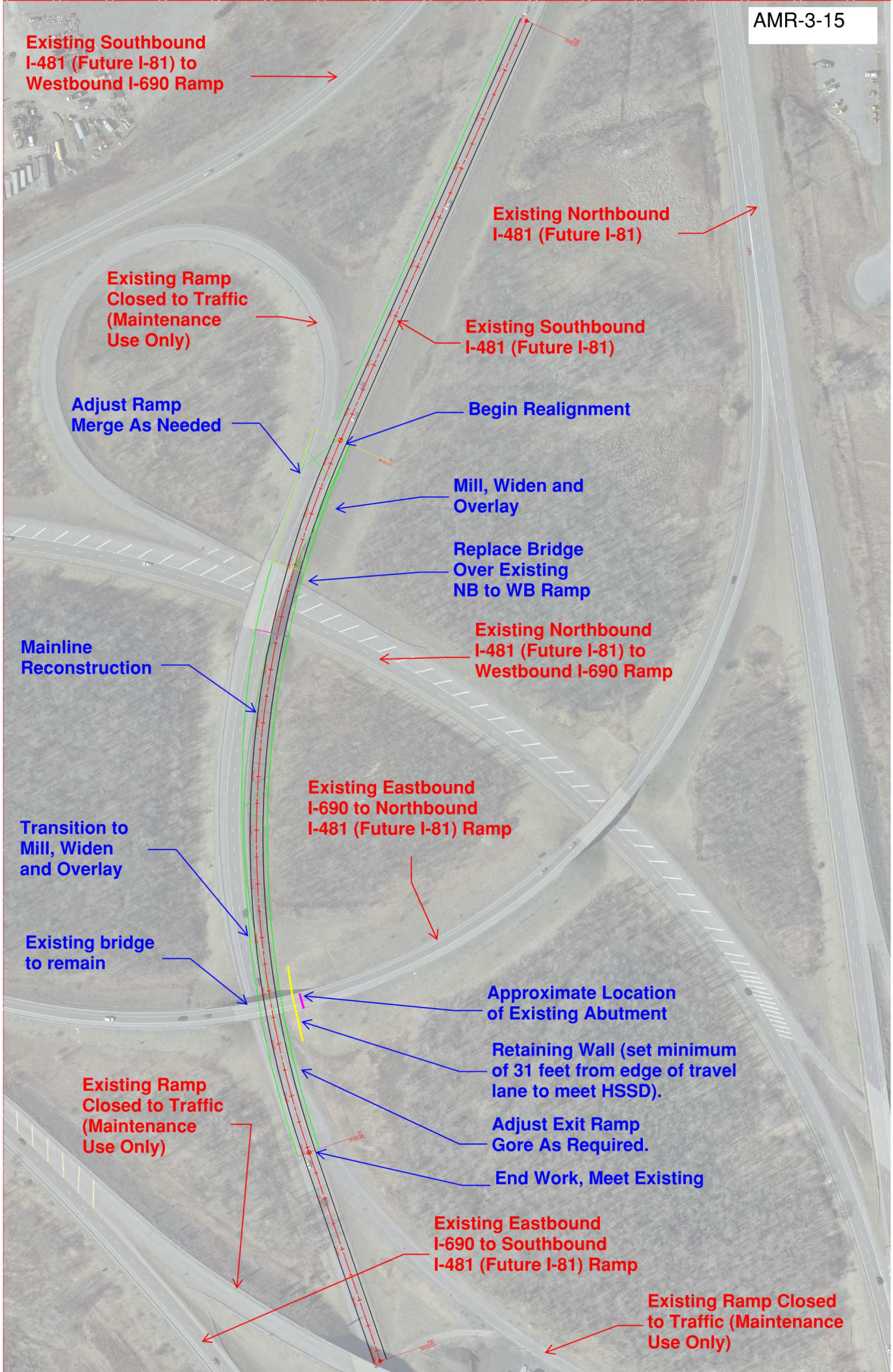
A-3-3-03c

(Attachment)

1. The existing crash rate is slightly higher than the statewide average rate at this location. For the 3-year period, there were a total of 10 crashes, 6 of which are potentially related to the non-standard horizontal curve along southbound I-481. A cluster of crashes occurred on the horizontal curve in the approximate center of the existing I-481 Interchange 4. The majority of these crashes are fixed object crashes resulting from a loss of control in adverse weather conditions. A pavement friction evaluation was conducted in accordance with the Department's Comprehensive Pavement Design Manual. The measured FN(40) values were between 37.3 and 59.3, which are above 32 (the friction value utilized in the stopping sight distance criteria for wet pavements). With measured friction values higher than 32, it appears skid resistance is not contributing to the crash history at this location.

2. Modification of the horizontal curve to meet current design standards would require approximately 1,400 LF of mainline reconstruction as well as a retaining wall (see attached figure). The cost of the reconstruction would exceed the estimated safety benefit.

3. An incremental improvement was evaluated, which involved adjusting the superelevation to the maximum 8%, which would increase the allowable speed to approximately 60 mph vs the 70 mph Design Speed. However, the existing mainline passes under an existing ramp bridge with minimum vertical clearance, so it is not possible to adjust the superelevation without either replacing the existing bridge or introducing a non-standard vertical clearance. In addition, adjusting the superelevation would also affect the overpass bridge on the north end of the curve. The shim depth required to obtain an 8% superelevation would likely cause the load carrying capacity of the bridge to be exceeded, resulting in the need to replace or heavily modify a second bridge. Both of the potentially impacted existing bridges are in good condition with good remaining service life.


AMR-3-15
Existing Southbound I-481 (Future I-81) to Westbound I-690 Ramp
Existing Northbound I-481 (Future I-81)
Existing Ramp Closed to Traffic (Maintenance Use Only)
Existing Southbound I-481 (Future I-81)
Adjust Ramp Merge As Needed
Begin Realignment
Mill, Widen and Overlay
Replace Bridge Over Existing NB to WB Ramp
Existing Northbound I-481 (Future I-81) to Westbound I-690 Ramp
Mainline Reconstruction
Existing Eastbound I-690 to Northbound I-481 (Future I-81) Ramp
Transition to Mill, Widen and Overlay
Existing bridge to remain
Approximate Location of Existing Abutment
Retaining Wall (set minimum of 31 feet from edge of travel lane to meet HSSD).
Existing Ramp Closed to Traffic (Maintenance Use Only)
Adjust Exit Ramp Gore As Required.
End Work, Meet Existing
Existing Eastbound I-690 to Southbound I-481 (Future I-81) Ramp
Existing Ramp Closed to Traffic (Maintenance Use Only)

Justification Number A-3-3-04

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** BL 81, Northern Segment, Butternut St. to Hiawatha Blvd. - Community Grid Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Other Freeway/Expressway		**Design Classification (AASHTO Class):** Other Freeway - Urban	
ADT: 46,512 NB; 48,487 SB	**% Trucks:** 16	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Shoulder Width

Location: BL-81 NB STA R16 29+00 TO R16 33+00; BL-81 SB STA R25 130+00 TO C22 105+80

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.056156° Long: -76.153300° **TO** Lat: 43.061359° Long: -76.156533°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 10 ft. Left and Right	**Design Speed:** 60 mph
Existing Value: 3 ft. Left and 6 ft. Right	**Recommended Speed - Existing:** 55 mph
Proposed Value: Varies 7 to 10 ft. Left and 7 to 10 ft. Right (see Note 1)	**Recommended Speed - Proposed:** 55 mph

2. Accident Analysis

Current Accident Rate[1]**:** 2.96 ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.08 ◉ **acc/mvm** ○ **acc/mev**
From 09/01/2014 **to** 08/31/2017	**Is the Nonstandard Feature a contributing factor?** ◉ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

See note 4.

3. Cost Estimates

Cost to fully meet standards: 0.15M + ROW & Building Acquisition (Note 2)	**Cost(s) for incremental improvements:** N/A (see Note 3)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Provide standard 10 ft. left and right shoulder widths to the extent practical and provide limited sections of 7 ft. shoulder in select locations to avoid significant increases in property and building impacts (see Note 1).

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

NB STA R16 29+00 TO R16 33+00 Right Shoulder: in order to provide a left (curve inner side) shoulder width of 10 ft, the maximum right shoulder width that can be provided is 7 ft. (vs. 10' right shoulder criteria), for a total length of ~400 ft, to avoid impacting Adirondack Furniture building;
SB STA R25 130+00 TO C22 105+80 Left Shoulder: provide 7 ft. left side shoulder to avoid impacts to the chimney just south of Spencer Street, and to Genant Drive and the properties abutting Genant Drive. The proposed median barrier width will be reduced to 3 ft between the cross bridges, to provide room for a 7 foot left shoulder width, except at the cross bridges, where the shoulder width would be 4 feet to accomodate the bridge piers.

7. Proposed Treatment (i.e., recommendation)

In the northbound direction, provide 10 ft. left and right shoulders except from NB STA R16 29+00 TO R16 33+00, where a 7 foot right shoulder will be provided adjacent to the existing retaining wall and Adirondack Furniture building. In the southbound direction, provide a 10 ft. left and right shoulder width except from SB STA R25 130+00 TO C22 105+80 where a left shoulder width of 7 ft (4 ft at bridge piers) would be used.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Non-Standard Feature Justification
A-3-3-04
(Attachment)

1. Along the northern segment of re-designated BL-81, between Butternut Street and Hiawatha Boulevard, a distance of approximately 1.3 miles, the highway consists 4 travel lanes in the northbound direction and 3 travel lanes in the southbound direction. The freeway ends at the southern limit of this section, but to the north, the adjacent section of BL 81 consists of extended miles of 6 lane highway. It is anticipated that at some point in the future, the adjacent segment to the north would be reconstructed, and at that time, the median side shoulders would be widened to meet current design criteria. Within this northern segment of BL 81, it is proposed that both the left shoulder along the median side and the outside right shoulders would meet the current 10 ft. width criteria for both bounds of highway, except for two sections:

   BL-81 NB STA R16 29+00 TO R16 33+00

   To provide for a uniform 10 ft. left shoulder width, a relatively short length (400 feet) of right side shoulder would be limited to 7 feet, due to the proximity of an existing large retaining wall and the Adirondack Furniture building;

   BL-81 SB STA R25 130+00 TO C22 105+80

   Between Spencer and Butternut streets, additional alignment shifting would be needed to provide for a 10-foot wide left shoulder, which would cause significant additional property impacts, including impacts to the chimney just south of Spencer Street, additional impacts to Genant Drive that would require closure of additional sections of that street, as well as additional ROW impacts to the properties abutting Genant Drive. As a result, a total length of approximately 1,360 feet of southbound highway would have a non-standard left shoulder width. But as an incremental improvement, a width of 7 feet of left shoulder width would be achieved by reducing the median width from 6 feet to 3 feet, except at the Spencer Street Bridge, where a short length of 4-foot shoulder would be needed adjacent to the bridge pier.

2. The cost estimate is based on the cost estimate report dated January 11, 2018, to fully meet the standard of 10 ft. shoulder width, which is providing additional widening of the shoulder (NB-right shoulder; SB-left shoulder) width from 7 ft. to 10 ft. within the two separate areas described above. This cost does not include additional costs that may be needed such as retaining walls, building demolitions, ROW, etc. While widening the shoulder an additional 3 feet would satisfy the 10 ft. shoulder criteria, there are other concerns that this would introduce. Additional concerns include: impacts to the existing retaining wall and furniture store on the east side of NB BL-81 and impacts to the chimney and to Genant Drive on the west side of SB BL 81.

3. The cost of incremental improvement is included in the revised base design.

4. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 160 crashes occurred along this highway segment, of which 20 crashes were identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 12.5% of total crashes, and a crash rate of 0.35 acc/mvm). The proposed design includes an incremental improvement (shoulder widened to 7-10' on both sides from 3' Left and 6' Right shoulder width) which would increase approximately 67-130% above the existing shoulder width and achieve 70-100% of the design criteria standard.

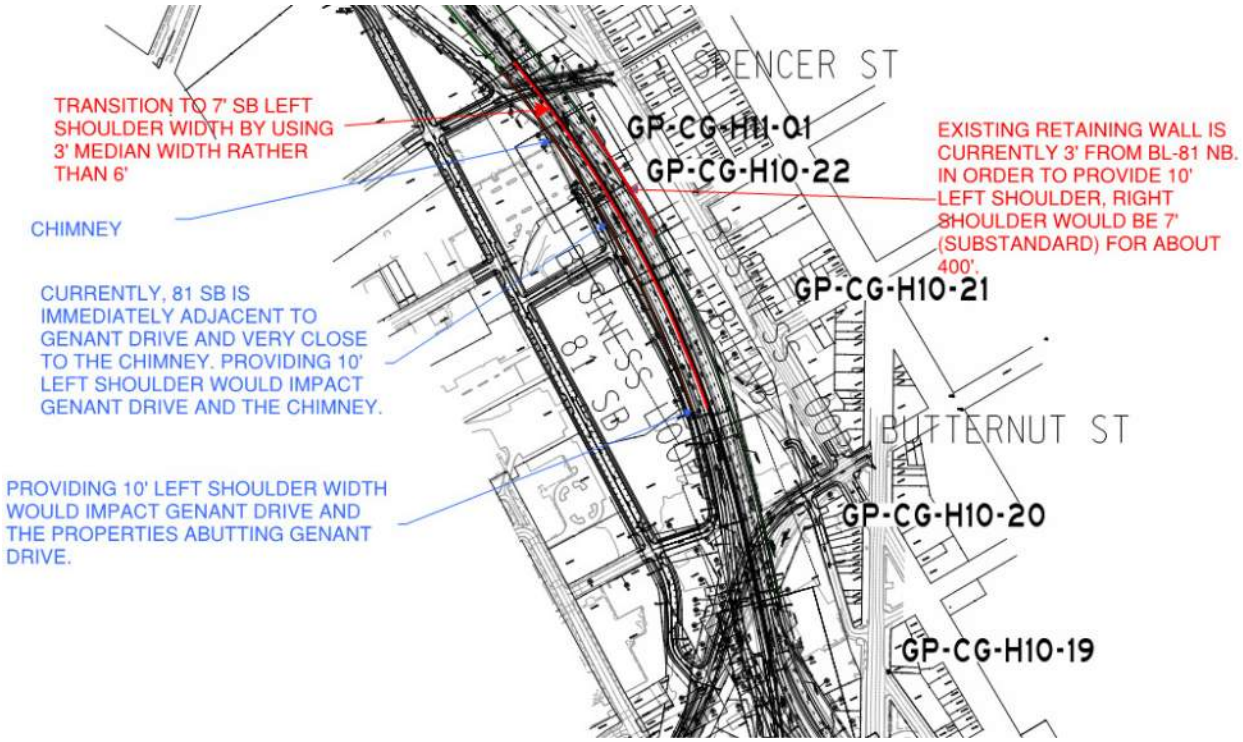

TRANSITION TO 7' SB LEFT SHOULDER WIDTH BY USING 3' MEDIAN WIDTH RATHER THAN 6'
CHIMNEY
CURRENTLY, 81 SB IS IMMEDIATELY ADJACENT TO GENANT DRIVE AND VERY CLOSE TO THE CHIMNEY. PROVIDING 10' LEFT SHOULDER WOULD IMPACT GENANT DRIVE AND THE CHIMNEY.
PROVIDING 10' LEFT SHOULDER WIDTH WOULD IMPACT GENANT DRIVE AND THE PROPERTIES ABUTTING GENANT DRIVE.
SPENCER ST
GP-CG-H11-01
GP-CG-H10-22
EXISTING RETAINING WALL IS CURRENTLY 3' FROM BL-81 NB. IN ORDER TO PROVIDE 10' LEFT SHOULDER, RIGHT SHOULDER WOULD BE 7' (SUBSTANDARD) FOR ABOUT 400'.
GP-CG-H10-21
BUTTERNUT ST
GP-CG-H10-20
GP-CG-H10-19

Figure 1

Justification Number A-3-3-05

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.6	**Route No. and Name:** Eastbound I-690 to Irving Ave. Off-Ramp - Community Grid Alternative
Project Type: Reconstruction	☑ **National Network/Qualifying Highway** ☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate	**Design Classification (AASHTO Class):** Interstate -Urban
ADT: 16,100	**% Trucks:** 7.4% ◉ **NHS** ○ **Non-NHS** **Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius

Location: STA R35 111+84 TO STA R35 114+37 (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.051321 Long: -76.138847 **TO** Lat: 43.050830 Long: -76.138263

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 214 ft	**Design Speed:** 30 mph
Existing Value: N/A	**Recommended Speed - Existing:** 15 mph ıction
Proposed Value: 158 ft	**Recommended Speed - Proposed:** 25 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.43 ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - New Construction

3. Cost Estimates

Cost to fully meet standards: N/A (see note 1)	**Cost(s) for incremental improvements:** N/A (see note 2).

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Available sight distance to the curve is slightly below the decision sight distance needed for drivers to adjust their speeds for this type of maneuver, as per AASHTO. Overhead curve warning and signal ahead signs will be placed in advance of the curve. Chevron alignments signs will be placed along the curve, as per the MUTCD.

5. Compatibility with Adjacent Segments and Future Plans

No future plans for adjacent segments of this ramp.

6. Other Factors

e.g., social, economic, and environmental

Providing a standard curve radii would create additional impacts to historic property and create a skewed intersection at Erie Boulevard. Traffic analysis has determined that the majority of trips on this ramp are destined for University Hill, therefore resulting in the proposed design of the ramp curve onto Irving Ave.

7. Proposed Treatment (i.e., recommendation)

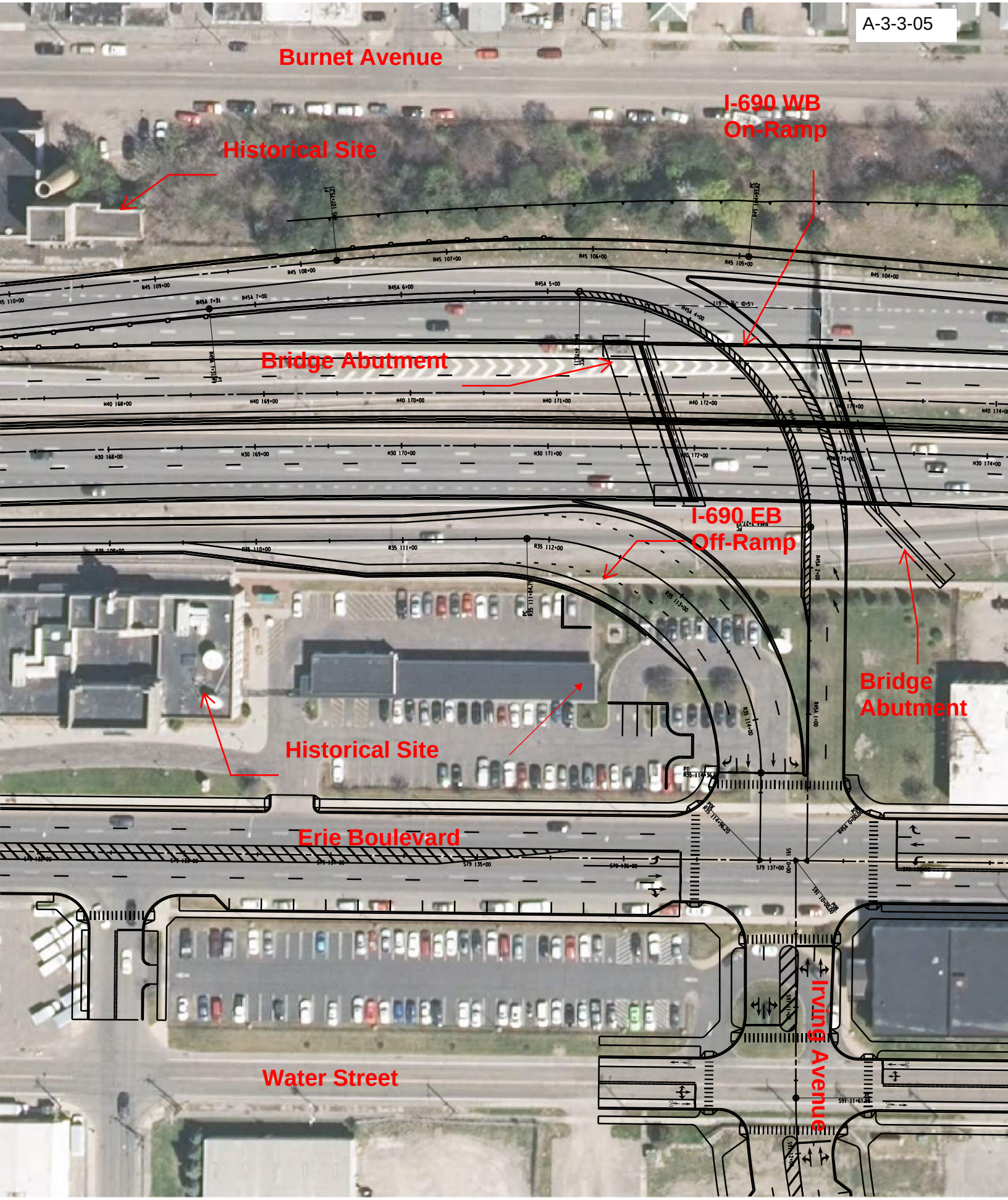
Propose non-standard curve radii with curve warning signs, signal ahead signs and chevron alignment signs.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Nonstandard Feature Justification
A-3-3-05
(Attachment)

1. The Proposed Design meets horizontal curve criteria for a 25 mph design speed. There is no feasible alternative design that would meet horizontal curve standards due to the close proximity to several East-West city streets (i.e. Erie Boulevard, Water street, etc.). Providing a standard curve radius would create extensive ROW impacts, including impact to property listed on the National Register of Historic Places and create a severely skewed intersection at Erie Boulevard. Additionally, the non-standard curve is immediately adjacent to the new signalized intersection between the new off-ramp and Erie Boulevard which is expected to cause traffic to be traveling well below the design speed.

2. Similarly, there are no feasible incremental improvements (see note 1).


A-3-3-05
Burnet Avenue
I-690 WB
On-Ramp
Historical Site
Bridge Abutment
I-690 EB
Off-Ramp
Bridge
Abutment
Historical Site
Erie Boulevard
Water Street
Irving Avenue

Justification Number A-3-3-06

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.6	**Route No. and Name:** Eastbound I-690 to Irving Ave. Off-Ramp - Community Grid Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 16,100	**% Trucks:** 7.4%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Stopping Sight Distance (Horizontal)

Location: STA R35 110+50 TO STA R35 112+75 (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.051320 Long: -76.139356 **TO** Lat: 43.051317 Long: -76.138803

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 200 ft	**Design Speed:** 30 mph
Existing Value: N/A	**Recommended Speed - Existing:** 15 mph
Proposed Value: 129 ft (Right Lane Only)	**Recommended Speed - Proposed:** 25 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.43 ◉ **acc/mvm** ○ **acc/mev**
From date **to** date	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - New Construction

3. Cost Estimates

Cost to fully meet standards: N/A (see note 1)	**Cost(s) for incremental improvements:** N/A (see note 2)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

The non-standard curve radius coupled with the proposed warning signs in this area is expected to reduce vehicle speeds below the design speed.

5. Compatibility with Adjacent Segments and Future Plans

No future plans for adjacent segments of this ramp.

6. Other Factors

e.g., social, economic, and environmental

To eliminate the need for roadside barrier, which obstructs the sight line, additional property would have to be acquired to install recoverable side slopes. This would increase impacts to the historic property adjacent to the ramp. This property is listed on the National Register of Historic Places. In addition, this sight restriction only applies to cars in the right lane. Heavy vehicles with a higher sightline are not affected.

7. Proposed Treatment (i.e., recommendation)

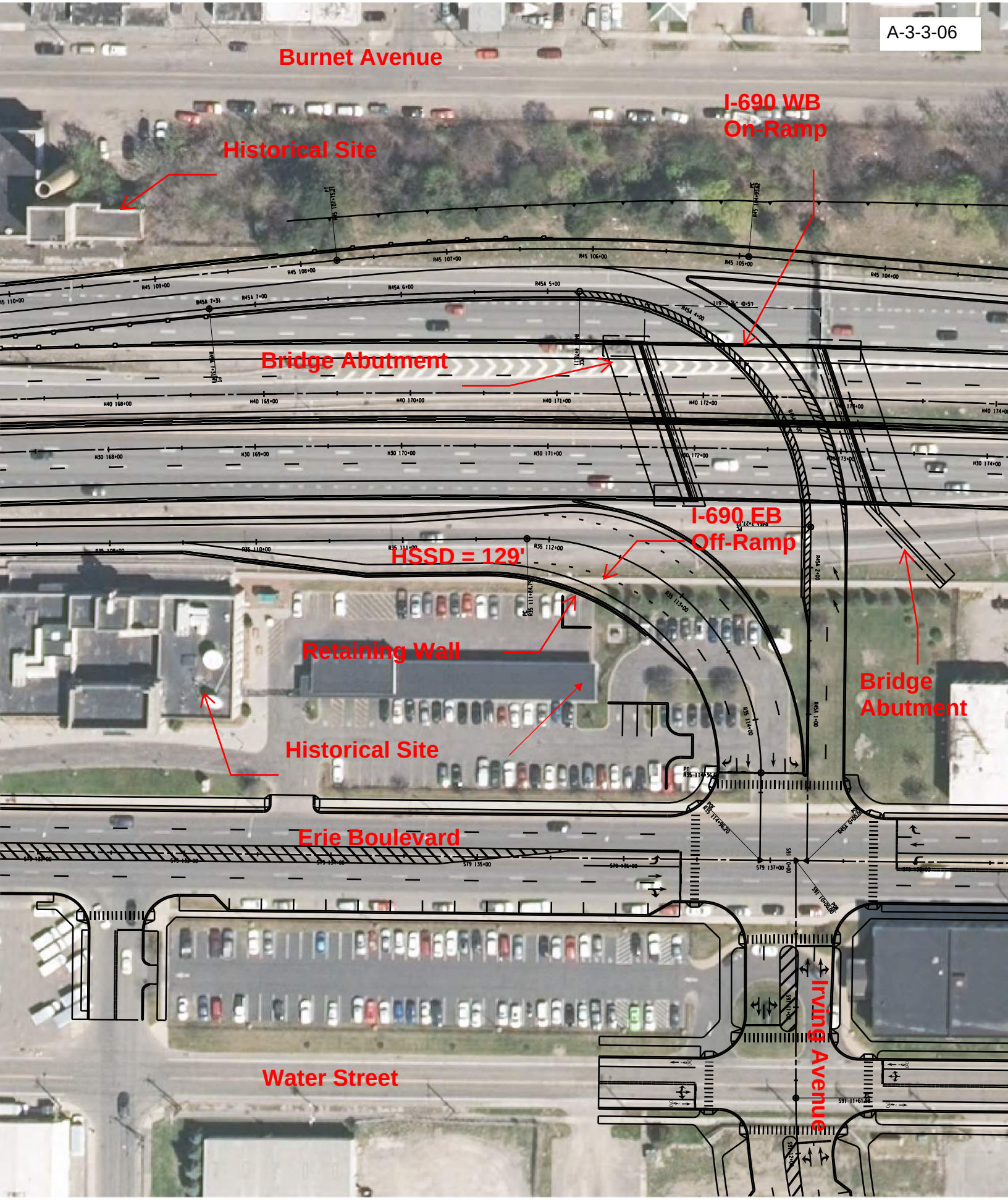
Propose non-standard horizontal stopping sight distance.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Nonstandard Feature Justification
A-3-3-06
(Attachment)

1. The sight line is obstructed by a roadside barrier on the top of a retaining wall. In order for the ramp to meet design criteria additional acquisition of property listed on the National Register of Historic Places would be required. The Proposed Design meets HSSD criteria for a 20 mph design speed. There are no feasible alternative design that would meet horizontal curve standards that would not increase ROW impacts, including impacts to a property listed on the National Register of Historic Places. Additionally, all but a short (150 foot) section of the ramp would meet HSSD criteria. Only the segment immediately adjacent to the horizontal curve leading to the signalized intersection with Erie Boulevard would have a non-standard HSSD and traffic speeds at that location are expected to be traveling well below the design speed due to the horizontal curve and the signalized intersection.

2. Similarly, there are no feasible incremental improvements, (see Note 1).


A-3-3-06
Burnet Avenue
I-690 WB
On-Ramp
Historical Site
Bridge Abutment
I-690 EB
Off-Ramp
HSSD = 129'
Retaining Wall
Bridge
Abutment
Historical Site
Erie Boulevard
Irving Avenue
Water Street

Justification Number A-3-3-07

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.6	**Route No. and Name:** Irving Ave. to Westbound I-690 On-Ramp - Community Grid Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Local - Urban	
ADT: 1,270	**% Trucks:** 7.4%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius

Location: North of Erie Blvd. STA R45A 2+17.07 TO R45A 4+65.86 (See Attached Figure)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.051311 Long: -76.138117 **TO** Lat: 43.051754 Long: -76.138667

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 214 ft	**Design Speed:** 30 mph
Existing Value: N/A	**Recommended Speed - Existing:** 15 mph ıction
Proposed Value: 159 ft	**Recommended Speed - Proposed:** 25 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.43 ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - New Construction

3. Cost Estimates

Cost to fully meet standards: N/A (see note 1)	**Cost(s) for incremental improvements:** N/A (see note 2)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

The location of this curve is shortly after a signalized intersection. Vehicles turning onto this ramp are expected to remain at near turning speeds and therefore drive through the curve below the ramp design speed of 30mph. Vehicles approaching the curve from Irving Ave. have available sight distance that is slightly below the decision sight distance needed for drivers to adjust their speeds for this type of maneuver, as per AASHTO. Curve warnings signs as well as Chevron alignments signs will be placed along the curve, as per the MUTCD.

5. Compatibility with Adjacent Segments and Future Plans

No future plans for adjacent segments of this ramp.

6. Other Factors

e.g., social, economic, and environmental

Providing a standard curve radii would reduce the available distance to tie in with the mainline, requiring the gore to shift further west along westbound I-690. This would result in a reduction of the weaving distance on the mainline therefore impacting operations on the mainline. This would also be a further reduction of a non-conforming ramp spacing.

7. Proposed Treatment (i.e., recommendation)

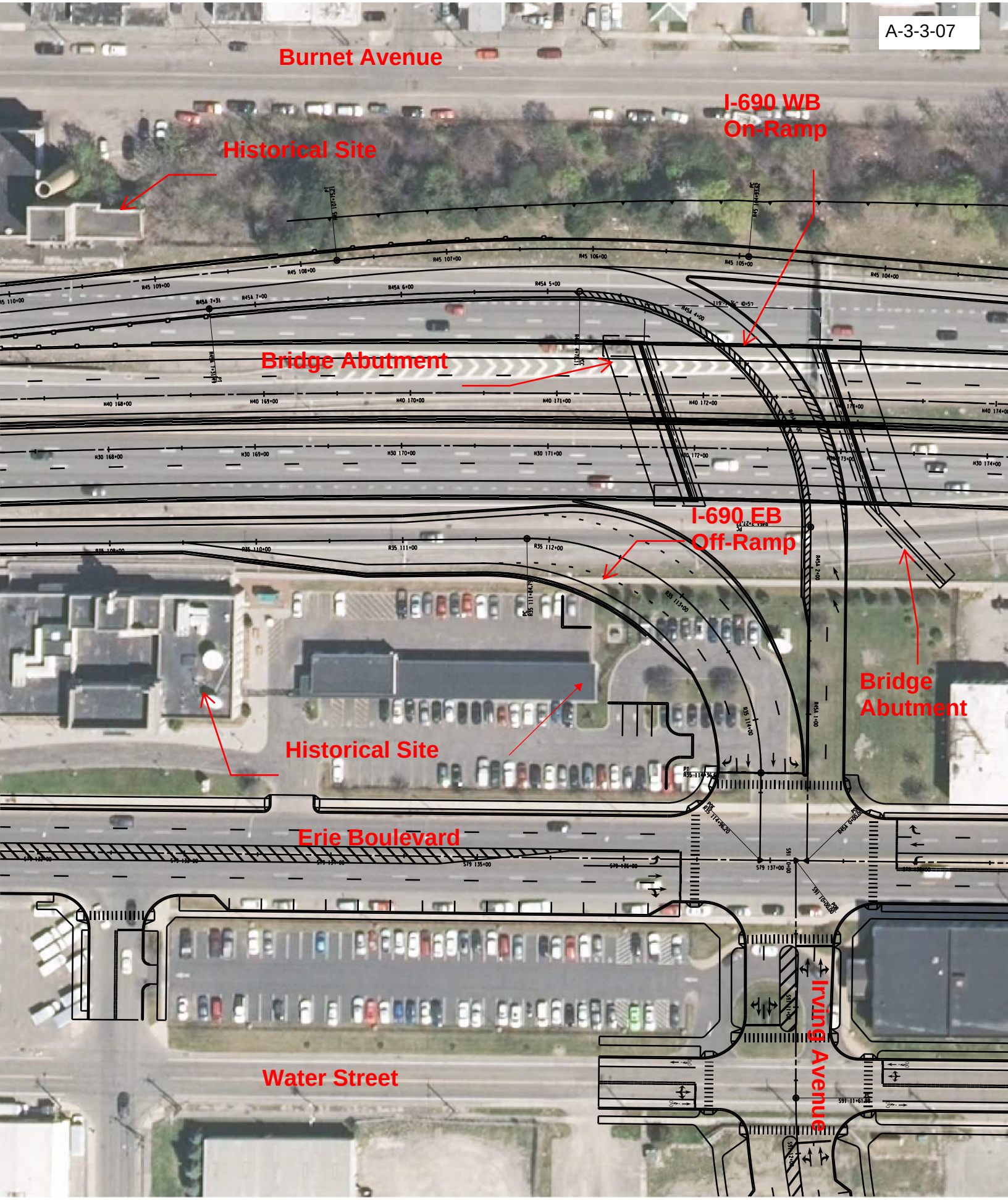
Propose non-standard curve radii with curve warning signs and chevron alignment signs.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Nonstandard Feature Justification
A-3-3-07
(Attachment)

1. The Proposed Design meets horizontal curve criteria for a 25 mph design speed. There is no feasible alternative design that would meet horizontal curve standards due to the close proximity of Burnet Avenue, the merging with the ramp segment from Crouse Avenue and the angle of the WB I-690 bridge crossing. Providing a standard curve radius would create extensive ROW impacts between I-690 and Burnet Avenue, including impact to property listed on the National Register of Historic Places and would require the length of the on-ramp to be extended which would then cause a non-conforming ramp spacing. Additionally, due to the ramp curves proximity to the signalized intersection on Erie Boulevard and Irving Avenue vehicles are expected to remain under the design speed of 30 mph.

2. There are no feasible incremental improvements, (see note 1).


A-3-3-07
Burnet Avenue
I-690 WB
On-Ramp
Historical Site
Bridge Abutment
I-690 EB
Off-Ramp
Bridge
Abutment
Historical Site
Erie Boulevard
Water Street
Irving Avenue

Justification Number A-3-3-08

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** I-81 Southbound Off-Ramp to Clinton Street - Community Grid Alternative
Project Type: Reconstruction	☑ **National Network/Qualifying Highway** ☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate	**Design Classification (AASHTO Class):** Interstate -Urban
ADT: 10461	**% Trucks:** 6% ◉ **NHS** ○ **Non-NHS** **Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius

Location: R27 STA 10+23 to R27 STA 13+27 (See Attachment)

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.065820 Long: -76.163120 **TO** Lat: 43.065084 Long: -76.162942

Latitude and Longitude (Point Feature) Lat: N/A Long: N/A

Standard Value: 214'	**Design Speed:** 30 mph
Existing Value: N/A New Construction	**Recommended Speed - Existing:** 30 mph on
Proposed Value: 167'	**Recommended Speed - Proposed:** 25 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** 1.43 ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - New Construction

3. Cost Estimates

Cost to fully meet standards: N/A (see note 1)	**Cost(s) for incremental improvements:** N/A (see note 2)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Overhead curve warning and signal ahead signs will be placed in advance of the curve. Chevron alignments signs will be placed along the curve, as per the MUTCD.

5. Compatibility with Adjacent Segments and Future Plans

No future plans for adjacent segments of this ramp.

6. Other Factors

e.g., social, economic, and environmental

Providing a standard curve radius would require that North Clinton Street be relocated further west creating extensive ROW impacts with adjacent property and not relocating North Clinton Street would create a skewed intersection at North Clinton Street. (See Attached Figure)

7. Proposed Treatment (i.e., recommendation)

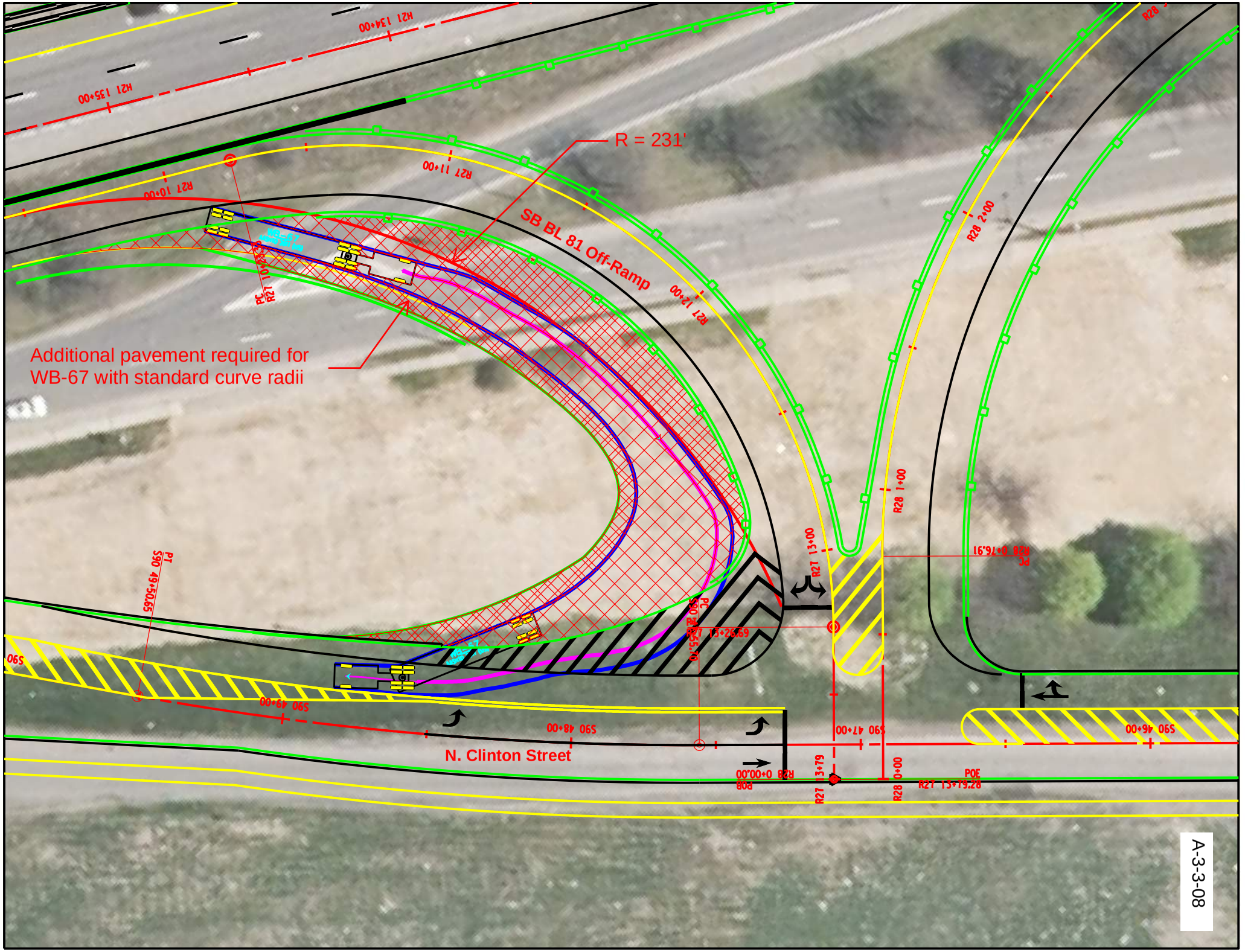
Propose non-standard curve raii with curve warning signs, signal ahead signs and chevron alignment signs.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Nonstandard Feature Justification
A-3-3-08
(Attachment)

1. The Proposed Design meets horizontal curve criteria for a 25 mph design speed. Providing a standard curve radius would require the relocation of North Clinton Street to the west creating extensive ROW impacts with adjacent property or create a skewed intersection at North Clinton Street. Providing a skewed intersection (see attached figure) would significantly widen the throat of the intersection to provide for truck turns. A much wider intersection could increase driver confusion. Additionally, the non-standard curve is immediately adjacent to the new signalized intersection between the new off-ramp and North Clinton which is expected to cause traffic to be traveling well below the design speed.

2. Similarly, there are no feasible incremental improvements (see note 1).


R = 231'
SB BL 81 Off-Ramp
Additional pavement required for
WB-67 with standard curve radii
N. Clinton Street
A-3-3-08

Justification Number A-3-3-09

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.6	**Route No. and Name:** Van Buren Street - Community Grid Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Minor Arterial		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 21,770	**% Trucks:** 3%	◯ NHS ◉ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Maximum Grade

Location: Between Almond Street and Henry Street STA S74 10+00 TO S74 12+50

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.037566° Long: -76.14072° **TO** Lat: 43.037529° Long: -76.141485°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 8%	**Design Speed:** 35 mph
Existing Value: 15.52%	**Recommended Speed - Existing:** 15 mph
Proposed Value: 15.52%	**Recommended Speed - Proposed:** 15 mph

2. Accident Analysis

Current Accident Rate[1]**:** 0.68 ◯ acc/mvm ◉ acc/mev	**Statewide Accident Rate:** 0.19 ◯ acc/mvm ◉ acc/mev
From 09/01/2014 **to** 08/31/2017	**Is the Nonstandard Feature a contributing factor?** ◯ Yes ◉ No

Anticipated accident rates, severity, and costs:

During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 5 crashes occurred on this segment, of which none of the crashes were identified to be potentially related to the existing non-standard grade (>8%) of Van Buren Street. The number of crashes potentially related to the existing non-standard grade equates to 0% of the total crashes, and a crash rate of 0 acc/mev.

3. Cost Estimates

Cost to fully meet standards: $7.0 M	**Cost(s) for incremental improvements:** There are no incremental improvements

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

A W7-1a (Hill with Grade) sign will be placed near the top of the non-standard grade to warn drivers in the downhill direction.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments

6. Other Factors

e.g., social, economic, and environmental

Providing a standard grade would raise the proposed elevations about 11' near the intersection of Van Buren St. and Almond St. This would require raising the grade of Almond Street to a max grade of 8% to meet Van Buren St. Raising elevations at this intersection would likely require severing the Burt Street intersection, the acquisition of the SHA Administration building and potential access impacts to the Syracuse University Steam Plantt. In additon, the driveway leading to the Syracuse University Parking Garage on the north side of Van Buren St. would need to be closed and retaining walls would be required to avoid impacts to the railroad.

7. Proposed Treatment (i.e., recommendation)

Maintain existing non-standard grade of 15.52%

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Justification Number A-3-3-10

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Genant Drive - Community Grid Alternative		
Project Type: Reconstruction		☐ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Interstate		**Design Classification (AASHTO Class):** Interstate -Urban	
ADT: 600 (2050)	**% Trucks:** 3	○ **NHS** ◉ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius

Location: STA S84A 11+17 to S84A 12+83

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.056926 Long: -76.154331 **TO** Lat: 43.057260 Long: -76.154106

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 188 FT	**Design Speed:** 30 mph
Existing Value: 76 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 76 FT	**Recommended Speed - Proposed:** 15 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** N/A ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A see note 1.

3. Cost Estimates

Cost to fully meet standards: N/A (see note 2)	**Cost(s) for incremental improvements:** N/A (see note 2)

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

None - This is an existing curve on a low volume, low speed city street and there are no feasible mitigation options.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

Providing a standard curve radius on Genant Drive would create extensive impacts to the existing parking lot which would negatively impact the viability of the property for business use. Due to the proximity to proposed Business Loop 81 the curve cannot be pushed out to avoid ROW impacts. (See Attached Figure)

7. Proposed Treatment (i.e., recommendation)

Maintain existing non-standard curve radius.

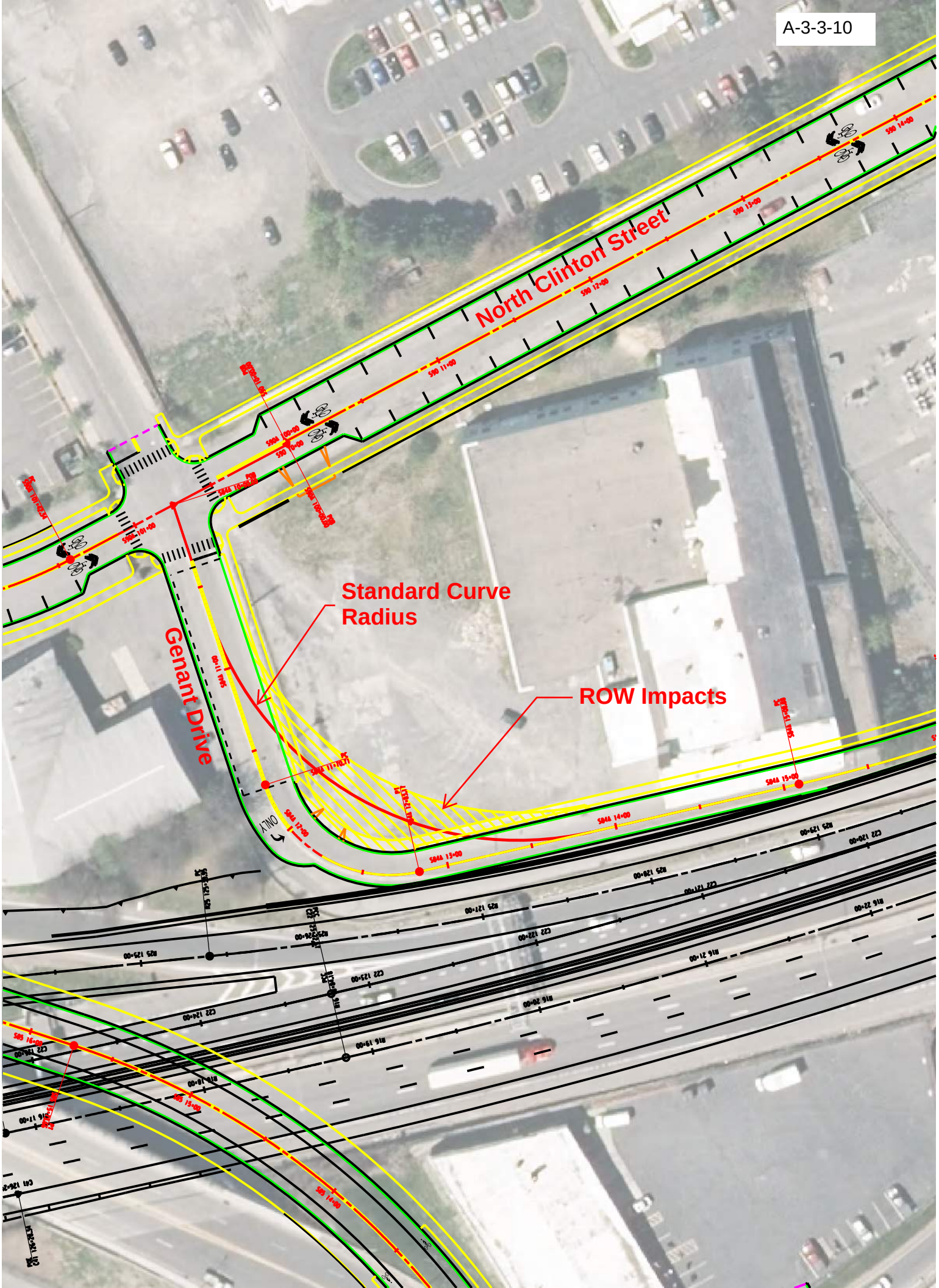
[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Nonstandard Feature Justification
A-3-3-10
(Attachment)

1. This is an existing curve on a low volume, low speed city street where the existing geometry is being maintained.

2. Providing a standard radius curve would impact the existing parking lot which would impact the viability of the property for business purposes. There are no feasible incremental improvements (see attached figure) and there are no plans to fully meet standards.

A-3-3-10


North Clinton Street
Genant Drive
Standard Curve Radius
ROW Impacts
ONLY

Justification Number A-3-3-11

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Erie Boulevard - Community Grid Alternative
Project Type: Reconstruction	☑ **National Network/Qualifying Highway** (Note 1) ☐ **Access Highway**
Functional Class: Urban Principal Arterial - Other	**Design Classification (AASHTO Class):** Arterial - Urban
ADT: Varies 4,000 to 14,700 (2050)	**% Trucks:** 3 ◉ **NHS** ○ **Non-NHS** **Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Salina Street and Crouse Avenue STA S79 100+00 TO S79 143+18

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.050910° Long: -76.152175° **TO** Lat: 43.050712° Long: -76.136458°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 12 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 12 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]: N/A ◉ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** N/A ◉ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ◉ **No**

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, there is a designated bicycle facility on Water Street (Empire State Trail) which is directly adjacent to Erie Boulevard and more conducive to bicycle use (see attached figure).

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Designated bicycle infrastructure is provided on an adjacent street (Water Street) which is part of the Empire State Trail system (see attached figure).

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on Erie Boulevard. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this instance, the parallel route is the designated Empire State Trail on Water Street, which has a much lower traffic volume, and is more conducive to mixed use traffic. The addition of signing to direct bicyclists to designated facilities will be considered during final design.

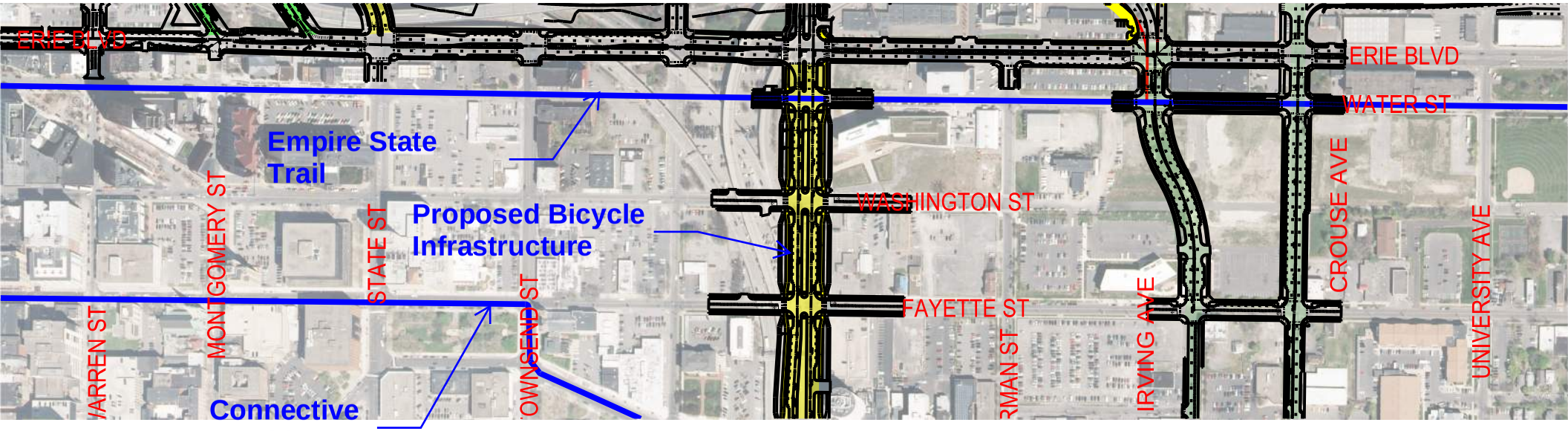
7. Proposed Treatment (i.e., recommendation)

Maintain lane width of 12 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*

Nonstandard Feature Justification
A-3-3-11
(Attachment)

1. Under the Community Grid Alternative, the section of Erie Boulevard between Oswego Boulevard and Almond Street would be classified as a Qualifying Highway. The classification of the remaining sections of Erie Boulevard would not be part of the Qualifying Highway network.


ERIE BLVD
ERIE BLVD
WATER ST
Empire State Trail
Proposed Bicycle Infrastructure
Connective Corridor
MONTGOMERY ST
STATE ST
WASHINGTON ST
FAYETTE ST
CROUSE AVE
UNIVERSITY AVE
IRVING AVE

A-3-3-11

Justification Number A-3-3-12

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Oswego Boulevard - Community Grid Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Other		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 3,440 (2050)	**% Trucks:** 3%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Erie Boulevard and Business Loop 81 Off Ramp

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.050862° Long: -76.149340° **TO** Lat: 43.052457° Long: -76.150627°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 12 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 12 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]: N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** ○ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, Oswego Boulevard is a one-way street with heavy traffic due to the high volume of traffic originating from the Business Loop 81 Off Ramp and there is a parallel, designated bicycle facility on State Street to the east, which is directly adjacent to Oswego Boulevard and more conducive to bicycle use (see attached figure).

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Designated bicycle infrastructure is provided on a parallel north-south city street (State Street to the east). See attached figure.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

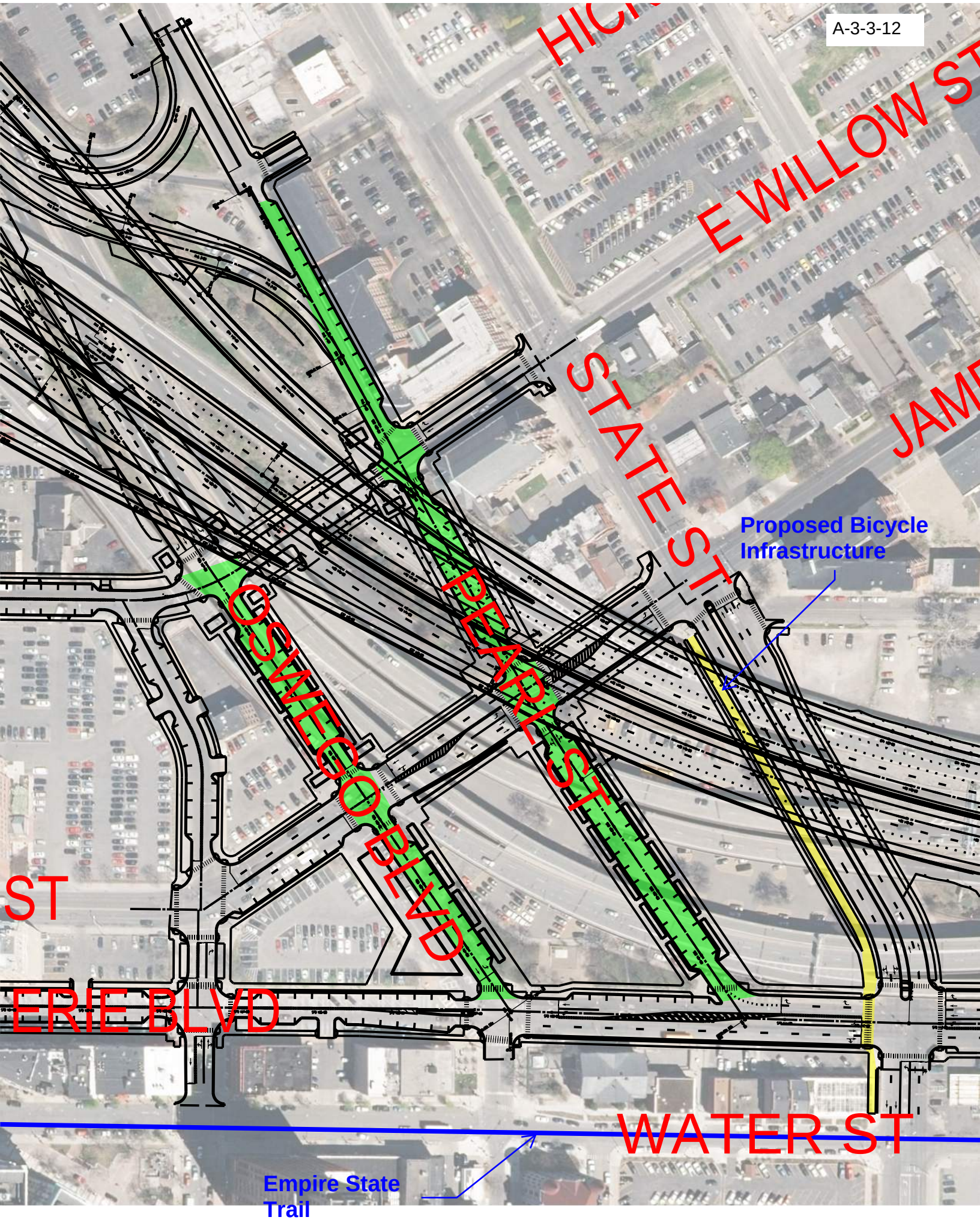
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on Oswego Boulevard. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, Oswego Boulevard is one way southbound and will carry a high volume of traffic coming from the BL 81 off-ramp, which is not conducive to two-way bicycle traffic. Additionally, alternate bicycle facilities are available. In this instance, designated bicycle infrastructure is being provided on a parallel north-south city street (State Street to the east). The addition of signing to direct bicyclists to designated facilities will be considered

7. Proposed Treatment (i.e., recommendation)

Maintain lane width of 12 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


A-3-3-12
E WILLOW ST
STATE ST
PEARL ST
OSWEGO BLVD
ERIE BLVD
ST
WATER ST
Proposed Bicycle Infrastructure
Empire State Trail

Justification Number A-3-3-13

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Pearl Street - Community Grid Alternative		
Project Type: Reconstruction		☑ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Other		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: Varies 5,200 to 9,120 (2050)	**% Trucks:** 3%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Erie Boulevard and Business Loop 81 Ramp

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.050851° Long: -76.148190° **TO** Lat: 43.054038° Long: -76.150637°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 12 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 12 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** N/A ○ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, Pearl Street is a one-way street with heavy traffic due to the high volume of traffic destined to the Business Loop 81 On Ramp and there is a parallel, designated bicycle facility on State Street to the east, which is directly adjacent to Pearl Street and more conducive to bicycle use (see attached figure)..

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Designated bicycle infrastructure is provided on a parallel north-south city street (State Street to the east). See attached figure.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

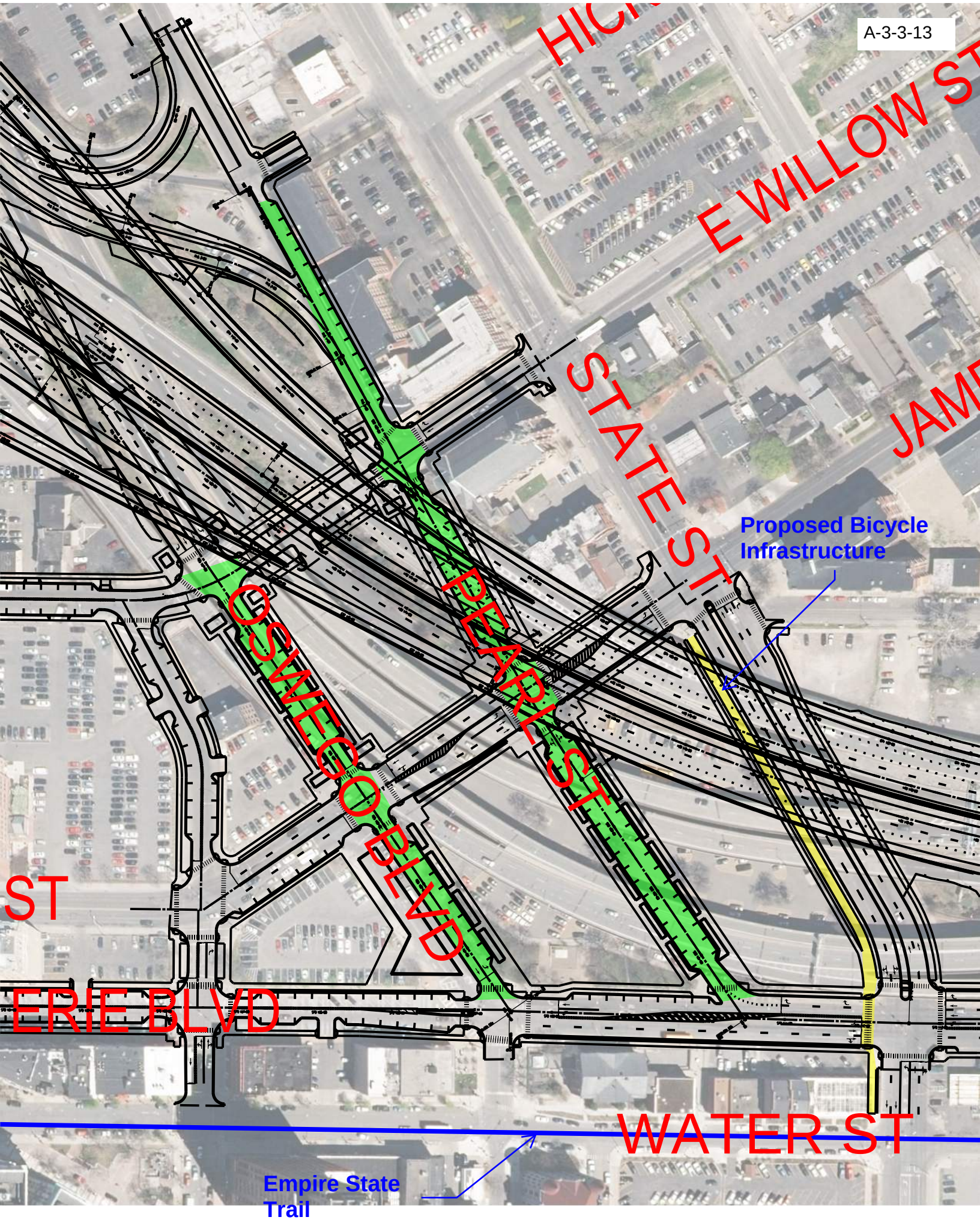
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on this segment of Pearl Street. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, This section of Pearl Street is one way northbound and will carry a high volume of traffic destined for the BL 81 on-ramp, which is not conducive to two-way bicycle traffic. Additionally, alternate bicycle facilities are available. In this instance, designated bicycle infrastructure is being provided on a parallel north-south city street (State Street to the east). The addition of signing to direct bicyclists to designated facilities will be

7. Proposed Treatment (i.e., recommendation)

Maintain minimum lane width of 12 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


A-3-3-13
E WILLOW ST
STATE ST
PEARL ST
OSWEGO BLVD
ERIE BLVD
WATER ST
Proposed Bicycle Infrastructure
Empire State Trail

Justification Number A-3-3-14

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Harrison Street - Community Grid Alternative		
Project Type: Reconstruction		☐ **National Network/Qualifying Highway**	☐ **Access Highway**
Functional Class: Urban Principal Arterial - Other		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: Varies 6,800 to 9,400 (2050)	**% Trucks:** 3%	◉ **NHS** ○ **Non-NHS**	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Salina Street and State Street

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.044301° Long: -76.152210° **TO** Lat: 43.044280° Long: -76.147496°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 10.5 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 10.5 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ○ **acc/mvm** ○ **acc/mev**	**Statewide Accident Rate:** N/A ○ **acc/mvm** ○ **acc/mev**
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ○ **Yes** ○ **No**

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, Harrison Street west of State Street contains narrow lanes, on street parking and minimum building setbacks. Alternatively, there are designated bicycle facilities on Genesee Street/Fayette Street (Connective Corridor) and on Water Street (Empire State Trail) which are parallel to Harrison Street and more conducive to bicycle use (see attached figure).

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

For the portion of Harrison Street between Salina Street and State Street, designated bicycle infrastructure is provided on parallel east-west city streets (Genesee/Fayette Street and Water Street to the north). The section of Harrison Street, between State Street and Townsend Street will accommodate mixed use traffic, a proposed designated bicycle facility will be provided on Harrison Street between Townsend Street and Almond Street and the section between Almond Street and Sarah Loguen Street will accomodate mixed use traffic. See attached figure.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

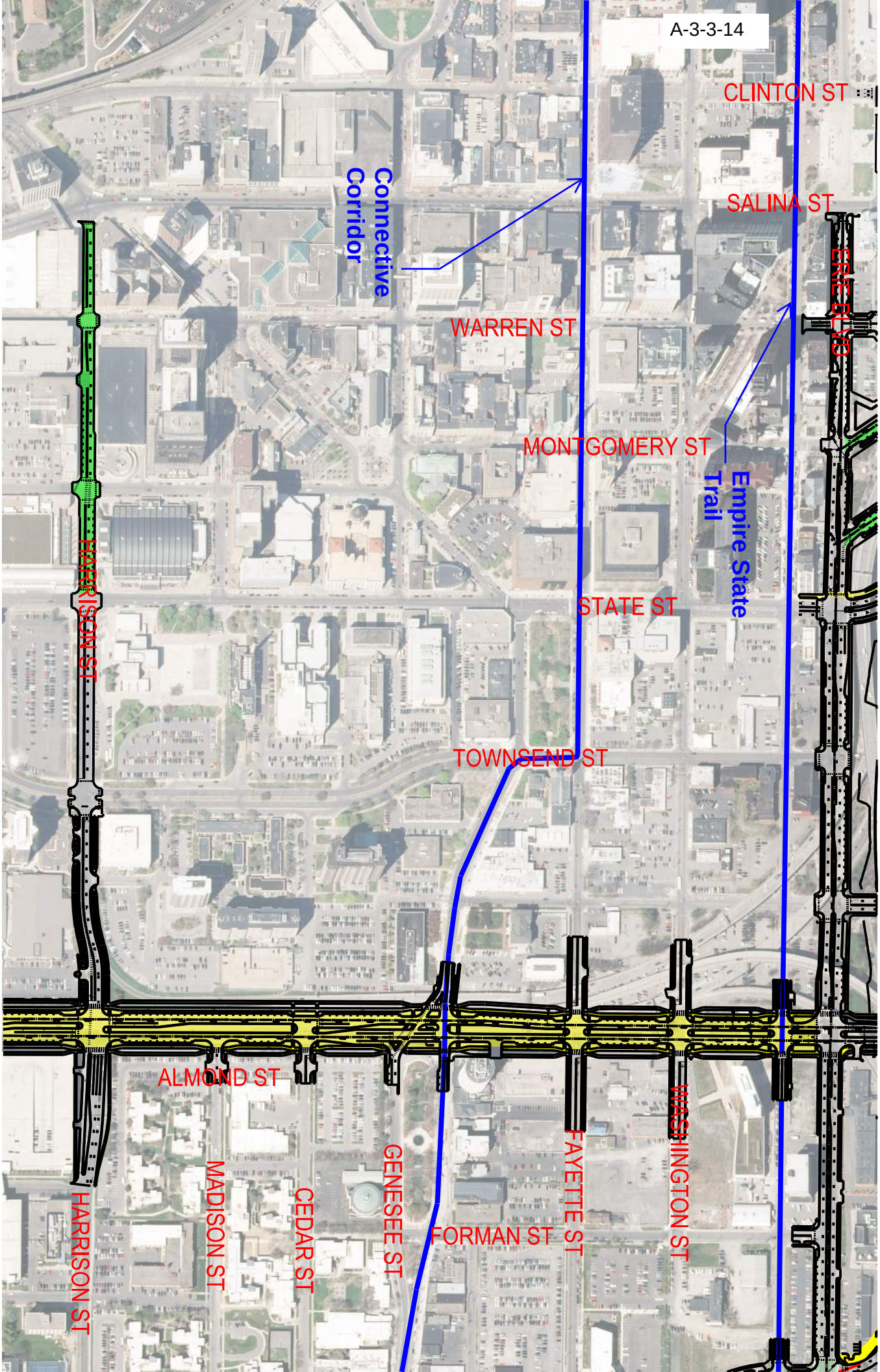
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on this segment of Harrison Street. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, the existing section of Harrison Street west of State Street contains narrow lanes, on street parking and minimum building setbacks. Alternatively, designated bicycle infrastructure is being provided on Genesee Street/Fayette Street (Connective Corridor) and Water Street (Empire State Trail). The addition of signing to direct bicyclists to designated facilities will be considered during final design.

7. Proposed Treatment (i.e., recommendation)

Maintain minimum lane width of 10.5 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


A-3-3-14
CLINTON ST
SALINA ST
ERIE BLVD
Connective Corridor
WARREN ST
MONTGOMERY ST
Empire State Trail
HARRISON ST
STATE ST
TOWNSEND ST
ALMOND ST
WASHINGTON ST
FAYETTE ST
GENESEE ST
FORMAN ST
CEDAR ST
MADISON ST
HARRISON ST

Justification Number A-3-3-15

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Crouse Avenue - Community Grid Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Principal Arterial - Other		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 3050 (2050)	**% Trucks:** 3%	◯ NHS ◉ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Waverly Avenue to Genesee Street

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.040552° Long: -76.136733° **TO** Lat: 43.052200° Long: -76.136427°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 12 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 12 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ◯ acc/mvm ◯ acc/mev	**Statewide Accident Rate:** N/A ◯ acc/mvm ◯ acc/mev
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ◯ Yes ◯ No

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, there is a designated bicycle facility on University Avenue (Connective Corridor) to the east and the proposed bicycle facilities on Almond Street to the west, which are more conducive to bicycle use (see attached figure).

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

For the portion of Crouse Avenue between Waverly Avenue and Genesee Street, designated bicycle infrastructure is provided on parallel north-south city streets (Almond Street to the west and University Avenue to the east). The section of Crouse Avenue, between Genesee Street and Burnet Avenue is being reconstructed and outside travel lanes will meet shared travel lane criteria (see attached figure).

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

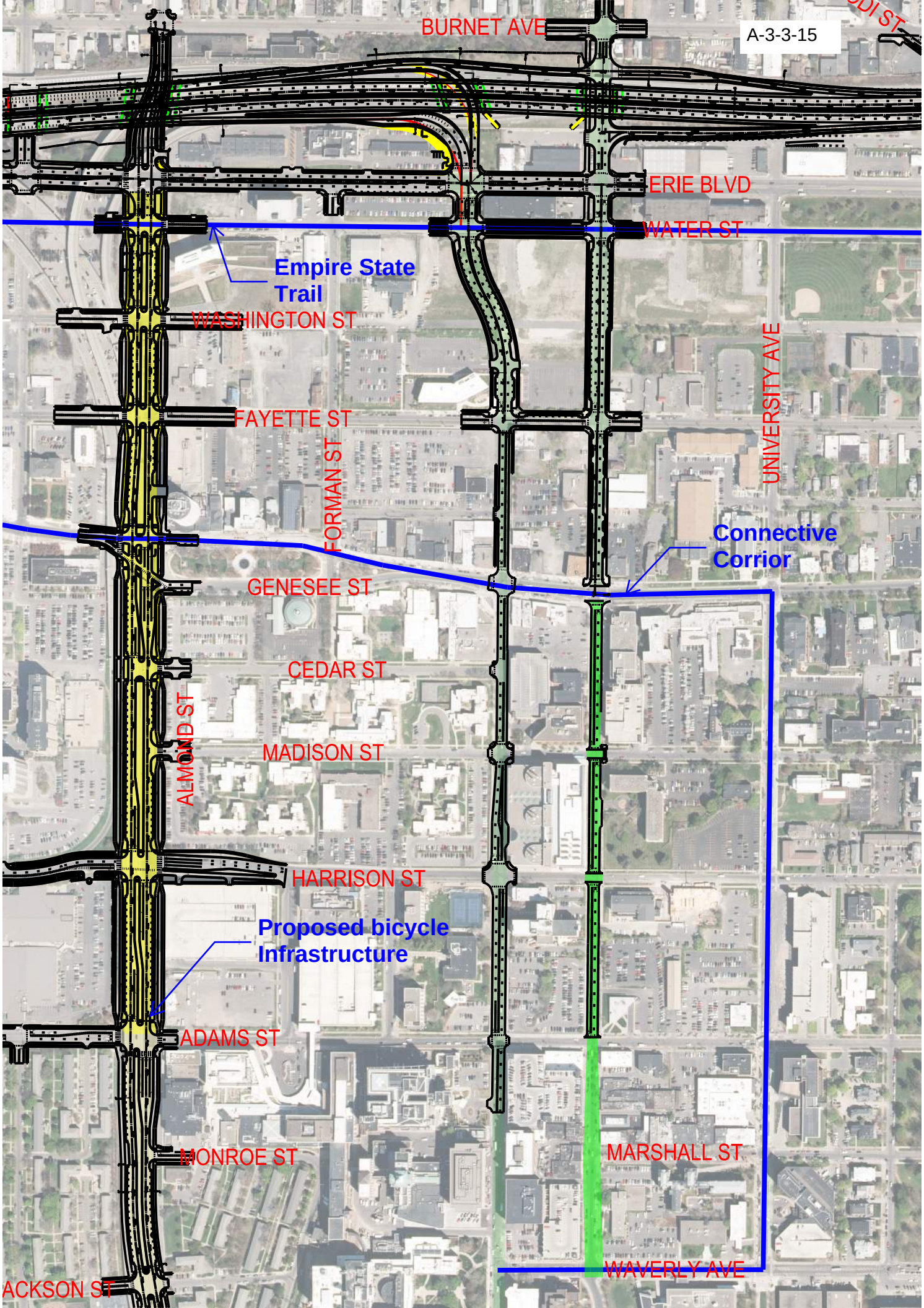
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on this segment of Crouse Avenue. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this instance, the parallel route is being provided on Almond Street to the west and University Avenue to the East, which are more conducive to bicycle use. The addition of signing to direct bicyclists to designated facilities will be considered during final design.

7. Proposed Treatment (i.e., recommendation)

Maintain lane width of 12 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


A-3-3-15
BURNET AVE
ERIE BLVD
WATER ST
Empire State Trail
WASHINGTON ST
FAYETTE ST
FORMAN ST
UNIVERSITY AVE
Connective Corrior
GENESEE ST
CEDAR ST
ALMOND ST
MADISON ST
HARRISON ST
Proposed bicycle Infrastructure
ADAMS ST
MONROE ST
MARSHALL ST
WAVERLY AVE
ACKSON ST

Justification Number A-3-3-16

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Irving Avenue - Community Grid Alternative
Project Type: Reconstruction	☐ National Network/Qualifying Highway ☐ Access Highway
Functional Class: Urban Principal Arterial - Other	**Design Classification (AASHTO Class):** Arterial - Urban
ADT: Varies 8,560 to 17,000 (2050)	**% Trucks:** 3% ◯ NHS ◉ Non-NHS **Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Van Buren Street and Erie Boulevard

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.037674° Long: -76.138293° **TO** Lat: 43.050353° Long: -76.138100°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 12 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 11 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ◯ acc/mvm ◯ acc/mev	**Statewide Accident Rate:** N/A ◯ acc/mvm ◯ acc/mev
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ◯ Yes ◯ No

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, there is a designated bicycle facility on University Avenue (Connective Corridor) to the east and the proposed bicycle facilities on Almond Street to the west, which are more conducive to bicycle use (see attached figure).

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Designated bicycle infrastructure is provided on parallel north-south city streets (Almond street to the west and University Avenue to the east). See attached figure.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

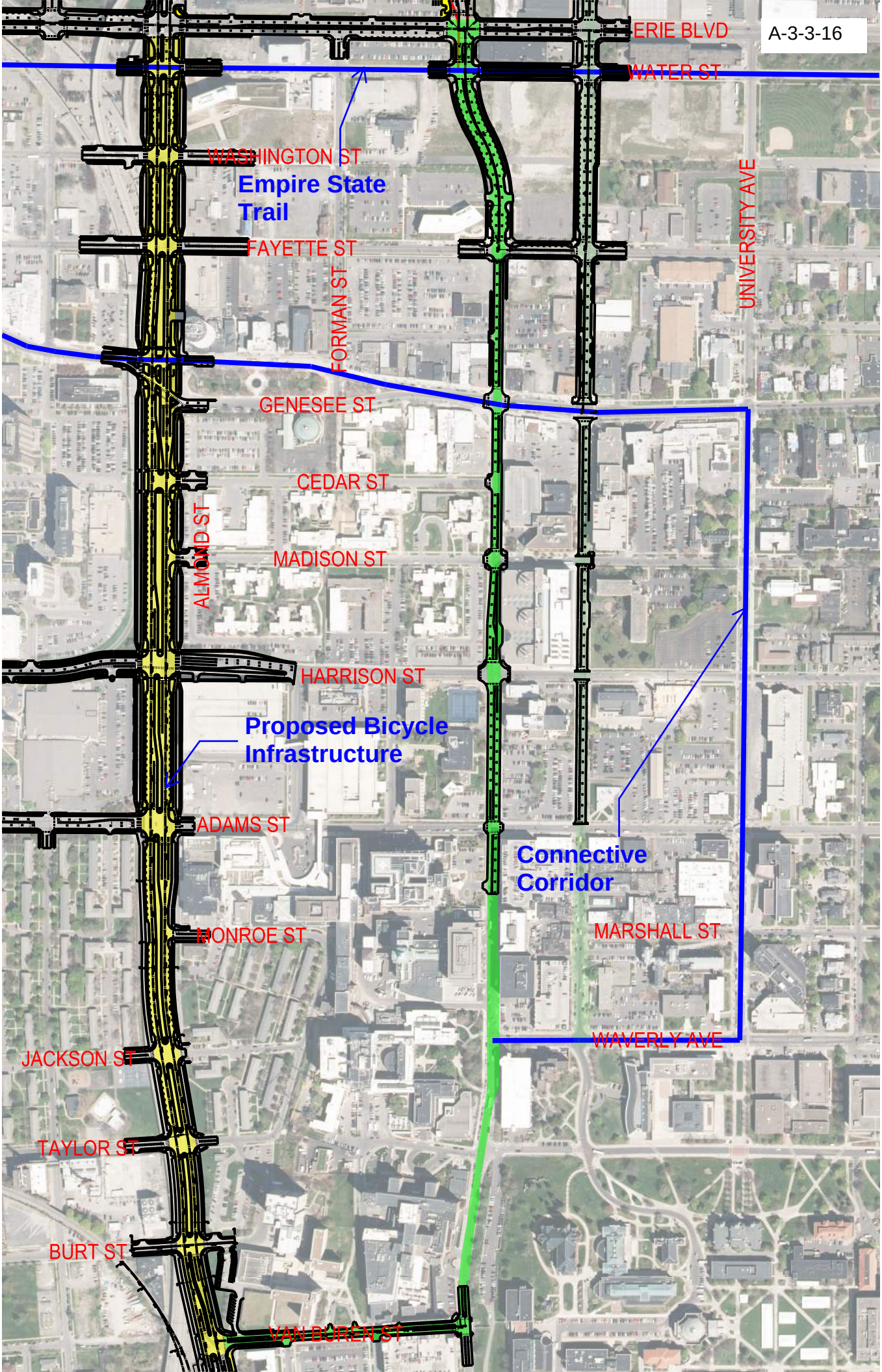
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on Irving Avenue. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this instance, the parallel route is being provided on Almond Street to the west and University Avenue to the East, which are more conducive to bicycle use. The addition of signing to direct bicyclists to designated facilities will be considered during final design.

7. Proposed Treatment (i.e., recommendation)

Maintain minimum lane width of 11 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


A-3-3-16
ERIE BLVD
WATER ST
WASHINGTON ST
Empire State Trail
FAYETTE ST
FORMAN ST
UNIVERSITY AVE
GENESEE ST
CEDAR ST
ALMOND ST
MADISON ST
HARRISON ST
Proposed Bicycle Infrastructure
ADAMS ST
Connective Corridor
MONROE ST
MARSHALL ST
WAVERLY AVE
JACKSON ST
TAYLOR ST
BURT ST
VAN BUREN ST

Justification Number A-3-3-17

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

Exhibit 2-15
Nonstandard Feature Justification

Rev. 04/24/17

PIN: 3501.60	**Route No. and Name:** Van Buren Street - Community Grid Alternative		
Project Type: Reconstruction		☐ National Network/Qualifying Highway	☐ Access Highway
Functional Class: Urban Minor Arterial		**Design Classification (AASHTO Class):** Arterial - Urban	
ADT: 10,950 (2050)	**% Trucks:** 3%	◯ NHS ◉ Non-NHS	**Terrain:** Rolling

1. Description of Nonstandard Feature

Type of Feature: Lane Width

Location: Between Almond Street and Irving Avenue

Latitude and Longitude (Linear Feature) **FROM** Lat: 43.037537° Long: -76.141476° **TO** Lat: 43.037663° Long: -76.138257°

Latitude and Longitude (Point Feature) Lat: Long:

Standard Value: 13 FT Shared Travel Lane	**Design Speed:** 35 mph
Existing Value: 12 FT	**Recommended Speed - Existing:** 30 mph
Proposed Value: 12 FT	**Recommended Speed - Proposed:** 35 mph

2. Accident Analysis

Current Accident Rate[1]**:** N/A ◯ acc/mvm ◯ acc/mev	**Statewide Accident Rate:** N/A ◯ acc/mvm ◯ acc/mev
From N/A **to** N/A	**Is the Nonstandard Feature a contributing factor?** ◯ Yes ◯ No

Anticipated accident rates, severity, and costs:

N/A - A crash rate related to shared use is not applicable. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, alternate, parallel bicycle facilities are available for use. In this case, Van Buren Street is very steep (>15%) and not conducive to bicycle use and alternate, designated bicycle facilities are available on Fineview Place which will connect the shared use path along Almond Street with Raynor Avenue. See attached figure.

3. Cost Estimates

Cost to fully meet standards: N/A see Item 6	**Cost(s) for incremental improvements:** N/A see Item 6

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

For Van Buren Street, designated bicycle infrastructure is provided on a parallel east-west city street (Raynor Avenue). See attached figure.

5. Compatibility with Adjacent Segments and Future Plans

Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments.

6. Other Factors

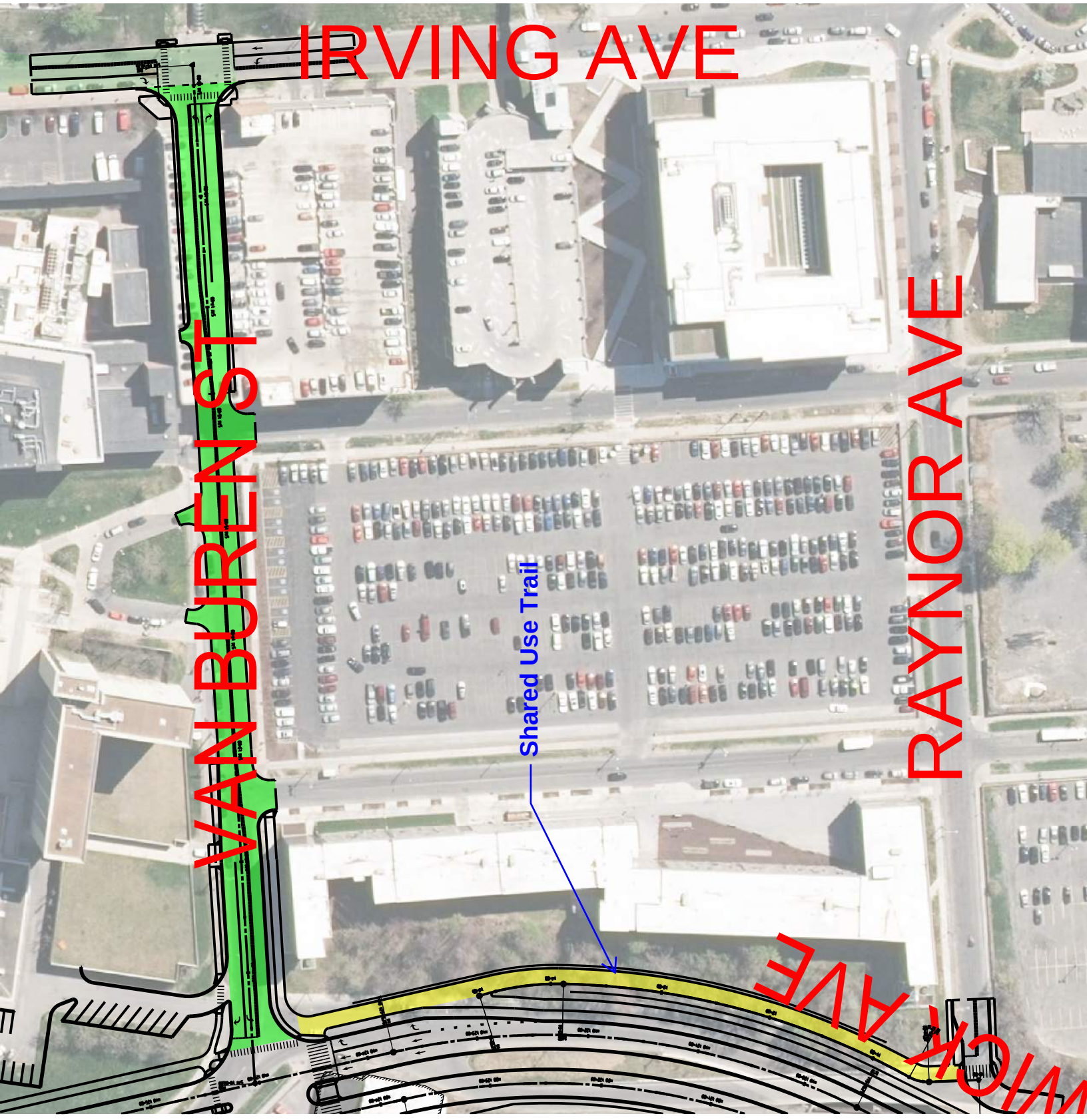
e.g., social, economic, and environmental

The Syracuse Bike Plan, a section of the Syracuse Comprehensive Plan, lays out a vision for an inter connected bike network throughout the city. A separate bicycle facility will not be provided on Van Buren Street. While bicyclists are allowed to utilize the roadway in accordance with Vehicle and Traffic Law Section 1234, Van Buren Street is very steep (>15%) and not conducive to bicycle use and alternate bicycle facilities are available. In this instance, Fineview Place which has a much lower traffic volume, and is more conducive to mixed use traffic, will be marked as a shared lane, connecting the proposed shared use path along Almond Street to Raynor Avenue and Irving Avenue. The addition of signing to direct bicyclists to designated facilities will

7. Proposed Treatment (i.e., recommendation)

Maintain lane width of 12 feet.

[1] *Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.*


IRVING AVE
VAN BUREN ST
RAYNOR AVE
Shared Use Trail

Appendix A.3.4

Non-Conforming Features to be Retained – Community Grid Alternative

The Non-Conforming Features recommended to be retained under the Community Grid Alternative are listed in Table A.3.4, followed by the Non-Conforming Feature justification for each element.

Table A.3.4
Non-Conforming Features Recommended to be Retained [1] – CG Alternative

Location	Design Element	Recommended Design Standard [2]	Proposed Design Standard	Justification
SB BL-81, H21 STA 144+78 to 151+34	Broken Back Curve	1500 ft.	657 ft.	1
NB BL-81, H11 STA 144+82 to 152+26	Broken Back Curve	1500 ft.	744 ft.	2
SB BL-81, H20 STA 82+29 to STA 82+55	Broken Back Curve	1500 ft.	26 ft.	3
NB BL-81, H10 STA 82+35 to STA 82+61	Broken Back Curve	1500 ft.	26 ft.	4
Ramp - WB I-690 to West St., R44 STA 105+28 to STA 108+39	Broken Back Curve	1500 ft.	312 ft.	5
Ramp – SB I-81 (Existing I-481) to RTE 5, R6A STA 28+49 to 32+97	Broken Back Curve	1500 ft	448 ft.	6
WB I-690, Irving Ave. on-ramp to NB BL-81 off-ramp. H40 STA 144+28 to 160+66	Ramp Spacing	2000 ft.	1638 ft.	7
WB I-690, former NB I-81 off-ramp to West St. off-ramp. H40 STA 136+22 to 144+28	Ramp Spacing	1000 ft.	806 ft.	8
WB I-690, West St. on-ramp to Geddes St. off-ramp.	Ramp Spacing	1600 ft.	1425 ft.	9
EB I-690, SB BL-81 on-ramp to Irving Ave. off-ramp H30 STA 142+36 to 159+03	Ramp Spacing	2000 ft.	1667 ft.	10
EB I-690 On-Ramp at Crouse Ave., proximity to driveway (former Canal Street (4)	Control of Access	50 ft.	0 ft.	11 and Exhibit A-3-4-01 [3]
SB BL 81 Off-Ramp to E. Willow, proximity to driveway at 123-29 Willow St. (4)	Control of Access	100 ft.	70 ft.	12 and Exhibit A-3-4-02 [3]
NB BL 81 On-Ramp, proximity to driveway at 320 Pearl Street. (4)	Control of Access	100 ft.	0 ft.	13 and Exhibit A-3-4-03 [3]
NB BL 81 Off-Ramp to Bear St., proximity to two driveways at 424 Sunset Ave. and 2523 Lodi St. (4)	Control of Access	300 ft.	120 ft.	14 and Exhibit A-3-4-04 [3]
SB BL 81 to S. State St. Off-Ramp, proximity to driveways at 2407-2415 S. State St.	Control of Access	300 ft.	70 ft.	15 and Exhibit A-3-4-05 [3]
Hiawatha Blvd to NB BL 81 On-Ramp - Proximity to driveway at 1800 N Salina St.	Control of Access	50 ft.	25 ft.	16 and Exhibit A-3-4-06 [3]
NB BL 81 to Hiawatha Blvd Off-Ramp - Proximity to driveways at 2027 Park St	Control of Access	300 ft.	110 ft.	17 and Exhibit A-3-4-07 [3]
SB BL 81 to 7th North St Off/On-Ramps - Proximity to driveway at 400 7th North St	Control of Access	300 ft.	180 ft.	18 and Exhibit A-3-4-08 [3]

Appendix A.3.4
Non-Conforming Features to be Retained – Community Grid Alternative

Location	Design Element	Recommended Design Standard (2)	Proposed Design Standard	Justification
NB BL 81 to Rt 11 Off-Ramp - Proximity to driveways at 2803 - 2807 Rt 11/Brewerton Rd	Control of Access	100 ft.	0 ft.	19 and Exhibit A-3-4-09 (3)
Rt 11 to NB BL 81 On-Ramp - Proximity to driveway at Northern Lights Shopping Center	Control of Access	100 ft.	80 ft.	20 and Exhibit A-3-4-10 (3)
WB I-690 to Bear St. On-Ramp - Proximity to driveways at 901, 906 & 945 Spencer St, 920 Bear St.	Control of Access	300/50 ft.	110/15 ft.	21 and Exhibit A-3-4-11 (3)
WB I-690 to Geddes St. Off-Ramp - Proximity to driveways at 807, 814 & 822 N Geddes St.	Control of Access	300/50 ft.	100/0 ft.	22 and Exhibit A-3-4-12 (3)
Geddes St. to EB I-690 On-Ramp - Proximity to driveways at 600 - 612 N Geddes St.	Control of Access	300 ft.	70 ft.	23 and Exhibit A-3-4-13 (3)
Teall Ave. to EB I-690 On-Ramp - Proximity to driveway at 226 Teall Ave.	Control of Access	300 ft.	175 ft.	24 and Exhibit A-3-4-14 (3)
Midler Ave to WB I-690 On-Ramp - Proximity to driveway at 2222 Burnet Ave.	Control of Access	50 ft.	10 ft.	25 and Exhibit A-3-4-15 (3)
WB I-690 to Midler Ave Off-Ramp - Proximity to driveway at 2400-2510 Burnet Ave.	Control of Access	300/50 ft.	45/10 ft.	26 and Exhibit A-3-4-16 (3)
EB Rt 5/92 to SB I-81 Ramp - Proximity to Driveways at 4600 - 4606 NY-5.	Control of Access	100 ft.	0 ft.	27 and Exhibit A-3-4-17 (3)
NB BL 81, between the on-ramp from SB NY-481 and off-ramp to NB NY-481	LOS (weave)	LOS D or better	LOS E (2056 PM peak)	28

Notes:

1) When design advances, further refinements would attempt to further improve this feature.
2) Refer to Other Design Parameters in **Appendix C-6.4.**
3) Also refer to the following pages for the Access Control Justification Forms (Exhibits A-3-4-01 to A-3-4-05).
4) LOS = Level of Service. Also refer to attached Access Control Justification Forms (Exhibits A-3-4.1 to A-3-4.5).

Justification for retaining Non-Conforming Feature:

1. This broken back curve is in an area bounded by Destiny USA and Lodi Street. To avoid ROW impacts on either side, a short tangent section was necessary. This is an existing broken back curve that is being maintained.
2. This broken back curve is in an area bounded by Destiny USA and Lodi Street. To avoid ROW impacts on either side, a short tangent section was necessary. This is an existing broken back curve that is being maintained.
3. This short tangent section is the existing I-81 bridge over Colvin Street, that is being maintained.
4. This short tangent section is the existing I-81 bridge over Colvin Street, that is being maintained.
5. This broken back curve was necessary to reduce impacts to historic property directly to the north.

Appendix A.3.4

Non-Conforming Features to be Retained – Community Grid Alternative

6. This broken back curve was necessary for the added left turn from the off-ramp to EB Route 5.
7. Increasing this ramp spacing would require eliminating the ramp from Irving Avenue and maintaining the North Crouse Avenue ramp. This would overburden North Crouse Avenue with traffic requiring mitigation in the form of widening resulting in increased ROW impacts.
8. Increasing this ramp spacing would require a non-standard grade on the westbound I-690 off-ramp or reducing the weaving distance for the ramp spacing under number 7 above.
9. This existing weaving segment would remain but improved as vehicles on westbound I-690 would only need to move over one lane to use the North Geddes Street exit ramp. The existing configurations forces drivers to mover over two lanes to exit therefore increasing potential conflicts. Increasing the spacing between these ramps would require moving one of the two ramps, thus increasing ROW impacts.
10. Increasing this weaving segment would require moving the Irving Avenue off-ramp to North Crouse Avenue. This would overburden North Crouse Avenue with traffic requiring mitigation in the form of widening, resulting in increased ROW impacts.
11. Canal Street is a dead-end street that provides access to 2 properties. Severing Canal St. would require acquisition of these properties. Refer to Access Control Justification form, Exhibit A-3-4-01 on following pages.
12. Closing the driveway would eliminate parking access to the garage on the associated property which would have a negative impact on the business and the property. Refer to Access Control Justification form, Exhibit A-3-4-02 on following pages.
13. This driveway provides access to an alleyway that provides parking for one or two cars and serves as maintenance access (dumpster storage, etc.) for the property. Driveway access is important to the operations of the building. Refer to Access Control Justification form, Exhibit A-3-4-03 on following pages.
14. Closing these driveways would impact two residences. Refer to Access Control Justification form, Exhibit A-3-4-04 on following pages.
15. Closing these driveways would impact several residences. Refer to Access Control Justification form, Exhibit A-3-4-05 on following pages.
16. Closing the driveway would impact a business. Refer to Access Control Justification form, Exhibit A-3-4-06 on following pages.
17. Closing the driveway would impact a business. Refer to Access Control Justification form, Exhibit A-3-4-07 on following pages.
18. Closing the driveway would impact a business. Refer to Access Control Justification form, Exhibit A-3-4-08 on following pages.
19. Closing these driveways would impact two businesses. Refer to Access Control Justification form, Exhibit A-3-4-09 on following pages.

Appendix A.3.4

Non-Conforming Features to be Retained – Community Grid Alternative

20. Closing this driveway would impact a shopping center. Refer to Access Control Justification form, Exhibit A-3-4-10 on following pages.
21. Closing these driveways would impact several businesses. Refer to Access Control Justification form, Exhibit A-3-4-11 on following pages.
22. Closing these driveways would impact two residences and one business. Refer to Access Control Justification form, Exhibit A-3-4-12 on following pages.
23. Closing these driveways would impact several residences. Refer to Access Control Justification form, Exhibit A-3-4-13 on following pages.
24. Closing these driveways would impact the Post Office. Refer to Access Control Justification form, Exhibit A-3-4-14 on following pages.
25. Closing this driveway would impact a commercial property. Refer to Access Control Justification form, Exhibit A-3-4-15 on following pages.
26. Closing these driveways would impact several residences and businesses. Refer to Access Control Justification form, Exhibit A-3-4-16 on following pages.
27. Closing these driveways would impact one residence and one business. Refer to Access Control Justification form, Exhibit A-3-4-17 on following pages.
28. The LOS E condition occurs in the horizon year (2056) and in the opening year (2026). The LOS is associated with the weaving segment between the SB NY-481 on ramp to BL 81 and the NB off-ramp to NB NY-481, where traffic merging into northbound BL 81 traffic is mixing with northbound BL 81 traffic exiting to northbound NY-481. (19) and would only apply to the PM peak hour. Travel speeds would not drop significantly below posted speeds. Potential mitigation options may include eliminating the northbound entrance ramp, reconstructing the northbound off-ramp as a fly over ramp, or other ramp configurations that may mitigate the weaving segment. It is anticipated that all reconfiguration options would increase ROW impacts and likely increase wetland impacts.

Exhibit A-3-4-01
Access Control Justification

PIN:	3501.6	Route No. & Name:	I-690 Eastbound On-Ramp at Crouse Ave. - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	9,780	Design Speed	30 mph
DHV (2050)	1,390	% Trucks:	4%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Former bed of Canal St. now a driveway to commercial property. (See attached sketch).		Community Grid Alternative
Standard Value:	50 ft	Design Speed	30 mph
Existing Value:	N/A, New Construction		
Proposed Value:	0 ft		

2. Accident Analysis

Current Accident Rate:	0.25 acc/mvm	Statewide Accident Rate:	0.18 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐	NO ☒	N/A, New Construction
If YES, describe how the feature contributes to accidents	Not applicable. New construction		

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	There are no incremental improvements. This is new construction

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

The driveway will be signed for right-in, right-out only. Additionally, the ramp is an on-ramp and retaining a driveway at this location would not cause confusion resulting in a wrong way movement on the ramp.

5. Compatibility with Adjacent Segments and Future Plans

This is an urban environment and the driveway is consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

The driveway is located on the bed of what was formerly Canal Street and is a dead end that provides access to a business. This is the only access to the business, so severing the driveway would require acquisition of the business

7. Recommendation

Provide non-standard control of access with right-in, right-out access only to/from the driveway.

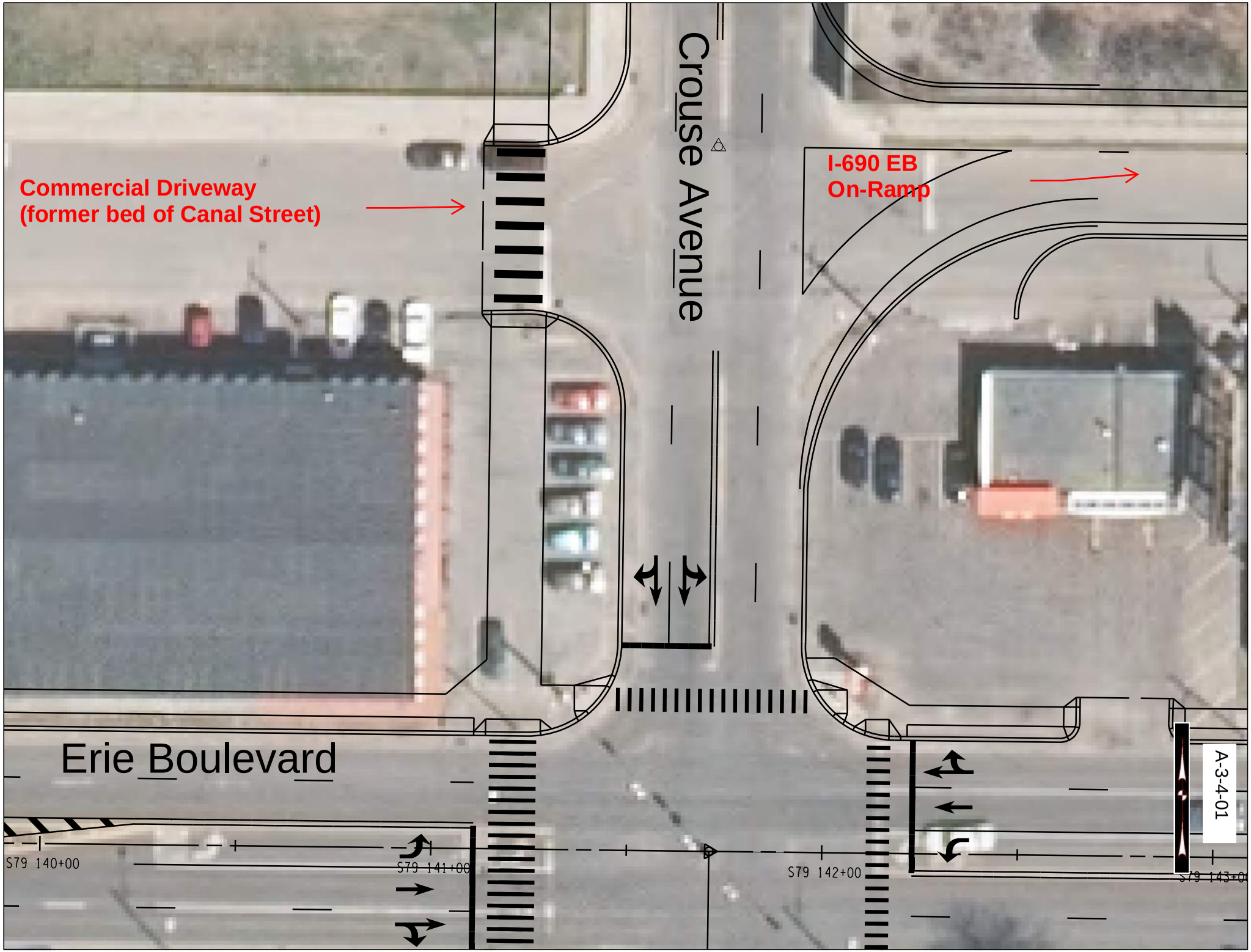

Commercial Driveway
(former bed of Canal Street)
Crouse Avenue
I-690 EB
On-Ramp
Erie Boulevard
S79 140+00
S79 141+00
S79 142+00
S79 143+00
A-3-4-01

Exhibit A-3-4-02
Access Control Justification

PIN:	3501.6	Route No. & Name:	BL 81 Southbound Off-Ramp at Willow St. - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	10,890	Design Speed	30 mph
DHV (2050)	1,270	% Trucks:	2.5%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Driveway at 123-29 Willow St. (See Attached Sketch).		Community Grid Alternative
Standard Value:	100 ft	Design Speed	30 mph
Existing Value:	N/A, New Construction		
Proposed Value:	70 ft		

2. Accident Analysis

Current Accident Rate:	0.29 acc/mvm	Statewide Accident Rate:	0.18 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐	NO ☒	N/A, New Construction
If YES, describe how the feature contributes to accidents	Not applicable. New construction		

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	There are no incremental improvements. This is new construction

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None.

5. Compatibility with Adjacent Segments and Future Plans

This is an urban environment and the driveway is consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

This is an existing Driveway to a small parking area used by the business. Closing the driveway would eliminate access to the parking area and a small garage structure on the associated property which would have a negative impact on the business and property.

7. Recommendation

Provide non-standard control of access to/from the driveway.

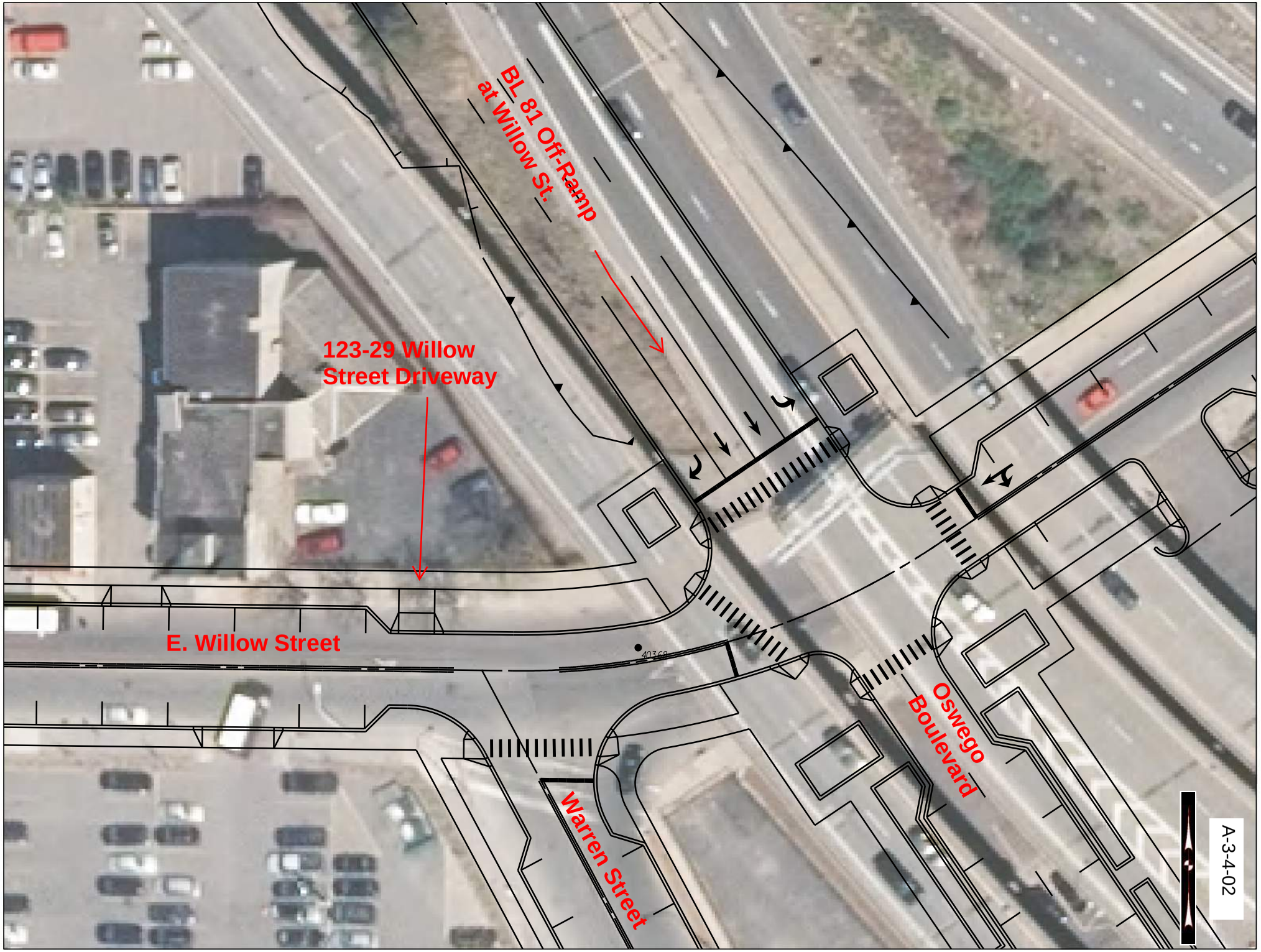

BL 81 Off-Ramp
at Willow St.
123-29 Willow
Street Driveway
E. Willow Street
Warren Street
Oswego
Boulevard
A-3-4-02

Exhibit A-3-4-03
Access Control Justification

PIN:	3501.6	Route No. & Name:	Northbound BL 81 On-Ramp at Pearl St. - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	10,100	Design Speed	30 mph
DHV (2050)	1,350	% Trucks:	

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Driveway at 320 Pearl Street. (See Attached Sketch).		Community Grid Alternative
Standard Value:	100 ft	Design Speed	30 mph
Existing Value:	N/A, New Construction		
Proposed Value:	0 ft		

2. Accident Analysis

Current Accident Rate:	0.42 acc/mvm	Statewide Accident Rate:	0.18 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	There are no incremental improvements. This is new construction

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. This driveway is not expected to produce adverse effects due to its limited size and limited use.

5. Compatibility with Adjacent Segments and Future Plans

This is an existing driveway in an urban area and the driveway is consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

This driveway provides access to a small alley way that provides one or 2 parking spaces and serves as maintenance access (dumpster storage, etc.) for the property. Driveway access is important to the operations of the building

7. Recommendation

Provide non-standard control of access, to/from the driveway


A-3-4-03
Alley/Driveway at
320 Pearl Street
Pearl Street
BL 81
On-Ramp
S93 110+00
S93 111+00
S93 112+00
S93 112+48
S93 112+47.52
POE

Exhibit A-3-4-04
Access Control Justification

PIN:	3501.6	Route No. & Name:	Northbound BL 81 Off-Ramp at Bear St. - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Freeway Ramp
ADT (2050)	3874	Design Speed	30 mph
DHV (2050)	AM: 286, PM: 222	% Trucks:	AM: 4%, PM: 2%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Two driveways on the south side of Bear Street, one at 424 Sunset Ave. and one at 8523 Lodi St. (See Attached Sketch)		Community Grid Alternative
Standard Value:	300 FT	Design Speed	30 mph
Existing Value:	N/A, New Construction		
Proposed Value:	120 FT		

2. Accident Analysis

Current Accident Rate:	N/A, New Construction	Statewide Accident Rate:	
Is the NSF a contributing feature to identified accidents? Choose YES or NO	N/A YES ☐		NO ☐
If YES, describe how the feature contributes to accidents	Not Applicable, New Construction		

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve two residences. In addition, there is a city street (Sunset Avenue) that is located between the off-ramp and the first driveway.

5. Compatibility with Adjacent Segments and Future Plans

These are existing residential driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

Closing these driveways would likely require acquisition of the residences.

7. Recommendation

Retain non-conforming control of access to/from the existing driveways.

Exhibit A-3-4-04

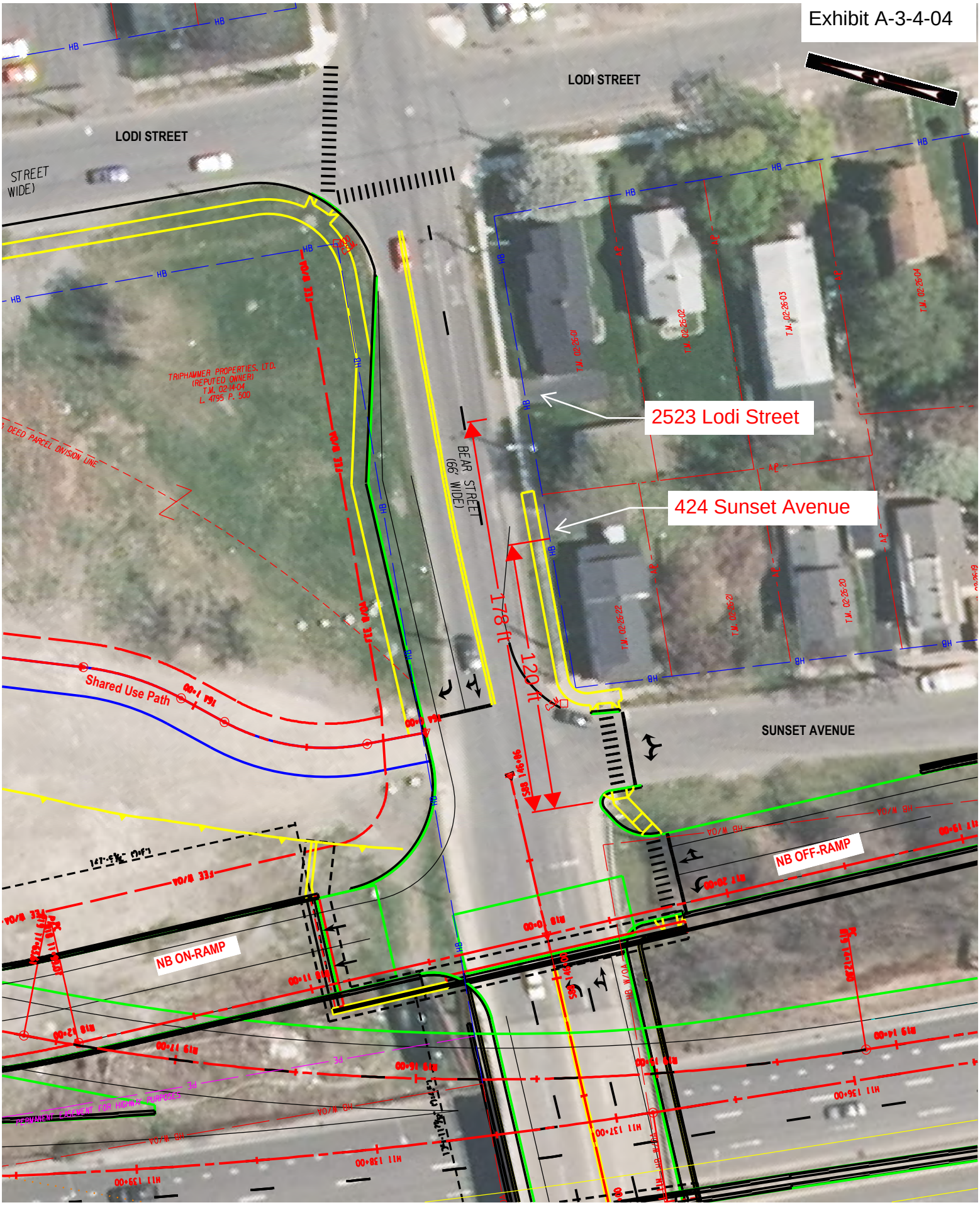


Exhibit A-3-4-05
Access Control Justification

PIN:	3501.6	Route No. & Name:	SB BL 81 to S State St. Off-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	9574	Design Speed	30 mph
DHV (2050)	1005	% Trucks:	2.3%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Three driveways from 2407-2415 S State St (See Attached Sketch).		Community Grid Alternative
Standard Value:	300 ft	Design Speed	30 mph
Existing Value:	70 ft		
Proposed Value:	70 ft		

2. Accident Analysis

Current Accident Rate:	0.53 acc/mvm	Statewide Accident Rate:	0.54 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve four residences and generate very few trips. There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

These are existing driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to four residence. Closing the driveways would eliminate access to the residences, which would have a negative impact on the properties.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.


A-3-4-05
SB BL 81 Off-Ramp
2407 S State St
2411 S State St
2415 S State St
70'
McClure Ave
S State Street

Exhibit A-3-4-06
Access Control Justification

PIN:	3501.6	Route No. & Name:	Hiawatha Blvd to NB BL 81 On-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	24293	Design Speed	30 mph
DHV (2050)	2551	% Trucks:	3.6%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	One driveway from 1800 N Salina St (See Attached Sketch).		Community Grid Alternative
Standard Value:	50 ft	Design Speed	30 mph
Existing Value:	25 ft		
Proposed Value:	25 ft		

2. Accident Analysis

Current Accident Rate:	0.79 acc/mvm	Statewide Accident Rate:	0.54 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. The existing driveway serves one business (Bodow Recycling Inc.), and located at the back of the building. There are additional driveways in front of the building, access to Exchange Pl, and appear to have more frequent usage. There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

This is an existing driveway in an urban area which is consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

This is an existing driveway to one business. Closing the driveway might have a negative impact on the business and property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.

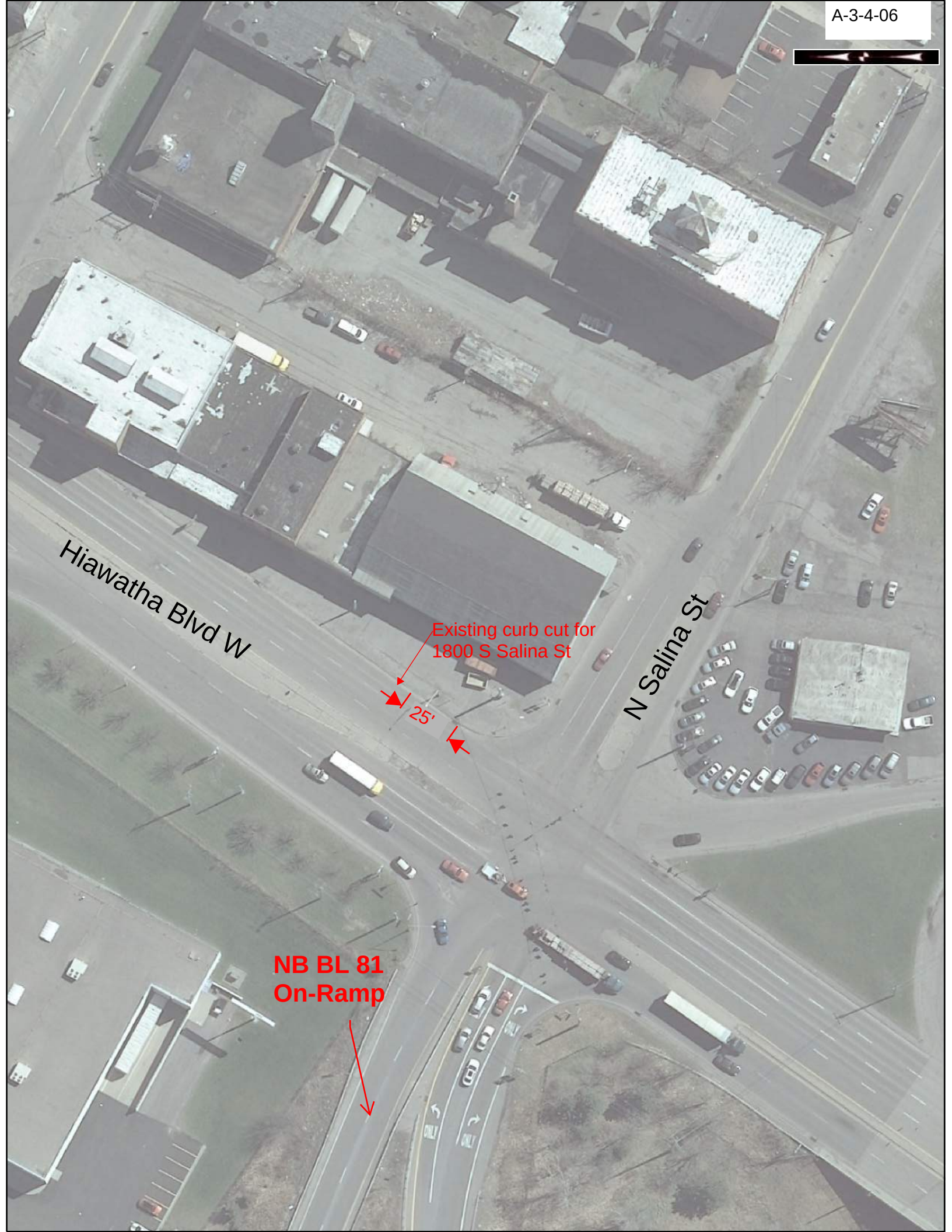

A-3-4-06
Hiawatha Blvd W
N Salina St
Existing curb cut for
1800 S Salina St
25'
NB BL 81
On-Ramp

Exhibit A-3-4-07
Access Control Justification

PIN:	3501.6	Route No. & Name:	NB BL 81 to Hiawatha Blvd Off-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	5298	Design Speed	30 mph
DHV (2050)	556	% Trucks:	3.3%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Two driveways from 2027 Park St (See Attached Sketch).		Community Grid Alternative
Standard Value:	300 ft	Design Speed	30 mph
Existing Value:	110 ft		
Proposed Value:	110 ft		

2. Accident Analysis

Current Accident Rate:	1.33 acc/mvm	Statewide Accident Rate:	0.54 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve the parking lot of one business (Baby's "R"us). There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

These are existing driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to the parking lot of one business. Closing the driveways would eliminate access to the business, and have a negative impact on the business and property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.

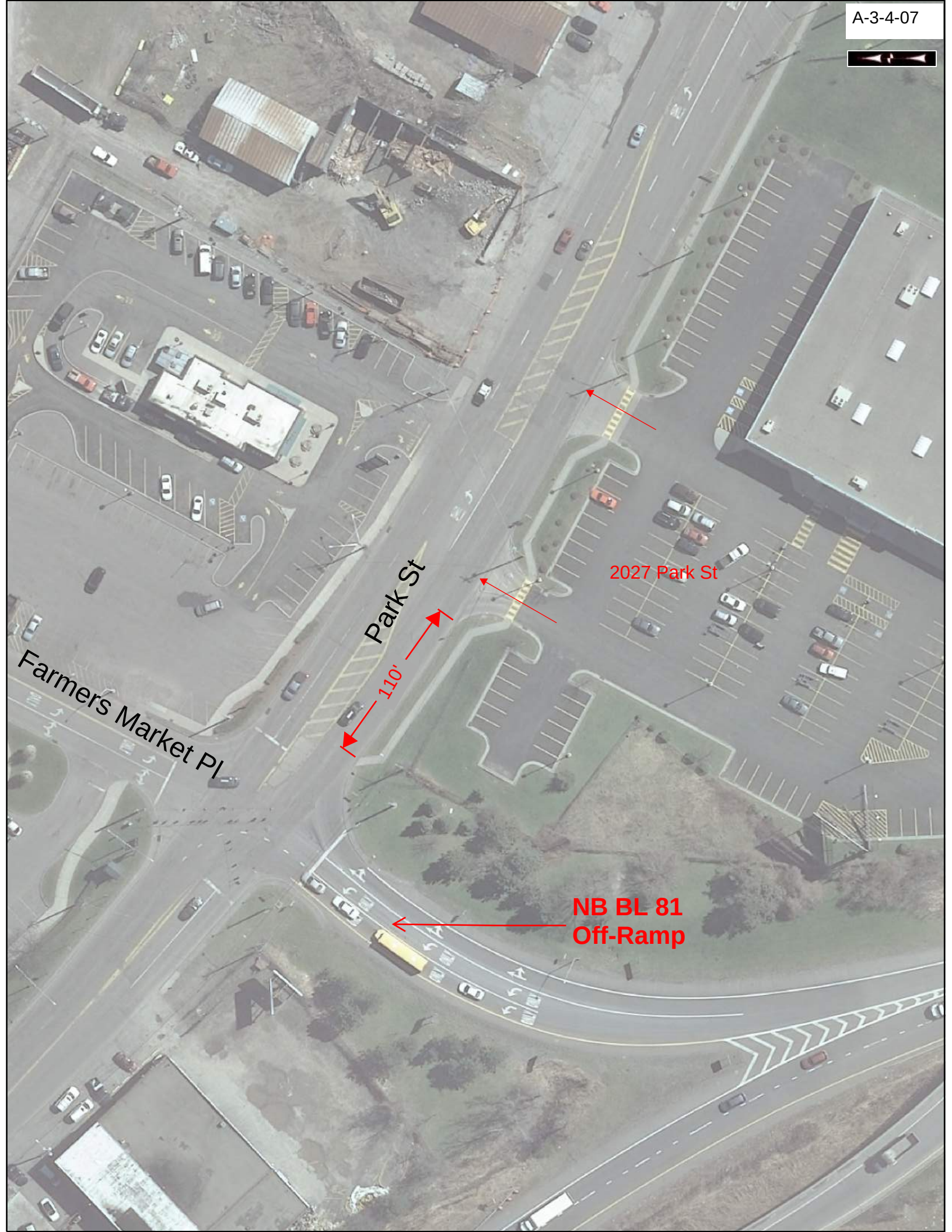

A-3-4-07
Park St
Farmers Market Pl
110'
2027 Park St
NB BL 81
Off-Ramp

Exhibit A-3-4-08
Access Control Justification

PIN:	3501.6	Route No. & Name:	SB BL 81 to 7th North St Off/On-Ramps - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	18526 Off-Ramp / 10834 On-Ramp	Design Speed	30 mph
DHV (2050)	1945 Off-Ramp / 1138 On-Ramp	% Trucks:	10% Off-Ramp / 8.1% On-Ramp

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	One driveway from 400 7th North St (See Attached Sketch).		Community Grid Alternative
Standard Value:	300 ft	Design Speed	30 mph
Existing Value:	180 ft		
Proposed Value:	180 ft		

2. Accident Analysis

Current Accident Rate:	1.60 acc/mvm	Statewide Accident Rate:	0.54 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☒		NO ☐
If YES, describe how the feature contributes to accidents	There were a total of 30 crashes at this ramp intersection between 9/1/2016 to 8/31/19, 3 of which were potentially related to the adjacent driveways, which equates to a crash rate of 0.16 acc/mvm		

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. The existing driveway serves the parking lot of one business (Maplewood Suites). There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

This is an existing driveway in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

This is the existing driveway to the parking lot of one business. Closing the driveway would eliminate access to the business, and have a negative impact on the business and property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.

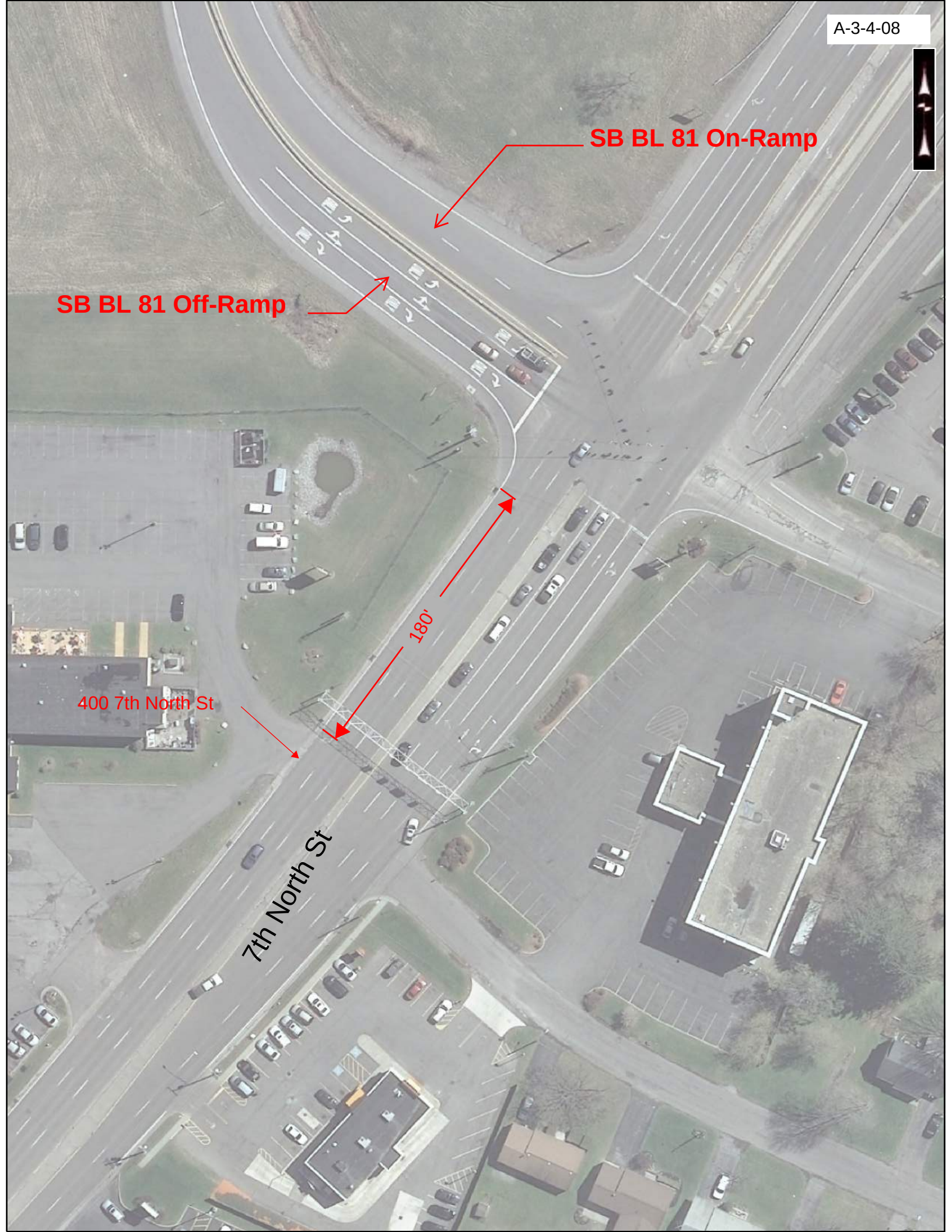

A-3-4-08
SB BL 81 On-Ramp
SB BL 81 Off-Ramp
180'
400 7th North St
7th North St

Exhibit A-3-4-09
Access Control Justification

PIN:	3501.6	Route No. & Name:	NB BL 81 to Rt 11 Off-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	19627	Design Speed	30 mph
DHV (2050)	2061	% Trucks:	6.3%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Two driveways from 2803 - 2807 Rt 11/Brewerton Rd (See Attached Sketch).		Community Grid Alternative
Standard Value:	100 ft	Design Speed	30 mph
Existing Value:	0 ft		
Proposed Value:	0 ft		

2. Accident Analysis

Current Accident Rate:	1.52 acc/mvm	Statewide Accident Rate:	0.54 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐	NO ☒	
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve the parking lots of two businesses (Dunn Tire and The Pawn Shop). There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

These are existing driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to the parking areas used by two businesses. Closing the driveways would eliminate access to the business, which would have a negative impact on the business and property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.


A-3-4-09
Rt 11 NB
Rt 11 SB
2807 Rt 11
(Brewerton Rd)
2803 Rt 11
Brewerton Rd
NB BL 81 Off-Ramp

Exhibit A-3-4-10
Access Control Justification

PIN:	3501.6	Route No. & Name:	Rt 11 to NB BL 81 On-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	16050	Design Speed	30 mph
DHV (2050)	1685	% Trucks:	13%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	One driveway from Northern Lights Shopping Center (See Attached Sketch).		Community Grid Alternative
Standard Value:	100 ft	Design Speed	30 mph
Existing Value:	80 ft		
Proposed Value:	80 ft		

2. Accident Analysis

Current Accident Rate:	0.05 acc/mvm	Statewide Accident Rate:	0.05 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. The existing driveway serves the parking lot of Northern Lights Shopping Center, and is one-way out only, which would not likely cause confusion resulting in a wrong way movement on the ramp. There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

This is an existing driveway in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

This is one of the existing driveways for the parking lot of a shopping center, and is a one-way out to access NB highway. Closing the driveway would have a negative impact for the travelers from the shopping center to access the NB BL 81 on-ramp.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.


NB BL 81 On-Ramp
80'
Rt 11 NB
Northern Lights
Shopping Center
Northern Lights
Shopping Center
A-3-4-10

Exhibit A-3-4-11
Access Control Justification

PIN:	3501.6	Route No. & Name:	WB I-690 to Bear St. On-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	18583	Design Speed	30 mph
DHV (2050)	1951	% Trucks:	5.3%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Four driveways from 901, 906 & 945 Spencer St, 920 Bear St, (See Attached Sketch).		Community Grid Alternative
Standard Value:	300' ramp side/50' opposite side	Design Speed	30 mph
Existing Value:	110'-190' / 15' -35'		
Proposed Value:	110'-190' / 15' -35'		

2. Accident Analysis

Current Accident Rate:	0.56 acc/mvm	Statewide Accident Rate:	0.54 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve several businesses. The proposed conditions are the same as the existing condition.

5. Compatibility with Adjacent Segments and Future Plans

These are existing driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to the parking areas used by several businesses. Closing the driveways would have a negative impact on the business and property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.

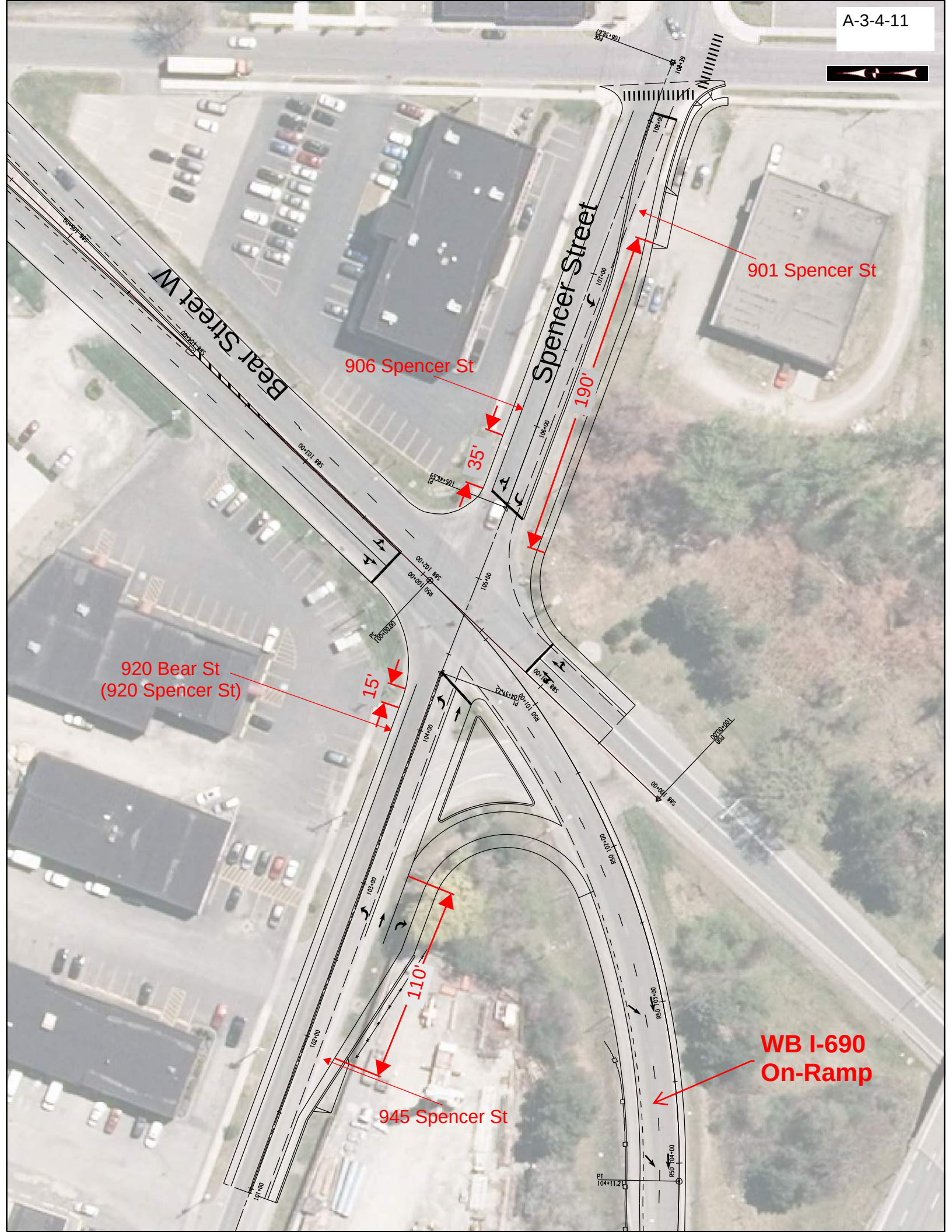

A-3-4-11
Bear Street W
Spencer Street
901 Spencer St
906 Spencer St
190'
35'
920 Bear St
(920 Spencer St)
15'
110'
945 Spencer St
WB I-690
On-Ramp

Exhibit A-3-4-12
Access Control Justification

PIN:	3501.6	Route No. & Name:	WB I-690 to Geddes St. Off-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	16921	Design Speed	30 mph
DHV (2050)	1777	% Trucks:	3.9%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Three driveways from 807, 814 & 822 N Geddes St (See Attached Sketch).		Community Grid Alternative
Standard Value:	300' ramp side/50' opposite side	Design Speed	30 mph
Existing Value:	100' / 0'		
Proposed Value:	100' / 0'		

2. Accident Analysis

Current Accident Rate:	1.64 acc/mvm	Statewide Accident Rate:	0.31 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve two residences and the parking lot of one business. There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

These are existing driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to two residences and one business. Closing the driveways would eliminate access to the residence, and have a negative impact on the business and property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.

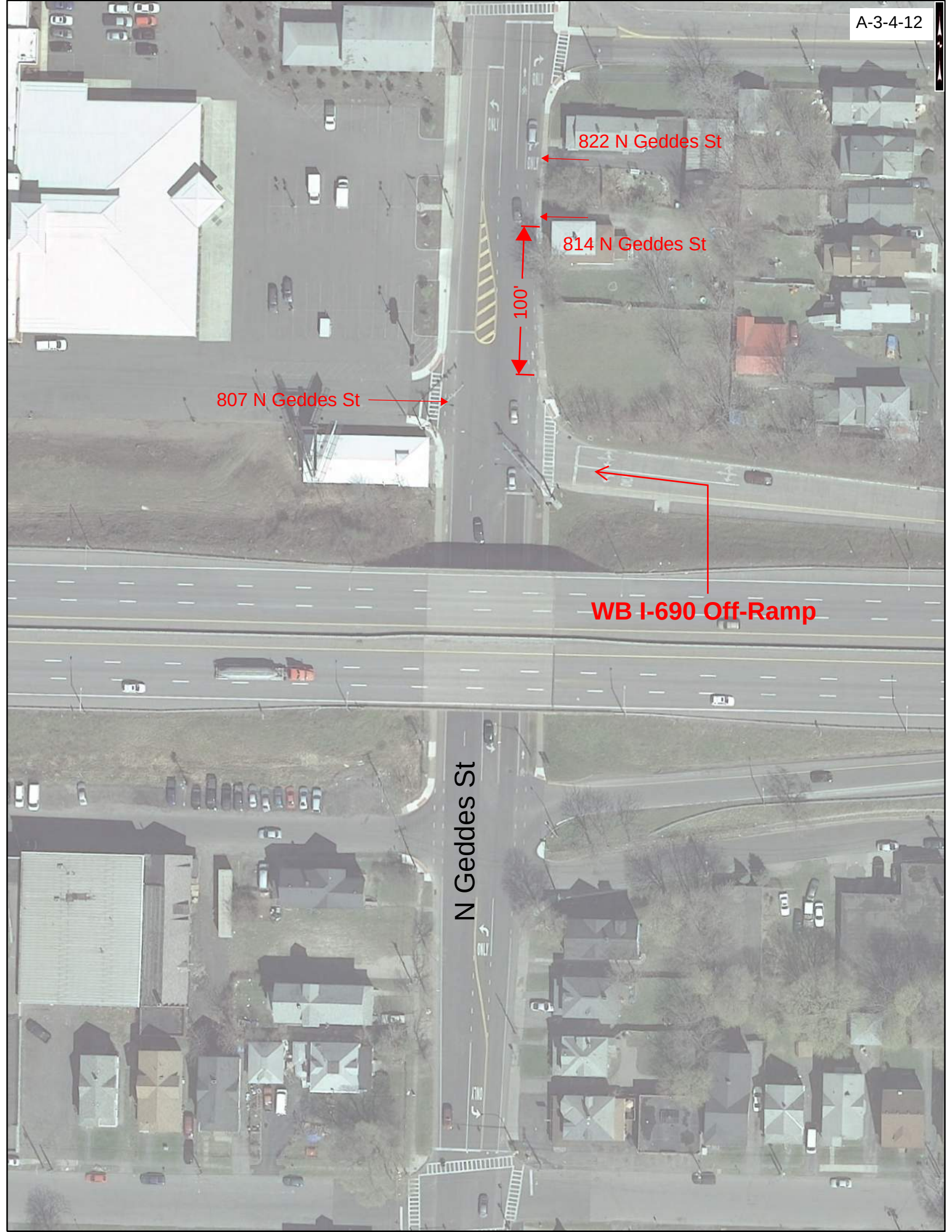

A-3-4-12
822 N Geddes St
814 N Geddes St
100'
807 N Geddes St
WB I-690 Off-Ramp
N Geddes St

Exhibit A-3-4-13
Access Control Justification

PIN:	3501.6	Route No. & Name:	Geddes St. to EB I-690 On-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	15492	Design Speed	30 mph
DHV (2050)	1627	% Trucks:	3.4%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Four driveways from 600 - 612 N Geddes St (See Attached Sketch).		Community Grid Alternative
Standard Value:	300 ft	Design Speed	30 mph
Existing Value:	70 ft		
Proposed Value:	70 ft		

2. Accident Analysis

Current Accident Rate:	0.27 acc/mvm	Statewide Accident Rate:	0.31 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐	NO ☒	
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve four residences. In addition, there is a city street that is located between the on-ramp and the first driveway. There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

These are existing driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to four residences. Closing the driveways would eliminate access to the residence, and have a negative impact on the property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.


A-3-4-13
N Geddes St
EB I-690 On-Ramp
Edison St
Edison St
70'
612 N Geddes St
610 N Geddes St
602 N Geddes St
600 N Geddes St

Exhibit A-3-4-14
Access Control Justification

PIN:	3501.6	Route No. & Name:	Teall Ave. to EB I-690 On-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	20316	Design Speed	30 mph
DHV (2050)	2133	% Trucks:	2.4%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Two driveways from 226 Teall Ave (See Attached Sketch).		Community Grid Alternative
Standard Value:	300 ft	Design Speed	30 mph
Existing Value:	124 ft & 175 ft		
Proposed Value:	255 ft & 195 ft		

2. Accident Analysis

Current Accident Rate:	1.39 acc/mvm	Statewide Accident Rate:	0.23 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☒	NO ☐	
If YES, describe how the feature contributes to accidents	There were a total of 56 crashes at this ramp intersection between 9/1/2016 to 8/31/19, of which 2 were potentially related to the adjacent driveways, which equates to a crash rate of 0.05 acc/mvm. This intersection was undergoing reconstruction during this period. The overall crash rate is expected to improve as a result of the reconstruction.		

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve the parking lot of United States Postal Service. Several mitigation measures were included in the recently completed project which have improved Access Control, including the addition of a raised median in the center of Teall Avenue, conversion of the northern driveway to one-way out only, and conversion of the southern driveway to one-way in only. There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

These are existing driveways in an urban area which are consistent with adjacent segments and future plans.
The access control information reflects the recently completed project, although the aerial image shows the other project still in construction.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to one business. Closing the driveways would eliminate access to the business, which would have a negative impact on the business and property.
To the north side of highway, there are several driveways located within 300 feet to the WB I-690 to Teall Ave on and off-ramps. But the existing Burnet Ave, with a signalized intersection is located in between the ramps and driveways.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.

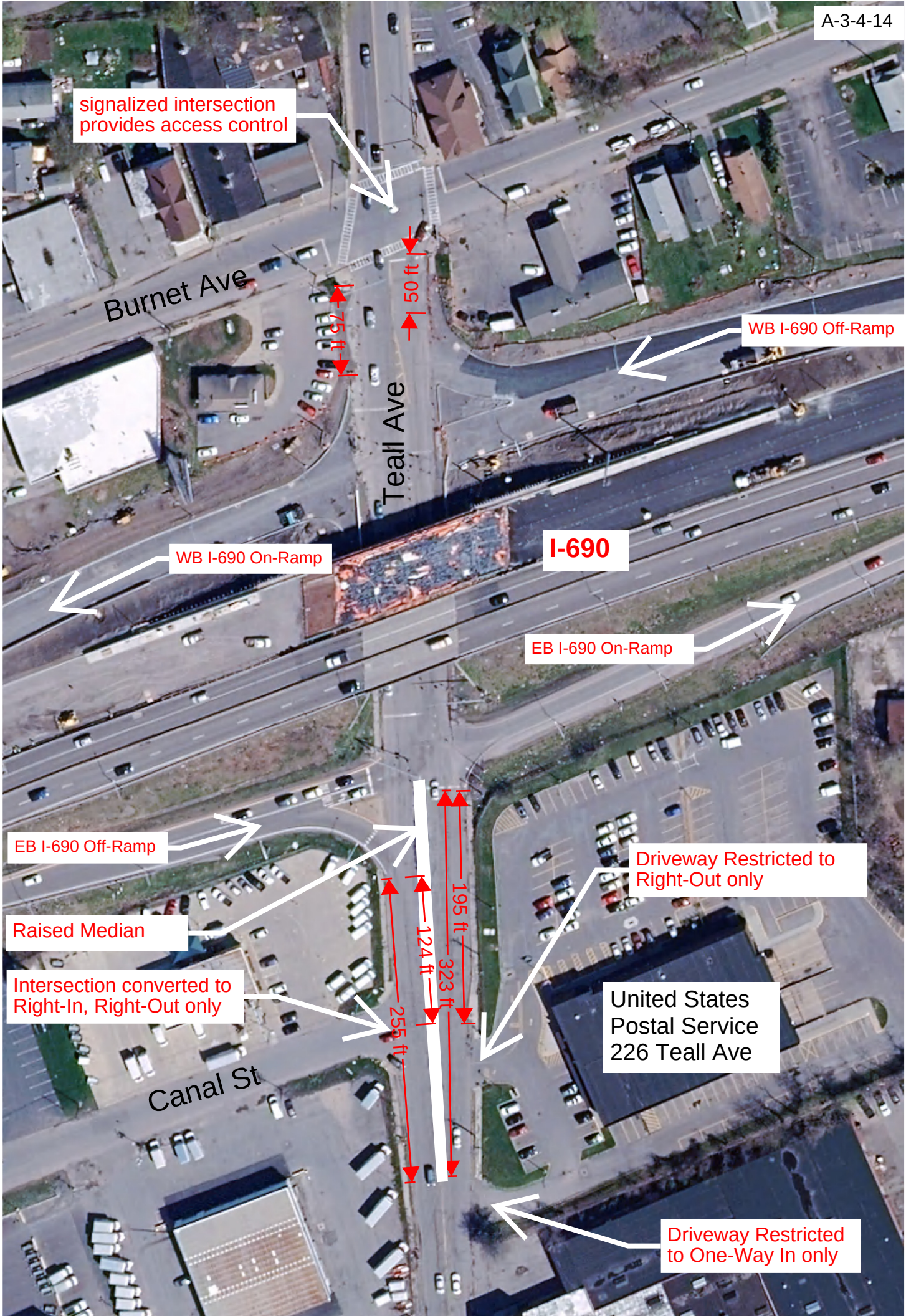

A-3-4-14
signalized intersection provides access control
Burnet Ave
50 ft
75 ft
Teall Ave
WB I-690 Off-Ramp
I-690
WB I-690 On-Ramp
EB I-690 On-Ramp
EB I-690 Off-Ramp
Driveway Restricted to Right-Out only
Raised Median
195 ft
124 ft
323 ft
Intersection converted to Right-In, Right-Out only
255 ft
United States Postal Service 226 Teall Ave
Canal St
Driveway Restricted to One-Way In only

Exhibit A-3-4-15
Access Control Justification

PIN:	3501.6	Route No. & Name:	Midler Ave to WB I-690 On-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	11686	Design Speed	30 mph
DHV (2050)	1227	% Trucks:	0.6%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	One driveway from 2222 Burnet Ave (See Attached Sketch).		Community Grid Alternative
Standard Value:	50 ft	Design Speed	30 mph
Existing Value:	10 ft		
Proposed Value:	10 ft		

2. Accident Analysis

Current Accident Rate:	0.69 acc/mvm	Statewide Accident Rate:	0.31 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. The existing driveway serves the parking area of a currently vacant business lot. There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

This is an existing driveway in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

The existing driveway serves the parking area of an currently vacant business lot. Closing the driveway would have negative impacts for the property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.


A-3-4-15
Existing curb cuts for
2222 Burnet Ave
Existing curb cuts for
2222 Burnet Ave
10'
WB I-690
On-Ramp
Burnet Ave

Exhibit A-3-4-16
Access Control Justification

PIN:	3501.6	Route No. & Name:	WB I-690 to Midler Ave Off-Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	7772	Design Speed	30 mph
DHV (2050)	816	% Trucks:	5.0%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Seven driveways from 2400-2510 Burnet Ave, and Sheridan Pl (See Attached Sketch).		Community Grid Alternative
Standard Value:	300' ramp side/50' opposite side	Design Speed	30 mph
Existing Value:	45' / 10' -20'		
Proposed Value:	45' / 10' -20'		

2. Accident Analysis

Current Accident Rate:	0.96 acc/mvm	Statewide Accident Rate:	0.31 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☒		NO ☐
If YES, describe how the feature contributes to accidents	There were a total of 11 crashes at this ramp intersection between 9/1/2016 to 8/31/19, of which 1 was potentially related to the adjacent driveways, which equates to a crash rate of 0.09 acc/mvm.		

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement. Maintaining existing condition

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve several residences and four businesses. There is no proposed roadway work in the vicinity and existing condition will be maintained.

5. Compatibility with Adjacent Segments and Future Plans

These are existing driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to several residences and four businesses. Closing the driveways would eliminate access to one of the residences, and three business, and have a negative impact on the business and property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.

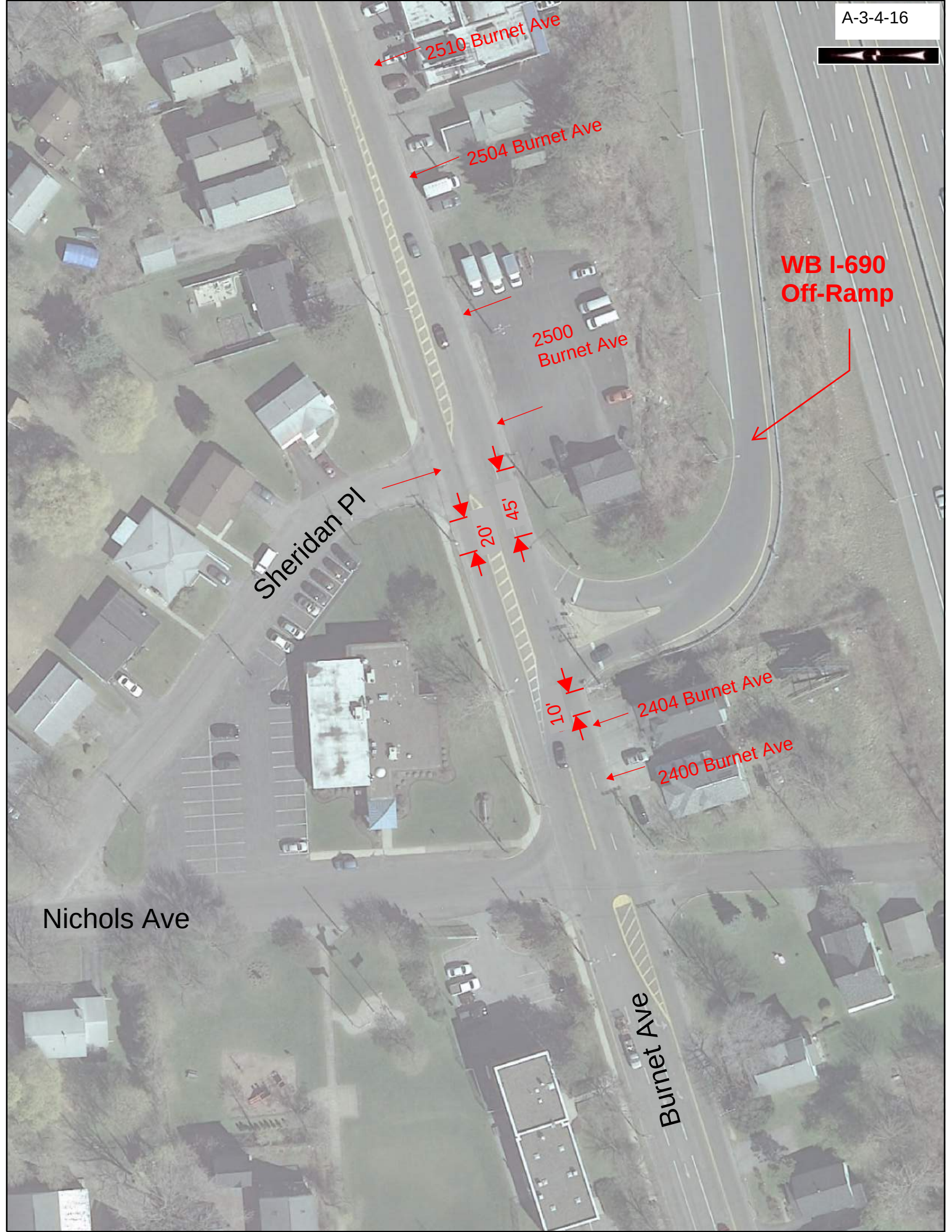

A-3-4-16
2510 Burnet Ave
2504 Burnet Ave
WB I-690
Off-Ramp
2500
Burnet Ave
Sheridan Pl
20'
45'
10'
2404 Burnet Ave
2400 Burnet Ave
Nichols Ave
Burnet Ave

Exhibit A-3-4-17
Access Control Justification

PIN:	3501.6	Route No. & Name:	EB Rt 5/92 to SB I-81 Ramp - Proximity to Driveway
Project Type:	Reconstruction	Design Classification:	Interstate Ramp
ADT (2050)	3705	Design Speed	30 mph
DHV (2050)	389	% Trucks:	1.6%

1. Description of Nonstandard Feature

Type of Feature (e.g., horizontal curve radius):	Control of Access		
Location:	Several driveways from 4600 - 4606 NY-5 (See Attached Sketch).		Community Grid Alternative
Standard Value:	100 ft	Design Speed	30 mph
Existing Value:	85 ft		
Proposed Value:	0 ft		

2. Accident Analysis

Current Accident Rate:	0.63 acc/mvm	Statewide Accident Rate:	0.15 acc/mvm
Is the NSF a contributing feature to identified accidents? Choose YES or NO	YES ☐		NO ☒
If YES, describe how the feature contributes to accidents			

3. Cost Estimates

Cost to Fully Meet Standards:	None
Cost(s) For Incremental Improvements:	No incremental improvement.

4. Measures to Mitigate the Potential Adverse Effects of the NSF (e.g., curve warning signs for a non-standard horizontal curve; ITS for non-standard LOS, etc.)

None. These existing driveways serve one residence and one gas station. The proposed condition extends the auxiliary lane for the on-ramp to improve traffic operations, which results in two residential driveways being within the auxiliary lane. The ramp is an on-ramp and retaining the driveways at this location would not cause confusion resulting in a wrong way movement on the ramp.

5. Compatibility with Adjacent Segments and Future Plans

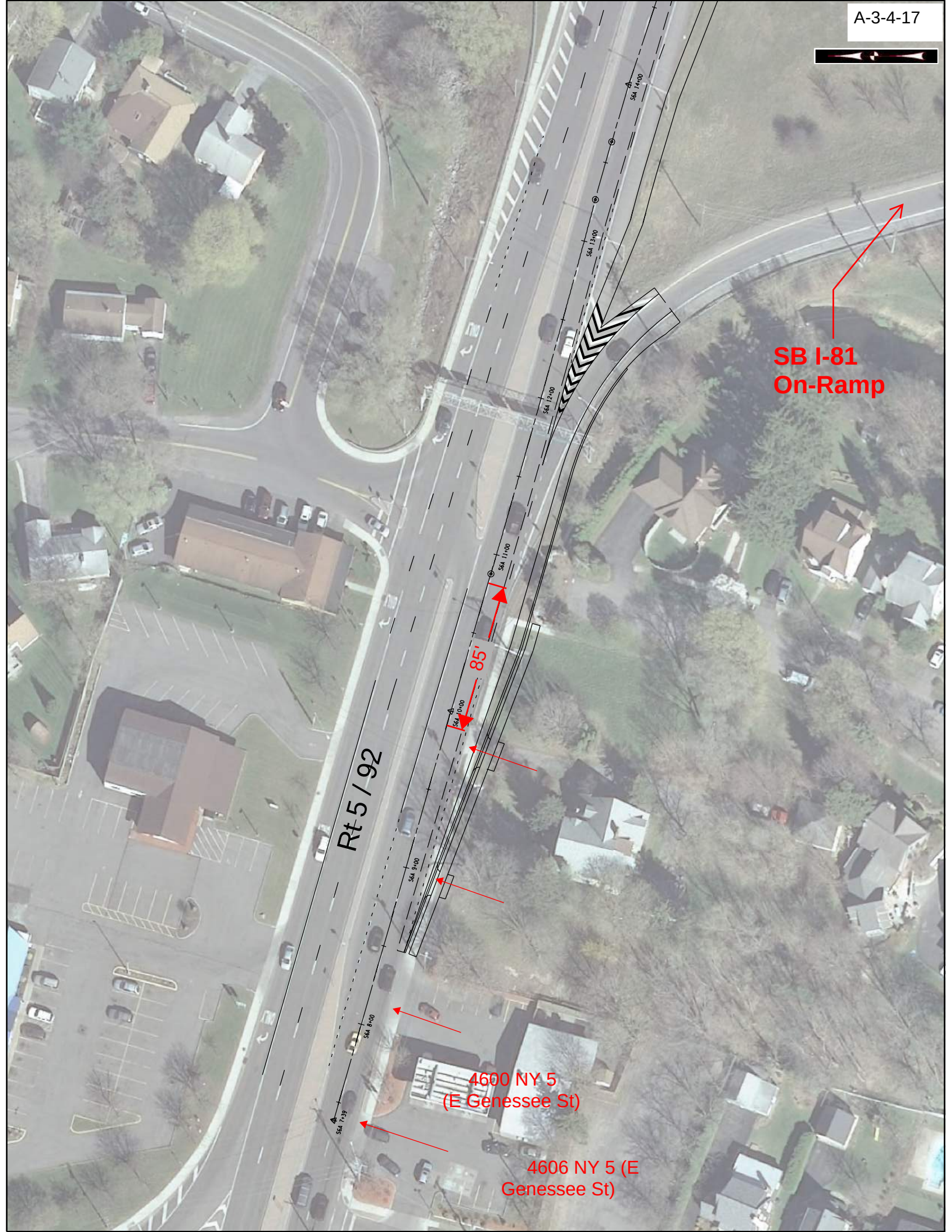
These are existing driveways in an urban area which are consistent with adjacent segments and future plans.

6. Social, Economic & Environmental factors that weigh in the decision to retain or propose the NSF

These are existing driveways to one residence, and a gas station with a small parking area used by the business. Closing the driveways would eliminate access to the gas station and the residence, which would have a negative impact on the business and property.

7. Recommendation

Retain existing non-standard control of access to/ from the existing driveways.


A-3-4-17
SB I-81
On-Ramp
85'
Rt 5 / 92
4600 NY 5
(E Genessee St)
4606 NY 5 (E
Genessee St)