I-81 VIADUCT PROJECT

EXECUTIVE SUMMARY

This Final Design Report/Final Environmental Impact Statement (FDR/FEIS) documents the social, economic, and environmental effects of the Interstate 81 Viaduct Project and contains analysis to support a finding by the Federal Highway Administration (FHWA) pursuant to the Section 4(f) of the U.S. DOT Act. The purpose of the I-81 Viaduct Project is to address the structural deficiencies and non-standard highway features while creating an improved corridor through the City of Syracuse that meets the transportation needs and provides the transportation infrastructure to support long-range planning efforts. The project alternatives consist of the No Build Alternative, the Viaduct Alternative, and the Community Grid Alternative which has been identified as the Preferred Alternative. This document also incorporates comments received on the Draft Design Report/Draft Environmental Impact Statement (DDR/DEIS), published in July 2021. Summaries of substantive comments with responses are provided in **Appendix M-5** of this FDR/FEIS.

S.1 INTRODUCTION

The New York State Department of Transportation (NYSDOT), in cooperation with the Federal Highway Administration (FHWA), has prepared this Final Design Report/Final Environmental Impact Statement (FDR/FEIS) for the Interstate 81 (I-81) Viaduct Project (the "Project") in accordance with the requirements of the Council on Environmental Quality's regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) (40 CFR §1500-1508), the FHWA's *Environmental Impact and Related Procedures: Final Rule* (23 CFR §771), the NYSDOT *Procedures for Implementation of the State Environmental Quality Review Act* (17 NYCRR Part 15), and the NYSDOT Project Development Manual.

The Project is classified as a NEPA Class I project in accordance with 23 CFR 771. NEPA Class I projects require the preparation of an Environmental Impact Statement (EIS) to determine the impact that project alternatives would have on the environment. FHWA, serving as the Federal Lead Agency, and NYSDOT, serving as Joint Lead Agency, are progressing the development of the EIS. In accordance with NYSDOT's State Environmental Quality Review Act (SEQRA) regulations, the Project is classified as a "non-Type II" action, indicating that it has the potential for significant environmental impacts or substantial controversy on environmental grounds. In accordance with 17 NYCRR Part 15, given that a Federal EIS has been prepared, NYSDOT and other New York State agencies undertaking a discretionary action for the Project have no obligation to prepare a separate EIS under SEQRA.

The I-81 Viaduct Project is informed by a three-year planning study (the I-81 Corridor Study) that NYSDOT prepared in partnership with Syracuse Metropolitan Transportation Council and FHWA. The I-81 Corridor Study identified strategies for the long-term viability of approximately 12 miles of highway along I-81 between its southern and northern interchanges with I-481 (Exits 16A and 29, respectively), including the I-81 viaduct and the I-81/I-690 interchange in Downtown Syracuse. The I-81 Corridor Study considered the needs of the corridor, along with potential solutions to address these needs. It divided the corridor into three segments: the south outer segment (approximately 2 miles), the viaduct segment (approximately 3.5 miles), and the north outer segment (approximately 6.5 miles). Completed in July 2013, the study concluded that there is a need for the near-term reconstruction or replacement of the travel capacity of I-81 through Downtown Syracuse, leading to the initiation of the I-81 Viaduct Project. The Corridor Study also informed the goals and objectives for the I-81 Viaduct Project.

FHWA issued a Notice of Intent to prepare an EIS for the I-81 Viaduct Project in the *Federal Register* in August 2013. In November 2013, NYSDOT hosted an initial scoping meeting at the Oncenter in Downtown Syracuse. In June 2014 NYSDOT issued a draft scoping report that identified the preliminary list of alternatives and hosted a second scoping meeting in June 2014 in the same location. In April 2015, FHWA and NYSDOT issued the Project Scoping Report, which reflected comments on the Project that had been received from both the public and agencies and identified alternatives for further evaluation in the Draft Design Report/Draft Environmental Impact Statement (DDR/DEIS). **Chapter 3, Alternatives** provides a history of the alternatives development for the I-81 Viaduct Project.

Following the release of the Project Scoping Report in 2015, FHWA and NYSDOT continued to refine and evaluate alternatives. Several Viaduct and Community Grid Alternative options were screened and dismissed, resulting in the identification of the alternatives studied in the DDR/DEIS. As a result of public input, various tunnel options were developed, evaluated, and dismissed (refer to **Appendices B-2, B-3, and B-4**). FHWA and NYSDOT also continued to enhance the design of the build alternatives to reduce or eliminate their potential adverse environmental effects. In April 2019, NYSDOT released a preliminary DDR/DEIS to bring the public up to date on the status of the Project. That document stated that the Community Grid Alternative would be selected as the Preferred Alternative.

Following the public release of the preliminary DDR/DEIS in April 2019, NYSDOT considered public comments, which were summarized and responded to in the DDR/DEIS that was released on July 16, 2021. The build alternatives were further refined to address public concerns. Both the Viaduct and Community Grid Alternatives were modified to include improvements along Bear Street, and the Community Grid Alternative also was refined to include improvements at I-481 Interchange 3 (Routes 5/92) and a new northbound BL 81 exit ramp at Colvin Street. The DDR/DEIS reflected these design modifications.

On July 16, 2021, FHWA and NYSDOT announced the availability of the DDR/DEIS and commenced a public review period. The public review period was originally 60 days and was scheduled to end on September 14, 2021. In response to public comment, FHWA and NYSDOT extended the public review period to 90 days, and it ended on October 14, 2021. FHWA and NYSDOT hosted public hearings on August 17 and 18, 2021. Following the public hearings, NYSDOT hosted nine neighborhood meetings where the public could informally interact with Project staff (see **Table S-5**).

Throughout the public review period on the DDR/DEIS, NYSDOT accepted comments through mail, its online comment form, e-mail, and voicemail. The public had the opportunity to offer oral testimony at the public hearings and could offer testimony privately to a stenographer at the in-person public hearing and neighborhood meetings. NYSDOT also accepted written comment forms at the public hearing and the neighborhood meetings. NYSDOT received more than 8,000 comment submissions during the public review period. All substantive comments have been reviewed, summarized, and responded to in this FDR/FEIS. Please refer to **Appendix M-5** for a summary of substantive comments with responses and **Appendix M-6** for the comment submissions.

In addition to responding to public comments on the DDR/DEIS, this FDR/FEIS reflects design modifications and other technical updates to address public and agency comments. These changes are noted in the appropriate technical chapters of this FDR/FEIS, and substantive changes are noted in the Foreword.

NYSDOT has coordinated with FHWA and Federal and State agencies for the review and release of this FDR/FEIS. Following a 30-day waiting period, FHWA and NYSDOT will subsequently issue a joint Record of Decision (ROD) in accordance with 23 CFR § 771.127 and Section 15.9 of 17 NYCRR Part 15.

S.2 PROJECT PURPOSE, NEEDS, GOALS, AND OBJECTIVES

The purpose of the Project is to address the structural deficiencies and non-standard highway features while creating an improved transportation corridor through the City of Syracuse that meets transportation needs and provides the infrastructure to support long-range transportation planning efforts.

I-81 and I-690 are elevated through Downtown Syracuse. Each interstate comprises multiple highway bridges, and many of their components, which were constructed primarily in the 1960s, are nearing the end of their design service life. Over time, these structures have experienced varying levels of deterioration from exposure to weather, de-icing salts, and heavy vehicle use. Bridges are particularly susceptible to wear and tear because many of their structural elements are directly exposed to weather conditions. The I-81 and I-690 corridors are characterized by high traffic volumes and reduced travel speeds. Notable delays and queues are common in some sections near the I-81 and I-690 interchange.

Specifically, the Project would address the following identified needs:

- The need to improve traffic flow and safety;
- The need to address aging infrastructure;
- The need for transportation infrastructure to support long-range planning efforts; and
- The need to improve pedestrian and bicycle infrastructure.
- The need for improved transit amenities.

With the project needs and local plans in mind, NYSDOT developed the following goals for the I-81 Viaduct Project:

- Improve safety and create an efficient regional and local transportation system within and through greater Syracuse; and

- Provide transportation solutions that enhance the livability, visual quality, sustainability, and economic vitality of greater Syracuse.

To meet the Project's purpose, five project objectives were established:

- Address the transportation network structural deficiencies, particularly associated with aging bridge structures and non-standard/non-conforming design features within the project limits along I-81 and I-690.
- Address vehicular, pedestrian, and bicycle geometric and operational deficiencies within the project limits.
- Maintain or enhance vehicle access to the interstate highway network and key destinations (i.e., business districts, hospitals, and institutions) within neighborhoods within and near Downtown Syracuse.
- Maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within the project limits in and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations.
- Maintain access to existing local bus service and enhance transit amenities[1] within the project limits in and near Downtown Syracuse.

S.3 PROJECT AREA

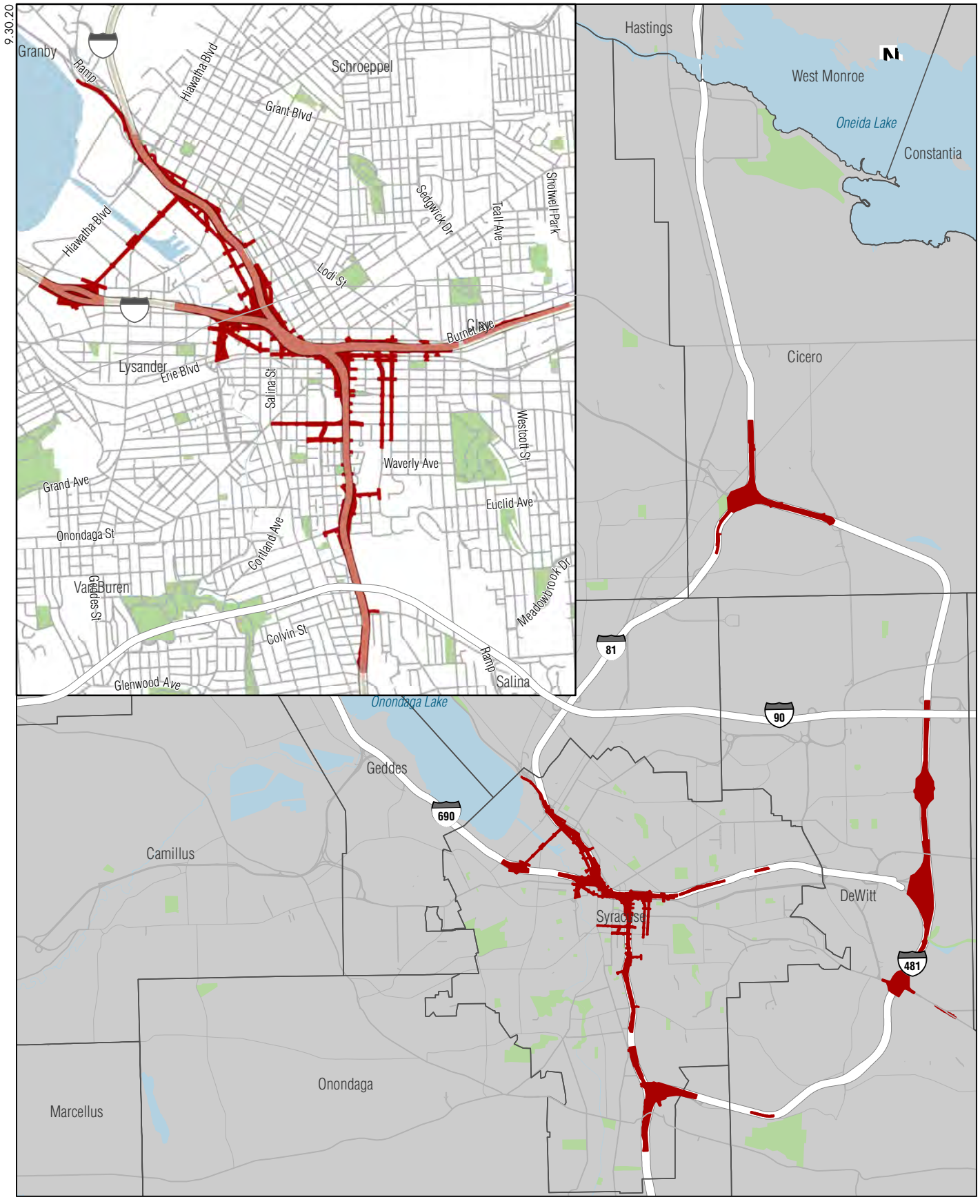
I-81 is an approximately 850-mile-long highway in the eastern United States. It begins at Interstate 40 in Dandridge, Tennessee, and extends northeasterly through Tennessee, Virginia, Maryland, West Virginia, Pennsylvania, and New York, terminating at Highway 401 in Ontario, Canada. It is the primary north-south highway through Central New York, serving Binghamton, Cortland, Syracuse, and Watertown, and provides an international crossing into Canada at the Thousand Islands Bridge.

The Project is located in Onondaga County, New York. The Project Area is within the City of Syracuse and the Towns of DeWitt, Salina, and Cicero. The Project Area is shown on **Figure S-1**, and it includes the southern and northern interchanges of I-81 with I-481 (Interchanges 16A and 29, respectively); the portion of I-81 between approximately East Brighton Avenue and approximately 0.7 miles north of Hiawatha Boulevard, including the I-81 viaduct and the I-81/I-690 interchange in Downtown Syracuse; the portions of I-690 approximately between Leavenworth Avenue and Beech Street and between Hiawatha Boulevard West and Bear Street; and I-481 between New York State Routes 5/92 and the New York State Thruway (I-90). The Project Area also includes selected local roads for improvements in proximity to I-81, I-690, and I-481 in Syracuse as well as segments of the existing highway network where there would be no roadway improvements, but where there would be new or reconstructed noise barriers under the Viaduct and Community Grid Alternatives.

S.4 PROJECT ALTERNATIVES

As explained in **Chapter 3, Alternatives**, numerous potential alternatives for the I-81 Viaduct Project, including some that were introduced as a result of public input, were evaluated to determine whether

[1] Transit amenities that may be explored could include bus stops and shelters, bus turnouts, and layover and turnaround places.



Project Area

I-81 Viaduct Project

Figure S-1

they would meet the project purpose and need, objectives, and screening criteria. As a result of this process, two build alternatives were progressed for detailed evaluation in the DDR/DEIS—the Viaduct and Community Grid Alternatives—in addition to the No Build Alternative. The DDR/DEIS identified the Community Grid Alternative as the Preferred Alternative for the I-81 Viaduct Project.

S.4.1 NO BUILD ALTERNATIVE

The No Build Alternative serves as the baseline against which the build alternatives are compared. Although the No Build Alternative would not meet the Project objectives, NEPA requires the evaluation of a No Build Alternative. The No Build Alternative would maintain the highway in its existing configuration, although ongoing maintenance and repairs to ensure the safety of the traveling public would continue.

S.4.2 VIADUCT ALTERNATIVE

The Viaduct Alternative would involve a full reconstruction of I-81 between approximately Colvin Street and Hiawatha Boulevard and the portions of I-690 from Leavenworth Avenue to Lodi Street and Hiawatha Boulevard West to Bear Street. **Figures S-2 through S-4** identify the key features of the Viaduct Alternative. The new viaduct would provide four to six, 12-foot travel lanes (a minimum of two in each direction), as well as inside shoulders (a minimum of four feet in two-lane sections and 10 feet in three-lane sections) and outside shoulders (a minimum of 10 feet in each direction). The new viaduct would be approximately 10 to 15 feet higher than the existing one at some locations. South of Harrison Street, the new viaduct generally would be approximately 10 to 20 feet wider than the 66-foot-wide existing viaduct. The Viaduct Alternative would reconstruct a portion of I-690 and the existing I-81/I-690 interchange; address nonstandard and nonconforming design features; provide new interchange connections at I-690 and I-81 where these connections do not currently exist; improve connections to local streets; and implement traffic, bicycle, and pedestrian enhancements. A detailed description of the Viaduct Alternative is presented in **Chapter 3, Alternatives**.

S.4.3 COMMUNITY GRID ALTERNATIVE

Figures S-5 through S-8 depict the key features of the Community Grid Alternative, which has been identified as the Preferred Alternative. The Community Grid Alternative would involve demolition of the existing viaduct between the New York Susquehanna & Western Railway (NYS&W) bridge near Renwick Avenue and the I-81/I-690 interchange. The section of I-81 between the southern I-81/I-481 interchange (Interchange 16A) and the I-81/I-481 northern interchange (Interchange 29) in Cicero would be de-designated as an interstate and re-designated as Business Loop 81 (BL 81), and existing I-481 would be re-designated as the new I-81. From just north of Colvin Street to just south of MLK, Jr. East, BL 81 would transition from a 55-mph elevated limited-access highway to a 30-mph city street. North of MLK, Jr. East, BL 81 would pass beneath a new bridge carrying the NYS&W Railway and return to street level at Van Buren Street, where a roundabout would be installed. BL 81 would continue along Almond Street north to Erie Boulevard and along Erie Boulevard from Almond Street to Oswego Boulevard. A portion of Pearl Street, between Erie Boulevard and the northbound Pearl Street on-ramp, and a portion of Oswego Boulevard, between Erie Boulevard and East Willow Street, also would be part of BL 81.

See Figure S-3 for Butternut to Bear Streets

Existing on-ramps at Pearl St. and Butternut St. would be replaced with a single on-ramp at Pearl St.

Existing West St./Franklin St. and Clinton St./ Salina St. off-ramps would be replaced with a single off-ramp at Clinton St.

New location of Butternut Street Bridge

New ramp connecting eastbound I-690 to northbound I-81

New ramp connecting southbound I-81 to westbound I-690

West St. overpass would be removed. The interchange would be reconstructed and reconfigured

West St. would be lowered to meet Genesee St., creating normalized intersection

New path would be built along west bank of Onondaga Creek between Erie Blvd. and Evans St.

New interchange posted speed limit would be 55 mph (currently posted at 45 mph)

New off-ramp at Catherine St. connecting westbound I-690 to Downtown/University Hill would replace existing connection on Townsend St.

New on-ramp at Almond St. connecting Downtown/University Hill to eastbound I-690 would replace existing connections from Harrison St. and McBride St.

Ramp from northbound I-81 to eastbound I-690 would change from a right-side to left-side exit, eliminating a weaving movement for traffic

Harrison St. off-ramp would be reconstructed with two lanes

Crouse Ave. would be converted from a one-way to a two-way street between Genesee St. and Adams St.

No connections between Almond St. and Cedar or Madison St.

Wider structure would be closer to adjacent buildings

Almond St. would be reconstructed with bicycle and pedestrian enhancements

No access from Monroe St. to Almond St.

New viaduct would pass above the railway

New partial interchange at MLK, Jr. East

0' 500' 1000' 2000'

N

NORTHSIDE

DOWNTOWN

SOUTHSIDE

RAILROAD

N. Clinton St. | Ash St. | Butternut St. | N. Salina St. | Pearl St. | N. State St. | E. Willow St. | James St. | Hawley Ave. | Lodi St. | Burnet Ave. | W. Genesee St. | N. West St. | N. Franklin St. | Erie Blvd. E. | E. Water St. | E. Washington St. | E. Fayette St. | E. Genesee St. | McBride St. | Canal St. | University Ave. | Walnut Ave. | Pine St. | Cedar St. | Madison St. | Harrison St. | S. Townsend St. | S. State | Almond St. | E. Adams St. | Monroe St. | Jackson St. | E. Taylor St. | Burt St. | Van Buren St. | Oakwood Ave. | Comstock Ave. | Martin Luther King, Jr. East | E. Colvin St

EXIT 19 | EXIT 11 | EXIT 13 | EXIT 18

I-81 | I-690

Clay | Cicero | Salina | Geddes | Onondaga Lake | Manlius | De Witt | Syracuse | Onondaga | LaFayette | Pompey

I-81

I-690

Ramps

Local Streets

I-81 Viaduct Project

Viaduct Alternative Overview:
Colvin Street to Butternut Street

Figure S-2

See Figure S-4 for Bear Street to Hiawatha Boulevard

Service road would be realigned opposite N. Clinton St.

New northbound I-81 on- and off-ramps at Bear St.

Existing northbound ramps at Sunset Ave. would be removed

direction; between the ramps and Court St., N. Clinton would be widened to carry one northbound and two southbound lanes

bridge with sidewalks on each side

Section of Genant Dr. south of Bear St. would be removed to make way for new southbound I-81 ramps

New location of southbound I-81 on- and off-ramps connecting to N. Clinton St.

Section of Genant Dr. would become a dead end

Existing southbound I-81 off-ramp at Genant Dr. would be removed

New Spencer St. bridge with sidewalks on each side

New on-road bike lanes on Spencer St. between N. Clinton St. and N. Salina St.

N. Clinton St. would be reconstructed from Bear St. to new Butternut St. bridge with new pavement, sidewalks on each side, curbside parking where possible, street trees, and curb bump-outs to shorten pedestrian crossing distances. Shared lanes for bicycles and vehicles would be provided from Spencer St. south to the N. Franklin St. intersection

N. State St. from Ash St. to Butternut St. would be reduced from three lanes to two lanes, with new sidewalk along its west side and parking and street trees where possible

Section of Genant Dr. south of Spencer St. would be removed

Existing State St. ramp to northbound I-81 would be removed

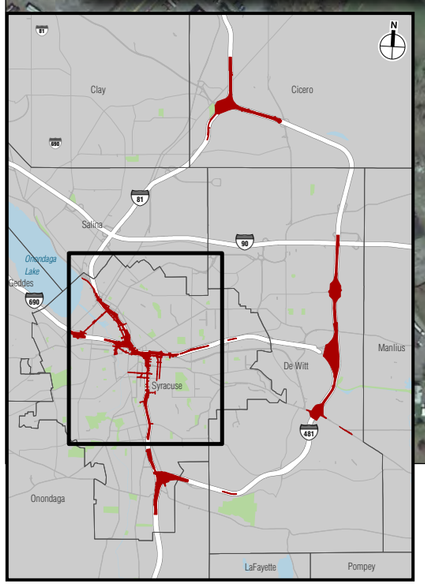
The existing southbound I-81 on-ramp from Genant Dr. would be removed

New, narrower Butternut St. bridge, carrying one lane in each direction with sidewalks and on-road bike lanes on each side

Existing Butternut St. bridge would be removed, existing Butternut St. would be removed from N. State St. to N. Franklin St.

Genant Dr. between Spencer St. and the new Butternut St. bridge would be removed to accommodate the widened I-81. Access to properties along Genant Dr. would be maintained from N. Clinton St.

Hiawatha Blvd W
Solar St
1st St
Sunset Ave
Court St
N Clinton St
Park St
Lodi St
Basin St
N Salina St
Van Rensselaer St
Bear St
Inner Harbor
W Kirkpatrick St
Spencer St
N State St
Ash St
Butternut St
EXIT 22
EXIT 22
EXIT 21
INTERSTATE 81
N
0′ 200′ 600′ 1400′

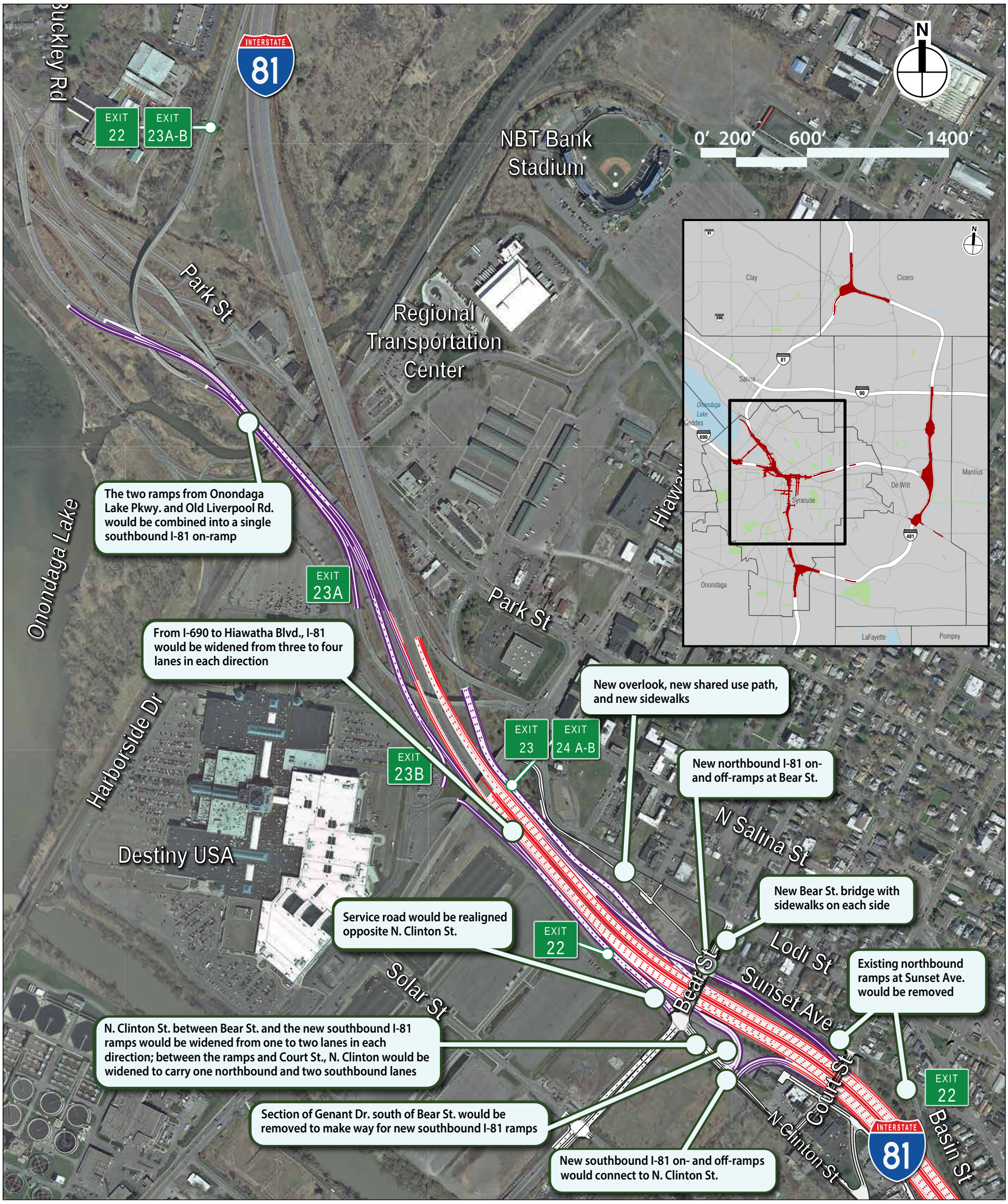


I-81
I-690
Ramps
Local Streets

See Figure S-2 for Colvin Street to Butternut Street

I-81 Viaduct Project

Viaduct Alternative Overview:
Butternut Street to Bear Street
Figure S-3



See Figure S-3 for Butternut to Bear Streets

I-81

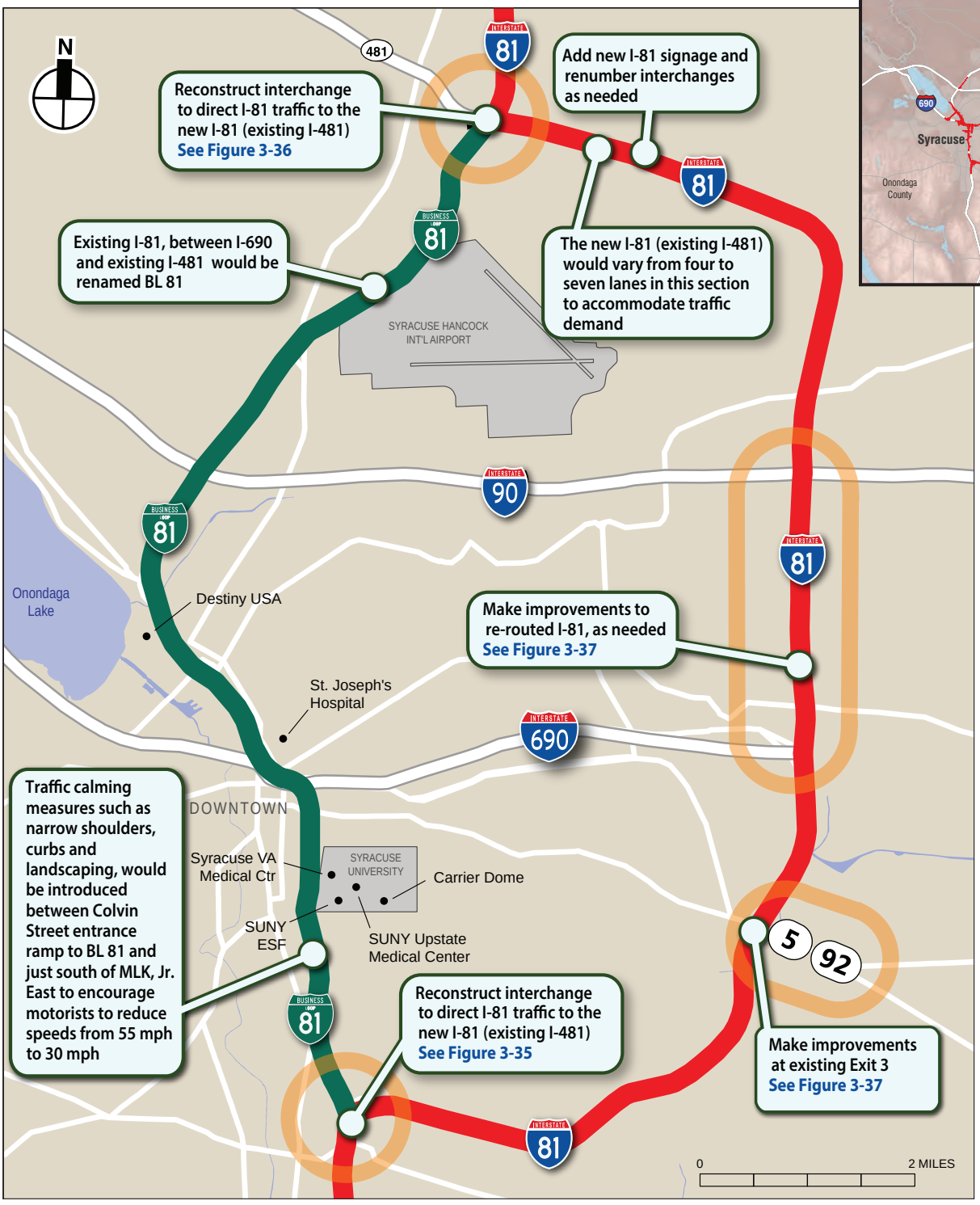
I-690

Ramps

Local Streets

Viaduct Alternative Overview:
Bear Street to Hiawatha Boulevard

Figure S-4



BL 81

I-81

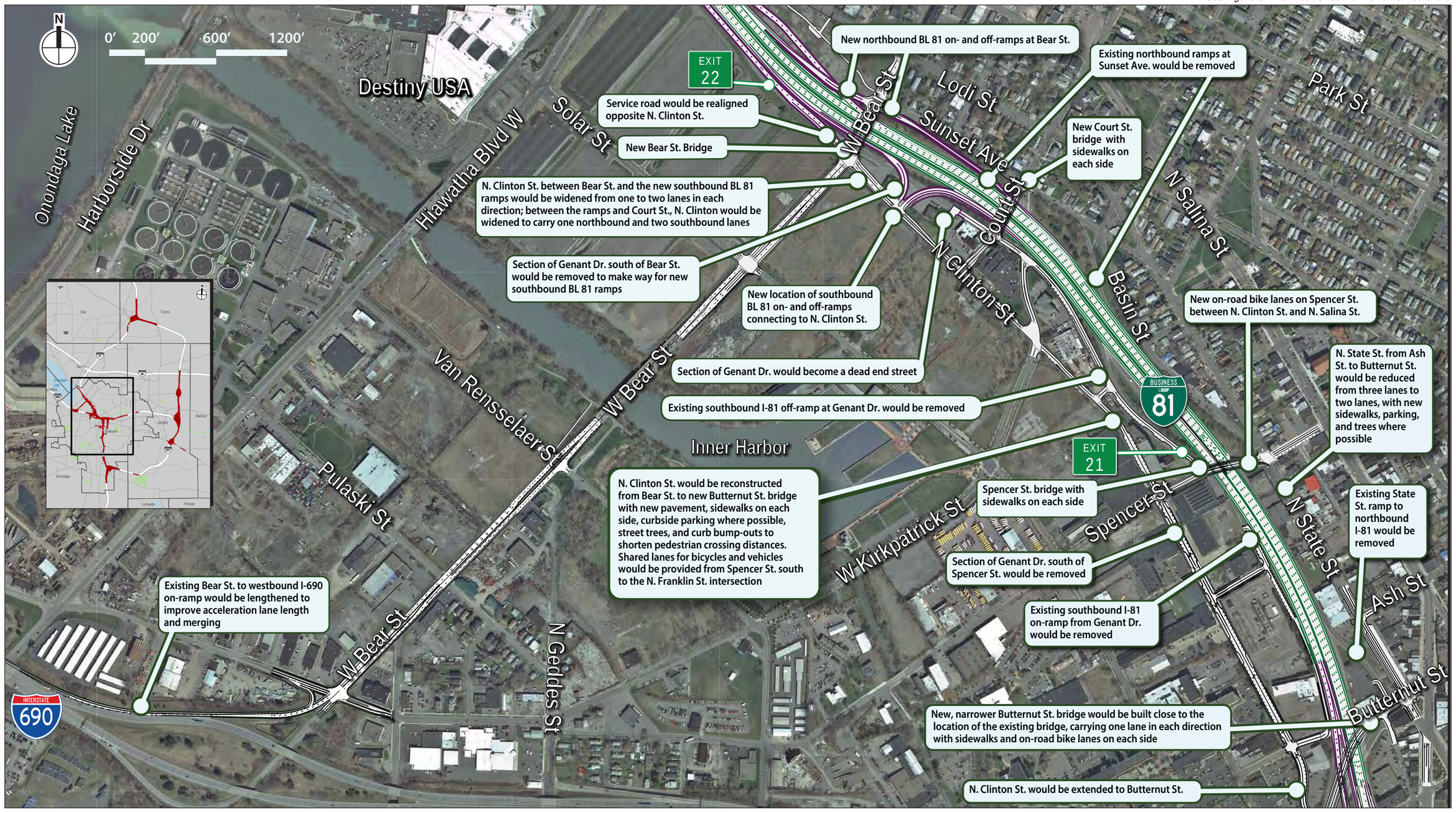
Detail enlarged on subsequent figures

Community Grid Alternative:
Re-Designation of I-481 to I-81

I-81 Viaduct Project

Figure S-5

See Figure S-7 for Bear Street to Hiawatha Boulevard



Buiness Loop 81

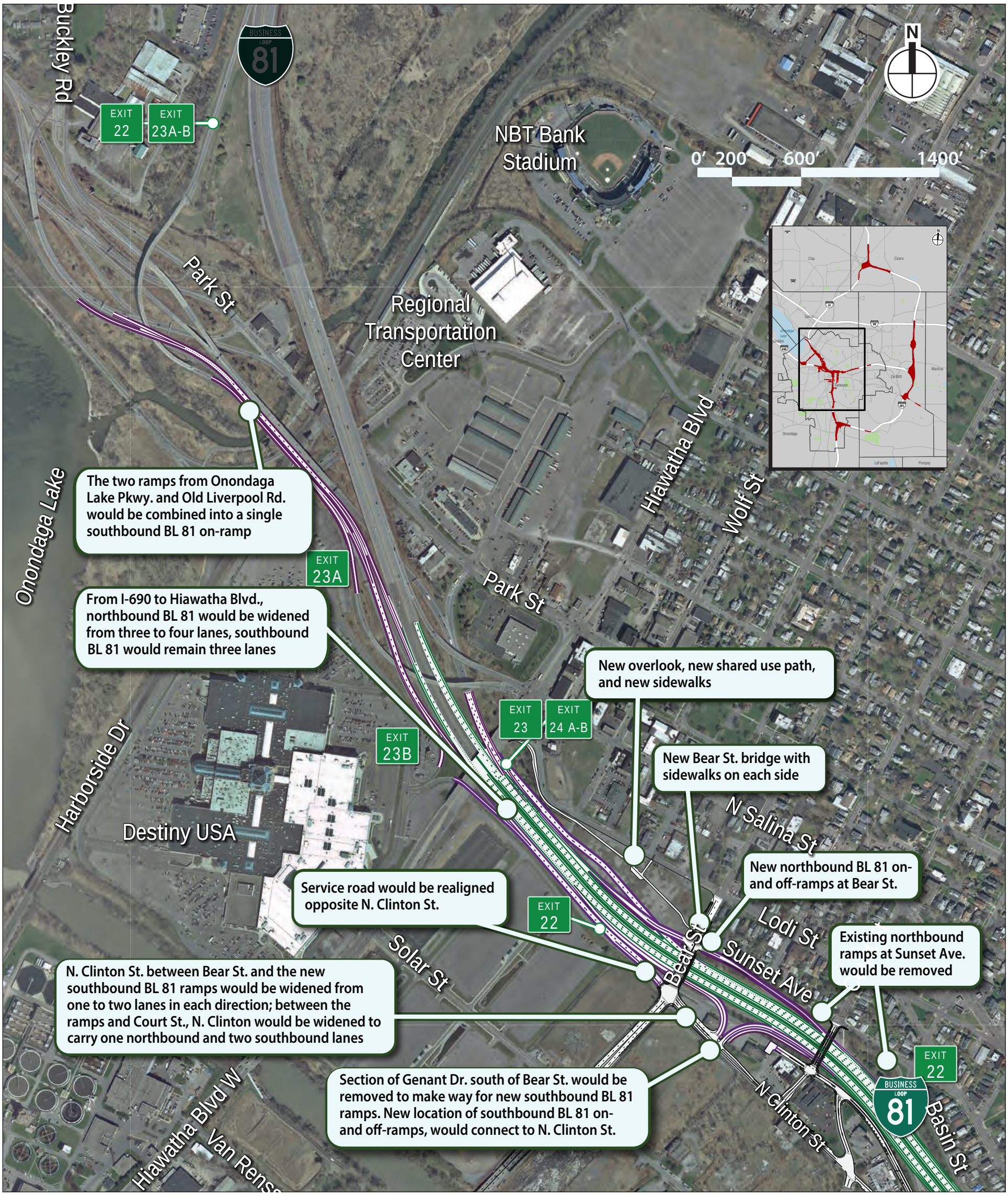
New Ramps

Local Road

I-81 Viaduct Project

Community Grid Alternative:
Butternut Street to Bear Street

Figure S-6



Community Grid Alternative Overview:
Bear Street to Hiawatha Boulevard

Figure S-7

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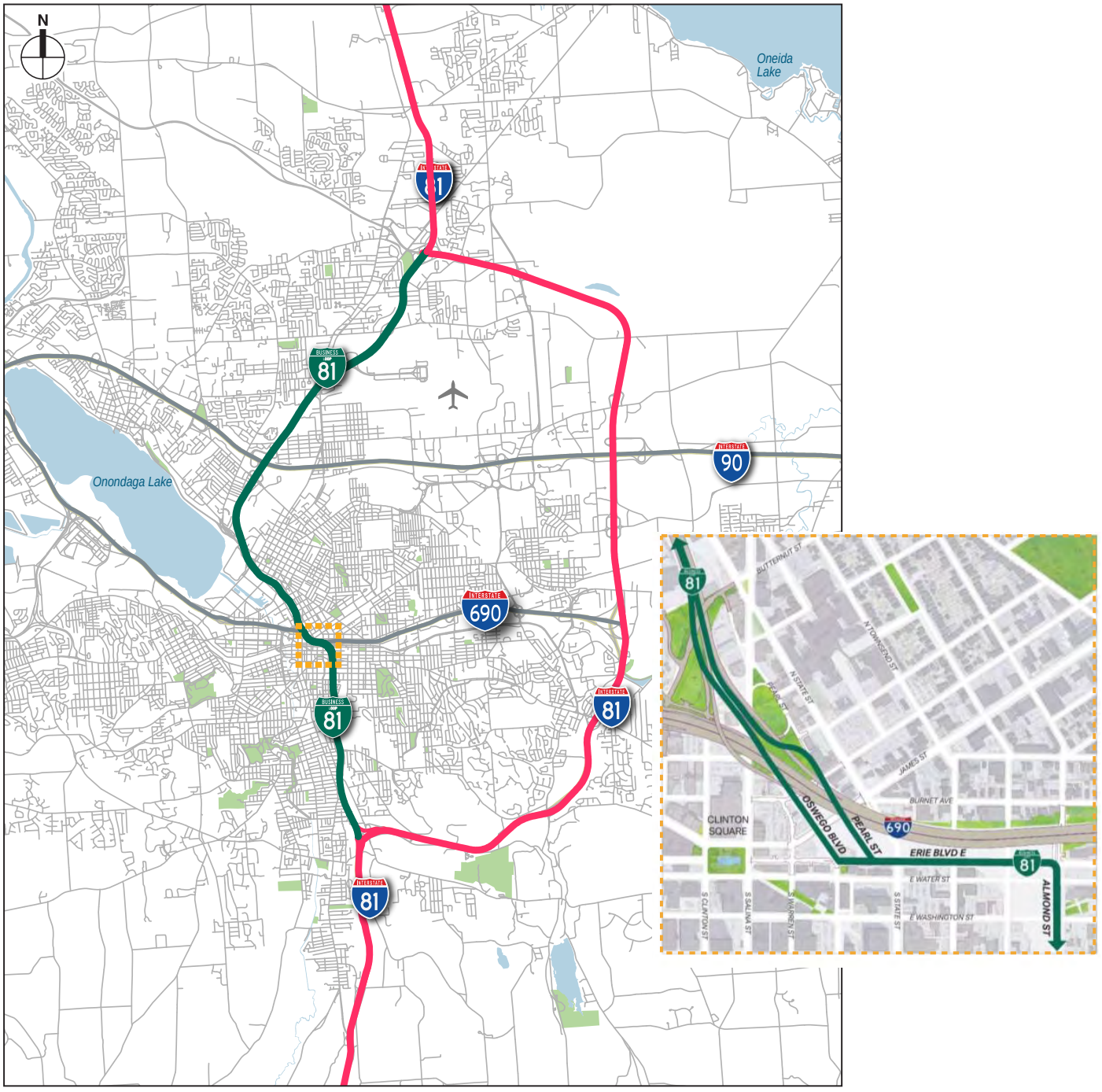

BL 81

I-81

Enlarged Area

Community Grid Alternative:
Business Loop 81

I-81 Viaduct Project

Figure S-8

Almond Street, which is located beneath the I-81 viaduct, would be reconstructed. The Community Grid Alternative would also involve reconstruction of the portions of I-690 from Leavenworth Avenue to Beech Street and Hiawatha Boulevard West to Bear Street, new or modified interchanges on I-690 and BL 81, as well as the reconstruction and reconfiguration of local streets in Downtown Syracuse.

The Community Grid Alternative would disperse traffic throughout the city grid, using the existing street network. Access points to and from I-690 and BL 81 would be available at West Street, and Crouse and Irving Avenues (to and from I-690), as well as at Clinton Street, Oswego Boulevard, and Pearl Street (to and from northern BL 81), and numerous at grade intersections along Almond Street between Van Buren Street and Erie Boulevard (to and from southern BL 81). North-south vehicular traffic would be channeled through Almond Street and along parallel corridors, such as Crouse Avenue, Irving Avenue, State Street, and Townsend Street, as well as other local streets that would have the capacity to accommodate this traffic. East-west traffic routes would include Erie Boulevard, Harrison Street, and Adams Street. North of I-690, North Clinton Street would be reconstructed and extended to serve as an alternative north-south route to Downtown, with new on- and off-ramps connecting to southbound BL 81 located south of Bear Street.

The westbound I-690 on-ramp from Bear Street would be lengthened, and operational improvements would be made on Bear Street. New interchanges would be constructed from I-690 at Crouse Avenue and Irving Avenue, as well as new entrance and exit ramps to/from the BL 81 connecting with East Willow Street, James Street, and Erie Boulevard; a new exit ramp from BL 81 to Colvin Street also would be constructed. West Street would be lowered to intersect with Genesee Street at grade. Streets incorporated into the Community Grid Alternative would be designed to meet Federal, State, and local design standards consistent with their anticipated function.

The reconstructed Almond Street would consist of two 12-foot-wide travel lanes in each direction, turning lanes at intersections (where needed), widened sidewalks, a landscaped median, and bicycle facilities. Bicycle facilities would include bicycle lanes, cycle tracks, and shared use (bicycle and pedestrian) paths in various segments along Almond Street, as well as some adjacent streets. Curbside parking lanes would be provided, except in the portion between Taylor Street and MLK, Jr. East.

The new Almond Street would provide vehicular access to all existing intersections between Van Buren Street and I-690 except at Madison and Monroe Streets, where only right turns would be possible; however, pedestrian-activated signals at these streets will be considered in final design. .

Existing I-481, which would be re-designated as I-81, would carry a minimum of four lanes (two in each direction) of through traffic. Interstate re-designation and associated numbering must meet American Association of State Highway Transportation Officials (AASHTO) protocols and receive approval from FHWA. The change in highway designation and associated changes in traffic volumes would require modifications to the re-designated I-81. These modifications would include:

- I-81/I-481 South Interchange (Interchange 16A): Reconstruction of this interchange would involve re-routing existing I-81 to connect with existing I-481, which would serve as the new I-81. The new I-81 would meet 70 MPH design standards. The existing ramps that connect northbound I-81 to northbound I-481 and southbound I-481 to southbound I-81 would be demolished, and these movements would be made on the main line of re-designated I-81. The

East Brighton Avenue bridge over the interchange and East Glen Avenue would be reconstructed. The intersection of East Brighton Avenue and Rock Cut Road would be maintained.

- I-81/I-481 North Interchange (Interchange 29): This interchange would be reconstructed to connect the re-designated I-81, which would meet 70 mph design standards, with the existing I-81. Ramps between the re-designated I-81 and BL 81 and between the re-designated I-81 and New York State Route 481 would also be provided. In addition, northbound and southbound auxiliary lanes would be constructed along portions of I-481 in the Project Area.
- Existing I-481 Interchange 3 (New York State Routes 5/92): The existing I-481 southbound to westbound Routes 5/92 exit ramp would be widened and improved to accommodate turns onto both westbound and eastbound Routes 5/92. The existing southbound I-481 to eastbound Routes 5/92 exit ramp would be removed. The improved southbound exit ramp would initially widen from one to two lanes and then transition to four lanes as it approaches Routes 5/92, where a new traffic signal would allow both left and right turns. In addition, the existing I-481 northbound entrance ramp from westbound Routes 5/92 would be lengthened substantially to improve vehicular merges. The intersection of New York State Routes 5 and 92 (Lyndon Corners) also would be improved with the addition of a new traffic signal and a right turn lane. The turn lane would begin approximately 600 feet west of the intersection and end on Route 92, approximately 1,000 feet east of the intersection (see **Figure 3-37**).
- A third southbound (auxiliary) lane would be provided between Kirkville Road (existing Interchange 5 southbound on-ramp) and I-690 (existing Interchange 4 southbound off-ramp) (see **Figure 3-37**).
- A third northbound (auxiliary) lane would be provided between I-690 (existing Interchange 4 northbound on-ramp) and Kirkville Road (existing Interchange 5 northbound off-ramp), requiring a widening of the bridge over the CSX railroad tracks.
- A third northbound (auxiliary) lane would be added between Kirkville Road and I-90 (existing Interchange 5 northbound on-ramp) and I-90 (existing Interchange 6 northbound off-ramp).
- A third southbound (auxiliary) lane would be added between existing I-481 Interchange 9 (I-81/I-481 north interchange) and Northern Boulevard (existing Interchange 8 southbound off-ramp).
- Signage: I-481 signage would be replaced with I-81 signage, and interchanges would be renumbered to correspond to the sequencing of I-81 interchanges south and north of Syracuse.

NYSDOT modified the Community Grid Alternative after publication of the preliminary DDR/DEIS in April 2019 in response to public input. Specifically, modifications included adding a northbound exit from BL 81 to Colvin Street, providing a new ramp between southbound BL 81 and I-81, and reconfiguring the design of Interchange 3 (New York State Route 5/92). Also, NYSDOT converted the intersection of BL 81 and MLK, Jr. East from a signalized intersection to a roundabout and modified the Bear Street interchanges on BL 81 and I-690. Following publication of the DDR/DEIS in July 2021, and in response to public input received, NYSDOT has further modified the design of the Community Grid Alternative, removing the roundabout from MLK Jr., East proposed in the DDR/DEIS. The revised Community Grid Alternative as presented in this FDR/FEIS includes a roundabout at Almond and Van Buren Streets and MLK Jr. East would no longer intersect with BL 81.

The Community Grid Alternative would entail the addition and removal of a route (I-81) from the National Network. Pursuant to 23 CFR 658.11, a Notice of Proposed Rulemaking is required for the proposed deletion of a Federal-aid interstate from the National Network (see the Designation/De-designation Package in **Appendix B-5**).

Upon the completion of construction, NYSDOT could dispose of potential surplus transportation right-of-way in the Central Study Area in accordance with Federal and State law, or the Contractor may sell staging sites. In total, implementation of the Community Grid Alternative could result in 10 to 12.5 acres of surplus transportation right-of-way, depending on how much land would be needed to accommodate the highway, sidewalk, shared use (bicycle and pedestrian) path, and other transportation features. NYSDOT would determine the size and location of the parcels once construction is complete. The potential surplus transportation right-of-way would consist of several sites near Almond Street and Erie Boulevard where the I-81 and I-690 ramps would be removed; a parcel north of Erie Boulevard between McBride and Catherine Streets where the eastbound I-690 ramp from McBride Street would be removed; a parcel north of Butternut Street between BL 81 and State Street where the existing northbound I-81 entrance ramp from Butternut Street would be removed; a parcel south of Court Street between BL 81 and Sunset Avenue where the existing northbound I-81 ramp to Sunset Avenue would be removed and relocated to Bear Street; and two parcels near MLK, Jr. East where the alignment of BL 81 shifts eastward. The parcels on Almond Street would range from 0.75 to 1.5 acres; those on Erie Boulevard would range from 0.3 to 0.5 acres; the parcel north of Butternut Street would be 1 to 1.5 acres; the parcel south of Court Street would be 0.75 to 1 acre; a parcel north of MLK, Jr. East would be 3 to 3.5 acres; and a parcel south of MLK, Jr. East and east of Leon Street would be 1 to 1.3 acres. There may be additional surplus right-of-way where the current street bed of MLK, Jr. East would be abandoned. The Community Grid Alternative would also result in a total of 2 to 2.5 acres consisting of numerous land strips that would be too small for development but may be of use to adjacent property owners. NYSDOT would identify the specific boundaries of the surplus parcels and their acreages after the construction phases, and NYSDOT's Property Evaluation Review Group would determine the next steps to dispose of the right-of-way once it concludes that the land is no longer needed for transportation purposes.

NYSDOT will form a land use working group consisting of representatives from the city, the city's school district, economic development and economic opportunity organizations, the business community, environmental justice populations, neighborhood residents, and other organizations and stakeholders as appropriate to provide input to NYSDOT in establishing a framework for the non-transportation use of each potential surplus parcel. Further details about the formation of and participation in this working group will be presented during continued project public involvement activities. Any new use or development would have to comply with the City of Syracuse's zoning ordinance and its Land Use and Development Plan 2040 currently being updated through its ReZone Syracuse project. Through the ReZone Syracuse project, the City has and continues to solicit community input.

Appendix A includes plans and profiles of the Community Grid Alternative. **Chapter 5, Transportation and Engineering Considerations**, provides an in-depth discussion of the design criteria and nonstandard features as well as roadway characteristics including vehicular traffic and non-motorized transportation.

S.4.4 SUMMARY OF ALTERNATIVES CONSIDERED AND DISMISSED FROM FURTHER STUDY

Twenty-one potential alternatives (NB, V-1, V-2, V-3, V-4, V-5, SL-1, SL-2, SL-3, DH-1, DH-2, T-1, T-2, T-3, T-4, T-5, T-6, T-7, Orange Tunnel Alternative, O-1, and O-2) were developed and evaluated. These include options proposed by the public. Following the initial screening of potential alternatives, which was presented in the Scoping Report, Alternatives V-2, V-3, and V-4 became options of one Viaduct Alternative and the Street-level Alternative was renamed the Community Grid-Alternative with two options, CG-1 and CG-2. A summary of **Section 3.3, Alternatives Considered and Dismissed from Further Study** is provided below:

Viaduct Alternatives (V-1 and V-5) – Scoping Report (April 2015)

Alternative V-1 (Rehabilitation) would involve a long-term program, implemented over multiple years as funding permits, to address the deterioration of I-81. The dimensions of the viaduct and operation of Almond Street would remain much the same as they are today. Alternative V-1 would not correct most nonstandard and nonconforming highway features.

Alternative V-5 (New Stacked Viaduct) would involve replacing the existing viaduct with a new two-level viaduct above Almond Street from Burt Street to East Genesee Street. Since northbound and southbound vehicles would travel on stacked decks, the Alternative V-5 viaduct would be approximately 30 feet taller and approximately 11 feet narrower than the existing viaduct. Alternative V-5 would eliminate east-west travel on East Genesee Street where it crosses Almond Street.

Therefore, Alternatives V-1 and V-5 failed to meet the Project's objectives and were dismissed from further consideration.

Depressed Highway Potential Alternatives - Scoping Report (April 2015)

Potential Alternatives DH-1 and DH-2 failed to address the Project's needs and to meet the Project's purpose and objectives and would pose difficult constructability considerations. Both alternatives would remove local street connections between Downtown and Northside, and it would not be reasonable to provide connections across the highway at every east-west street. Alternatives DH-1 and DH-2 were not recommended for further study.

Other Potential Alternatives - Scoping Report (April 2015)

Potential Alternative O-1 and O-2 would require a substantial amount of property acquisition. Additionally, Alternative O-2 would substantially diminish local street connections in the West Street corridor, thereby failing to meet the Project's objective to "maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations." Alternatives O-1 and O-2 were dismissed from further consideration.

Potential Tunnel Alternatives - Scoping Report (April 2015)

Potential Alternatives T-1 and T-2 failed to address the Project's needs or meet the purpose and objectives and are considered unreasonable. Both alternatives would eliminate several local street connections between Downtown, Northside, and University Hill. Severing these streets would create about a three-block gap in north-south and east-west vehicular access, which is inconsistent with the

objective to "maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations."

Alternative T-3 was not recommended for further study because it has many of the same deficiencies as Alternatives T-1 and T-2: Alternative T-3 failed to address the Project's needs or meet the Project's purpose and objectives, poses difficult constructability considerations, and has an unreasonable cost of $2.6 billion. In addition, Alternative T-3 would require acquisition of 55 to 70 buildings, which is considered unreasonable.

Alternative T-4 would address the Project's needs and meet the Project's purpose and objectives and constructability considerations. However, Alternative T-4 would acquire more than 100 buildings and would cost more than $3 billion, which are both considered unreasonable. Therefore, Alternative T-4 was dismissed from further consideration.

Additional Potential Tunnel Alternatives - Tunnel Feasibility Study (October 2016)

In response to public input after the publication of the Scoping Report, FHWA and NYSDOT conducted additional engineering and analyses to determine whether a tunnel alternative that satisfies the Project's needs, meets the Project's purpose and objectives, and meets the established screening criteria could be developed. Three new potential tunnel alternatives (T-5, T-6, and T-7) were developed and studied (see **Appendix B-2**).

Potential Alternative T-5 would eliminate the Colvin Street entrance ramp to northbound I-81; introduce an overpass (East Fayette Street from South Townsend Street to approximately Forman Avenue would need to be elevated); and eliminate the northbound I-81 ramp from Harrison Street, a main access point from University Hill to travel north. Alternative T-5 meets the Project's purpose, need, and objectives.

However, Alternative T-5 would involve constructability difficulties. Community disruptions, including impacts to vehicular, pedestrian, and bicycle traffic, are likely as a result of cut-and-cover tunneling. In addition to relocation of substantial utilities, Alternative T-5 would require the underpinning of the viaduct, which is nearly 60 years old. This would be a risky operation with some unknowns (such as the risk of potential lateral movements), adding difficulty to the construction and at least two to three years to the construction duration. In addition, Alternative T-5 would temporarily disrupt 15 major road crossings and a railroad crossing.

Alternative T-5 would require the acquisition of 35 properties (34 buildings and one parking lot). Alternative T-5's property needs are deemed reasonable. Alternative T-5's estimated cost of $3.1 billion is considered unreasonable. For these reasons, Alternative T-5 was dismissed from further consideration.

Potential Alternative T-6 would eliminate the Colvin Street entrance ramp to northbound I-81 and require the closure of Willow Street. In addition, Alternative T-6 would require the closure of Townsend Street between Genesee Street and Harrison Street to accommodate I-81 ramps to and from the north, and the closure of James Street between Oswego Boulevard and State Street due to insufficient clearance over the interstate-to-interstate ramps. These two closures would substantially sever local street connectivity and are not consistent with the Project's objective to "maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within and near

Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations." Therefore, Alternative T-6 does not meet the Project's purpose, need, and objectives.

Alternative T-6 would require the acquisition of 17 properties (16 buildings and one open space) and would cost $2.6 billion, both of which are considered unreasonable. For these reasons, Alternative T-6 was dismissed from further consideration.

Potential Alternative T-7 involves the construction of a high-speed, non-interstate tunnel in addition to all of the improvements associated with the Community Grid Alternative. The construction of Alternative T-7 largely would be implemented underground, using a tunnel-boring machine and sequential excavation method. While there are some risks associated with all underground construction, the use of these conventional and known tunneling methods would allow the alternative to pass on constructability. Alternative T-7 would require the acquisition of 11 properties and would cost $2.5 billion, both of which are considered unreasonable. For these reasons, Alternative T-7 was dismissed from further consideration.

WSP "I-81 Independent Feasibility Study" (December 2017)

In December 2017, NYSDOT released the WSP "I-81 Independent Feasibility Study," which was conducted "to ensure that a tunnel and depressed highway were sufficiently analyzed to assess their feasibility and cost" and to "[examine] alternatives that would adequately provide for vehicular traffic to replace the existing I-81 viaduct through the center of Syracuse" (see **Appendix B-3**). It was a technical engineering report and did not study the social, economic, and environmental effects of the proposed tunnel concepts. Under the study's "Key Findings and Conclusions" it states that "it would be technically feasible to design and construct a tunnel alternative that meets the study goals and improve [sic] the transportation system in the Syracuse Metropolitan Area," and ultimately identified the Orange Alternative as the tunnel option with "greatest benefit."

NYSDOT further developed the "Orange Alternative" and evaluated its social, economic and environmental effects; the modified alternative was called the Orange tunnel concept (see **Appendix B-4**). To accommodate ramps connecting southern Almond Street to BL 81/I-81 (to and from the south) and ramps connecting northern Almond Street to I-690 (to and from the west), local and through traffic would be severed at Washington, Jackson, and Burt Streets as well as Almond Street between Van Buren Street and Burt Street. Therefore, the Orange tunnel concept would not meet the Project's objective to "maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within the project limits in and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations." The concept would require 17 building acquisitions, and the tunnel's 11-year construction duration and $4.9 billion cost are considered unreasonable. Therefore, the Orange tunnel concept was dismissed.

S.4.5 IDENTIFICATION OF A PREFERRED ALTERNATIVE

Based on a balanced consideration of the need for safe and efficient transportation; the social, economic, and environmental effects of the Project; and national, state, and local environmental protection goals, the Community Grid Alternative has been identified as the preferred alternative.

S.5 SOCIAL, ECONOMIC, AND ENVIRONMENTAL CONSIDERATIONS

Chapter 5, Transportation and Engineering Considerations and **Chapter 6, Social, Economic, and Environmental Considerations** identify the potential long-term, operational effects of the Viaduct and Community Grid Alternatives, and they describe mitigation necessary for the identified adverse effects. **Tables S-1a and S-1b** list the anticipated effects and proposed measures. **Table S-2** lists the potential permits and approvals required for implementing Community Grid Alternative.

The Viaduct Alternative would take seven years to construct. Work would be conducted in three phases, with the greatest construction effects to occur in Phases 2 and 3. This alternative would require the temporary closure of eastbound I-690 in Phase 2 and a two-year closure of northbound and southbound I-81 between MLK, Jr. East and Butternut Street for the reconstruction of the viaduct and associated ramps and roads.

The Community Grid would take six years to construct. Work would be conducted in two phases (with Phase 2 having two subphases). Phase I would involve all work necessary to re-designate I-481 to I-81. Phase 2 includes closing segments of eastbound I-690 (Phase 2A) and using a local street detour between West Street and Crouse Avenue. Phase 2 would involve reconstruction of I-690, demolition of the viaduct structure, and reconstruction of Almond Street and other local streets.

This FDR/FEIS documents the potential effects of constructing the Viaduct and Community Grid Alternatives. Construction effects of both alternatives would include temporary increases in noise, emissions from construction equipment, traffic detours, and changes in visual appearance near construction zones. NYSDOT would seek temporary easements during construction, but except for properties that would be permanently acquired, NYSDOT would not relocate residents or businesses during construction. Furthermore, NYSDOT would maintain access to businesses through detour routes, as necessary. NYSDOT would close a 20-foot (0.12-acre) portion of 2.1-acre Wilson Park adjacent to the viaduct to provide a safety buffer between the construction work area and the park. The safety buffer would be in effect for less than one year of the six-year Community Grid Alternative construction period and two years of the seven-year Viaduct Alternative construction period. NYSDOT would carefully coordinate construction activities near Dr. King Elementary School with the Syracuse City School District to limit disruption to faculty, staff, and students, and they would conduct outdoor ambient air monitoring at the school to observe emissions from nearby construction activities and implement corrective measures in the event the exceedances occur. Any asbestos, lead-based paint, or hazardous materials encountered during construction, including during the removal of the existing viaduct, would be transported to licensed handling facilities in accordance with Federal, State, and local laws.

FHWA and NYSDOT have identified measures to minimize or mitigate these effects, which they would incorporate into contract documents and design plans to ensure the requirements are met. NYSDOT would be responsible for ensuring that contractors comply with the measures that they and FHWA have identified. **Table S-3** identifies measures to minimize or mitigate the effects of construction.

Table S-1a
Summary of Environmental Effects and Proposed Mitigation for the Viaduct Alternative – Permanent / Operational Effects

Topic	Viaduct Alternative	
	Effects	**Mitigation**
TRANSPORTATION CONSIDERATIONS		
Traffic *(See Chapter 5)*	Traffic signal coordination, signage, and pavement markings would be improved	None required
	Improved traffic flow on the viaduct would attract more vehicles, and traffic volumes would increase on some segments of I-81 and I-690. Refer to Table 8-2 for changes in travel times between certain origins and destinations in the Syracuse region. The Viaduct Alternative would relieve congestion issues on southbound I-81, the Harrison/Adams Street interchange, and Almond Street by providing additional capacity to relieve bottlenecks, as well as establishing alternative access points that redirect demand from the congested areas. The Viaduct Alternative would accomplish this by providing the following improvements: ▪ Reconstructing the existing two-lane section of southbound I-81 between the entrance-ramp from eastbound I-690 and the Harrison Street exit to provide an additional auxiliary lane. ▪ Reconstructing the existing single-lane Harrison Street exit-ramp to provide two lanes. ▪ Widening the Harrison Street exit-ramp approach to Almond Street from one to two lanes. ▪ Reconfiguring the Harrison and Almond Streets intersection to provide an exclusive right-turn lane that would accommodate the continuous movement from westbound Harrison Street to the northbound I-81 on-ramp. ▪ Constructing a new partial interchange on I-81 south of Adams Street at MLK, Jr. East. This new access point would accommodate commuting traffic traveling from locations south of the City to University Hill and would relieve some traffic demand currently served by Almond Street and the Harrison/Adams Street interchange. ▪ Relocating primary access from University Hill to eastbound I-690 from the Harrison/ Adams Street interchange to a new entrance-ramp north of Erie Boulevard on Almond Street.	None required
Level of Service (LOS) *(See Chapter 5)*	**LOS *(freeway)*:** ▪ LOS would generally improve, but some freeway segments would operate at LOS E or F during AM and PM peak periods. **LOS *(intersections)*:** LOS E or F operations: ▪ 2026 AM peak hour: 1 intersection ▪ 2026 PM peak hour: 2 intersections ▪ 2056 AM peak hour: 2 intersections ▪ 2056 PM peak hour: 4 intersections	Some locations could be mitigated with a traffic signal and other minor improvements when appropriate.
Crashes *(See Chapter 5)*	▪ Rear-end conflicts: 12 percent reduction (-) ▪ Lane change conflicts: 3 percent reduction (-) ▪ Crossing conflicts: less than 1 percent reduction (-) ▪ *Overall: 4 percent reduction* ▪ Crash Cost Benefit: $3,045,772	None required
Parking (See Chapter 5)	▪ Parking under the existing viaduct would be removed and other lots would be affected.	Impacts would be mitigated by replacing and creating parking lots beneath the viaducts and transportation demand management measures.
Pedestrians (See Chapter 5)	Narrower Almond Street crossing width compared to the No Build Alternative.	None required
	New pedestrian facilities: ▪ West side of Onondaga Creek from Evans Street to Erie Boulevard. ▪ Almond Street from Water Street (Empire State Trail) south to Van Buren Street. Some of these new pedestrian facilities would be shared-use (pedestrian and bicycle) paths.	None required

Table S-1a (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Viaduct Alternative – Permanent / Operational Effects

Topic	Viaduct Alternative Effects	Mitigation
TRANSPORTATION CONSIDERATIONS (continued)		
Bicyclists (See Chapter 5)	New on-road bicycle lanes: ▪ Almond Street from Water Street (Empire State Trail) to Fineview Place; ▪ New Butternut Street bridge from State Street to Franklin Street; ▪ New Spencer Street bridge from Catawba Street to Clinton Street; ▪ McBride Street from Water Street (Empire State Trail) to Burnet Avenue; and ▪ Lodi Street from Burnet Avenue to Canal Street. New shared (for vehicles and bicycles) lanes: ▪ Fineview Place from Van Buren Street to Raynor Avenue; ▪ Walnut Avenue and Canal Street to Water Street; ▪ Salina Street from East Laurel Street to State Street; ▪ State Street from Salina Street to Butternut Street; ▪ North Clinton Street from Spencer Street to Franklin Street; ▪ Franklin Street from Butternut Street to Herald Place; and ▪ Evans Street from Franklin Street to Plum Street. New shared-use (bicycle / pedestrian) paths: ▪ Almond Street from Genesee Street to Fineview Place; ▪ Along Onondaga Creek (west side) from Evans Street to Erie Boulevard; ▪ Franklin Street to the existing Creekwalk, immediately north of Evans Street; ▪ Bear Street to Hiawatha Boulevard and Lodi Street east of BL-81; and ▪ Van Rensselaer Street to the existing Creekwalk, immediately north of Bear Street.	None required
	Two-way raised cycle track: ▪ Almond Street from Water Street (Empire State Trail) to Genesee Street; and Salina Street (west side) from Herald Place to East Laurel Street.	None required
SOCIAL CONSIDERATIONS		
Neighborhood Character (see Section 6-2-1)	▪ Convert 21.74 acres of land to State right-of-way. ▪ Buildings Acquisitions: 24 (commercial/industrial) and a smokestack and displacing 95 dwelling units. Affected properties include: ▪ Vacant parcels and structures; ▪ Surface parking areas; and ▪ Mixed-use (commercial and residential), commercial, and industrial buildings.	Owners and tenants of affected businesses and residences would be provided relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) and the New York State Eminent Domain Procedures Law (EDPL) (see Land Acquisition, Displacement, and Relocation). In addition, owners of properties that would be acquired would be compensated at fair market value.
	Viaduct would stay in place. I-81/I-690 interchange reconstructed to provide full connections.	None required
	Pedestrian and bicycle improvements, including a shared use (bicycle and pedestrian) path along the west side of Almond Street from Fineview Place to Harrison Street, and distinctive pavement markings or materials to define space for bicyclists and pedestrians, would have a positive effect on pedestrian and bicyclist safety.	None required
	Some new development may be attracted to the Northern Neighborhoods Subarea (north of I-690) associated with the Clinton Street improvements and to the Southwest Neighborhoods Subarea (Near Westside and Downtown) associated with the removal of the West Street ramps.	None required
	Removal of the elevated West Street overpass and ramps to and from I-690 would improve community cohesion; removal would re-establish connections between Downtown and the Near Westside and provide an opportunity to expand the Creekwalk and relocate a portion it to be adjacent to Onondaga Creek. In total, the alternative would result in approximately 5.4 miles of new or reconstructed sidewalks, 2.1 miles of new or reconstructed shared use (bicycle and pedestrian) paths, 0.2 miles of new cycle track (a separate track for bicyclists only), and 0.2 miles of new or reconstructed shared vehicle and bicycle lanes.	None required
	Overall land use conditions would not change.	None Required

Table S-1a (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Viaduct Alternative – Permanent / Operational Effects

Topic	Viaduct Alternative	
	Effects	**Mitigation**
SOCIAL CONSIDERATIONS (continued)		
Social Groups Benefitted or Harmed *(Elderly Individuals, Individuals with Disabilities, and Transit-Dependent Individuals [Transit Riders, Pedestrians, and Bicyclists])* (see Section 6-2-2)	Elderly individuals and individuals with disabilities would benefit from the safety and mobility improvements and new facilities compliant with the Public Right-of-Way Accessibility Guidelines (PROWAG) in the Almond Street corridor and adjacent streets, and the east side of West Street.	None required
	Transit-dependent individuals, pedestrians, and bicyclists would benefit from improved pedestrian and bicycle facilities on Almond Street and other local streets, as well as potential transit amenities that could be incorporated into the Project in coordination with Centro (such as bus stops, bus shelters, and roadway features to improve bus maneuvering).	None required
Environmental Justice *(Minority and/or Low-Income Populations)* (see Section 6-2-3)	While there would be improvements to the roadways beneath the viaduct as well as the pedestrian and bicycle facilities, the viaduct would continue to be a prominent feature of the Central Study Area and could be perceived as a division between neighborhoods. While there would be adverse effects to environmental justice populations related to visual resources and traffic noise, most would be mitigated, and these adverse effects would not be disproportionately high. Thus, the Viaduct Alternative would not result in disproportionately high and adverse effects on environmental justice populations.	Aesthetic treatments/enhancements are proposed, such as replacement landscaping; streetscape enhancements along Almond Street, portions of West Street and Erie Boulevard, and portions of connecting streets; and surface treatments. In addition, noise barriers would be constructed.
ECONOMIC CONSIDERATIONS		
Land Acquisition, Displacement, and Relocation (see Section 6-3-1)	▪ Full/Partial Land Acquisition: 21.74 acres ▪ Full Acquisitions: 31 properties ▪ Partial Acquisitions: 88 properties ▪ Buildings Acquired: 22 (occupied); 2 (vacant) ▪ Displaced Dwelling Units: 95 ▪ Displaced Employees: 555 ▪ Approximate Loss in Annual Tax Revenue: $754,063	Owners and tenants of affected businesses and residences would be provided relocation assistance in accordance with the Uniform Act and EDPL. In addition, owners of properties that would be acquired would be compensated at fair market value.
Local and Regional Economy (see Section 6-3-2)	Displacement: ▪ 24 buildings with 555 employees, representing 0.7 percent of total Central Study Area employment.	The displacement of businesses would be undertaken pursuant to the Uniform Act and EDPL. In addition, owners of properties that would be acquired would be compensated at fair market value.
ENVIRONMENTAL CONSIDERATIONS		
Historic and Cultural Resources (see Section 6-4-1)	Removal of eleven (11) historic buildings, representing 10 historic properties (National Register-Eligible / Listed). Nine of these are individually NRHP-listed or eligible for NRHP-listing and two contribute to a historic district, which is considered one historic property. Construction of the Viaduct Alternative would involve ground disturbance, which has the potential to effect archaeological resources. Approximately 19.1 acres within the APE for direct effects is undisturbed, or disturbance cannot be documented, and therefore potentially sensitive for archaeological resources. The Project's effects on historic properties cannot be fully determined at this time. As such, the final identification and evaluation of historic properties will be deferred as provided for in a Programmatic Agreement, developed pursuant to 36 CFR §800.14(b)(1)(ii) (see Appendix E-6).	Adverse effects on historic properties would be mitigated in coordination with SHPO should the Viaduct Alternative advance. The Programmatic Agreement outlines procedures for consultation among FHWA, SHPO, the Onondaga Nation, the Tuscarora Nation, and NYSDOT to evaluate archaeological resources and seek measures to avoid, minimize, or mitigate any adverse effects on National Register eligible archaeological properties. The Programmatic Agreement was developed for the preferred alternative for the Project, which is the Community Grid Alternative (see Section 6-4-1.4.5). If the Viaduct Alternative is selected, NYSDOT would develop an agreement through consultation with FHWA, SHPO, the Onondaga Nation, the Tuscarora Nation, and Consulting Parties that is specific to the Viaduct Alternative.
Parks and Recreational Resources (see Section 6-4-2)	The Viaduct Alternative would not result in permanent adverse effects to parks and recreational resources. There would be a temporary closure of a portion of Wilson Park during two years of the construction period to provide a safety buffer. NYSDOT would implement improvements to the park to mitigate the short-term closures of a portion of the park during construction.	There would be permanent improvements to Wilson Park to mitigate temporary loss of parkland during construction. Improvements include construction of a basketball court prior to commencing construction, so that two basketball courts would be available for use during construction. A third hoop and backboard and benches would be added. Other improvements include new shade trees, a new water fountain, a new splash pad, new pavement for access from Jackson Street and other fence, pedestrian gates, and parking improvements. Once construction is complete, the existing eastern basketball court would be reconstructed.

Table S-1a (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Viaduct Alternative – Permanent / Operational Effects

Topic	Viaduct Alternative	
	Effects	**Mitigation**
ENVIRONMENTAL CONSIDERATIONS (continued)		
Visual Resources and Aesthetic Considerations (see Section 6-4-3)	▪ Minor adverse effects: 13 viewpoints ▪ Neutral effects: 11 viewpoints ▪ Minor beneficial/beneficial effects: 8 viewpoints	Streetscape enhancements would be provided along Almond Street, portions of West Street and Erie Boulevard, and portions of connecting streets. Streetscape enhancements may include sidewalks, specialty pavements and aesthetic treatments for walkways, site furnishings such as benches and trash receptacles, plantings, and green infrastructure for stormwater management. Gateway enhancements would be developed to create a distinct and identifiable sense of entry and sense of place. These enhancements could include establishment of a consistent theme or motif, use of specialty materials and site elements, historical elements, landscaping, signage, aesthetic earth forms, sculptural elements, and public art to mark the entrance to the city. Gateways have been identified at the West Street and Genesee Street intersection, the Clinton Street exit and on Almond Street between the Adams Street and Harrison Street on- and off-ramps. Some screening of limited views in the Central Study Area may be possible with additional street trees. In some cases, variation in the style and form of support structures, for example at bridge overpasses, could enhance visual compatibility with the context of surrounding neighborhoods. Surface treatments, such as using native stone materials for concrete columns, abutments, and support structures, may be possible enhancements in some locations.
Air Quality (see Section 6-4-4)	Mesoscale: ▪ No adverse effects in area wide emissions. ▪ Lower emissions of all modeled pollutants in all analysis years when compared to No Build. Microscale: ▪ PM concentrations would be below the NAAQS and similar to conditions under the No Build Alternative.	None required
Energy and Climate Change (see Section 6-4-5)	▪ Reduction of electricity use and associated emissions with grid power to be used for lighting, message boards, and signals due to replacement of some of these existing roadway components with new, more energy efficient components ▪ Decrease in operational GHG emissions and energy use	None Required
Noise (see section 6-4-6)	▪ Impacted receivers: 675 (1,196 receptors) of the 2,817 receiver sites without abatement. ▪ Additional 95 receivers would exceed the NACs compared to existing conditions without abatement. ▪ Perceptible (>3dB(A)) traffic noise level increases at 38 receivers (94 receptors) compared to existing conditions without abatement.	Noise barriers were considered where traffic noise impacts are predicted. Each noise barrier considered was developed, modeled, and evaluated in terms of its feasibility and reasonableness. Barriers are depicted in Figure 6-4-6-1 as well as the Viaduct Alternative Noise Abatement figures in Attachment G of Appendix H. Fifteen (15) noise barriers meet the NYSDOT reasonableness and feasibility criteria and are, therefore, recommended.
Water Resources (see section 6-4-7)	Decreased overall impervious surface.	None required
	EO 11990 wetland impacts: 0.06 acres (0.06 vegetated wetlands)	The permanent loss of EO 11990 wetlands is minimal (0.06 acres), and no loss of open waters would occur as a result of the Viaduct Alternative. Therefore, no EO 11990 wetland mitigation is required. As design advances, all practicable measures would be employed to avoid and minimize harm to EO 11990 wetlands.
	▪ NYSDEC wetland impacts 0.00 acres. ▪ NYSDEC-regulated freshwater wetland adjacent area impacts: 0.71 acres of permanent new pavement and 2.12 acres of permanent cut/fill (pervious).	The Viaduct Alternative would result in no permanent effects to NYSDEC freshwater wetlands. During construction, measures (i.e., design refinements, silt or exclusion fencing) would be implemented to avoid effects to wetlands.
	Onondaga Creek (Central Study Area): ▪ Permanent impacts: 0 ▪ Temporary impacts: 65 linear feet	No loss of open waters would occur as a result of the Viaduct Alternative. Therefore, no stream mitigation is required. Where new culverts are proposed or where existing culverts would be modified or replaced, open bottom culverts would be installed to improve habitat connectivity in these locations.
ENVIRONMENTAL CONSIDERATIONS (continued)		
	Habitat removed: 305 acres	

Table S-1a (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Viaduct Alternative – Permanent / Operational Effects

Topic	Viaduct Alternative	
	Effects	**Mitigation**
General Ecology and Wildlife Resources (see section 6-4-8)	▪ 275.7 acres of terrestrial cultural communities ▪ 22.6 acres of successional southern hardwood communities ▪ 4.0 acres of successional old field communities ▪ 2.0 acres of successional shrubland communities ▪ 0.6 acres of floodplain forest communities ▪ 0.06 acres wetland impacts ▪ Trees removed: 10.3 acres	Areas disturbed during construction that are not part of the permanent project footprint would be revegetated to the greatest extent practicable with plant species indigenous to this region of New York. These efforts would be carried out in accordance with a Landscape Restoration Plan.
	State threatened and endangered species: "Take Not Likely" – All species Federal threatened and endangered species: ▪ Indiana bat: "May Affect, Not Likely to Adversely Affect" ▪ Northern long-eared bat: "May Affect, Not Likely to Adversely Affect" ▪ Eastern massasauga: "No Effect – No Habitat" ▪ American hart's-tongue fern: "No Effect"	Mitigation may be required for tree cutting in Indiana bat and northern long-eared bat habitat. As design advances and scheduling for tree cutting is planned, any required mitigation would be coordinated with FHWA, USFWS, and NYSDEC.
Asbestos and Lead (see section 6-4-9)	Implementation of the Viaduct Alternative would affect twenty-four (24) buildings and one associated structure. The preliminary asbestos assessment indicates that these structures and bridges affected by this alternative have lead based paints (LBP).	Asbestos surveys and lead sampling is recommended at 24 buildings and 52 ramps/bridges prior to construction to identify any asbestos containing materials (ACMs) or LBPs. Lead-based paint concerns to protect the public from lead dust exposure would first be controlled by the actions of the contractor and use of containment and control structures and modification of construction practices. Airborne lead levels could be monitored either directly or indirectly by monitoring particulate concentrations in the atmosphere. Additional protection methods will be evaluated as necessary. Any ACM and LBPs encountered during construction would be removed from the project site during demolition and would be transported to a licensed handling facility in accordance all applicable with Federal and state regulations. Refer to Chapter 4, Construction Means and Methods and Table 4-7 for specific measures to mitigate ACM and LBP encountered during construction.
Hazardous Waste and Contaminated Materials (see section 6-4-10)	Detailed assessment of each structure to be removed or reconstructed would be completed prior to its acquisition and/or removal.	A hazardous waste and contaminated materials assessment is recommended for 68 sites proposed for full or partial property acquisition and should focus on areas of anticipated construction, particularly areas that have potential for or have been identified as locations with recognized environmental concerns. Groundwater sampling is also recommended in locations where anticipated construction would extend below the water table. The storage, transportation, and disposal of any hazardous waste and/or contaminated materials encountered during construction would be conducted in accordance with all applicable federal, state, and local regulations. The removal of ACMs would be completed in accordance with NYSDOL ICR 56 and applicable Federal regulations (e.g., OSHA, National Emission Standards for Hazardous Air Pollutants Compliance Monitoring [NESHAPS]).
Farmlands *(See Section 6-4-11)*	No effect on farmland.	None Required

Table S-1b
Summary of Environmental Effects and Proposed Mitigation for the Community Grid Alternative – Permanent / Operational Effects

Topic	Community Grid Alternative	
	Effects	**Mitigation**
TRANSPORTATION CONSIDERATIONS		
Traffic *(See Chapter 5)*	Traffic signal coordination, signage, and pavement markings would be improved.	None required
	The Community Grid Alternative would disperse traffic throughout the city grid by promoting broader use of the existing street network. Access points to and from I-690 and BL 81 would be available at West Street and Crouse and Irving Avenues (to and from I-690); Clinton Street, Oswego Boulevard, and Pearl Street (to and from northern BL 81); existing and new connections at Colvin Street, and numerous at grade intersections along Almond Street between the new Van Buren Street roundabout and Erie Boulevard (to and from southern BL 81). Posted speeds would be lower with I-81 removed. Traffic volumes would increase on former I-481 and I-690. Changes in travel times between various origins and destinations within the Syracuse region are provided in **Table 8-2**. In most cases, there is less than a five-minute change in travel time. The Community Grid Alternative would relieve congestion issues on southbound I-81, the Harrison Street/Adams Street interchange, and Almond Street by removing the I-81 interchange at Harrison/Adams Streets, as well as dispersing traffic along many roadways with existing surplus capacity and providing more-direct access to the City's major activity centers. The Community Grid Alternative would provide interstate access at alternative locations and provide capacity improvements on the local street system, in addition to the freeway system. The Community Grid Alternative would accomplish this by providing the following improvements: ▪ Redesigning I-481 to accommodate additional traffic currently served by I-81 and re-designating I-481 as I-81. ▪ Constructing a new I-690 interchange at Crouse/Irving Avenues to provide direct access between University Hill and locations to the north, east, and west. Substantial local street improvements would be provided on Crouse Avenue and Irving Avenue to accommodate increased traffic. ▪ Establishing additional, more-direct access to University Hill and the Southside from points south of the City by providing access to multiple east-west cross streets south of Adams Street, such as Van Buren Street, Burt Street, and Taylor Street, as well as an exit ramp from northbound BL 81 to Colvin Street. ▪ Providing geometric and capacity improvements on local streets to accommodate the new travel patterns established by removing the I-81 viaduct and creating improved access and connectivity to major activity centers.	None required
Level of Service *(See Chapter 5)*	**LOS *(freeway)*:** ▪ LOS would generally improve, but one freeway segment would operate at LOS E during PM peak periods. **LOS *(intersections)*:** LOS E or F operations: ▪ 2026 AM peak hour: 1 intersection ▪ 2026 PM peak hour: 1 intersection ▪ 2056 PM peak hour: 1 intersection	Most locations could be mitigated with a traffic signal and other easily implementable improvements when appropriate.
Crashes *(See Chapter 5)*	▪ Rear-end conflicts: 42 percent reduction (-) ▪ Lane change conflicts: 10 percent reduction (-) ▪ Crossing conflicts: 15 percent reduction (-) ▪ *Overall: 20 percent reduction* ▪ Crash Cost Benefit: $3,080,537	None required
Parking (See Chapter 5)	Parking under the existing viaduct would be removed and other lots would be affected.	Impacts would be mitigated by replacing or creating parking lots beneath I-690 and transportation demand management measures.
Pedestrians (See Chapter 5)	Improved pedestrian refuges in the median along Almond Street would be provided. A narrower Almond Street crossing width, in the area of heaviest pedestrian traffic between Genesee Street and Adams Street, compared to the No Build Alternative.	None required
	New pedestrian facilities: ▪ West side of Onondaga Creek from Evans Street to Erie Boulevard. ▪ Almond Street from Erie Boulevard south to MLK, Jr. East. Some of these new pedestrian facilities would be shared-use (pedestrian and bicycle) paths.	None required

Table S-1b (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Community Grid Alternative – Permanent / Operational Effects

Topic	Community Grid Alternative	
	Effects	**Mitigation**
TRANSPORTATION CONSIDERATIONS (continued)		
Bicyclists (See Chapter 5)	New on-road bicycle lanes: ▪ New Butternut Street bridge from State Street to Franklin Street; ▪ New Spencer Street bridge from Catawba Street to North Clinton Street; ▪ Almond Street between Erie Boulevard and Burnet Avenue; ▪ Lodi Street via Walnut Avenue and Canal Street; and ▪ East Brighton Avenue north-bound from East Glen Avenue to Rock Cut Road. New shared (for vehicles and bicycles) lanes: ▪ Walnut Avenue and Canal Street to Water Street; ▪ Salina Street from East Laurel Street to State Street; ▪ State Street from Salina Street to Butternut Street; ▪ North Clinton Street from Spencer Street to Butternut Street; ▪ Franklin Street from Evans Street to Herald Place; and ▪ Evans Street from Franklin Street to Plum Street. New shared-use (bicycle / pedestrian) paths: ▪ Almond Street between Adams Street and MLK, Jr. East; ▪ Almond Street between Van Buren Street and Raynor Avenue; ▪ MLK, Jr. East between Almond Street and Leon Street; ▪ Crouse Avenue between Water Street (Empire State Trail) and Burnet Avenue; ▪ East Glen Avenue bridge to East Brighton Avenue; ▪ Along Onondaga Creek (west side) from Evans Street to Erie Boulevard; ▪ Franklin Street to the existing Creekwalk immediately north of Evans Street; ▪ Bear Street to Hiawatha Boulevard and Lodi Street east of BL 81; and ▪ Van Rensselaer Street to the existing Creekwalk, immediately north of Bear Street.	None required
Bicyclists (See Chapter 5)	One-way raised cycle track: ▪ Almond Street (both sides) from Erie Boulevard to Adams Street; ▪ Harrison Street from Almond Street to Townsend Street; and ▪ Southbound East Brighton Avenue from East Glen Avenue to Rock Cut Road.	None required
	Two-way raised cycle track: ▪ Salina Street (west side) from Herald Place to East Laurel Street; and ▪ State Street from Water Street (Empire State Trail) to James Street.	None required
SOCIAL CONSIDERATIONS		
Neighborhood Character (see Section 6-2-1)	▪ Convert 20.44 acres of land to State right-of-way. ▪ Buildings Acquisitions: 4 (commercial); No residences to be acquired by the Community Grid. Affected properties include: ▪ Vacant parcels and structures; ▪ Surface parking areas; and ▪ Commercial and industrial land uses.	Owners and tenants of affected properties would be provided relocation assistance in accordance with the Uniform Act and EDPL. In addition, owners of properties that would be acquired would be compensated at fair market value.
	Signalized surface roadway with planted median. I-81/I-690 interchange reconstructed as a partial interchange	None required

Table S-1b (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Community Grid Alternative – Permanent / Operational Effects

Topic	Community Grid Alternative	
	Effects	Mitigation
SOCIAL CONSIDERATIONS (continued)		
Neighborhood Character (see Section 6-2-1)	Pedestrian and bicycle improvements, including a shared use (bicycle and pedestrian) path along the west side of Almond Street from MLK, Jr. East to Adams Street; a cycle track from Adams Street to Erie Boulevard; shared use path connection from Almond Street/Van Buren Street to Fineview Place, as well as from Water Street to Burnet Avenue along Crouse Avenue; a cycle track connection from Almond Street to Townsend Street along Harrison Street; and distinctive pavement markings or materials to define space for bicyclists and pedestrians would have a positive effect on pedestrian and bicyclist safety.	None required
	Some new development may be attracted to the Northern Neighborhoods Subarea (north of I-690) associated with the Clinton Street improvements and to the Southwest Neighborhoods Subarea (Near Westside and Downtown) associated with the removal of the West Street ramps. BL 81 would come to grade just south of MLK, Jr. East and shift eastward to pass beneath the NYS&W Railway. The removal of the viaduct would also open new land for potential development in areas south of I-690, near MLK, Jr. East, and east and west of West Street at the intersection of West Genesee Street. The Community Grid Alternative would incorporate approximately 20.44 acres of land in the Project Area into new transportation right-of-way, but the alternative could also result in 10 to 12.5 acres of surplus transportation right-of-way that could be converted to another use. Due to the removal of the viaduct and associated highway ramps, the potential surplus transportation right-of-way would consist of several sites near Almond Street and Erie Boulevard where the I-81 and I-690 ramps would be removed; a parcel north of Erie Boulevard between McBride and Catherine Streets where the eastbound I-690 ramp from McBride Street would be removed; a parcel north of Butternut Street between BL 81 and State Street where the existing northbound I-81 entrance ramp from Butternut Street would be removed; a parcel south of Court Street between BL 81 and Sunset Avenue where the existing northbound I-81 ramp to Sunset Avenue would be removed and relocated to Bear Street; and land near MLK, Jr. East where the alignment of BL 81 shifts eastward. NYSDOT would identify the specific boundaries of the surplus parcels and their acreages after the construction phases, and NYSDOT's Property Evaluation Review Group would determine the next steps to dispose of the right-of-way once it concludes that the land is no longer needed for transportation purposes.	NYSDOT will form a land use working group consisting of representatives from the city, the city's school district, economic development and economic opportunity organizations, the business community, environmental justice populations, neighborhood residents, and other organizations and stakeholders as appropriate to provide input to NYSDOT in establishing a framework for the non-transportation use of each potential surplus parcel.
	Removal of the elevated West Street overpass and ramps to and from I-690 would improve community cohesion; removal would re-establish connections between Downtown and the Near Westside, provide an opportunity to expand the Creekwalk, and relocate a portion of the trail to be adjacent to Onondaga Creek. The alternative would result in improved connectivity on several local streets (e.g., Irving Avenue would be extended to I-690 from East Fayette Street, Crouse Avenue would connect to I-690, West Street would be connected to West Genesee Street, Oswego Boulevard would be extended between East Willow Street and James Street, Pearl Street would be extended from East Willow Street to Erie Boulevard, North Clinton Street would be extended to Butternut Street/North Franklin Street, etc.). A new interchange between I-690 and Crouse and Irving Avenues would establish a new entry corridor to the Near Eastside and University Hill. In total, the alternative would result in approximately 12.5 miles of new or reconstructed sidewalks, 2.0 miles of new or reconstructed shared use (bicycle and pedestrian) paths, one mile of new cycle track (a separate track for bicyclists only), and 1.7 miles of new or reconstructed shared vehicle and bicycle lanes.	None required
Social Groups Benefitted or Harmed *(Elderly Individuals, Individuals with Disabilities, and Transit-Dependent Individuals [Transit Riders, Pedestrians, and Bicyclists])* (see Section 6-2-2)	Elderly individuals and individuals with disabilities would benefit from the safety and mobility improvements and new facilities compliant with PROWAG on Almond Street and adjacent streets, and the east side of West Street.	None required
	Transit-dependent individuals, pedestrians, and bicyclists would benefit from improved pedestrian and bicycle facilities on Almond Street and other local streets, as well as potential transit amenities that could be incorporated into the Project in coordination with Centro (such as bus stops, bus shelters, and roadway features to improve bus maneuvering).	None required
Environmental Justice *(Minority and/or Low-Income Populations)* (see Section 6-2-3)	The existing I-81 viaduct, a perceived barrier, would be removed from the railway bridge near Renwick Avenue to I-690. The removal of highway infrastructure and reduction in the transportation footprint, along with related transportation and urban design improvements, would help reconnect neighborhoods on both sides of I-81 and I-690. Adverse effects to environmental justice populations related to visual resources, traffic noise, and construction effects are expected. However, these adverse effects would not be disproportionately high. Thus, the Community Grid Alternative would not result in disproportionately high and adverse effects on environmental justice populations.	Aesthetic treatments/enhancements are proposed, such as replacement landscaping; streetscape enhancements along Almond Street, portions of West Street and Erie Boulevard, and portions of connecting streets; and surface treatments. In addition, noise barriers would be constructed.

Table S-1b (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Community Grid Alternative – Permanent / Operational Effects

Topic	Community Grid Alternative	
	Effects	**Mitigation**
ECONOMIC CONSIDERATIONS		
Land Acquisition, Displacement, and Relocation (see Section 6-3-1)	▪ Full/Partial Land Acquisition: 20.44 acres ▪ Full Acquisitions: 14 properties ▪ Partial Acquisitions: 137 properties ▪ Buildings Acquired: 3 (occupied); 1 (vacant) ▪ Displaced Households: 0 ▪ Displaced Employees: 35 ▪ Approximate Loss in Annual Tax Revenue: $135,954 ▪ No residences will be acquired by the Community Grid	Owners and tenants of affected properties would be provided relocation assistance in accordance with the Uniform Act and EDPL. In addition, owners of properties that would be acquired would be compensated at fair market value.
Local and Regional Economy (see Section 6-3-2)	Displacement: ▪ 4 buildings with 35 employees, representing less than 0.1 percent of total Central Study Area employment. ▪ Changes in travel patterns and travel times would neither adversely affect specific industries nor result in indirect displacement.	Owners and tenants of affected properties would be provided relocation assistance in accordance with the Uniform Act and EDPL. In addition, owners of properties that would be acquired would be compensated at fair market value.
ENVIRONMENTAL CONSIDERATIONS		
Historic and Cultural Resources (see Section 6-4-1)	The Community Grid Alternative would not result in adverse effects to National Register-Eligible / Listed properties: Construction of the Community Grid Alternative would involve ground disturbance, which has the potential to disturb archaeological resources. Approximately 19.1 acres within the APE for direct effects is undisturbed, or disturbance cannot be documented, and therefore potentially sensitive for archaeological resources. The Project's effects on historic properties cannot be fully determined at this time. As such, the final identification and evaluation of historic properties will be deferred as provided for in a Programmatic Agreement, developed pursuant to 36 CFR §800.14(b)(1)(ii) (see Appendix E-6).	The Programmatic Agreement outlines procedures for consultation among FHWA, SHPO, the Onondaga Nation, the Tuscarora Nation, and NYSDOT to evaluate archaeological resources and to seek measures to avoid, minimize, or mitigate any adverse effects on National Register eligible archaeological properties though this process.
Parks and Recreational Resources (see Section 6-4-2)	The Community Grid Alternative would not result in adverse effects to parks and recreational resources. There would be a temporary closure of a portion of Wilson Park during construction to provide a safety buffer. NYSDOT would implement improvements to the park to mitigate the short-term closures of a portion of the park during construction.	There would be permanent improvements to Wilson Park to mitigate temporary loss of parkland during construction. Improvements include construction of a basketball court prior to commencing construction, so that two basketball courts would be available for use during construction. A third hoop and backboard and benches would be added. Other improvements include new shade trees, a new water fountain, a new splash pad, new pavement for access from Jackson Street and other fence, pedestrian gates, and parking improvements. Once construction is complete, the existing eastern basketball court would be reconstructed.
Visual Resources and Aesthetic Considerations (see Section 6-4-3)	▪ Minor adverse effects: 6 viewpoints ▪ Neutral effects: 4 viewpoints ▪ Minor beneficial/beneficial effects: 22 viewpoints	NYSDOT would provide or replace landscaping as a part of overall aesthetic enhancements and improvements. Streetscape enhancements would be provided along Almond Street and portions of Erie Boulevard, West Street, Crouse and Irving Avenues, and connecting streets. Streetscape enhancements could include sidewalks, specialty pavements and aesthetic treatments for walkways, site furnishings such as benches and trash receptacles, landscape plantings, and green infrastructure for stormwater management. Almond Street would include a landscaped median from Van Buren Street to I-690 (see Viewpoint 6 simulation), lending a distinctive character to the length of the roadway. Gateway enhancements would be developed to create a distinct and identifiable sense of entry and sense of place. These enhancements could include establishment of a consistent theme or motif, use of specialty materials and site elements, historical elements, landscaping, signage, aesthetic earth forms, sculptural elements, and public art to mark the entrance to the city. Gateways have been identified at the new West Street and Genesee Street intersection, new James Street exit at Oswego Boulevard through the creation of a new "Canal District," at the new Crouse and Irving Avenues interchange with I-690, and at the new Van Buren Street entrance to the city. Some screening of limited views in the Central Study Area may be possible through the enhancement of streetscapes with additional street trees. In some cases, variation in the style and form of support structures, for example at bridge overpasses, could enhance visual compatibility with the context of surrounding neighborhoods. Surface treatments, such as using native stone materials for concrete columns, abutments, and support structures, may be possible enhancements in some locations.

Table S-1b (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Community Grid Alternative – Permanent / Operational Effects

Topic	Community Grid Alternative	
	Effects	**Mitigation**
ENVIRONMENTAL CONSIDERATIONS (continued)		
Air Quality (see Section 6-4-4)	Mesoscale: ▪ No adverse effects in area wide emissions. ▪ Lower emissions of all modeled pollutants in all analysis years when compared to No Build. Microscale: ▪ PM concentrations would be below the NAAQS and similar to conditions under the No Build Alternative.	None required
Energy and Climate Change (see Section 6-4-5)	▪ Reduction of electricity use and associated emissions with grid power to be used for lighting, message boards, and signals due to replacement of some of these existing roadway components with new, more energy efficient components. ▪ Decrease in operational GHG emissions and energy use.	None required
Noise (see section 6-4-6)	▪ Impacted receivers: 577 (representing 963 receptors) of the 2,817 receiver sites without abatement ▪ 23 fewer receivers would exceed the NACs compared to existing conditions without abatement. ▪ Perceptible (>3dB(A)) traffic noise level increases at 33 receivers (86 receptors) compared to existing conditions without abatement.	Noise barriers were considered where traffic noise impacts are predicted. Each noise barrier considered was developed, modeled, and evaluated in terms of its feasibility and reasonableness. Barriers are depicted in Figure 6-4-6-2 as well as the Community Grid Noise Abatement figures in Attachment K of Appendix H. Fifteen (15) noise barriers meet the NYSDOT reasonableness and feasibility criteria and are, therefore, recommended.
Water Resources (see section 6-4-7)	Increased overall impervious surface.	None required
	EO 11990 wetland impacts: 0.98 acres (0.89 vegetated wetlands and 0.07 open surface waters)	Assuming a 1.5-acre (compensation) to 1.0-acre wetland mitigation ratio (effects ratio), the preliminary compensatory mitigation acreage would be 1.34 acres. Mitigation for these 1.34 acres would be in the form of an in-lieu fee arrangement with a mitigation service provider approved by USACE.
	NYSDEC wetland impacts: 0.35 acres. NYSDEC-regulated freshwater wetland adjacent area impacts: 2.22 acres of permanent new pavement and 6.71 acres of permanent cut/fill (pervious).	Mitigation for the 0.35 acres of potential NYSDEC wetlands effects would be in the form of improvements to Mud Creek (including streambed restoration, habitat connectivity, floodplain enhancements, and riparian corridor enhancements).
	Onondaga Creek (Central Study Area): ▪ Permanent impacts: 0 ▪ Temporary impacts: 65 linear feet North Branch Ley Creek (I-481 East Study Area): ▪ Permanent impacts: 10 linear feet ▪ Temporary impacts: 15 linear feet Mud Creek: ▪ Net increase of 81 linear feet of previously culverted stream ▪ Temporary impacts: 0	Additional mitigation proposal for surface waters (i.e., Mud Creek, Ley Creek, and Onondaga Creek) as regulated by NYSDEC and USACE would be, to the extent practicable, to establish (or enhance) a buffer of native species between the creek channel and the ROW/edge of pavement as it would slow and absorb stormwater runoff, support bank stability, and create/enhance habitat. Where new culverts are proposed or where existing culverts would be modified or replaced, open bottom culverts would be installed to improve habitat connectivity in these locations.
General Ecology and Wildlife Resources (see section 6-4-8)	Habitat removed: 1,050.4 acres ▪ 771.4 acres of terrestrial cultural communities ▪ 69.4 acres of successional southern hardwood communities ▪ 91.7 acres of successional old field communities ▪ 42.9 acres of successional shrubland communities ▪ 74.0 acres of floodplain forest communities ▪ 0.89 acres of freshwater wetland communities ▪ 0.07 acres of open surface water communities ▪ Trees removed: 17.9 acres	Areas disturbed during construction that are not part of the permanent project footprint would be revegetated to the greatest extent practicable with plant species indigenous to this region of New York. These efforts would be carried out in accordance with a Landscape Restoration Plan.
	State threatened and endangered species: "Take Not Likely" – All species Federal threatened and endangered species: ▪ Indiana bat: "May Affect, Not Likely to Adversely Affect" ▪ Northern long-eared bat: "May Affect, Not Likely to Adversely Affect" ▪ Eastern massasauga: "No Effect – No Habitat" ▪ American hart's-tongue fern: "No Effect"	Mitigation may be required for tree cutting in Indiana bat and northern long-eared bat habitat. As design advances and scheduling for tree cutting is planned, any mitigation required would be developed in coordination with FHWA, USFWS, and NYSDEC.

Table S-1b (cont'd)
Summary of Environmental Effects and Proposed Mitigation for the Community Grid Alternative – Permanent / Operational Effects

Topic	Community Grid Alternative	
	Effects	**Mitigation**
ENVIRONMENTAL CONSIDERATIONS (continued)		
Asbestos and Lead (see section 6-4-9)	Implementation of the Community Grid Alternative would affect four (4) buildings. In addition, a total of approximately 64 ramp and bridge structures would be affected. The preliminary asbestos assessment indicates that these structures and bridges affected by this alternative have lead based paints (LBP).	Asbestos surveys and lead sampling is recommended at the buildings and ramps/bridges, prior to construction, to identify any asbestos containing materials (ACMs) or LBPs. Lead-based paint concerns to protect the public from lead dust exposure would first be controlled by the actions of the contractor and use of containment and control structures and modification of construction practices. Airborne lead levels could be monitored either directly or indirectly by monitoring particulate concentrations in the atmosphere. Additional protection methods will be evaluated as necessary. ACM and lead-based paint would be removed from the project site during demolition and would be transported to a licensed handling facility in accordance with all applicable Federal, State, and local regulations. Refer to Chapter 4, Construction Means and Methods and Table 4-7 for specific measures to mitigate ACM and LBP encountered during construction.
Hazardous Waste and Contaminated Materials (see section 6-4-10)	Detailed assessment of each structure to be removed or reconstructed would be completed prior to its acquisition and/or removal.	A hazardous waste and contaminated materials assessment is recommended for 68 sites proposed for full or partial property acquisition and should focus on areas of anticipated construction, particularly areas that have potential for or have been identified as locations with recognized environmental concerns (RECs). Groundwater sampling is also recommended in locations where anticipated construction would extend below the water table. The storage, transportation, and disposal of any hazardous waste and/or contaminated materials encountered during construction would be conducted in accordance with all applicable federal, state, and local regulations. The removal of ACMs would be completed in accordance with NYSDOL ICR 56 and applicable Federal regulations (e.g., OSHA, National Emission Standards for Hazardous Air Pollutants Compliance Monitoring [NESHAPS]).
Farmlands *(See Section 6-4-11)*	No effect on farmland.	None required

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Table S-2
Potential Permits and Approvals

Permit or Approval	Approving Agency	Regulatory Authority
Addition/removal of Route from National Network*	FHWA	23 CFR § 658.11
Interstate Highway Designation*	FHWA	23 CFR § 103(c)(4)(B)
Interstate Access Modification	FHWA	23 USC §§ 109 and 111, 23 CFR § 625.4, and 49 CFR § 1.48(b)(1)
Floodplains Determination	FHWA	Executive Order 11988 of 1977; USDOT Order 5650-2, "Floodplain Management and Protection," April 23, 1979
Wetlands Finding	FHWA	Executive Order 11990 of 1977; USDOT Order 5660.1A, "Preservation of the Nation's Wetlands," August 24, 1978
Section 4(f) Finding pursuant to Section 4(f) of the USDOT Act	FHWA in consultation with DOI and SHPO	49 USC § 303; 23 CFR Part 774
Section 106 Effect Finding pursuant to the National Historic Preservation Act	FHWA in consultation with ACHP and SHPO	54 USC 300101 et seq.; 36 CFR Part 800
New York State Endangered Species Act	NYSDEC	ECL Article 1, Title 5 § 11-0535; 6 NYCRR Part 182
Section 7 Consultation pursuant to the Endangered Species Act	USFWS	16 USC §§ 1531-1544; 50 CFR Part 402
Section 404 Permit pursuant to the Clean Water Act	USACE	33 USC §§ 1251-1387 and 33 CFR §§ 320-330
Section 401 Water Quality Certification pursuant to the Clean Water Act	NYSDEC	33 USC §§ 1251-1387 and 33 CFR §§ 320-330
Environmental Justice Compliance	FHWA	Executive Order 12898 of 1994, 59 CFR Part 7629, February 16, 1994; 1997 USDOT Order 5610.2[a], May 2, 2012; FHWA Order 6640.23A, June 14, 2012
State Pollutant Discharge Elimination System (SPDES) Permit	NYSDEC	State Pollutant Discharge Elimination System (ECL Article 3, Title 3; Article 15; Article 17, Titles 3, 5, 7, and 8; Article 21; Article 70, Title 1; Article 71, Title 19; 6 NYCRR Part 750)
Protection of Waters / Freshwater Wetlands Permit	NYSDEC	NYSDEC/NYSDOT Memorandum of Understanding Regarding ECL Articles 15 and 24 (February 19, 1997); ECL Article 15, Title 5; 6 NYCRR Part 608; ECL Article 24; 6 NYCRR 663
Consistency with Smart Growth Public Infrastructure Policy Act	NYSDOT	ECL § 6-0101 et seq.

Note:

* Community Grid Alternative only.

FHWA = Federal Highway Administration; NYSDOT = New York State Department of Transportation; NYSDEC = New York State Department of Environmental Conservation; USACE = Army Corps of Engineers; DOI = U.S. Department of Interior; SHPO = New York State Historic Preservation Office; ACHP = Advisory Council on Historic Preservation; USFWS = U.S. Fish and Wildlife Service

Table S-3
Measures and Commitments to Minimize Construction Effects

Technical Area	Commitments
Transportation	Develop a Traffic Management Plan, which would identify traffic management strategies, such as: -- Implementing expanded and improved Intelligent Transportation Systems; -- Implementing local street improvements early in the Project; -- Retiming signals within the Project limits; -- Designating truck routes or truck detour; and -- Providing planned and unplanned Traffic Incident Management. Identify in the plan transit or High Occupancy Vehicle (HOV) measures, such as: -- Adding bus routes and/or adding buses to existing routes; -- Providing park-and-ride facilities; -- Implementing a rideshare action plan; -- Coordinating employee shuttles with local employers; and -- Implementing Transportation Demand Management measures (e.g., guaranteed ride home, car sharing, and carpool matching).
	Establish aggressive completion and/or milestone dates to minimize construction durations.
	Refine the construction staging plan to reduce the need for highway/street closures and detours.
	Implement capacity and safety enhancements early in construction phase to reduce the impacts of later phases of the Project.
	Direct Contractor to shuttle construction workers from remote parking sites to construction areas, when reasonable.
	Direct Contractor to maintain safe pedestrian traffic and to maintain public access to intersecting roads, residences, business establishments, adjacent property, bus stops, and transportation facilities for vehicles, pedestrians, and bicyclists. Where sidewalks, walkways, or shoulders must be temporarily closed to facilitate construction, safe pedestrian passage shall always be maintained on one side of the roadway, unless other temporary pedestrian accommodations are provided in the contract documents. Construction zone pedestrian access would be maintained in accordance with the Accessibility Guidelines for Pedestrian Facilities in the Public Right of Way.
Community Character and Social Considerations	Provide incentive and disincentive clauses to the construction contract to minimize construction durations.
	Direct Contractor to manage all surplus materials and waste generated in the performance of the contract in accordance with applicable federal, state, and local laws and regulations.
	Require Contractor to maintain safe storage of construction materials; remove construction waste and debris generated from the work site and dispose of waste containers at regular intervals; and utilize construction barriers that are uniform and well maintained.
	Require that temporary construction lighting shall be designed, installed, and operated to avoid glare that affects traffic on the roadway or that causes annoyance or discomfort for residences adjoining the roadway, when reasonable.
	Coordinate with emergency service providers as well as hospitals near the construction zone to minimize the impact of construction activities on their operations.
	Require that there are no short-term temporary lane and/or shoulder closures during major holidays and major events. Long-term lane and/or shoulder closures would be retained as necessary. The NYSDOT will reserve the right to cancel any work operations that would create traffic delays by unforeseen events.

Table S-3 (cont'd)
Measures and Commitments to Minimize Construction Effects

Technical Area	Commitments
Community Character and Social Considerations	Continue to coordinate with the Syracuse City School District during construction regarding potential effects on schools near the construction zone. During final design, NYSDOT would consider implementing additional construction restrictions within the construction zone near Dr. King Elementary School, such as time and/or seasonal restrictions where appropriate.
	Under the Community Grid Alternative, construct a wall adjacent to BL 81 and the Loretto facility. The wall would serve as a health and safety barrier protecting the integrity of the specialized care and treatment provided at the Loretto facility.
Economic Considerations	Inform the public regarding construction zones, traffic delays, road closures, and detours in a timely manner.
	Direct Contractor to maintain access to businesses for vehicles, pedestrians, and bicyclists. If access cannot be maintained, require the Contractor to notify the business and provide alternative access. If alternative access cannot be provided, the Contractor must conduct work when the business is not operational and must restore access during business hours.
	Permanent property acquisitions and displacements would be conducted in accordance with the NYS Eminent Domain Procedure Law and the Uniform Relocation Assistance and Real Property Acquisition Policies Act.
	Establish agreements with property owners for any temporary easements that are required for construction prior to the start of work.
	Direct Contractor to install temporary business signs to identify entrances and direct customers to businesses that would be affected by detours.
	Promote job training for and hiring of local residents for construction of the I-81 Viaduct Project. – In coordination with FHWA, establish a local hiring preference for the I-81 Viaduct Project and expand NYSDOT's On-the-Job Training program for the Project to increase access for individuals to seek careers in heavy highway construction. – Continue the Workforce Forward: Syracuse program, which is connecting workers to training opportunities and infrastructure jobs in and around Syracuse, including individuals to work on ancillary jobs that would be created by the I-81 Viaduct Project. – Create a video program to introduce and encourage high school students to pursue careers in highway construction; coordinate with the Syracuse City School District and its P-Tech program to solicit interest and use employment opportunities for the I-81 Viaduct Project to encourage participation. – Advertise training programs and construction employment opportunities at public meetings and the Project's outreach center. – Monitor the local hiring metrics throughout the Project and conduct regular meetings with the WorkSmart NY Syracuse Build Collaborative to discuss progress and any steps to modify the initiatives.
Cultural and Historic Resources	Implement all stipulations specified in the Project's Section 106 Programmatic Agreement.
	Continued consultation and coordination among the State Historic Preservation Office, Federal Highway Administration, the Advisory Council on Historic Preservation, the Onondaga and Tuscarora Nations, and NYSDOT regarding the Project's effects on historic and cultural resources as stipulated in the Project's Section 106 Programmatic Agreement (see **Appendix E-6**).

Table S-3 (cont'd)
Measures and Commitments to Minimize Construction Effects

Technical Area	Commitments
Parklands and Recreational Resources	Establish a 20-foot (0.12-acre) safety buffer between Wilson Park and the construction zone. To mitigate the temporary loss of parkland at Wilson Park: – Prior to construction, construct a basketball court west of the bleachers in the location of the former tennis court; – After construction, add a third hoop and backboard to the new court, benches, new shade trees, a new water fountain in the basketball court area, a new splash pad, new pavement for access from Jackson Street, and other fence, pedestrian gates, and parking improvements; and – Once construction is complete, reconstruct the existing eastern basketball court and regrade and reseed the adjacent lawn area.
	– Install signage to inform the public that the safety buffer is closed to the public.
Air Quality	Use Ultra Low Sulfur Diesel fuel to operate all diesel engines.
	Use construction equipment that meets Tier 4 emissions standards, where appropriate and to the extent practicable.
	Direct Contractor to schedule and conduct activities and to employ appropriate protection techniques to minimize impacts to air quality and to prevent hazardous or objectionable air quality conditions, particularly for drillings, cutting, grinding, abrasive blasting, or similar activities.
	Restrict the burning of any materials on the construction site
	Require the Contractor to develop and implement a Dust Control Plan that includes pro-active measures to prevent discharge of dust into the atmosphere. In areas not subject to traffic, apply products and materials including vegetative cover, mulch, and spray adhesives on soil surfaces to prevent airborne migration of soil particles. In areas subject to traffic, apply products and materials including water sprinkling, polymer additives, barriers, windbreaks, and wheel washing.
	Direct Contractor to protect sensitive receptors including hospitals, schools, daycare facilities, building fresh air or ventilation intakes, elderly housing, and convalescent facilities from impacts of diesel exhaust fumes. The Contractor shall: – Ensure that diesel powered engines are located away from building air conditioners and windows; – Minimize exposure of sensitive receptors in proximity (50') to diesel exhaust, in terms of both concentration and time; and – Limit idling time for diesel powered equipment to three consecutive minutes for delivery and dump trucks and all other diesel powered equipment with limited exceptions.
	Implement an outdoor ambient air quality monitoring program during construction that will be overseen by NYSDOT. The program would identify the locations, including a location near the Dr. King Elementary School, and durations of air quality monitoring and protocols to address any exceedances of National Ambient Air Quality Standards, should they be observed, during final design.
	Direct Contractor to use solar powered digital signs, including arrow panels and portable variable message signs when reasonable.
Noise and Vibration	Implement a noise and vibration monitoring program during construction.
	Coordinate work operation to coincide with time periods that would least affect neighboring residences and businesses. Normal work hours would be scheduled between 6:00 a.m. and 9:00 p.m. Nighttime, Saturday morning, and Sunday construction activities would be limited to 70dBA Lmax at 50' in Noise Sensitive Areas when reasonable (schools, places of worship, medical facilities, residential areas).
	Implement abatement measures that would include shrouds or other noise curtains, acoustic fabric, soundproof housings, physical barriers, and/or enclosures to reduce noise from pile drivers, compressors, generators, pumps, and other loud equipment when reasonable.

Table S-3 (cont'd)
Measures and Commitments to Minimize Construction Effects

Technical Area	Commitments
Noise and Vibration	Restrict the use of impact and drilling equipment including pile drivers, jackhammers, hoe rams, core drills, direct push soil probes (e.g., Geoprobe), pavement breakers, pneumatic tools, and rock drills when reasonable.
	Require motorized construction equipment to be equipped with an appropriate well-maintained muffler and require silencers to be installed on both air intakes and air exhaust when reasonable.
	Require all construction devices with internal combustion engines to be operated with engine doors closed and with noise-insulating material mounted on the engine housing that does not interfere with the manufacture guidelines.
	Direct Contractor to transport construction equipment and vehicles carrying rock, concrete, or other materials along designated routes that would cause the least disturbance to noise sensitive receptors when reasonable.
	Require self-adjusting or manual audible back up alarms for vehicles and equipment used in areas adjacent to sensitive noise receptors.
	Direct Contractor to use pre-auguring equipment to reduce the duration of impact or vibratory pile driving when reasonable.
	Provide as much notice of construction activities to the hospitals and medical facilities as possible and would coordinate with them to resolve schedule conflicts if construction activities would impact critical surgeries or procedures.
	For the construction zone between MLK, Jr. East and Harrison Street: -- Direct Contractor to use saw cutting methods and prohibit impact hammers during the demolition of existing structures when reasonable; and -- Direct Contractor to use drilled foundations on all bridge piers and other support structures and prohibit pile driving methods.
Water Quality, Surface Waters, and Wetlands	Direct Contractor to protect all water resources within the contract limits and adjacent lands and take measures to maintain water quality of receiving water bodies in accordance with Federal and State regulations.
	Prepare a Stormwater Pollution Prevention Plan (SWPPP) to meet the requirements of the State Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity. Contractor will be directed to install erosion and sediment controls in accordance with the New York Standards and Specifications for Erosion and Sediment Control and the requirements of the NYSDOT Highway Design Manual, Chapter 8 Highway Drainage.
	Minimize temporary impacts to surface waters and wetlands to the extent practicable. Best management measures such as turbidity curtains, cofferdams, and temporary piping or diversion of Onondaga Creek, Mud Creek, and the North Branch Ley Creek tributary would be implemented for any in-water construction activities, as necessary, to maintain stream flow and minimize increases in suspended sediment. Disturbed streambanks will be stabilized in accordance with the SWPPP and the requirements of the NYSDOT Highway Design Manual, Chapter 8 Highway Drainage, using native riparian plant species where possible. Disturbed wetland areas will be restored using soil restoration techniques and planting of native plants where possible, as per the landscape restoration plan that would be developed for this alternative.
General Ecology	Direct Contractor to conduct tree clearing during the winter hibernation period for Indiana bat and northern long-eared bat. Bridge bat surveys will be conducted during the roosting season and prior to construction to determine if there is any evidence of bats actively using bridges identified for removal.
	Require that new culverts intended to convey surface water have a minimum width of 1.25 x bankfull and would be embedded or three sided (open bottom) to allow for passage of aquatic organisms and small terrestrial species. Provisions for wildlife passage will be incorporated in the culvert design where practicable.

Table S-3 (cont'd)
Measures and Commitments to Minimize Construction Effects

Technical Area	Commitments
	Direct Contractor to revegetate disturbed areas in accordance with a Landscape Restoration Plan to include native plant species.
Contaminated Materials	Require Contractor to prepare a project-specific Safety and Health Plan.
	Remove and transport all contaminated materials in accordance with Federal and State regulations.
Contaminated Materials	Require Contractor to dispose of soil contaminated with petroleum or other non-hazardous materials as non-hazardous industrial waste at a permitted solid waste management facility or use it in applications that have received generic or case-specific beneficial use determinations from the New York State Department of Environmental Conservation.
Lead Based Paint	Implement a lead-based paint public education program, in coordination with the Onondaga County Health Department, prior to the demolition of the existing I-81 viaduct and adjacent structures. Potential activities could include the development of educational materials on household protocols to prevent the spread of contaminated dust into homes and holding a community session/meeting focused on demolition and ways to protect residents from lead dust during construction.
	Require Contractor prepare a Lead Exposure Control Plan that includes practices and measures that will be implemented to ensure the safety and health of employees who may be exposed to lead during construction work. By extension this plan will be developed to protect the general public. The LECP is consistent with the OSHA Lead Standard (29 CFR 1926.62) and will address all the requirements of that standard.
Public Engagement	Provide early and continual public involvement opportunities throughout the transportation planning process, including providing information on the Project's website, making public announcements, and providing numerous opportunities for input.
	Provide timely information about transportation issues and processes to the general public, affected public agencies, freight shippers, private providers of transportation, and others affected by transportation plans, programs, and projects.
	Use Variable Message Signs to provide real-time motorist information concerning construction dates, traffic changes, delays, and other pertinent work zone traffic related information.
	Develop a construction communication program to guide community engagement throughout construction.
	Establish a project outreach center to disseminate construction information and to obtain input from the public.
	Conduct community open houses periodically throughout the construction period to proactively disseminate construction information and to receive comments regarding construction from the community.
	Establish a phone and email hotline to accept comments regarding construction operations.
	Develop an app and/or social media platform to communicate construction status, detours, closures, and other relevant construction information.
	Coordinate with local media to communicate construction information.
	Establish a protocol to accept and address community complaints.

S.6 PROJECT COSTS

The estimated total project costs are shown in **Table S-3**. Costs are in 2021 dollars, escalated to the mid-point of construction; refer to **Appendix A-5** for more information on the alternative cost estimates. The cost estimates will continue to be refined as design progresses.

Table S-4
Estimated Total Project Costs

	Viaduct Alternative	Community Grid Alternative
Construction Cost	**$1,916,000,000**	**$1,834,000,000**
To include Force Account, CI, Final Design, QC, Site Mobilization (19 to 24%)	$449,000,000	$401,000,000
Award Cost	**$2,365,000,000**	**$2,235,000,000**
Right-of-Way (ROW)	$55,000,000	$15,00,000
Total Cost Rounded to Nearest $10M	**$2,420,000,000**	**$2,250,000,000**

S.7 PUBLIC AND AGENCY INVOLVEMENT

S.7.1 PUBLIC INVOLVEMENT ACTIVITIES

Table S-4 lists key milestones and public meetings that have occurred since the initiation of the Project in August 2013. The table shows large public meetings, which included scoping meetings, project update meetings, the public hearing for the DDR/DEIS, open houses, and neighborhood meetings. In addition, there have been numerous one-on-one or small group meetings with the interested public, stakeholders, community groups, and elected officials. Refer to **Chapter 9, Agency Coordination and Public Outreach**, for more information on public involvement.

Table S-5
Public Involvement Meetings and Key Milestones

Milestone	Date
Publication of Notice of Intent	August 26, 2013
Neighborhood Meeting – Toomey Abbott, Syracuse	September 25, 2013
Neighborhood Meeting – Dr. Weeks Elementary School, Syracuse	October 22, 2013
Neighborhood Meeting – Everson Museum, Syracuse	October 23, 2013
Neighborhood Meeting – Fowler High School, Syracuse	October 29, 2013
Community Meeting – DeWitt Community Room, DeWitt	October 30, 2013
Publication of Initial Scoping Packet	November 2013
Scoping Meeting, Oncenter, Syracuse	November 13, 2013
Project Update Presentation, Everson Museum, Syracuse	May 1, 2014
Publication of Draft Scoping Report	June 2014
Stakeholders' Committee Meeting	June 24, 2014
Scoping Meeting, Oncenter, Syracuse	June 26, 2014
Neighborhood Meeting – Southwest Community Center, Syracuse	July 16, 2014
Neighborhood Meeting – The MOST, Syracuse	July 23, 2014
Neighborhood Meeting – HW Smith School, Syracuse	July 24, 2014
Neighborhood Meeting – Toomey Abbott, Syracuse	July 29, 2014
Neighborhood Meeting – St. Lucy's, Syracuse	July 30, 2014

Table S-5 (cont'd)
Public Involvement Meetings and Key Milestones

Milestone	Date
Neighborhood Meeting – Dr. Weeks Elementary School, Syracuse	July 31, 2014
Neighborhood Meeting – St. Peter's Parish Center, Syracuse	July 31, 2014
Publication of Scoping Report	April 2015
Capital for a Day, Sky Armory, Syracuse	September 30, 2015
Community Meeting, Liverpool Middle School, Liverpool	December 3, 2015
Real Property Rights Acquisition Information Sessions 335 Montgomery Street, Syracuse Assumption Church Parish Center, Syracuse Boys and Girls Club, Syracuse	June 1 and 2, 2016
Stakeholders' Committee Meeting	June 9, 2016
Public Open House, Oncenter, Syracuse	October 6, 2016
Neighborhood Meeting – Henninger High School, Syracuse	October 18, 2016
Community Meeting – Skaneateles High School, Skaneateles	October 19, 2016
Neighborhood Meeting – Grant Middle School, Syracuse	October 20, 2016
Neighborhood Meeting – Syracuse Institute of Technology, Syracuse	October 26, 2016
Neighborhood Meeting – Fowler High School, Syracuse	November 1, 2016
Neighborhood Meeting – Dr. King Elementary School, Syracuse	November 3, 2016
Community Meeting – Jamesville-DeWitt High School, DeWitt	November 16, 2016
Community Meeting – Cicero-North Syracuse High School, Cicero	December 6, 2016
Publication of preliminary Draft Design Report / Draft Environmental Impact Statement (DDR/DEIS)	April 22, 2019
Public Open House, Oncenter, Syracuse	June 18, 2019
Neighborhood Meeting – Henninger High School, Syracuse	June 25, 2019
Neighborhood Meeting – Fowler High School, Syracuse	June 26, 2019
Community Meeting – Town of Camillus Gymnasium, Camillus	July 9, 2019
Community Meeting – ESM High School, East Syracuse	July 10, 2019
Neighborhood Meeting – Dr. King Elementary School, Syracuse	July 11, 2019
Neighborhood Meeting – Syracuse Institute of Technology, Syracuse	July 16, 2019
Neighborhood Meeting – HW Smith Pre-K through 8 School, Syracuse	July 17, 2019
Community Meeting – Grimshaw Elementary School, Lafayette	July 23, 2019
Noise Barriers Meeting – Dr. King Elementary School, Syracuse	July 24, 2019
Community Meeting – Cicero-North Syracuse High School, Cicero	July 25, 2019
Noise Barriers Meeting – Cicero-North Syracuse High School, Cicero	July 30, 2019
Noise Barriers Meeting – Henninger High School, Syracuse	August 14, 2019
Noise Barriers Meeting – DeWitt Community Room, DeWitt	August 15, 2019
Community Meeting – Chestnut Hill Middle School, Liverpool	September 11, 2019
Notice of Availability for publication of DDR/DEIS	July 16, 2021
Virtual DDR/DEIS and EDPL Public Hearing	August 17, 2021
In-person DDR/DEIS and EDPL Public Hearing	August 18, 2021
Neighborhood Meeting – Lincoln Middle School, Syracuse	August 24, 2021
Neighborhood Meeting – Fowler High School, Syracuse	August 25, 2021
Neighborhood Meeting – HW Smith School, Syracuse	August 26, 2021
Neighborhood Meeting – Grimshaw Elementary School, Lafayette	August 31, 2021
Neighborhood Meeting – Chestnut Hill Middle School, Liverpool	September 1, 2021
Neighborhood Meeting – Mott Road Elementary School, Fayetteville	September 8, 2021
Neighborhood Meeting – Dr. King Elementary School, Syracuse	September 9, 2021
Neighborhood Meeting – Cicero North Syracuse High School, Cicero	September 13, 2021
Neighborhood Meeting – Camillus Municipal Building, Camillus	September 23, 2021

S.7.2 COOPERATING AND PARTICIPATING AGENCY INVOLVEMENT

Cooperating and Participating Agencies are responsible for identifying, as early as practicable, any issues of concern regarding a project's potential environmental or socioeconomic effects that could substantially delay or prevent an agency from granting a permit or other approval.

The following agencies were invited to serve as Cooperating and/or Participating Agencies on this Project:

- **Cooperating Agencies:**
  - Advisory Council on Historic Preservation
  - U.S. Army Corps of Engineers
  - U.S. Environmental Protection Agency
  - U.S. Fish and Wildlife Service[2]
  - New York State Department of Environmental Conservation
  - New York State Office of Parks, Recreation, and Historic Preservation – State Historic Preservation Office
- **Participating Agencies:**
  - Onondaga Nation
  - Tuscarora Nation
  - Syracuse Metropolitan Transportation Council
  - CNY Centro, Inc.
  - New York, Susquehanna and Western Railway
  - Onondaga County
  - City of Syracuse
  - Town of Cicero
  - Town of DeWitt
  - Town of Salina
  - Village of East Syracuse
  - Village of North Syracuse

FHWA and NYSDOT collaborated with the Cooperating and Participating Agencies in the preparation of the DDR/DEIS and assessment of effects, including frequent conference calls with the Cooperating Agencies and a meeting with Participating Agencies. FHWA and NYSDOT hosted two Cooperating Agency meetings and one Participating Agency meeting during the public review of the DDR/DEIS and held individual meetings with Cooperating and Participating Agencies to discuss

[2] Declined the invitation to participate as a Cooperating Agency.

technical issues and other considerations or concerns. The Cooperating and Participating Agencies will be notified of the availability of this FDR/FEIS and the ROD and given appropriate comment opportunities. Following the ROD, NYSDOT will coordinate with the appropriate agencies to complete any necessary permit(s) for the Project.

The Onondaga and Tuscarora Nations are both Participating Agencies and Consulting Parties, the latter for the review of the Project pursuant to Section 106 of the National Historic Preservation Act (NHPA). FHWA and NYSDOT have invited them to participate in stakeholder and Section 106 meetings for the Project and have communicated directly with them on several occasions as noted in **Chapter 9, Agency Coordination and Public Outreach**. This outreach will continue throughout project development, as needed.

S.8 PUBLIC AVAILABILITY OF THE FDR/FEIS

Following an announcement of the availability of this FDR/FEIS, FHWA and NYSDOT will make it publicly available for a 30-day period. Should FHWA and NYSDOT receive substantive public comments on this FDR/FEIS, they will consider them and respond, as necessary, in the ROD.