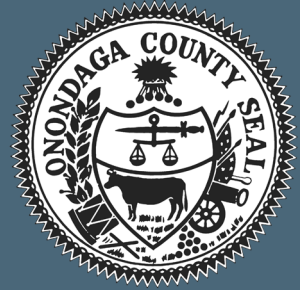




Onondaga County

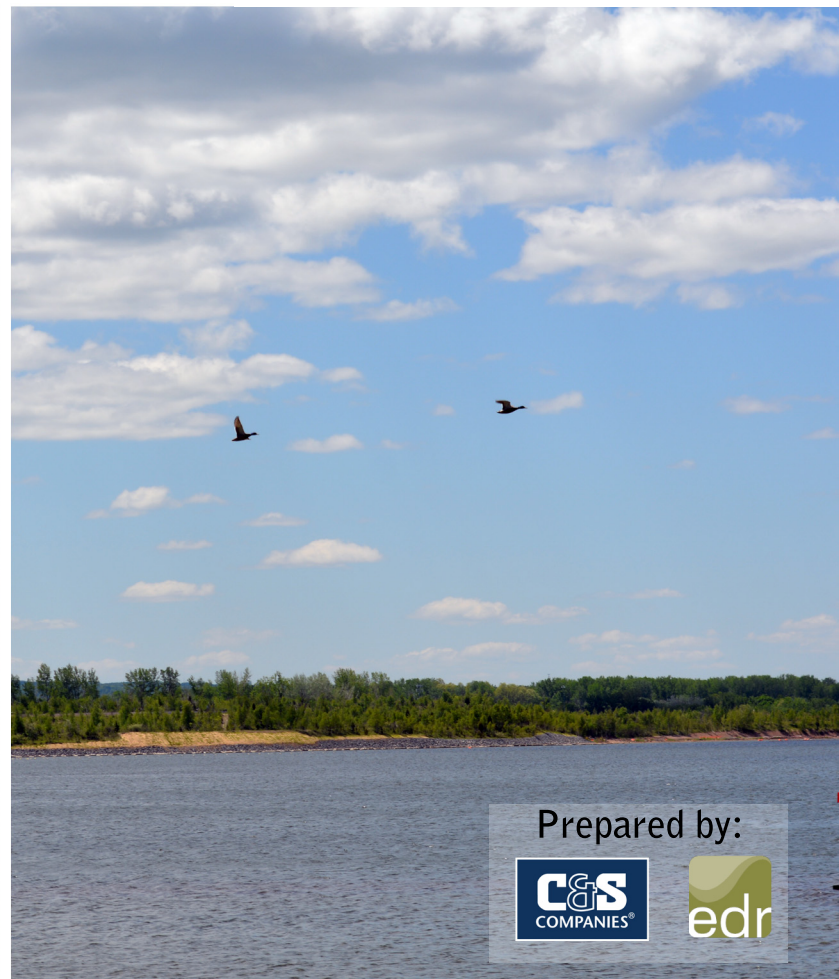


Lakeview Amphitheater

Draft Environmental
Impact Statement

SEQR Lead Agency:
Onondaga County

June 2014



Prepared by:



DRAFT ENVIRONMENTAL IMPACT STATEMENT

FOR THE

LAKEVIEW AMPHITHEATER

Onondaga County, New York

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Date Accepted by Lead Agency: July 1, 2014

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition/Denotation
AMSL	Above Mean Sea Level
BMPs	Best Management Practices
dBA	A-weighted Decibels
DEIS	Draft Environmental Impact Statement
EAF	Environmental Assessment Form
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
GIS	Geographic Information Systems
GPS	Global Positioning System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historical Places
NYNHP	New York Natural Heritage Program
NYSDEC	New York State Department of Environmental Conservation
NYSOPRHP	New York State Office of Parks, Recreation, and Historic Preservation
SEQR	State Environmental Quality Review Act
SHPO	State Historic Preservation Office
SPDES	State Pollutant Discharge Elimination System
SPHINX	State Preservation Historical Information Network Exchange
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

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1.0 EXECUTIVE SUMMARY

Project Site Description

The Project site is located on Lakeview Point, on the western shore of Onondaga Lake, north of the existing New York State Fairgrounds parking lots and the Interstate 690 (I-690) and NYS Route 695 exchange, and east-southeast of the mouth of Nine Mile Creek. This specific portion of Onondaga Lake's shoreline was historically used as a location to host events and attract tourism. In 1872, the Lakeview Point Resort became the first of many hotels, restaurants, resorts, and amusement parks lining the shores of Onondaga Lake (see Image ES-1 below).



Image ES-1: 1898 United States Geological Survey (USGS) Syracuse Southwest Quadrangle, illustrating the location of the former Lake View Hotel and Rockaway, Manhattan, and Pleasant Beaches.

Subsequent to its use as a resort, this land was used as a waste repository and a landfill, and the Project site is located on what are known as the Solvay Process wastebeds. Wastebeds 1-8 cover an area of approximately 315 acres, and consist of tiered layers of fill above the natural sediments, contained by

perimeter dikes. The fill, which was generated as waste during soda ash production at the former Solvay Process Plant from approximately 1916 to 1943, consists largely of calcium carbonite, gypsum, sodium chloride, and calcium chloride. The Lakeview Amphitheater Project site is generally located on Wastebeds 5 and 6. Portions of Wastebeds 1-4, 7, and 8 are currently used for State Fair parking. In addition, Crucible Specialty Metals began operating a landfill on Wastebed 5 that was used for disposal of both hazardous and non-hazardous wastes, which was Capped in 1988.

The Project site is currently dedicated parkland, owned by Onondaga County Parks, which in cooperation with the Onondaga County Department of Transportation, has recently completed constructing a paved multipurpose trail through the Project site (see Image ES-2 below). This new trail extends the West Shore Trail by approximately 2.5 miles, and is part of a long-term initiative to develop a “Loop the Lake” trail around Onondaga Lake.



Image ES-2: 2014 Photograph of the West Shore Trail

Project Description

The Lakeview Amphitheater will be an outdoor event complex, which will include an amphitheater with an estimated seating capacity of approximately 17,500 (both covered and lawn seats), a nature area, vendor/festival area, a smaller outdoor community theater, recreational trails, an observation pier and other amenities. Associated infrastructure will include access roads/driveways and utilities (power, water, sewer, etc.). It is anticipated that vehicular access to the amphitheater will be provided from I-690 and the local road network, and parking will be accommodated through use of the existing New York State Fair parking lots located between I-690 and Onondaga Lake. Pedestrians will also be able to access the amphitheater through use of the Onondaga Lake Park Trail System and the pedestrian bridge from State Fair Boulevard. Future additional water-based access is also anticipated through use of a seasonal (removable) docking system and associated water taxis.

Construction will occur in phases, anticipated to begin in the late fall/winter of 2014 and conclude in the fall of 2015. The Lakeview Amphitheater Facility will be owned by Onondaga County, and the entire site is expected to remain in public ownership.

Purpose, Need, and Benefit

The purpose of establishing an outdoor events center at the Lakeview Point site is to 1) enhance public access to the western shore of Onondaga Lake, 2) take advantage of the new opportunities available as a result of the remediation and restoration efforts taking place on the western lakeshore, and 3) further economic opportunity and revitalization in the Town of Geddes, Village of Solvay, and surrounding area. This Project will create a new waterfront attraction offering entertainment, gathering and recreational opportunities for local residents and visitors from the surrounding region. This vision is to be fulfilled consistent with the concepts developed by local planners as expressed in the *Onondaga Lake Development Plan 1991*, the Syracuse-Onondaga County Planning Agency (SOCPA) *1995 Land Use Plan*, the community's vision for the future of a revitalized Onondaga Lake as provided to the Onondaga Lake Partnership in the 2007 EcoLogic report and consistent with findings in the recent report *F.O.C.U.S. on Onondaga Lake – A Road Map to Facilitating Reconnecting the Lake with the Community*.

Regulatory Process

The SEQR process was recently initiated for the proposed Lakeview Amphitheater. The basic purpose of SEQR is to incorporate the consideration of environmental factors into the existing planning, review, and decision-making processes of state, regional, and local government agencies at the earliest possible time. To accomplish this goal, SEQR requires a determination of whether a proposed action may have a significant impact on the environment, and if it is determined that the action may have a significant adverse impact, prepare or request an Environmental Impact Statement (EIS). It was the intention of the State Legislature that protection and enhancement of the environment, human, and community resources should be given appropriate weight with social and economic considerations. Accordingly, it is intended that a suitable balance of social, economic, and environmental factors be incorporated into the planning and decision-making processes of state, regional, and local agencies. However, it is not the intention of SEQR that environmental factors be the sole consideration in decision-making.

The SEQR process for the proposed Lakeview Amphitheater has included or will include the following actions:

- Preparation of Parts 1, 2, and 3 of a Full Environmental Assessment Form (EAF).
- Issuance of a Positive Declaration.
- Preparation of a Draft Scoping Document.
- Public Scoping Process.
- Issuance of Final Scoping Document.
- Preparation of the Draft Environmental Impact Statement (DEIS).
- Notice of completion of DEIS and notice of public hearing and comment period.
- Public hearing on DEIS (must be held at least 14 days after public notice is published).
- A minimum 30-day public comment period on the DEIS.
- Revisions to the DEIS as necessary to address substantive/relevant comments received.
- Preparation of Final EIS (FEIS).
- Filing notice of completion of FEIS.
- 10-day consideration period.
- Issuance of Findings Statement.

Opportunities for detailed agency and public review in relation to this specific action will continue to be provided throughout the SEQR process. This DEIS, along with a copy of the public notice, will be distributed for review and comment to the public and agencies. In addition to a public comment period (during which time written comments will be accepted), a duly noticed public hearing concerning the DEIS will be organized and held, in accordance with SEQR requirements. Additionally, a 2005 amendment to SEQR, (Chapter 641 of the NYS Laws of 2005; "Ch. 641") requires every Environmental Impact Statement be posted on a publicly accessible internet website. A DEIS is to be posted as soon as it is accepted and remain posted until the FEIS is accepted. The FEIS should be posted when completed, and must remain posted until one (1) year after all final approvals have been issued for the Project that is the subject of the FEIS. In accordance with this amendment to SEQR, the DEIS will be posted to: <http://www.ongov.net/environment/amphitheater.html>.

Summary of Potential Impacts

In accordance with requirements of the SEQR process, potential impacts arising from the proposed action were evaluated with respect to an array of environmental, social and cultural resources. The analysis of potential impacts is summarized in Table ES-1.

Table ES-1. Summary of Potential Environmental Impacts.

Topic	Potential Impacts
Geology, Soils, and Topography	Disturbance of contaminated materials and/or elements of the site remedies. Increased loads on site soils, slope stability issues.
Water Resources	Construction runoff into waterways. Increase in impervious surfaces.
Climate and Air Quality	Emissions and fugitive dust during construction. Short-term increases in vehicle exhaust emissions.
Biological, Terrestrial, and Aquatic Ecology	Direct loss of vegetation and wildlife habitat. Displacement, incidental injury or mortality during construction. Alteration/conversion of wildlife habitat. Removal of potential roosting habitat (trees) for rare bat species.

Topic	Potential Impacts
Aesthetic/Visual Resources	Minor temporary impacts during construction. Visibility of new building (Amphitheater).
Historic, Cultural, and Archaeological Resources	No significant impacts to historic or archeological resources.
Open Space and Recreation	Temporary impacts (closures, relocation) to the West Shore Trail during construction. Positive impacts associated with increased access to the Onondaga Lakeshore.
Traffic and Transportation	No adverse impacts associated with small events. I-690 traffic flow impacts during large/sold-out events.
Noise and Odor	Noise levels in excess of 65 dBA during portions of concert events. No significant odor impacts anticipated.
Documented Environmental Conditions	Intrusive work associated with installation of utilities, preliminary site grading and installation of foundations.
Public Health and Safety	Intrusive work associated with installation of utilities, preliminary site grading and installation of foundations.
Land Use and Zoning	Temporary impacts to land use during construction. Conversion of a vacant lakeshore parcel into an area utilized by the public periodically for special performance events.
Growth and Community Character	Minor inconsistencies with some community planning documents.
Community Facilities and Services	Temporary closures of the West Shore Trail.

Summary of Mitigation Measures

The Project will include various measures to avoid, minimize and/or mitigate potential environmental impacts, as described in Table ES-2.

Table ES-2. Summary of Measures to Avoid, Minimize, and/or Mitigate Impacts

Topic	Proposed Avoidance/Mitigation Measures
Geology, Soils, and Topography	Sediment and erosion controls during construction, and SWPPP compliance. Engaging nationally recognized geotechnical experts, familiar with the soil conditions and this site in particular, to assist the design team. Care and maintenance consistent with the long term Site Management Plan and Institutional Controls to preserve integrity of remedial actions put in place by Honeywell and Crucible.
Water Resources	Multiple measures will be engineered into the site development plans to capture, treat and/or reduce stormwater runoff from the site, which is expected to enhance groundwater and surface water quality over existing conditions.

Topic	Proposed Avoidance/Mitigation Measures
Climate and Air Quality	<p>Best management practices (BMPs) during construction, including dust control measures.</p> <p>Construction will be performed consistent with a NYSDEC-approved Site Management Plan, developed as part of the ongoing remediation effort for the larger wastebed 1-8 area.</p>
Biological, Terrestrial, and Aquatic Ecology	<p>Development of an overall Project master plan that maximizes the protection/integration of natural communities to the extent practicable.</p> <p>Adherence to designated work/disturbance limits and avoidance of off-limit sensitive areas during construction.</p> <p>Restoration of all temporarily disturbed areas, and coordinating restoration efforts with the long-term remedy to be implemented by Honeywell.</p> <p>The buildings associated with the Project will incorporate bird-friendly design.</p> <p>To avoid mortality of protected bat species that could be roosting in trees at the Project site, tree cutting will be restricted to between October 15 and March 31, when bats are hibernating off-site.</p> <p>Lighting fixtures associated with pedestrian pathways, roads, parking areas, and building exterior areas for the proposed facility will be consistent with "Dark Sky" initiatives.</p>
Aesthetic/Visual Resources	<p>Implementing a Project design intended to blend with the environment through use of textures and materials (e.g., stone, wood) representative of nature.</p> <p>Lighting fixtures associated with pedestrian pathways, roads, parking areas, and building exterior areas for the proposed facility will be consistent with "Dark Sky" initiatives.</p> <p>Project visibility does not necessarily equate to an adverse visual impact; adding a visually interesting focal point, attracting the attention of potential spectators, and creating a source of community pride can be considered a benefit.</p>
Historic, Cultural, and Archaeological Resources	<p>No impacts to historic or archeological resources; therefore, no mitigation required or proposed.</p> <p>Consultation pursuant to Section 106 of the National Historic Preservation Act, Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law (and, for NYSDEC, DEC Policy CP-42: Contact, Cooperation and Consultation with Indian Nations).</p>
Open Space and Recreation	<p>Since overall impacts to open space and recreation from the proposed Project are believed to be positive, no mitigation required or proposed.</p>
Traffic and Transportation	<p>Implementation of various operational and/or capital improvement measures for large, sold-out events.</p>
Noise and Odor	<p>Implementation of best management practices for sound abatement during construction.</p> <p>Sound level monitoring and adjustment of specific sound sources (medium-scale roof speakers) during performances as necessary.</p>

Topic	Proposed Avoidance/Mitigation Measures
Documented Environmental Conditions	Implementation of BMPs during construction (e.g., dust suppression, sediment and erosion control measures). Implementation of controls to promote access to desired areas during events. Care and maintenance carried out consistent with the long term Site Management Plan and Institutional Controls put in place to preserve the integrity of the site cover and other remedy components both for the Crucible Landfill and the wastebeds.
Public Health and Safety	Implementation of construction and site management plans to control access and vehicular traffic, which will be site specific addressing the range of potential physical and environmental hazards associated with each phase of the work, as well as the potential pathways by which workers and the public could be impacted and by incorporating proactive and conservative prevention and control measures for those situations. Care and maintenance carried out consistent with the long term Site Management Plan and Institutional Controls put in place to preserve the integrity of the site cover and other remedy components both for the Crucible Landfill and the wastebeds. Site security will be enhanced through design features which include fencing, specific area lighting, video surveillance, emergency communications network, and routine police/park ranger patrols.
Land Use and Zoning	The proposed Project is consistent with existing land uses and land use, and consequently mitigation measures are not required or proposed.
Growth and Community Character	The project is generally consistent with the major goals common to many of the existing planning documents, and consequently mitigation measures are not required or proposed.
Community Facilities and Services	Temporary trail closures coordinated with appropriate park officials and communicated to the public.

Alternatives

Alternatives considered include the No Action alternative, an alternative west shore site, and an alternative that would rely upon design or scale modifications to either reduce or avoid potential impacts. Alternatives are evaluated for their potential to mitigate impacts and for their ability to meet the goals of the project sponsor, which are to 1) enhance public access to the western shore of Onondaga Lake, 2) take advantage of the new opportunities available as a result of the remediation and restoration efforts taking place on the western lakeshore, and 3) further economic opportunity and revitalization in the Town of Geddes, Village of Solvay, and surrounding area.

With respect to an alternate west shore site location, there are few other apparent sites along the western shore where a project of this scale could be located with sufficient access, parking, and space to

accommodate a development of this size. Based on spacial constraints as the first criterion, alternative locations were reviewed and one alternative site was identified. However, Lakeview Point is considered the preferred alternative because it fulfills the objectives of the project sponsor, minimizes site related impacts as compared to other on site locations, has lower expected construction and operating costs and allows for full facility and amenities buildout.

With respect to alternative project design and scale, several different concepts and settings are being evaluated. The preferred alternative (Cove setting) minimizes physical disturbance of the upper surfaces of the wastebeds, provides additional cover and reinforcement of the northern wastebed dikes, helps to control drainage and runoff in the steeper slope areas, reduces impacts to the Crucible landfill site and has a lower visual impact on the surrounding areas. An important factor in assessing a reduced scale project is maintaining a critical size to support a viable project. The current project concept is based on providing adequate facilities and amenities to attract top tier national tours.

Under the no action alternative, the pre-existing site conditions on Wastebeds 5 and 6 would generally be maintained, and the final remedy selected for the sites would be a function of the intended future use (which would remain unidentified under this alternative). Access to the general area has increased recently as a result of the opening of the new bike trail segment of the West Shore Trail; however, under this alternative, the remaining features of the area would remain similar to those currently experienced with the exception that a proposed remedy would be completed by Honeywell to support a less intense use. Impacts related to construction would not occur at this time. The full potential of the site as envisioned in earlier planning documents, along with the project purpose, needs and benefits, would not be realized.

2.0 DESCRIPTION OF PROPOSED ACTION

Onondaga County is proposing to construct an outdoor events center (Lakeview Amphitheater) on County-owned land on the western shore of Onondaga Lake, in the Town of Geddes. Information regarding the site, proposed action, the project's purpose, need and benefit, construction and operation, and the anticipated reviews and approvals are provided below.

2.1 SITE DESCRIPTION

The Project site is located on Lakeview Point, on the western shore of Onondaga Lake (Figure 1). Situated north of the existing New York State Fairgrounds parking lots and the Interstate 690 (I-690) and NYS Route 695 exchange, and east-southeast of the mouth of Nine Mile Creek, the Project site is located approximately 1.2 miles north of the Village of Solvay, 1.0 mile south of the Village of Liverpool, and 1.9 miles northwest of the City of Syracuse (Figure 2). This specific portion of Onondaga Lake's shoreline was historically used as a location to host events and attract tourism. In 1872, the Lakeview Point Resort became the first of many hotels, restaurants, resorts, and amusement parks lining the shores of Onondaga Lake (see Image 1 below) (Thompson, 2002).¹

¹ Thompson, D.H. 2002. *The Golden Age of Onondaga Lake Resorts*. Purple Mountain Press, Ltd., Fleischmanns, NY. 141 pp.



Image 2-2: 1898 United States Geological Survey (USGS) Syracuse Southwest Quadrangle,
illustrating the location of the former Lake View Hotel and Rockaway, Manhattan, and Pleasant Beaches.

Subsequent to its use as a resort, this land was used as a waste repository and a landfill, and the Project site is located on what are known as the Solvay Process wastebeds. Wastebeds 1-8 cover an area of approximately 315 acres, and consist of tiered layers of fill above the natural sediments, contained by perimeter dikes. The fill, which was generated as waste during soda ash production at the former Solvay Process Plant from approximately 1916 to 1943 (see Image 2 below), consists largely of calcium carbonite, gypsum, sodium chloride, and calcium chloride (USEPA, 2009).² As depicted on Figure 3, the Lakeview Amphitheater Project site is generally located on Wastebeds 5 and 6. Portions of Wastebeds 1-4, 7, and 8 are currently used for State Fair parking. The upper levels of the wastebeds are up to 65 feet above lake level, with a maximum thickness of approximately 78 feet and a typical thickness ranging between 60 feet and 70 feet (O'Brien & Gere, 2011).³

² United States Environmental Protection Agency (USEPA). 2009. *Human Health Risk Assessment Onondaga Lake Wastebeds 1-8 Site: Bike Trail, Geddes, NY*. Emergency and Remedial Response Division, New York, NY. January 2009.

³ O'Brien & Gere. 2011. *Baseline Ecological Risk Assessment Wastebeds 1 through 8 Site, Geddes, New York*. Prepared for Honeywell, International, Inc. March 2011.



Image 2-3: 1938 aerial photograph illustrating the then-active wastebeds.

In addition to the wastebeds, the Project site also contains a closed landfill (Figure 3). In 1973, Crucible Specialty Metals began operating a landfill on Wastebed 5 that was used for disposal of both hazardous and non-hazardous wastes. Capped in 1988, the Crucible landfill contains approximately 225,100 cubic yards of steel mill waste and covers approximately 20 acres (O'Brien & Gere, 2011). The Crucible landfill contains both hazardous and non-hazardous waste, consisting of various mill wastes including waste caustic, acid pickling sludges, air pollution dust and demolition debris.

According to the New York State Office of Real Property Services (NYSORPS), land use at the Project site is currently classified as vacant commercial land. The nearest residential properties are located on the other side of I-690 (approximately 0.3 to 0.5 mile west of the Project site), along State Fair Boulevard, Regatta Row, and Lake Country Drive. The Project site is currently dedicated parkland, owned by Onondaga County Parks, which in cooperation with the Onondaga County Department of Transportation has recently completed constructing a paved multipurpose trail through the Project site.



Image 2-3: 2014 Photograph of West Shore Trail

This new trail extends the West Shore Trail by approximately 2.5 miles, and is part of a long-term initiative to develop a “Loop the Lake” trail around Onondaga Lake. Elevation at the Project site ranges from 390 feet above mean sea level (amsl) to 410 feet amsl.

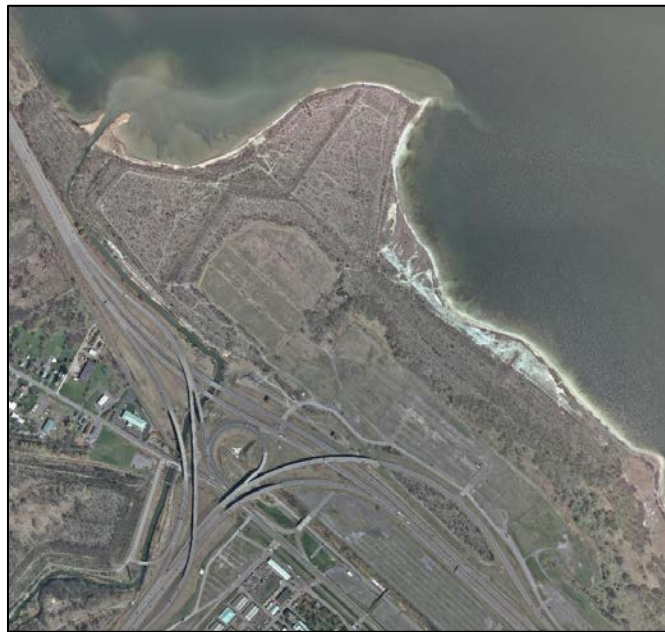


Image 2-4. 2012 Aerial Photograph of the Project site.

2.2 DETAILED DESCRIPTION OF THE PROPOSED ACTION

The Lakeview Amphitheater will be an outdoor event complex, which will include an amphitheater with an estimated seating capacity of approximately 17,500 (both covered and lawn seats), a nature area, vendor/festival area, a smaller outdoor community theater, recreational trails, observation pier, and other amenities (Figure 4). Associated infrastructure will include access roads/driveways and utilities (power, water, sewer, etc.).

It is anticipated that vehicular access to the amphitheater will be provided from I-690 and the local road network, and parking will be accommodated through use of the existing parking lots located between I-690 and Onondaga Lake. These lots are currently utilized primarily during the New York State Fair. Pedestrians will also be able to access the amphitheater through use of the Onondaga County Park Trail System and the pedestrian bridge from State Fair Boulevard. Future additional water-based access is also anticipated through use of a seasonal (removable) docking system and associated water taxis.

Construction will occur in phases, anticipated to begin in the late fall/winter of 2014 and conclude in the fall of 2015. The Lakeview Amphitheater Facility will be owned by Onondaga County, and the entire site is expected to remain in public ownership.

2.3 PROJECT PURPOSE, NEED, AND BENEFITS

The purpose of establishing an outdoor events center at the Lakeview Point site is to help enhance public access to the western shore of Onondaga Lake, to take advantage of the new opportunities available as a result of the remediation and restoration efforts taking place on the western lakeshore and to further economic opportunity and revitalization in the Town of Geddes, Village of Solvay, and surrounding area. This Project will create a new waterfront attraction offering entertainment, gathering and recreational opportunities for local residents and visitors from the surrounding region. This vision is to be fulfilled consistent with the concepts developed by local planners as expressed in the *Onondaga Lake Development Plan 1991*, the Syracuse-Onondaga County Planning Agency (SOCPA) *1995 Land Use Plan*, the community's vision for the future of a revitalized Onondaga Lake as provided to the Onondaga

Lake Partnership in the 2007 EcoLogic report⁴ and consistent with findings in the recent report *F.O.C.U.S. on Onondaga Lake – A Road Map to Facilitating Reconnecting the Lake with the Community*⁵.

These and other planning efforts by Onondaga County, the City of Syracuse and various agencies have created a vision for transforming the lakeshore and adjacent areas. There have been significant changes and improvements in and surrounding the lake over the last 10 years as a result of this vision and the area is now becoming a dominant contributor to the economic, cultural and social fabric of the County. Water quality has improved greatly as the County's Save the Rain program moves toward its 2018 goal, and Honeywell continues to progress rapidly on its lake and upland remediation efforts. The southern lakeshore has already become a destination for retail, entertainment, recreation and regional transportation, which will be further enhanced by the planned infill development of the Inner Harbor. Consistent with this vision, these areas present a number of opportunities for adaptive reuse, many of which are currently underway. A capable network of advocacy organizations, institutions, nonprofits, local government, and private developers are now contributing to the revitalization of the areas and neighborhoods on the west side of the lake. Through much hard work, these stakeholders have coalesced around the vision of a resurgence around the lake, capitalizing on the area's strengths and history. This resurgence is changing the relationship of our community with the lake and public perception of the lakeshore areas. As the lake and its surroundings are transforming from a post industrial landscape, the lakeshore and surrounding properties are experiencing the beneficial effects of our community wide interest in revitalization. The Lakeview Point Amphitheater will further this effort by capitalizing on a unique landform present on the western shore, helping to protect and improve the lake oriented vistas which were previously unavailable to the public and allowing opportunity for visitors to experience Onondaga Lake from atop this peninsula.

2.4 PROJECT CONSTRUCTION AND OPERATION

2.4.1 Pre-Construction Activities

Prior to construction, a number of activities may take place at the site including reconnaissance, survey and layout and equipment/materials staging. Depending on weather conditions, some clearing and grubbing

⁴ EcoLogic. 2007. *Reconnecting with Onondaga Lake – The Community's Vision for the Future of a Revitalized Resource*. Onondaga Lake Partnership and Onondaga Environmental Institute.

⁵ F.O.C.U.S. Greater Syracuse, Inc. 2012. *F.O.C.U.S. on Onondaga Lake: A Roadmap to Facilitate Reconnecting the Lake with the Community*. Available at: <http://www.ongov.net/documents/FOCUSonOnondagaLake.pdf> (Accessed April 7, 2014).

may also precede formal construction. Construction access to and around the site can be provided from existing construction roads and access ways which will be coordinated with the ongoing work associated with Honeywell's on site remediation efforts.

2.4.2 Site Construction

The majority of the construction will take place in phases over an approximate 1.5-year period. Initial work will focus on site clearing and preparation followed by basic infrastructure buildouts on each area to be developed. The infrastructure construction will consist of roads, access ways and buried utilities such as water lines and sewers. Electric power distribution will also be placed underground in conduits along with communication links. Site work will be carried out consistent with a site specific Site Management Plan, Stormwater Pollution Prevention Plan (SWPPP) and the statewide NYSDEC State Pollution Discharge Elimination System (SPDES) Stormwater General Permit. Hours of work will be consistent with Town ordinances and noise and dust control/suppression techniques will be implemented as best management practices.

Site work and infrastructure buildouts will be followed by foundation work and then vertical construction. This will involve specialized deep pile based foundations to address the unique subsurface conditions in the area and standard building construction techniques for superstructures. Nationally recognized geotechnical experts, familiar with these subsurface conditions and this site in particular, have been retained to assist the design team in developing foundation systems that are compatible with these subsurface conditions. Lastly, landscaping and surface features will be added to complete the work on the site. Granular materials will be imported to the site and placed as fill over the Solvay Waste to form most of the grades and site features to be developed during site design in order to minimize excavation. Landscaping will include predominately grassy areas for visitors, with appropriate plantings and pedestrian pathways.

Planning to provide for the safety of the workers and the general public during construction is central to the successful implementation of any major project, and is vital when the Project is located in an area that may be visited or traversed by the public during the construction effort. Exclusion zones limiting access of the public will be designated and enforced so that Project-related activities, noise, and traffic will not overtly affect the users of the recreation trail or other adjacent facilities. Access to the new multipurpose trail and adjacent areas will be restricted during certain phases of construction to provide for public safety.

2.5 REVIEWS, APPROVALS, AND OTHER COMPLIANCE DETERMINATIONS

In addition to the Lead Agency's responsibility to comply with State Environmental Quality Review Act (SEQR) regulations and requirements, implementation of the Project will take place following funding procurement and certain ministerial approvals from local and state agencies. The approvals that are expected to be required are listed in Table 1.

Table 1. Approvals for the Lakeview Amphitheater

Agency	SEQR Status	Description of Approval Required or Project Interest
Onondaga County Legislature	Lead Agency	Administration of SEQR review process, including acceptance of EIS documents and issuance of findings
Onondaga County Department of Health	Involved Agency	Approvals associated with connection to public water supply and sanitary sewer system.
Onondaga County Department of Water Environment Protection	Involved Agency	Approvals associated with connection to sanitary sewer system.
New York State Department of Environmental Conservation	Involved Agency	SPDES General Permit for construction. Site Management Plan, Institutional Controls
New York State Department of Health	Involved Agency	Approvals associated with temporary food service establishments.
New York State Department of Transportation	Involved Agency	Highway work permits.
New York State Office of Parks, Recreation, and Historical Preservation	Involved Agency	Consultation pursuant to NY, Parks, Recreation and Historic Restoration Law (PRHPL) § 14.09 and/or § 106 of the National Historic Preservation Act.
Empire State Development Corporation	Involved Agency	Project funding.
New York State Canal Corporation	Interested Agency	Activities related to water taxi.
New York State Department of Agriculture and Markets	Involved Agency	Use of State Fair parking lots during events.
Town of Geddes	Interested Agency	Utilities/infrastructure.

Agency	SEQR Status	Description of Approval Required or Project Interest
Village of Solvay	Interested Agency	Utilities/infrastructure.
Federal Highway Administration	NA	I-690 ingress/egress
U.S. Army Corps of Engineers	NA	Approval associated with waterfront pier.

2.5.1 SEQR Process

The SEQR process was recently initiated for the proposed Lakeview Amphitheater. The basic purpose of SEQR is to incorporate the consideration of environmental factors into the existing planning, review, and decision-making processes of state, regional, and local government agencies at the earliest possible time. To accomplish this goal, SEQR requires a determination of whether a proposed action may have a significant impact on the environment, and if it is determined that the action may have a significant adverse impact, prepare or request an Environmental Impact Statement (EIS).⁶ It was the intention of the State Legislature that protection and enhancement of the environment, human, and community resources should be given appropriate weight with social and economic considerations in determining public policy, and that those factors be considered together in reaching decisions on proposed actions. Accordingly, it is intended that a suitable balance of social, economic, and environmental factors be incorporated into the planning and decision-making processes of state, regional, and local agencies. However, it is not the intention of SEQR that environmental factors be the sole consideration in decision-making.⁷

The SEQR process for the proposed Lakeview Amphitheater has included or will include the following actions:

- Preparation of Parts 1, 2, and 3 of a Full Environmental Assessment Form (EAF).
- Issuance of a Positive Declaration.
- Preparation of a Draft Scoping Document.
- Public Scoping Process.
- Issuance of Final Scoping Document.

⁶ 6 New York Codes, Rules, and Regulations (NYCRR) Part 617.1(c). 6 NYCRR Part 617.1 through 617.20 can be accessed at www.dec.ny.gov/regs/4490.html.

⁷ 6 NYCRR Part 617.1(d).

- Preparation of the Draft Environmental Impact Statement (DEIS).
- Notice of completion of DEIS and notice of public hearing and comment period.
- Public hearing on DEIS (must be held at least 14 days after public notice is published).
- A minimum 30-day public comment period on the DEIS.
- Revisions to the DEIS as necessary to address substantive/relevant comments received.
- Preparation of Final EIS (FEIS).
- File notice of completion of FEIS.
- 10-day consideration period.
- Issuance of Findings Statement.

On February 14, 2014, the Onondaga County circulated to potentially interested/involved SEQR agencies Part 1 of a Full Environmental Assessment Form (EAF) and a statement indicating that the County intended to serve as Lead Agency for the review of the proposed Lakeview Amphitheater. Following the required 30 day coordinated review period,⁸ no agency objected to Onondaga County assuming the role of Lead Agency. In addition, Onondaga County, as Lead Agency, issued a Positive Declaration (which necessitated the preparation of this DEIS), and initiated the Public Scoping Process on April 4, 2014.

Public scoping represents an initial step in the review of potential environmental impacts under SEQR. The primary goals of scoping (which is an optional step in the SEQR process) are to focus an EIS on potentially significant impacts and to eliminate consideration of those impacts that are irrelevant or non-significant.⁹ A draft scoping document for the proposed Lakeview Amphitheater was released for public and agency review and comment on April 11, 2014. The comment period provided an opportunity for agencies and the public to review and comment on the identification of significant environmental conditions and resources that may be affected by the proposed action, and the extent and quality of information necessary to address those issues during the SEQR process. The comment period ended on May 12, 2014. A final scoping document was issued May 22, 2014, which identified the significant environmental conditions and resources that may be affected by the proposed Lakeview Amphitheater, and defined the extent and quality of information necessary to address those issues. It reflected the Lead Agency's analysis of potential

⁸ 6 NYCRR Part 617.6(b)(3)(i).

⁹ 6 NYCRR Part 617.8(a).

impacts indicated in Parts 2 and 3 of the EAF, and incorporated additional relevant issues raised during the public scoping process.

In accordance with SEQR, this DEIS addresses those potentially significant adverse environmental impacts that can reasonably be anticipated and/or have been identified in the scoping process. An EIS should not contain more detail than is appropriate considering the nature and magnitude of the proposed action and the significance of its potential impacts. The EIS must be analytical and not encyclopedic.¹⁰

2.5.2 Agency and Public Review

Opportunities for detailed agency and public review in relation to this specific action will continue to be provided throughout the SEQR process. This DEIS, along with a copy of the public notice, will be distributed for review and comment to the public and to the agencies and parties listed below. In addition to a public comment period (during which time written comments will be accepted), a duly noticed public hearing concerning the DEIS will be organized and held, in accordance with SEQR requirements. Additionally, a 2005 amendment to SEQR, (Chapter 641 of the NYS Laws of 2005; "Ch. 641") requires every Environmental Impact Statement be posted on a publicly accessible internet website. A DEIS is to be posted as soon as it is accepted and remain posted until the FEIS is accepted. The FEIS should be posted when completed, and must remain posted until one (1) year after all final approvals have been issued for the Project that is the subject of the FEIS. In accordance with this amendment to SEQR, the DEIS will be posted to: <http://www.ongov.net/environment/amphitheater.html>.

The Recipients of this DEIS (in either digital [CD] or printed format) are as follows:

¹⁰ 6 NYCRR Part 617.9

John A. DeFrancisco
NYS Senator, Senate District #50
333 E. Washington Street, Room 800
Syracuse, NY 13202

William B. Magnarelli
NYS Assembly Member, District #129
333 E. Washington Street, Room 840
Syracuse, NY 13202

David J. Valesky
NYS Senator, Senate District #53
333 E. Washington Street Suite 805
Syracuse NY 13202

Will Barclay
NYS Assemblyman, District 120
201 N. Second St.
Fulton NY 13069

Al Stirpe
NYS Assemblyman, District 127
7293 Buckley Road Suite 201
N. Syracuse NY 13212

Samuel D. Roberts
NYS Assemblymember District 128
711 E. Genesee St. Suite 2
Syracuse NY 13210-1540

Onondaga Nation Council
3951 Route 11
Nedrow, NY 13120

Supervisor Manny Falcone and
Town Board of the Town of Geddes
1000 Woods Road
Syracuse, NY 13209

Mayor Ronald Benedetti and
Village Board of Village of Solvay
1100 Woods Road
Solvay, NY 13209

David Coburn, Director
Onondaga County Office of the Environment
421 Montgomery Street, 14th Floor
Syracuse, NY 13202

Andrew M. Maxwell, Director
Syracuse-Onondaga County Planning Agency
421 Montgomery Street, 11th Floor
Syracuse, NY 13202

William Lansley, Commissioner
Onondaga County Parks & Recreation
106 Lake Drive
Liverpool, NY 13088

Onondaga County Health Department
421 Montgomery Street, 9th Floor
Syracuse, NY 13202

Brian J. Donnelly, Commissioner
Onondaga County Department of Transportation
421 Montgomery Street, 11th Floor
Syracuse, NY 13202

Commissioner Joseph Martens
NYSDEC
625 Broadway
Albany, New York 12233-7258

Kenneth Lynch, Regional Director
NYSDEC Region 7
615 Erie Blvd. West
Syracuse, NY 13204

NYS Department of Transportation
50 Wolf Road, 6th Floor
Albany, New York 12232

Carl Ford, Regional Director
NYS Department of Transportation Region 3
State Office Building
333 E. Washington Street
Syracuse, NY 13202

Ms. Ruth Pierpont
Director, Field Services Bureau
NYSPRHP
PO Box 189
Waterford, NY 12188

Onondaga County Central Library
The Galleries of Syracuse
447 S. Salina Street
Syracuse, NY 13202

Nirav R. Shaw, Commissioner
NYS Department of Health
Corning Tower, Empire State Plaza
Albany, NY 12237

Richard Ball, Acting Commissioner
NYS Department of Agriculture and Markets
10B Airline Drive
Albany, NY 12235

Margaret A. Crawford
U.S. Army Corps of Engineers
Buffalo District
7413 County House Road
Auburn, NY 13021

Patricia M. Millington, Area Engineer
US Department of Transportation
Federal Highway Administration
New York Division
Leo W. O'Brien Federal Building
11A Clinton Avenue, Suite 719
Albany NY 12207

James Fayle, Regional Director
Empire State Development Corporation
620 Erie Blvd. West - #112
Syracuse, NY 13204

Thomas J. Madison, Executive Director
NYS Canal Corporation
200 Southern Blvd.
P.O. Box 189
Albany, NY 12201-0189

Solvay Public Library
615 Woods Road
Solvay, NY 13219

3.0 EXISTING CONDITIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES

3.1 GEOLOGY, SOILS, AND TOPOGRAPHY

3.1.1 *Existing Conditions*

3.1.1.1 Geology

The Project site is located in the Erie-Ontario Lowlands province, an area of generally low relief lying south of the Great Lakes characterized by glacial deposits rather than bedrock. It is an area formed on glacial lake bottoms which have been modified by erosion and glacial deposition. The actual Project site is a unique formation in that it consists primarily of man-made land that was constructed in the early 1900's by the Solvay Process Company as a repository for wastes generated as a result of the production of soda ash. The waste material, known as Solvay Process Waste, is an alkaline chalky material consisting mainly of calcium carbonate with gypsum, sodium chloride, and calcium chloride. The waste beds themselves were formed as a series of lagoons into which Solvay Process Waste was pumped as a liquid slurry from approximately 1916 to 1943 (USEPA, 2009).¹¹ The slurry decanted over time forming the upper strata beneath the Project site. The western portion of the site also includes a steel mill landfill which was capped and closed in 1989.

3.1.1.2 Soils

The underlying site is part of a region within the Erie-Ontario Lowlands known as the Oneida Lake Plain consisting of soft or loose lacustrine deposits. Soils on the Project site are classified in the *Soil Survey of Onondaga County, NY* as "Made land – chemical waste" (see Figure 5). The upper strata generally consists of Solvay Process Waste, with some added fly ash, to a depth of 50 to 60 feet. This material has a silt-like texture with little or no structural development. The higher terraces are moderately well drained to somewhat poorly drained, while the lower terraces near the lake level are somewhat poorly drained to poorly drained. The underlying soils, in descending order, consist of peat and marl, silts and clays, silts

¹¹ United States Environmental Protection Agency (USEPA). 2009. *Human Health Risk Assessment, Onondaga Lake Waste Beds 1-8 Site: Bike Trail, Geddes NY*. Emergency and Remedial Response Division, New York, NY. January 2009.

and sands, sands and gravels, and glacial till. Overburden depth averages approximately 250 feet overlying Vernon shales of the Silurian-age Salina Group (USDA SCS, 1977).¹²

3.1.1.3 Topography

Site topography is relatively flat. Elevations range from a low of approximately 363 feet above mean sea level at the water surface to a high of about 430 feet. Slopes are generally less than 3% other than at the banks of the waste beds where terraced slopes exceeding 15 % transition to the lake shore.

3.1.2 *Potential Impacts*

3.1.2.1 Construction

Minimal disturbance of site soils will occur as a result of Project construction, as the nature of the Solvay Waste material presents challenges related to excavation and grading. Intrusive work will be limited predominately to the installation of utilities and placement of piles and supporting foundation members. Granular materials will be imported to the site and placed as fill atop the Solvay Waste to form the grades and site features to be developed during site design. Landscaping will include predominately grassy areas for spectators with appropriate plantings and pedestrian pathways. Overall, Project construction is anticipated to disturb a total of up to approximately 120 acres; however, of this total approximately 20 acres is currently disturbed as a result of ongoing remedial activities. Potential impacts could include disturbance of contaminated materials and/or elements of the site remedies, increased loads on site soils, slope stability issues and general construction related impacts.

3.1.2.2 Operation

On-site operations will involve some vehicle traffic and intense pedestrian traffic during scheduled events. Impacts associated with this type of use include surface soil disturbance, litter and stress to vegetation. Site maintenance during operations will be provided through the Onondaga County Parks Department while remedy-specific maintenance will be carried out by Honeywell.

¹² United States Department of Agriculture (USDA) Soil Conservation Service (SCS). *Soil Survey of Onondaga County, NY*, January 1977.

3.1.3 Proposed Mitigation

Design of the surface and subsurface features of the amphitheater project are being coordinated with technical staff of Honeywell and the involved state and federal agencies so that they can be implemented in conjunction with the existing and proposed remedies for the site, including both the Crucible and Honeywell elements. Nationally recognized geotechnical experts, familiar with the soil conditions and this site in particular, will assist the design team in developing facilities which are compatible with these subsurface conditions. Piles will be installed so as to prevent migration of contaminants. Construction work will be carried out consistent with a NYSDEC approved Site Management Plan developed as part of the remediation effort for the larger Waste Bed 1-8 area, a site specific Stormwater Pollution Prevention Plan (SWPPP), and the statewide NYSDEC State Pollution Discharge Elimination System (SPDES) Stormwater General Permit. Hours of work will be consistent with Town ordinances and noise and dust control/suppression techniques will be implemented as best management practices.

The construction management plan will describe acceptable operating procedures for disturbance of waste materials and guidance regarding worker safety and protection of public health. This plan will be site specific, addressing the range of potential hazards associated with each phase of the work, as well as the potential pathways by which workers and the public could be impacted, and will incorporate proactive and conservative prevention and control measures for those situations. Site safety plans will be required for each phase of work and worker safety meetings will be held at periodic intervals during construction. The contractors will be instructed to employ proper construction and dust suppression techniques including wetting or shielding of work areas whenever significant potential for airborne particulates is present. If the mitigation efforts do not succeed in reducing the emissions to acceptable levels, work can be suspended until conditions improve or successful additional mitigation methods are incorporated. Planning to provide for the safety of the workers and the general public during construction is central to the successful implementation of any major project, and is vital when the project is located in an area that may be visited and traversed by the public during the construction effort. Exclusion zones limiting access of the public will be designated and enforced so that Project-related activities, noise, and traffic will not overtly affect the users of the bike trail or other adjacent facilities. Access to the Bike Trail and adjacent areas may be restricted during certain phases of construction.

As indicated above, site maintenance associated with amphitheater operations will be provided through the Onondaga County Parks Department. Parks Department staff are well versed in maintaining areas of public use throughout the County and in protecting the County's investment in public spaces. Remedy-specific maintenance will be carried out by Honeywell. Long term care and maintenance of the site and surrounding areas will be carried out as set forth in the Record of Decision, consistent with the long term Site Management Plan and Institutional Controls, which are put in place to preserve the integrity of the site cover and other remedy components including the Crucible Landfill.

3.2 WATER RESOURCES

3.2.1 *Existing Conditions*

3.2.1.1 Surface Waters

The predominant surface water features in the vicinity of the Project site are the northern terminus of Nine Mile Creek and Onondaga Lake. Originating at Otisco Lake in southern Onondaga County, Nine Mile Creek is the largest tributary to the lake, with a drainage area of nearly 200 square miles and a total length of about 16 miles. The creek, is classified as a Class C stream in the lower reaches and C(T) upstream. The specified best usage of Class C waters is fishing; however, these waters are also considered suitable for fish, shellfish, and wildlife propagation and survival. The water quality is also listed as "suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes."¹³ The (T) designation in the upstream sections denotes that these are trout waters and special standards for trout survival are in place. Ninemile Creek has a generally shallow slope in the area of the site and enters Onondaga Lake at an elevation of approximately 356 feet. The creek follows a well defined channel with a generally trapezoidal shape about 40 to 50 ft. wide. The banks are vegetated with Wastebeds 1 through 8 forming the right bank and the I-690 embankment forming the left bank until the final turn toward Onondaga Lake where the wetland SYW-10 forms the left bank (Parsons, 2012).¹⁴ The lower reach of Nine Mile Creek was relocated several times to accommodate the construction of the Solvay Wastebeds. The original channel underlies the Project site beneath Wastebeds 5 and 6.

¹³ 10 New York Codes, Rules, and Regulations (NYCRR) Part 701.8. 10 NYCRR Part 701.1 through 701.26 can be accessed at <http://www.dec.ny.gov/regs/4592.html>.

¹⁴ Parsons. 2012. *Ninemile Creek Reaches AB and BC Stormwater Pollution Prevention Plan*. Prepared for Honeywell, December 2012.

The eastern portion of the Project site borders Onondaga Lake. The lake is approximately 4.6 miles long and 1 mile wide with a total surface area of approximately 4.6 square miles. The maximum depth of the lake is about 63 feet with an average depth of 35 feet. Onondaga Lake's major tributaries are Nine Mile Creek and Onondaga Creek, together accounting for about 70% of all the water that flows into the lake each year. The Metropolitan Syracuse Wastewater Treatment Plant (Metro) is the next largest source of water, supplying approximately 20% of the lake's annual inflow (NYSDEC, 2014a).¹⁵

In the 19th century, Onondaga Lake was a popular tourist attraction, with beaches, resorts, and amusement parks. Over time, industrial development and a growing population led to increases in sewage and industrial discharges that negatively impacted the lake's sediments and water quality. Swimming was banned by 1940 and fishing in 1970. Because of pollution control efforts and more recent cleanup work, the lake is now the cleanest it has been in over 100 years (NYSDEC, 2014a). The lake waters surrounding the Project site are classified by NYSDEC as Class B with the exception of the area within a 0.25 mile radius of Ninemile Creek outlet and the southeast portion of the lake, which are designated as Class C. The best usage of Class B waters is primary and secondary contact recreation and fishing. The lake reopened to fishing in 1986 with consumption advisories, and as a result of changes in water quality and aquatic habitat, over 65 species of fish have been documented in the lake (OCDWEP & SUNY ESF, 2011)¹⁶ reflecting an impressive increase from the 10 to 12 species that were recorded in the lake during the 1920s to 1940s (Tango & Ringler, 1996).¹⁷

3.2.1.2 Wetlands

A wetland boundary assessment of Wastebeds 1-8 was performed by O'Brien & Gere in 2005, with supplemental field investigations performed in 2008, in cooperation with representatives from the NYSDEC and USEPA. Two wetlands (A and B) totaling 0.721 acres were delineated along the lake shore north of Wastebeds 1 and 2. Both wetlands are comprised of monotypic stands of common reed, with saturated "soils" (mostly Solvay waste) within the upper 12 inches. The boundaries of these wetlands were approved

¹⁵ NYSDEC. 2014a. *Onondaga Lake*. Available at: <http://www.dec.ny.gov/lands/72771.html> (Accessed April 2014).

¹⁶ Onondaga County Department of Water Protection (OCDWEP) and State University of New York College of Environmental Science and Forestry (SUNY ESF). *Onondaga Lake Fishery: 2011 Fact Sheet*.

¹⁷ Tango, P.J. and N.H. Ringler. 1996. *The role of pollution and external refugia in structuring the Onondaga Lake Fish Community*. *Lake and Reservoir Management* 12(1): 81-90.

by the NYSDEC in a letter dated June 9, 2009 (OBG, 2011).¹⁸ The Project site is located atop Wastebeds 5 and 6, more than 0.5 mile north of Wetlands A and B. No wetlands were identified within the Project site, and aside from Wetlands A and B, no other wetlands were identified within Wastebeds 1-8.

Other wetlands in the vicinity of the Project site include Ninemile Creek and New York State Freshwater Wetland SYW-10. Ninemile Creek abuts Wastebed 5 to the north and west, and is described above in Section 3.2.1.1. Wetland SYW-10 is located along the lakeshore north of the Ninemile Creek outlet, and is a Class I State-regulated wetland. The NYSDEC classifies regulated wetlands based on their functions, values, and benefits; Class I wetlands are the most valuable. Cover types present in Wetland SYW-10 include floodplain forest and common reed stands.

3.2.1.3 Groundwater

The Project site is along a topographic high in the area and therefore, shallow and intermediate groundwater generally does not flow into the area from offsite but rather occurs as a result of recharge from incident precipitation and snowmelt. This recharge creates a mounding effect on top of the wastebeds as shallow and intermediate groundwater flows outward toward Onondaga Lake, Ninemile Creek, and other surface water bodies, such as drainage ditches. Groundwater flow within the shallow and intermediate groundwater zones along the northern and eastern shores is toward Onondaga Lake. Contaminated groundwater is present beneath the site and exits in the lower levels of Wastebeds 5 and 6 through a series of seeps which are currently being remediated. The shallow groundwater table lies some 20 feet below the ground surface at the Project site and is characterized by elevated levels of sodium, calcium and chlorides. Other Contaminants of Interest in the area include BTEX compounds (i.e., benzene, toluene, ethyl benzene, and xylenes), naphthalene, and phenol, although these are generally associated with the deeper groundwater layers. The general overall remedial strategy for groundwater in the area has been to manage as necessary the shallow and intermediate groundwater that is discharging toward Onondaga Lake and Ninemile Creek and to minimize the recharge of groundwater from infiltration (O'Brien & Gere, 2010a).¹⁹ Permeability of the underlying Solvay Waste is quite low, with vertical conductivities in the range of 10^{-6} cm/sec.

¹⁸ O'Brien & Gere. 2011. *Baseline Ecological Risk Assessment Wastebeds 1 through 8 Site, Geddes, New York*. Prepared for Honeywell International, Inc. March 2011.

¹⁹ O'Brien & Gere. 2010a. *Focused Feasibility Study, Wastebeds 1-8, Geddes New York*. Prepared for Honeywell, June 2010.

3.2.1.4 Floodplains and Floodways

Only a small portion of the Project site is within the 100-year floodplain or regulated floodway, including any shoreline areas where boat access may be planned in the future. The vast majority of work for this Project will take place at the surface of Wastebeds 5 and 6, some 65 feet above the lake water level. As designated by FEMA, the 100-year flood plain is the area which would be inundated by the 100-year base flood, which is a flood having a one percent chance of occurring in any given year. A regulated floodway means the channel of a watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the upstream water surface elevation more than a designated height. Communities must regulate development in floodways to ensure that there are no increases in upstream flood elevations. Under the Nationwide Flood Insurance Program, FEMA makes federally-backed flood insurance available in communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. The Army Corps of Engineers is designated as the flood management agency for this area and regulates construction within designated floodplains. Federal regulations deal with flood damage prevention and include design criteria aimed at preventing flood damage to structures. Development which is consistent with the code requirements is eligible for flood insurance coverage. As stated previously, very little, if any, encroachment on the floodplain will occur from the planned development and no work is expected within a floodway. It should be noted that recent map modernization efforts by FEMA are expected to result in a revised floodplain boundary for the site. This is expected to result in slight changes to the designated floodplain area within the Project site. The Project design staff has been in close communication with FEMA regarding these changes and will track any modifications to the boundaries as they are implemented.

3.2.1.5 Stormwater

Currently, stormwater is generally uncontrolled at the surface of the Project site with the exception of the former Crucible Landfill area on Wastebed 5 which contains a network of storm sewers and inlets tributary to a stormwater outfall at Ninemile Creek. There are no permanent stormwater management systems currently in place in the Wastebed 6 area of the Project site.

3.2.2 *Potential Impacts*

While little or no negative long term impact to surface waters is expected as a result of this Project other than some potential physical disturbance of the shoreline associated with providing boater access in the future, the proposed Project could potentially affect surface waters and groundwater quality on a short-term basis. Construction activities or seasonal activities such as use of lawn treatments, pest controls or de-icing chemicals (e.g., road salt) for roads and walkways can be concerns. Construction can also cause sediment-laden runoff to enter waterways. If not properly controlled, the resultant water quality impacts may adversely affect animal, plant, or human populations. Water quality impacts can occur from both point and non-point sources. Point sources are stormwater or other types of discharges that flow through a conveyance (pipe) and discharge to a waterway. In New York State, the NYSDEC issues pollutant discharge permits authorizing point source discharges. Non-point sources include stormwater runoff from impervious surfaces, outdoor storage areas, or construction areas that do not flow through conveyance systems. Both point source and non-point source runoff may contain pollutants such as metals, oils, greases, hazardous materials, solids, hydrocarbons, pesticides, and herbicides as well as sediments. During dry weather, pollutants can accumulate on impermeable surfaces, but during storms they can be washed into creeks, streams, lakes, or other waters causing potential water quality impacts.

Potential impacts of work within a waterway can include alteration of habitat, shoreline modification, disturbance of sediments, and introduction of foreign materials. Depending on the particular Project design, visual and aesthetic impacts may also occur (see Section 3.5).

3.2.2.1 Construction

As development proceeds, the majority of the site will be covered with imported fill forming the desired grades and surface features. As the surface conditions change at the site and drainage designs are implemented, the potential for leaching of contaminants to the groundwater will be reduced. However, as the percent of impervious areas is increased, a greater percentage of rainfall and snow melt may be directed to runoff rather than infiltration and groundwater recharge. In settings such as these, this generally has a beneficial effect on groundwater quality, although surface water quality can be adversely impacted by increased runoff unless specific mitigation measures, such as those listed herein are implemented.

The most common water quality issue associated with construction is erosion and sedimentation control in the areas disturbed by the construction effort. Removal of vegetative cover enhances the erosion effects of precipitation. Mitigation available for erosion and sedimentation include diversion ditches up-gradient of work areas, sedimentation basins, silt fences and other barriers such as straw bales. Properly installed and maintained, these temporary structures will need to be maintained until vegetative cover is restored. The scope and schedule for erosion and sedimentation control measures will be provided in a Project specific Stormwater Pollution Prevention Plan (SWPPP) for the site, which will be reviewed and approved by the appropriate state and/or federal agencies. Fuel, lubricants, and any other construction-related chemicals, will be stored in specified, secondarily contained locations, and fueling and maintenance of equipment will be conducted at locations distant from the drainage areas so that spills or overfills can be cleaned up before reaching the water. Dewatering efforts during construction should be minimal as most work will take place above the shallow water table.

3.2.2.2 Operation

Storm water runoff flows are expected to increase as positive drainage and the percent impervious areas grow beyond existing conditions as a result of site development and operations. As such, portions of the stormwater volume which previously may have percolated to groundwater, evaporated, or been taken up by vegetation may be directed to Ninemile Creek or adjacent land areas. Pollutants associated with surface runoff will be reduced as imported cover is placed and therefore will have a reduced impact. However, increased stormwater flows are expected to occur to Ninemile Creek. The nature of the runoff pollutants will change as areas of the site are covered and developed. Overall stormwater contaminant loadings associated with past use of the site should be reduced and the nature of the runoff pollutants will change toward those more associated with parklands. As the surface features of the site are developed, incident precipitation will contact manmade features rather than existing site soils and the pollutants associated more with park lands will predominate over those preexisting at the site. In the case of this Project site, the net effect of this change is expected to be beneficial.

3.2.3 *Proposed Mitigation*

Groundwater and surface water quality should be enhanced through placement of surface features, covering of impacted surface soils, reduced infiltration and percolation and by sustainable design of

stormwater management systems and structures. A number of mitigation measures will be engineered into the site development plans to capture, treat and/or reduce stormwater runoff from the site. Plans for stormwater mitigation at the site will be developed with the assistance of NYSDEC Division of Water Quality personnel and approved in concept by NYSDEC Region 7 prior to final design. Site maintenance by the Parks Department during operations will utilize the County's Integrated Pest Management (IPM) approach.

Work is being designed to avoid construction within the floodplain to the maximum extent practicable. Where work within the floodplain is unavoidable, design and construction will be done consistent with the applicable regulations intended to protect structures. Any work planned to take place within surface waters of the U.S., will be initiated only after review and approval has been completed by the appropriate regulatory agencies including NYSDEC Region 7 and the USACOE Buffalo District office. Conditions imposed in the appropriate Nationwide Permits and/or specific permit conditions will be followed, including proper pre-construction notifications and reporting.

3.3 CLIMATE AND AIR QUALITY

3.3.1 *Existing Conditions*

3.3.1.1 Climatic Conditions

In partnership with the Natural Resources Conservation Service (NRCS) National Water and Climate Center (NWCC), the PRISM Climate Group at Oregon State University produces continuous digital temperature and precipitation maps of the U.S., using the point data collected from NWCC substations. The data sets are created using the PRISM (Parameter-elevation Regressions on Independent Slopes Model) climate mapping system. PRISM data sets are recognized as the highest quality spatial climate data sets currently available and the maps produced from the PRISM system have undergone an extensive peer-review process. Based on the data collected between 1981 and 2010, the average daily maximum temperature for the Project site is 57.3°F, and the average daily minimum is 38.5°F. The average annual precipitation for the Project site between 1981 and 2010 is 40.4 inches (Prism Climate Group, 2012).²⁰

²⁰ Prism Climate Group. 2012. *Prism Climate Data: Norm81m*. Available at: <http://prism.oregonstate.edu/> (Accessed March 11, 2014). July 7, 2012. Oregon State University.

3.3.1.2 Air Quality

The NYSDEC Division of Air Resources publishes air quality data for New York State annually. The most recent summary of air quality data available for the state is the *New York State Air Quality Report for 2012*. Included in this report are the most recent ambient air quality data, as well as long-term air quality trends derived from data that have been collected and compiled from numerous state and private (e.g., industrial, utility) monitoring stations across the state. These trends are assessed and reported by NYSDEC regions. The Project site is located in NYSDEC Region 7, which encompasses Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, and Tompkins Counties. There are three monitoring stations in Region 7: Fulton in Oswego County monitors ozone; East Syracuse in Onondaga County measures sulfur dioxide, ozone, and inhalable particulates; and Camp Georgetown in Madison County measures sulfur dioxide and ozone. The Clean Air Act requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. In 2012, all Region 7 sampling points were within the acceptable levels for all tested parameters (NYSDEC, 2012a).²¹

According to the U.S. Environmental Protection Agency (USEPA) Toxic Release Inventory Program, there were 2,664 lbs of on-site releases to the air in zip code 13209 (where the Project site is located) in 2012. These releases consisted of nitric acid (37%), chromium (30%), manganese (18%), nickel (8%), cobalt (4%), and other (3%). The largest source of air emissions in the vicinity of the Project site is Crucible Industries, LLC. In 2012, this facility was ranked 46th among all facilities in New York State for total on- and off-site releases of all chemicals (USEPA, 2013).²²

Air quality monitoring is being conducted in the vicinity of the Project site in conjunction with the dredging and capping phases of the ongoing Onondaga Lake cleanup/remediation. There are eight fixed monitoring locations along the consolidation area perimeter (approximately 1.2 to 2.5 miles southwest of the Project site), and up to five monitoring stations along the lakeshore (approximately 0.1 to 2.6 miles from the Project site). The monitoring system at the consolidation area operates continuously 24 hours per day, seven days per week, while monitoring at the lakeshore occurs whenever dredging takes place. Air is monitored for

²¹ NYSDEC. 2012a. *New York State Ambient Air Quality Report for 2012*. Bureau of Air Quality Surveillance. Available at: <http://www.dec.ny.gov/chemical/8536.html> (Accessed March 11, 2014).

²² United States Environmental Protection Agency (USEPA). 2013. *2012 Toxics Release Inventory National Analysis Dataset*. Washington, D.C. November 2013.

dust, mercury, sulfides, and total volatile organic compounds (VOCs) to ensure concentrations at the perimeter of the work zones remain below criteria established by the associated Community Health and Safety Plan (Honeywell, 2013).²³ Data is continuously reviewed by NYSDEC, the New York State Department of Health (NYSDOH), and the USEPA. According to the NYSDEC (2013a), “the data collected to date does not indicate a community health concern; all levels are lower than concentrations established for the protection of public health.”²⁴

3.3.2 Potential Impacts

3.3.2.1 Construction

Construction of the proposed Lakeview Amphitheater is not anticipated to have any significant effects on climate.

During the site preparation and construction phases of the Lakeview Amphitheater, temporary adverse impacts to air quality may result from the operation of construction equipment and vehicles. Such impacts could occur as a result of emissions from engine exhaust and from the generation of fugitive dust during earth moving activities. Fugitive dust is a greater concern at the Project site than in most areas because the Lakeview Amphitheater will be constructed on top of the Solvay Process wastebeds and around the Crucible landfill, both of which contain hazardous materials.

The Project has been designed to minimize soil disturbance associated with construction activities. Granular materials will be imported to the site and placed as fill atop the wastebeds/landfill to form the design grades, and site features will be developed in this clean fill. Excavation and soil-disturbing activities will be largely restricted to the placement of piles and/or supporting foundation structures, and the installation of underground utilities. Landscaping, to include grassy areas along with ornamental shrub and herbaceous plantings, will also result in minor soil disturbances.

²³ Honeywell International, Inc. 2013. *Air Monitoring*. Available at: <http://www.lakecleanup.com/community-health-safety/air-monitoring> (Accessed March 14, 2014).

²⁴ NYSDEC. 2013a. *Onondaga Lake Dredging to Resume with Additional Odor Control Measures*. Press release dated April 8, 2013. Available at: <http://www.dec.ny.gov/chemical/90251.html> (Accessed March 14, 2014).

With the implementation of the remedy, as described elsewhere, and the mitigation measures described below in Section 3.3.3, it is not anticipated that the increased dust and emissions will be of a magnitude or duration that would significantly impact local air quality. Any impacts from fugitive dust emissions are anticipated to be short-term and localized, and will be avoided or quickly corrected.

3.3.2.2 Operation

Once the Lakeview Amphitheater becomes operational, the existing off site State Fairgrounds parking lots will experience increased use. It is anticipated that high volumes of traffic will utilize these lots during scheduled events at the Amphitheater (see Section 3.8), resulting in sporadic short-term increases in vehicle exhaust and dust emissions. Beyond the increased vehicle-related emissions, operation of the proposed facility is not anticipated to have any significant effects on climate or air quality.

3.3.3 *Proposed Mitigation*

3.3.3.1 Construction

Dust control procedures will be implemented to minimize the amount of dust generated by construction activities, in a manner consistent with the Standards and Specifications for Dust Control as outlined in the *New York State Standards and Specifications for Erosion and Sediment Controls*. In accordance with these procedures (NYSDEC, 2005) ²⁵, the extent of exposed/disturbed areas on the site at any one time will be minimized and restored/stabilized as soon as practicable. Exclusion zones limiting public access to the Project site will be designated and enforced during certain phases of the construction of the Lakeview Amphitheater, thereby limiting the potential for exposure to fugitive dust generated during construction activities. Specific mitigation measures to address air quality during construction are expected to include (at minimum):

- The construction site will be fenced.
- Soil/sediment/erosion controls will be implemented, including regularly scheduled inspections by a qualified monitor.

²⁵ NYSDEC. 2005. New York State Standards and Specifications for Erosion and Sediment Control. Division of Water. Albany, NY. August 2005.

- The construction site will include a vehicle wash-down station.
- Vehicle speed will be restricted to 10 mph on-site.
- Stock piles will be covered or seeded.
- A dust control program will be implemented as necessary to control fugitive dust during construction. Control measures will include the application of mulch, water, stone, or approved chemical agent on access roads, exposed soils, or stockpiled soils when dry and windy conditions exist. A watering vehicle shall be available and be used as necessary. High-traffic areas will be covered with gravel, and exposed soils and roadways will be wetted as needed during extended dry periods to minimize dust generation. Typically only plain water will be used for dust suppression; chemical dust suppressants will be used only in approved situations where plain-water dust suppression is not effective.
- If these mitigation efforts do not succeed in reducing dust emissions to acceptable levels, work may be suspended until conditions improve or successful additional mitigation methods are incorporated.

In addition, as described in Section 3.1.3, construction work will be performed in compliance with a NYSDEC-approved Site Management Plan, developed as part of the ongoing remediation effort for the larger wastebed 1-8 area. This plan will describe acceptable operating procedures for disturbance of waste materials and guidance regarding worker safety and protection of public health. The Site Management Plan will include a Community Air Monitoring Plan (CAMP), consistent with guidance provided in Appendix 1A of the NYSDEC (2010a) Program Policy DER-10, *Technical Guidance for Site Investigation and Remediation*.²⁶ Community air Monitoring may not be necessary during all phases of project construction depending on the nature of the work and the progress in completing the remedies. The goal of any potential CAMP would be to provide for the protection of downwind communities (i.e., off-site receptors including residences and businesses) from potential airborne contaminant releases as a direct result of construction activities. When employed at the Project site, a CAMP would include response levels and appropriate actions to be implemented should ambient air concentrations exceed NYSDEC-approved thresholds. Ultimately, the need for air monitoring will be determined in consultation with the appropriate regulatory agencies.

²⁶ NYSDEC. 2010a. *DER-10: Technical Guidance for Site Investigation and Remediation*. NYSDEC Program Policy. Division of Environmental Remediation, Office of Remediation and Materials Management. May 3, 2010.

3.3.3.2 Operation

To address operational related impacts, controls must be put in place to promote access to designated areas and discourage trespass in sensitive parts of the site and surrounding parcels. Good landscape design practice which provides adequate wayfinding features, natural barriers and enhanced access pathways will be implemented in order to promote proper travel, protect the neighboring sensitive habitats and to discourage travel to areas intended to remain in a natural state. Fencing and signage will also be utilized in certain areas to enhance site control and security. Routine maintenance of the venue site will be performed by the Onondaga County Department of Parks while remedy specific maintenance is expected to be carried out by Honeywell. Long term care and maintenance of the site and surrounding areas will be carried out consistent with the long term Site Management Plan and Institutional Controls as set forth in the Record of Decision which are put in place to preserve the integrity of the site cover and other remedy components both for the Crucible Landfill and the Wastebeds.

3.4 BIOLOGICAL, TERRESTRIAL, AND AQUATIC ECOLOGY

3.4.1 *Existing Conditions*

3.4.1.1 Vegetation

Plant species and communities found at the Project site were identified and characterized during field surveys conducted by O'Brien & Gere (OBG) staff during the fall of 2004, summer of 2005, and summer of 2008 (OBG, 2011²⁷; OBG, 2010b²⁸). In addition, EDR ecologists conducted reconnaissance level field surveys in the spring of 2014. A total of 43 plant species were documented during these surveys. A list of these species, including scientific names, is included in Appendix A. All of the plant species observed during the course of these surveys are common to the region and state.

²⁷ O'Brien & Gere. 2011. *Baseline Ecological Risk Assessment Wastebeds 1 through 8 Site, Geddes, New York*. Prepared for Honeywell International, March 2011.

²⁸ O'Brien & Gere. 2010b. *Wetlands/Floodplains Assessment Onondaga Lake, Geddes and Syracuse, New York*. Prepared for Honeywell International, Inc. March 2010.

3.4.1.1.1 Ecological Communities

Vegetative communities at the Project site were evaluated based on interpretation of aerial photography and field verification. There are three community types present at the Project site, successional shrubland/forest, and a former (capped) landfill, and disturbed/developed land. Brief descriptions are provided below for each of these ecological communities, which are mapped in Figure 8. Wetlands and surface waters are described separately (see Section 3.2).

Successional Shrubland/Forest

This is the dominant ecological community on-site, totaling approximately 78 acres, and primarily includes shrubland interspersed with smaller areas of forest. Common shrub species include European buckthorn (*Rhamnus cathartica*), bush honeysuckles (*Lonicera* spp.), autumn olive (*Elaeagnus umbellata*), dwarf juniper (*Juniperus communis*), and red osier dogwood (*Cornus sericea*). The majority of the trees observed were relatively small in size and are considered part of the shrub community, with species including box elder (*Acer negundo*), cottonwood (*Populus deltoides*), northern white cedar (*Thuja occidentalis*), European birch (*Betula pendula*), eastern red cedar (*Juniperus virginiana*), and red maple (*Acer rubrum*), with lesser amounts of black locust (*Robinia pseudo-acacia*), staghorn sumac (*Rhus typhina*), quaking aspen (*Populus tremuloides*), white ash (*Fraxinus americana*), green ash (*F. pennsylvanica*), American elm (*Ulmus americana*), common catalpa (*Catalpa bignonioides*), red mulberry (*Morus rubra*), and American basswood (*Tilia americana*). Forested areas are primarily dominated by cottonwood.

Capped Landfill

This vegetative community totals approximately 22 acres and occurs at the Crucible Landfill, which was capped during closure and vegetated with various grasses. Additional species present include vetch (*Vicia* spp.), goldenrod (*Solidago* spp.), and Queen Anne's lace (*Daucus carota*).

Disturbed/Developed Land

This community totals approximately 20 acres and is primarily a result of ongoing remedial activities and associated disturbance, and also includes the recently opened West Shore Trail.

3.4.1.1.2 Significant Natural Communities/Rare Plant Species

The United States Fish and Wildlife Service (USFWS) maintains a website to assist applicants in determining the possible occurrence of federally-listed, proposed, and candidate rare species by county. The lists include all such species known to occur in a given county, as well as those likely to occur there. This online consultation procedure was conducted for Onondaga County on March 28, 2014 (see Appendix B). One federally-listed threatened plant species has been documented in Onondaga County, the American hart's-tongue fern (*Asplenium scolopendrium* var. *americanum*). Additional information about this threatened plant is provided below:

American Hart's-tongue Fern

Range wide, American hart's-tongue fern appears to require high humidity, shaded conditions, a moist substrate, and the presence of dolomitic limestone (Currie, 1993).²⁹ In New York State, this fern is typically found in the deep shade of glacial plunge basins, on calcareous rocks. These basins are often cooler and moister than surrounding areas, and tend to support a high number of bryophyte species. It has also been documented on talus slopes, in limestone sinkholes, at cave entrances, in rock crevices, and on calcareous cliffs. Associated species include common hackberry (*Celtis occidentalis*), black maple (*Acer nigrum*), hophornbeam (*Ostrya virginiana*), American basswood, northern white cedar, bladderwort (*Staphylea trifolia*), Canada yew (*Taxus canadensis*), wild ginger (*Asarum canadense*), herb-robert (*Geranium robertianum*), wild sarsaparilla (*Aralia nudicaulis*), blue cohosh (*Caulophyllum thalictroides*), rock polypody (*Polypodium virginianum*), maidenhair spleenwort (*Asplenium trichomanes*), lady fern (*Athyrium filix-femina*), bulbet fern (*Cystopteris bulbifera*), Goldie's woodfern (*Dryopteris goldiana*), and marginal woodfern (*Dryopteris marginalis*) (NYNHP, 2013a).³⁰

The species is also listed as threatened by the State of New York. The state heritage rank is S2, indicating that the species is imperiled or highly vulnerable to extirpation. There are fewer than twenty populations of this species in New York State, which together comprise approximately 90%

²⁹ Currie, R.R. 1993. *Recovery Plan for American Hart's-tongue (Asplenium scolopendrium L. var. americanum [Fernald] Kartesz and Gandhi [Synonym: Phyllitis scolopendrium (L.) Newman var. Americana Fernald])*. United States Fish and Wildlife Service, Southeast Region. Atlanta, GA. September 15, 1993.

³⁰ New York Natural Heritage Program (NYNHP). 2013a. *Online Conservation Guide for Asplenium scolopendrium var. americanum*. Available at: <http://www.acris.nynhp.org/guide.php?id=9819> (Accessed March 28, 2014).

of the known plants in the entire country (NYNHP, 2013a). Extant populations are restricted to the greater Syracuse area, in Onondaga and Madison Counties. The original USFWS Recovery Plan identified trampling and habitat alteration or destruction by timber removal, quarrying, and residential development as the biggest threats to American hart's-tongue fern populations (Currie, 1993). More recent information (USFWS, 2012;³¹ NYNHP, 2013a) indicates that competition with or shading from invasive species has become a serious threat. Swallow-wort (*Cynanchum rossicum*) currently poses the most severe risk to many New York populations, which are also being adversely affected by exotic bush honeysuckles and European buckthorn.

The specific habitat conditions (i.e., substrate, moisture, humidity, and shade) required by this species are not present at the Project site. Therefore, due to the lack of suitable habitat, American hart's-tongue is not expected to occur at the Project site, and Project-related impacts to this species are not anticipated.

A written request for information regarding state-listed threatened and endangered species and unique or significant natural communities was sent to the New York Natural Heritage Program (NYNHP). According to the response letter dated March 17, 2014 (see Appendix B), an occurrence of the state-listed endangered straight-leaf pondweed (*Potamogeton strictifolius*) has been documented at, or in the immediate vicinity of, the Project site. Additional information about this endangered plant is provided below:

Straight-leaf Pondweed

With the exception of the occasional flowering spikes, this aquatic plant grows entirely underwater. It is typically found in lakes, ponds, and slow-flowing streams with sandy or hard, muddy substrates. Straight-leaf pondweed is confined to water bodies with high alkalinity, and can be found at a variety of water depths, up to approximately 3 meters (9.8 feet). Leaves are often coated with calcium carbonate deposits (i.e., marl). Associated species include other aquatics of alkaline waters, such as flat-stemmed pondweed (*Potamogeton. zosteriformis*), Fries's pondweed (*P. friesii*), leafy pondweed (*P. foliosus*), small pondweed (*P. pusillus*), common coontail

³¹ United States Fish and Wildlife Service (USFWS). 2012. *American Hart's-tongue Fern (Asplenium scolopendrium var. americanum) 5-Year Review: Summary and Evaluation*. Ecological Services Field Office, Cookeville, TN. October 2012.

(*Ceratophyllum demersum*), spatterdock (*Nuphar variegata*), Sago pondweed (*Stuckenia pectinata*), and common waterweed (*Elodea canadensis*) (Hellquist & Pike, 2003).³²

The state heritage rank for this endangered species is S1, indicating that it is critically imperiled in New York State (Young, 2010).³³ This rare plant is most common in the upper Great Lakes (Michigan, Wisconsin, and Minnesota) and becomes more uncommon in the northeastern and northwestern portions of its range. Eutrophication and competition with invasive species (and the impacts associated with their management and/or control) pose the greatest threats to straight-leaf pondweed (Hellquist & Pike, 2003).

While the proposed Lakeview Amphitheater will be constructed on dry land, on a bluff above the water, a small portion of the proposed Project will be sited within potential habitat for straight-leaf pondweed: the future seasonal docking system anticipated to provide water-based access to the amphitheater via water taxis and an observation pier. The NYNHP recommends surveying for this endangered pondweed during the summer months of July, August, and September (Young, 2010). Due to the suggested timing of field surveys, it is anticipated that the potential for occurrence of this endangered plant will be assessed during the summer of 2014, prior to preparation of the FEIS.

In summary, site surveys/review conducted in the fall of 2004, summer of 2005, and summer of 2008 (by OBG) and during the spring of 2014 (by EDR) suggest that common ecological communities dominate the Project site. No listed threatened and endangered plant species, or unique or significant natural communities that typically support such species, were observed on-site. However, these surveys were land-based and did not focus on aquatic species that may occur within Onondaga Lake. Prior to any construction activities in Onondaga Lake, a species-specific rare plant survey will be conducted to determine the presence or absence of straight-leaf pondweed so that potential impacts to this endangered species can be avoided.

³² Hellquist, C.B. and A.R. Pike. 2003. *Potamogeton strictifolius* A. Bennett Straight-leaved Pondweed: Conservation and Research Plan for New England. New England Wildflower Society, Framingham, MA. December 2003.

³³ Young, S.M. (editor). 2010. *New York Rare Plant Status List*. New York Natural Heritage Program, Albany, NY. June 2010.

3.4.1.1.3 *Invasive Plant Species*

An invasive species is an organism that has been purposefully or accidentally introduced outside its original geographic range, and is able to proliferate and aggressively alter its new environment, potentially causing harm to the economy, environment, or human health. Invasive plant species spread in a number of different ways. Dispersal mechanisms include wind, water, wildlife, vegetative reproduction, and human activity. Populations of invasive species typically establish most readily in places where the ground has been disturbed, thereby exposing the soil. Field surveys identified the following invasive species at the Project site: common reed (*Phragmites australis*), garlic mustard (*Alliaria petiolata*), purple loosestrife (*Lythrum salicaria*), autumn olive, European buckthorn, and honeysuckle.

3.4.1.2 Fish and Wildlife

Fish and wildlife resources at the Project site were identified through analysis of existing data sources, correspondence with the NYNHP, and on-site field surveys conducted by OBG and EDR. Specific information on fish and wildlife resources at the Project site is presented below, organized into sub-sections focused on birds, mammals, reptiles and amphibians, fish, wildlife habitat, and threatened and endangered species. A complete list of wildlife species documented in the vicinity of the Project site, including scientific names, is included in Appendix A.

3.4.1.2.1 *Birds*

To determine the type and number of bird species present at the Project site, existing data sources were consulted. Sources of information included the following:

- USGS Breeding Bird Survey (BBS),
- USFWS
- NYS Breeding Bird Atlas (BBA),
- Audubon Christmas Bird Count (CBC),
- On-site observations by OBG ecologists during the fall of 2004, summer of 2005, and summer of 2008, and
- On-site observations by EDR ecologists during the spring of 2014.

Based on existing data, on-site investigations, existing habitat conditions, and species range, it appears that approximately 200 avian species could use the Project site at some time throughout a given year. Details on the Project site's avian community are presented below:

Breeding Birds

The North American Breeding Bird Survey (BBS), overseen by the Patuxent Wildlife Research Center of the USGS, is a long-term, large-scale, international avian monitoring program that tracks the status and trends of North American bird populations. Each survey route is 24.5 miles long, with 3-minute point counts conducted at 0.5-mile intervals. During the point counts, every bird seen or heard within a 0.25-mile radius is recorded. The nearest BBS survey route (Cicero Center) runs roughly east-west, approximately 6.3 miles north of the Project site. Most of the 129 species recorded on this route since 1966 have been common birds of forest, forest edge, woodland, old field, grassland, and wetland habitats. The most commonly observed species include mourning dove (*Zenaida macroura*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), brown-headed cowbird (*Molothrus ater*), red-winged blackbird (*Agelaius phoeniceus*), common grackle (*Quiscalus quiscula*), American goldfinch (*Spinus tristis*), chipping sparrow (*Spizella passerina*), song sparrow (*Melospiza melodia*), bank swallow (*Riparia riparia*), cedar waxwing (*Bombycilla cedrorum*), yellow warbler (*Setophaga petechia*), common yellowthroat (*Geothlypis trichas*), house sparrow (*Passer domesticus*), wood thrush (*Hylocichla mustelina*), and American robin (*Turdus migratorius*) (Sauer et al., 2014).³⁴

The BBS also documented one state-listed endangered species (black tern [*Chlidonias niger*]), four state-listed threatened species (common tern [*Sterna hirundo*], northern harrier [*Circus cyaneus*], upland sandpiper [*Bartramia longicauda*], and Henslow's sparrow [*Ammodramus henslowii*]), and eleven state-listed species of special concern (American bittern [*Botaurus lentiginosus*], sharp-shinned hawk [*Accipiter striatus*], Cooper's hawk [*Accipiter cooperii*], osprey [*Pandion haliaetus*], red-headed woodpecker [*Melanerpes erythrocephalus*], horned lark [*Eremophila alpestris*], golden-winged warbler [*Vermivora chrysoptera*], cerulean warbler [*Setophaga cerulea*], yellow-breasted chat [*Icteria virens*], vesper sparrow [*Pooecetes gramineus*], and grasshopper sparrow [*Ammodramus savvanarum*]). However, the state-listed

³⁴ Sauer, J.R., J.E. Hines, J.E. Fallon, K.L. Pardieck, D.J. Ziolkowski, Jr., and W.A. Link. 2014. *The North American Breeding Bird Survey, Results and Analysis 1966 - 2012. Version 02.19.2014.* USGS Patuxent Wildlife Research Center, Laurel, MD.

species have generally been detected in very low numbers. For example, one northern harrier was observed in 1995, and none have been detected since; similarly only one grasshopper sparrow was observed (1966), one yellow-breasted chat (1968), one common tern (1974), two red-headed woodpeckers (one each in 1978 and 1982), etc. No federally-listed endangered or threatened species were observed (Sauer et al., 2014).

The NYS Breeding Bird Atlas (BBA) is a comprehensive, statewide survey that indicates the distribution of breeding birds in New York State. Point counts are conducted by volunteers within 5-km by 5-km survey blocks across the state (McGowan & Corwin, 2008)³⁵. The Project site is located within or immediately adjacent to four New York State BBA blocks (3977C, 3977D, 3976A, 3976B). The number of species observed per survey block in the Atlas 2000 project (covering 2000-2005) ranged from 61 to 85, for a cumulative total of 95 different species. During the previous Atlas, covering 1980-1985, the number of species observed per survey block ranged from 62 to 72, for a total of 88 species. The majority of the species identified in the BBA are typical of the mixed forest, wetland, and successional habitats that dominate the area surrounding the Project site. These species are consistent with regularly occurring nesting species for the region, and are very similar to that indicated by the BBS. However, one state-listed threatened species (pied-bill grebe [*Podilymbus podiceps*]) and four state-listed species of special concern (osprey, Cooper's hawk, sharp-shinned hawk, and grasshopper sparrow) were recorded in the 2000-2005 BBA. In addition, one state-listed threatened species (northern harrier) and four state-listed species of special concern (sharp-shinned hawk, common nighthawk [*Megasceryle alcyon*], red-headed woodpecker, and horned lark) were recorded in the 1980-1985 BBA. No federally-listed endangered or threatened species were observed in the vicinity of the Project site during either survey (NYSDEC, 2014b).³⁶

Wintering Birds

Most avian species present in the summer breeding season migrate south for the winter (e.g., warblers, flycatchers, and thrushes), leaving only year-round species that are not seasonally displaced (e.g., great horned owl [*Bubo virginianus*], pileated woodpecker [*Dryocopus pileatus*], and black-capped chickadee [*Parus atricapillus*]) and species that travel south from more northern climates to winter in New York (e.g.,

³⁵ McGowan, K. J., Corwin, K. J. 2008. *The Second Atlas of Breeding Birds in New York State*. Cornell University Press, Ithaca, NY.

³⁶ NYSDEC. 2014b. *New York State Breeding Bird Atlas*. Available at: <http://www.dec.ny.gov/animals/7312.html> (Accessed April 18, 2014). Fish, Wildlife & Marine Resources, Albany, NY.

American tree sparrow [*Spizella arborea*], rough-legged hawk [*Buteo lagopus*], and snowy owl [*Bubo scandiacus*]). Data from the Audubon's Christmas Bird Count (CBC) provides an overview of the birds that inhabit the region during early winter. The primary objective of the CBC is to monitor the status and distribution of wintering bird populations across the Western Hemisphere. Counts take place on a single day during a three-week period around Christmas, when birdwatchers comb a 15-mile (24 km) diameter circle in order to tally up all bird species and individuals observed. The Project site lies within the Syracuse count circle.

The number of wintering species observed in this count circle ranged between 65 and 86 species per year over the last 10 years, with a total of 118 unique species recorded. The most common wintering bird species observed were snow goose (*Chen caerulescens*), Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), common goldeneye (*Bucephala albeola*), lesser scaup (*Aythya affinis*), common merganser (*Mergus merganser*), ring-billed gull (*Larus delawarensis*), herring gull (*Larus argentatus*), American crow, European starling, rock pigeon, mourning dove, American robin, black-capped chickadee, and house sparrow. The CBC also documented one state-listed endangered species (peregrine falcon [*Falco peregrinus*]), three state-listed threatened species (northern harrier, pied-billed grebe, and bald eagle [*Haliaeetus leucocephalus*]), and six state-listed species of special concern (common loon [*Gavia immer*], sharp-shinned hawk, Cooper's hawk, northern goshawk [*Accipiter gentilis*], red-shouldered hawk [*Buteo lineatus*], and horned lark. No federally-listed endangered or threatened species were recorded (National Audubon Society, 2014).³⁷

The USFWS conducted a winter waterfowl survey at Onondaga Lake during the winter of 2007-2008. The primary objective of this survey was to increase understanding of waterfowl use at Onondaga Lake during the non-breeding season. A two-person team conducted surveys at ten locations around Onondaga Lake, one day per week, from November 14, 2007 through March 27, 2008. A visual survey using binoculars and a spotting scope was performed for approximately 15 to 30 minutes at each location, and all birds seen on the water surface or adjoining shoreline up to 50 meters from the shoreline were counted. Surveys were not conducted or were suspended if weather conditions impaired visibility. The ten most abundant species recorded in general order of abundance were common merganser, mallard, ring-billed gull, common

³⁷ National Audubon Society. 2014. *Audubon Christmas Bird Count*. Available at: <http://netapp.audubon.org/CBCObservation/> (Accessed April 18, 2014).

goldeneye, herring gull, Canada goose, greater black-backed gull (*Larus marinus*), lesser scaup, American black duck (*Anas rubripes*), and bufflehead (*Bucephala albeola*)³⁸.

3.4.1.2.2 Mammals

Due to a lack of existing data regarding mammals at the Project site, the occurrence of mammalian species was documented through on-site field surveys and evaluation of available habitat. This effort suggests that approximately 40 species of mammals could occur in this area. Field surveys conducted by OBG and EDR documented the presence of four species at the Project site, through direct visual observation or signs of their occurrence such as tracks or scat. These species include raccoon (*Procyon lotor*), whitetail deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), and woodchuck (*Marmota monax*). Species not observed, but likely to occur in the area include opossum (*Didelphis virginiana*), striped skunk (*Memphitis memphitis*), weasels (*Mustela spp.*), muskrat (*Ondatra zibethicus*), porcupine (*Erethizon dorsatum*), red fox (*Vulpes vulpes*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), various bats, and a variety of small mammals, such as squirrels, chipmunks, mice, voles, moles, and shrews. All of these species are common and widely distributed throughout New York State.

3.4.1.2.3 Reptiles and Amphibians

Reptile and amphibian presence at the Project site was determined primarily through review of *The Amphibians and Reptiles of New York State* (Gibbs et al., 2007).³⁹ This reptile and amphibian resource book is based on the New York State Amphibian and Reptile Atlas. The Atlas Project was a 10-year survey (1990 through 1999) designed to document the geographic distribution of the state's herptofauna. Atlas data was collected and organized according to USGS 7.5-minute quadrangles (NYSDEC, 2007).⁴⁰ Based on this data, along with documented species ranges and existing habitat conditions, it is estimated that approximately 22 reptile and amphibian species could occur in the vicinity of the Project site (NYSDEC, 2007; Gibbs et. al., 2007). Of these, one species was documented on-site by OBG (2011), brown snake (*Storeria dekayi*). Species not observed, but likely to occur in the area include bull frog (*Rana catesbeiana*), leopard frog (*Rana pipiens*), American toad (*Bufo americanus*), spring peeper (*Pseudacris*

³⁸ USFWS. 2011. *Onondaga Lake Summary of Winter Waterfowl Survey 2007 – 2008*. New York Field Office, Cortland NY. October 2011.

³⁹ Gibbs, J.P., A.R. Breisch, P.K. Ducey, G. Johnson, J.L. Behler, and R.C. Bothner. 2007. *The Reptiles and Amphibians of New York State*. Oxford University Press. New York, NY.

⁴⁰ NYSDEC. 2007. *New York State Amphibian and Reptile Atlas Data*. Bureau of Wildlife, Albany NY. November 20, 2007.

crucifer), painted turtle (*Chrysemys picta*), snapping turtle (*Chelydra serpentina*), red-spotted newt (*Notophthalmus viridescens*), spotted salamander (*Ambystoma maculatum*), northern two-lined salamander (*Eurycea bislineata*), northern redback salamander (*Plethodon cinereus*), northern water snake (*Nerodia sipedone*), and common garter snake (*Thamnophis sirtalis*). All of these species are common and widely distributed throughout New York State. The NYS Amphibian and Reptile Atlas also documented wood turtle (*Glyptemys insculpta*) in the vicinity of the Project site. Wood turtle is state-listed as a species of special concern.

3.4.1.2.4 Fish

As a result of the industrial and cultural pollution found in Onondaga Lake, historical data show a very low fish species richness (i.e., diversity), with surveys detecting only 10 different fish species in 1927 and 12 species in 1946 (Tango & Ringler, 1996).⁴¹ Data collected by long-term biological monitoring programs show a dramatic recovery, and the lake now supports a diverse and productive aquatic community: a total of 66 fish species have been identified in surveys conducted since 1987. The biological monitoring programs, conducted by scientists at the Onondaga County Department of Water Protection (OCDWEP) and State University of New York College of Environmental Science and Forestry (SUNY-ESF), track aquatic plant and animal communities in the Onondaga Lake ecosystem. The monitoring programs measure the number and types of fish, aquatic plants, macroinvertebrates, phytoplankton (algae), zooplankton, and dreissenid (zebra and quagga) mussels. This data indicates that Onondaga Lake now resembles other regional lakes of its size with respect to the number of fish species, plant abundance, and water clarity. However, some differences remain. Compared with other nearby lakes of similar size, Onondaga Lake supports fewer invertebrates, such as dragonflies and mayflies, which provide prey for fish species. Submerged aquatic vegetation is now abundant, but there is little emergent vegetation along the shoreline, which may limit egg-laying habitat for these insects (OCDWEP & SUNY-ESF, 2011).⁴²

The Onondaga Lake fish community consists of a diverse group of both native and non-native species. Many of these species are highly valued by anglers, including walleye (*Stizostedion vitreum*), largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), brown trout (*Salmo trutta*), brown

⁴¹ Tango, P.J. and N.H. Ringler. 1996. *The role of pollution and external refugia in structuring the Onondaga Lake Fish Community*. Lake and Reservoir Management 12(1): 81-90.

⁴² Onondaga County Department of Water Protection (OCDWEP) and State University of New York College of Environmental Science and Forestry (SUNY-ESF). 2011. *Onondaga Lake Fishery: 2011 Factsheet*.

bullhead (*Ameiurus nebulosus*), yellow perch (*Perca flavascens*), and sunfish (*Lepomis spp.*). Other species serve as important sources of forage for sport fish and other predators, including alewife (*Alosa pseudoharengus*), golden shiner (*Notemigonus crysoleucas*), and various other minnow (*Pimephales spp.*) and shiner (*Notropis spp.*) species. Non-native fish species documented in Onondaga Lake include round goby (*Neogobius melanstomus*) and alewife (*Alosa pseudoharengus*). Most of these species are common throughout the area. One exception is the State-listed threatened lake sturgeon (*Acipenser fulvescens*), which have made their way to Onondaga Lake from Oneida Lake, where they had been stocked as part of an effort to re-establish this rare species. As water quality and habitat conditions continue to improve, further changes in the lake's fish community are likely to occur. It is anticipated that the significant reduction in ammonia and phosphorus inputs, and the resulting transition from eutrophic (nutrient-rich) to mesotrophic (moderate nutrient levels) conditions, will expand/improve available fish habitat within both the littoral zone (near shore) and the pelagic zone (open water, not near the shore or bottom) (OCDWEP & SUNY-ESF, 2011).

3.4.1.2.5 Wildlife Habitat

There are no New York State Wildlife Management Areas (WMAs) or Bird Conservation Areas (BCAs) within the Project site. The nearest State WMAs include the Hamlin Marsh WMA (located 4.9 miles northeast of the Project site), the Three Rivers WMA (located 7.9 miles northwest of the Project site), and the Cicero Swamp WMA (located 8.4 miles northeast of the Project site). The Three Rivers BCA, encompassing the entire 3,615-acre Three Rivers WMA, is the only New York State BCA in the vicinity of the Project site. Onondaga Lake was designated by the National Audubon Society as an Important Bird Area (IBA) in 1997, because of its value to congregating waterfowl.

Although the new multipurpose recreation trail passes through the area and remediation activities are ongoing along the lakeshore, the Project site currently represents the largest relatively intact undeveloped area along the shoreline of Onondaga Lake. As previously described, the Project site is dominated by successional forestland, and also contains a capped landfill. The value of these communities to various wildlife species is summarized below:

Successional Forestland

The forestland on-site is generally an open woodland, with scattered trees. The density of the understory shrubs varies widely, ranging from fairly sparse to dense thickets. Consequently, these areas generally do not provide habitat for wildlife species that require forest interior conditions. However, the Project site does provide habitat for wildlife species that utilize shrubland and young forests, such as brown thrasher (*Toxostoma rufum*), American woodcock (*Scolopax minor*), willow flycatcher (*Empidonax traillii*), gray catbird (*Dumetella carolinensis*), dark-eyed junco (*Junco hyemalis*), eastern towhee (*Pipilo erythrophthalmus*), cedar waxwing, song sparrow, American goldfinch, yellow warbler, common yellowthroat, yellow-breasted chat, and golden-winged warbler. Whitetail deer and eastern cottontail are also typically found in brushy habitat. In addition, many of the shrub species found in these areas produce berries, which provide food sources for birds and mammals such as raccoon, striped skunk, and opossum.

Capped Landfill

The old Crucible landfill site provides approximately 20 acres of open, grassy habitat. This area is too small to provide optimal nesting and foraging habitat for area sensitive grassland birds, such as bobolink and grasshopper sparrow. However, this habitat is suitable for grassland birds that aren't area sensitive, along with habitat generalists and birds that favor edges, such as eastern kingbird (*Tyrannus tyrannus*), eastern bluebird (*Sialia sialis*), mourning dove, and red-winged blackbird. The vegetation in this area provides forage in the form of seeds and foliage, which can be utilized by a wide variety of birds, as well as small mammals (mice, shrews, moles, voles, etc.), whitetail deer, and eastern cottontail. Birds of prey, such as northern harrier and red-tailed hawk, and mammalian predators, such as red fox and eastern coyote, also use such habitats as hunting areas.

3.4.1.2.6 Threatened and Endangered Wildlife Species

As mentioned previously, a written request for listed species documentation was sent to the NYNHP. The response letter indicates several occurrences of Indiana bat (*Myotis sodalis*) adjacent to the Project site. This species is both state- and federally-listed as endangered. In addition, the USFWS online consultation identified Indiana bat, northern long-eared bat (*Myotis septentrionalis*), bog turtle (*Clemmys muhlenbergii*), and eastern massasauga (*Sistrurus catenatus*) as federally-listed species that are known to occur in Onondaga County, and could potentially be found at the Project site. Additional information about each of these species is provided below:

Indiana Bat

The Indiana bat is a small bat, approximately 2 inches in length and weighing approximately 0.2 to 0.3 ounces. Indiana bats hibernate in caves and mines during the winter. Hibernacula are known to occur in the following New York State counties: Albany (n=1), Essex (n=2), Jefferson (n=1), Onondaga (n=1), Ulster (n=4), and Warren (n=1). Maternity colonies have been identified through radio-telemetry studies and mist-net captures in Dutchess, Essex, Jefferson, Onondaga, and Ulster counties. The Indiana bat has both a state and federal protection status of endangered. The state heritage rank for this species is S1 indicating typically 5 or fewer occurrences, very few remaining individuals, or biological factors that make the species especially vulnerable in New York State (NYNHP, 2013b).⁴³

Indiana bats radio-tracked from hibernacula in Jefferson, Essex, and Ulster Counties were found to move between approximately 12 and 40 miles to roost location on their foraging grounds. The roosts consisted of living, dying, and dead trees in both rural and suburban landscapes (NYNHP, 2013b). The NYSDEC conducted an emergence study of Indiana bats from the Onondaga County hibernaculum in 2006. Bats were captured as they exited the hibernaculum in the evening, and marked with radio transmitters. Female bats were subsequently tracked and observed at thirty-eight (38) maternal roost trees ranging from approximately 5 to 29 miles from the hibernaculum. Bats generally flew to roost sites north and northwest of the hibernaculum, in northwestern Onondaga County, southwestern Oswego County, and northeastern Cayuga County. Tree species used for maternal roosts include: red maple (n=14), shagbark hickory (*Carya ovata*; n=5), sugar maple (*Acer saccharum*; n=2), silver maple (*A. saccharinum*; n=2), black willow (*Salix nigra*; n=2), American elm (n=2), shellbark hickory (*Carya laciniosa*; n=1), ash (*Fraxinus* sp.; n=1), and tulip tree (*Liriodendron tulipifera*; n=1). Six roost trees were identified simply as "maple," while the species of two roost trees was not determined (NYSDEC, unpublished data).

Before the onset of white nose syndrome (WNS) in the winter of 2006, the ten Indiana bat hibernacula in New York State appeared to be stable. The maximum total count had increased from approximately 13,000 to 41,000 bats. Despite the increase in numbers, the population was

⁴³ NYNHP. 2013b. *Online Conservation Guide for Myotis sodalis*. Available at: <http://www.acris.nynhp.org/guide.php?id=7405> (Accessed April 1, 2014).

still considered vulnerable, due to the concentration of overwintering bats at a few limited sites, many of which occur in areas subject to increasing development (NYNHP, 2013b). Since that time, WNS has decimated populations of cave-dwelling bats within New York State. By April 2012, Indiana bat populations had declined 71% statewide from peak population numbers observed prior to the appearance of WNS (NYSDEC, 2012b).⁴⁴

As previously indicated, correspondence with NYNHP indicates that Indiana bats have been documented adjacent to the Project site. Given that bats often fly several miles in the course of normal foraging activities, it should be assumed that Indiana bats forage at the Project site.

Northern Long-eared Bat

The northern long-eared bat is currently a candidate for federal listing. The Center for Biological Diversity petitioned the Secretary of the Department of the Interior to list the northern long-eared bat as threatened or endangered under the Endangered Species Act (ESA) of 1973 (CBD, 2010).⁴⁵ On June 29, 2011, the USFWS announced a 90-day finding in the Federal Register (Volume 76, No. 125, p. 38095), concluding that sufficient information was provided to conduct a more thorough analysis and initiating a formal review. On October 2, 2013, the USFWS announced a 12-month finding in the Federal Register (Volume 78, No. 191, p. 61046), concluding that listing the northern long-eared bat is warranted (USFWS, 2013).⁴⁶ Accordingly, the USFWS is proposing to list the northern long-eared bat as a federally endangered species throughout its range under the ESA. This initiated a 60-day public comment period, subsequently extended to 90-days, along with the solicitation of peer review from scientific experts. The USFWS will evaluate information provided during the comment period, and make a final decision on listing the species within 12 months. Until very recently, this species had been relatively common in New York State and is not currently State-listed. However, due to mortality from WNS, the species has since suffered dramatic population declines across the entire northeast. In New York, the impacts

⁴⁴ NYSDEC. 2012b. *DEC Reports: 2012 Winter Bat Surveys Results*. Press Release dated April 19, 2012. Available at: <http://www.dec.ny.gov/press/81767.html> (Accessed April 1, 2014).

⁴⁵ Center for Biological Diversity, The (CBD). 2010. *Petition to List the Eastern Small-footed Bat *Myotis leibii* and Northern Long-Eared Bat *Myotis septentrionalis* as Threatened or Endangered Under the Endangered Species Act*. January 21, 2010. Richmond, VT.

⁴⁶ USFWS. 2013. *Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List the Eastern Small-footed Bat and the Northern Long-eared Bat as Endangered or Threatened Species; Listing the Northern-eared Bat as an Endangered Species*. Federal Register Vol. 78, No. 191, pp. 61046-61080. October 2, 2013.

of WNS on northern long-eared bat have been severe, with a 98% decline in statewide populations recorded since the onset of the disease (NYSDEC, 2012b).

Range wide, this rare bat is typically associated with mature interior forests, and tends to avoid woodlands with significant edge habitat. Although they are most often found in cluttered or densely forested areas including in uplands and at streams or vernal pools, northern long-eared bat may also use small openings or canopy gaps as well. Captures from New York State suggest that this species may also use younger forest types (NYNHP, 2014).⁴⁷ Northern long-eared bats select day roosts in dead or live trees under loose bark, or in cavities and crevices, and may sometimes use caves as night roosts. They may also roost in buildings, behind shutters, or in bat houses. A variety of tree species are used for roosting, including black locust, silver maple, sugar maple, black oak (*Quercus velutina*), red oak (*Q. rubra*), and American beech (*Fagus grandifolia*). Roosts tend to be in trees with larger diameter and greater height than the surrounding trees. Females tend to roost in more open areas than males, likely due to the increased solar radiation, which aids pup development. In the winter, northern long-eared bats hibernate in caves and mines where the air temperature is constant, preferring cooler areas with high humidity (USFWS, 2013).

The Project site does not contain any of the mature, interior forests typically preferred by northern long-eared bat, and the Project-specific correspondence from NYNHP did not indicate any confirmed records of this species in the vicinity of the Project site. However, successional forestland is the dominant community on-site, and given that northern long-eared bats have been observed using younger forest types in New York State, the presence of this candidate endangered species cannot be ruled out.

Bog Turtle

Bog turtles are found in open early successional habitats such as wet meadows, sedge meadows, or open calcareous fens. These wetland communities are generally dominated by sedges and sphagnum moss with scattered trees and shrubs; common species include slender sedge (*Carex lasiocarpa*), bog buckbean (*Menyanthes trifoliata*), pitcher plant (*Sarracenia purpurea*), red maple,

⁴⁷ NYNHP. 2014. *Online Conservation Guide for Myotis septentrionalis*. Available at: <http://www.acris.nynhp.org/guide.php?id=7407> (Accessed April 4, 2014).

alder (*Alnus* spp.), dogwood (*Cornus* spp.), and willow (*Salix* spp.) (NYNHP, 2013c).⁴⁸ Habitat for this species typically includes cool, shallow, slow-moving water, deep, soft muck soils, and tussock-forming, low-lying herbaceous vegetation. Nesting and hibernation both occur within wetland habitat, with eggs often laid inside the upper part of an unshaded tussock (Gibbs et al., 2007).

The USFWS lists the bog turtle as threatened, while New York State lists this species as endangered. The state heritage rank is S2, indicating that the species is imperiled or highly vulnerable to extirpation. Although historically known from much of the state, extant populations of this species are concentrated in the Hudson River Valley. Extant bog turtle populations are also known from a small portion of Oswego County, and single locations in Seneca and Wayne Counties (NYNHP, 2013c). USFWS data indicates that the bog turtle is considered “historical” in Onondaga County, meaning that the species has been documented in the County, but more than 25 years ago, and has not been recently confirmed (Klemens, 2001).⁴⁹ The most significant threats to the bog turtle include: indirect effects due to development, including habitat loss, degradation, and fragmentation; and habitat degradation due to natural succession and encroachment by invasive plant species (USFWS, 2009)⁵⁰, particularly purple loosestrife and common reed. Other threats to this species include illegal collecting for the pet trade and road mortality (NYNHP, 2013c).

O’Brien and Gere identified one area of mixed wetland and upland vegetation along the lakeshore on the eastern side of Lakeview Point. This community, located at the base of the bluff, is largely dominated by non-native species (including purple loosestrife and common reed), and plant species typically associated with bog turtle were not observed (OBG, 2010b). No Project-related activities are proposed in this area, and there are no wetland habitats atop the wastebeds or landfill where the amphitheater is proposed. Furthermore, Project-specific correspondence from the NYNHP did not identify bog turtle as occurring in the vicinity of the Project site. Due to the lack of

⁴⁸ NYNHP. 2013c. *Online Conservation Guide for Glyptemys muhlenbergii*. Available at: <http://www.acris.nynhp.org/guide.php?id=7507> (Accessed April 7, 2014).

⁴⁹ Klemens, M. 2001. *Bog Turtle (Clemmys muhlenbergii), Northern Population Recovery Plan*. Prepared for United States Fish and Wildlife Service, Region 5, Hadley, MA. May 15, 2001.

⁵⁰ USFWS. 2009. *Bog Turtle (Clemmys [=Glyptemys] muhlenbergii) Spotlight Species Action Plan*. December 3, 2009.

suitable habitat, bog turtle is not expected to occur at the Project site and no impacts to this species are anticipated.

Eastern Massasauga

This small rattlesnake is State-listed as endangered and is a candidate for federal protection under the ESA. Range wide, the eastern massasauga has declined drastically since the mid-1970s, and now occurs in primarily in isolated and disjunct populations. In New York State, there are only two extant populations, in Onondaga and Genesee Counties, both of which are considered vulnerable. Massasaugas inhabit the edges of open-canopied wetlands with adjacent early successional uplands, and move seasonally between the upland and wetland habitats. Specifically, areas occupied by extant populations of massasaugas possess the following characteristics: (1) open, sunny areas intermixed with shaded areas, presumably for thermoregulation; (2) presence of the water table near the surface for hibernation; and (3) variable elevations between adjoining lowland and upland habitats. Threats to the species include habitat loss, fragmentation, and degradation; road mortality; improper habitat management practices, such as water level drawdowns; and illegal collecting and harvesting (Szymanski, 1998).⁵¹

The single documented occurrence in Onondaga County is in a boggy forested wetland approximately 9 miles northeast of the Project site. As indicated above, there are no wetland habitats atop the wastebeds or landfill where the majority of the amphitheater development is proposed. Furthermore, Project-specific correspondence from the NYNHP did not identify massasauga as occurring in the vicinity of the Project site. Due to the lack of suitable habitat, eastern massasauga is not expected to occur at the Project site and no impacts to this species are anticipated.

In addition, the results of on-site surveys and existing data sources, including the NYS Amphibian and Reptile Atlas, the BBS, the BBA, and the CBC, were consulted to assess the potential presence of state- and/or federally-listed threatened and endangered species. The NYS Amphibian and Reptile Atlas documented one state-listed species of special concern, wood turtle, in the vicinity of the Project site

⁵¹ Szymanski, J.A. 1998. *Status Assessment for the Eastern Massasauga (Sistrurus c. catenatus)*. U.S. Fish and Wildlife Service, Fort Snelling, MN.

(NYSDEC, 2007). BBS data indicate that one state-listed endangered species (black tern), four state-listed threatened species (common tern, northern harrier, upland sandpiper, and Henslow's sparrow), and eleven state-listed species of special concern (American bittern, sharp-shinned hawk, Cooper's hawk, osprey, red-headed woodpecker, horned lark, golden-winged warbler, cerulean warbler, yellow-breasted chat, vesper sparrow, and grasshopper sparrow) have been recorded in the general area of the Project site (Sauer et al., 2014). According to BBA data, two state-listed threatened species (pied-bill grebe and northern harrier) and seven state-listed species of special concern (osprey, sharp-shinned hawk, Cooper's hawk, horned lark, common nighthawk, red-headed woodpecker, and grasshopper sparrow) have been documented in the vicinity of the Project site (NYSDEC, 2014). According to CBC data, one state-listed endangered species (peregrine falcon), three state-listed threatened species (pied-billed grebe, bald eagle, and northern harrier) and six state-listed special concern species (common loon, sharp-shinned hawk, Cooper's hawk, northern goshawk, red-shouldered hawk, and horned lark) have been observed in the vicinity of the Project area (National Audubon Society, 2014).

A summary of state-listed wildlife species documented to occur in the vicinity of the Project site is presented below in Table 2. Please note: only those species with an "OS" prefix in the source column were actually observed on-site.

Table 2. State-listed Wildlife Species Documented in the Vicinity of Onondaga Lake.

Common Name	Scientific Name	NYS Legal Status	Source ¹
Birds			
Black Tern	<i>Chlidonias niger</i>	Endangered	BBS
Peregrine Falcon	<i>Falco peregrinus</i>	Endangered	CBC
Common Tern	<i>Sterna hirundo</i>	Threatened	BBS
Henslow's Sparrow	<i>Ammodramus henslowii</i>	Threatened	BBS
Upland Sandpiper	<i>Bartramia longicauda</i>	Threatened	BBS
Northern Harrier	<i>Circus cyaneus</i>	Threatened	BBS, BBA, CBC
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened	OS-OBG, CBC
Pied-billed Grebe	<i>Podilymbus podiceps</i>	Threatened	BBA, CBC
Cooper's Hawk	<i>Accipiter cooperii</i>	Special Concern	OS-OBG, BBS, BBA, CBC
Northern Goshawk	<i>Accipiter gentilis</i>	Special Concern	CBC
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Special Concern	BBS, BBA, CBC
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Special Concern	BBS, BBA
American Bittern	<i>Botaurus lentiginosus</i>	Special Concern	BBS

Common Name	Scientific Name	NYS Legal Status	Source ¹
Red-shouldered Hawk	<i>Buteo lineatus</i>	Special Concern	CBC
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern	BBA
Cerulean Warbler	<i>Dendroica cerulean</i>	Special Concern	BBS
Horned Lark	<i>Eremophila alpestris</i>	Special Concern	BBS, BBA, CBC
Common Loon	<i>Gavia immer</i>	Special Concern	CBC
Yellow-breasted Chat	<i>Icteria virens</i>	Special Concern	BBS
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Special Concern	BBS, BBA
Osprey	<i>Pandion haliaetus</i>	Special Concern	OS-EDR, BBS, BBA
Vesper Sparrow	<i>Pooecetes gramineus</i>	Special Concern	BBS
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Special Concern	BBS
Reptiles			
Bog Turtle ²	<i>Clemmys muhlenbergii</i>	Endangered	FWS
Eastern Massasauga ³	<i>Sistrurus catenatus</i>	Endangered	FWS
Wood Turtle	<i>Glyptemys insculpta</i>	Special Concern	ARA
Mammals			
Indiana Bat ⁴	<i>Myotis sodalis</i>	Endangered	OS-NHP, FWS
Eastern Small-footed Bat	<i>Myotis leibii</i>	Special Concern	FWS
Fish			
Lake Sturgeon	<i>Acipenser fulvescens</i>	Threatened	OCDWEP/SUNY-ESF

¹ Source: BBS = USGS Breeding Bird Survey; BBA = New York State Breeding Bird Atlas; CBC = Audubon Christmas Bird Count; ARA = New York State Amphibian and Reptile Atlas; OS-NHP = Project-specific Natural Heritage Program correspondence (species identified as occurring within 0.25 mile the Project site); FWS = US Fish & Wildlife Service consultation website (includes records for all of Onondaga County); OCDWEP/SUNY-ESF = Onondaga County Department of Water Environment Protection and SUNY College of Environmental Science and Forestry; OS-OBG = on-site ecological surveys conducted by O'Brien & Gere; OS-EDR = on-site ecological surveys conducted by EDR.

² Also federally-listed as threatened.

³ Also a candidate for federal listing.

⁴ Also federally-listed as endangered.

3.4.2 Potential Impacts

3.4.2.1 Construction

Anticipated construction-related impacts to vegetation, wildlife, and listed threatened and endangered species are outlined below.

3.4.2.1.1 Vegetation

Project construction will result in temporary and permanent impacts to vegetation at the Project site. All of the plant species observed at the Project site are common in New York State. Therefore, no plant species will be extirpated or significantly reduced in abundance as a result of construction activities.

Construction-related impacts to vegetation include cutting/clearing, removal of stumps and root systems, and increased exposure/disturbance of soil. Along with direct loss of (and damage to) vegetation, these impacts can result in a loss of wildlife food and cover, increased soil erosion and sedimentation, a disruption of normal nutrient cycling, and the introduction or spread of invasive plant species. Impacts to vegetation will result from site preparation, earth-moving, and excavation/backfilling activities associated with construction/installation of staging areas, access roads, foundations, buried utilities, lawns, and landscaping (i.e., consistent with the impacts currently taking place as a result of ongoing remedial construction – see Appendix C). These activities will result in disturbance of up to approximately 78 acres of shrub/forest vegetation and 22 acres of capped landfill vegetation at the Project site.

3.4.2.1.2 Fish and Wildlife

Construction-related impacts to wildlife are anticipated to consist of limited incidental injury and mortality due to construction activity and vehicular movement, construction-related silt and sedimentation impacts on aquatic organisms, habitat disturbance/loss associated with clearing and earth-moving activities, and displacement of wildlife due to increased noise and human activities. Each of these potential impacts is described below:

Incidental Injury or Mortality

Incidental injury and mortality should be limited primarily to sedentary/slow-moving species such as small mammals, reptiles, and amphibians that are unable to move out of the area being disturbed by construction. If construction occurs during the nesting season, wildlife subject to mortality could also include the eggs and/or young offspring of nesting birds, as well as immature mammalian species that are not yet fully mobile. More mobile species and mature individuals should be able to vacate areas that are being disturbed by construction.

Silt and Sedimentation

Earth-moving activities (including foundation excavation and back-fill, installation of buried utilities, widening of existing roads, and construction of new access roads) may result in sediment and siltation impacts to aquatic habitat. These impacts are most likely to occur downslope of areas subject to significant earth-moving activity. Siltation and sedimentation of water bodies can adversely affect water quality and aquatic habitat. It can also interfere with the respiration of aquatic organisms and the survival of fish and amphibian eggs and larvae.

Habitat Disturbance/Loss

A maximum of approximately 78 acres of shrubland/forest and 22 acres of capped landfill vegetation will be disturbed during construction. Of this total, approximately 20 acres will be converted to built facilities, while the remaining acreage will be converted to lawns and landscaped areas (approximately 50 acres) and restored to natural communities (approximately 30 acres) at the completion of construction. Depending on the timing of construction activities, project construction may reduce the availability of stopover habitat for migratory birds at the project site, both directly, through the loss of habitat, and indirectly, by inducing avoidance of stopover habitat in response to visual and/or noise disturbance. However, it should be noted that ongoing remedial construction activities have been taking place along the western shore of Onondaga Lake for the past several years, as depicted below in Image 3-1 (see also photo log included as Appendix C).



Image 3-1: 2014 Aerial Photograph of Project Area

Displacement

Some wildlife displacement will also occur due to the noise and human activity associated with Project construction. The significance of this impact will vary by species and the seasonal timing of construction activities. Within New York State, peak breeding time for birds common to successional forest and grassland habitat occurs in late spring and early summer (i.e., May and June). If construction begins before the initiation of breeding activities, then most breeding birds would likely avoid nesting in active construction areas. If construction begins during the breeding season, then some breeding birds are expected to remain in the area, increasing their risk of construction-related injury or mortality, while others will likely relocate to similar habitats nearby, if available. However, as a result of ongoing remediation efforts, the western shoreline of Onondaga Lake (including portions of the Project site) has been experiencing disturbance from construction-related machinery for many years, during both daytime and nighttime hours, as depicted in Image 3-1 above (see also Appendix C). Therefore, wildlife in and around the Project Site has habituated to noise and human activity association with construction efforts. Significant impacts associated with wildlife displacement are not anticipated.

3.4.2.1.3 Threatened and Endangered Species

As described above in Section 3.4.1.2.6, there is no habitat at the Project site for bog turtle or eastern massasauga. Consequently, construction of the proposed Project will have no adverse impact on these

species. Similarly, there are no known occurrences of rare or endangered plant species at the Project site, and no construction-related impacts to listed plants or significant natural communities are anticipated.

The response letter from NYNHP indicates several occurrences of Indiana bat adjacent to the Project site, which provides suitable roosting and foraging habitat for Indiana and northern long-eared bat, and is within the range of the nearest hibernaculum. Therefore, it is assumed that both these protected bat species may utilize the Project site. If construction occurs during spring, summer, or fall when bats are active (i.e., not hibernating), roosting bats could be subject to mortality as a result of site clearing activities. In addition, human activity and noise associated with Project construction could result in disturbance/displacement of protected bats. It is anticipated that any displaced bats would move into similar habitat found both to the north and south of the Project site.

Additional listed species documented in the area are listed above in Table 2. All of these species were detected in low numbers, and most were not actually observed at the Project site. Therefore, the potential risk of Project construction disturbing these species is considered remote.

3.4.2.2 Operation

3.4.2.2.1 *Vegetation*

Project construction will result in permanent conversion of approximately 70 acres of vegetated land to unvegetated/built facilities (e.g., buildings, roads/trails, lawn) at the Project site. It should be noted that for vegetation, permanent impacts include both conversion of natural communities to built facilities, and conversion of one vegetative community to another (e.g., successional shrubland to mowed lawn) for the life of the Project. This conversion will occur throughout the Project site. A total of approximately 30 acres of existing vegetation will be restored or allowed to regenerate to natural communities once construction is complete. Other than minor disturbances associated with routine maintenance (e.g., mowing) and occasional repair activities, as needed, no additional disturbance to plants and vegetative communities are anticipated as a result of Project operation.

3.4.2.2.2 *Fish and Wildlife*

Operational-related impacts to wildlife are anticipated to consist of habitat loss and displacement of wildlife due to increased noise and human activities. Each of these potential impacts is described below:

Habitat Loss

A total of up to approximately 70 acres of existing wildlife habitat (successional shrubland/forest and capped landfill) will be converted to built facilities and maintained lawns/parkland. Therefore, portions of the existing successional habitat currently on-site will be unavailable as wildlife habitat throughout the operational life of the Lakeview Amphitheater. As indicated above, the Project site is currently part of the largest relatively intact, mostly undeveloped area along the western shoreline of Onondaga Lake. The two County-owned parcels along the west shore total approximately 400 acres of undeveloped and minimally developed land (the existing multipurpose trail traverses both parcels from end to end, with scattered rain shelters and benches). The conversion of up to approximately 70 acres of undeveloped/successional shrubland/forest and grassland (capped landfill) at the Project site to built communities and mowed lawns represents a somewhat significant loss of existing wildlife habitat (i.e., approximately 18% of the minimally developed/undeveloped County-owned land on the west shore).

Disturbance/Displacement

Habitat alteration and disturbance resulting from the operation of the Lakeview Amphitheater could make adjacent areas unsuitable or less suitable for nesting, foraging, resting, or other wildlife use. The true amount of wildlife habitat altered by the Project may extend beyond the functional project footprint, due to the increased human activity, along with the sporadic bright lighting and high sound levels from amphitheater events. However, as previously indicated the western shoreline of Onondaga Lake (including portions of the Project site) has been experiencing disturbance from construction-related machinery for many years, during both daytime and nighttime hours. Therefore, wildlife in and around the Project Site has habituated to noise and human activity association with construction efforts. Significant impacts associated with wildlife displacement are not anticipated.

3.4.2.2.3 Threatened and Endangered Species

As described above in Section 3.4.1.2.6, there is no habitat at the Project site for bog turtle or eastern massasauga. Consequently, operation of the proposed Project will have no adverse impact on these species. Similarly, there are no known occurrences of rare or endangered plant species at the Project site, and no operational impacts to listed plants or significant natural communities are anticipated.

Human activity and noise associated with events at the Lakeview Amphitheater could result in disturbance or displacement of protected bat species. It is anticipated that any displaced bats would move into similar habitat found both to the north and south of the Project site.

Additional listed species documented in the area are listed above in Table 2. All of these species were detected in low numbers, and most were not actually observed at the Project site. Therefore, the potential risk for the operating amphitheater to disturb these species is considered remote.

3.4.3 Proposed Mitigation

3.4.3.1 Vegetation

Mitigation of impacts to vegetation will be accomplished primarily through careful site planning. EDR ecologists are collaborating with EDR landscape architects, along with other Project consultants and county officials, in the development of an overall Project master plan that maximizes the protection/integration of natural communities to the extent practicable (Figure 4). In addition, a comprehensive sediment and erosion control plan will be developed and implemented to protect adjacent undisturbed vegetation and other ecological resources.

Mitigation measures to avoid or minimize impacts to vegetation will also include delineating those natural communities where no disturbance or vehicular activities are allowed, educating the construction workforce on respecting and adhering to the physical boundaries of off-limit areas, employing best management practices during construction, and maintaining a clean work area within the designated construction sites. Following construction activities, temporarily disturbed areas will be seeded (and stabilized with mulch and/or straw if necessary) to reestablish vegetative cover in these areas. Controls will be put in place to

promote access to designated areas and discourage trespass in sensitive parts of the site and surrounding parcels. Good landscape design practice will be implemented that provides adequate wayfinding features, natural barriers, and enhanced access pathways in order to promote proper travel, protect the neighboring sensitive habitats, and discourage travel into areas intended to remain in a natural state.

3.4.3.2 Fish and Wildlife

As previously discussed, construction-related impacts to fish and wildlife should be limited to incidental injury and mortality due to construction activity and vehicular movement, construction-related silt and sedimentation impacts on aquatic organisms, habitat disturbance/loss associated with clearing and earth moving activities, and displacement due to increased noise and human activities. Mitigation of impacts related to construction activity will be accomplished through careful site design (e.g., avoiding sensitive habitat), adherence to designated construction limits, and avoidance of off-limit sensitive areas.

Work is being designed to avoid construction within the floodplain to the maximum extent practicable. Where work within the floodplain is unavoidable, design and construction will be done consistent with the applicable regulations intended to protect structures. Any work planned to take place within surface waters of the U.S. will be initiated only after review and approval has been completed by the appropriate regulatory agencies including NYSDEC Region 7 and the USACOE Buffalo District office. Any conditions imposed in the appropriate Nationwide Permits and/or specific permit conditions will be carefully followed, including proper pre-construction notifications and reporting.

To avoid and minimize impacts to aquatic resources resulting from construction-related siltation and sedimentation, an approved sediment and erosion control plan and Storm Water Pollution Prevention Plan (SWPPP) will be implemented. Proper implementation of these plans will assure compliance with NYSDEC State Pollutant Discharge Elimination System (SPDES) regulations and New York State Water Quality Standards.

Mitigation for impacts related to habitat loss/conversion will be accomplished through careful site design (i.e., minimizing the conversion of habitat to the extent practicable), restoration of all temporarily disturbed areas, and coordinating restoration efforts with the long-term remedy to be implemented by Honeywell.

Mitigation for avian impacts includes elements of the Project's design. Specifically, the buildings associated with the Project will incorporate bird-friendly design. The glass incorporated in the building will be designed to reduce reflectivity and transparency. Tint and pattern can be used to avoid strikes, which will reduce bird mortality, and lighting will be evaluated both in type and time of operation, to reduce attracting birds to the building.

3.4.3.3 Threatened and Endangered Species

Both Indiana and northern long-eared bats roost under the bark or in crevices/cavities of living, dying, and dead trees. As indicated above in Section 3.4.2.1.3, roosting bats could be subject to mortality as a result of site clearing activities if construction occurs during the spring, summer, or fall when bats are active (i.e., not hibernating). To avoid mortality of protected bat species that could be roosting in trees at the Project site, tree cutting will be restricted to between October 15 and March 31, when Indiana and northern long-eared bat are hibernating off-site. It is anticipated that the tree cutting timeframe will be applied to trees greater than or equal to 5 inches diameter at breast height (dbh).

To minimize potential nighttime impacts associated with exterior lighting when the proposed facility is not in use, the minimum acceptable lighting to ensure security and safety will be used. In addition, all lighting fixtures associated with pedestrian pathways, roads, parking areas, and building exterior areas for the proposed facility will be "fully shielded" or fitted with opaque hoods, shields, louvers, shades, and/or other devices to insure that all light generated by the light source is directed downward and not outward horizontally. The lighting fixtures will be consistent with the intent of various "Dark Sky" initiatives.

Construction and operation of the proposed Project will not result in any other significant impacts to threatened and endangered species. Consequently, no further mitigation measures are proposed.

3.5 VISUAL AND AESTHETIC RESOURCES

3.5.1 Existing Conditions

The visual study area was defined as the area within a one-mile radius⁵² of both potential Lakeview Point Project locations (i.e., the Cove and the Beacon). The study area includes approximately 3.4 square miles and includes portions of the Towns of Geddes and Salina and a portion of the Hamlet of Lakeland. The Village of Liverpool is located at the northeastern limit of the visual study area and the City of Syracuse is approximately 1.4 miles to the southeast. The extent of the visual study area is illustrated in Figure 9.

The visual study area is located in the lowlands portion of the Erie-Ontario Plain physiographic province, which is characterized by low lying till plains, drumlins, outwash plains and small areas of lacustrine origin (USDA SCS, 1977).⁵³ Roughly half of the visual study area overlaps the central portion of Onondaga Lake. Topography in the remainder of the visual study area is characterized by a relatively level area comprised of Solvay waste beds and a capped steel mill landfill in the central portion of the study area and extending to the southeast; a low lying area surrounding the channelized Nine-Mile Creek and a solidified industrial waste lagoon/tailings pond in the southwestern portion of the study area; and a moderately steep hillside in the western portion of the study area. Elevations range from approximately 360 feet amsl along the Onondaga Lake shoreline to approximately 510 feet amsl in the western portion of the study area (see Figure 2).

Land use within the one-mile-radius visual study area includes recreational and residential uses as well as areas of vacant land. Recreational land use within the study area is associated with Onondaga Lake, Onondaga Lake County Park, the New York State Fairgrounds, and Pope's Grove Golf Course. Medium-density residential development with small interspersed areas of forest or grassland/shrubland occupies the western portion of the visual study area, associated with the Hamlet of Lakeland. Vacant land is associated with former waste beds in the vicinity of the Project site and in the southwestern portion of the study area. Vegetation within the study area is a mix of lawns, landscape/streetscape plantings, grassland, successional shrubland/forestland, and small areas of mature deciduous forest.

⁵² A 1.0-mile study area is typically used as an industry standard for visual assessments for small projects such as buildings, communication towers, and/or electrical utility lines.

⁵³ USDA Soil Conservation Service (SCS). 1997. *Soil Survey of Onondaga County, NY*, January 1977.

The Project site is located on Lakeview Point, a manmade landform extending into Onondaga Lake. The Project site is located within Onondaga Lake Park; is adjacent to the New York State Fairgrounds parking lots and the I-690 and NYS Route 695 exchange; and is east-southeast of the mouth of Nine Mile Creek. The Project site is presently vacant and covered by early successional forestland. A multi-use recreational trail has recently been constructed through the Project site that connects to the existing West Shore trail located northwest of the site.

3.5.1.1 Visually Sensitive Resources

To identify visually sensitive resources within the visual study area, EDR consulted a variety of data sources, including: digital geospatial data (shapefiles) obtained primarily through the NYS GIS Clearinghouse or the Environmental Systems Research Institute (ESRI); numerous national, state, county and local agency/program websites, as well as websites specific to identified resources; the DeLorme Atlas and Gazetteer for New York State; USGS 7.5-minute topographical maps; and web mapping services such as Google Maps. All inventoried aesthetic resources are depicted in Figure 10 and listed in Appendix D.

Visually sensitive resources generally fall into two categories: 1) aesthetic resources that have been formally recognized, such as buildings and landscapes listed on the National or State Register of Historic Places or publicly owned properties such as State Parks, or 2) places of concentrated activity such as schools, villages centers, and heavily used roadways, or landscapes of high aesthetic merit that may be considered important by local residents. The former category includes various resources that have been identified as aesthetic resources of statewide significance by NYSDEC Visual Policy. Within the one-mile study area, these resources include the following:

Sites Listed on the State and/or National Register of Historic Places (NRHP)

EDR reviewed the National Register of Historic Places (NRHP) and New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) website, as well as a NYSOPRHP shapefile for buildings, structures, objects and historic districts listed in the NRHP, in order to identify significant historic

buildings and/or districts located within one mile of the proposed Project (NRHP, 2014a,⁵⁴ 2014b;⁵⁵ NYSOPRHP, 2012,⁵⁶ 2014a⁵⁷). No NRHP-listed historic sites or districts occur within the visual study area. The NYSOPRHP State Preservation Historical Information Network Exchange (SPHINX) database was also reviewed to identify NRHP-eligible properties (NYSOPRHP, 2014c).⁵⁸ This database identifies 24 structures within the New York State Fairgrounds as NRHP-eligible, 10 of which fall within the visual study area.

State Parks

Review of the NYSOPRHP website indicates that there are no New York State Parks located within the visual study area. The State Park at the Fair is located in front of the Horticulture Building, just outside the study area (NYSOPRHP, 2014d).⁵⁹

Urban Cultural Parks/Heritage Areas

The visual study area lies wholly within the Erie Canalway National Heritage Corridor. This national heritage corridor encompasses New York's canal system and the communities that grew along its shores (NYSOPRHP, 2014e).⁶⁰ The mission of the Erie Canalway National Heritage Corridor Commission is to "assist historic preservation, conservation, recreation, interpretation, tourism and community development along the Erie Canalway Heritage Corridor among the Canalway's many stakeholders, and to enhance the Canalway's national significance for all to use and enjoy" (NYSOPRHP, 2007).⁶¹

⁵⁴ National Register of Historic Places. 2014a. *Historic Districts* [website]. Available at: <http://www.nationalregisterofhistoricplaces.com/districts.html> (Accessed April 9, 2014).

⁵⁵ National Register of Historic Places. 2014b. *State Listings* [website]. Available at: <http://www.nationalregisterofhistoricplaces.com/state.html> (Accessed April 9, 2014).

⁵⁶ NYSOPRHP. 2012. *National Register Sites* [shapefile]. File "allnr.shp" received by EDR staff via email September 18, 2012 from Cristina Croll at New York State Office of Parks, Recreation and Historic Preservation.

⁵⁷ NYSOPRHP. 2014c. *The Geographic Information System for Archeology and National Register* [website]. Available at: <http://www.oprhp.state.ny.us/nr/main.asp> (Accessed April 9, 2014).

⁵⁸ NYSOPRHP. 2014b. *SPHINX System*. Available at: <http://pwa.parks.ny.gov/SPHINX/> (Accessed March 10, 2014).

⁵⁹ NYSOPRHP. 2014d. *State Parks* [website]. Available at: <http://nysparks.state.ny.us/parks/> (Accessed April 11, 2014).

⁶⁰ NYSOPRHP. 2014e. *Heritage Areas* [website]. Available at: <http://nysparks.state.ny.us/historic-preservation/heritage-areas.aspx> (Accessed April 11, 2014).

⁶¹ New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP). 2007. *Heritage Development Resource Guide*. Available at: <http://nysparks.com/historic-preservation/documents/HeritageDevelopmentResourceGuide.pdf> (Accessed April 11, 2014).

State Forest Preserves

New York State Forest Preserves occur within the Adirondack and Catskill Parks, neither of which are located within the visual study area (NYSDEC, 2014c).⁶²

National Wildlife Refuges and State Wildlife Management Areas

Review of the U.S. Fish and Wildlife Service National Wildlife Refuge System website and the NYSDEC website indicate that no National Wildlife Refuges or State Wildlife Management Areas are located within the visual study area (USFWS, 2014;⁶³ NYSDEC, 2014d⁶⁴).

National Natural Landmarks

Review of the National Park Service National Natural Landmarks Program website indicates that no National Natural Landmarks are located within the visual study area (NPS, 2014a).⁶⁵

National Parks, Recreation Areas, Seashores and/or Forests

Review of the National Park Service and U.S. Forest Service websites regarding National Park Service Lands and National Forests (respectively) indicates that no National Parks, Recreation Areas, Seashores or Forests are located within the visual study area (NPS, 2014b;⁶⁶ USFS, 2014⁶⁷).

National or State Designated Wild, Scenic and Recreational Rivers

Review of the National Wild and Scenic Rivers website and the NYSDEC Wild, Scenic and Recreational Rivers website indicates that no formally designated wild, scenic or recreational rivers are located within the visual study area (National Wild and Scenic Rivers, 2014;⁶⁸ NYSDEC, 2014e⁶⁹). The Nationwide Rivers

⁶² New York State Department of Environmental Conservation (NYSDEC). 2014c. New York's Forest Preserve [website]. Available at: <http://www.dec.ny.gov/lands/4960.html> (Accessed April 9, 2014).

⁶³ United States Fish and Wildlife Service. 2014. *National Wildlife Refuge Locator* [website]. Available at: <http://www.fws.gov/refuges/refugeLocatorMaps/index.html> (Accessed April 11, 2014).

⁶⁴ NYSDEC. 2014d. *Wildlife Management Areas* [website]. Available at: <http://www.dec.ny.gov/outdoor/7768.html> (Accessed April 9, 2014).

⁶⁵ National Park Service (NPS). 2014a. *National Natural Landmarks in New York* [website]. Available at: <http://www.nature.nps.gov/nml/state.cfm?State=NY> (Accessed April 9, 2014).

⁶⁶ NPS. 2014b. *Find a Park in NY* [website]. Available at: <http://www.nps.gov/state/ny/index.htm> (Accessed April 4, 2014).

⁶⁷ United States Forest Service. 2014. *Find a Forest by State* [website]. Available at: http://www.fs.fed.us/recreation/map/state_list.shtml (Accessed April 11, 2014).

⁶⁸ National Wild and Scenic Rivers. 2014. *Wild & Scenic Rivers: New York* [website]. Available at: <http://www.rivers.gov/new-york.php> (Accessed April 9, 2014).

⁶⁹ NYSDEC. 2014e. *Wild, Scenic and Recreational Rivers* [website]. Available at: <http://www.dec.ny.gov/permits/32739.html> (Accessed April 9, 2014).

Inventory (NRI) was also consulted, as it is somewhat equivalent to an eligible-for-listing designation, but did not include any rivers located within the study area (NPS, 2014c).⁷⁰

Sites, Areas, Lakes, Reservoirs or Highways Designated or Eligible as Scenic

There are no state or nationally designated scenic byways located within the visual study area (NYSDOT, 2014⁷¹; USDOT, 2014).⁷²

Scenic Areas of Statewide Significance

According to the NYS Department of State (2014)⁷³, there are no Scenic Areas of Statewide Significance within the visual study area.

State or Federally Designated Trails

No state or federally designated trails are located within the study area (NPS, 2014d;⁷⁴ NYSOPRHP, 2014f⁷⁵).

Adirondack Park Scenic Vistas

No portion of the Adirondack Park is located within the study area.

Palisades Park

No portion of Palisades Park is located within the study area.

State Nature and Historic Preserve Areas and Bond Act Properties (Exceptional Scenic Beauty, Open Space)

Review of existing data did not identify any State Nature or Historic Preserve Areas or Bond Act Properties within the study area that were purchased under the Exceptional Scenic Beauty or Open Space Category.

⁷⁰ NPS. 2014c. *Nationwide Rivers Inventory* [website]. Available at: <http://www.nps.gov/ncrc/programs/rta/nri/index.html> (Accessed April 9, 2014).

⁷¹ New York State Department of Transportation (NYSDOT). 2014. *New York State Scenic Byways* [website]. Available at: <https://www.dot.ny.gov/scenic-byways> (Accessed April 9, 2014).

⁷² United States Department of Transportation (USDOT). 2014. *America's Byways: New York* [website]. Available at: <http://www.fhwa.dot.gov/byways/states/NY/maps> (Accessed April 9, 2014).

⁷³ New York State Department of State. 2014. *Scenic Areas of Statewide Significance* [website]. Office of Planning and Development. Available at: <http://www.dos.ny.gov/opd/programs/consistency/scenicass.html> (Accessed April 9, 2014).

⁷⁴ NPS. 2014d. *National Trails System* [website]. Available at: http://www.nps.gov/nts/nts_trails.html (Accessed April 9, 2014).

⁷⁵ NYSOPRHP. 2014f. *Trails* [website]. Available at: <http://www.nysparks.com/recreation/trails/> (Accessed April 11, 2014).

Locally Important Resources

In addition to the scenic resources of statewide significance listed above, the visual study area also includes areas that are regionally or locally significant, sensitive to visual impacts, and/or receive significant public/recreational use. These resources include the Hamlet of Lakeland, the Village of Liverpool (adjacent to the study area), Interstate 690 and State Route 695, the New York State Fairgrounds, and a number of recreational resources, described below.

The Empire Expo Center/New York State Fairground is located in the southern portion of the visual study area. This 375-acre exhibition ground is used for a variety of exhibitions and trade fairs throughout the year, but is best known for annually hosting the New York State Fair. State Fair attendance is typically near 1 million visitors and it is estimated that an additional 1 million people attend non-fair events throughout the year (New York State Fair, 2014).⁷⁶

Onondaga Lake Park is the most popular park in Central New York with over 1 million visitors per year (Onondaga County Parks, 2014).⁷⁷ The park features seven miles of shoreline; offers paved trails, a marina, playground, and dog park; hosts special events, sporting competitions and festivals; and more. The park encompasses much of the shoreline of Onondaga Lake, including the entire shoreline within the visual study area. The portion of the park within the visual study area is relatively undeveloped, although a portion of the West Shore Trail extends into the northeastern portion of the study area. The West Shore Trail, also known as John Haley Memorial Trail, is a paved trail that wanders through 2 miles of woodlands along the western shore of Onondaga Lake. An expansion of this trail has recently been constructed that provides pedestrians and bicyclists access to the Project site.

Onondaga Lake is approximately 1 mile wide and 4.6 miles long and occupies roughly half of the visual study area. Recreational use of the lake includes boating and fishing. Recreational uses of Ninemile Creek within the study area include fishing and paddling.

⁷⁶ New York State Fair. 2014. *The Great New York State Fair* [website]. Available at: <http://www.nysfair.org/> (Accessed May 9, 2014).

⁷⁷ Onondaga County Parks. 2014. *Onondaga Lake Park* [website]. Available at: <http://onondagacountyparks.com/onondaga-lake-park/> (Accessed May 7, 2014).

Pope's Grove Golf Course is a nine-hole course located off of State Fair Boulevard, approximately 0.6 miles southwest of the Project site. Another notable recreational resource, located beyond the visual study area, is the Onondaga Creekwalk, which presently extends from Armory Square in downtown Syracuse to the southern shore of Onondaga Lake. The northern terminus of this popular trail is approximately 3.5 miles southeast of the Project site. Additionally, the Onondaga Yacht Club Boat Launch is located across the lake from the Project site, just at the border of the visual study area.

3.5.2 Potential Impacts

3.5.2.1 Construction

Visual impacts during construction will include removal of vegetation and soil disturbance on the Project site, as well as the addition of construction material and equipment to the Project site and local roads. Once construction activity and landscaping activities are complete, construction-related visual impacts will no longer occur.

3.5.2.2 Operation

Potential Project visibility was evaluated through viewshed analysis and field verification (ballooning). Project visibility and visual contrast with the existing landscape do not necessarily equate to an adverse visual impact in this situation. Adding a visually interesting focal point, attracting the attention of potential spectators, and creating a source of community pride are goals of this facility.

The appearance of the Project was illustrated by preparing computer-assisted wire frame renderings of the completed Project from representative/sensitive viewpoints throughout the visual study area.

3.5.2.2.1 *Viewshed Analysis*

Topographic viewshed maps for the Project were prepared using USGS digital elevation model (DEM) data (7.5-minute series), the location and height of the two proposed Lakeview Point concepts, and ESRI ArcGIS® software with the Spatial Analyst extension. A 1-mile radius topographic viewshed was mapped to illustrate potential visibility of the proposed Project (based on a maximum structure height of 87 feet above existing grade).

The ArcGIS program defines the viewshed (using topography only) by reading every cell of the DEM data and assigning a value based upon visibility from observation points throughout the 1-mile study area. The resulting topographic viewshed map defines the maximum area from which any portion of the completed Project could potentially be seen from ground-level vantage points (existing grade plus 1.7 meters to account for viewer height) within the study area (ignoring the screening effects of existing vegetation and structures).

Potential visibility of the proposed Project, as indicated by the topographic viewshed analyses, is illustrated in Figure 11, Sheet 1. This analysis indicates that some portion of the proposed Project could potentially be visible in approximately 94% of the 1-mile radius study area if it is constructed at the Beacon location, or approximately 89% of the 1-mile radius study area if it is constructed at the Cove location. Because the screening provided by vegetation and structures is not considered in this analysis, the topographic viewshed represents a "worst case" (maximum) assessment of potential Project visibility. Topographic viewshed maps assume that no trees exist, and are therefore very accurate in predicting where visibility will not occur due to topographic interference. However, they are less accurate in identifying areas from which the Project would actually be visible. Tall vegetation, buildings, and other structures can limit or eliminate visibility in areas indicated as having potential Project visibility in the topographic viewshed analysis.

Areas where this analysis indicates screening of views by intervening topography include portions of the shoreline around Lakeview Point, the shoreline near the southeastern limit of the study area, and portions of I-690 southeast of, and including, the interchange with State Route 695. Based on this analysis, all of the visually sensitive resources identified within the 1-mile study area are indicated as having potential views of some portion of the Project based on screening or partial screening provided by intervening topography alone (see Appendix D). The viewshed mapping of the two proposed Project locations are similar, but due to the higher elevation of the Beacon site, this location has greater visibility throughout the study area. Nearly all of the sensitive sites identified within the study area are indicated as having the potential for views of the Project, regardless of which location is chosen. The primary difference between the two proposed locations (with respect simply to the presence or absence of a view from any portion of a visually sensitive resource) is that some of the NRHP-eligible sites within the New York State Fairgrounds would not have views of the Project if it were located at the Cove site, whereas all of these structures are

indicated as having a potential view of the Project if it were located at the Beacon site (according to the topographic viewshed analysis).

To supplement the “worst case” topographic viewshed analysis, a vegetation viewshed was also prepared to illustrate the potential screening provided by forest vegetation. A base vegetation layer was created using the USGS 2006 National Land Cover Dataset (NLCD) to identify the mapped location of forest land (including the Deciduous Forest, Evergreen Forest and Mixed Forest NLCD classifications). The mapped locations of the forest land were assigned an assumed elevation of 40 feet, and added to the DEM. The viewshed analysis was then re-run, as described above. Once the viewshed analysis was completed, the areas covered by the forest vegetation layer were set to zero visibility using a Spatial Analyst conditional statement to reflect the fact that views within forested areas will generally be screened.

Because areas of mapped mature forest are somewhat limited within the study area (including several small areas scattered in the western portion of the study area and a small portion of Onondaga Lake Park adjacent to the State Fair parking area in the southeastern portion of the study area), factoring vegetation into the viewshed analysis results in a minor reduction in potential Project visibility (see Figure 11, Sheet 2). Within a 1-mile radius, the vegetative viewshed analysis indicates that approximately 87% of the study area could have views of the proposed Project if it is constructed in the Beacon location, or approximately 81% of the study area if it is constructed in the Cove location. According to this analysis, views of the Project will be more limited in the western portion of the study area than the topographic viewshed indicated. Portions of residential neighborhoods in Lakeland and a portion of Onondaga Lake Park’s West Shore Trail are indicated as being screened from view of the Project.

Because it accounts for the screening provided by mapped forest stands, the vegetation viewshed is a much more accurate representation of potential Project visibility. However, it is important to note that because screening provided by hedgerows, scrub vegetation, buildings and street/yard trees, as well as characteristics of the proposed Project components that influence visibility (color, distance from viewer, etc.), are not taken into consideration in the viewshed analyses, being within the viewshed does not necessarily equate to actual Project visibility. Areas of actual Project visibility are anticipated to be more limited than indicated by the viewshed analysis.

3.5.2.2.2 *Field Review*

Visibility of the proposed Project was also evaluated in the field on April 28, 2014. Two 15-foot by 6-foot helium-filled balloons were tethered at approximately the center of each of the proposed Project sites and raised to a height of 87 feet above existing grade. The purpose of this exercise was to provide a locational and scale reference to verify visibility of the proposed Project and to obtain photographs for subsequent use in the development of wire frame renderings. Partly sunny skies resulted in good visibility throughout the day.

During the field verification, an EDR field crew drove public roads and visited public vantage points within the 1-mile radius study area as well as points on the water and along the Onondaga Lake shoreline beyond the study area to document locations from which the Project would likely be visible, partially screened, or fully screened, based on the visibility of the balloons raised at the potential Project sites. Photos were taken from 101 representative viewpoints within the study area and around the lake (viewpoint locations are mapped in Figure 12 and corresponding photographs are presented in Appendix E). All photos were obtained using Nikon D200 and 5200 digital SLR cameras with a focal length between 28 and 35 mm (equivalent to between 45 and 55 mm on a standard 35 mm film camera). This focal length is the standard used in visual impact assessment because it most closely approximates normal human perception of spatial relationships and scale in the landscape. Viewpoint locations were determined using hand-held global positioning system (GPS) units and high resolution aerial photographs (digital ortho quarter quadrangles). The time and location of each photo was documented on field maps and data sheets (see Appendix F). Viewpoints photographed during field review generally represented the most open, unobstructed available views toward the Project.

Field review confirmed that actual Project visibility is likely to be more limited than suggested by viewshed mapping. This is primarily due to screening provided by buildings and street trees within more developed areas such as residential neighborhoods and the New York State Fairgrounds as well as some degree of screening by trees and scrub on Lakeview Point. Field review also indicates that the Beacon location is more visible in the southeastern portion of the visual study area (in the vicinity of the State Fair parking lots adjacent to I-690) than the Cove location; and that the Cove location is more visible from some areas in Lakeland than the Beacon location. Beyond the one-mile study area, field review indicates that the proposed Project would be visible in both potential locations along the northern, eastern and southern

shores of Onondaga Lake, including the northern terminus of Onondaga Creekwalk. Project visibility from the western shore was found to be more limited, and views from much of Onondaga Lake Park's West Shore trail were screened by tall vegetation. The Project was visible from areas near the shoreline within the Village of Liverpool but screened from view in locations further into the village. Similarly, both Concepts were visible from portions of Lakeland nearest to the Project, but visibility was intermittent at greater distances. The Project was not visible from viewpoints within the New York State Fairgrounds but the Beacon Concept was visible throughout the State Fair parking lot and the Cove Concept was visible from the northern end of the parking lot. Visibility from I-690 was variable, with only the Cove Concept visible from the West Shore Trail I-690 overpass; both Concepts visible from Viewpoint 61, west of the Project site; neither Concept is visible from Viewpoint 62 near the State Fairgrounds exit; and only the Beacon Concept visible from the walking bridge over I-690 between the Fairgrounds and the parking area.

3.5.2.2.3 Wire Frame Renderings

The photo documentation that resulted from EDR's field verification effort was used by C&S Companies for development of wire frame renderings. The wire frame renderings allow comparison between existing views and these same views following construction of the proposed Project in either the Beacon or the Cove location. Since the architectural design of the Project has not yet been determined, two different potential designs were used in developing the wire frame renderings; one that is more traditional and presents limited contrast to the landscape with its horizontal/gently rounded profile while the other design presents more of an architectural statement and visual focal point. These two designs represent opposite ends of the spectrum of potential architectural design currently under consideration. For the purposes of this analysis, in order to present a range from least visual contrast to most visual contrast, the more subtle/traditional design was placed in the lower-elevation Cove location and the higher contrasting/modern design was placed in the higher elevation Beacon location. However, the designs are not location-specific and either design (or another design altogether) could be constructed in either location. Because the renderings are intended to depict the proposed Project relative to existing conditions, they include existing features in the landscape that provide scale references and visual context for the Project; in some instances, these features may also serve to screen portions of the building.

Views from Across the Lake

Wire frame renderings were prepared to represent views of the Project that would be available from the opposite shoreline of Onondaga Lake. The selected viewpoint, referred to as Viewpoint 1, is located at the Onondaga Yacht Club Boat Launch directly across the lake from the Project site. From this viewpoint, both the Beacon and Cove Concepts are clearly visible and relatively unobscured by intervening vegetation and topography (Figure 13). Although the effect of distance limits the visual prominence of both the Beacon and Cove Concepts, their contrast to existing land use creates a new focal point in this view nonetheless. Both alternatives present a contrast to the undeveloped landscape, but the horizontal lines and low profile of the Cove Concept create less visual contrast to this view whereas the Beacon Concept creates a more noticeable break in the horizon and creates greater contrast with the landscape in terms of both line and form.

Views from the Water

Viewpoints 7 and 21 are representative of views of the Project from the lake on either side of Lakeview Point. Viewpoint 7 is located southeast of Lakeview Point and is therefore closer to the Beacon Concept, which is fully visible from this viewpoint, while the view of the Cove Concept is largely obscured by intervening topography and vegetation (Figure 14). The Beacon Concept dominates the view from Viewpoint 7, introducing a new and distinctive man-made feature to a view that was previously undeveloped. By contrast, the Cove Concept introduces minimal visual change to the landscape from this viewpoint. Viewpoint 21 is located northwest of Lakeview Point and is closer to the Cove Concept (Figure 15). As such, the Cove Concept is fully visible from this viewpoint. It introduces a large new structure to the previously undeveloped shoreline, and unlike other views of this Concept, is not screened by site vegetation or topography or tempered by the effects of distance. The Beacon Concept is also clearly visible on the horizon from this viewpoint. While the lines and form of the Beacon Concept present greater contrast with the landscape than the Cove Concept in this view, greater distance from the viewer and the unaltered foreground vegetation serve to reduce visual contrast of the Beacon Concept from this viewpoint.

Viewpoints 11 and 13 are both located northeast of Lakeview Point at distances of approximately 2,200 feet and 830 feet from shore, respectively. The Beacon Concept was modeled from Viewpoint 11 (Figure 16, Sheet 1). From this viewpoint, the structure is prominently visible, sitting atop the plateau and breaking the sky line in this view. It presents strong contrast to the line and form of the existing landscape and adds a

new and distinctive man-made structure to a view that was previously undeveloped. The Cove Concept was modeled from Viewpoint 13 and, although this is a closer view than the rendering of the Beacon Concept from Viewpoint 11, this alternative presents less contrast to the existing landscape due to the horizontal lines of the design and its lower elevation which results in substantial screening of the structure and limited interruption of the horizon line (Figure 16, Sheet 2).

Views from Adjacent Uplands

The appearance of each proposed alternative from adjacent uplands south of the site was illustrated from Viewpoint 24, which is located at the edge of the capped Crucible Landfill and near the western end of the State Fair parking area. Both proposed alternatives are located below the existing tree line in this view and are substantially screened by intervening topography (Figure 17). Once again, the lines and form of the Beacon Concept present a greater contrast with the landscape than the Cove Concept, with its primarily horizontal and subtly curved lines. While the Cove Concept is a less prominent change to the existing view, the design of the Beacon Concept creates a more distinctive focal point and adds visual interest from this viewpoint.

3.5.2.2.4 Night Lighting

No impacts from night lighting are anticipated during construction of the Project. It is anticipated that construction activities will be restricted to daytime hours and therefore no lighting during construction will be necessary.

As described in Section 3.5.2.2.3, the architectural design of the Project has not yet been finalized. Therefore, the precise effect of lighting cannot be determined. However, it is anticipated that the facility will host concerts, performances, and/or special events during the evening, and that during those events the Project will include significant lighting. It is anticipated that the effect of lighting during these events will generally be consistent with the effect of lighting from other existing, well-established, temporary (i.e., event-based) occurrences at the adjacent New York State Fairgrounds.

During periods when the facility is not in use, it is anticipated that some exterior lighting will be necessary for security and public safety. Exterior lighting associated with periods when the facility is not in use may be

necessary along the exterior of the amphitheater and other associated structures, along pathways and roads, and in parking areas.

3.5.3 Mitigation

Project visibility and visual contrast with the existing landscape do not necessarily equate to an adverse visual impact in this situation. Adding a visually interesting focal point, attracting the attention of potential spectators, and creating a source of community pride are goals of this facility. If these goals are to be achieved while minimizing visual contrast with the existing landscape, the Cove Concept represents a more subtle addition to the landscape from most viewpoints within the visual study area. The only exception would be views from the lake, particularly immediately east of Lakeview Point. If the desire is to make an architectural statement and create a prominent landmark then the Beacon alternative is better suited to that purpose. Since the visual change that this Project represents is not necessarily an adverse impact, no formal mitigation measures are proposed.

In addition the Project design is intended, in part, to blend with the environment through use of textures and materials (e.g., stone, wood) representative of nature.

To minimize potential nighttime impacts from exterior lighting when the proposed facility is not in use, exterior lighting will be restricted to the minimum acceptable lighting to ensure security and safety. In addition, all lighting fixtures associated with pedestrian pathways, roads, parking areas, and building exterior areas for the proposed facility will be “fully shielded” or fitted with opaque hoods, shields, louvers, shades, and/or other devices to insure that all light generated by the light source is directed downward and not outward horizontally. The lighting fixtures will be consistent with the intent of various “Dark Sky” initiatives (generally speaking; e.g., Dark Sky Society, 2009⁷⁸).

⁷⁸ The Dark Sky Society. 2009. Guidelines for Good Exterior Lighting Plans. Available at: <http://www.darksksociety.org/handouts/LightingPlanGuidelines.pdf>.

3.6 HISTORIC, CULTURAL, AND ARCHEOLOGICAL RESOURCES

3.6.1 *Existing Conditions*

Consultation with the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) and review of previously prepared cultural resources studies prepared in advance of ongoing hazardous waste remediation activities and dredging were reviewed to evaluate the potential presence of significant archeological sites and historic properties located within the area that could potentially be affected by the proposed Project.

3.6.1.1 Archeological Resources

According to the NYSOPRHP online GIS database (NYSOPRHP, 2014a;⁷⁹ Image 3-2) the Project site is within an archeologically sensitive area, indicating that the Project site lies within one-mile of one or more previously reported archeological sites.

⁷⁹ NYSOPRHP. 2014a. *NY State Historic Preservation Office GIS – Public Access*. Available at: <http://pwa.parks.ny.gov/nr/> (Accessed March 10, 2014).

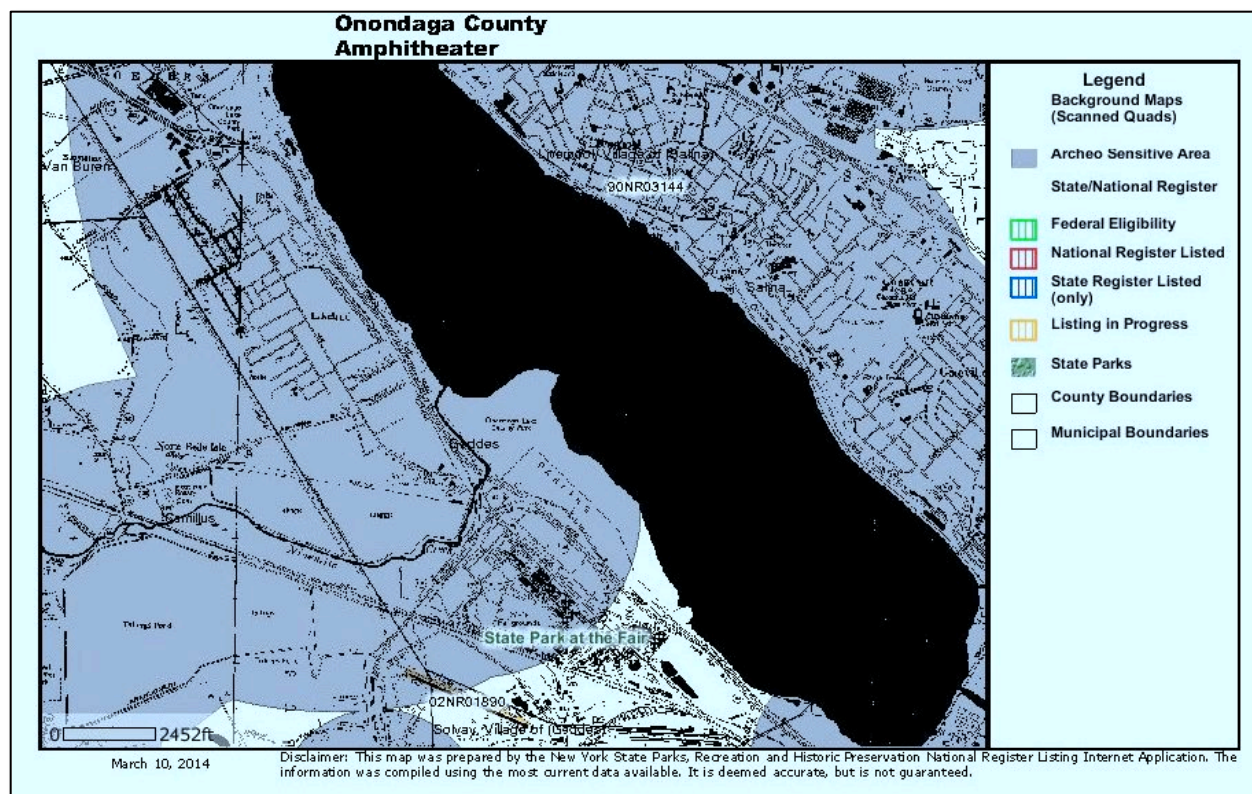


Image 4-2: Screen Capture from NYSORPHP's Online GIS Database
Showing Archeologically Sensitive Areas in the Vicinity of the Project Site (NYSORPHP, 2014a).

There are numerous previously identified pre-contact Native American archeological sites around Onondaga Lake, including in the vicinity of Ninemile Creek. Pre-contact archeological sites located along or around the lake shoreline and waterways that flow into and out of the lake include hamlets, villages, an earthwork, campsites, traces of occupation, and burial mounds that date from as early as the Late Archaic Period (ca. 4000 to 1500 B.C.) through the Late Woodland Period (ca., A.D. 1000-1500). During and subsequent to the period of early contact with European colonial populations, members of the Onondaga Nation of the Haudenosaunee (or Iroquois) Confederacy occupied the shores of Onondaga Lake and surrounding areas (Hohman, 2004⁸⁰; Hohman and Parsons, 2011a⁸¹). The Onondaga Nation states that all areas of the lake and shoreline were used by pre-contact and historic-period Native American

⁸⁰ Hohman, C.D. 2004. Cultural Resource Management Report, Phase 1A Cultural Resource Assessment, Onondaga Lake Project, Onondaga Lake, Wastebed B and Wastebed 13, Towns of Camillus, Geddes and Salina and City of Syracuse, Onondaga County, New York. Public Archaeological Facility, Binghamton, New York.

⁸¹ Hohman, C.D. and Parsons. 2011a. Cultural Resource Management Report, Phase 1B Reconnaissance Survey, Onondaga Lake Project, Upland and Shoreline Area, Wastebeds 1-8 Shoreline and Wastebeds 1-8 Supplement Work, Towns of Camillus and Geddes, Onondaga County, New York. Public Archaeology Facility, Binghamton University, Binghamton, New York.

populations and the areas adjacent to the lake should be considered highly sensitive for archeological resources (Onondaga Nation, 2011⁸²).

During the mid-to-late nineteenth century, the portions of Onondaga Lake's shoreline adjacent to the Project site were developed with recreational and tourist facilities. In 1872, the Lakeview Point Resort (built in the vicinity of the Project site; see Image in Section 2.1) became the first of many hotels, restaurants, resorts, and amusement parks lining the shores of Onondaga Lake (Thompson, 2002).⁸³ As described in Section 3.1.1, starting in the early 1900's, the Solvay Process Company used the Project site and adjacent areas as a repository for wastes generated during the production of sodium carbonate (or soda ash). The soils on the site include an upper strata of Solvay Process Waste to a depth of up to 60 feet, underlain by (in descending order) peat and marl, silts and clays, silts and sands, sands and gravels and glacial till. Any potential archeological sites that could be located at the Project site would be located underneath this deep fill deposit.

There have been seven previous archeological studies conducted to determine whether intact (undisturbed), significant archeological sites are located in (or under) the site of the Solvay Process Wastebeds 1-8 (and adjacent areas). The results of these previous surveys suggest that it is generally unlikely that intact archeological sites are located within the Project site (i.e., beneath the Wastebeds). The locations of previously surveyed areas are depicted in Figure 18 and each survey is summarized below:

- Preliminary Geomorphological Observations for Wastebeds 1-8, Onondaga Lake Project (Aiuvalasit & Schuldenrein, 2010).⁸⁴
- Geoarcheological Assessment of Geotechnical Borings for the Onondaga Lake Remediation Project, Wastebeds 1-8 (Urista, et al., 2011).⁸⁵

⁸² Onondaga Nation. 2011. Onondaga Nation's Spiritual and Cultural History of Onondaga Lake. Included in Hohman, C.D. and Parsons, *Cultural Resource Management Report, Phase 1B Reconnaissance Survey, Onondaga Lake Project, Upland and Shoreline Area, Wastebeds 1-8 Shoreline and Wastebeds 1-8 Supplement Work, Towns of Camillus and Geddes, Onondaga County, New York*. Public Archaeology Facility, Binghamton University, Binghamton, New York.

⁸³ Thompson, D.H. 2002. *The Golden Age of Onondaga Lake Resorts*. Purple Mountain Press, Ltd., Fleischmanns, NY. 141 pp.

⁸⁴ Aiuvalasit, M. and Schuldenrein, J. 2010. *Preliminary Geomorphological Observations for Wastebeds 1-8, Onondaga Lake Project*. Prepared for Public Archaeology Facility, Binghamton University, Binghamton, New York. Geoarcheology Research Associates, Yonkers, New York.

⁸⁵ Urista, J.C., M.J. Aiuvalasit, and J. Schuldenrein. 2011. *Geoarcheological Assessment of Geotechnical Borings for the Onondaga Lake Remediation Project, Wastebeds 1-8, Town of Geddes, Onondaga County, New York*. Prepared for Public Archaeology Facility, Binghamton University, Binghamton, New York. Geoarcheology Research Associates, Yonkers, New York.

- Phase 1B Reconnaissance Survey, Onondaga Lake Project, Upland and Shoreline Area, Wastebeds 1-8 (Hohman and Parsons, 2011a).⁸⁶
- Phase 1 Reconnaissance Survey Onondaga Lake Project, Upland and Shoreline Area, Slurry Pipeline and Fiber Optic Line (Hohman and Parsons, 2011b).⁸⁷
- Phase 1 Reconnaissance Survey Onondaga Lake Project, Upland and Shoreline Area, Lakeshore Complex (Hohman and Parsons, 2011c).⁸⁸
- Phase 1B Reconnaissance Survey, Wastebeds 1-8 Integrated Interim Remedial Measure Ninemile Creek Collection Trench (Hohman and O'Brien & Gere, 2012).⁸⁹
- Underwater Archeological Resources Phase 1B Work Plan for the Onondaga Lake Bottom (Parsons and the Lake Champlain Maritime Museum [LCMM], 2010).⁹⁰

A geomorphological analysis of Wastebeds 1-8 was conducted to determine the overall soil stratigraphy and evaluate the archeological sensitivity (or potential) of the wastebeds (Aiuvalasit & Schuldenrein, 2010). The evaluation was based on a review of historical documents, published sources concerning the geology and natural setting of Onondaga Lake, and examining logs from geotechnical and soil borings conducted in select portions of the wastebeds. The general stratigraphy for the area consists of (from bottom to top): bedrock, tills, glacio-lacustrine sands, clay capped by marl and peats, all of which were overlain by at least 30 feet of Solvay Process Waste (the depth of waste deposits is variable across the site, which accounts for the present topography across the site). Any potential archeological sites in this area would be found within deeply-buried layers of peat, organic soils, paleo-shoreline sands, and alluvial sediments along Ninemile Creek. The study concluded that while peat deposits within the wastebed areas may have the potential to represent former terrestrial environments, it is likely that disturbance resulting from deposition of

⁸⁶ Hohman, C.D. and Parsons. 2011a. Cultural Resource Management Report, Phase 1B Reconnaissance Survey, Onondaga Lake Project, Upland and Shoreline Area, Wastebeds 1-8 Shoreline and Wastebeds 1-8 Supplement Work, Towns of Camillus and Geddes, Onondaga County, New York. Public Archaeology Facility, Binghamton University, Binghamton, New York.

⁸⁷ Hohman, C.D. and Parsons. 2011b. Cultural Resource Management Report, Phase 1 Reconnaissance Survey Onondaga Lake Project, Upland and Shoreline Area, Slurry Pipeline and Fiber Optic Line, Towns of Camillus and Geddes, Onondaga County, New York. Public Archaeology Facility, Binghamton University, Binghamton, New York.

⁸⁸ Hohman, C.D. and Parsons. 2011c. Cultural Resource Management Report, Phase 1 Reconnaissance Survey Onondaga Lake Project, Upland and Shoreline Area, Lakeshore Complex, Town of Geddes, Onondaga County, New York. Public Archaeology Facility, Binghamton University, Binghamton, New York.

⁸⁹ Hohman, C.D. and O'Brien & Gere Engineers, Inc. 2012. Cultural Resource Management Report Phase 1B Reconnaissance Survey, Wastebeds 1-8 Integrated Interim Remedial Measure Ninemile Creek Collection Trench, Town of Geddes, Onondaga County, New York. Available at <http://www.dec.ny.gov/chemical/87580.html> (Accessed March 2014).

⁹⁰ Parsons and the Lake Champlain Maritime Museum (LCMM). 2010. Underwater Archeological Resources Phase 1B Work Plan for the Onondaga Lake Bottom, Subsite of the Onondaga Lake Superfund Site, Onondaga County, New York. Lake Champlain Maritime Museum, Vergennes, Vermont.

the thick waste deposits makes it unlikely that intact archeological deposits remain extant in the uppermost natural sediments that underlay the wastebeds. Sources of presumed soil disturbance include excavation and grading conducted as part of wastebed preparation, compression and compaction of soils due to the weight of the waste deposits, and contamination by leachate. The study concluded that no further archeological investigations were warranted.

Geoarcheological analysis of geotechnical soil boring data was conducted to further evaluate the potential for intact archeological sites to be located within, adjacent to, or under Wasterbeds 1-8 (Urista, *et al.* 2011). Review of soil borings determined that intact natural soils were present in the vicinity of the original stream bed and delta of Ninemile Creek (which was diverted to its present course during the nineteenth century) and in some locations beneath thick deposits of Solvay Process Waste.

A Phase 1B archeological survey of Wastebeds 1-8 was conducted in 2010 (Hohman and Parsons, 2011a; see Figure 18). The Phase 1B survey included review of the geomorphological assessment, a complete site walkover reconnaissance, analysis of soil borings, and the excavation of 19 shovel tests along the shoreline of the lake. In most portions of Wastebeds 1-8, the study found that approximately 65 to 70 feet of waste and fill were located above a natural horizon of peat and marl soils. Solvay Process Waste deposits were observed in all of the shovel tests excavated along the shoreline areas. In two shovel tests, apparently natural soils were observed below an approximately 1-foot-thick layer of Solvay Process Waste. These soils consisted of an 8 to 14-inch thick layer of gray marl (or peat) underlain by dark grayish brown sandy loam. No cultural resources were identified.

A Phase 1B archeological survey was conducted in advance of the installation of an approximately 4.5-mile-long slurry pipeline and fiber optic line associated with ongoing hazardous waste remediation and dredging in Onondaga Lake (Hohman and Parsons, 2011b). The slurry pipeline route extends from Wastebed B along the eastern shoreline of Onondaga Lake to Wastebed 13, and includes a connector and auxiliary feed line across Wastebeds 1-8 (see Figure 18). Archeological survey included soil borings, review of previously conducted soil borings, and review of ground-penetrating radar (GPR) survey data. No archeological resources were identified.

Archeological deep testing was conducted within a 4.4-acre area along the Onondaga Lake shoreline approximately 1.2 miles south-east from the proposed amphitheater Project site (Hohman and Parsons, 2011c). The archeological survey was conducted in advance of proposed improvements at the site, including construction of an asphalt driveway, parking lots, public access kayak launch, the Onondaga Lake Operations Meeting Space (operations building), a support building, and an area for construction support. The archeological survey included a site walkover and archeological soil borings. No surface evidence of cultural resources was evident during the walkover of the Project site. Soil borings in one area documented 4-8 feet of sand overlying fill and/or debris that may be associated with the former Syracuse Yacht Club, which was located on the site between 1898 and 1917. The Syracuse Yacht Club burned in 1917. During the mid-twentieth-century, a portion of the area of the former Syracuse Yacht Club was filled to create the present landform that extends into Onondaga Lake. No additional archeological testing was recommended in this area.

A Phase 1B archeological survey was conducted within an approximately 0.63-acre area proposed for the Ninemile Creek Collection Trench associated with the Wastebeds 1-8 Integrated Interim Remedial Measure (IRM), located on alongside Ninemile Creek southwest of Wastebeds 1-8 (Hohman and O'Brien & Gere, 2012). The archeological survey included excavation of backhoe trenches and 5 split-spoon soil borings. Analysis of the bores indicates that the area along the Ninemile Creek Collection Trench was either wetlands or marshy lake edge throughout much of its past and had been covered with 6 to 10 feet of fill during the last two centuries. No pre-contact Native American artifacts or deposits were identified and no further archaeological work was recommended in this area.

As stated previously, the current plan contemplates future water-based access to the Lakeview Amphitheater venue area that would include a seasonal (removable) docking system and an associated water taxi service on the western shoreline of Lakeview Point. An observation pier extending into the lake is also under consideration. The underwater archeological resources survey work plan (Parsons and LCMM, 2010) prepared in advance of dredging and remediation of the Onondaga Lake Bottom was reviewed to determine if any offshore/underwater archeological resources could be affected by installation of the proposed docking or pier system. The underwater resources survey work plan included review of previously conducted remote sensing survey (i.e., side scan sonar, magnetometer, bathymetry, and sub-bottom profiler data) from which 52 anomalies of potential interest were identified and subsequently

evaluated through use of high-resolution imagery, geophysical data, and historic records. These included 8 documented anomalies located in the vicinity of Lakeview Point, as shown in Images 3-3 and 3-4, and described below:

- A16: Foundation/Structural Remains Associated with ca. 1872 Lakeview Point Resort
- A17: Derelict barge
- A18: Unknown shallow water structure
- A19: Unknown, possible wreck (may be located in a previously dredged area)
- A20: Derelict barge
- A43: Magnetic anomaly, unknown
- A44: Magnetic anomaly (likely associated with navigational markers)
- A47/A48: Magnetic anomalies near the mouth of Ninemile Creek. Notes from a remote sensing survey suggest that some anomalies may be the result of an adjacent Parsons Work platform.

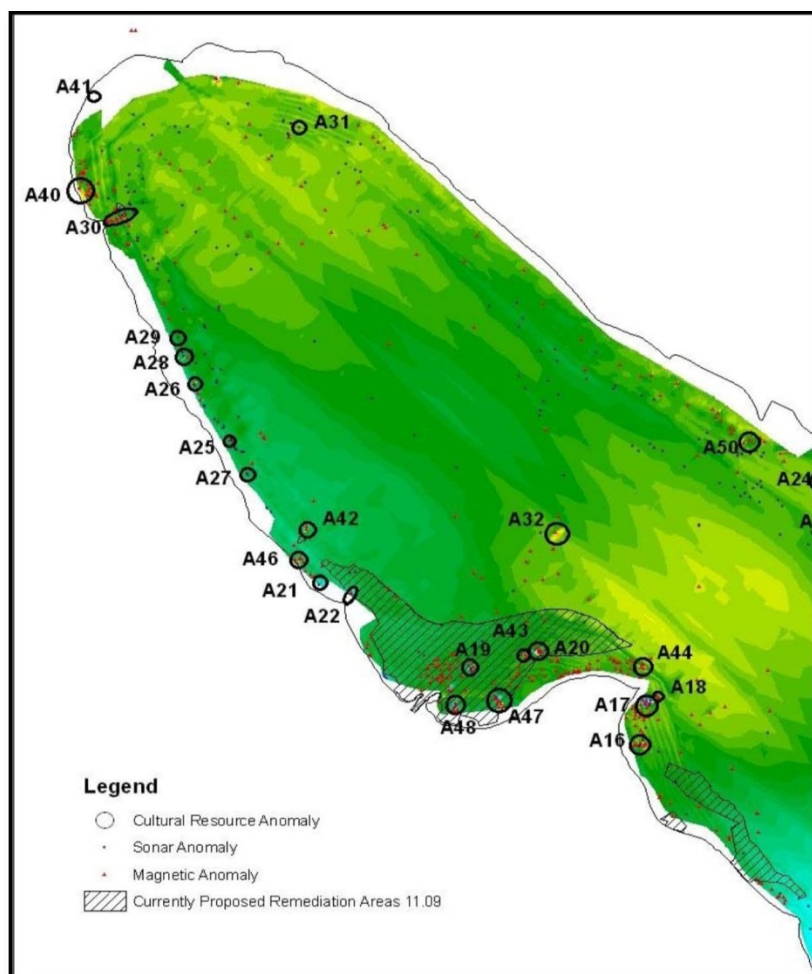


Image 3-3: Anomalies in the Northern/Western Portion of Onondaga Lake, Underwater Archeological Survey for the Onondaga Lake Bottom (from Parsons and LCMM, 2010).

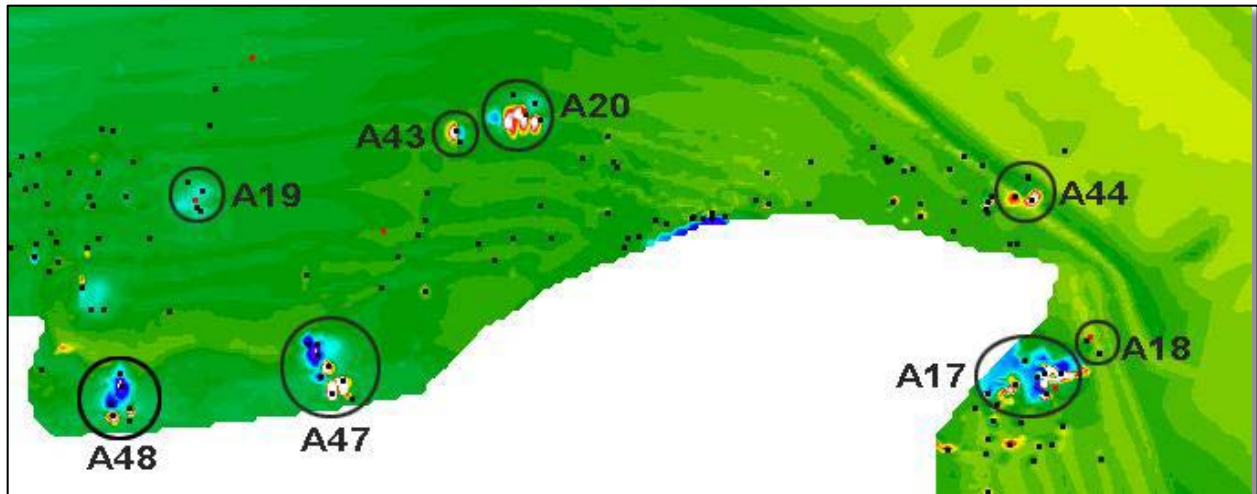


Image 3-4: Detail of Anomalies in the Vicinity of Lakeview Point,
Underwater Archeological Survey for the Onondaga Lake Bottom (from Parsons and LCMM, 2010).

Anomalies documented on the western side of Lakeview Point (A19, A20, A43, A44, A47, and A48) all occur at depths and distances where they would not be affected by installation of the proposed seasonal docking system or observation pier. Anomalies A16, A17, and A18 are located along the shoreline and at shallow depths on the eastern side of Lakeview Point. No construction is proposed in this area.

3.6.1.2 Historic and Architectural Resources

The National Register of Historic Places (NRHP), NYSOPRHP on-line Geographic Information Systems (GIS) database, and NYSOPRHP State Preservation Historical Information Network Exchange (SPHINX) database (NYSOPRHP, 2006⁹¹, 2014a, 2014b⁹²) were reviewed to identify historic properties that are listed in, or have previously been determined eligible for listing in, the NRHP in the vicinity of the Project site. There are no NRHP-listed properties located within one-mile of the Project site. The locations of NRHP-eligible sites located within one mile of the Project are depicted in Figure 10. Historic properties located within one mile of the proposed Project are listed in Table 3.

⁹¹ New York State Office of Parks, Recreation & Historic Preservation (NYSOPRHP). 2006. *New York State State/National Register Listings Shapefile*. Obtained May 4, 2009 from Cristina Croll, Senior Natural Resources Planner, OPRHP.

⁹² NYSOPRHP. 2014b. *SPHINX System*. Available at: <http://pwa.parks.ny.gov/SPHINX/> (Accessed March 10, 2014).

Table 3. Historic Sites within 1 Mile of the Project Site.

Site Name	Status	Distance to Project
Horse Racing Stables (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	0.8 Mile
Horses Building (Delaware & Tonawanda Street) (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	0.8 Mile
Feed Store (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	0.8 Mile
Youth Activity Center (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	0.8 Mile
Youth Building (Sioux Ave. at Mohegan Street) (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	0.9 Mile
Swine, Sheep, and Goats Building (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	1.0 Mile
Witter Agricultural Museum (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	1.0 Mile
Building for Senior Citizens and Handicapped (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	1.0 Mile
Wagoner Carriage Museum (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	1.0 Mile
Syracuse Mounted Patrol Building (NYS Fairgrounds)	NRHP-eligible as part of potential historic district	1.0 Mile

3.6.2 Potential Impacts

3.6.2.1 Construction

3.6.2.1.1 *Archeological Resources*

Due to the heavily-disturbed setting and deep deposits of fill (Solvay Process Waste) that occupy the Project site, there is little to no likelihood that the Project site contains Native American archeological resources or significant historic-period archeological resources. As described above, the uppermost layer of soil at the Project site is a 50 to 60-foot deep layer of Solvay Process Waste that was deposited between approximately 1916 and 1943. Any potential archeological sites that could be located at the Project site would be located underneath this deep fill deposit. Previous evaluations have determined that the presence of such sites is unlikely (Aiuvalasit & Schuldenrein, 2010).

Minimal disturbance of site soils will occur as a result of the Project because the physical characteristics of the Solvay Process Waste material present challenges related to excavation and grading. Intrusive work will be limited predominately to the installation of utilities and placement of piles and supporting foundation members. With the exception of very limited areas along the shoreline in the vicinity of the proposed dock or pier, the Project does not include any excavation or construction-related activities that will extend into the native/undisturbed soils that underlay the Solvay Process Waste. As described in Section 3.6.1.1., the areas that could potentially be disturbed along the shoreline have been previously investigated for the presence of archeological resources and no significant resources were identified. Therefore, construction of the Project will not impact any archaeological resources.

3.6.2.1.2 Historic and Architectural Resources

There are no historic-architectural resources located within or adjacent to the Project site. Construction of the Project will not require the demolition or physical alteration of historic buildings or other potential historic resources. Therefore, construction of the Project will not impact any historic-architectural resources.

3.6.2.2 Operation

3.6.2.2.1 Archeological Resources

Any archeological resources that may be located within the Project site would be located in deeply-buried stratigraphic contexts that will not be disturbed during operation of the Project. Therefore, operation of the Project is not expected to impact any archeological resources.

3.6.2.2.2 Historic and Architectural Resources

The only potential effect on historic properties resulting from the operation of the Project would be a change in a given historic property's visual setting. As it pertains to historic properties, setting is defined as "the physical environment of a historic property" and is one of seven aspects of a property's integrity, which refers to the "ability of a property to convey its significance" (NPS, 1990).⁹³ There are no sites listed on or

⁹³ National Park Service (NPS). 1990. *How to Apply the National Register of Historic Places Criteria for Evaluation*. National Register Bulletin No. 15. National Register Branch, National Park Service, U.S. Department of the Interior, Washington, D.C. Available at: <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf> (Accessed April 2014).

eligible for the NRHP located within or adjacent to the Project site. The nearest NRHP-eligible sites are portions of the New York State Fairgrounds (located between approximately 0.8 and 1.0-mile from the Project site), which have been identified as an NRHP-eligible (proposed) historic district that includes 10 individual buildings identified as contributing resources (NYSOPRHP, 2011b). From locations New York State Fairgrounds where open views of the Project site are available, those views already include significant modern intrusions and infrastructure. Potential visibility of the Project will not affect the integrity of the visual setting associated with the NRHP-listed New York State Fairgrounds. In addition, there are 2 NRHP-listed properties located within 1.0-1.5 miles of the Project site, the Enlarged Lock No. 50 of the Old Erie Canal in the Town of Geddes and the Lucius Gleason House in the Village of Liverpool. The visual settings associated with these properties include significant modern development and the proposed Project, if visible, would be located in the distant mid-ground. The presence and operation of the Project will not have a significant effect on the visual setting associated with any historic properties.

In reviewing correspondence regarding the Project, NYSOPRHP stated that the proposed Project “will have **No Impact** on upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places” (Herter, 2014⁹⁴; emphasis in original) (see Appendix B).

3.6.3 Proposed Mitigation

Construction and operation of the proposed Project will not result in any significant impacts to identified historic or archeological resources. Consequently, no further mitigation measures regarding these resources are proposed.

The Onondaga Nation has expressed their concern's regarding the Project's overall impact on the physical and cultural environment of Onondaga Lake and the surrounding lands (Heath, 2014⁹⁵). Section 106 of the National Historic Preservation Act requires federal agencies to consider the potential effects on historic properties for projects that they carry out, approve, or provide funding. Considering the Project as currently conceived, approvals from federal agencies may include the waterfront pier (U.S. Army Corps of

⁹⁴ Herter, N. 2014. Re: SEQRA, Onondaga County Lakeview Amphitheater Facility/West Side of Onondaga Lake Town of Geddes, Onondaga County, 14PR01170. Letter dated March 31, 2014 to David Coburn, Office of the Environment, Onondaga County from New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY.

⁹⁵ Heath, J. 2014. Re: Comments on Draft Scoping Document for Amphitheater Project. Letter dated May 12, 2014 to David Coburn, Onondaga County Office of the Environment from General Counsel for the Onondaga Nation, Syracuse, NY.

Engineers) and improvements related to I-690 ingress/egress (Federal Highway Administration), in which case consultation pursuant to Section 106 of the National Historic Preservation Act would be applicable. In addition, in the event that any state agency approvals are necessary (for instance, NYSDEC approval of a joint permit application), then Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law (and, for NYSDEC, DEC Policy CP-42: Contact, Cooperation and Consultation with Indian Nations) would also be applicable.

3.7 OPEN SPACE AND RECREATION

3.7.1 *Existing Conditions*

The Project site is currently comprised almost entirely of undeveloped open space. As described in Section 2.1, the Project site includes wastebeds used for disposal of industrial waste from the manufacture of soda ash in the early to mid-20th century, and a landfill used for the disposal of steel mill waste in the 1970s and 80s.

The only development currently found at the Project site is the recently completed recreation trail, which opened in May, 2014. In cooperation with the Onondaga County Department of Transportation, Onondaga County Parks opened this multipurpose paved trail through the Project site. Designed to accommodate walkers, runners, roller-bladers, and bikers, the new trail extends the existing West Shore Trail by approximately 2.5 miles, and is part of a long-term initiative to develop a “Loop the Lake” trail.



Image 3-5: Onondaga Lake Park Trail System

illustrating new trail through Project site (Schmitt, 2012).⁹⁶

The trail has been designed at a gentle grade to provide wheelchair accessibility, and the paved surface is approximately 10 feet wide. Steel railings border most of the trail over the waste beds, and signs have been posted directing users not to venture off the paved path. Several shelters have been erected along the trail extension, including one at the tip of Lakeview Point. The West Shore Trail extension provides direct access from the Project site to the recreational features/facilities along the northern and eastern shores of Onondaga Lake. These attractions include additional trails, Long Branch Park, the Good Dog Park, an archery range, numerous shelters, picnic tables and grills, Onondaga Lake Park Marina, the Salt Museum, tram rides, Griffin Visitor Center, shuffleboard courts, bocce ball courts, ballfields, volleyball courts, equipment rentals, public restrooms, Wegmans Playground, Onondaga Lake Skate Park, the Butterfly Garden of Hope, and the Skä•noñh Center.

⁹⁶ Schmitt, T. 2012. *Loop the Lake* [illustration], accompanying article on Syracuse.com by P. Reide, *Onondaga Lake Trail Forges Ahead Over Old Allied Waste Beds*, dated October 5, 2012. The Post-Standard. Available at: http://www.syracuse.com/news/index.ssf/2012/10/onondaga_lake_trail_forges_ahe.html (Accessed March 18, 2014).

The Project site is also immediately adjacent to Onondaga Lake, which provides recreational opportunities for fishing and boating.

3.7.2 Potential Impacts

3.7.2.1 Construction

The Lakeview Amphitheater has been designed, in part, to complement the existing trail system and other recreational opportunities within and surrounding Onondaga Lake. There may be some impacts to the trail during Project construction to allow for completion of the facility and installation of utilities. These may range from temporary closures to relocation of some sections of the trail. For safety purposes, temporary exclusion zones limiting public access to the Project site will be designated and enforced during construction.

3.7.2.2 Operation

By adding structures and access roads/paths, the proposed facility will reduce open space at the Project site. However, the Lakeview Amphitheater will enhance recreational opportunities in the Central New York region by providing the infrastructure necessary to host concerts, festivals, and other events (e.g., community theater). The Lakeview Amphitheater is proposed to have a capacity of approximately 17,500. As a result, it is anticipated that the venue will attract performances that are too small for the Carrier Dome (49,000 seats) and too big for the Onondaga County War Memorial (7,000 seats), or SRC Arena (6,500 seats).

In addition, the proposed Project has been designed to allow trail users to experience the Amphitheater and grounds when concerts are not taking place. As currently conceived, the recently opened West Shore Trail extension will take trail users by the Amphitheater, between the covered seating and lawn seating portions of the concert venue, thereby providing a new user experience. Additionally, parking associated with the event complex will increase access to the West Shore Trail extension.

3.7.3 Proposed Mitigation

Since overall impacts to open space and recreation from the proposed Project are believed to be positive, no mitigation measures are proposed.

3.8 TRAFFIC AND TRANSPORTATION

The Lakeview Amphitheater site is served by a substantial transportation network with major arterials nearby including NYS Route 931B (State Fair Boulevard), Interstate Route 690 (I-690), New York State Route (NYS RT) 695, and NYS RT 297 (Bridge Street), as well as Pumphouse Road and Willis Avenue. In order to evaluate the existing and proposed traffic demands on the highway network serving the project site and the potential impacts, C&S Engineers, Inc. completed a Traffic Impact Study in June 2014. A copy of this report is included in Appendix G. The study area (see Image 3-6 below) and scope of the analysis were developed through consultation with the New York State Department of Transportation (NYSDOT – Region 3) and the Federal Highway Administration (FHWA). The study assumed the facility will include a 17,500 seat outdoor events center that will host 15 to 20 large events during a season as well as smaller scale events throughout the year. While events will range from small, local gatherings to popular musical acts, it was assumed that a sold-out event could generate approximately 7,000 vehicles during the typical PM (afternoon/evening) commuter period that would use the existing roadway network. Parking for the facility will be provided at the Upper (Orange) and Lower (Brown) State Fair parking lots (see image 3-7 below) adjacent to the project site. While the Orange Lot will be able to accommodate the small, local event demand, additional use of the Brown Lot will be necessary for the larger and sold-out events.

Image 3-6: Traffic Study Area

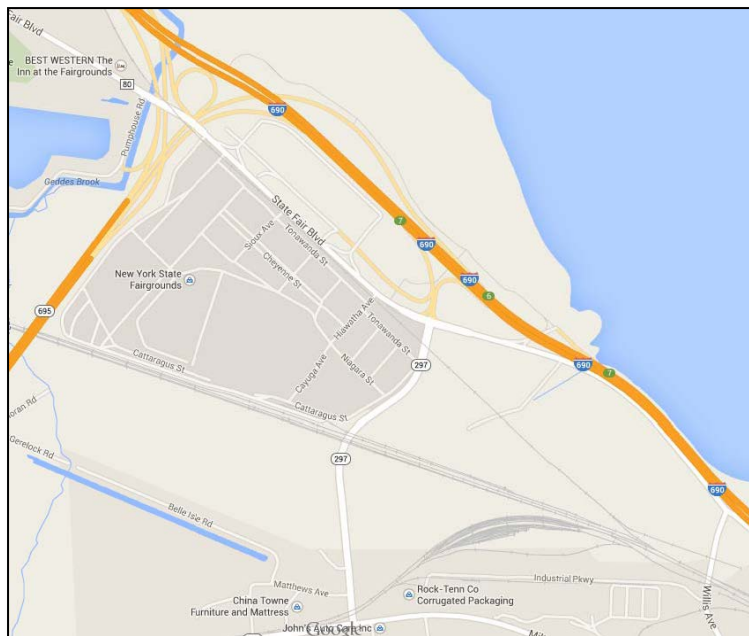


Image 3-7: Parking Areas



The methodology used to determine the impacts of the traffic generated by the proposed facility was discussed with the NYSDOT. Several traffic conditions or scenarios were established and considered for the study intersections. The traffic conditions considered were as follows:

- Existing (2014) traffic conditions during the typical Friday PM peak hours
- Design year (2016) full-build traffic conditions for the proposed development during the typical Friday PM peak hours for a small event (arrival and departure)
- Design year (2016) full-build traffic conditions for the proposed development during the typical Friday PM peak hours for a sold-out event (arrival and departure)
- Mitigated conditions for the full-build traffic conditions, as needed

While a design year no-build traffic condition is typically evaluated for a traffic impact study as a baseline for comparison with the full-build condition, this comparison was not applicable in this case due to the unique conditions created by the use of the proposed facility. The design year traffic condition scenarios did include a growth of background traffic factor to account for unknown development in the area. The PM peak period analyzed (4:00 – 7:00PM) was determined based on the following considerations:

- Many events were assumed to occur on weekend evenings with a start time of 7:00 or 8:00 PM
- Arrivals for such an event was anticipated to coincide with typical commuter traffic (4:00 – 7:00PM)
- Morning or midday events during the typical work week were not anticipated

The effect of the proposed facility on the adjacent roadway network was measured by comparing the operations of the study intersections to operations that are typically considered acceptable. The study also included an accident analysis on State Fair Boulevard and the Exit 7 Connector road in vicinity of the project site. The NYSDOT provided accident and event summaries for the most recent three-year period available, from October 1, 2010 through September 30, 2013. The accident analysis was conducted to identify any areas of concern in terms of traffic safety that may be improved or intensified based on the proposed project.

3.8.1 Existing Conditions

A capacity analysis was performed for the study intersections using the existing condition traffic volumes with existing roadway and intersection geometries and the NYSDOT's signal timing and phasing information. The study intersections were analyzed using a computer program that implements the methods presented in the 2000 Highway Capacity Manual⁹⁷ to determine the level of service (LOS), which is defined in terms of delay, as well as anticipated queue lengths. Delay is a measure of driver discomfort, frustration, fuel consumption and lost travel time. LOS criteria are stated in terms of the control delay per vehicle for a 15 minute analysis period and range from "A" to "F". LOS A is representative of a movement that is free flowing with minimal delay, while LOS F generally represents long delays. LOS D is generally considered acceptable in urban environments. Since we are evaluating special event traffic operations, the evaluation focuses on the amount of anticipated delay, queue lengths, and some anticipated impacts to the interstate highway system. The results of this analysis indicate that all existing movements are operating at a LOS D or better, except for the few vehicles using the construction access at the intersection of the I-690 Westbound Exit 7 off-ramp and the Exit 7 Connector road.

3.8.2 Potential Impacts

3.8.2.1 Construction

Based upon the proposed schedule for construction, no adverse impacts are expected due to construction traffic over that which has been experienced during the past few years as remedial work has progressed in the area. Construction of the amphitheater project will begin as the Honeywell IRM and dredging work are coming to a close (see Section 3.11 for additional information regarding the IRM). Schedules for the final remedial work and the amphitheater construction will be coordinated so as to optimize efficiencies in materials delivery and construction worker access.

⁹⁷ Highway Capacity Manual, Transportation Research Board, National Research Council, Washington D.C., 2000.

3.8.2.2 Operation

Traffic impacts due to operation of the facility were assessed in the traffic study under several scenarios as summarized below. Please see Appendix G (Traffic Impact Study) for additional detail.

Small Event – Arrival/Departure

Delays for vehicles arriving from the I-690 Eastbound Exit 7 off-ramp to the intersection at State Fair Boulevard and Bridge Street are expected to approach two minutes as they wait to turn left onto State Fair Boulevard. The anticipated queues are not expected to impact the I-690 Eastbound mainline. The average intersection LOS falls from a C to a D with an increase to the average intersection delay of approximately 15 seconds. The LOS for the arriving vehicles as they approach the Orange Lot access at the intersection of the I-690 Westbound Exit 7 off-ramp and the Exit 7 Connector road are expected to be an F, with a significant increase in delay and queues due to the high conflicting volumes coming off the off-ramp. Queues are not anticipated to impact the intersection of the Exit 7 Connector road and State Fair Boulevard. The I-690 Westbound Exit 7 off-ramp or mainline is not expected to be impacted. With minimal conflicting traffic, there are no significant delays anticipated during event departure. All movements at all study intersections are anticipated to operate at a LOS B or better.

Large Event (Sold Out)

As the models were created and evaluated for the sold-out event arrivals using existing traffic control, it became evident that mitigation would be required to eliminate gridlock throughout the study area. Traffic can be expected to come to a stand-still for those trying to access the Orange Lot from Bridge Street and Willis Avenue, as well as for those trying to access the Brown Lot from State Fair Boulevard west and Pumphouse Road. Queues from Pumphouse Road are expected to impact the I-690 Eastbound Exit 6 off-ramp, and possibly the I-690 Eastbound mainline, at this location. The I-690 Eastbound Exit 7 off-ramp traffic at the intersection of State Fair Boulevard and Bridge Street is expected to queue along the exit only lane from the NYS RT 695 Northbound merge with I-690 Eastbound. This would affect the I-690 Eastbound mainline at this location if a vehicle on I-690 wishes to take Exit 7 and needs to merge into slow moving traffic in the exit only lane.

In order to avoid impacts to the I-690 mainline, various mitigation scenarios were developed. The first level of mitigation considered was manned traffic control at the intersections of I-690 Westbound Exit 7 off-ramp and the Exit 7 Connector road, State Fair Boulevard and Pumphouse Road, and the west access to the Brown Lot on State Fair Boulevard to maintain traffic flow into the facilities and minimize queues on the I-690 off-ramps. Manned control was simulated by using a pre-timed signal timing and phasing at these intersections with more green time allotted to movements that would most improve operations that may affect the I-690 mainline: I-690 Westbound Exit 7 off-ramp; Pumphouse Road; and the access to the Brown Lot.

While manned control is expected to improve queues and delays, there will still be significant backups along Pumphouse Road that will impact the I-690 Eastbound Exit 6 off-ramp. The introduction of manned control on the I-690 Westbound Exit 7 off-ramp will create queues that may impact the I-690 Westbound mainline at this location, even with a change in lane usage allowing the left lane as a shared left/through lane and the right lane as a dedicated through lane to the Orange Lot.

The 1,000 foot plus queue for traffic approaching the Orange Lot from the Exit 7 Connector road is expected to impact operations at the intersection with State Fair Boulevard and ultimately to the traffic approaching northbound on Bridge Street.

In order to minimize the potential for impacts onto the I-690 mainline, additional mitigation measures were considered along the route via Pumphouse Road to the Brown Lot access and to the I-690 Westbound Exit 7 off-ramp as described below:

- Measurements of Pumphouse Road and the ramp from I-690 eastbound indicate that there is adequate existing pavement width including the shoulder to accommodate two lanes of travel northbound. The striped median, two-way center left turn lane, and wide shoulders along State Fair Boulevard between Pumphouse Road and the Brown Lot access may allow for 2 lanes of travel eastbound. With two lanes of traffic, manned traffic control, as well as the appropriate signage and traffic control, it is anticipated that queues will be mitigated to avoid impacts to the I-690 Eastbound mainline.

- Potential mitigation to the I-690 Westbound Exit 7 off-ramp include widening and lengthening the ramp itself to current guidelines for a parallel type interstate off-ramp provided by the American Association of State Highway and Transportation Officials' *A Policy on Geometric Design of Highways and Streets*: add an additional lane at the intersection with the Exit 7 Connector road to provide a dedicated left turn lane and two through lanes for approximately 400 feet, widen the ramp to provide two lanes for another 400 feet, and extend the deceleration/storage lane for a total Exit 7 off-ramp length of approximately 2,600 feet compared to the existing 1,000 foot ramp. Along with the manned control focused on minimizing queues on the off-ramp, it is anticipated that impacts to the I-690 Westbound mainline could be avoided.

As with the small event, the background traffic expected during the departure analysis period is minimal, but with the amount of traffic trying to leave the two parking areas at one time, there will be significant delays for attendees. Once they leave the parking areas, delays will be minimal throughout the study area, except for those exiting the Orange Lot as they approach State Fair Boulevard and those wanting to turn left onto Bridge Street from State Fair Boulevard westbound. The following mitigation measures were considered to improve operations during departure:

- Adjusting the signal timing at the intersection of State Fair Boulevard and Bridge Street to provide more time for the westbound movements will mitigate the delays for the westbound traffic on State Fair Boulevard without degrading operations for other movements.
- In order to improve traffic flow for those exiting the Orange Lot, adding a second right turn lane (auxiliary lane for event traffic only) on the Exit 7 Connector road approaching State Fair Boulevard will reduce delays but not mitigate them to a LOS indicative of current operations.

Departure traffic should not impact I-690 mainline operations in either direction as delays and queues will be limited to the parking lots themselves.

3.8.3 Proposed Mitigation

Small Event

There are no proposed mitigation measures for the arrival time period associated with a small event. Likewise, there are no proposed mitigation measures for the departure time period based on the currently available information.

Large Event (Sold Out)

Based on numerous scenario analyses for a sold-out event, the following operational and capital improvement recommendations should be considered for mitigation.

Operational Recommendations

- Educate the public on desired parking area and traffic flow based on incoming direction of travel by posting directions on the facility website. For the large, sold-out events, it is recommended that attendees are directed as follows based on anticipated travel routes:
 - I-690 Westbound traffic take Exit 7 and will park in the Orange Lot
 - I-690 Eastbound traffic will take Exit 6 towards Lakeland, onto Pumphouse Road, State Fair Boulevard, and the Brown Lot
 - NYS RT 695 Northbound will transition onto I-690 Eastbound, take Exit 7 to State Fair Boulevard, and the Brown Lot
 - Bridge Street (NYS RT 297) traffic will take a right onto State Fair Boulevard to the Orange Lot
 - State Fair Boulevard traffic (from the west) will use the Brown Lot
 - Willis Avenue traffic will use the Orange Lot via State Fair Boulevard
- Utilize police officers on the ground to manually control key intersections in the area, focusing on moving traffic along Pumphouse Road and off the I-690 Westbound Exit 7 off-ramp to avoid impacts to the I-690 mainline
- Utilize existing dynamic message signs (DMS) on the I-690 mainline and install a new DMS on NYS RT 695 Northbound to direct traffic in real-time and warn motorists of potential slowdowns

- Utilize existing intelligent transportation system (ITS) cameras during events to update the DMS in real-time and communicate with the police on the street controlling traffic to help keep traffic flowing efficiently.
- Utilize temporary signage to direct traffic to the appropriate I-690 exit and parking area, as well as to inform vehicles on I-690 Eastbound Exit 6 off-ramp to utilize the shoulder as a second lane on Pumphouse Road and form two lanes eastbound on State Fair Boulevard between Pumphouse Road and the Brown Lot west access.
- Utilize approximately 25 transit buses as shuttles to transport attendees between the Brown Lot and the facility before and after the event.

Capital Improvement Recommendations

- Widen and lengthen the I-690 Westbound Exit 7 off-ramp to include three lanes approaching the Exit 7 Connector road and approximately 800 feet of a two-lane storage lane for a total length of approximately 1,200 feet
- Construct a second right turn lane for southbound traffic on the Exit 7 Connector road approaching State Fair Boulevard
- Optimize signal timing at the intersection of State Fair Boulevard and Bridge Street during the event departure period to increase green times for westbound traffic

Long-Term Considerations

The access to the Orange Lot opposite the I-690 Westbound Exit 7 off-ramp is currently the only available access to the proposed site, pending the approval of a Federal Highway Administration (FHWA) break-in-access study. Discussions between the FHWA, NYSDOT, and the County have acknowledged the desire to provide long-term improvements to the area that will not only serve the proposed amphitheater facility, but the State Fair access to the Orange Lot as well without requiring the use of the access points from the I-690 Westbound to NYS RT 695 Southbound ramp or the signal along the I-690 mainline. The mitigation measures identified to widen and extend the I-690 Westbound Exit 7 off-ramp and construct a second right turn lane on the Exit 7 Connector road southbound to State Fair Boulevard will improve operations and safety during both amphitheater events and the State Fair, but will not reduce the need for the non-standard access points currently used while the State Fair is in session. To eliminate the need for those access points, additional ramps from the I-690 mainline would need to be considered.

Several conceptual layouts are being considered to provide direct access to the Orange Lot via I-690 Eastbound and Westbound off- and on-ramps and frontage roads. One scenario to be considered involves constructing new westbound on- and off-ramps at the location of the current temporary traffic signal at the mainline crossover. Other long-term concepts would consider replacing some or all existing ramps with a full interchange to serve both the fairgrounds and the amphitheater site.

3.8.4 Public Transportation

With regard to public transportation and access to the site, CNY CENTRO, Inc., (CENTRO) a member of the Central New York Regional Transit Authority (CNYRTA), provides daily service to the area and interconnections to most of the significant employment districts, shopping locations, educational and medical facilities, and entertainment venues within the area. In July 1998, CENTRO opened the William F. Walsh Regional Transportation Center (RTC) at the Stadium Market Center which provides one-stop connections to both regional train & bus services 7 days a week and is located less than three miles from the proposed project site. CENTRO also provides bus service from the newly opened Transit Hub on South Salina Street in downtown Syracuse. Frequent daily bus service is provided between outlying residential districts and downtown Syracuse with connecting routes to Destiny USA and the RTC. Bus service is available on a near hourly basis during the day along State Fair Boulevard adjacent to the project site with special event service to the fairgrounds during the State Fair. As the project develops over the next few years, this service is expected to further adapt to the needs of the community residents, visitors and employees.

The site is also served by the new Bike Trail extension to the West Shore Trail. This trail provides access from the North to the site for pedestrians and cyclists from the Onondaga County Parks System. Future additions to the south as part of the planned "Loop the Lake" Trail completion will provide access from the City of Syracuse.

3.9 NOISE AND ODOR

3.9.1 *Existing Conditions*

3.9.1.1 Noise

Noise is defined by NYSDEC as any loud, discordant or disagreeable sound or sounds⁹⁸. Basically, any unwanted sound can be considered noise. Various environmental factors determine the impacts of noise including number and type of receptors, sensitivity of receptors, distance from the source, terrain, background sound levels, time of day, wind direction and climate conditions. The combination of sound characteristics, environmental factors and sensitivity of the receptors determine whether noise impacts will be adverse. Noise impacts can be evaluated in several ways including the extent to which government ordinances or guidelines may be exceeded, and the extent to which receptors may be annoyed or otherwise adversely affected by the sound.

The proposed project site is immediately north of the existing New York State Fairgrounds parking lots and east of I-690 (and the I-690/NYS Route 695 exchange). The New York State Fairgrounds are located immediately south of the I-690/NYS Route 695 exchange (see Figure 2). Background sound sources around the site include traffic on the adjacent Interstate and State Fair Boulevard, events at the State Fairgrounds, processes at Crucible Specialty Metals, Ben Weitzman scrap yard and at other local industrial plants and the local railroad traffic.

3.9.1.2 Odor

Odors have been an issue in the area of this project for quite some time and are a sensitive topic with local residents. Various sources of odor have presented issues from time to time including former and current manufacturing facilities, State Fair operations and maintenance, waste disposal, remediation work and Onondaga Lake itself at one time due to late summer algal blooms.

⁹⁸ NYSDEC Program Policy Publication DEP-00-1, February 2, 2001

3.9.2 Potential Impacts - Noise

3.9.2.1 Construction

Construction noise has the potential to disturb people at home in their residences, in office buildings or retail businesses and walking or travelling in the vicinity of the site. In the case of the Lakeview Point Amphitheater project, there are several occupied parcels including residences, a hotel and several businesses in the nearby hamlet of Lakeland in the Town of Geddes, which is located on the west side of I-690 (and north of the I-690/NYS 695 exchange). Similar receptors are located east of the project across the lake in the Town of Salina. Other prime receptors of concern would be those people using the Lake Trail or participating in boating or shore activities on Onondaga Lake. Noise from construction-related activities can also affect non-human species such as aquatic life, terrestrial and airborne animals. Issues related to vibration may also arise during project development when driving piles or compacting surfaces. The type of noises generated during construction of this project are expected to be those related to operation of heavy machinery such as bulldozers, excavators, cranes and dump trucks (engine noise and back up alarms), pile driving equipment, power tools and equipment including generators and air compressors. This type of equipment is similar to what is currently operating at or near the site associated with implementation of the shoreline IRM and the dredging/capping operations within Onondaga Lake. As a result, adverse impacts associated with project-related construction noise are not anticipated.

3.9.2.2 Operation

NYSDEC Program Policy Guidance document DEP-00-01 contains criteria by which noise impacts can be assessed. The guidance document states that the addition of any noise source, in a non industrial area, should not raise the ambient noise level above a maximum of 65 dBA and for industrial or commercial areas, a threshold of 79 dBA is used. Although the project site is actually located in an Industrial zoned area, there are nearby receptors in Commercial and Residential zoned areas. A 65 dBA threshold was utilized for this analysis as a conservative assessment. The NYSDEC Guidance also states that incremental sound level increases over background of 0 to 3 dBA should have no appreciable effect on

receptors while increases in the range of 3 to 6 dBA may have potential for adverse noise impact in cases where the most sensitive of receptors are present. The guidance also recommends where increases of more than 6 dBA occur, that a closer analysis of impact potential may be warranted depending on existing background conditions and the nature of surrounding land use and receptors.

In order to assess the sources of noise associated with this project, a sound level assessment was performed by Acoustic Dimensions, which included modeling to predict future sound levels associated with events and a comparison to applicable evaluation criteria. The Acoustic Dimensions sound propagation report is included in Appendix H.

Sound propagation levels are based upon estimated average source levels. With respect to concerts and/or performing arts, these levels will fluctuate from one performance to the next depending on the size and nature of the event. For performances at a typical outdoor amphitheater with both covered and lawn seating, the total sound level will consist of a combination of the following primary sources.

1. Source One is sound generated on the stage by instruments, instrument amplifiers, and stage monitors. These sounds are the Artist's means of expression.
2. Source Two is sound generated by the large-scale sound reinforcement loudspeakers flanking the stage. These sounds are mixed (adjusted) for the enjoyment of the audience located under the roof.
3. Source Three is sound generated by medium-scale loudspeakers distributed along the leading edge of the roof. These sounds are mixed for the audience located on the lawn.
4. Source Four is sound generated by the audience. This source is often overlooked, however, the audience members themselves are capable of generating sound levels equal to or greater than the other sources.

Anticipated sound levels to be experienced by the nearby communities were estimated based on typical Amphitheater sound levels for amplified music, estimated to be 100 dBA at the rear of the lawn seating area. Sound levels of this magnitude will occur during loud rock and pop music concerts, which can be considered a worst-case scenario. It should be noted that sound propagation over long distances from the Amphitheater will vary significantly depending on atmospheric, weather and wind conditions. Although the

effect of these conditions cannot be precisely predicted, they could impact sound levels at any one location by 10 dB or more.

As shown below in Images 3-7 and 3-8 (see also Appendix H) depict the results of the sound propagation analysis during loud rock and pop music concerts. The sound levels shown are not continuous expected sound levels generated during each event, but instead are maximum anticipated sound levels that are will occur for a portion of some events during certain times of a given performance. The duration of these maximum sound levels, the number of times during an event they will occur, and the number of events during the season during which these sound levels may occur, will depend on the events that are scheduled.

Image 3-7 shows the anticipated maximum sound levels within approximately 2 miles of the Amphitheater location. Image 3-8 compares expected maximum sound levels from concerts in the proposed Amphitheater with expected maximum sound level from concerts in the existing State Fair Grandstand.

Image 3-8: Sound Propagation – Predicted Maximum Sound Levels

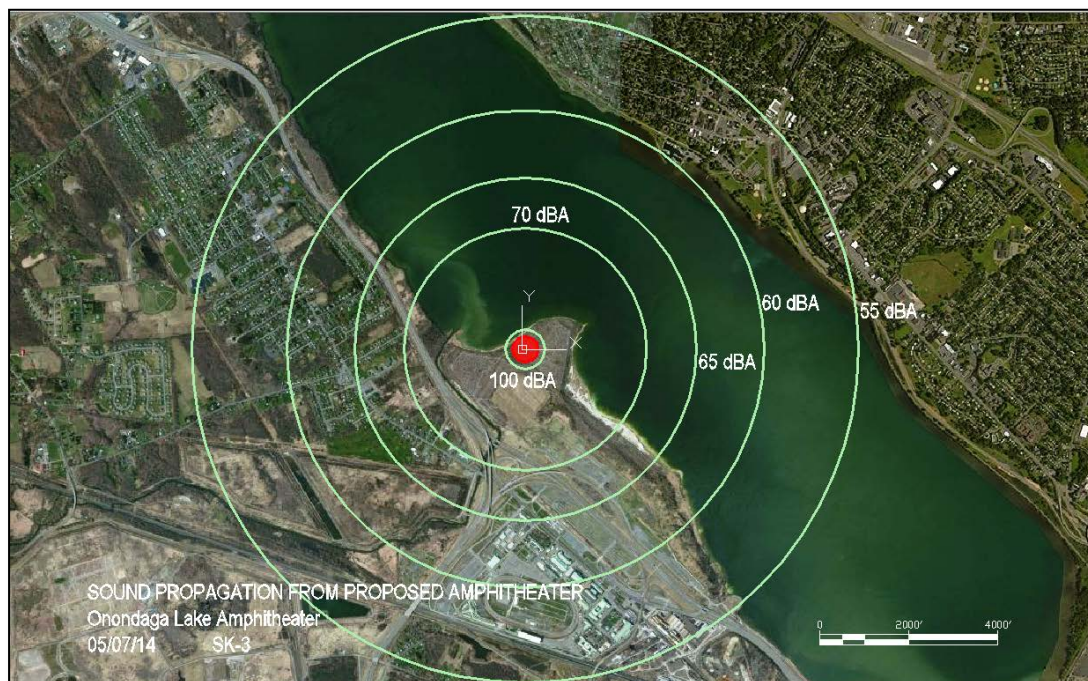
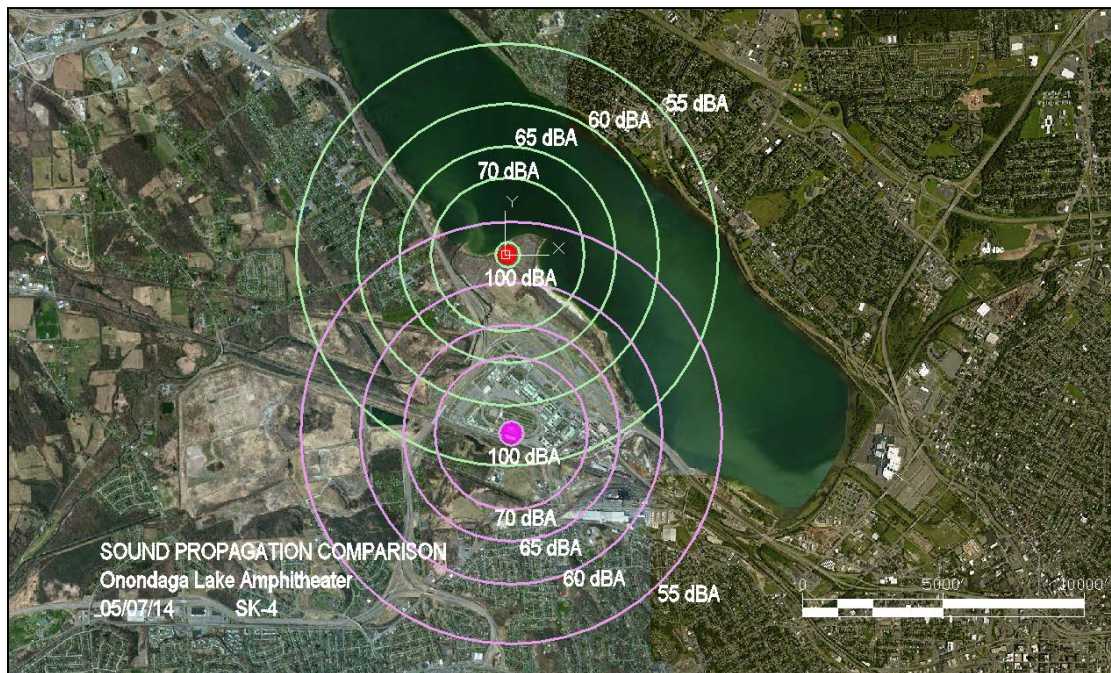


Image 3-9: Sound Propagation Amphitheater and NYS Fairgrounds Grandstand



As can be seen in the model results, there are some residential areas along State Fair Boulevard in Lakeland where maximum sound levels from some events are predicted to exceed 65 dBA. Also, from Image 3-8, it can be seen that these sounds would appear louder than that from a concert at the State Fairgrounds under similar conditions. Using the 65 dBA threshold, some amount of annoyance/impact could be expected in the Lakeland area based on the modeling conducted by Acoustic Dimensions, depending on background conditions. However, as depicted above in Image 3-7, no receptors are predicted to experience sound levels in excess of 70 dBA as a result of the Amphitheater.

3.9.3 Potential Impacts - Odor

The Amphitheater project is not expected to produce significant odors other than that associated with vehicle emissions during construction and events and food preparation. These will be at a significantly reduced scale than that which is experienced during the State Fair and numerous other large events at the Fairgrounds. No significant adverse odor impacts are expected to occur as a result of this project and further mitigation is not anticipated.

3.9.4 Proposed Mitigation

3.9.4.1 Construction

Construction noise mitigation will include implementation of best management practices for sound abatement, including use of vibratory pile drivers versus impact hammers, inspection of equipment for proper muffling, and effective scheduling.

3.9.4.2 Operation

In order to mitigate noise impacts from live performances, sound levels can be monitored by various methods and the results can be communicated to the system operators. Sound level monitoring in the community can be conducted during events, through automated systems or by manual sound level measurements. This database of sound impacts can be used to alter future soundstage setups to mitigate impacts. These modifications are typically used to control Source Three sounds as noted above. Sources One and Two are controlled by the artist and their technicians and are typically not managed other than possibly by contract in special cases. Contracts that are too restrictive can limit the desirability of a venue for certain tour acts. Source Four (crowd noise) is typically not mitigated. Should noise-related impacts occur, sound level monitoring and Source Three controls can be implemented. Also, given the temporal and intermittent nature of these events, public notice can be given to receptors in the area concerning times and dates for performances to allow for effective planning and avoidance.

3.10 DOCUMENTED ENVIRONMENTAL CONDITIONS

This section describes recognized environmental conditions at the Project site, with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §9601) and petroleum products. Potential impacts to site contaminant levels associated with this Project within or in the vicinity of such recognized environmental conditions are discussed along with planned and current mitigation measures. This analysis is based upon review of recent comprehensive studies prepared as part of ongoing remediation efforts at the Waste Beds 1-8 Site. Analysis of project

impacts related to ecology, human health, water quality or air quality are discussed in those specific sections of this document.

3.10.1 Existing Conditions

As stated previously, the actual project site is a unique formation in that it consists primarily of manmade land that was constructed in the early 1900's by the Solvay Process Company as a repository for wastes generated as a result of the production of soda ash. The waste material, known as Solvay Process Waste, is a chalky material consisting mainly of calcium carbonate with gypsum, sodium chloride, and calcium chloride. The wastebeds themselves were formed as a series of lagoons into which Solvay Process Waste was pumped as a liquid slurry from approximately 1916 to 1943.⁹⁹ The slurry was decanted over time forming the upper strata beneath the project site. The depth of this material across the project site ranges typically between 60 and 70 feet and is underlain by native soil material. The western portion of the site also includes a former steel mill landfill, which sits atop the Solvay Waste and was capped and closed in 1989.

Onondaga Lake was designated as a Superfund site (EPA ID: NYD986913580) in December, 1994. The Onondaga Lake Superfund site includes the lake bottom, and 12 subsites around the lake and along the tributaries that are potential sources of contamination. One of the subsites, known as Wastebeds 1 – 8, contains the project site. Specifically, the project site is located within the areas known as Wastebeds 5 and 6. The project area is also listed on the New York State Registry of Inactive Hazardous Waste Sites as a State Superfund Class 2 site (NYS Registry: 734081). The Crucible Landfill is a former steel mill solid waste fill site which covers an area of approximately 20 acres on Wastebed 5 and contains an estimated volume of about 225,000 cubic yards of both non-hazardous and hazardous wastes.¹⁰⁰ These wastes included slag, construction and refractory debris, boiler house ashes, coolant swarves, mill scale, treatment plant sludge, waste caustic solids, acid pickling sludges and air pollution dust. This landfill was closed in 1988 consistent with a NYSDEC approved closure plan and is capped with an engineered cover system which includes a 60 mil synthetic liner and a fabric/soil composite cover.

⁹⁹ USEPA, *Human Health Risk Assessment, Onondaga Lake Waste Beds 1-8 Site: Bike Trail, Geddes NY* January 2009

¹⁰⁰ *Revised Landfill Closure Plan Volumes 1 & 2* (C&S, 1986)

Many environmental studies have been completed in the area surrounding the project site by Honeywell and others as part of the Wastebeds 1 – 8 remediation project and the Crucible post closure monitoring plan. Soils and groundwater in the Wastebeds 1 -8 area have been tested extensively as part of these efforts. Contaminated soils are present in some areas beneath the Solvay Waste. Contamination is also present in the groundwater beneath the project site, in seeps that discharge along the steep banks of the project site, and in sediment associated with some area ditches and seeps. Contaminants of Concern within the Wastebed 1-8 area include Heavy Metals, Volatile Organics and Semi-volatile organic compounds.¹⁰¹ Specific contaminants include benzene, toluene, ethylbenzene and xylene (BTEX) compounds, nappthalene, polycyclic aromatic hydrocarbons (PAHs), phenolic compounds, various inorganics, and some PCB and pesticides. Volatile organic compounds in the groundwater have also been identified as a potential source of soil vapors in some areas. In general, the highest presence and concentration of these compounds are located in the central and southeastern portions of the Wastebed 1-8 area while the majority of the amphitheater project site area is considered to exhibit relatively low levels of contaminants.

Currently, a Feasibility Study and Supplemental Human Health Risk Evaluation are being completed for areas of the site known as Operable Unit No. 1, which is defined as the soil and fill material in Wastebeds 1-8 exclusive of the groundwater component. The FS report will evaluate alternatives to define a physical remedy for the contamination present in the soils at the site. Upon review of the FS report, the DEC, in coordination with EPA and NYSDOH, will select a remedy for the site (known as the Record of Decision or ROD). This remedy will be based on the proposed intended uses of each area within the site, including use of Wastebeds 5 and 6 as a public events center and park, and must be protective of human health and the environment in order to be approved by the regulatory agencies. It must also be compatible with the existing remedies implemented nearby in Ninemile Creek and Onondaga Lake. Prior to issuing a final ROD, the FS and proposed remedy will be made available by NYSDEC to the public for review and comment. Other than for various phases of construction, this DEIS impact analysis is based upon use of the site with the selected remedies in place.

¹⁰¹ NYSDEC 2013b. *Environmental Site Remediation Database - Site # 734081*

3.10.2 Potential Impacts

3.10.2.1 Construction

Construction of the project will involve some intrusive work associated with installation of utilities, preliminary site grading and installation of foundations. This initial work will not have the benefit of protection through the proposed remedy as will the latter stages of construction. Potential adverse environmental impacts associated with the construction of this project can include air quality, water quality, noise, solid waste generation and natural communities. These impact categories are typical for major construction efforts in urban areas with nearby commercial, recreational and/or aesthetic resources subject to multiple uses by the public. In the case of the Lakeview Amphitheater project, much of the contiguous parcel area is vacant or unoccupied throughout most of the year. This will change somewhat with the opening of the new Bike Trail section of the Loop the Lake Trail and during State Fair events when the upper parking lots are in use. The existing public roadways, trails and waterways in the area will continue to serve the public during construction to the extent compatible with public safety. Since the duration of the construction effort will extend through multiple construction seasons, longer term plans for mitigating construction impacts will be beneficial.

The use of heavy construction equipment may produce volatile vapors and carbon monoxide emissions which, when added to background levels produced by motor vehicles, could result in short-term adverse impacts to air quality. Because of the current topography and subsurface conditions at the site, extensive excavation is not anticipated which will mitigate levels of airborne particulates (dust). However, other construction activities including grading, placement of granular materials and transportation of materials on site can create airborne particulates and contaminants. Other potential impacts can include disturbance of contaminated materials and/or elements of the site remedies.

The most common water quality issues associated with construction are erosion and sedimentation control in the areas disturbed by the construction effort. Removal of vegetative cover can also enhance the erosion effects of precipitation.

Construction of the project will generate some quantity of solid waste materials. Solid waste associated with construction of the project will include domestic waste generated by workers, and construction-related waste (e.g., containers and construction debris).

Impacts to natural communities within the areas of active construction are discussed separately in Section 3.4.

3.10.2.2 Operation

It is planned that operation of the facility will take place after the site remedies are in place. It is not expected that these operations will result in major impacts with regard to the environmental contaminants at the site. Impacts associated with intense public use include erosion and habitat disruption associated with trespass whether intentional or accidental. This may also increase the chance of exposure to underlying contaminants if allowed to continue for longer periods of time. Additional fill imported to the site to construct the necessary grades and surface features of the project will add additional cover over the existing soils, enhancing the effectiveness of the anticipated remedy. Maintenance of the property will be necessary to provide for the long term integrity of the remedy and to prevent future impacts due to site disturbance and erosion. Other environmental impacts associated with operations such as noise and traffic are discussed separately under those sections of this document.

3.10.3 Proposed Mitigation

3.10.3.1 Construction

To help mitigate air emissions during construction, the contractors will be instructed to employ proper construction and dust suppression techniques, including wetting or shielding of work areas whenever significant potential for airborne particulates is present. If the mitigation efforts do not succeed in reducing the emissions to acceptable levels, work can be suspended until conditions improve or successful additional mitigation methods are incorporated.

Mitigation available for erosion from stormwater during construction includes diversion ditches up-gradient of work areas, sedimentation basins, silt fences and other barriers such as straw bales. Properly installed and maintained, these temporary structures will need to be maintained until vegetative cover is restored. The scope and schedule for erosion and sedimentation control measures will be provided in a project specific Stormwater Pollution Prevention Plan (SWPPP), which will be reviewed and approved by the appropriate state and/or federal agencies.

Fuel, lubricants, and any other construction-related chemicals, will be stored in specified, secondarily contained locations, and fueling and maintenance of equipment will be conducted at locations distant from the excavations so that spills or overfills can be cleaned up effectively.

Planning to provide for the safety of the workers and the general public during construction is central to the successful implementation of any major project, and is vital when the project is located in an area that will be visited and traversed by the public during the construction effort. Exclusion zones limiting access of the public will need to be designated and enforced so that project-related activities will not overtly affect the users of the other areas of the site.

The air quality and water quality construction mitigation efforts discussed previously are intended to provide for the safety of the site workers and the public, as would the construction and site management plans which control access and vehicular traffic in the project area. To be effective, these plans will be site specific, addressing the range of potential hazards associated with each phase of the work, as well as the potential pathways by which workers and the public could be impacted and by incorporating proactive and conservative prevention and control measures for those situations. Site safety plans will be required for each phase of work and worker safety meetings will be held at periodic intervals during the project.

Wastes will be segregated and disposed of as a contractual obligation by the site contractor. Likely, a local garbage hauler will be engaged by the contractor to make regular pick-ups and transport the waste to a nearby permitted facility. The contractor will also be obliged to provide sanitary waste collection and disposal for the workers.

Absent appropriate controls, there could be the potential for workers or the general public to be exposed to impacted materials during intrusive work on the site. Prior to any intrusive work, the contractor must prepare a plan for the removal and proper disposal of any waste materials that are determined to be present at locations and concentrations indicative of a potential hazard. This plan would include measures for characterizing waste materials for disposal purposes and handling. The plan may include an air monitoring plan for the site to address the potential for hazardous materials to migrate via fugitive dust emissions from construction activity.

The restoration plan will include interim erosion and sediment control measures to protect the area prior to re-growth of vegetative cover. Restoration will emphasize the use of native species characteristic of the desirable natural communities present prior to construction disturbance.

Since there appears to be adequate mitigation available for the range of anticipated construction-related impacts, there should be no undue adverse impacts to the environmental condition of the site associated with the construction effort.

3.10.3.2 Operations

To address operational related impacts, controls must be put in place to promote access to designated areas and discourage trespass in sensitive parts of the site and surrounding parcels. Good landscape design practice which provides adequate wayfinding features, natural barriers and enhanced access pathways will be implemented in order to promote proper travel, protect the neighboring sensitive habitats and to discourage travel to areas intended to remain in a natural state. Fencing and signage will also be utilized in certain areas to enhance site control and security. Routine maintenance of the venue site will be performed by the Onondaga County Department of Parks while remedy specific maintenance is expected to be carried out by Honeywell. Long term care and maintenance of the site and surrounding areas will be carried out consistent with the long term Site Management Plan and Institutional Controls as set forth in the Record of Decision which are put in place to preserve the integrity of the site cover and other remedy components both for the Crucible Landfill and the Wastebeds.

3.11 PUBLIC HEALTH AND SAFETY

3.11.1 Background Information

Currently, the Wastebed 5 and 6 area is vacant for the most part, with the exception of the lands supporting the new Bike Trail and the adjacent State Fair parking lots located offsite to the south, which see occasional seasonal use. The upland areas are characterized as successional forest with emergent mixed wood growth on previously disturbed land. Public use at this time is limited to the Bike Trail area. The property is owned by the County of Onondaga and is located within the Town of Geddes bordering the Village of Solvay.

3.11.2 Fire Protection

Fire protection for the site is provided through the Village of Solvay Volunteer Fire Department. The Department is located immediately west of the City of Syracuse, covering the Syracuse Suburbs of Solvay, Westvale, and portions of the Town of Geddes in Onondaga County, New York. The unit covers approximately 15,000 residents, on 7.7 square miles of land, and roughly 3 miles of Onondaga Lake shoreline. The district is densely populated, with a mix of residential, commercial, and heavy industry. The New York State Fairgrounds are located entirely within the Solvay Fire District. The Department's staff of over 60 volunteers responds to over 1,400 calls for service annually, making it the 3rd busiest fire department in Onondaga County. The Department operates out of 2 main stations, plus staffs a station at the New York State Fairgrounds 24 hours a day with 6 personnel and an Engine on site during the 12 days of the State Fair. The closest permanent station to the proposed project site is located at 1925 Milton Avenue, less than 3 miles away.

3.11.3 Police Protection

The Town of Geddes Police Department, located on Woods Road in Solvay, is a Town police department comprised of approximately 25 members. They are responsible for providing public safety services in the Town including the proposed project area. The New York State Police and Onondaga County Sheriff's Department also provide service to this area along Interstate 690. The State Police station for Troop D,

Zone 2 is in North Syracuse approximately 10 miles from the site. The Onondaga County Park Rangers will also patrol the site as part of their overall coverage of County facilities.

3.11.4 Emergency Services

The Onondaga County Departments of Emergency Communications and Emergency Management are designated to coordinate all emergency management activities in the area and work cooperatively with emergency medical services (EMS), fire, hospital, and law enforcement agencies to provide incident response to the community. The Department of Emergency Communications operates the County's 911 Call Center and provides the main link between the citizens and the public safety agencies that serve them. When an emergency call arrives that requires a dispatched response, the call center coordinates with the appropriate responders based upon location and availability. This agency currently serves most of the Lakefront community and this would continue under the proposed development. There are four major hospitals located within 6 miles of the site with the closest being St. Joseph's Hospital Health Center on Prospect Avenue in the city of Syracuse just over 4 miles away.

3.11.5 Environmental Conditions

As stated previously, the Lakeview Point site is located within one of the Onondaga Lake superfund subsites, known as Wastebeds 1 through 8. Specifically, the project site is located within the areas known as Wastebeds 5 and 6. The project area is also listed on the New York State Registry of Inactive Hazardous Waste Sites as a State Superfund Class 2 site (NYS Registry: 734081). Also located on Wastebed 5 is the closed Crucible Steel landfill, a former steel mill solid waste fill site which covers an area of approximately 20 acres and contains an estimated volume of about 225,000 cubic yards of both non-hazardous and hazardous wastes.¹⁰² With the planned future designated use of this area as a public park and entertainment venue, the health and safety aspects of the site are an important issue. To address the planned designated use, Honeywell is currently preparing a Draft Feasibility Study (FS) for Operable Unit No. 1(OU1) to evaluate remedies for the site. OU1 includes the soils and fill materials on Wastebeds 1

¹⁰² *Crucible Landfill Revised Landfill Closure Plan Volumes 1 & 2 (C&S, 1986)*

through 8 excluding site groundwater, which is a separate unit. This FS document¹⁰³ will outline the development, screening and evaluation of remedial alternatives designed to be protective of human health and the environment and to improve natural habitat. Each alternative developed as part of that plan, will be evaluated consistent with CERCLA and NYSDEC guidance in terms of the following criteria:

1. Overall protection of human health and the environment
2. Compliance with Applicable, Relevant or Appropriate Requirements (ARARS)
3. Long term effectiveness and permanence
4. Reduction of mobility, toxicity or volume
5. Short term effectiveness
6. Implementability, and
7. Cost

The feasible alternatives developed through this process will be implemented in conjunction with the elements of the ongoing Interim Remedial Measures (IRM) and a future groundwater remediation plan to address remediation of the project site and surrounding property. The feasible alternatives to be proposed involve placement of vegetated cover and institutional controls on the site as a function of the intended use of each area. More specifically, the FS will propose placement of a vegetative cover system consisting of either vegetative enhancement or placement of a soil or structural fill substrate capable of providing water holding capacity, rooting volume and growing conditions to support a planted vegetative cover utilizing native species appropriate for each area of use. The placement and thickness of the substrate could range from a minimal wood fiber mulch/compost/fertilizer layer to as much as one foot of gravel or two feet of soil and would be a function of use as defined by the following categories:

1. Areas where contaminant levels are below the appropriate NYSDEC Soil Cleanup Objectives (SCOs)
2. Areas of Passive Recreational Use (limited potential for soil contact, i.e. parking lots, etc.)
3. Areas of Active Recreational Use (potential for soil contact, i.e. park grounds, seating areas)

¹⁰³ *Draft Feasibility Study Report-Operable Unit No. 1, Wastebeds 1 through 8, Geddes, NY. O'Brien and Gere, May 2014*

4. Areas of Ecological Resources Value (undeveloped upland areas supporting native flora and fauna)

In addition to the FS, the USEPA has prepared a Draft Supplemental Human Health Risk Evaluation (HHRE)¹⁰⁴ as an addendum to the 2011 HHRA document reflecting current information on site conditions and the intended use of the Wastebed 5 and 6 areas for the amphitheater venue. The 2011 HHRA identified the potential exposure pathways by which populations may be exposed to site-related contamination, the toxicity of the chemicals that are present, and the potential for cancer risks and non-cancer health hazards from exposure to those chemicals. A four-step process was utilized as part of this study for assessing site-related human health risks for a reasonable maximum exposure (RME) scenario. These steps included:

1. Hazard Identification, which identifies the contaminants of potential concern at the site based on several factors such as toxicity, frequency of occurrence and concentration.
2. Exposure Assessment, which estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures and the exposure pathways under current and likely future land use scenarios.
3. Toxicity Assessment, which determines the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure and severity of adverse effects, and
4. Risk Characterization, which summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of site-related risks and hazards, and presents a discussion of the uncertainties of the process.

The HHRE evaluation included a comparison of the human receptors for the intended use (Amphitheater Attendee, Amphitheater Maintenance Worker, and Amphitheater Construction Worker) likely to be associated with the proposed Lakeview Amphitheater Facility to receptors that were quantitatively evaluated as part of the 2011 Wastebeds 1-8 site (Site) baseline human health risk assessment (HHRA). It is important to note that the HHRA and the supplemental evaluation assumed no remediation, nor access

¹⁰⁴ USEPA, *Draft Supplemental Human Health Risk Evaluation, Onondaga Lake Superfund Site, Wastebeds 1-8, Lakeview Amphitheater, Geddes, NY, May 2014* <http://www.epa.gov/region2/superfund/npl/onondagalake/docs.html>

or use controls such as fencing or signage and that once the remedial measures and controls are implemented, there will be reduced potential for human exposure to Site contaminants relative to the conditions which were assumed in the HHRA and in this supplemental evaluation. The supplemental risk evaluation concludes that the potential risks and hazards associated with the Amphitheater Attendee and Amphitheater Maintenance Worker are expected to be within acceptable risk ranges and targets. The study does however, recommend protective measures for Amphitheater Construction Workers while engaging in on site activities.

As noted earlier, as part of the regulatory process established for the remedial alternatives, following review of the evaluations documented in the FS Report, NYSDEC and USEPA will identify an alternative to propose as the preferred remedy for the site and will develop a Proposed Remedial Action Plan (PRAP) for Operable Unit 1 describing their findings. This plan will be published for public review and comment. Following receipt of public comments on the PRAP, the selected remedial alternative will be finalized and documented in a Record of Decision (ROD) for the site. The final remedy will then be implemented by Honeywell under the supervision of the involved regulatory agencies. In addition, the design and construction of the proposed facility must take into account the conditions described in the Crucible Landfill Closure Plan and Post Closure Plan. These documents describe the function of the landfill cover system which has been in place since 1989 and the long term care and maintenance requirements to preserve and protect the cover features. Design of the surface and subsurface features of the amphitheater project are being coordinated with technical staff of Honeywell and the regulators so that they can be implemented in conjunction with both the existing and proposed site remedies. Early phases of construction of the project will involve some intrusive work associated with installation of utilities, preliminary site grading and installation of foundations, and this initial work may not have the benefit of protection by the proposed remedy as will the latter stages of construction. Later stages of construction and site preparation as well as the ultimate use of the facilities and surrounding grounds will benefit from the proposed remedies as they are implemented. Other than for various phases of construction, this DEIS impact analysis is based upon use of the site with the selected remedy in place.

3.11.6 Potential Impacts

3.11.6.1 Construction

Construction of the project will involve some intrusive work associated with installation of utilities, preliminary site grading and installation of foundations. This initial work will not have the benefit of protection by the proposed remedy as will the latter stages of construction. Potential adverse public health and safety impacts associated with the construction of this project can include air quality, water quality, noise, solid waste generation and physical hazards. These impact categories are typical for major construction efforts in urban areas with nearby commercial, recreational and/or aesthetic resources subject to multiple uses by the public. In the case of the Lakeview Amphitheater project, much of the contiguous parcel area is vacant or unoccupied throughout most of the year. This will change somewhat with the opening of the new Bike Trail section of the Loop the Lake Trail and during State Fair events when the upper parking lots are in use. The existing public roadways, trails and waterways in the area may continue to serve the public during construction to the extent compatible with public safety.

The use of heavy construction equipment may produce volatile vapors and carbon monoxide emissions which, when added to background levels produced by motor vehicles, could result in short-term adverse impacts to air quality. Because of the current topography of the site, extensive excavation is not anticipated which will mitigate levels of airborne particulates (dust). However, other construction activities, including grading, placement of granular materials and transportation of materials on site can create airborne particulates and contaminants.

The most common water quality issues associated with construction are erosion and sedimentation control in the areas disturbed by the construction effort. Removal of vegetative cover can also enhance the erosion effects of precipitation.

Construction of the project will generate some quantity of solid waste materials. Solid waste associated with construction of the project will include domestic waste generated by workers, and construction-related waste (e.g., containers and construction debris).

3.11.6.2 Operation

Operation of the facility will take place after the remedy is in place. However, as the facility operates, larger numbers of people will be drawn to the site for recreation and attendance at entertainment events. Also, users of the new Bike Trail will want to take advantage of the amenities to be provided as part of the facility. Impacts to the site associated with intense public use include erosion and habitat disruption associated with trespass, whether intentional or accidental. This may also increase the chance of exposure to underlying contaminants if allowed to continue for longer periods of time. There may also be increased risk of criminal activity or vandalism which will require enhanced security. Other impacts associated with operations such as noise and traffic are discussed separately under those specific sections of this document.

3.11.7 *Proposed Mitigation*

3.11.7.1 Construction Mitigation

To help mitigate air emissions during construction, the contractors will be instructed to employ proper construction and dust suppression techniques including wetting or shielding of work areas whenever significant potential for airborne particulates is present. If the mitigation efforts do not succeed in reducing the emissions to acceptable levels, work can be suspended until conditions improve or successful additional mitigation methods are incorporated.

Mitigation available for erosion during construction includes diversion ditches up-gradient of work areas, sedimentation basins, silt fences and other barriers such as straw bales. Properly installed and maintained, these temporary structures will need to be maintained until vegetative cover is restored. The scope and schedule for erosion and sedimentation control measures will be provided in a project specific Stormwater Pollution Prevention Plan (SWPPP), which will be reviewed and approved by the appropriate state and/or federal agencies.

Fuel, lubricants, and any other construction-related chemicals, will be stored in specified, secondarily contained locations, and fueling and maintenance of equipment will be conducted at locations distant from the excavations so that spills or overfills can be cleaned up effectively.

Planning to provide for the safety of the workers and the general public during construction is central to the successful implementation of any major project, and is vital when the project is located in an area that will be visited and traversed by the public during the construction effort. Exclusion zones limiting access of the public will need to be designated and enforced at certain times so that project-related activities will not overtly affect the users of the other areas of the site.

The air quality and water quality construction mitigation efforts discussed previously are intended to provide for the safety of both the site workers and the public, as would the construction and site management plans which control access and vehicular traffic in the project area. To be effective, these plans will be site specific addressing the range of potential physical and environmental hazards associated with each phase of the work, as well as the potential pathways by which workers and the public could be impacted and by incorporating proactive and conservative prevention and control measures for those situations. Site safety plans will be required for each phase of work and worker safety meetings will be held at periodic intervals during the project.

Wastes will be segregated and disposed of as a contractual obligation by the site contractor. Likely, a local garbage hauler will be engaged by the contractor to make regular pick-ups and transport the waste to a nearby permitted facility. The contractor will also be obliged to provide sanitary waste collection and disposal for the workers.

Absent appropriate controls, there could be the potential for workers or the general public to be exposed to impacted materials during intrusive work on the site. Prior to any intrusive work, the contractor must prepare a plan for the removal and proper disposal of any waste materials that are determined to be present at locations and concentrations indicative of a potential hazard. This plan would include measures for characterizing waste materials for disposal purposes and handling. The plan may include air monitoring for the site to address the potential for hazardous materials to migrate via fugitive dust emissions from construction activity.

3.11.7.2 Operation Mitigation

To address operational related impacts, controls must be put in place to promote access to designated areas and discourage trespass in sensitive parts of the site and surrounding parcels. Good landscape design practice which provides adequate wayfinding features, natural barriers and enhanced access pathways will be implemented in order to promote proper travel, protect the neighboring sensitive habitats and to discourage travel to areas intended to remain in a natural state. Routine maintenance of the venue site will be performed by the Onondaga County Department of Parks while remedy specific maintenance is expected to be carried out by Honeywell. Long term care and maintenance of the site and surrounding areas will be carried out consistent with the long term Site Management Plan and Institutional Controls as set forth in the Record of Decision and Post Closure Plan which are put in place to preserve the integrity of the site cover and other remedy components.

Site security will be enhanced through design features which include fencing, specific area lighting, video surveillance, emergency communications network, and routine police/park ranger patrols.

3.12 LAND USE AND ZONING

3.12.1 *Existing Conditions*

The Project site is located on Lakeview Point, on the western shore of Onondaga Lake (see Figure 1). Situated north of the existing New York State Fairgrounds parking lots and the I-690 and NYS Route 695 exchange, and east-southeast of the mouth of Nine Mile Creek, the Project site is located approximately 1.2 miles north of the Village of Solway, 1.0 mile south of the Village of Liverpool, and 1.9 miles northwest of the City of Syracuse (see Figure 2). This specific portion of Onondaga Lake's shoreline was historically used as a location to host events and attract tourism. In 1872, the Lakeview Point Resort became the first of many hotels, restaurants, resorts, and amusement parks lining the shores of Onondaga Lake (Thompson, 2002).¹⁰⁵

The Project site consists of a single parcel at 612 State Fair Blvd (Lot 029.-01-02.0) currently owned by Onondaga County. The site is currently vacant and covered by a mix of vegetated and open meadow

¹⁰⁵ Thompson, D.H. 2002. *The Golden Age of Onondaga Lake Resorts*. Purple Mountain Press, Ltd., Fleischmanns, NY. 141 pp.

areas. However, as described in Sections 2.0 and 3.7, a multi-use recreational trail has recently been constructed through a portion of the site, which connects to the existing West Shore trail on the adjacent County-owned parcel to the northwest. The proposed Project will be constructed adjacent to the trail and will integrate it into the design (see Figure 4).

Land uses and existing conditions adjacent to the Project site include:

- to the northwest, another parcel (ID Number 030.-01-02.1) owned by Onondaga County across the mouth of Nine Mile Creek, which contains a portion of the existing West Shore multi-use recreational trail;
- to the northeast and east, Onondaga Lake; and
- to the southwest and west, land owned by New York State containing parking facilities mainly used by visitors to the annual New York State Fair and Interstate 690.

The Project site is currently zoned “Industrial A: General Industrial District” by the Town of Geddes. The zoning code does not permit any uses by right in this district. The uses permitted in this district include (Town of Geddes, 2010)¹⁰⁶:

- Industrial Use
- Business Office
- Vehicular freight service
- Retail, Warehouse, or Wholesale Business
- Facilities necessary for the provision of natural gas, electric, cable television, and telephone service to the local community other than storage yards or towers
- Commercial dry-cleaning or laundry facility
- Public Park or Playground
- Research Facilities

Additionally, several uses are permitted upon issuance of a special permit (Town of Geddes, 2010). These include:

- Storage yard

¹⁰⁶ Town of Geddes. 2010. *Code of the Town of Geddes New York, v14*. The Officials of the Town of Geddes. Available at: <http://townofgeddes.com/wp-content/uploads/2010/02/Geddes-Codes-Book.pdf> (Accessed March 25, 2014).

- Motor vehicle sales and/or service establishment
- Car or truck wash
- Gas Station
- Restaurant
- Hotel or Motel
- Parking Facility
- Commercial transmitting, relaying, or receiving facility
- Power Generating Facility

3.12.2 Potential Impacts

3.12.2.1 Construction

Preconstruction and construction activities are expected to have temporary impacts on land use in the area immediately surrounding the Project site. Temporary construction activities will be largely limited to the Project site and the adjacent parking area. These activities include, but are not limited to:

- The installation of Project site/construction logistics, including fencing/wind screening, signage, alternate transportation routing and associated equipment;
- The installation of soil erosion and sedimentation controls;
- Utility demolition, relocation, and installation, including stormwater collection systems, water supply and wastewater collection lines, electric, data, telecommunications, and gas;
- Site excavation;
- Loading and unloading of materials and equipment; and
- Building construction.

Construction activities may result in temporary minor impacts from dust, noise, vibration, and other minor inconveniences to nearby properties. Temporary adverse impacts to air quality may result from the operation of construction equipment and vehicles, which could generate engine exhaust emissions and fugitive dust. Exclusion zones limiting public access to the Project site will be designated and enforced during construction of the Lakeview Amphitheater, thereby limiting exposure of most construction impacts. These exclusion zones could include short-term closures of the multi-purpose trail during certain phases of

construction, resulting in a temporary reduction in recreational opportunities on-site. As described in Sections 3.3, 3.7, and 3.9, the Project includes mitigation, minimization, and/or avoidance measures to ensure that any such effects will not rise to the level of significant adverse impacts.

3.12.2.2 Operation

Operation of the proposed Lakeview Amphitheater will change land use at the Project site by converting a large, vacant parcel on the lakeshore into an area utilized by the public periodically for special performance events. As is described in Section 3.13, this development is largely consistent with the goals of multiple planning documents. Operation of the proposed Project will impact the adjacent parking facilities only by increasing the frequency of use from largely only during the annual State Fair to whenever there is an event at the Amphitheater.

3.12.3 *Mitigation*

The proposed Project is consistent with existing land uses and land use regulation of the Project site and adjacent areas. Due to this consistency, no significant impacts to land use are expected. Consequently, no further mitigation measures are proposed.

3.13 GROWTH AND CHARACTER OF THE COMMUNITY

3.13.1 *Existing Conditions*

The Project site is located adjacent to Onondaga Lake, Onondaga Lake Park, and the New York State Fairgrounds. This location is a strategically important area of Onondaga County for many different stakeholder groups including the nearby residents of the Town of Geddes, the Onondaga Nation, and the residents of Onondaga County and the entire Central New York Region. For this reason, its future development is discussed in a variety of planning documents produced over the last few decades. These various plans provide guidance and direction regarding the physical development and programming of the area in order to contribute to the overarching strategies and goals of the various stakeholders. Four applicable plans are described below:

Onondaga Lake Development Plan (1991)

This document, published in 1991, was the outcome of a partnership between the City of Syracuse, Onondaga County, the Metropolitan Development Foundation, and the New York State Urban Development Corporation. It is described as a “comprehensive land use master plan to be used by the community in selecting policies to develop lakeshore and adjacent properties in a planned and coordinated manner” (Halcyon Ltd. et al., 1991).¹⁰⁷ Along with research into the existing conditions of Onondaga and the surrounding communities, the document enumerates both general and site-specific recommendations regarding future development both directly adjacent to the lake and on properties further away that could affect it indirectly. Development at the Project site is specifically discussed.

2010 Development Guide for Onondaga County (1998)

Along with the companion existing conditions assessment document referred to as the “Framework for Growth”, the 2010 Development Guide represents the community’s vision at the time of publication for how the County should develop over through the first decade of the 21st century (Syracuse-Onondaga County Planning Agency, 1998).¹⁰⁸ The document lists four overarching goals for the County’s future, which all the specific recommendations are based on. These main goals include economic growth, an attractive community, diversity and choice, and fiscal strength. The five main strategies for achieving these goals are identified as good community planning, coordinated community efforts, cost-effective infrastructure, sustainable development patterns, and natural resource stewardship.

F.O.C.U.S on Onondaga Lake (2012)

Undertaken in 2012 by F.O.C.U.S Greater Syracuse, this planning document was conceived as a way to compile and organize decades worth of people’s thoughts, ideas and perspectives on how to reintegrate the Lake into the fabric of the community, and to distill these ideas into an orderly suite of practical projects, programs and activities that can be systematically undertaken to ensure that the community’s reconnection with Onondaga Lake is realized. Additionally, it reported on the results of both a recent survey effort of local residents and interviews of selected stakeholders regarding their visions, values, needs, and concerns

¹⁰⁷ Halcyon Ltd., Calcerinos and Spina Engineers, P.C., The Winters Group, Inc., and Knowledge Systems and Research, Inc. 1991. *1991 Onondaga Lake Development Plan*. Prepared for the Metropolitan Development Foundation of Central New York (MDFCNY), New York State Urban Development Corporation, Onondaga County Industrial Development Agency, and City of Syracuse. October 29, 1991.

¹⁰⁸ Syracuse-Onondaga County Planning Agency (SOCPA). 1998. *2010 Development Guide for Onondaga County*. Available at: http://www.ongov.net/planning/documents/plan_2010_development_guide.pdf (Accessed April 8, 2014).

about future lake shoreline development (F.O.C.U.S Greater Syracuse, 2012).¹⁰⁹ The main product in the report is an outlined and categorized list of compiled goals and desires of the community for future development of the shoreline of the Lake as it continues to get cleaner and remediation efforts continue and finish over the next few decades from these three sources (the review of past documents, the survey, and the stakeholder interviews). These goals are broken down into the areas of:

- Recreation
- Tourism, Culture and Education
- Transportation
- Development
- Community Outreach and Engagement, and
- Environment

Finally, the report finishes with a list of specific recommendations including, but not limited to, the construction of new fishing piers, the completion of the Loop-The-Lake Trail, and the development of new learning opportunities along the lakeshore.

Reconnecting with Onondaga Lake: The Community's Vision for the Future of a Revitalized Resource (2007)

In the latter half of the first decade of the 2000s, the Onondaga Lake Partnership and Onondaga Environmental Institute commissioned a visioning study. In light of the improving environmental state of Onondaga Lake and nearby areas attributable to recent and ongoing environmental remediation efforts, these organizations recognized a need to understand how the community wanted to move forward with utilizing improving resources. This document was published in 2007 as the result of a visioning process that included background research and a large phone survey of registered voters in Onondaga County. The process culminated with a single vision statement for what the collective desire of the community for the future regarding the rehabilitated Onondaga Lake: Reconnect with it (EcoLogic, 2007).¹¹⁰ The document expands on this by stating that this should be done through accessibility, activities, and

¹⁰⁹ F.O.C.U.S Greater Syracuse, Inc. 2012. *F.O.C.U.S. on Onondaga Lake: A Roadmap to Facilitate Reconnecting the Lake with the Community*. Available at: <http://www.ongov.net/documents/FOCUSonOnondagaLake.pdf> (Accessed April 7, 2014).

¹¹⁰ Ecologic, LLC. 2007. *Reconnecting with Onondaga Lake: The Community's Vision for the Future of a Revitalized Resource*. Available at: http://onlakepartners.org/ppdf/reconnecting_with_onondaga_lake.pdf (Accessed April 9, 2014).

community commitment to rehabilitation. Finally, it commits to progress measurement towards this vision though looking at the amount public access to the lakeshore, the number of attractive activities happening at the lake, and signs of healthy or improving environment (Ecologic, 2007; ES-2).

3.13.2 *Potential Impacts*

3.13.2.1 Construction

As described previously in Sections 3.3, 3.7, and 3.9, construction activities may result in minor, temporary impacts from dust, noise, vibration, and minor inconveniences to areas in the immediate vicinity of the Project site. As described in those sections, the Project construction time period will be limited, and includes mitigation, minimization, and/or avoidance measures to ensure that any such effects will not rise to the level of significant adverse impacts on community growth and character.

3.13.2.2 Operation

Each of the plans described in Section 3.13.1 provides enumerated strategies and/or goals. Table 4 below lists the primary goals of each document relevant to the proposed Project. The degree to which the Project is consistent with or inconsistent with these goals is also summarized in Table 4 below.

Table 4. Project Consistency with Local Planning Documents

Plan	Relevant Goals/Strategies/Values	Project Consistencies	Project Inconsistencies
1991 Onondaga Lake Development Plan	<ul style="list-style-type: none"> - Fairgrounds and the Inner Harbor should be the areas of concentrated activity. Development on the rest of the shoreline should be focused on recreational uses. - Strong ties should be created to the University Campus area and downtown, possibly through the development of mass transit options - Redevelopment of the western lakeshore wastebeds peninsula to include a seasonal performing arts facility 	<ul style="list-style-type: none"> - Utilizes existing Fairgrounds parking - Redevelopment of the wastebed peninsula site - New recreational use along the lakeshore 	None

Plan	Relevant Goals/Strategies/Values	Project Consistencies	Project Inconsistencies
2010 Development Guide for Onondaga County (1998)	General <ul style="list-style-type: none"> - Invest in existing communities - Redevelop obsolete and vacant sites - Protect and maintain existing infrastructure - Preserve transportation assets - Expand infrastructure for job creation Site-Specific <ul style="list-style-type: none"> - Develop a Protected Open Space land use at the wastebeds peninsula site 	<ul style="list-style-type: none"> - Capitalizes on and preserves existing transportation and parking assets including Interstate 690 and New York State Fair Parking - Converts a long underutilized site to a beneficial use for the community - Invests in the existing community of the Town of Geddes - Includes designated open spaces/natural areas 	<ul style="list-style-type: none"> - Reduces open space
F.O.C.U.S. on Onondaga Lake: A Roadmap to Facilitate Reconnecting the Lake with the Community (2012)	<ul style="list-style-type: none"> - Survey Question: Top reason you currently visit Onondaga Lake – 41.9% Exercise, 26.3% Recreation, 8.9% Events - Survey Question: Importance of completing a trail around the entire lake – 49.0% Very Important, 30.0% Important - Survey Question: Importance of continuing County ownership of majority shoreline land – 30.7% Very Important, 31.8% Important, 23.6% Neutral - Stakeholder Interview stated Priorities: <ul style="list-style-type: none"> • Preservation of existing and creation of new public access points to waterfront • Facilitate connections using existing infrastructure and new non-automobile options • Enhance public fishing access 	<ul style="list-style-type: none"> - Increases the opportunity for events oriented uses on the lakeshore - Integrates with an existing and currently expanding recreational and fitness oriented use (multipurpose trail on site and connection to the northwest) - Preserves public ownership of waterfront area - Provides new public waterfront access - Provides for option of non-automobile transportation connections with water taxi service - Provides for cultural events and displays along the shoreline including concerts, an art park and an amphitheater 	<ul style="list-style-type: none"> - Does not limit development to Solvay, Liverpool, and the Inner Harbor
Reconnecting with Onondaga Lake: The Community's Vision for the Future of a Revitalized Resource (2007)	Vision Elements <ul style="list-style-type: none"> - Develop and maintain existing trails along lakeshore - Provide year-round activities at the lake - Improved access for boating and fishing - Protect and maintain existing infrastructure - Preserve transportation assets - Expand infrastructure for job creation 	<ul style="list-style-type: none"> - Integrates with an existing and currently expanding recreational trail on site and connection to the northwest - Provides new public waterfront access - Provides space for new public events at the lake to capitalize on the asset 	None

Additionally, beyond the specifics of the planning documents reviewed above, the Project is generally consistent with the land use and community character of the areas adjacent to its proposed location. The proposed design of the Project integrates the amphitheater with the multipurpose recreational trail, and utilizes existing parking areas already used for other special events (i.e., State Fair parking lots). It capitalizes on the proximity to the lakeshore by introducing a water taxi transportation option during special

events. Finally, it adds a similar and compatible use to an area adjacent to the Fairgrounds that is already accustomed to the presence of a large, seasonal special events and recreational land use.

3.13.3 Proposed Mitigation

As discussed above, the proposed Project is generally consistent with existing land use and community character of the Project site and adjacent areas, and the major goals common to many of the existing planning documents described above (Table 4). These consistencies include:

- Redevelopment of underutilized properties,
- Addition of new recreational opportunities along the Onondaga Lake shoreline,
- Integration with existing transportation and recreational infrastructure,
- Continued public ownership of and enhanced public access to the Onondaga Lake shore.

In summary, due to the overall consistency with existing conditions and stated plans, no significant impacts to community character are expected. Therefore, no additional mitigation measures are proposed.

3.14 COMMUNITY FACILITIES AND SERVICES

3.14.1 Existing Conditions

As described in Section 3.7, the County is recently completed a multipurpose recreation trail at the Project site. There are presently no other community facilities or services at the Project site.

The land to the north of the Nine Mile Creek outlet is also owned by Onondaga County Parks, and contains additional recreation trails. Municipally owned recreation facilities within the Town of Geddes include the John Carno Recreation Center, Lakeland Park, Geddes Athletic Fields, and Lindbergh Lawns Park. Municipally owned recreation facilities within the Village of Solway include the Village Park and Playground, Woods Road Park, Mountaintop Park, Boyd Park and Gertrude Park.

Emergency services in the vicinity of the Project site are provided by the Onondaga County Park Rangers, Onondaga County Sheriff's Office, Geddes Police Department, Solvay Police Department, Solvay Volunteer Fire Department, and the New York State Police.

Primary public education facilities and services for nearby residents are provided by the Solvay Union Free School District and Onondaga-Cortland-Madison BOCES.

The general project area is served by two water purveyors depending on location: the Onondaga County Water Authority (OCWA) and the City of Syracuse. The City of Syracuse service to the area terminates in the general vicinity of the Honeywell visitors center approximately 1.5 miles south of the proposed facility. A meeting was held with OCWA in March 2014 to discuss providing a water service to the amphitheater facility. Based on that meeting, OCWA indicated that it has a 12-inch diameter water distribution pipeline that runs along the northeastern side of State Fair Boulevard, which could be utilized for the facility's water service. OCWA will be performing a hydrant flow test in the vicinity of the intended connection point to further quantify system capabilities during high flow conditions. This data will be considered during final design of the utilities to the facility.

Based on a review of existing infrastructure in the area, there are currently no sewer lines on the east side of I-690 that could be utilized to discharge sewage from the amphitheater. A meeting was held with the Onondaga County Department of Water Environment Protection (OCWEP) in March 2014 to discuss available options for discharge of sewage from the facility. OCWEP has two existing pumping stations in the project area; the West Side Pumping Station and the Lakeside Pumping Station. The West Side Pumping station is located on the western shore of Onondaga Lake, immediately adjacent to the Honeywell visitor's center. The West Side Pumping Station has a number of current operational issues due to its age and insufficient capacity to support sewage flows. OCWEP recently selected a consultant to address these issues with the end result likely being that the entire pumping station will be replaced and slightly relocated. The Lakeside Pumping Station is located on the northeastern side of State Fair Blvd adjacent to the I-690 access ramps. Based on discussion with OCWEP, this pumping station is somewhat underutilized and would have sufficient capacity to accept sewage from the amphitheater facility.

The Onondaga County Resource Recovery Agency (OCRRA) has been providing a comprehensive solid waste management and resource recovery system to Onondaga County since 1990. OCRRA operates two trash and recycling drop-off sites (Ley Creek and Rock Cut Road), two compost sites (Amboy and Jamesville), and one waste-to-energy facility (Rock Cut Road). The waste-to-energy facility processes non-recyclable trash, while generating enough electricity for 25,000 to 30,000 homes and reducing the volume of material that needs to be landfilled by 90%¹¹¹.

Onondaga County provides a number of county-wide community facilities and services, including but not limited to numerous health-related services, emergency communications and management, and various social services.

3.14.2 Potential Impacts

3.14.2.1 Construction

During construction, the existing OCRRA facilities will be used to process trash and recyclable materials. OCWA existing water supply lines in the Town of Geddes will be extended to serve the Project site. In addition, existing sewer lines in the Geddes Sanitary District will be extended so that sanitary wastewater can be delivered to the Metropolitan Syracuse Wastewater Treatment Plant (Metro).

As discussed in Section 3.7.2, temporary closures may affect the multi-purpose recreation trail during Project construction. However, the trail will not be physically impacted, and there are no other community facilities or services on-site that could be impacted during construction. Beyond the potential temporary impacts to the trail network, construction of the Lakeview Amphitheater is not expected to impact community facilities and services on-site or in nearby communities.

3.14.2.2 Operation

Operation of the Lakeview Amphitheater will have no adverse effect on the community facilities and services offered by Onondaga County, or on the primary education facilities in the area. As discussed in

¹¹¹ Onondaga County Resource Recovery Agency (OCRRA). 2012. *About OCRRA*. Available at: <https://ocrra.org/about-ocrra> (Accessed May 27, 2014).

Section 3.7.2, the proposed Project will enhance recreational opportunities at the Project site and in the surrounding communities. However, there will be an increased demand for certain other community facilities and services during events at the amphitheater, including emergency services, solid waste disposal, water supply, and sanitary wastewater treatment.

It is anticipated that emergency services during events at the amphitheater would be similar to those employed at other large County-run events, such as the Jamesville Balloonfest, Golden Harvest Festival, JP Morgan Corporate Challenge, and Syracuse Jazz Fest.

The project design team will continue to work with OCWA and OCWEP to provide for water and sewage treatment to the amphitheater facility, without causing undue impacts to the existing infrastructure and systems.

The existing OCRRA facilities will be used to process trash and recyclable materials, and adequate capacity exists to accommodate the proposed Project. Although specific design details do not yet allow for estimation of the amount of water to be used by the Lakeview Amphitheater, it is anticipated that the OCWA currently has the capacity to supply the water needs of the facility. Similarly, although the amount of sanitary sewage to be produced by the amphitheater has yet to be determined, it is anticipated that Metro has available capacity to treat it.

3.14.3 Proposed Mitigation

To ensure adequate emergency services coverage by the Onondaga County Park Rangers and Onondaga County Sheriffs, efforts will be made to avoid scheduling major events at the Lakeview Amphitheater concurrently with the Jamesville Balloonfest, Golden Harvest Festival, JP Morgan Corporate Challenge, or Syracuse Jazz Fest. However, if multiple events are scheduled on the same day/weekend, then additional mitigation options will be implemented as needed (e.g., hiring temporary personnel).

Since there will be no other potentially adverse impacts to community facilities and services from the proposed Project, no further mitigation measures are proposed.

4.0 UNAVOIDABLE ADVERSE IMPACTS

The proposed Project will result in long-term benefits to the community through improved access to the lakeshore, enhanced recreational opportunities and the ability to attract national-caliber entertainers and performers to the area with the resultant benefits, including economic opportunity and revitalization in the Town of Geddes and surrounding area. The Project will also create construction employment opportunities in the near term.

Despite the positive effects anticipated as a result of the Project, its construction and operation will necessarily result in certain unavoidable impacts. Many of these impacts will be temporary, and will result from construction activities (e.g., dust, trail closures). However, long-term unavoidable impacts associated with operation and maintenance of the Project will include visual impact to be experienced from some vantage points. These impacts relate to perceived changes in land use and community character; although many would consider development of a public recreation space to be an improvement, it is still a change when compared to existing conditions. Project development will also result in a loss of open space and wildlife habitat, a minor increase in impervious surface, and during events at the amphitheater, increased noise, light and traffic in the surrounding area. These impacts are evaluated in Section 3.0 of the DEIS. Although relatively minor adverse environmental impacts may occur, they will be minimized through the use of various general and site-specific avoidance and mitigation measures. With the implementation of these mitigation measures, the Project is expected to result in positive, long-term overall impacts that will offset the adverse effects that cannot otherwise be avoided.

The following subsections summarize general mitigation and avoidance measures that have been incorporated into the Project design, and specific mitigation and avoidance measures proposed to minimize adverse impacts to specific resources.

4.1 GENERAL MINIMIZATION AND AVOIDANCE MEASURES

SEQRA regulations require public input into the environmental review of proposed development projects so that potential adverse impacts can be identified prior to Project implementation and avoided or mitigated to the greatest extent practicable. This DEIS was prepared consistent with these regulations, and provides

the primary means by which the potential costs and benefits of the Project are described and weighed in a public forum. Compliance with SEQRA regulations provides a mechanism whereby public and agency comments are solicited and addressed, Project alternatives are evaluated, and potential adverse impacts are identified and mitigated to the extent practicable. Response to comments and preparation of a Final Environmental Impact Statement (FEIS) will provide the information necessary for the Lead Agency to draw conclusions (Findings Statement) regarding the Project's overall environmental impacts, and impose conditions on SEQRA approval, if necessary.

Compliance with the other applicable federal, state, and local regulations/guidelines governing the construction and design of the proposed Project also will serve to minimize adverse impacts. Construction activities and Project engineering will be in compliance with state building codes and design standards, and federal OSHA guidelines to protect the safety of workers and the public. Compliance with the State Pollution Discharge Elimination System General Permit will serve to protect water resources. Highway permitting at the local, county, and state level will assure that safety, congestion, and damage to highways in the area is avoided or minimized. In addition, documentation of specific existing conditions (e.g., groundwater, noise, vibration) will allow for Project-related comparisons and analyses as necessary. Lastly, locally based experts are being engaged during the development of critical plans (e.g., SWPPP) so that impacts are avoided to the extent practicable.

4.2 SPECIFIC MITIGATION MEASURES

Project development and operation will also include specific measures to mitigate potential impacts to specific resources. These were described in detail in Section 3.0, but generally include the following:

- Implementation of a Stormwater Pollution Prevention Plan to avoid/minimize impacts to soils and water resources.
- The proposed use of "dark sky"-compliant light fixtures to avoid/minimize light pollution impacts.
- Implementation of a dust control program during construction to maintain air quality.
- The use of temporary exclusion zones during construction to protect public safety.
- Tree cutting will be restricted to winter months when Indiana and northern long-eared bats are hibernating off-site.

- Prior to any construction activities in Onondaga Lake (i.e., the proposed seasonal docking system), a targeted rare plant survey will be conducted to determine the presence or absence of straight-leaf pondweed so that potential impacts to can be avoided.
- Good landscape design practice, which provides adequate wayfinding features, natural barriers and enhanced access pathways to promote proper travel, protect habitats left undisturbed, and discourage travel to areas intended to remain in a natural state.
- Implementation of a site restoration plan that provides for interim erosion and sedimentation control, along with revegetation with native species.
- Development of a long term maintenance plan consistent with the Honeywell Site Management Plan, Crucible post closure plan and site Institutional Controls protective of the remedies at Wastebeds 5 and 6 and the Crucible Landfill.
- Implementing a Project design that is intended, in part, to blend with the environment through use of textures and materials (e.g., stone, wood) representative of nature.

This section of the DEIS will include a description and evaluation of potential alternatives for the proposed action. Alternatives to be considered will include the No Action alternative, an alternative west shore site and an alternative that would rely upon design or scale modifications to either reduce or avoid potential impacts. Alternatives will be evaluated for their potential to mitigate impacts and for their ability to meet the goals of the project sponsor. As stated in Section 2, the goals of the project are:

1. To help enhance public access to the western shore of Onondaga Lake
2. To take advantage of the new opportunities available as a result of the remediation and restoration efforts taking place on the lakeshore, and
3. To further economic opportunity and revitalization in the Town of Geddes and surrounding areas.

To develop this alternative, various County owned public lands along the western shore of the lake were screened for their ability to support the project concept. The 1991 Onondaga Lake Land Use Plan evaluated the public lands along the western shore for their ability to support a variety of uses. These are shown schematically on the Image 5-1.



The planning document shows a proposed location for an amphitheater near Lakeview point. As can be seen from the figure, there are few other apparent sites along the western shore where a project of this scale could be located with sufficient access, parking, and space to accommodate a development of this size. Based on spacial constraints as the first criterion, alternative locations were reviewed and one alternative site was identified. This site is on County property at the Northwest corner of the lake, in the area known as Maple Bay as shown on Image 5- 2.

Image 5-2: Alternate Siting



This site was the only alternate area identified on the western shore that had the minimum space required to accommodate the proposed stage house and seating areas, however there is little additional space for ancillary facilities or amenities. The site is located off of Van Vleck Road at Exit 5 from Interstate 690 adjacent to Dwight Industrial Park. It currently is vacant with the exception of the County West Shore Trail right of way. A proposed site layout for this parcel is shown in Image 5-3.

Image 5-3: Maple Bay Site Layout



The two candidate sites were evaluated based on a series of criteria related to suitability for development and operation, including proximity to residences and businesses, available public utilities, opportunities for community enhancement, sensitive receptors, visual impacts, construction impacts, engineering considerations and constructability and operability.

Siting at the Maple Bay location would require offsite parking and shuttle service to accommodate the planned events. Although alternative parking may be available at Longbranch Park or other County properties, none of these areas provide sufficient space for the expected 6500 vehicles associated with a major event. Under this alternative, construction would most likely take place at several sites concurrently to accommodate offsite parking and reduced scale amenities would be provided at the main venue site. Viability of the venue as a national tour stop may be diminished due to the site constraints and reduced amenities. Public utilities are available nearby and renewable sourced power could be provided at reduced cost from the Village of Solvay Municipal Electric system. Special consideration would have to be given to geotechnical conditions on this site, however these may be less severe than at the Lakeview site. Operating costs would be greater as most parking would remain offsite requiring use of shuttles. Currently, a large portion of the Maple Bay site is located within a documented wetlands area. Siting at this location would require a major wetlands offset mitigation effort to accommodate the necessary site work resulting in additional project cost and a lengthened implementation schedule. By contrast, there would be little

concern regarding impacted soils or contaminated groundwater and coordination with remedial construction would not be necessary as it would at Lakeview Point. The facility would be in relatively close proximity to housing developments along Lake Pines Trail and Nick's Way in Lakeland and homes and businesses on Van Vleck Road and the Dwight Industrial Park. Visual impact would be more pronounced at this location given its relation to neighboring properties.

The Lakeview Point site's proximity to the State Fairgrounds parking lots would provide ease of access and lower operating cost. In addition, the site has sufficient acreage to support all of the planned facilities for a top tier venue. The site has ready access to public sewer, water, natural gas and low cost municipal electric service and favorable topography to minimize visual impacts. Operations and security would be enhanced through proximity to Honeywell Visitor's Center site and the State Fair grounds. There are fewer homes and businesses proximate to the site as compared to Maple Bay and the location could serve as a convenient waypoint between Longbranch Park and the Inner Harbor for Loop the Lake Trail users. Difficult geotechnical conditions are present on site and coordination with the ongoing Honeywell remedial construction will be required.

In comparison to Maple Bay, the Lakeview Point site has more positive attributes to support the intended use. Based on this initial screening, the analysis then focused on finding a favorable site in the Wastebeds 5 and 6 area at Lakeview Point as described below.

5.2 ALTERNATIVE PROJECT DESIGN AND SCALE

With regard to design, several different concepts and settings are being evaluated. The two concepts with the greatest potential involve the "Cove" setting along the northern shore of Wastebeds 5 and 6 and the "Beacon" setting located atop the peninsula between Wastebeds 5 and 6. These are shown conceptually in Images 5:4 and 5:5. Each setting presents its own advantages and challenges. In evaluating each alternative setting, environmental impacts were considered. In comparison, the preferred alternative (Cove setting) minimizes physical disturbance of the upper surfaces of the wastebeds, provides additional cover and reinforcement of the northern wastebeds dikes, helps to control drainage and runoff in the steeper slope areas, reduces impacts to the Crucible landfill site and has a lower visual impact on the surrounding areas. The "Cove" alternative, if selected, would serve to mitigate impacts associated with these features

Image 5-4: “Cove” Concept



Image 5-5: “Beacon” Concept



Should the size of the proposed project features also create adverse impacts which could not be mitigated to an acceptable level, a reduced scale with respect to those specific elements creating the impact, can be considered. An important factor in assessing a reduced scale project is maintaining a critical size to support a viable project. The current project concept is based on providing adequate facilities and amenities to attract top tier national tours. The current proposed concept maximizes the potential of the available land to support the planned use with a minimum of site disturbance and visual impact. It also seeks to maintain the public access areas currently constructed and provide for enhanced access and amenities for users of the Loop the Lake trail. Should the proposed scope of development create an unacceptable impact with regard to infrastructure capacity, traffic, or other scale related impacts, the magnitude of the impact may be reduced in some cases by decreasing the size of the venue with the goal of reducing the impact to one which is sustainable but still economically viable from a commerce and needs perspective. At this time, no significant scale related impacts have been identified. If unacceptable impacts due to scale are identified, potential reductions in the specific project element scope will be considered to address these impacts.

5.3 NO ACTION

Under this alternative, the pre-existing site conditions on Wastebeds 5 and 6 would generally be maintained until an alternative use for the site was proposed and accepted. The final remedy selected for the sites would be a function of the intended future use. Under low use conditions, it is likely a minimal vegetative cover would be placed on the site as opposed to the substantial cover depths currently proposed for the amphitheater designated use. Access to the general area has increased recently as a result of the opening of the new bike trail segment of the West Shore Trail, however under this alternative, the remaining features of the area would remain similar to those currently experienced with the exception that a proposed remedy would be completed by Honeywell to support a less intense use. Impacts related to construction would not occur at this time. The full potential of the site as envisioned in earlier planning documents would not be realized. Future site development costs would be higher if a project is to be constructed post remedy.

5.4 ALTERNATIVE SCREENING

As required by SEQR, the No Action Alternative was considered in addition to the other alternatives. As seen in the table below, Alternative 1 was carried forward during the review to serve as a control to help evaluate the potential effects of the other alternatives.

Table 5. List of Alternatives

Alternative	Description
1	No action alternative
2	Alternate West Shore Site
3	Alternate Designs or Scale at Lakeview Point

The purpose of the alternative screening is to evaluate whether the alternatives meet the project objectives. Those alternatives which do not fully meet the project's objectives can be eliminated from consideration. The remaining alternatives are then considered further to identify which satisfy the objectives in a more feasible, cost effective, and environmentally sustainable manner. As stated previously, the goals of the project sponsor are:

1. To help enhance public access to the western shore of Onondaga Lake
2. To take advantage of the new opportunities available as a result of the remediation and restoration efforts taking place on the lakeshore, and
3. To further economic opportunity and revitalization in the Town of Geddes and surrounding areas.

The results of the objectives screening are summarized in Table 5-2:

Table 6. Results of Phase One Alternative Screening

Alternative	Description	Meets Objectives		
		Objective 1	Objective 2	Objective 3
1	No Action alternative	No	No	No
2	Alternate West Shore Site	Partially	No	Yes

Alternative	Description	Meets Objectives		
		Objective 1	Objective 2	Objective 3
3	Alternate Designs for Lakeview Point Site	Yes	Yes	Yes

Under Alternative 1, the full potential of the site for public use would not be realized as most of the site would generally be maintained in its present condition until an alternative use for the site was proposed and accepted. Project costs would be minimal and would cover only site maintenance and security. The final remedy selected for the sites would be a function of the intended future use. Under low use conditions, a minimal vegetative cover would be placed on the site as opposed to the substantial cover depths proposed for the amphitheater designated use. Other current investments in area infrastructure improvements would be underutilized. The benefits of the onsite remediation and the Bridge Street/Milton Avenue Streetscape Revitalization project would not be fully realized. Therefore, the no action alternative would be counter to the County's long term plan and vision for public use of the west shore and revitalization in the Town of Geddes and surrounding areas.

Under Alternative 2, the existing site would remain close to its current condition similar to Alternative 1, however event parking would most likely involve use of the State Fair parking lots for parking up for to 6500 vehicles per event and a shuttle station/rest area may be built on Lakeview Point site to accommodate the shuttle service. The Maple Bay site would provide enhanced public access to this portion of the west shore however much of it is already currently accessible. This location would not utilize remediated areas of the west shore and would require additional mitigation work related to wetlands. The scale of the onsite facilities would be reduced due to spatial constraints, so some of the planned functions and amenities for the venue would be restricted. This could diminish economic opportunity. The site would not benefit from or add significantly to mutual benefits related to the Bridge Street/Milton Avenue Streetscape Revitalization project.

Under Alternative 3, the complete planned project would be built at one of two locations on the Wastebed 5 and 6 site with parking available at the adjacent State Fair parking lot sites. The Lakeview Point site has sufficient room for a fully developed venue including a smaller community theater, park areas and festival

grounds greatly enhancing public access to an area which was previously unavailable to the public while taking full advantage of the remediation work which is progressing. The full build out will provide for greater economic opportunity and will benefit from the Bridge Street/Milton Avenue Streetscape Revitalization project.

Based on the above considerations, the recommended plan would be to implement the “Cove” concept design at the Lakeview Point site. This concept fulfills the objectives of the project sponsor, minimizes site related impacts as compared to other on-site locations, has lower expected construction and operating costs compared with Maple Bay and allows for full facility and amenities buildout.

6.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

A resource commitment is considered irreversible when direct and indirect impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources and also to those resources that are renewable only over long periods of time (e.g., soil productivity). A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for future use.

The proposed Project will require the irreversible and irretrievable commitment of certain human, material, environmental, and financial resources. Human and financial resources have already been expended by Onondaga County, the State of New York (i.e., various state agencies), and the United States (i.e., various federal agencies) during the planning and review of the Project. The expenditure of funds and human resources will continue to be required throughout the permitting and construction phases of the Project (e.g., for environmental reviews and permitting, and construction inspections).

The Project also represents a commitment of land. Specifically, the land to be developed for the Lakeview Amphitheater will not be available for alternative purposes after the amphitheater is built. Although the Project could conceivably be demolished and removed, and the land reclaimed for alternative uses at some future date, the commitment of this land to the Project is essentially an irreversible and irretrievable commitment of resources. While undertaking the proposed project will result in a loss of some natural habitat and open space (see Section 3.4 for additional detail), there will be no taking of wetlands and significant adverse impacts to aquatic flora and fauna are not expected.

Various types of manufacturing and construction materials and building supplies will be committed to the Project. The use of these materials, such as gravel, concrete, steel, brick, glass, lumber, mechanical equipment, plumbing fixtures, light fixtures, hardware, etc., will represent a long-term commitment of these resources, which will not be available for other projects. Although some of these materials (e.g., steel, glass) could be recovered and recycled were the Lakeview Amphitheater to be demolished, the use of these materials for the most part represents an irreversible and irretrievable commitment of resources.

Energy resources also will be irretrievably committed to the Project, during both the construction and operation of the Project. Fuel, lubricants, and electricity will be required during site preparation and construction activities, as well as operation of various types of construction equipment and vehicles, and for the transportation of workers and materials to the Project site. Additionally, electricity will be required to provide energy during the operation of the building. While a major portion of the electricity provided through the Village of Solvay Electric Department is from renewable sources, consumption of these energy resources can be considered a irreversible and irretrievable commitment of resources.

The commitment of resources such as construction materials and land, when compared with the public purpose and benefits of the proposed action, are considered to be a positive result that will provide a substantial amount of recreational and commercial opportunity in an area which has been unavailable to the public for a long period of time.

7.0 CUMULATIVE IMPACTS

In accordance with 6 NYCRR § 617.9(b)(5)(iii)(a), SEQR requires a discussion of cumulative impacts “at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence”. Cumulative impacts are two or more individual environmental effects which, when taken together, are significant or that compound or increase other environmental effects. The individual effects may be effects resulting from a single project or from separate projects.

Where individual effects of the Project may interact with other effects of the Project, such potential cumulative impacts have been addressed in Section 3.0 of the DEIS.

This section addresses the potential cumulative impacts that may arise from interactions between the impacts of the Lakeview Amphitheater and the impacts of other projects. In general, cumulative impact analysis of external projects is required where the external projects have been specifically identified and either are part of a single plan or program, or there is a sufficient nexus of common or interactive impacts to warrant assessing such impacts together. Some cumulative impacts are the simple additive effect of the projects (i.e., each will disturb a certain amount of ground surface, wetlands, or natural communities). These additive impacts can be quantified by simply tallying the total impacts resulting from each project, to the extent that such information is known and has been publicly presented. Certain other cumulative impacts may not simply be additive and therefore need a certain level of further analysis. The discussion below evaluates whether there are identified projects for which a cumulative impact analysis is required, and assesses the extent to which the impacts of such projects will be cumulative with the impacts of the Lakeview Amphitheater.

Between the remediation/restoration activities associated with the Cleanup Onondaga Lake Project and the trail construction associated with the Loop-the-Lake trail development initiative, the west shore of the Onondaga Lake has been subject to ongoing construction and site work activities for several years, and this work is expected to continue in the foreseeable future. Therefore, both of these projects have the potential for cumulative impacts with the Lakeview Amphitheater. As previously indicated, construction of the amphitheater is anticipated to begin in the late fall/winter of 2014 and conclude in the fall of 2015.

The 2.3-mile West Shore Trail Extension connects the portion of the West Shore Trail that starts at Long Branch Park to Honeywell's Onondaga Lake Visitor Center, passing through the Project site. Construction of the West Shore Trail Extension was completed in the spring of 2014, with an official ribbon cutting ceremony and community expo held to celebrate the official opening on May 18, 2014. Planning is currently underway for the next phase of the Loop-the-Lake initiative, which will run between the current terminus of the trail at the Visitor Center and the Onondaga Creekwalk, behind Destiny USA. Several preliminary routing options are under consideration, and a public meeting was held April 10, 2014. However, no construction dates have been announced for this project yet. Because development of this segment of the trail is still in the planning phase, it is unlikely that construction will occur simultaneously with construction of the Lakeview Amphitheater.

In January 2007, Honeywell International, Inc. (the successor to Allied-Signal, Inc.) entered into a Consent Decree with NYSDEC to implement the Onondaga Lake Cleanup Plan. This plan, approved by the NYSDEC and USEPA, involves preventing additional migration of contaminants into the lake from old industrial sites, dredging contaminated sediments and permanently containing them in an approved site, capping portions of the lake bottom, and restoring habitat along the lake's shoreline and tributaries. Dredging operations began in 2012, and will be completed in 2014 or 2015. Dredging barges are used to hydraulically pump sediments from the bottom of the lake, which is then piped approximately 4 miles to a sediment consolidation area in Camillus, NY. Dredging and capping operations are also underway in Nine Mile Creek, adjacent to the Project site. In the spring of 2014, as part of efforts to restore forested wetlands, silver maple, box elder, and swamp white oak were planted at the mouth of the Nine Mile Creek (adjacent to the lake). Habitat restoration along the western shoreline, which includes the Project site, is currently underway. This area will be graded and covered, then vegetated with native plants, with wetlands established in low-lying areas to support shorebird habitats. Various phases of the remediation and restoration work are scheduled to be ongoing through project completion in 2016.

In addition, Onondaga County recently concluded the SEQRA review of the Bridge Street/Milton Avenue Streetscape Revitalization Project, through issuance of a Negative Declaration¹¹². This project involves the limits of the streetscape improvements along Milton Avenue between the Village of Solvay/City of Syracuse

¹¹² New York State Department of Environmental Conservation (NYSDEC). 2014. *Environmental Notice Bulletin (ENB), ENB – Region 7 Notices 5/21/2014*. Available at: http://www.dec.ny.gov/enb/20140521_not7.html (Accessed May 23, 2014).

municipal boundary to the east and the Village of Solvay/Town of Camillus municipal boundary to the west. The project limits along Bridge Street extend from Milton Avenue in the Village of Solvay to State Fair Boulevard in the Town of Geddes. Improvements to the streetscapes will enhance the appearance, pedestrian accommodations, community character, vehicular mobility, and overall functionality, as well as provide improved multi-modal access to local attractions.

A number of potential cumulative impacts are possible, although none are likely to be substantial. Cumulative changes influencing the surrounding built and natural environment include potential impacts on traffic, noise levels, community character, and recreation. Each of these potential cumulative impacts is discussed below:

- **Traffic:** Construction vehicles associated with the Lakeview Amphitheater are anticipated to access the Project site from the existing State Fair parking lots, which are also used as an egress point for many of the vehicles associated with the remediation/restoration efforts. Combined traffic levels from amphitheater construction, remediation/restoration efforts, and the streetscape improvement project will be higher than were either project implemented separately. However, temporary impacts on traffic associated with the construction of the Lakeview Amphitheater are expected to be localized and minimal, and as indicated above, additional construction activities associated with the Loop-the-Lake initiative are not anticipated to occur during the construction phase of the amphitheater. Consequently, substantial cumulative construction traffic impacts are not likely. Depending on the timing of events held at the amphitheater, cumulative operational impacts on local traffic conditions are possible (e.g., during the New York State Fair).
- **Noise:** Constructing the Lakeview Amphitheater concurrently with remediation/restoration efforts and/or the streetscape improvement project will potentially result in higher noise levels than were either project implemented separately. Occasional, temporary increases on the local ambient noise level may result from simultaneous operation of various types of heavy machinery (e.g., cranes, bulldozers, excavators, dump trucks, etc.). Construction noise may be audible at nearby residences, but primarily during lulls in traffic on I-690. Furthermore, any increases in sound levels will be limited to construction hours. Depending on the timing of events held at the amphitheater, cumulative operational noise impacts are possible (e.g., during the New York State Fair).

- **Community character:** Neither the Lakeview Amphitheater, the Loop-the-Lake trail development initiative, nor the remediation/restoration efforts represent dramatic changes in the type of land use in the area. The amphitheater is generally consistent with the land use and community character of the areas adjacent to its proposed location. The proposed design of the Project integrates the amphitheater with the existing multipurpose recreational trail, and utilizes existing parking areas already used for other special events (i.e., State Fair parking lots). Finally, it adds a similar and compatible use to an area adjacent to the Fairgrounds that is already accustomed to the presence of a large, seasonal special events and recreational land use. The remediation/restoration efforts are enhancing the community character by implementing measures to protect human health and the environment. The streetscape improvement project is designed, in part, to improve community character.
- **Recreation:** Individually, each of these three projects (the Lakeview Amphitheater, the Loop-the-Lake trail development initiative, and the Cleanup Onondaga Lake Project) expands recreational opportunities and enhances public access to Onondaga Lake. Combined, these projects have a significant beneficial impact on recreation in Central New York. In addition, the streetscape improvement project is designed, in part, to improve pedestrian access.

In summary, there may be some minor temporary and permanent cumulative impacts associated with the construction and operation of the Lakeview Amphitheater, the Loop-the-Lake trail development initiative, the Cleanup Onondaga Lake Project, and the streetscape improvement project. However, as indicated above, these cumulative effects are not anticipated to result in any significant adverse impacts.

8.0 GROWTH INDUCING ASPECTS

As defined by the NYSDEC in the SEQR Handbook, a proposed project may “trigger” further development if:

- it significantly increases the local population by creating or relocating employment, causing subsequent increases in demand for support services and facilities; or
- it increases the development potential of the surrounding area through the installation or improvement of sewers, water mains, or other utilities (NYSDEC, 2010b).¹¹³

Project construction will enhance the local economy through employment of construction workers and the purchase of goods and services, such as construction materials. However, these economic benefits will be short-term in nature. The increased demand for construction workers and materials will be temporary (i.e., limited to the construction period), and the extent/duration of such expenditures are not expected to generate significant sustained growth of construction or construction supply businesses. Once operational, it is anticipated that the Lakeview Amphitheater will be staffed largely by existing County employees. A few additional employees may be hired to maintain the facility and grounds and/or assist visitors. However, it is anticipated that most amphitheater workers will be seasonal (i.e., not permanent) or employees of other parks on temporary assignment to the facility, as is common practice for other large County-run events, such as the Jamesville Balloonfest and the Golden Harvest Festival. New employment generated by the Lakeview Amphitheater will not significantly increase the local population.

Development of the Lakeview Amphitheater will introduce new utilities to the Project site that do not currently exist, including water, sewer lines, electricity, and communication infrastructure. In theory, establishment of such utilities could make the surrounding area more amenable for future development projects. However, the surrounding area is comprised of the waters of Onondaga Lake, or land that is largely already developed. The adjacent land to the west of the Project site consists of I-690, and beyond that, commercial and residential development in Lakeland. The existing parking lots for the New York State Fair lie south and east of the Project site. The adjacent land along the lakeshore to the northwest consists of a relatively narrow strip of land between I-690 and Onondaga Lake, while the adjacent land to the

¹¹³ NYSDEC. 2010b. *The SEQR Handbook*. Division of Environmental Permits. Albany, NY. Available at: http://www.dec.ny.gov/docs/permits_ej_operations_pdf/seqrhandbook.pdf (Accessed April 2014).

southeast consists of a narrow strip of land between the lake shore and the State Fair parking. Both parcels are owned by Onondaga County Parks and both currently support multipurpose recreation trails. Neither parcel is large enough to support significant future development, and it is intended that they will remain in public ownership. Therefore, it is not anticipated that the proposed Lakeview Amphitheater will increase the development potential of the surrounding County-owned land along the lake shore. However, the Lakeview Amphitheater is anticipated to increase the development potential/economic opportunities in the Town of Geddes, in part through increased travel and tourism. In addition, the County's Bridge Street/Milton Avenue Streetscape Revitalization Project is proposed to enhance streetscape appearance, pedestrian accommodations, community character, vehicular mobility, and overall functionality, as well as provide improved multi-modal access to local attractions (see Section 7.0 for additional detail).

9.0 EFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES

The U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) program provides a framework for defining and measuring the performance of resource efficiency and environmental health in the design and construction of the built environment. Each proposed project is scored on a basis of 110 total available points between seven topic areas, outlined as follows:

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Innovation in Design
- Regional Priority (USGBC, 2010).

The process of obtaining LEED certification requires applicants to incorporate the concepts of resource efficiency and environmental health throughout the entire design and construction process. Applicants submit project checklists and detailed accounts of the proposed design, procurement processes, materials, emissions, and controls to support their proposed scores. The USGBC reviews each application, and certifies projects as appropriate along a scale from 40 to 110 points. Onondaga County's current objective is to obtain LEED Silver (50-59 points) or Gold (60-79 points) certification for the Lakeview Amphitheater.

The Project anticipates obtaining its electricity needs from the Solvay Electric Department, which accounts for approximately 60 percent of its electricity needs through hydropower. The hydropower is from a block of 752 megawatt (MW) of Preference Power from the New York Power Authority's (NYPA) Niagara Power Project near Niagara Falls. The power, sold without markup at approximately one cent per kilowatt-hour, is some of the lowest cost electricity in the state (NYPA, 2010)¹¹⁴. Initial meetings with representatives from the Solvay Electric Department took place in the spring of 2014. New utility designs will be consistent with current codes and utility provider requirements and will be subject to review by the municipality and/or service provider involved. Opportunities for increased energy efficiency for the planned project elements

¹¹⁴ New York Power Authority (NYPA). 2010. *NYPA CEO Announces Plans for Purchase of Electricity From Albany Landfill Gas Facilities to Provide Supplemental Electricity for the Village of Solvay*. Press Release by Michael Saltzman, released June 29, 2010.

are being explored through several available programs. Based on current information from the utility providers, sufficient capacity is available to meet the needs of the project. No negative impacts are anticipated at this time with respect to energy demand.

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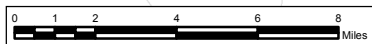
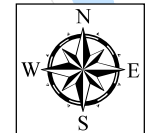
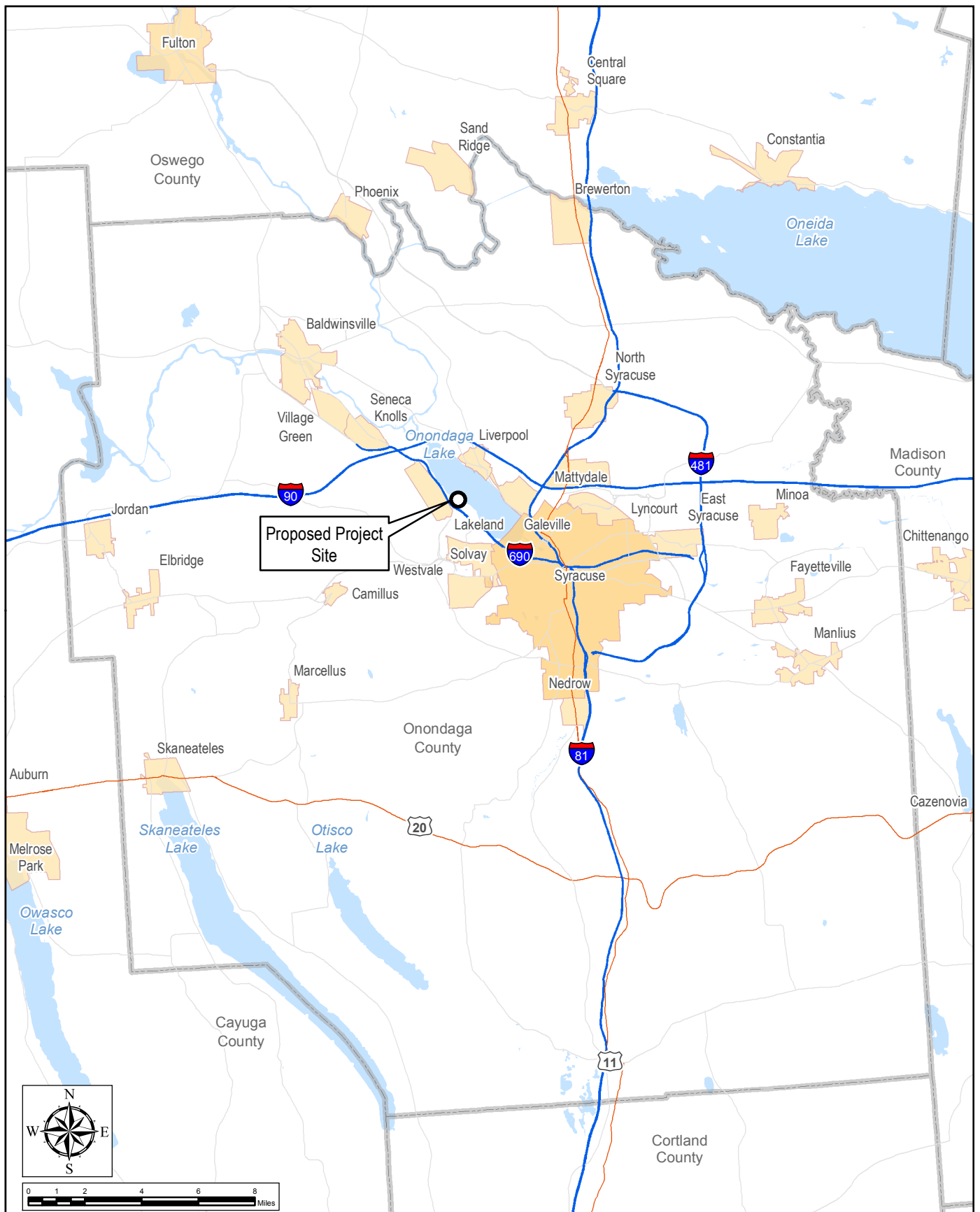
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Figures

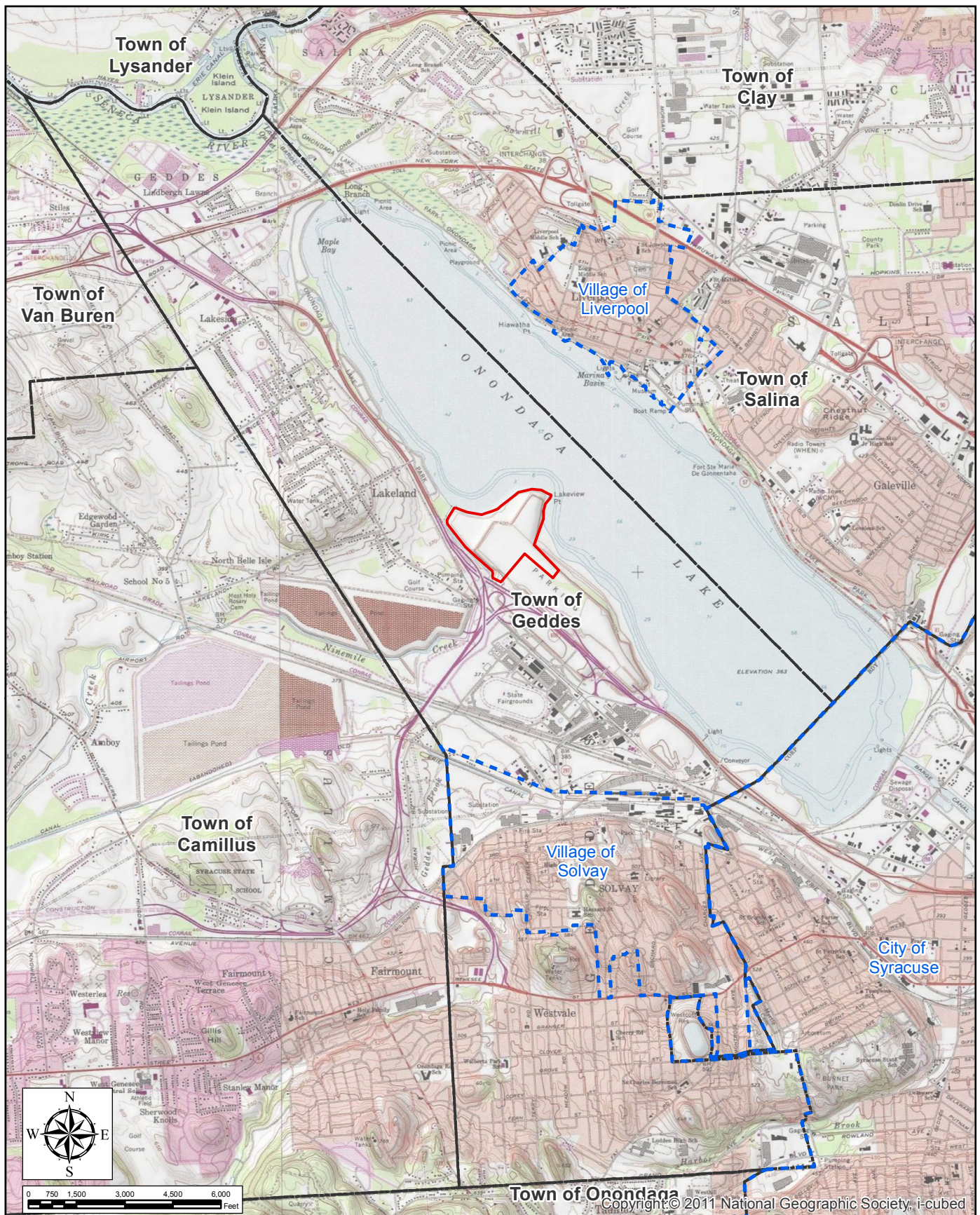


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FIGURE 1: REGIONAL PROJECT LOCATION

NOTES: BASEMAP: ESRI STREETMAP NORTH AMERICA, 2008.





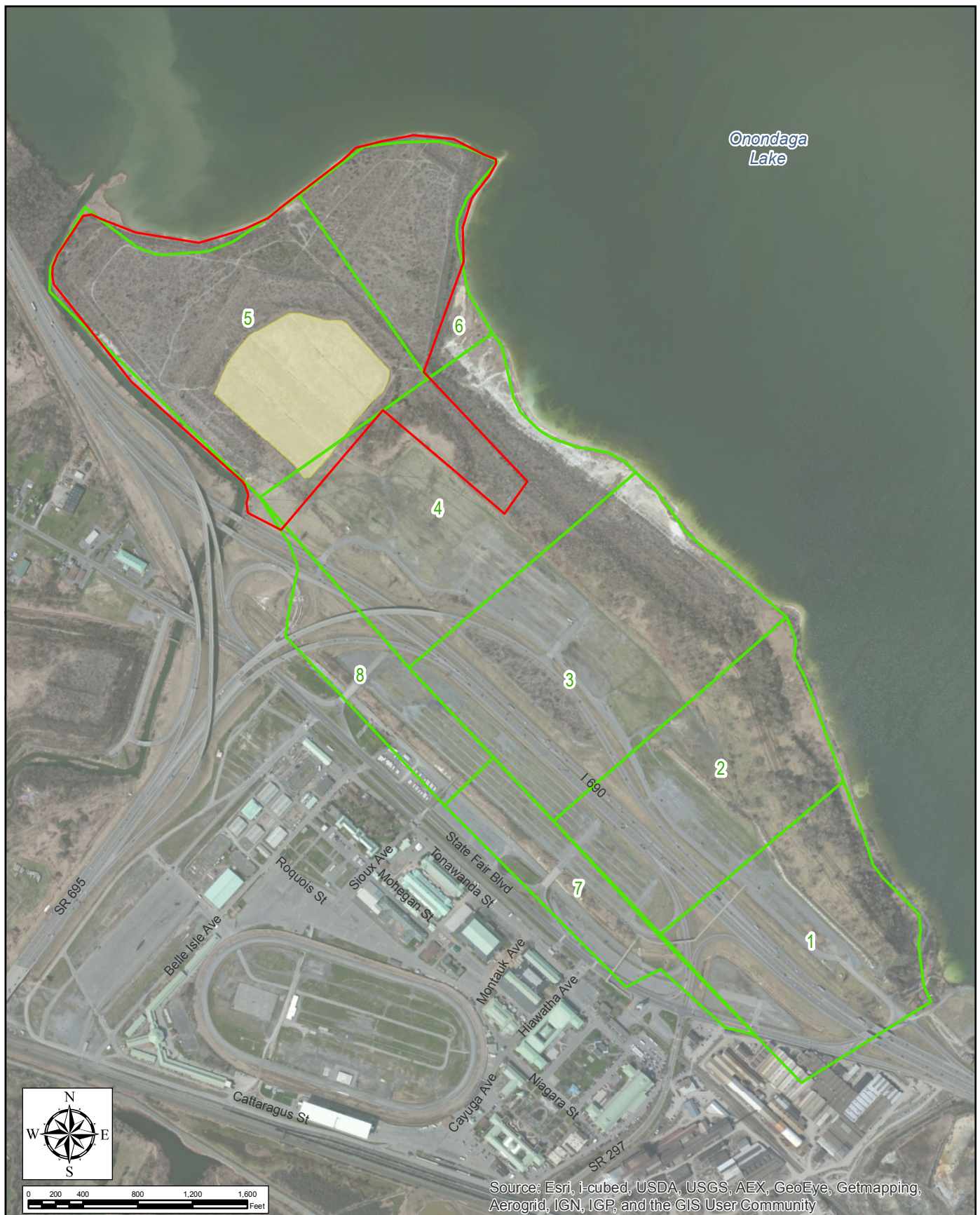
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FIGURE 2: PROJECT LOCATION

NOTES: BASEMAP: ESRI ARCGIS ONLINE "USA TOPO MAPS" MAP SERVICE.

- ▭ PROJECT SITE
- ▭ CITY/VILLAGE BOUNDARY
- ▭ TOWN BOUNDARY





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FIGURE 3: WASTEBED LOCATIONS

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.

- CRUCIBLE LANDFILL
- SOLVAY WASTEBED
- PROJECT SITE





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FIGURE 4: SITE MASTER PLAN





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FIGURE 5: PROJECT SITE SOILS

NOTES: BASEMAP: SOIL SURVEY GEOGRAPHIC DATABASE, ONONDAGA COUNTY, NEW YORK.

 PROJECT SITE





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FIGURE 6: MAPPED STREAMS AND WETLANDS

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.

- NYSDEC PROTECTED STREAM
- UNPROTECTED STREAM
- NYSDEC WETLAND
- NWI WETLAND
- PROJECT SITE





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FIGURE 7: MAPPED FLOODPLAINS

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.

- FEMA 100-YEAR FLOODPLAIN
- PROJECT SITE





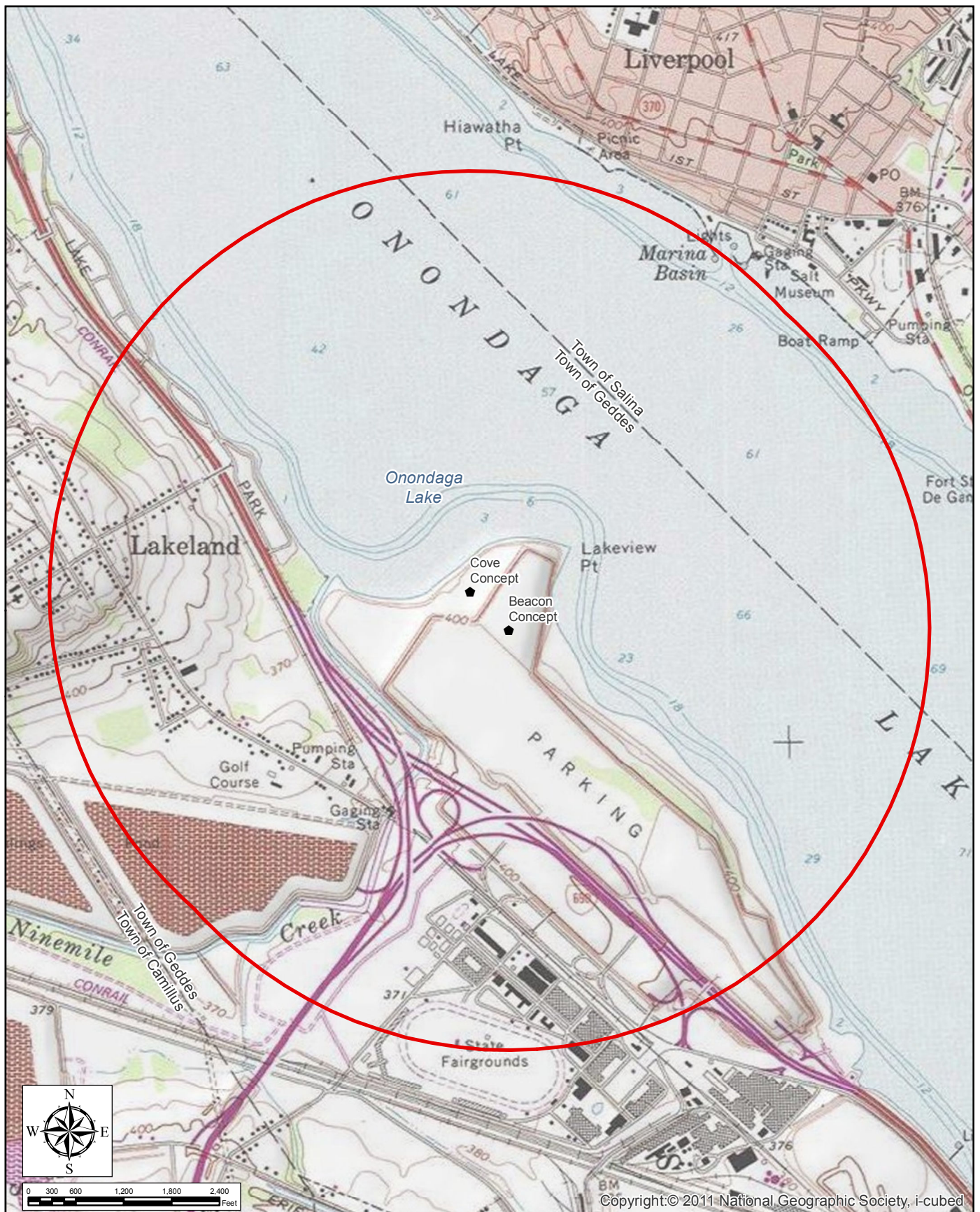
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FIGURE 8: ECOLOGICAL COMMUNITIES

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.

 PROJECT SITE





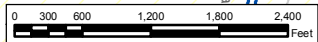
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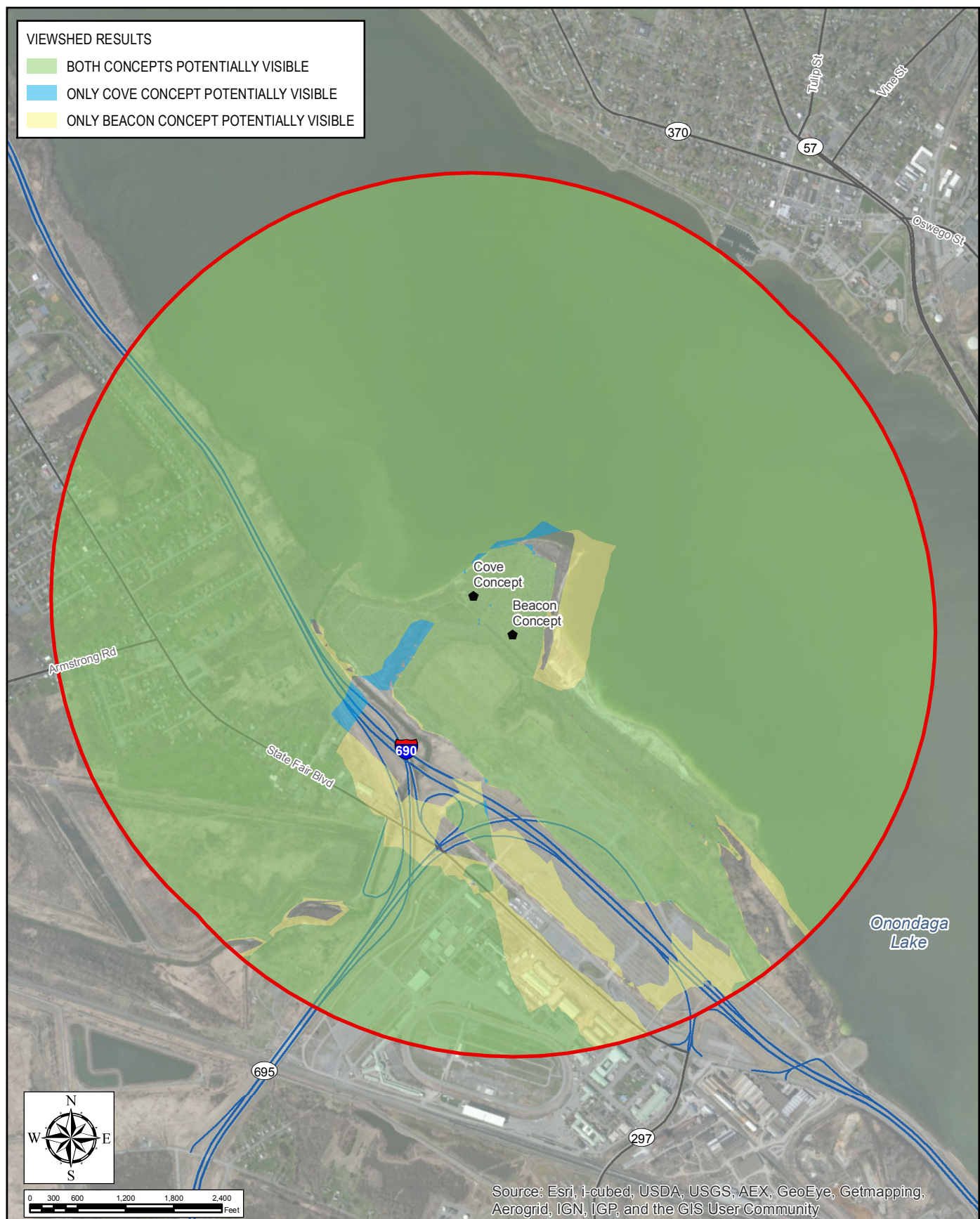
FIGURE 9: VISUAL STUDY AREA

NOTES: BASEMAP: ESRI ARCGIS ONLINE "USA TOPO MAPS" MAP SERVICE.

- POTENTIAL PROJECT LOCATION
- ONE-MILE VISUAL STUDY AREA







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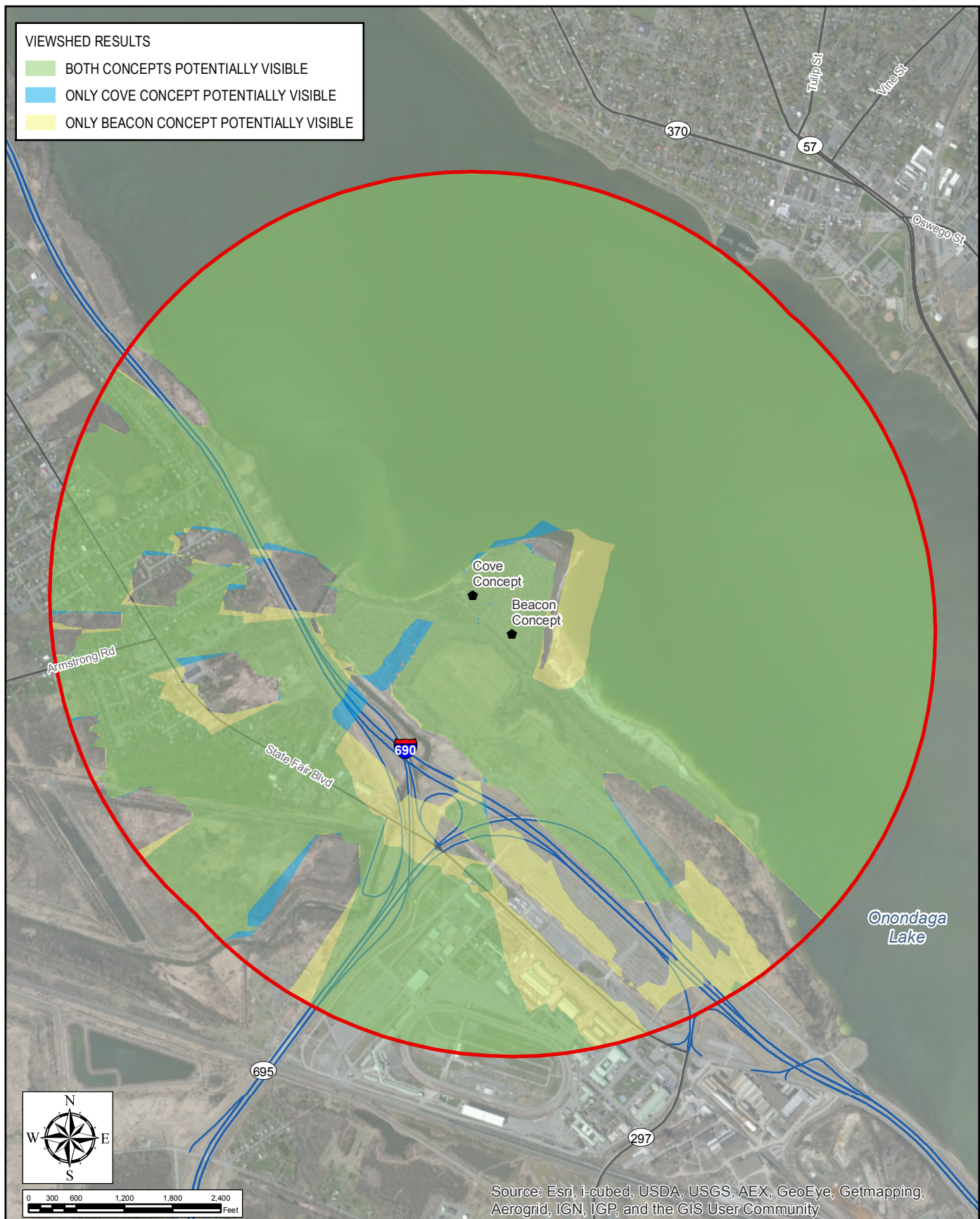
FIGURE 11: VIEWSHED ANALYSIS

SHEET 1 OF 2: VISIBILITY BASED ON TOPOGRAPHY ONLY

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.

- POTENTIAL PROJECT LOCATION
- ONE-MILE VISUAL STUDY AREA





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FIGURE 11: VIEWSHED ANALYSIS

SHEET 2 OF 2: VISIBILITY BASED ON TOPOGRAPHY AND VEGETATION

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.

- POTENTIAL PROJECT LOCATION
- ONE-MILE VISUAL STUDY AREA





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FIGURE 12: VIEWPOINT LOCATION MAP

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.





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FIGURE 13: VIEWPOINT 1 WIRE FRAME RENDERINGS

SHEET 1 OF 2: BEACON CONCEPT

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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FIGURE 13: VIEWPOINT 1 WIRE FRAME RENDERINGS

SHEET 2 OF 2: COVE CONCEPT

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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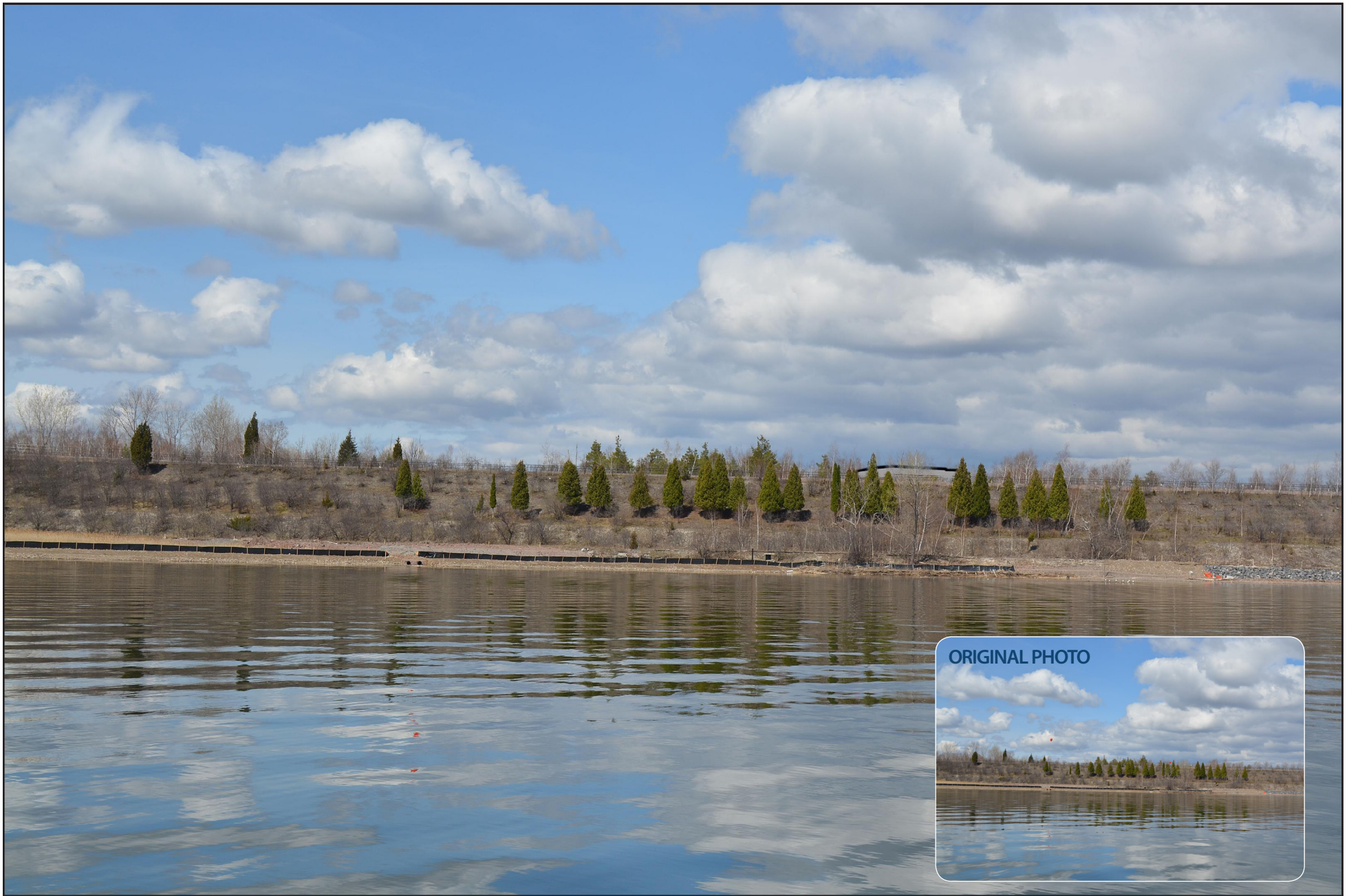
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FIGURE 14: VIEWPOINT 7 WIRE FRAME RENDERINGS

SHEET 1 OF 2: BEACON CONCEPT

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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FIGURE 14: VIEWPOINT 7 WIRE FRAME RENDERINGS

SHEET 2 OF 2: COVE CONCEPT

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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FIGURE 15: VIEWPOINT 21 WIRE FRAME RENDERINGS

SHEET 1 OF 2: BEACON CONCEPT

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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FIGURE 15: VIEWPOINT 21 WIRE FRAME RENDERINGS

SHEET 2 OF 2: COVE CONCEPT

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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FIGURE 16: VIEWPOINTS 11 AND 13 WIRE FRAME RENDERINGS

SHEET 1 OF 2: BEACON CONCEPT (VIEWPOINT 11)

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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FIGURE 16: VIEWPOINTS 11 AND 13 WIRE FRAME RENDERINGS

SHEET 2 OF 2: COVE CONCEPT (VIEWPOINT 13)

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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FIGURE 17: VIEWPOINT 24 WIRE FRAME RENDERINGS

SHEET 1 OF 2: BEACON CONCEPT

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





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FIGURE 17: VIEWPOINT 24 WIRE FRAME RENDERINGS

SHEET 2 OF 2: COVE CONCEPT

Please note that the purpose of creating a wire frame model is to determine the scale of a given building/structure based on the conceptual design, and its placement and orientation in a given landscape. The building finishes and aesthetic qualities will ultimately be determined through detailed architectural design.





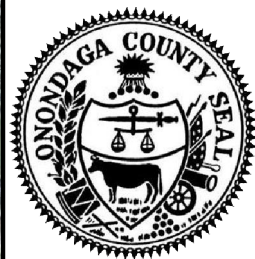
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FIGURE 18: PREVIOUS ARCHEOLOGICAL SURVEYS

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.

- CRUCIBLE LANDFILL
- SOLVAY WASTEBED
- PROJECT SITE





ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

CONCEPTUAL
ENGINEERING STUDY

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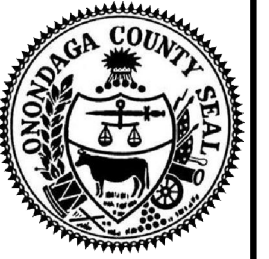
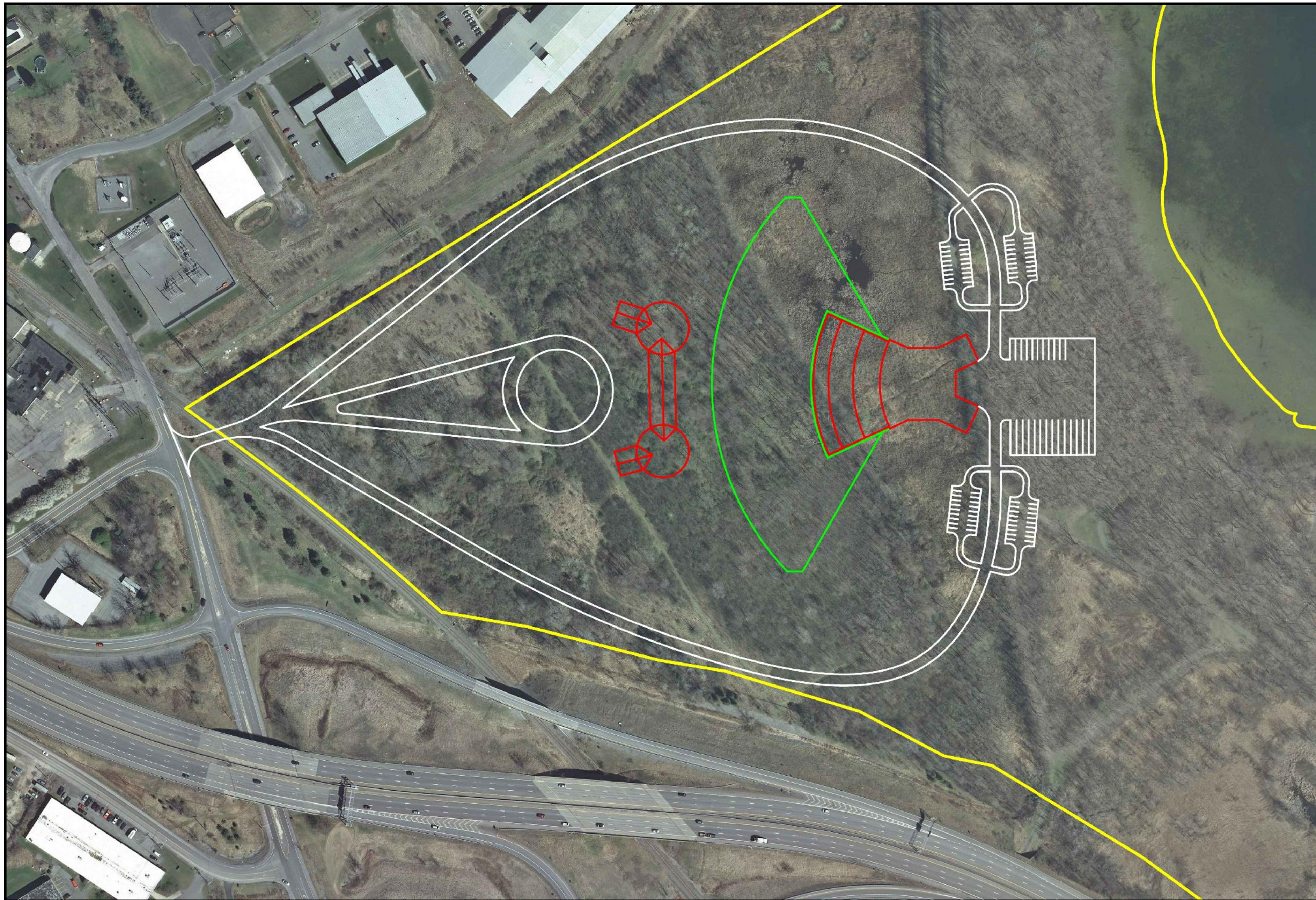
**THEATRE
PROJECTS**
Consultants

LEGEND

- LAKEVIEW POINT SITE
- MAPLE BAY SITE

ALTERNATE
SITING

FIGURE 19



ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

CONCEPTUAL
ENGINEERING STUDY

JUNE, 2014



**THEATRE
PROJECTS**
Consultants

ALTERNATE
SITING: MAPLE
BAY CONCEPT
LAYOUT

FIGURE 20

Appendix A

Plant and Wildlife Species List

PLANT SPECIES INVENTORY
Observed During On-Site Field Surveys

	<u>Family</u>	<u>Genus</u>	<u>species</u>	<u>common name</u>
1,3	Aceraceae	<i>Acer</i>	<i>negundo</i>	box elder
1	Aceraceae	<i>Acer</i>	<i>rubrum</i>	red maple
1	Anacardiaceae	<i>Rhus</i>	<i>typhina</i>	staghorn sumac
1,2	Apiaceae	<i>Daucus</i>	<i>carota</i>	Queen Anne's lace
3	Asteraceae	<i>Artemisia</i>	<i>vulgaris</i>	mugwort
2	Asteraceae	<i>Bidens</i>	<i>frondosa</i>	devils's beggartick
3	Asteraceae	<i>Centaurea</i>	<i>stoebe</i>	spotted knapweed
2,3	Asteraceae	<i>Cirsium</i>	<i>vulgare</i>	bull thistle
2	Asteraceae	<i>Lactuca</i>	<i>serriola</i>	prickly lettuce
1,2,3	Asteraceae	<i>Solidago</i>	<i>spp.</i>	goldenrod
2	Asteraceae	<i>Symphyotrichum</i>	<i>lateriflorum</i>	calico aster
2	Asteraceae	<i>Xanthium</i>	<i>strumarium</i>	cocklebur
2	Betulaceae	<i>Betula</i>	<i>papyrifera</i>	paper birch
3	Betulaceae	<i>Betula</i>	<i>pendula</i>	European birch
1	Bignoniaceae	<i>Catalpa</i>	<i>bignonioides</i>	southern catalpa
1	Brassicaceae	<i>Alliaria</i>	<i>petiolata</i>	garlic mustard
2	Brassicaceae	<i>Brassica</i>	<i>juncea</i>	brown mustard
1,3	Caprifoliaceae	<i>Lonicera</i>	<i>spp.</i>	honeysuckle
3	Cornaceae	<i>Cornus</i>	<i>sericea</i>	red osier dogwood
3	Cupressaceae	<i>Juniperus</i>	<i>communis</i>	dwarf juniper
3	Cupressaceae	<i>Juniperus</i>	<i>virginiana</i>	red cedar
3	Cupressaceae	<i>Thuja</i>	<i>occidentalis</i>	northern white cedar
3	Elaeagnaceae	<i>Elaeagnus</i>	<i>umbellata</i>	autumn olive
1	Fabaceae	<i>Gleditsia</i>	<i>triacanthos</i>	honey locust
2	Fabaceae	<i>Melilotus</i>	<i>spp.</i>	sweet clover
1	Fabaceae	<i>Robinia</i>	<i>pseudoacacia</i>	black locust
1	Fabaceae	<i>Vicia</i>	<i>spp.</i>	vetch
2	Lamiaceae	<i>Glechoma</i>	<i>hederacea</i>	ground ivy
2	Lamiaceae	<i>Mentha</i>	<i>spp.</i>	mint
2	Lythraceae	<i>Lythrum</i>	<i>salicaria</i>	purple loosestrife
1	Moraceae	<i>Morus</i>	<i>rubra</i>	red mulberry
1	Oleaceae	<i>Fraxinus</i>	<i>americana</i>	white ash
1,2,3	Oleaceae	<i>Fraxinus</i>	<i>pennsylvanica</i>	green ash
3	Pinaceae	<i>Pinus</i>	<i>sylvestris</i>	Scotch pine
2,3	Poaceae	<i>Phragmites</i>	<i>australis</i>	common reed
1,3	Rhamnaceae	<i>Rhamnus</i>	<i>cathartica</i>	buckthorn

PLANT SPECIES INVENTORY
Observed During On-Site Field Surveys

	<u>Family</u>	<u>Genus</u>	<u>species</u>	<u>common name</u>
3	Rosaceae	<i>Fragaria</i>	<i>virginiana</i>	wild strawberry
1,3	Salicaceae	<i>Populus</i>	<i>deltoides</i>	eastern cottonwood
1	Salicaceae	<i>Populus</i>	<i>tremuloides</i>	quaking aspen
3	Scrophulariaceae	<i>Verbascum</i>	<i>thapsus</i>	common mullein
2	Solanaceae	<i>Solanum</i>	<i>dulcamara</i>	deadly nightshade
1	Tiliaceae	<i>Tilia</i>	<i>americana</i>	American basswood
1	Ulmaceae	<i>Ulmus</i>	<i>americana</i>	American elm

¹ Species identified during on-site ecological surveys conducted by O'Brien & Gere in 2004 and 2005 (OBG, 2011).

² Species identified during on-site wetland investigations conducted by O'Brien & Gere in 2004 and 2008 (OBG, 2010).

³ Species identified during on-site ecological surveys conducted by EDR in 2014.

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
Bird Species		
	<u>Loons</u>	<u>Gaviidae</u>
6,8	common loon	<i>Gavia immer</i>
6	red-throated loon	<i>Gavia stellata</i>
	<u>Grebes</u>	<u>Pedicipedidae</u>
6,8	horned grebe	<i>Podiceps auritus</i>
6	red-necked grebe	<i>Podiceps grisegena</i>
5,6,8	pied-billed grebe	<i>Podilymbus podiceps</i>
	<u>Hérons, Bitterns</u>	<u>Ardeidae</u>
4,5,6	great blue heron	<i>Ardea herodias</i>
4	American bittern	<i>Botaurus lentiginosus</i>
4,5	green heron	<i>Butorides virescens</i>
4,6	black-crowned night heron	<i>Nycticorax nycticorax</i>
4,6,8	double crested cormorant	<i>Phalacrocorax auritus</i>
	<u>Waterfowl</u>	<u>Anatidae</u>
4,5,6,8	wood duck	<i>Aix sponsa</i>
6,8	northern pintail	<i>Anas acuta</i>
6,8	American wigeon	<i>Anas americana</i>
4,5,6	green-winged teal	<i>Anas crecca</i>
4	blue-winged teal	<i>Anas discors</i>
4,5,6,8	mallard	<i>Anas platyrhynchos</i>
4,5,6,8	American black duck	<i>Anas rubripes</i>
6,8	gadwall	<i>Anas strepera</i>
6,8	lesser scaup	<i>Aythya affinis</i>
6,8	redhead	<i>Aythya americana</i>
6,8	ring-necked duck	<i>Aythya collaris</i>
6,8	greater scaup	<i>Aythya marila</i>
6,8	canvasback	<i>Aythya valisineria</i>
6	brant	<i>Branta bernicla</i>
4,5,6,8	Canada goose	<i>Branta canadensis</i>
6	cackling goose	<i>Branta hutchinsii</i>
6,8	bufflehead	<i>Bucephala albeola</i>
6,8	common goldeneye	<i>Bucephala clangula</i>
6	snow goose	<i>Chen caerulescens</i>
6,8	long-tailed duck	<i>Clangula hyemalis</i>
6	trumpeter swan	<i>Cygnus buccinator</i>
6,8	tundra swan	<i>Cygnus columbianus</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
6	mute swan	<i>Cygnus olor</i>
6,8	hooded merganser	<i>Lophodytes cucullatus</i>
6,8	white-winged scoter	<i>Melanitta fusca</i>
6	surf scoter	<i>Melanitta perspicillata</i>
6,8	common merganser	<i>Mergus merganser</i>
6,8	red-breasted merganser	<i>Mergus serrator</i>
6,8	ruddy duck	<i>Oxyura jamaicensis</i>
	<u>American Vultures</u>	<u>Cathartidae</u>
4,5,6	turkey vulture	<i>Cathartes aura</i>
	<u>Hawks</u>	<u>Accipitridae</u>
1,4,5,6	Cooper's hawk	<i>Accipiter cooperii</i>
6	northern goshawk	<i>Accipiter gentilis</i>
4,5,6	sharp-shinned hawk	<i>Accipiter striatus</i>
4,5,6	red-tailed hawk	<i>Buteo jamaicensis</i>
6	rough-legged hawk	<i>Buteo lagopus</i>
6	red-shouldered hawk	<i>Buteo lineatus</i>
4	broad-winged hawk	<i>Buteo platypterus</i>
4,5,6	northern harrier	<i>Circus cyaneus</i>
6	merlin	<i>Falco columbarius</i>
6,8	peregrine falcon	<i>Falco peregrinus</i>
4,5,6	American kestrel	<i>Falco sparverius</i>
1,6,8	bald eagle	<i>Haliaeetus leucocephalus</i>
2,4,5	osprey	<i>Pandion haliaetus</i>
	<u>Quail</u>	<u>Odontophoridae</u>
4	northern bobwhite	<i>Colinus virginiana</i>
	<u>Pheasants</u>	<u>Phasianidae</u>
4,5,6	ring-necked pheasant	<i>Phasianus colchicus</i>
	<u>Grouse</u>	<u>Tetraonidae</u>
5,6	ruffed grouse	<i>Bonasa umbellus</i>
	<u>Turkeys</u>	<u>Meleagrididae</u>
4,5,6	wild turkey	<i>Meleagris gallopavo</i>
	<u>Rails</u>	<u>Rallidae</u>
6,8	American coot	<i>Fulica americana</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
4	common gallinule	<i>Gallinula galeata</i>
4,5	sora rail	<i>Porzana carolina</i>
5	Virginia rail	<i>Rallus limicola</i>
	<u>Plovers</u>	<u>Charadriidae</u>
4,5	killdeer	<i>Charadrius vociferus</i>
	<u>Sandpipers</u>	<u>Scolopacidae</u>
4,5	spotted sandpiper	<i>Actitis macularia</i>
4	upland sandpiper	<i>Bartramia longicauda</i>
6	purple sandpiper	<i>Calidris maritima</i>
	Wilson's snipe	<i>Gallinago delicata</i>
	common snipe	<i>Gallinago gallinago</i>
4,5	American woodcock	<i>Philohela minor</i>
	<u>Gulls</u>	<u>Laridae</u>
6,8	Bonaparte's gull	<i>Chroicocephalus philadelphia</i>
4,6,8	herring gull	<i>Larus argentatus</i>
4,6,8	ring-billed gull	<i>Larus delawarensis</i>
6	lesser black-backed gull	<i>Larus fuscus</i>
6	Iceland gull	<i>Larus glaucoides</i>
6	glaucous gull	<i>Larus hyperboreus</i>
6,8	great black-backed gull	<i>Larus marinus</i>
	<u>Terns</u>	<u>Sternidae</u>
4	black tern	<i>Chlidonias niger</i>
4	common tern	<i>Sterna hirundo</i>
	<u>Pigeons, Doves</u>	<u>Columbidae</u>
4,5,6	rock dove	<i>Columba livia</i>
4,5,6	mourning dove	<i>Zenaida macroura</i>
	<u>Cuckoos</u>	<u>Cuculidae</u>
4,5	yellow-billed cuckoo	<i>Coccyzus americanus</i>
4,5	black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>
	<u>Typical Owls</u>	<u>Strigidae</u>
8	short-eared owl	<i>Asio flammeus</i>
6	snowy owl	<i>Bubo scandiacus</i>
4,5,6	great horned owl	<i>Bubo virginianus</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
6	eastern screech owl	<i>Otus asio</i>
6	barred owl	<i>Strix varia</i>
	<u>Goat Suckers</u>	<u>Caprimulgidae</u>
	whip-poor-will	<i>Caprimulgus vociferus</i>
5	common nighthawk	<i>Chordeiles minor</i>
	<u>Swifts</u>	<u>Apodidae</u>
4,5	chimney swift	<i>Chaetura pelagica</i>
	<u>Hummingbirds</u>	<u>Trochilidae</u>
4,5	ruby-throated hummingbird	<i>Archilochus colubris</i>
	<u>Kingfishers</u>	<u>Alcedinidae</u>
1,2,4,5,6,8	belted kingfisher	<i>Ceryle alcyon</i>
	<u>Woodpeckers</u>	<u>Picidae</u>
2,5,6	northern flicker	<i>Colaptes auratus</i>
4,5,6	pileated woodpecker	<i>Dryocopus pileatus</i>
4,5,6	red-bellied woodpecker	<i>Melanerpes carolinus</i>
4,5	red-headed woodpecker	<i>Melanerpes erythrocephalus</i>
4,5,6	downy woodpecker	<i>Picoides pubescens</i>
4,5,6	hairy woodpecker	<i>Picoides villosus</i>
4,6	yellow-bellied sapsucker	<i>Sphyrapicus varius</i>
	<u>Flycatchers</u>	<u>Tyrannidae</u>
	olive-sided flycatcher	<i>Contopus cooperi</i>
4,5	eastern wood-pewee	<i>Contopus virens</i>
	yellow-bellied flycatcher	<i>Empidonax flaventris</i>
4,5	alder flycatcher	<i>Epidonax alnorum</i>
4,5	least flycatcher	<i>Epidonax minimus</i>
4,5	willow flycatcher	<i>Epidonax traillii</i>
4,5	great crested flycatcher	<i>Myiarchus crinitus</i>
4,5	eastern phoebe	<i>Sayornis phoebe</i>
4,5	eastern kingbird	<i>Tyrannus tyrannus</i>
	<u>Swallows</u>	<u>Hirundinidae</u>
4	cliff swallow	<i>Hirundo pyrrhonotta</i>
4,5	barn swallow	<i>Hirundo rustica</i>
4,5	purple martin	<i>Progne subis</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
4,5	bank swallow	<i>Riparia riparia</i>
4,5	northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
4,5	tree swallow	<i>Tachycineta bicolor</i>
	<u>Shrikes</u>	<u>Laniidae</u>
6	northern shrike	<i>Lanius excubitor</i>
	<u>Jays, Crows</u>	<u>Corvidae</u>
4,5,6,8	American crow	<i>Corvus brachyrhynchos</i>
6	common raven	<i>Corvus corax</i>
5,6,8	fish crow	<i>Corvus ossifragus</i>
4,5,6	blue jay	<i>Cyanocitta cristata</i>
	<u>Titmice</u>	<u>Paridae</u>
4,5,6	black-capped chickadee	<i>Parus atricapillus</i>
4,5,6	tufted titmouse	<i>Baeolophus bicolor</i>
	<u>Nuthatches</u>	<u>Sittidae</u>
4,5,6	red-breasted nuthatch	<i>Sitta canadensis</i>
4,5,6	white-breasted nuthatch	<i>Sitta carolinensis</i>
	<u>Creepers</u>	<u>Certhiidae</u>
4,5,6	brown creeper	<i>Certhia americana</i>
	<u>Wrens</u>	<u>Troglodytidae</u>
4,5	marsh wren	<i>Cistothorus palustris</i>
4,5,6	Carolina wren	<i>Thryothorus ludovicianus</i>
4,5	house wren	<i>Troglodytes aedon</i>
4,6	winter wren	<i>Troglodytes hiemalis</i>
	<u>Mimic Thrushes</u>	<u>Mimidae</u>
1,2,4,5,6	gray catbird	<i>Dumetella carolinensis</i>
4,5,6	northern mockingbird	<i>Mimus polyglottos</i>
2,4,5	brown thrasher	<i>Toxostoma rufum</i>
	<u>Thrushes</u>	<u>Turdidae</u>
4,5	veery	<i>Catharus fuscescens</i>
4,6	hermit thrush	<i>Catharus guttatus</i>
4,5	wood thrush	<i>Hylocichla mustelina</i>
4,5,6	eastern bluebird	<i>Sialia sialis</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
2,4,5,6	American robin	<i>Turdus migratorius</i>
	<u>Kinglets</u>	<u>Sylviidae</u>
4,5	blue-gray gnatcatcher	<i>Polioptila caerulea</i>
	ruby-crowned kinglet	<i>Regulus calendula</i>
6	golden-crowned kinglet	<i>Regulus satrapa</i>
	<u>Waxwings</u>	<u>Bombycillidae</u>
4,5,6	cedar waxwing	<i>Bombycilla cedrorum</i>
	<u>Starlings</u>	<u>Sturnidae</u>
4,5,6	European starling	<i>Sturnus vulgaris</i>
	<u>Vireos</u>	<u>Vireonidae</u>
4,5	yellow-throated vireo	<i>Vireo flavifrons</i>
4,5	warbling vireo	<i>Vireo gilvus</i>
4,5	red-eyed vireo	<i>Vireo olivaceus</i>
4,5	blue-headed vireo	<i>Vireo solitarius</i>
	<u>Wood Warblers</u>	<u>Parulidae</u>
4	Canada warbler	<i>Cardellina canadensis</i>
4,5	mourning warbler	<i>Geothlypis philadelphia</i>
4,5	common yellowthroat	<i>Geothlypis trichas</i>
4	yellow-breasted chat	<i>Icteria virens</i>
4,5	black and white warbler	<i>Mniotilta varia</i>
4	Nashville warbler	<i>Oreothlypis ruficapilla</i>
	Louisiana waterthrush	<i>Parkesia motacilla</i>
4	northern waterthrush	<i>Parkesia noveboracensis</i>
	northern parula warbler	<i>Parula americana</i>
4	ovenbird	<i>Seiurus aurocapillus</i>
	black-throated blue warbler	<i>Setophaga caerulescens</i>
4	cerulean warbler	<i>Setophaga cerulea</i>
4,5,6	yellow-rumped warbler	<i>Setophaga coronata</i>
	prairie warbler	<i>Setophaga discolor</i>
	blackburnian warbler	<i>Setophaga fusca</i>
	magnolia warbler	<i>Setophaga magnolia</i>
4,5	chestnut-sided warbler	<i>Setophaga pensylvanica</i>
4,5	yellow warbler	<i>Setophaga petechia</i>
4	pine warbler	<i>Setophaga pinus</i>
4,5	American redstart	<i>Setophaga ruticilla</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
	black-throated green warbler	<i>Setophaga virens</i>
4	golden-winged warbler	<i>Vermivora chrysoptera</i>
4,5	blue-winged warbler	<i>Vermivora cyanoptera</i>
	hooded warbler	<i>Wilsona citrina</i>
6	Wilson's warbler	<i>Wilsonia pusilla</i>
	<u>Weaver Finches</u>	<u>Ploceidae</u>
4,5,6	house sparrow	<i>Passer domesticus</i>
	<u>Blackbirds</u>	<u>Icteridae</u>
1,2,4,5,6	red-winged blackbird	<i>Agelaius phoeniceus</i>
4,5	bobolink	<i>Dolichonyx oryzivorus</i>
6	rusty blackbird	<i>Euphagus carolinus</i>
4,5	Baltimore oriole	<i>Icterus galbula</i>
4,5	orchard oriole	<i>Icterus spurius</i>
4,5,6	brown-headed cowbird	<i>Molothrus ater</i>
4,5,6	common grackle	<i>Quiscalus quiscula</i>
4,5	eastern meadowlark	<i>Sturnella magna</i>
	<u>Larks</u>	<u>Alaudidae</u>
4,5,6	horned lark	<i>Eremophila alpestris</i>
	<u>Cardinals</u>	<u>Cardinalinae</u>
4,5,6	northern cardinal	<i>Cardinalis cardinalis</i>
4,5	indigo bunting	<i>Passerina cyanea</i>
4,5	rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>
4,5	scarlet tanager	<i>Piranga olivacea</i>
	<u>Sparrows</u>	<u>Emberizidae</u>
4	Henslow's sparrow	<i>Ammodramus henslowii</i>
4,5	grasshopper sparrow	<i>Ammodramus savannarum</i>
4,5,6	dark-eyed junco	<i>Junco hyemalis</i>
4,5,6	swamp sparrow	<i>Melospiza georgiana</i>
1,4,5,6	song sparrow	<i>Melospiza melodia</i>
4,5	savannah sparrow	<i>Passerculus sandwichensis</i>
6	snow bunting	<i>Plectrophenax nivalis</i>
4	vesper sparrow	<i>Pooecetes gramineus</i>
	<u>True Finches</u>	<u>Fringillidae</u>
6	common redpoll	<i>Carduelis flammea</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
6	pine siskin	<i>Carduelis pinus</i>
4,5,6	American goldfinch	<i>Carduelis tristis</i>
4,5,6	house finch	<i>Carpodacus mexicanus</i>
4,5,6	purple finch	<i>Carpodacus purpureus</i>
6	evening grosbeak	<i>Coccothraustes vespertinus</i>
4	red crossbill	<i>Loxia curvirostra</i>
6	white-winged crossbill	<i>Loxia leucoptera</i>
4,5,6	rufous-sided towhee	<i>Pipilo erythrophthalmus</i>
6	pine grosbeak	<i>Pinicola enucleator</i>
6	American tree sparrow	<i>Spizella arborea</i>
4,5	chipping sparrow	<i>Spizella passerina</i>
4,5	field sparrow	<i>Spizella pusilla</i>
4,6	white-throated sparrow	<i>Zonotrichia albicollis</i>
6	white-crowned sparrow	<i>Zonotrichia leucophrys</i>

Mammal Species

Opossums

opossum

Didelphiidae

Didelphis virginiana

Shrews

shorttail shrew

least shrew

masked shrew

smoky shrew

Soricidae

Blarina brevicauda

Cryptotis parva

Sorex cinereus

Sorex fumeus

Moles

starnose mole

hairytail mole

eastern mole

Talpidae

Condylura cristata

Parascalops breweri

Scalopus aquaticus

Plainnose Bats

big brown bat

silver-haired bat

red bat

hoary bat

Keen myotis

little brown myotis

eastern pipistrelle

Vespertilionidae

Eptesicus fuscus

Lasionycteris noctivagans

Lasiurus borealis

Lasiurus cinereus

Myotis keenii

Myotis lucifugus

Pipistrellus subflavus

Racoons

Procyonidae

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

Common Name	Scientific Name
raccoon	<i>Procyon lotor</i>
<u>Porcupines</u>	<u>Erethizontidae</u>
porcupine	<i>Erethizon dorsatum</i>
<u>Weasels</u>	<u>Mustelidae</u>
striped skunk	<i>Mephitis mephitis</i>
shorttail weasel	<i>Mustela erminea</i>
longtail weasel	<i>Mustela frenata</i>
mink	<i>Mustela vison</i>
<u>Dogs, Wolves, Foxes</u>	<u>Canidae</u>
coyote	<i>Canis latrans</i>
gray fox	<i>Urocyon cinereoargenteus</i>
red fox	<i>Vulpes vulpes</i>
<u>Cats</u>	<u>Felidae</u>
bobcat	<i>Felis rufus</i>
<u>Squirrels</u>	<u>Sciuridae</u>
southern flying squirrel	<i>Glaucomys volans</i>
woodchuck	<i>Marmota monax</i>
eastern gray squirrel	<i>Sciurus carolinensis</i>
eastern chipmunk	<i>Tamias striatus</i>
red squirrel	<i>Tamiasciurus hudsonicus</i>
<u>Beaver</u>	<u>Castoridae</u>
beaver	<i>Castor canadensis</i>
<u>Mice, Rats, Lemmings, Voles</u>	<u>Cricetidae</u>
meadow vole	<i>Microtus pennsylvanicus</i>
muskrat	<i>Ondatra zibethicus</i>
white-footed mouse	<i>Peromyscus leucopus</i>
[<i>Peromyscus maniculatus</i>
<u>Old World Rats & Mice</u>	<u>Muridae</u>
house mouse	<i>Mus musculus</i>
Norway rat	<i>Rattus norvegicus</i>
<u>Jumping Mice</u>	<u>Zapeoidae</u>
woodland jumping mouse	<i>Napaeozapus insignis</i>
meadow jumping mouse	<i>Zapus hudsonicus</i>
<u>Hares, Rabbits</u>	<u>Leporidae</u>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
2	eastern cottontail	<i>Sylvilagus floridanus</i>
	<u>Deer</u>	<u>Cervidae</u>
1,2	whitetail deer	<i>Odocoileus virginianus</i>
Reptile and Amphibian Species		
	<u>Snapping Turtles</u>	<u>Chelydridae</u>
3	common snapping turtle	<i>Chelydra serpentina</i>
	<u>Box and Water Turtles</u>	<u>Emydidae</u>
3	painted turtle	<i>Chrysemys picta</i>
3	wood turtle	<i>Clemmys insculpta</i>
	eastern box turtle	<i>Terrapene caroliniana</i>
	<u>Musk Turtles</u>	<u>Kinosternidae</u>
3	common musk turtle	<i>Sternotherus odoratus</i>
	<u>Colubrids</u>	<u>Colubridae</u>
3	ring necked snake	<i>Diadophis punctatus</i>
	black rat snake	<i>Elaphe obsoleta</i>
3	eastern milk snake	<i>Lampropeltis triangulum</i>
	smooth green snake	<i>Liochlorophis vernalis</i>
3	northern water snake	<i>Natrix sipedon</i>
1,3	brown snake	<i>Storeria dekayi</i>
3	red-bellied snake	<i>Storeria occipitomaculata</i>
	shorthead garter snake	<i>Thamnophis brachystoma</i>
	eastern ribbon snake	<i>Thamnophis sauritus</i>
3	common garter snake	<i>Thamnophis sirtalis</i>
	<u>Giant Salamanders</u>	<u>Cryptobranchidae</u>
	hellbender	<i>Cryptobranchus alleganiensis</i>
	<u>Mole Salamanders</u>	<u>Ambystomatidae</u>
	Jefferson salamander	<i>Ambystoma jeffersonianum</i>
	blue-spotted salamander	<i>Ambystoma laterale</i>
3	spotted salamander	<i>Ambystoma maculatum</i>
	<u>Lungless Salamanders</u>	<u>Plethodontidae</u>
3	northern dusky salamander	<i>Desmognathus fuscus</i>
	Allegheny mountain dusky salamander	<i>Desmognathus ochrophaeus</i>
3	northern two-lined salamander	<i>Eurycea bislineata</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
	long-tailed salamander	<i>Eurycea longicauda</i>
	spring salamander	<i>Gyrinophilus porphyriticus</i>
	four-toed salamander	<i>Hemidactylium scutatum</i>
3	eastern red-backed salamander	<i>Plethodon cinereus</i>
3	slimy salamander	<i>Plethodon glutinosus</i>
	Wehrle's salamander	<i>Plethodon wehrlei</i>
	northern red salamander	<i>Pseudotriton ruber</i>
	<u>Aquatic Salamanders</u>	<u>Proteidae</u>
	mudpuppy	<i>Necturus maculosus</i>
	<u>Newts</u>	<u>Salamandridae</u>
3	red-spotted newt	<i>Notophthalmus viridescens</i>
	<u>Toads</u>	<u>Buфонidae</u>
3	American toad	<i>Bufo americanus</i>
	<u>Tree Frogs</u>	<u>Hylidae</u>
3	gray treefrog	<i>Hyla versicolor</i>
3	spring peeper	<i>Pseudacris crucifer</i>
	western chorus frog	<i>Pseudacris triseriata</i>
	<u>True Frogs</u>	<u>Ranidae</u>
	bull frog	<i>Rana catesbeiana</i>
3	green frog	<i>Rana clamitans</i>
	pickerel frog	<i>Rana palustris</i>
3	northern leopard frog	<i>Rana pipiens</i>
	wood frog	<i>Rana sylvatica</i>
Fish Species		
	<u>Bowfin</u>	<u>Amiidae</u>
7	bowfin	<i>Amia calva</i>
	<u>Sturgeons</u>	<u>Acipenseridae</u>
7	lake sturgeon	<i>Acipenser fulvescens</i>
	<u>Pikes</u>	<u>Esocidae</u>
7	northern pike	<i>Esox lucius</i>
7	tiger muskie	<i>Esox masquinongy x lucius</i>
7	chain pickerel	<i>Esox niger</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
	<u>Gars</u>	<u>Lepisosteidae</u>
7	longnose gar	<i>Lepisosteus osseus</i>
	<u>Sunfishes</u>	<u>Centrarchidae</u>
7	rock bass	<i>Ambloplites rupestris</i>
	redbreast sunfish	<i>Lepomis auritus</i>
7	green sunfish	<i>Lepomis cyanellus</i>
7	pumpkinseed	<i>Lepomis gibbosus</i>
7	bluegill	<i>Lepomis macrochirus</i>
7	smallmouth bass	<i>Micropterus dolomieu</i>
7	largemouth bass	<i>Micropterus salmoides</i>
	white crappie	<i>Pomoxis annularis</i>
7	black crappie	<i>Pomoxis nigromaculatus</i>
	<u>Mudminnows</u>	<u>Umbridae</u>
	central mudminnow	<i>Umbra limi</i>
	<u>Bullhead/Catfishes</u>	<u>Ictaluridae</u>
7	black bullhead	<i>Ameiurus melas</i>
7	yellow bullhead	<i>Ameiurus natalis</i>
7	brown bullhead	<i>Ameiurus nebulosus</i>
7	channel catfish	<i>Ictalurus punctatus</i>
	stonecat	<i>Norturus flavus</i>
7	tadpole madtom	<i>Noturus gyrinus</i>
	marginated madtom	<i>Noturus insignis</i>
7	trout perch	<i>Percopsis omiscomaycus</i>
	<u>Suckers</u>	<u>Catostomidae</u>
7	quillback	<i>Carpionides cyprinus</i>
7	white sucker	<i>Catostomus commersoni</i>
	creek chubsucker	<i>Erimyzon oblongus</i>
7	northern hogsucker	<i>Hypertelium nigricans</i>
7	silver redhorse	<i>Moxostoma anisurum</i>
7	shorthead redhorse	<i>Moxostoma macrolepidotum</i>
7	greater redhorse	<i>Moxostoma valenciennesi</i>
	<u>Sticklebacks</u>	<u>Gasterosteidae</u>
7	brook stickleback	<i>Culaea inconstans</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
	<u>Sculpins</u>	<u>Cothidae</u>
	mottled sculpin	<i>Cottus bairdii</i>
	slimy sculpin	<i>Cottus cognatus</i>
	<u>Gobies</u>	<u>Gobiidae</u>
7	round goby	<i>Neogobius melanostomus</i>
	<u>Temperate Basses</u>	<u>Moronidae</u>
7	white perch	<i>Morone americana</i>
7	white bass	<i>Morone chrysops</i>
	<u>Drums</u>	<u>Sciaenidae</u>
7	freshwater drum	<i>Aplodinotus grunniens</i>
	<u>Perches</u>	<u>Percidae</u>
7	Johnnie darter	<i>Etheostoma nigrum</i>
	fantail darter	<i>Etheostoma flabellare</i>
7	tessellated darter	<i>Etheostoma olmstedi</i>
7	yellow perch	<i>Perca flavescens</i>
7	logperch	<i>Percina caprodes</i>
	blackside darter	<i>Percina maculata</i>
	shield darter	<i>Percina peltata</i>
7	walleye	<i>Sander vitreus</i>
	<u>Silversides</u>	<u>Atherinopsidae</u>
7	brook silverside	<i>Labidesthes sicculus</i>
	<u>Topminnows</u>	<u>Fundulidae</u>
7	banded killifish	<i>Fundulus diphanus</i>
	<u>Carps and Minnows</u>	<u>Cyprinidae</u>
	central stone roller	<i>Campstoma anomalum</i>
7	goldfish	<i>Carassius auratus</i>
	redside dace	<i>Clinostomus elongatus</i>
	lake chub	<i>Couesius plumbeus</i>
7	carp	<i>Cyprinus carpio</i>
	satinfish shiner	<i>Cyprinella analostana</i>
7	spotfin shiner	<i>Cyprinella spiloptera</i>
	cutlips minnow	<i>Exoglossum maxilllingua</i>

WILDLIFE SPECIES INVENTORY

Based on existing data, on-site surveys, and/or the availability of suitable habitat, the following species could occur in the project area at some time during the year:

	Common Name	Scientific Name
	common shiner	<i>Luxilus cornutus</i>
	redfin shiner	<i>Lythrurus umbratilis</i>
	river chub	<i>Nocomis micropogon</i>
7	golden shiner	<i>Notemigonus crysoleucas</i>
	comely shiner	<i>Notropis amoenus</i>
7	emerald shiner	<i>Notropis atherinoides</i>
	spottail shiner	<i>Notropis hudsonicus</i>
7	bluntnose minnow	<i>Pimephales notatus</i>
7	fathead minnow	<i>Pimephales promelas</i>
	blacknose dace	<i>Rhinichthys atratulus</i>
7	longnose dace	<i>Rhinichthys cataractae</i>
7	rudd	<i>Scardinius erythrophthalmus</i>
	fall fish	<i>Semotilus corporalis</i>
	creek chub	<i>Semotilus atromaculatus</i>
	<u>Smelt</u>	<u><i>Osmeridae</i></u>
7	rainbow smelt	<i>Osmerus mordax</i>
	<u>Shads</u>	<u><i>Clupeidae</i></u>
7	alewife	<i>Alosa pseudoharengus</i>
7	gizzard shad	<i>Dorosoma cepedianum</i>
	<u>Trout</u>	<u><i>Salmonidae</i></u>
7	rainbow trout	<i>Oncorhynchus mykiss</i>
7	brown trout	<i>Salmo trutta</i>
	brook trout	<i>Salvelinus fontinalis</i>

Notes: Bold denotes those species actually observed on site.

¹ Species identified during on-site ecological surveys conducted by OBG in 2005 and 2008.

² Species identified during on-site ecological surveys conducted by EDR in 2014.

³ Species identified in the NYS Amphibian & Reptile Atlas Project (Syracuse West Quad).

⁴ Species identified in the USGS Breeding Bird Survey (Cicero Center Route).

⁵ Species identified in the NYS Breeding Bird Atlas (Survey Blocks 3977C, 3977D, 3976A, 3976E).

⁶ Species identified in the Audubon Christmas Bird Count (Syracuse Count).

⁷ Species identified in 2011 Onondaga Lake Fishery Factsheet.

⁸ Species identified in the USFWS 2007-2008 Winter Waterfowl Survey.

Appendix B

Agency Correspondence



Environmental Design & Research,
Landscape Architecture, Engineering & Environmental Services, D.P.C.
217 Montgomery Street, Suite 1000, Syracuse, New York 13202
P. 315.471.0688 • F. 315.471.1061 • www.edrdpc.com

February 28, 2014

Jean Pietrusiak
Information Services
New York Natural Heritage Program
625 Broadway, 5th Floor
Albany, NY 12233-4757

**RE: Lakeview Amphitheater
EDR Project No. 14007**

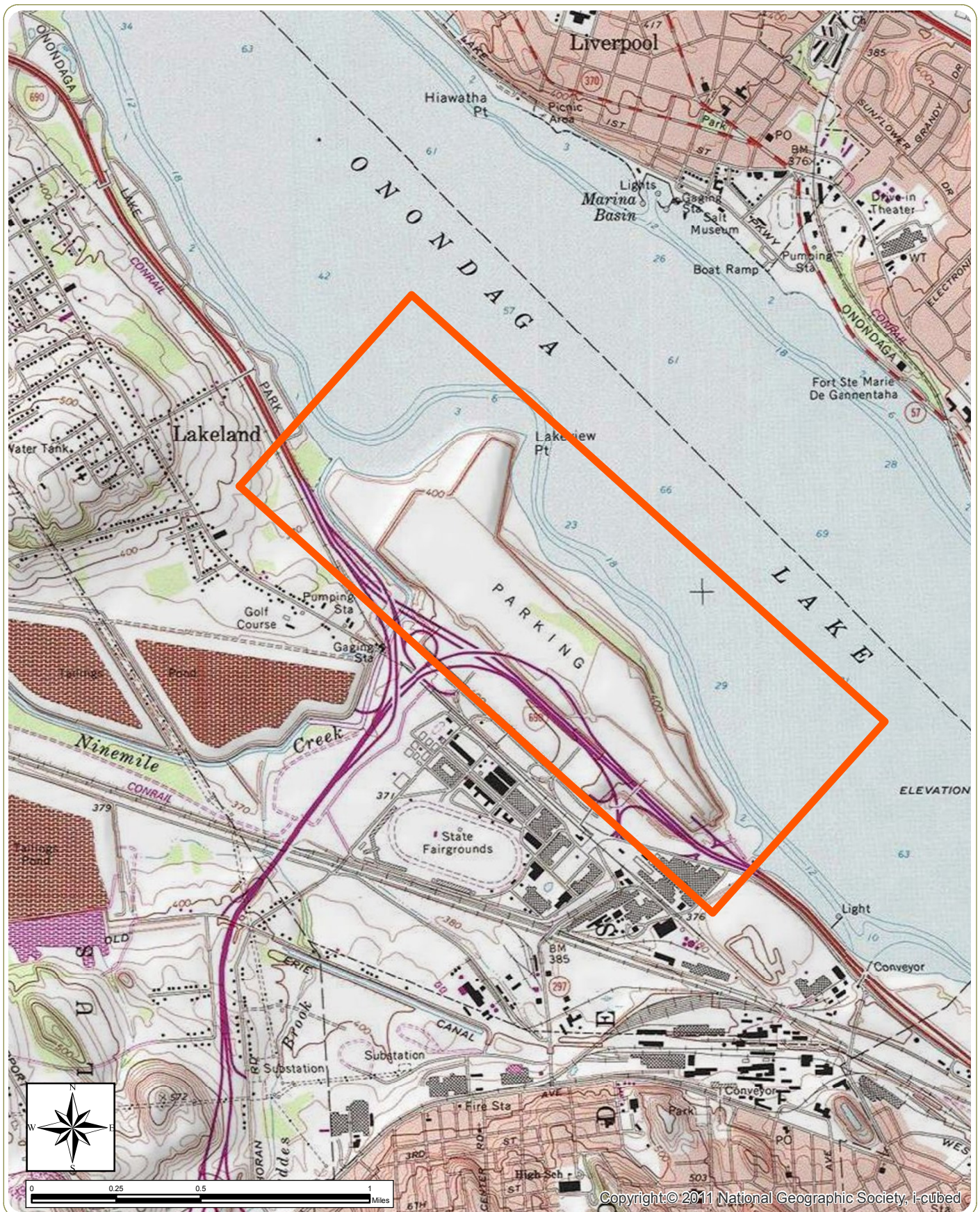
Dear Ms. Pietrusiak:

Environmental Design and Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) is compiling environmental information for a proposed amphitheater project in the Town of Geddes in Onondaga County. Please accept this request for any information you may have concerning documented endangered and threatened wildlife, significant habitats, and/or rare plant species in this area. I have enclosed a map of the project site, which is located within the Syracuse West USGS 7.5-Minute quadrangle.

If you have any questions regarding this data request or require additional project information, please do not hesitate to contact me at 315-471-0688. Thank you for your assistance with this matter. I look forward to hearing from you.

Sincerely,

Sara R. Stebbins
Senior Ecological Resource Specialist



Lakeview Amphitheater

Town of Geddes, Onondaga County

Project Location

February 2014

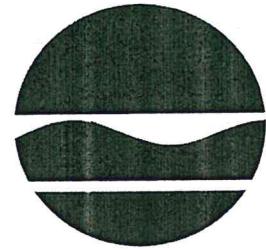
Notes: Basemap: ESRI ArcGIS Online Topomaps Map Service.

 Project Location



www.edrcompanies.com

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov



Joe Martens
Commissioner

March 17, 2014

Sara R. Stebbins
edr Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, NY 13202

EDR

MAR 20 2014
RECEIVED

Re: Lakeview Amphitheater, EDR Project No. 14007
Town/City: Geddes. County: Onondaga.

Dear Sara R. Stebbins :

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program



**The following state-listed animals have been documented
at your project site, or in its vicinity.**

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing. The list may also include significant natural communities that can serve as habitat for Endangered or Threatened animals, and/or other rare animals and rare plants found at these habitats.

For information about potential impacts of your project on these populations, how to avoid, minimize, or mitigate any impacts, and any permit considerations, contact Tom Bell, Wildlife Biologist, at the NYSDEC Region 7 Office in Cortland, tgbell@gw.dec.state.ny.us, 607-753-3095.

The following species have been documented within 0.25 mile. Individual animals may travel 2.5 mi from documented locations.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	FEDERAL LISTING	
Mammals				
Indiana Bat	<i>Myotis sodalis</i>	Endangered	Endangered	12156
Maternity colony				
Indiana Bat	<i>Myotis sodalis</i>	Endangered	Endangered	13799
Bachelor colony				

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at <http://www.dec.ny.gov/animals/7494.html>.

Information about many of the rare plants and animals, and natural community types, in New York are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NatureServe Explorer at <http://www.natureserve.org/explorer>.



**The following rare plants, rare animals, and significant natural communities
have been documented at your project site, or in its vicinity.**

We recommend that potential onsite and offsite impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQR. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following plants are listed as Endangered or Threatened by New York State, and/or are considered rare by the New York Natural Heritage Program, and so are a vulnerable natural resource of conservation concern.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	HERITAGE CONSERVATION STATUS
Vascular Plants			
Straight-leaf Pondweed	<i>Potamogeton strictifolius</i>	Endangered	Critically Imperiled in NYS

Onondaga Lake, 2005-09: The plants were found in the littoral zone of Onondaga Lake, in water less than 4 meters deep. The lake has been heavily polluted with mercury and other industrial contaminants, and is now being cleaned up. Much of the land surrounding the lake is now protected. The substrate is a combination of sand, silt, and calcium carbonate.

12316

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at <http://www.natureserve.org/explorer>, and from USDA's Plants Database at <http://plants.usda.gov/index.html> (for plants).

Information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org. For descriptions of all community types, go to <http://www.dec.ny.gov/animals/29384.html> and click on Draft Ecological Communities of New York State.



U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

New York Ecological Services Field Office
3817 LUKER ROAD
CORTLAND, NY 13045
(607) 753-9334
<http://www.fws.gov/northeast/nyfo/es/section7.htm>

Project Name:

Amphitheater



U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Location Map:



Project Counties:

Onondaga, NY

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-76.2064389 43.0719695, -76.206353 43.0718441, -76.2091855 43.0730354, -76.2204293 43.0806213, -76.2242917 43.0820005, -76.2282399 43.0842573, -76.2319306 43.0893346, -76.2304715 43.0902749, -76.2266091 43.0887078, -76.2230042 43.090839, -76.2176827 43.090839, -76.2184552 43.087893, -76.2160519 43.0851975, -76.2093571 43.081499, -76.2044648 43.0741012, -76.2064389 43.0719695)))

Project Type:

Recreation Construction / Maintenance



Natural Resources of Concern

Endangered Species Act Species List ([*USFWS Endangered Species Program*](#)).

There are a total of 5 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Ferns and Allies	Status		Has Critical Habitat	Contact
American Hart'S-Tongue fern (<i>Asplenium scolopendrium</i> var. <i>americanum</i>) Population:	Threatened	species info		New York Ecological Services Field Office
Mammals				
Indiana bat (<i>Myotis sodalis</i>) Population: Entire	Endangered	species info		New York Ecological Services Field Office
northern long-eared Bat (<i>Myotis septentrionalis</i>) Population:	Proposed Endangered	species info		New York Ecological Services Field Office
Reptiles				
Bog Turtle (<i>Clemmys muhlenbergii</i>) Population: northern	Threatened	species info		New York Ecological Services Field Office
eastern Massasauga (<i>Sistrurus catenatus</i>)	Candidate	species info		New York Ecological Services Field Office



Natural Resources of Concern

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#)).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#)).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the [Bald and Golden Eagle Protection Act](#) (16 U.S.C. 668). The Service's [Birds of Conservation Concern \(2008\)](#) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

Migratory bird information is not available for your project location.

NWI Wetlands ([USFWS National Wetlands Inventory](#)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

The following wetlands intersect your project area:

Wetland Types	NWI Classification Code	Approximate Acres
---------------	-------------------------	-------------------



U.S. Fish and Wildlife Service

Natural Resources of Concern

Lake	L1UBH	2515.551921
Lake	L2UBH	69.006636
Lake	L2UBH	73.553518
Lake	L2UBG	7.509922
Lake	L2USCs	12.176073



New York State Office of Parks, Recreation and Historic Preservation

Division for Historic Preservation
P.O. Box 189, Waterford, New York 12188-0189
518-237-8643

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

March 31, 2014

David Coburn
Office of the Environment
John H. Mulroy Civic Center
421 Montgomery Street
Syracuse, New York 13202

Re: SEQRA
Onondaga County Lakeview Amphitheater
Facility/West Side of Onondaga Lake
Town of Geddes, Onondaga County
14PR01170

Dear Mr. Coburn:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

Based upon this review, it is the OPRHP's opinion that your project will have **No Impact** upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places.

Please note that if federal permits or funds are involved, Native American consultation with Mr. Anthony Gonyea of the Onondaga Nation is required under Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations 36 CFR 800. The Department of Environmental Conservation (DEC) also has a Native American consultation policy entitled *DEC Policy CP-42/Contact, Cooperation, and Consultation with Indian Nations*. If DEC permits are required, please contact the DEC regarding their Native American consultation requirements.

The OPRHP appreciates the opportunity to comment on this information. Please telephone me at ext. 3280 with any questions you may have.

Sincerely,

Nancy Herter
Historic Preservation Program Analyst

Appendix C

Existing Disturbance Photos

Photo 1:



Photo 2:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

Sheet 1 of 19



Photo 3:



Photo 4:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

Sheet 2 of 19



Photo 5:



Photo 6:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

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Photo 7:



Photo 8:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

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Photo 9:



Photo 10:

LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

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Photo 11:



Photo 12:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

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Photo 13:



Photo 14:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

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Photo 15:



Photo 16:





Photo 17:



Photo 18:

LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

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Photo 19:



Photo 20:

LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

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Photo 21:



Photo 22:



Photo 23:



Photo 24:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

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Photo 25:



Photo 26:



Photo 27:



Photo 28:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

Sheet 14 of 19



Photo 29:



Photo 30:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

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Photo 31:



Photo 32:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

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Photo 33:



Photo 34:





Photo 35:



Photo 36:



Photo 37:



Photo 38:



LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2014

APPENDIX C: Existing Disturbance Photos

Sheet 19 of 19



Appendix D

Aesthetic Resources

Location				Distance ² Miles from Nearest proposed Concept	Distance Zone ● Foreground ● Midground ● Background	Project Visibility ³		
Visually Sensitive Resource	Town	County	VP Number ¹			+Visible	- Not Visible	+/- Partially Visible
1. Properties listed on or eligible for inclusion in the National or State Register of Historic Places								
NRHP-Eligible Structures within the NYS State Fairgrounds	Geddes	Onondaga	63, 65	0.7	●	+	+	-
2. State Parks								
None in Study Area								
3. Urban Cultural Parks/Heritage Areas								
Erie Canalway National Heritage Corridor	Geddes, Salina	Onondaga	1-101	0.0	●	+/-	+/-	+/-
4. State Forest Preserves								
None in Study Area								
5. National Wildlife Refuges, State Game Refuges and State Wildlife Management Areas								
None in Study Area								
6. National Natural Landmarks								
None in Study Area								
7. National Parks, Recreation Areas, Seashores and/or Forests								
None in Study Area								
8. National or State Designated Wild, Scenic, or Recreational Rivers								
None in Study Area								
9. Sites, Areas, Lakes, Reservoirs or Highways Designated or Eligible as Scenic								
None in Study Area								
10. Scenic Areas of Statewide Significance								
None in Study Area								
11. State and Federally Designated Trails								
None in Study Area								
12. Adirondack Park Scenic Vistas								
None in Study Area								
13. State Nature and Historic Preserve Areas								
None in Study Area								
14. Palisades Park								
None in Study Area								
15. Bond Act Properties for Exceptional Beauty or Open Space								

None in Study Area									
Locally Important Resources									
Areas of Intensive Land Use (City, Village, Hamlet)									
Hamlet of Lakeland	Geddes	Onondaga	49-51, 66-70, 72, 73	0.4	●	+/-	+/-	+/-	
Village of Liverpool	Salina	Onondaga	85-94	1.0	●	+	+	+/-	
Transportation Corridors									
I 690	Geddes	Onondaga	42, 56, 60-62, 99, 100	0.4	●	+/-	+/-	+/-	
SR 695	Geddes	Onondaga	57-59	0.8	●	+	+	+	
Recreation Resources									
<i>Local Parks and Playgrounds</i>									
Onondaga Lake County Park	Salina, Geddes	Onondaga	1, 22, 24-41, 74, 76-79, 81, 82, 90, 91, 93, 95	0.0	●	+/-	+/-	+/-	
<i>Lakes and Rivers</i>									
Onondaga Lake	Salina, Geddes	Onondaga	1-21, 80, 83, 84	0.1	●	+/-	+/-	+/-	
Ninemile Creek	Geddes	Onondaga		0.3	●	+/-	+/-		
<i>Trails</i>									
West Shore Trail	Geddes	Onondaga		0.4	●	+	+/-		
<i>NYSDEC Lands</i>									
None in Study Area									
<i>Golf Courses</i>									
Pope's Grove Golf Course	Geddes	Onondaga		0.6	●	+	+/-		
Schools and Colleges									
None in Study Area									
Cemeteries									
None in Study Area									
Hospitals									
None in Study Area									
Other Local Resources									
State Fairgrounds	Geddes	Onondaga	23, 43-48, 63, 65, 101	0.2	●	+/-	+/-	+/-	

¹ If no viewpoint (VP) number is indicated, no photo was obtained during fieldwork.

² For large areas and linear sites, approximate distance to the nearest proposed Project site was measured from the respective area's closest point.

Appendix E

Representative Viewpoint Photos



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community



ONONDAGA COUNTY LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT
JUNE, 2014

Appendix E: Viewpoint Location Map

NOTES: BASEMAP: ESRI ARCGIS ONLINE "WORLD IMAGERY" MAP SERVICE.

- POTENTIAL STAGE LOCATION
- ONE-MILE VISUAL STUDY AREA
- VIEWPOINT LOCATION/VISIBILITY
 - BOTH CONCEPTS VISIBLE
 - ONLY BEACON CONCEPT VISIBLE
 - ONLY COVE CONCEPT VISIBLE
 - NEITHER CONCEPT VISIBLE





Viewpoint 1:

State Fairgrounds Parking Lot,
Town of Geddes
April, 2014



Viewpoint 2:

Onondaga Lake West Shore
Trail (Under Construction),
Town of Geddes
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

Sheet 1 of 15





Viewpoint 3:

Onondaga Lake West Shore
Trail (Under Construction),
Town of Geddes
April, 2014



Viewpoint 4:

Onondaga Lake West Shore
Trail (Under Construction),
Town of Geddes
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

Sheet 2 of 15





Viewpoint 5:

Onondaga Lake Visitor Center,
Town of Geddes
April, 2014



Viewpoint 6:

Regatta Road,
Hamlet of Lakeland
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

Sheet 3 of 15





Viewpoint 7:

Pleasant Beach Road,
Hamlet of Lakeland
April, 2014



Viewpoint 8:

Walkway over I-690 to Onondaga
Lake West Shore Trail,
Town of Geddes
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Viewpoint 9:

Onondaga Lake West
Shore Recreational Trail,
Town of Geddes
April, 2014



Viewpoint 10:

Onondaga Lake West
Shore Recreational Trail,
Town of Geddes
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Viewpoint 11:

Onondaga Lake West
Shore Recreational Trail,
Town of Geddes
April, 2014



Viewpoint 12:

Onondaga Lake West
Shore Recreational Trail,
Town of Geddes
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Viewpoint 13:

Onondaga Lake West
Shore Recreational Trail,
Town of Geddes
April, 2014



Viewpoint 14:

Lakeland Park,
Hamlet of Lakeland
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

Sheet 7 of 15





Viewpoint 15:

State Fair Boulevard,
Hamlet of Lakeland
April, 2014



Viewpoint 16:

I-690 On-Ramp,
Town of Geddes
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Viewpoint 17:

Onondaga Creek Walk,
City of Syracuse
April, 2014



Viewpoint 18:

Destiny USA Parking Lot,
City of Syracuse
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

Sheet 9 of 15





Viewpoint 19:

Destiny USA
Best Buy Parking Lot,
City of Syracuse
April, 2014



Viewpoint 20:

Onondaga Lake Parkway,
Hamlet of Galeville
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Viewpoint 21:

Onondaga Lake County Park,
Shoreline Walking Trail,
Village of Liverpool
April, 2014



Viewpoint 22:

Tulip Street and 1st Street,
Village of Liverpool
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Viewpoint 23:

Onondaga Lake County Park,
East Shore Recreation Trail,
Village of Liverpool
April, 2014



Viewpoint 24:

Johnson Park,
Village of Liverpool
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Viewpoint 25:

Onondaga Lake County Park,
East Shore Recreation Trail,
Town of Salina
April, 2014



Viewpoint 26:

Onondaga Lake County Park,
East Shore Recreation Trail,
Town of Salina
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

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Viewpoint 27:

Onondaga Lake County Park,
East Shore Recreation Trail,
Town of Salina
April, 2014



Viewpoint 28:

I-690 East,
Town of Geddes
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Viewpoint 29:

I-690 West Overpass,
Town of Geddes
April, 2014

Lakeview Amphitheater

Town of Geddes - Onondaga County, New York

Figure E: Representative Viewpoint Photos

April 2014

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Appendix F

Visual Field Notes

EDR Project: Amphitheatre (14006)

Date: 4/23/14 Weather: Sunny → P.H.Y. Cloudy

Winds: Calm

Sheet: 1 of 2

Initials: JH

Balloon One: GPS #:

Height: 87'

Color: Orange

Camera: Nikon 5200

Balloon Two: GPS #:

Height: 87'

Color: Red

VP # GPS # Photo Reference Time

Balloon Visible 1 2

Location/ Sensitive Resource/ Comments

Direction of View

1	1	264-265	1042	✓	✓	Overlook Lake Park - Boat launch	
2	2	266-268	10:58	✓	✓	Overlook Lake - South end - No GPS	
3	3	269-271	11:03	✓	✓	"	
4	4	272-273	11:05	✓	✓	"	
5	5	274-276	11:08	✓	✓	"	
6	6	277-279	11:10	✓	✓	"	
7	7	280-282	11:12	✓	✓	"	
8	8	283-285	11:14	✓	✓	"	
9	9	286-287	11:18	✓	✓	" - Just outside marina	
10	10	288	11:20	✓	✓	" - Middle of lake	
11	11	289-290	11:21	✓	✓	"	
12	12	291-292	11:23	✓	✓	"	
13	13	293-294	11:24	✓	✓	"	
14	14	295-296	11:25	✓	✓	" - East of point	
15	15	297-298	11:30	✓	✓	" - Northwest near 1 way	
16	16	299-300	11:31	✓	✓	"	
17	17	301-302	11:33	✓	✓	"	
18	18	303	11:35	✓	✓	"	
19	19	304	11:37	✓	✓	"	
20	20	305-306	11:38	✓	✓	"	
21	21	307-308	11:43	✓	✓	"	
22	22	309-310	11:56	✓	✓	"	
23	23	311-312	12:17	✓	✓	Parkway on site - parking area	
24	24	313-314	12:20	✓	✓	Trailers on site	
25	25	315	12:25	✓	✓	High Point on bike trail	
26	26	316-317	12:32	✓	✓		
27	27	318	12:35	✓	✓		
28	28	319-320	12:40	✓	✓	Bridge on bike path (actual bridge closed)	
29	29	321	12:42	✓	✓		
30	30	322-323	12:43	✓	✓		
31	31	324-326	12:45	✓	✓		
32	32	327-329	12:50	✓	✓		
33	33	330-331	12:52	✓	✓		
34	34	332-333	12:55	✓	✓	Overlook on bike trail	

Date: 4/28/14

Balloon One: GPS #:

GPS #:

Balloon Two:	GPS #:
--------------	--------

GPS #:

Color:	Orange
Color:	Red

Color:	Orange
Color:	Red

Camera: Nikon
S200

Camera: Nikon
S200

Winds: Light

Sheet: 2 of 2

Initials: SH

VP #	GPS #	Photo Reference	Time	Balloon Visible		Location/ Sensitive Resource Comments	Direction of View
				1	2		
35	35 334	334 - 337	1:00	✓	✓	Parallel on bike trail	
36	36 334	338 - 342	1:05	✓	✓	Bike trail - end of road	
25	25 341	341 01	1:15	✓	✓	Restoat of VP 25 (Waypoint 24) - New road	
37	36	02	1:18	✓	✓		
38	37	03-04	1:21	✓	✓	Parallel on Bike Trail - #2 partially screened	
39	38	05	1:23	✓	✓		
40	39	06	1:27			Both balloons screened by trees	
41	40	07	1:30			" " " "	
42	41	08-09	1:38	✓			
43	42	10-11	1:40	✓		Bridge over I690	
44	44	12-13	1:45	✓		Parking lot Road	
45	45	14	1:50	✓		" " " "	
46	46	15	1:52	✓		Parking lot	
47	47	16	1:55	✓	✓	" " " "	
48	48	17	2:00	✓	✓	Trailer p. lot - Balloon #2 barely vis through trees - GPS?	
23	22	-18	2:02	✓	✓	Restoat of VP 23 (Waypoint 22)	
24	23	19-21	2:05	✓	✓	Restoat of VP 24 (Waypoint 23)	
49	48	22-23	2:20	✓	✓	Balloon #2 well screened by veg.	
50	49	24-25	2:25	✓	✓	Lake Country Dr.	
51	50	26-27	2:28	✓	✓	Regatta Road - balloons vis. above rooftops Balloon #1 behind bldg. - Luber Supply	

EDR Project: Amphitheatre (14006)

Date: _____ Weather: _____ Winds: _____ Sheet: _____ of _____
 Balloon One: 0214 GPS #: _____ Height: 83' Color: _____ Camera: _____
 Balloon Two: 0214 GPS #: _____ Height: 83' Color: _____

VP #	GPS #	Photo Reference	Time	Balloon Visible	Location/ Sensitive Resource/ Comments	Direction of View
1	0202 - 0212	15:24	X	2	State fair parking lot	N
2	0213 - 0218	11:14	X	X	Creek walk near benches	N
3	0219 - 0221	11:22	X	X	Destiny USA parking lot	NW
4	0222 - 0227	11:29	X	X	Post Body upper parking area	NW
5	0228 - 0231	11:41	X	X	Hawthorn Road bridge	N
6	0232 - 0236	11:47	X	X	I-690 west near exit 7	N
7	0237 - 0240	11:51	X	X	695 to Auburn exit	NE
8	0241 - 0244	12:00	X	X	695 toward 690	E
9	0245 - 0249	12:10	X	X	695 onramps to 690 west	E
10	0250 - 0253	12:15	X	X	I-690 east - no visibility	S
11	0254 - 0256	12:18	X	X	I-690 east - near bridge on site	E
12	0261 - 0266	12:21	X	X	I-690 east - near fairgrounds exit	NE
13	0267 - 0273	12:26	X	X	Gate 4 - NYS Fair grounds	NE
14	0274 - 0279	12:32	X	X	NYS Fair grounds	E
15	0280 - 0284	12:38	X	X	"	E?
16	0285 - 0291	12:45	X	X	"	E
17	0292 - 0295	12:50	X	X	State fair Boulevard - near car mechanic	E
18	0296 - 0300	1:05	X	X	Senior living facility	SE
19	0301 - 0306	1:10	X	X	Lake country drive - no visibility	SE
20	0307 - 0309	1:15	X	X	Our lady peace church	SE
21	0310 - 0317	1:28	X	X	End of church street	SE
22	0318 - 0322	1:34	X	X	Sacred Heart seminary	SE
23	0328 - 0339	1:48	X	X	Solvay middle school	SE
24	0340 - 0346	1:52	X	X	west lake shore trail overpass	S
25	0347 - 0353	2:06	X	X	New trail connecting to west shore trail	S
26	0354 - 0356	2:01	X	X	west lake shore trail - bench	S
27	0357 - 0364	2:15	X	X	"	S
28	0365 - 0368	2:21	X	X	"	S
29	0369 - 0373	2:44	X	X	Onondaga County lake park - picnic area	S
30	0374 - 0379	2:48	X	X	"	S
31	0380 - 0383	2:51	X	X	"	S
32	0384 - 0387	2:54	X	X	"	S
33	0388 - 0391	3:00	X	X	"	S
34	0392 - 0399	3:02	X	X	"	S
35	0400 - 0402	3:26	X	X	St Paul's Lutheran church	W

Date:	Weather:	Winds:	Sheet: ____ of ____	Initials:
Balloon One:	GPS #:	Height:	Color:	Camera:
Balloon Two:	GPS #:	Height:	Color:	

VP #	GPS #	Photo Reference	Time	Balloon Visible		Location/ Sensitive Resource/ Comments	Direction of View
				1	2		
36	35	0903 - 0410	3:32			Gleason center Museum - Liverpool	N
37	36	0411 - 0416	3:36	X		Liverpool elementary	W
38	37	0417 - 0420	3:39	X		Hickory Street - small development	W
39	38	0421 - 0426	3:44	X	X	First Street - Liverpool W	W
40	39	0427 - 431	3:53	X	X	Onondaga Yacht club boat launch	W
41	40	0432 - 439	3:53	X	X	Onondaga county lake park - Baseball fields	W
42	41	0440 - 0444	4:02	X	X	Butterfly Garden Observation Point	W
43	42	0445 - 0448	4:05	X	X	Onondaga lake parkway	W
44	43	0449 - 0454	4:08	X	X	Onondaga lake parkway	W
45	44	0455 - 0459	4:16	X	X	Onondaga lake parkway	W
46	45	0460 - 0464	4:19	X	X	Onondaga lake parkway	W
47	46	0465 - 0476	4:23	X	X	Onondaga lake parkway	W
48	47	0477 - 0482	4:26			Onondaga lake parkway	W
49	48	0483 - 0487	4:35	X		Onondaga lake parkway	W
50	49	0488 - 0494	4:37	X		Overpass/walking Bridge to state fair parking	N

Appendix G

Traffic Impact Study

Traffic Impact Study

Lakeview Amphitheater

Town of Geddes, Onondaga County, New York

Prepared for:

Onondaga County
Office of the County Executive
John H. Mulroy Civic Center, 14th Floor
Syracuse, New York 13202

June 2014

Prepared by:



C&S Engineers, Inc.
499 Col Eileen Collins Boulevard
Syracuse, New York 13212

Lakeview Amphitheater Traffic Impact Study

Prepared by

C&S Engineers, Inc.

for

Onondaga County

Draft Report

June 2014

Onondaga County
Office of the County Executive
John H. Mulroy Civic Center, 14th Floor
Syracuse, New York 13202

**Lakeview Amphitheater
Traffic Impact Study**

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**Lakeview Amphitheater
Traffic Impact Study**

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Appendix C: Accident Data.....	C

EXECUTIVE SUMMARY

This traffic impact study evaluates the potential transportation impacts from the proposed Lakeview Amphitheater Facility. Onondaga County is proposing to construct a 17,500 seat (combination indoor and lawn seating) outdoor events center on County-owned land on the western shore of Onondaga Lake, in the Town of Geddes. It is anticipated that the venue will host 15 to 20 large events during a concert season, plus additional large events in conjunction with the New York State Fair. Smaller scale events are also anticipated to occur several times per year. While events will range from small, local gatherings to popular musical acts, it is anticipated that a sold-out event could generate approximately 7,000 vehicles during the typical PM commuter period to be accommodated along the adjacent roadway network.

Parking for the facility will be accommodated with the Orange and Brown State Fair parking lots. In order to use the Orange Lot outside of State Fair activities, a break-in-access study is required by the Federal Highway Administration and will be a follow-on activity associated with the development of the site.

While the Orange Lot will be able to accommodate the small, local event demand, the Brown Lot will be necessary for the larger, close to sold-out events. For the large, sold-out events, it is recommended that attendees are directed as follows based on anticipated travel routes:

- I-690 Westbound traffic take Exit 7 and will park in the Orange Lot
- I-690 Eastbound traffic will take Exit 6 towards Lakeland, onto Pumphouse Road, State Fair Boulevard, and the Brown Lot
- NYS RT 695 Northbound will transition onto I-690 Eastbound, take Exit 7 to State Fair Boulevard, and the Brown Lot
- Bridge Street (NYS RT 297) traffic will take a right onto State Fair Boulevard to the Orange Lot
- State Fair Boulevard traffic (from the west) will use the Brown Lot
- Willis Avenue traffic will use the Orange Lot via State Fair Boulevard

Accident information was obtained from NYSDOT in order to determine if there is a high incident of accidents within the study area. Verbal description reports of accidents as recorded in the Accident Location Information System (ALIS) over the latest three-year period (October 1, 2010 to September 30, 2013) were obtained for the study area. During the study period, a total of 91 reported accidents were provided by the ALIS. Of the 91 accidents, 15 had indeterminate locations or were out of the study area. The Pumphouse Road, Bridge Street and Willis Road intersections along State Fair Boulevard exceed the statewide average by a considerable margin. The I-690 Westbound Exit 7 off-ramp accident rate is above the average, but there was only 1 accident in the three year period, and that occurred during the Fair with drugs were involved. The only State Fair Boulevard segment significantly above the statewide average is from the Exit 7 Connector road to Willis Avenue.

Based on numerous scenario analyses for a sold-out event, the following operational and capital improvement recommendations should be considered in order to minimize impacts to the I-690 mainline:

Operational Recommendations

- Educate the public on desired parking areas and traffic flow based on incoming direction of travel by posting directions on the facility website
- Utilize police officers on the ground to manually control key intersections in the area, focusing on moving traffic along Pumphouse Road and off the I-690 Westbound Exit 7 off-ramp to avoid impacts to the I-690 mainline
- Utilize existing dynamic message signs (DMS) on the I-690 mainline and install a new DMS on NYS RT 695 Northbound to direct traffic in real-time and warn motorists of potential slowdowns
- Utilize existing intelligent transportation system (ITS) cameras during events to update the DMS in real-time and communicate with the police on the street controlling traffic will help to ensure traffic is flowing as efficiently and safely as possible
- Utilize temporary signage to direct traffic to the appropriate I-690 exit and parking area, as well as to inform vehicles on I-690 Eastbound Exit 6 off-ramp to utilize the shoulder as a second lane on Pumphouse Road and form two lanes eastbound on State Fair Boulevard between Pumphouse Road and the Brown Lot west access
- Utilize approximately 25 transit buses as shuttles to transport attendees between the Brown Lot and the facility before and after the event

Capital Improvement Recommendations

- Widen and lengthen the I-690 Westbound Exit 7 off-ramp to include three lanes approaching the Exit 7 Connector road and approximately 400 feet of a two-lane storage lane for a total length of approximately 2,600 feet
- Construct an auxiliary right turn lane for southbound traffic on the Exit 7 Connector road approaching State Fair Boulevard (NYS RT 931B) for use during large events
- Reconstruct the Orange Lot access road opposite the Exit 7 off-ramp to lower grade and improve turning radius for large vehicles
- Optimize signal timing at the intersection of State Fair Boulevard and Bridge Street during the event departure period to increase green times for westbound traffic

There will be significant delays for those approaching the site on State Fair Boulevard from west of Pumphouse Road and those on Bridge Street due to the preference of moving traffic on other approaches to avoid impacts to the I-690 mainline.

The above-mentioned recommendations are expected to minimize impacts to the I-690 mainline for events at the proposed facility and improve safety and operations during the State Fair, but will not reduce the need for the non-standard access points throughout the adjacent interstate system currently used while the State Fair is in session. Long-term improvements to the roadway network within the study area will be considered, outside of this study, to provide improved access to the Orange Lot during the State Fair and for the proposed facility.

I. Introduction

a. Project Description

This traffic impact study (TIS) evaluates the potential transportation impacts from the proposed Lakeview Amphitheater Facility. Onondaga County is proposing to construct an outdoor events center on County-owned land on the western shore of Onondaga Lake, in the Town of Geddes, Onondaga County, New York. The Lakeview Amphitheater Facility will be an outdoor event complex, which will include an amphitheater with both covered and lawn seats (17,500 total), a vendor area, recreational trails, and amenities. Events hosted at the facility are expected to vary in size from small, local events to sold-out musical acts, and will occur on-site throughout the season. It is anticipated that 15 to 20 large scale events may be scheduled in a typical summer concert season. Additional large scale events are also expected to be scheduled during the New York State Fair as a replacement for the current grandstand entertainment concert series. Local usage may consist of school graduations, wedding receptions, concerts by local artists, and other community-based events. Construction is anticipated to occur in a single phase, beginning in the late fall/winter of 2014 and concluding in the spring of 2016. It is planned to host small-scale events at the facility by Labor Day 2015, with full utilization of the site available for the 2016 summer concert season.

b. Study Area

The project site is located on Lakeview Point, on the western shore of Onondaga Lake. Situated north of the existing New York State Fairgrounds parking lots and the Interstate 690 (I-690) and New York State (NYS) Route 695 interchange, and east-southeast of the mouth of Nine Mile Creek, the site is located approximately 1.2 miles north of the Village of Solvay, 1.0 mile south of the Village of Liverpool, and 1.9 miles northwest of the City of Syracuse. A project location map of the site is included as **Figure 1-1**.

The study area is defined by all roads that provide access to the Fairgrounds and Lakeview Point area, which consist of three local streets, one freeway, and one interstate highway. Based on discussions with the New York State Department of Transportation (NYSDOT) Region 3, the study area includes the following intersections (see **Figure 1-2**):

- State Fair Boulevard & Pumphouse Road (West limit of NYS RT 931B)
- State Fair Boulevard (NYS RT 931B) & Bridge Street (NYS RT 297)
- I-690 Westbound Exit 7 off-ramp & Exit 7 Connector
- Exit 7 Connector & State Fair Boulevard
- State Fair Boulevard & Willis Avenue

The intersection of State Fair Boulevard and Bridge Street is signalized (owned and operated by the NYSDOT) but the other study area intersections are stop controlled. See **Section II.a** for more detailed roadway network information.

c. Methodology

The methodology used to determine the impacts of the traffic generated by the proposed facility was discussed and approved with NYSDOT. Several traffic conditions or scenarios were established and considered for the study intersections. The traffic conditions considered in this report are as follows:

- Existing (2014) traffic conditions during the typical Friday PM peak hours
- Design year (2016) full-build traffic conditions for the proposed development during the typical Friday PM peak hours for a small event (arrival and departure)
- Design year (2016) full-build traffic conditions for the proposed development during the typical Friday PM peak hours for a sold-out event (arrival and departure)
- Mitigated conditions for the full-build traffic conditions, as needed

While a design year no-build traffic condition is typically evaluated for a traffic impact study as a baseline for comparison with the full-build condition, this comparison is not applicable due to unique conditions created by the use of the proposed facility. The design year traffic condition scenarios will include a

growth of background traffic to account for unknown development in the area through 2016.

The PM peak period analyzed (4:00-7:00 PM) was determined based on the following considerations:

- Many events are assumed to occur on weekend evenings with a start time of 7:00 or 8:00 PM
- Arrivals for such an event are anticipated to coincide with typical commuter traffic (4:00 – 7:00 PM)
- Morning or midday events during the typical work week are not anticipated

The effect of the proposed facility on the adjacent roadway network was measured by comparing the operations of the study intersections to operations that are typically considered acceptable. The study intersections were analyzed using SYNCHRO 7¹ which is a computer program that implements the methods presented in the 2000 Highway Capacity Manual². SYNCHRO determines the level of service (LOS), which is defined in terms of delay, as well as anticipated queue lengths. Delay is a measure of driver discomfort, frustration, fuel consumption and lost travel time. LOS criteria are stated in terms of the control delay per vehicle for a 15 minute analysis period and range from “A” to “F”. LOS A is representative of a movement that is free flowing with minimal delay, while LOS F generally represents long delays. LOS D is generally considered acceptable in urban environments. Since we are evaluating special event traffic operations, this evaluation focuses on the amount of anticipated delay, queue lengths, and anticipated impacts to the interstate highway system.

The ranges of delay for each level of service are shown in **Table 1-1** on the following page.

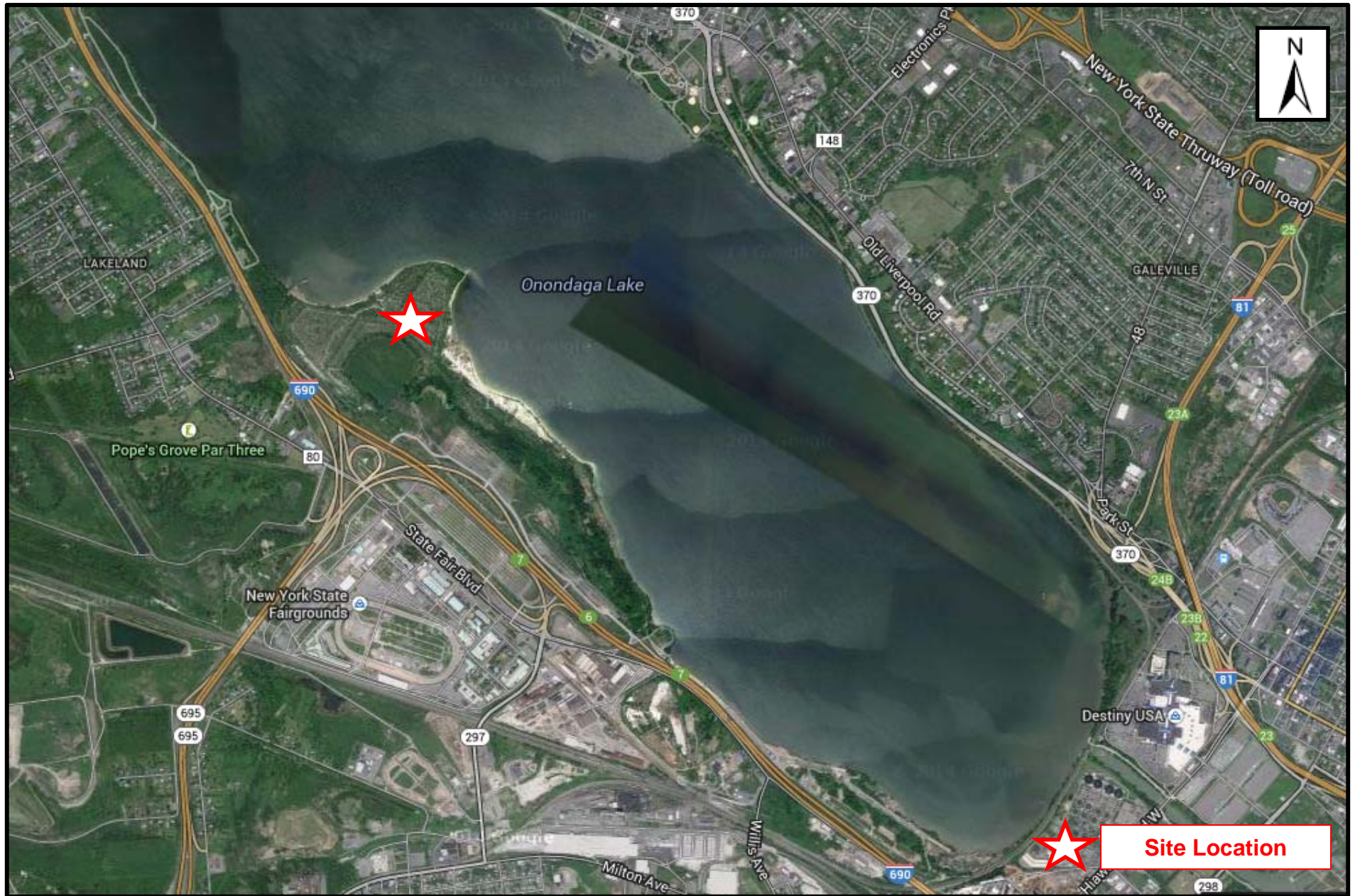
¹ SYNCHRO 7, Traffic Signal Coordination Software, Version 7, Trafficware Corporation, Albany, California, 1993-2006.

² Highway Capacity Manual, Transportation Research Board, National Research Council, Washington D.C., 2000.

Table 1-1: Level of Service Criteria

Level of Service (LOS)	Signalized Intersections	Unsignalized Intersections
	Delay (sec)	Delay (sec)
A	0-10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	over 80	over 50

The TIS also includes an accident analysis on State Fair Boulevard and the Exit 7 Connector road in vicinity of the project site. The NYSDOT provided accident verbal and event summaries for the most recent three-year period available, from October 1, 2010 through September 30, 2013. The accident analysis was conducted to identify any areas of concern in terms of traffic safety that may be improved or intensified based on the proposed project.



**LAKEVIEW
AMPHITHEATER**

TRAFFIC IMPACT STUDY

PROJECT LOCATION MAP

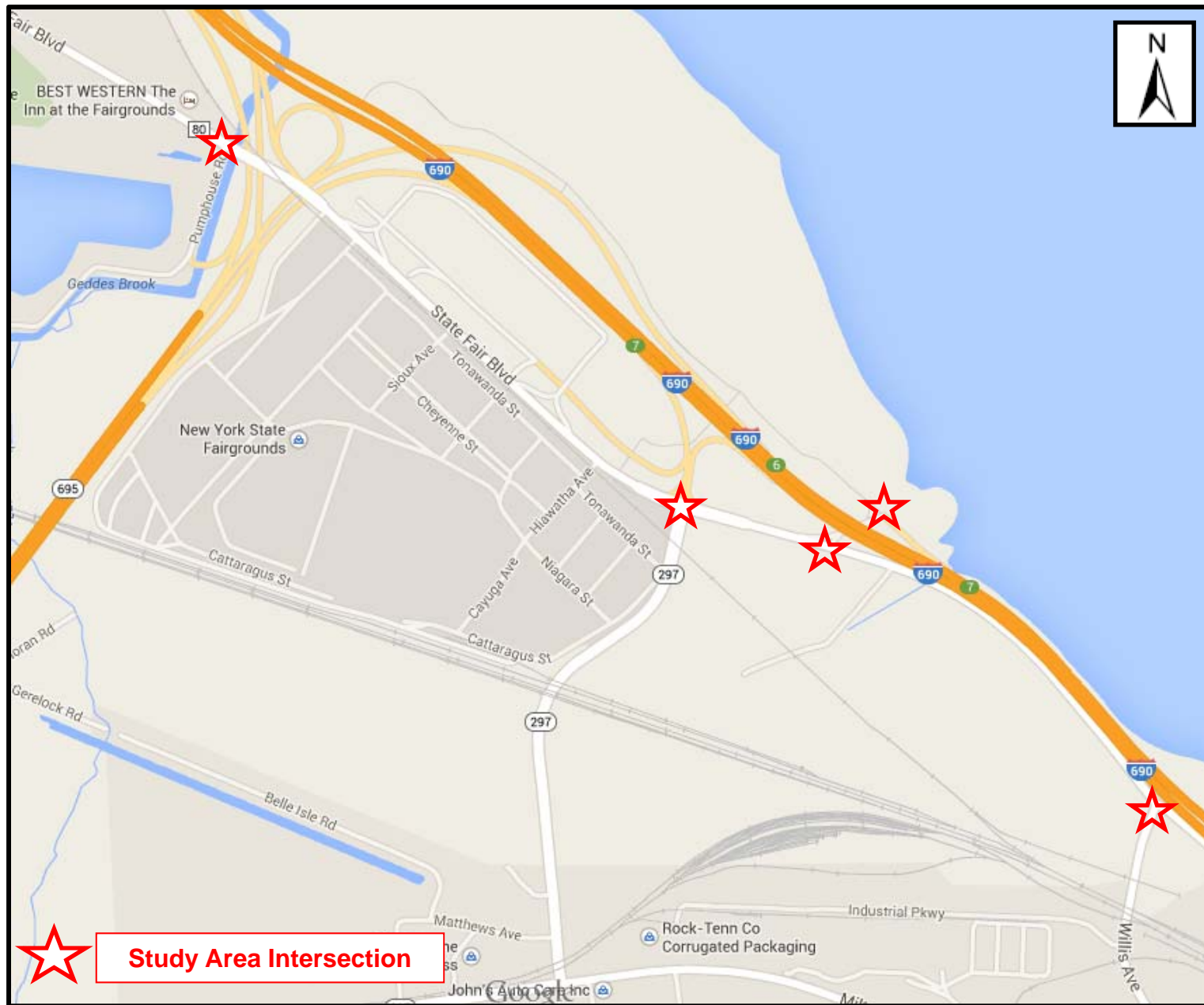
(AERIAL FROM GOOGLE MAPS 2013)



NOT TO SCALE

FIGURE

1-1



**LAKEVIEW
AMPHITHEATER
TRAFFIC IMPACT STUDY**

STUDY AREA INTERSECTIONS
(MAP FROM GOOGLE MAPS 2013)



NOT TO SCALE

FIGURE
1-2

II. Existing Conditions

a. Roadway Network

The following roadways and intersections make up the study area:

State Fair Boulevard is a two-way roadway with multiple ownership within the study area. The section between Pumphouse Road and Bridge Street is owned by the NYSDOT and is also known as NYS RT 931B. The NYS RT 931B section consists of two lanes for westbound traffic and one lane eastbound with a center two-way left turn lane along portions of the roadway. Onondaga County owns the remainder of the roadway within the study area and is also called County Route 80. Two lanes are provided on the county-owned sections for each direction of travel. The speed limit is 35 MPH at west end of the study limits, 40 MPH in proximity to the State Fairgrounds, and increases to 45 MPH just east of the Exit 7 Connector road.

Pumphouse Road is a two-way roadway that runs north-south and serves as a connector from the I-690 eastbound/ NYS RT 695 southbound ramp to State Fair Boulevard. There is one lane for each direction of travel and no posted speed limit. The roadway is signed as a dead end. South of the intersection with the I-690/NYS RT 695 ramp, the road leads to a small public park and a gated private road to waste beds.

Bridge Street is a two-way roadway also known as NYS RT 297. There is one lane of travel in each direction. The posted speed limit is 40 MPH. There is currently a sidewalk on the west side of the roadway, directly adjacent to the curb. This roadway is currently being redesigned to improve bicycle and pedestrian safety, but it is assumed that traffic operations will not change.

The ***Exit 7 Connector*** road is a two-way roadway owned by the NYSDOT that connects the I-690 westbound off-ramp to State Fair Boulevard. There are two

lanes for southbound traffic and one lane northbound. There is no posted speed limit.

Willis Road is a two-way north-south County-owned roadway within the study area that consists of one lane for each direction of travel and no posted speed limit.

Intersection of State Fair Boulevard and Pumphouse Road is stop-controlled on Pumphouse Road. There are two lanes on the westbound approach and one lane on the eastbound approach of State Fair Boulevard with a narrow striped median and one approach lane on Pumphouse Road. There are no sidewalks or crosswalks, but paved shoulders are available on all roadway approaches.



Intersection of State Fair Boulevard and Bridge Street (NYS RT 297) is four-way intersection that is controlled by a NYSDOT owned and operated signal. The approaches consist of the following lane configurations:

- State Fair Boulevard Eastbound – Dedicated left-turn lane, through lane, and shared through/right-turn lane
- State Fair Boulevard Westbound – Dedicated left-turn lane, through lane, and shared through/channelized right-turn lane
- Bridge Street Northbound – Dedicated left-turn lane, shared through/right-turn lane
- I-690 Eastbound off-ramp – shared left-turn/through lane and channelized right-turn lane



Signal timing and phasing information was provided by NYSDOT.

Intersection of State Fair Boulevard and the Exit 7 Connector road is a skewed three-way intersection that is stop controlled on the southbound approach of the connector road. There is one lane for left-turning traffic and one channelized right-turn lane for southbound traffic on the connector road. There is one lane for westbound traffic and a dedicated left-turn lane with a dedicated through lane for eastbound traffic on State Fair Boulevard.



Intersection of the Exit 7 Connector and the I-690 Westbound Exit 7 Off-Ramp is a four-way intersection that is controlled on all approaches but the Exit 7 off-ramp. The off-ramp consists of two-lanes that operate as a dedicated left-turn lane and shared left-turn/through/right-turn lane during typical operations. The access to the State Fair Orange Lot is opposite the Exit 7 off-ramp and consists of two lanes inbound and one channelized right-turn lane approaching the intersection. The Exit 7 Connector road approach is one shared left-turn/through lane. The approach opposite the Exit 7 Connector is currently provides construction access to sites along Onondaga Lake.



Intersection of State Fair Boulevard and Willis Avenue is a three-legged intersection with stop-control on Willis Avenue. Each approach consists of one lane for all movements.



b. Traffic Volumes

Turning movement counts were collected at the study area intersections on Friday, May 2nd 2014 from 4:00 – 7:00 PM. The peak hour for the study intersections was determined to be from 4:00 – 5:00 PM.

The existing condition PM peak hour traffic volumes are shown in **Figure 2-1** in and the complete turning movement count data is provided in **Appendix A**.

c. Level of Service Analysis

A capacity analysis was performed for the study intersections using the existing condition traffic volumes with existing roadway and intersection geometries and NYSDOT's signal timing and phasing information. **Figure 2-2** shows the LOS, delay in seconds, and 95th percentile queues for each lane group of each study intersection. The results of this analysis indicate that all movements are operating at a LOS D or better, except for the few vehicles using the construction access at the intersection of the I-690 Westbound Exit 7 off-ramp and the Exit 7 Connector road.

The existing condition SYNCHRO reports are included in **Appendix B**.

d. Accident Analysis

Accident information was obtained from NYSDOT in order to determine if there is a high incident of accidents within the study area. Verbal description reports of accidents as recorded in the Accident Location Information System (ALIS) over the latest three-year period (October 1, 2010 to September 30, 2013) were obtained for State Fair Boulevard from approximately three tenths of a mile west of the Pumphouse Road intersection, east to the ramp merging onto I-690 Eastbound, for a total length of 2.6 miles. Also included was the I-690 Westbound Exit 7 off-ramp and Exit 7 Connector road to State Fair Boulevard. This information included accident records at the intersection of State Fair Boulevard and Pumphouse Road, Bridge Street, Exit 7 Connector road, Willis Avenue, and

the various gates and ramps to the fairgrounds. The information provides brief summaries of each reported accident and a general location based on reference markers, intersecting streets and landmarks. Some reports have incomplete location information and the exact location cannot be determined. For the purposes of this study, locations were estimated based on the information given, a thorough check of available on-line mapping, and inferences taken from the details of the accident.

During the study period, a total of 91 reported accidents were provided by the ALIS. Of the 91 accidents, 15 had indeterminate locations or were out of the study area. The accident analysis was broken down into each separate intersection and smaller intersection-to-intersection segments, with corresponding Annual Average Daily Traffic (AADT) estimated from recently collected traffic counts. The table on the following page summarizes accident severity for the entire study period for each of the intersections and segments. Non-reportable collisions are those that result in less than \$1,000 worth of damage and no injuries. Since this corridor experiences an extremely high traffic volume during the 12 days the State Fair is open, during which a higher incidence of accidents may occur but a reliable source of traffic volume data is not available, the accidents were tabulated separately for all days of the year, and excluding State Fair days, in order to give a general comparison of the accidents rates during the State Fair and the rest of the year.

The accident rates for each segment and intersection were calculated in order to make a comparison to the statewide average rates as published by the NYSDOT for similar road and intersection types and locations. The results are shown in **Table 2-2** on Page 2-7.

Table 2-1: Accident Summary

	October 2011 - September 2013				
	Total # Accidents	PDO	Injury	Fatality	Non- Reportable
Intersections - All Days, Including State Fair					
State Fair Boulevard at Pumphouse Road	2	1	0	0	1
State Fair Boulevard at Bridge Street	28	14	5	0	9
State Fair Boulevard at Exit 7 Connector Road	0	0	0	0	0
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	1	1	0	0	0
State Fair Boulevard at Willis Avenue	2	1	1	0	0
	33	17	6	0	10
Segments - All Days, Including State Fair					
State Fair Boulevard: West of Pumphouse Road	2	0	0	0	2
State Fair Boulevard: Pumphouse Road to Bridge Street	32	12	5	0	15
State Fair Boulevard: Bridge Street to Exit 7 Connector Road	2	0	1	0	1
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	0	0	0	0
State Fair Boulevard: Exit 7 Connector Road to Willis Avenue	7	1	5	1	0
State Fair Boulevard: East of Willis Avenue	0	0	0	0	0
Totals	43	13	11	1	18
Intersections - Excluding State Fair Days					
State Fair Boulevard at Pumphouse Road	2	1	0	0	1
State Fair Boulevard at Bridge Street	27	13	5	0	9
State Fair Boulevard at Exit 7 Connector Road	0	0	0	0	0
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	0	0	0	0
State Fair Boulevard at Willis Avenue	2	1	1	0	0
Totals	31	15	6	0	10
Segments - Excluding State Fair Days					
State Fair Boulevard: West of Pumphouse Road	2	0	0	0	2
State Fair Boulevard: Pumphouse Road to Bridge Street	17	8	4	0	5
State Fair Boulevard: Bridge Street to Exit 7 Connector Road	1	0	0	0	1
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	0	0	0	0
State Fair Boulevard: Exit 7 Connector Road to Willis Avenue	7	1	5	1	0
State Fair Boulevard: East of Willis Avenue	0	0	0	0	0
Totals	27	9	9	1	8

Table 2-2: Accident Rates

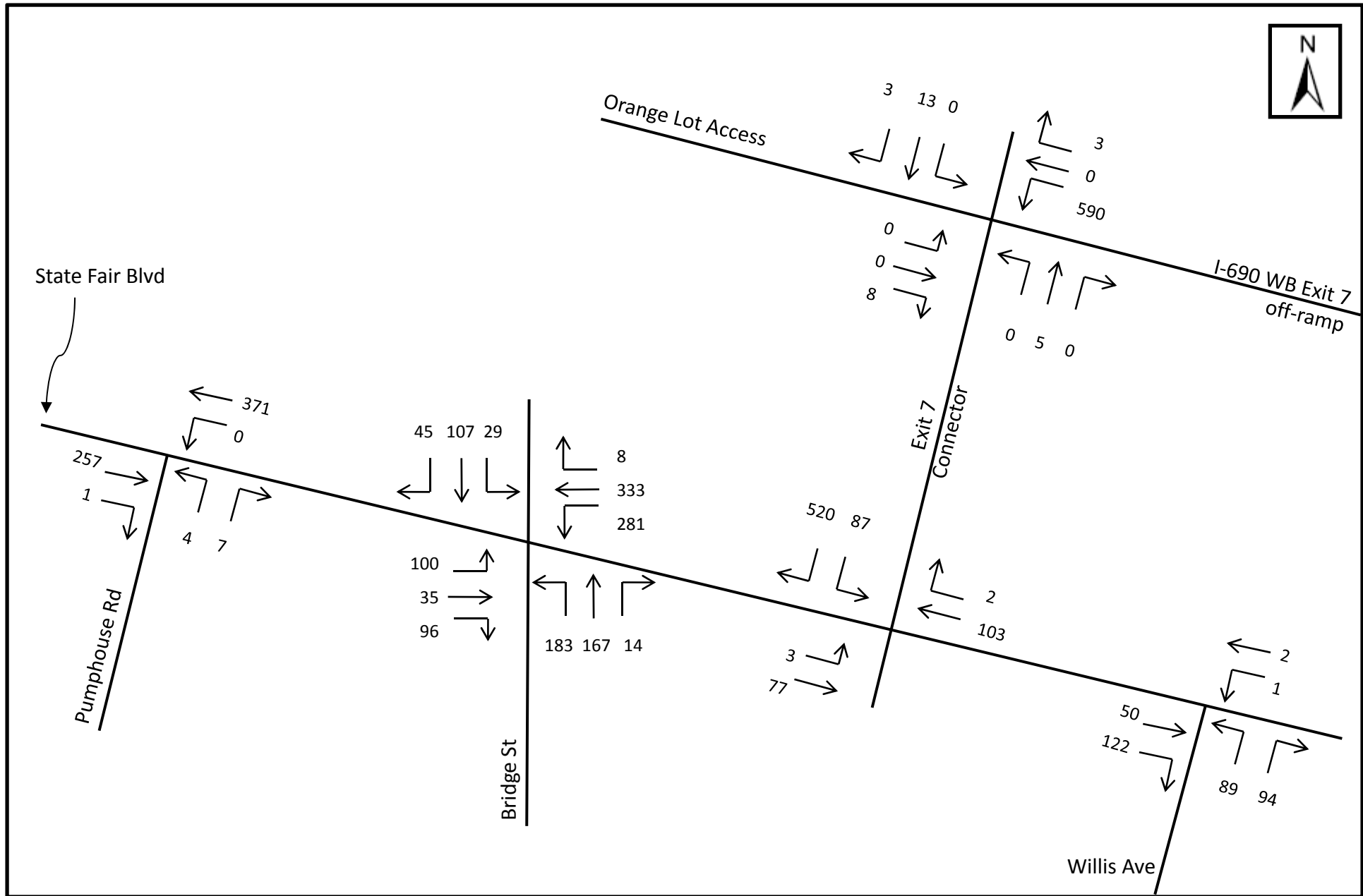
	Total # Accidents	AADT*	Segment Length (mi)	Total Acc Rate (MEV)	SWA Rate	% > SWA
Intersections - All Days, Including State Fair						
State Fair Boulevard at Pumphouse Road	2	5340		0.34	0.15	127%
State Fair Boulevard at Bridge Street	28	11650		2.19	0.21	943%
State Fair Boulevard at Exit 7 Connector Road	0	6600			0.15	
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	1	5190		0.18	0.13	38%
State Fair Boulevard at Willis Avenue	2	2990		0.61	0.15	307%
Segments - All Days, Including State Fair						
State Fair Boulevard: West of Pumphouse Road	2	5280	0.30	1.15	2.25	-49%
State Fair Boulevard: Pumphouse Road to Bridge Street	32	6600	0.90	4.92	2.48	98%
State Fair Boulevard: Bridge Street to Exit 7 Connector Road	2	5880	0.23	1.35	3.20	-58%
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	5190	0.22		2.25	
State Fair Boulevard: Exit 7 Connector Road to Willis Avenue	7	2250	0.66	4.3	2.25	91%
State Fair Boulevard: East of Willis Avenue	0	1230	0.30		2.25	
Intersections - Excluding State Fair Days						
State Fair Boulevard at Pumphouse Road	2	5340		0.35	0.15	133%
State Fair Boulevard at Bridge Street	27	11650		2.19	0.21	943%
State Fair Boulevard at Exit 7 Connector Road	0	6600			0.15	
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	5190			0.13	
State Fair Boulevard at Willis Avenue	2	2990		0.63	0.15	320%
Segments - Excluding State Fair Days						
State Fair Boulevard: West of Pumphouse Road	2	5280	0.30	1.19	2.25	-47%
State Fair Boulevard: Pumphouse Road to Bridge Street	17	6600	0.90	2.7	2.48	9%
State Fair Boulevard: Bridge Street to Exit 7 Connector Road	1	5880	0.23	0.70	3.20	-78%
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	5190	0.22		2.25	
State Fair Boulevard: Exit 7 Connector Road to Willis Avenue	7	2250	0.66	4.45	2.25	98%
State Fair Boulevard: East of Willis Avenue	0	1230	0.30		2.25	

*AADT for intersections estimated using existing PM peak hour entering volumes and the Suburban through route factor below to obtain AADT (see Appendix C)

The Pumphouse Road, Bridge Street and Willis Road intersections exceed the statewide average by a considerable margin, with no significant difference seen during the State Fair. The I-690 Westbound Exit 7 off-ramp accident rate is above the average, but there was only 1 accident in the three year period, and that occurred during the Fair with drugs were involved. The only State Fair Boulevard segment significantly above the statewide average is from the Exit 7 Connector road to Willis Avenue. It should be noted that of the 7 accidents recorded, 5 resulted in injury and there was 1 fatality. Accidents during the State Fair occur at a higher rate in the Pumphouse Road to Bridge Street segment due to the increased number of access points used along this segment at the fairgrounds. Otherwise removing accidents that occurred during the State Fair did not significantly reduce the number of accidents throughout the study area.

The most prevalent types of accidents in the study area were rear end, overtaking, and turning movement collisions. At the Bridge Street intersection, 10 of the 31 accidents involved left turns against other vehicles, indicating motorists are pulling in front of oncoming traffic, resulting in a collision. Another 8 at that intersection were rear end, which is indicative of stop and go traffic. Most of the contributing factors for all study area accidents were driver inattention, failure to yield right-of-way, and unsafe lane changes or improper passing and lane usage.

A copy of the ALIS reports from NYSDOT is included along with a detailed summary list of all the accidents and collision diagrams in **Appendix C**.



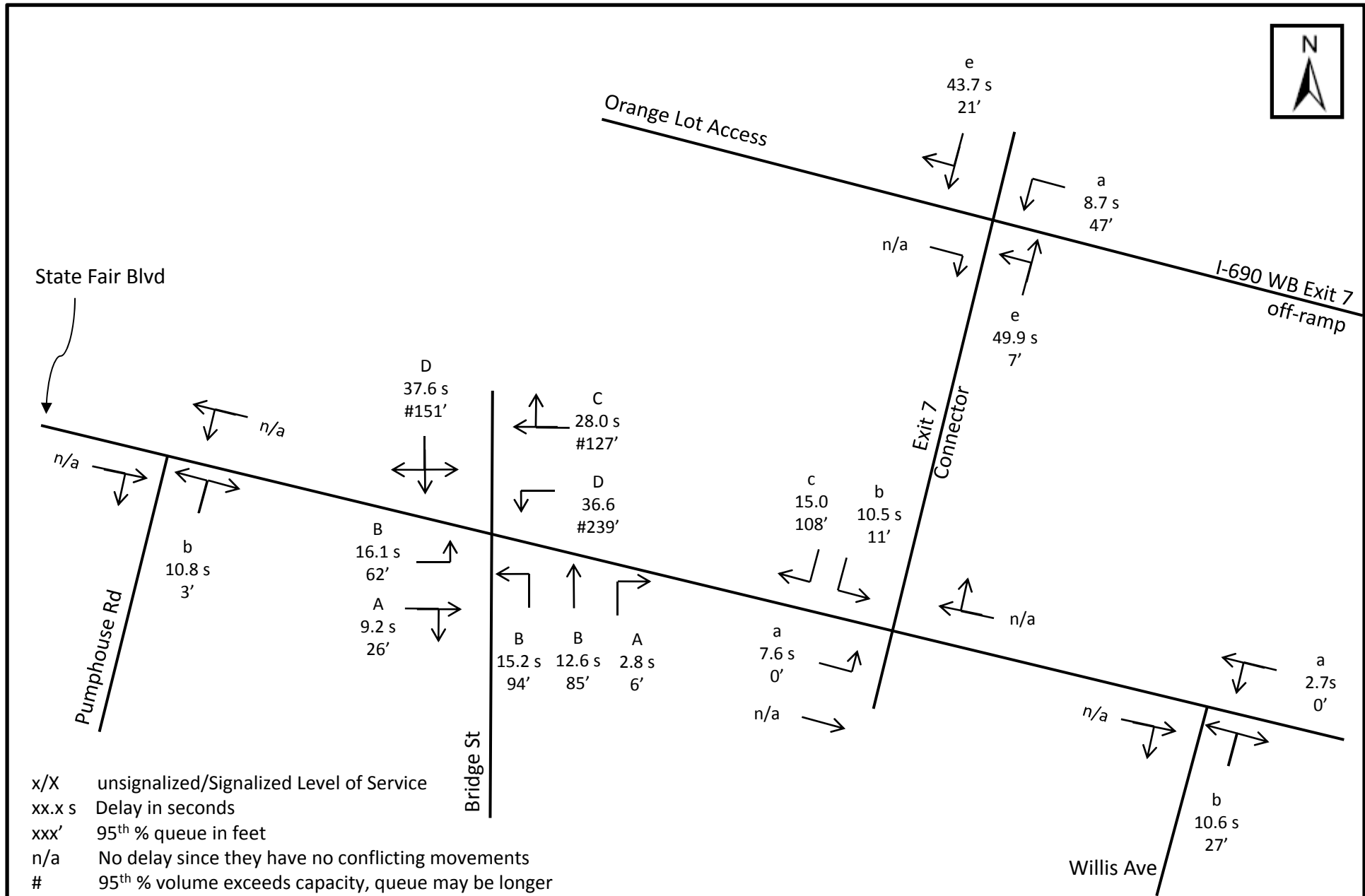
**LAKEVIEW
AMPHITHEATER
TRAFFIC IMPACT STUDY**

**EXISTING CONDITION PM PEAK HOUR
VOLUMES**



NOT TO SCALE

FIGURE
2-1



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

EXISTING CONDITION OPERATIONS SUMMARY



NOT TO SCALE

FIGURE

2-2

III. Build Conditions

a. Access and Parking

The facility is proposed to be constructed on Lakeview Point, adjacent to what is currently designated as the Orange Lot for State Fair parking. Based on an understanding between Onondaga County and the New York State Department of Agriculture and Markets, parking for the facility will be accommodated by the Orange and Brown Lots, typically used during the State Fair. For the purposes of this study and analysis, it is assumed any access control in terms of payment collection will occur well within the site, if at all, so as not to negatively impact vehicular flow inbound.

The Orange Lot is accessed via a three-lane roadway opposite the I-690 Westbound Exit 7 off-ramp and is estimated to be able to accommodate approximately 6,500 vehicles. This access will serve as the only vehicular access to the site. It is anticipated that



the existing grade approaching the facility site will be reduced as part of the development of the site.

In order to use this access point outside of State Fair activities, a break-in-access study is required by the Federal Highway Administration (FHWA) and will be a follow-on activity associated with the development of the facility. The County has recently obtained a permit for temporary access for the new Loop Trail and a small parking lot. Discussions with the FHWA and NYSDOT have led to the understanding that any other access points to the site typically used during the State Fair (gated access drives from the I-690 Westbound to NYS RT 695 Southbound ramp, temporary traffic signal with the Orange Lot access with the I-690 mainline, and the access ramp directly to the Brown Lot from the I-690 Eastbound Exit 6 off-ramp) will not be available during amphitheater events.

During events, the Orange Lot western access road to the I-690 crossover will be opened only for emergency vehicle access only, and would not include any signal components.

The Brown Lot is accessed via two driveways along State Fair Boulevard with a capacity of approximately 3,500 vehicles. It is assumed that this lot will be used during large events (see **Section III.d**) and will be served by shuttle buses to transport attendees to the facility via the Orange Lot access.

b. Background Growth

The Lakeview Amphitheater Facility is expected to be completed by the fall of 2015 and completely operational with a full season in 2016. Based on past traffic volume information collected on various roadways within the study area (see **Appendix A**), a compounded growth rate of 0.5% was applied to the existing traffic volumes to derive 2016 background volumes that account for any unknown development that may occur in the area.

Figure 3-1 shows the 2016 background arrival volumes.

c. Trip Generation

The expected trip generation for the Lakeview Amphitheater Facility was estimated based on the number of seats in the facility, size of event, an assumed vehicle occupancy ratio, and assumed arrival and departure patterns. It is assumed that any employees will arrive well before attendees and before the typical PM peak hour. The vehicle occupancy ratio (VOR) for the attendees is assumed to be 2.5, meaning that, on average, each vehicle contains 2.5 attendees. While other modes may be used to access the area via a recently completed multi-use trail and potential boat access in the future, a mode share reduction was not applied for the purposes of this analysis. The following assumptions were made when estimating the facility's trip generation for a small, local event and a sold-out event:

Small Event

A small, local event is assumed to attract 500 attendees, or 200 vehicles with the VOR adjustment. It is assumed that all 500 attendees will arrive during the peak hour and will be directed to park in the Orange Lot. Departure would occur for all attendees via the Orange Lot access over the course of one hour, assumed to be approximately 10:00PM.

Sold-out Event

With the VOR adjustment, 17,500 attendees would arrive in 7,000 vehicles. Given the size of the event and potential tail-gating type activities, it is assumed that 80% of the vehicles (5,600) would arrive during the peak hour with the remaining 20% arriving before or after the analysis period.

As noted in **Section III.a**, it is anticipated that the Brown Lot will be utilized with shuttle buses transporting attendees to the site via the Orange Lot access. Shuttle bus trips were estimated based on a number of assumptions including the number of vehicles and attendees using the Brown Lot (as discussed in **Section III.d**), the capacity of transit buses, and the time estimated to take for a bus to make a roundtrip from the Brown Lot to the facility. It is assumed that shuttle buses will have more direct access via dedicated lanes or given priority through intersections to avoid congestion, which will be finalized during facility operations planning.

During the peak hour, it is estimated that 75 shuttle bus trips will occur during the peak hour analyzed. See **Appendix A** for more detailed shuttle bus assumptions and calculations.

d. Trip Distribution

Trip distribution was considered on a broader, regional scale then broken down to a more localized distribution depending on the size of the event: small vs sold-out. The regional distribution takes into consideration where attendees are

coming from and how they are accessing the study area. The local distribution is based on the size of the event and which parking area will be utilized.

Access to the general study area is accommodated through the following roadways:

- I-690 Westbound
- I-690 Eastbound
- NYS RT 695 Northbound
- Bridge Street (NYS RT 297)
- State Fair Boulevard (from the west)
- Willis Avenue

In order to estimate how many vehicles will use each of the above-mentioned routes, it was assumed that the distribution for amphitheater events would be similar to the distribution to the area during the State Fair. The NYSDOT provided counts that were collected hourly throughout the study area during the course of the 2007 State Fair. The average incoming volumes on each route were found during the analysis period and used to determine the distribution, as shown in **Figure 3-2**. See **Appendix A** for detailed regional distribution data and calculations.

For the small event, it is assumed that all attendees will park in the Orange Lot using the access opposite the I-690 Westbound Exit 7 off-ramp on the Exit 7 Connector road. The local distribution for small event arrivals and departures is shown in **Figures 3-3 and 3-4**.

For the sold-out event, it is anticipated that 7,000 vehicles will need to park on-site. Since the Orange Lot is only expected to accommodate 6,500 vehicles, traffic will need to be distributed to the Brown Lot. A local distribution was developed in order to more evenly distribute vehicles to the two lots, as well as minimize conflicting movements and delays. It is assumed that this distribution will be publicized through the facility website, dynamic message signs (DMS)

along I-690 and NYS RT 695, and other signage to direct traffic to the desirable route and parking lot. As shown in **Figure 3-5**, the following local distribution for a sold-event during arrival was developed:

- I-690 Westbound traffic will park in the Orange Lot
- I-690 Eastbound traffic will take Exit 6 towards Lakeland, onto Pumphouse Road, State Fair Boulevard, and the Brown Lot
- NYS RT 695 Northbound will transition onto I-690 Eastbound, take Exit 7 to State Fair Boulevard, and the Brown Lot
- Bridge Street (NYS RT 297) traffic will take a right onto State Fair Boulevard to the Orange Lot
- State Fair Boulevard traffic (from the west) will use the Brown Lot
- Willis Avenue traffic will use the Orange Lot

It is assumed that both Brown Lot access points will be utilized. For arrivals, it is assumed that the westernmost access point will consist of two inbound lanes and one outbound lane while the east access will consist of one lane in each direction. For departures, the lane configuration for the west access will change to three outbound lanes: two right turn lanes and a left turn lane for shuttles. It is assumed that the access to the Orange Lot will remain with two inbound lanes and one outbound lane.

During departure for both the sold-out event, the traffic distribution will use the closest, more direct interstate ramps and roadways to travel in the direction they arrived, as shown in **Figure 3-6**.

e. Build Volumes

The distributed arrival attendee traffic was added to the 2016 background volumes to create the 2016 future build condition volumes for the small and sold-out events. For the departure conditions, background traffic was estimated based on a comparison between PM peak hour volumes and volumes collected during the 10:00PM hour. Using 24-hour counts during typical conditions along State Fair Boulevard, Bridge Street, and the I-690 Westbound Exit 7 off-ramp, it was estimated that volumes during the 10:00PM hour are approximately 20% of the

4:00PM hour volumes. Therefore, the existing PM peak hour volumes were reduced by approximately 80%, then grown at the 0.5% compounded growth rate to estimate 2016 background volumes during event departure.

Future volume calculations are included in **Appendix A. Figures 3-7 through 3-10** show the 2016 build condition volumes for small and sold-out events during arrival and departure.

f. Build Analyses

Future build condition SYNCHRO models were created for the following scenarios:

- Small event arrival with existing traffic control
- Small event departure with existing traffic control
- Sold-out event arrival with existing traffic control
- Sold-out event arrival with manned traffic control
- Sold-out event arrival with manned traffic control and proposed mitigation
- Sold-out event departure

Small Event – Arrival/Departure

The LOS, delay in seconds, and 95th percentile queues for the small event arrival and departure scenarios are shown in **Figures 3-11 and 3-12** and detailed analysis reports are included in **Appendix B**. Delays for vehicles arriving from the I-690 Eastbound Exit 7 off-ramp to the intersection at State Fair Boulevard and Bridge Street are expected to approach two minutes as they wait to turn left onto State Fair Boulevard. The anticipated queues are not expected to impact the I-690 Eastbound mainline. The average intersection LOS falls from a C to a D with an increase to the average intersection delay of approximately 15 seconds. The LOS for the arriving vehicles as they approach the Orange Lot access at the intersection of the I-690 Westbound Exit 7 off-ramp and the Exit 7 Connector road are expected to be an F, with delays and queues due to the high conflicting volumes coming off the off-ramp. Queues are not anticipated to impact the intersection of the Exit 7 Connector road and State Fair Boulevard. The I-690

Westbound Exit 7 off-ramp or mainline is not expected to be impacted. There are no proposed mitigation measures for the arrival time period associated with a small event.

With minimal conflicting traffic, there are no significant delays anticipated during event departure. All movements at all study intersections are anticipated to operate at a LOS B or better. There are no proposed mitigation measures for the departure time period associated with a small event.

Sold-out Event – Arrival

As the models were created and evaluated for the sold-out event arrivals using existing traffic control, it became evident that mitigation would be required to eliminate gridlock throughout the study area. Traffic can be expected to come to a stand-still for those trying to access the Orange Lot from Bridge Street and Willis Avenue, as well as for those trying to access the Brown Lot from State Fair Boulevard west and Pumphouse Road. Queues from Pumphouse Road are expected to impact the I-690 Eastbound Exit 6 off-ramp, and possibly the I-690 Eastbound mainline, at this location. The I-690 Eastbound Exit 7 off-ramp traffic at the intersection of State Fair Boulevard and Bridge Street is expected to queue along the exit only lane from the NYS RT 695 Northbound merge with I-690 Eastbound. This would affect the I-690 Eastbound mainline at this location if a vehicle on I-690 wishes to take Exit 7 and needs to merge into slow moving traffic in the exit only lane. Detailed analysis reports are included in **Appendix B**.

Sold-out Event – Arrival with Manned Traffic Control

The first level of mitigation considered was manned traffic control at the intersections of I-690 Westbound Exit 7 off-ramp and the Exit 7 Connector road, State Fair Boulevard and Pumphouse Road, and the west access to the Brown Lot on State Fair Boulevard to maintain traffic flow into the facilities and minimize queues on the I-690 off-ramps. Manned control was simulated by using a pre-

timed signal timing and phasing at these intersections with more green time allotted to movements that would most improve operations that may affect the I-690 mainline: I-690 Westbound Exit 7 off-ramp; Pumphouse Road; and the access to the Brown Lot.

While manned control is expected to improve queues and delays, there will still be significant backups along Pumphouse Road that will impact the I-690 Eastbound Exit 6 off-ramp. The introduction of manned control on the I-690 Westbound Exit 7 off-ramp will create queues that may impact the I-690 Westbound mainline at this location, even with a change in lane usage allowing the left lane as a shared left/through lane and the right lane as a dedicated through lane to the Orange Lot.

Although not obvious by reviewing the results, the 1,000 foot plus queue for traffic approaching the Orange Lot from the Exit 7 Connector road is expected to impact operations at the intersection with State Fair Boulevard and ultimately to the traffic approaching northbound on Bridge Street. The LOS, delay in seconds, and 95th percentile queues for the sold-out event arrival scenario with assumed manned traffic control are shown in **Figure 3-13** and the detailed analysis reports are included in **Appendix B**.

Sold-out Event – Arrival with Manned Traffic Control and Mitigation

In order to minimize the potential for impacts onto the I-690 mainline, additional mitigation measures were considered along the route via Pumphouse Road to the Brown Lot access and to the I-690 Westbound Exit 7 off-ramp as described below:

- Measurements of Pumphouse Road and the ramp from I-690 eastbound indicate that there is adequate existing pavement width including the shoulder to accommodate two lanes of travel northbound. The striped median, two-way center left turn lane, and wide shoulders along State Fair Boulevard between Pumphouse Road and the Brown Lot access may allow for 2 lanes of travel eastbound. With two lanes of traffic, manned

traffic control, as well as the appropriate signage and traffic control, it is anticipated that queues will be mitigated to avoid impacts to the I-690 Eastbound mainline.

- Potential mitigation to the I-690 Westbound Exit 7 off-ramp include widening and lengthening the ramp itself to current guidelines for a parallel type interstate off-ramp provided by the American Association of State Highway and Transportation Officials' *A Policy on Geometric Design of Highways and Streets*: add an additional lane at the intersection with the Exit 7 Connector road to provide a dedicated left turn lane and two through lanes for approximately 400 feet, widen the ramp to provide two lanes for another 400 feet, and extend the deceleration/storage lane for a total Exit 7 off-ramp length of approximately 2,600 feet compared to the existing 1,000 foot ramp (see **Figure 3-14**). Along with the manned control focused on minimizing queues on the off-ramp, it is anticipated that impacts to the I-690 Westbound mainline could be avoided.

The above-mentioned mitigation measures will not improve the queues and delays for the vehicles accessing the Orange Lot via the Exit 7 Connector road impacting State Fair Boulevard and Bridge Street, or for the vehicles from NYS RT 695 Northbound using the I-690 Eastbound Exit 7 off-ramp to the Brown Lot. In order to reduce the potential for impacts to the I-690 Eastbound mainline near Exit 7, DMS could guide vehicles looking to use that exit to use Exit 6 instead. The LOS, delay in seconds, and 95th percentile queues for the sold-out event arrival scenario with assumed manned traffic control and the above-mentioned mitigation measures are shown in **Figure 3-15** and the detailed analysis reports are included in **Appendix B**.

Intelligent Transportation Systems (ITS)

The use of temporary signage, police personnel for traffic control, real-time DMS use, intelligent transportation systems (ITS) cameras, and real-time communications will help to mitigate traffic operations for any sized event at the facility. Monitoring traffic in the areas during an event using the existing ITS cameras, immediately changing the DMS message as needed to direct traffic or warn through vehicles of potential slowdowns, and communicating with the police on the street controlling traffic will help to ensure traffic is flowing as efficiently and safely as possible. There are currently roadside DMS units along

I-690 in both directions approaching the study area, and installing one on NYS RT 695 Northbound will provide the opportunity to direct traffic to an event to use the I-690 Eastbound Exit 7 and stay in the right lane to the Brown Lot. The DMS would warn through traffic to be aware of event traffic and direct event traffic to their designated exit, lane, and parking area.

Sold-out Event – Departure with/without Mitigation

As with the small event, the background traffic expected during the departure analysis period is minimal, but with the amount of traffic trying to leave the two parking areas at one time, there will be significant delays for attendees. Once they leave the parking areas, delays will be minimal throughout the study area, except for those exiting the Orange Lot as they approach State Fair Boulevard and those wanting to turn left onto Bridge Street from State Fair Boulevard westbound. The following mitigation measures were considered to improve operations during departure:

- Adjusting the signal timing at the intersection of State Fair Boulevard and Bridge Street to provide more time for the westbound movements will mitigate the delays for the westbound traffic on State Fair Boulevard without degrading operations for other movements.
- In order to improve traffic flow for those exiting the Orange Lot, adding a second right turn lane (auxiliary lane for event traffic only) on the Exit 7 Connector road approaching State Fair Boulevard will reduce delays but not mitigate them to a LOS indicative of current operations (see **Figure 3-14**).

Departure traffic should not impact I-690 mainline operations in either direction as delays and queues will be limited to the parking lots themselves. The LOS, delay in seconds, and 95th percentile queues for the sold-out event departure scenario without and with the above-mentioned mitigation measures are shown in **Figures 3-16 and 3-17** and the detailed analysis reports are included in **Appendix B**.

g. Additional Analyses

As stated in **Section III.a**, it is understood that the gated access drives into the Orange Lot from the I-690 Westbound to NYS RT 695 Southbound ramp, the temporary traffic signal at the Orange Lot access road with the I-690 mainline crossover, and the access ramp directly to the Brown Lot from the I-690 Eastbound Exit 6 off-ramp, all of which are utilized during the New York State Fair every year for 12 days preceding Labor Day, will not be available for use during amphitheater events. Before this was known, a number of additional scenarios were evaluated that included the use of these access points:

- *Sold-out event arrival with the Orange Lot access from the I-690 Westbound to NYS RT 695 Southbound ramp and the access directly to the Brown Lot from the I-690 Eastbound Exit 6 off-ramp (see **Figure 3-18**)* – This assumes that both access points to the Orange Lot are open, with signage directing traffic to use the shoulder for direct access to the east access, the right lane to the west access, and the left lane for through traffic. This scenario eliminates the need to alter the I-690 Westbound Exit 7 off-ramp, as well as improves delays and queues along the Exit 7 Connector road and at the intersection of State Fair Boulevard and Bridge Street.
- *Sold-out event departure using the signal from the Orange Lot to access the I-690 mainline (see **Figure 3-19**)* – This scenario assumes that vehicles that arrived via I-690 Westbound Exit 7 will exit the Orange Lot via the signalized intersection along the I-690 mainline. Delays from the Orange Lot are reduced, but traffic on the I-690 mainline will be forced to come to a stop similar to conditions during the State Fair. Significant signage and the use of the DMS will be required to warn motorists on I-690 of the stop in traffic.

The detailed analysis reports for the above-mentioned scenarios are included in **Appendix B**.

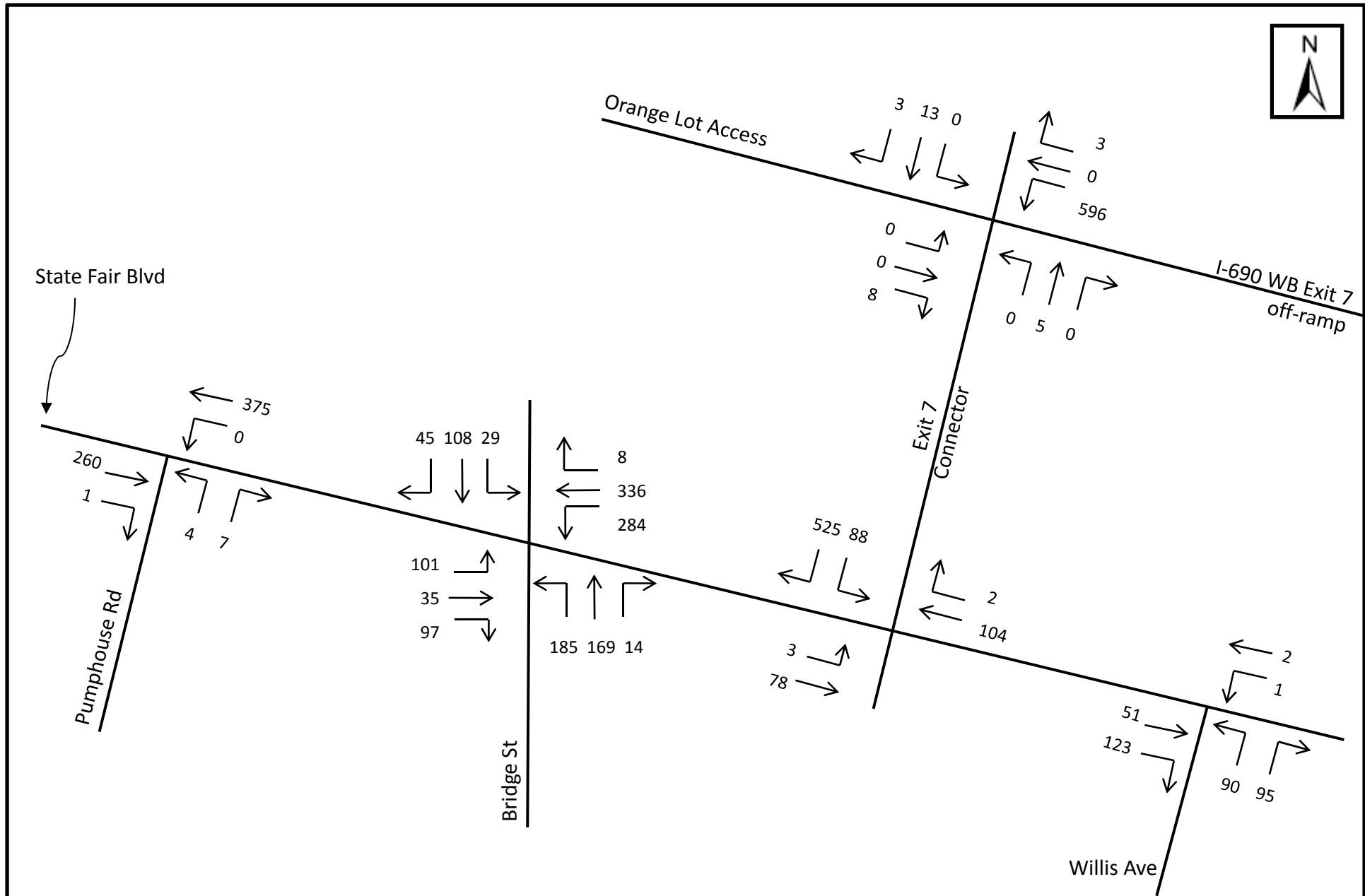
h. Long-Term Considerations

The access to the Orange Lot opposite the I-690 Westbound Exit 7 off-ramp is currently the only available access to the proposed site, pending the approval of an FHWA break-in-access study. Discussions between the FHWA, NYSDOT, and the County have acknowledged the desire to provide long-term improvements

to the area that will not only serve the proposed amphitheater facility, but the State Fair access to the Orange Lot as well without requiring the use of the access points from the I-690 Westbound to NYS RT 695 Southbound ramp or the signal along the I-690 mainline.

The mitigation measures identified to widen and extend the I-690 Westbound Exit 7 off-ramp and construct a second right turn lane on the Exit 7 Connector road southbound to State Fair Boulevard will improve operations and safety during both amphitheater events and the State Fair, but will not reduce the need for the non-standard access points currently used while the State Fair is in session. To eliminate the need for those access points, additional ramps from the I-690 mainline would need to be considered.

While not a part of this study, several conceptual layouts are being considered to provide direct access to the Orange Lot via I-690 Eastbound and Westbound off- and on-ramps and frontage roads. One scenario to be considered involves constructing new westbound on- and off-ramps at the location of the current temporary traffic signal at the mainline crossover. Other long-term concepts would consider replacing some or all existing ramps with a full interchange to serve both the fairgrounds and the amphitheater site.



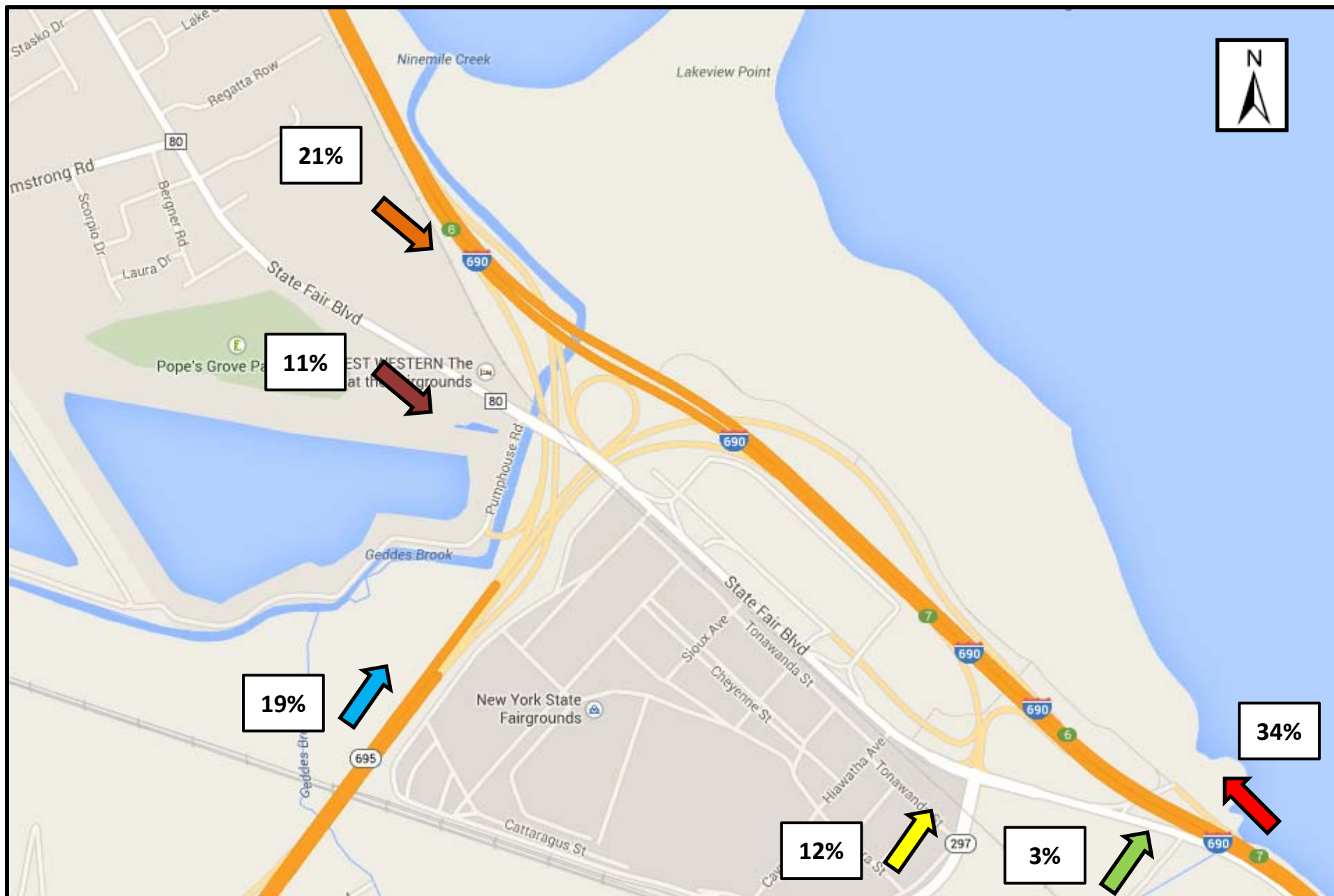
**LAKEVIEW
AMPHITHEATER
TRAFFIC IMPACT STUDY**

**2016 PM PEAK HOUR BACKGROUND
VOLUMES**



NOT TO SCALE

**FIGURE
3-1**



**LAKEVIEW
AMPHITHEATER
TRAFFIC IMPACT STUDY**

REGIONAL TRIP DISTRIBUTION

(MAP FROM GOOGLE MAPS 2013)



NOT TO SCALE

FIGURE

3-2



LAKEVIEW
AMPHITHEATER

TRAFFIC IMPACT STUDY

SMALL EVENT – LOCAL
ARRIVAL DISTRIBUTION



NOT TO SCALE

FIGURE

3-3



LAKEVIEW
AMPHITHEATER

TRAFFIC IMPACT STUDY

SMALL EVENT – LOCAL
DEPARTURE DISTRIBUTION



NOT TO SCALE

FIGURE

3-4



LAKEVIEW
AMPHITHEATER

TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – LOCAL
ARRIVAL DISTRIBUTION



NOT TO SCALE

FIGURE

3-5



LAKEVIEW
AMPHITHEATER

TRAFFIC IMPACT STUDY

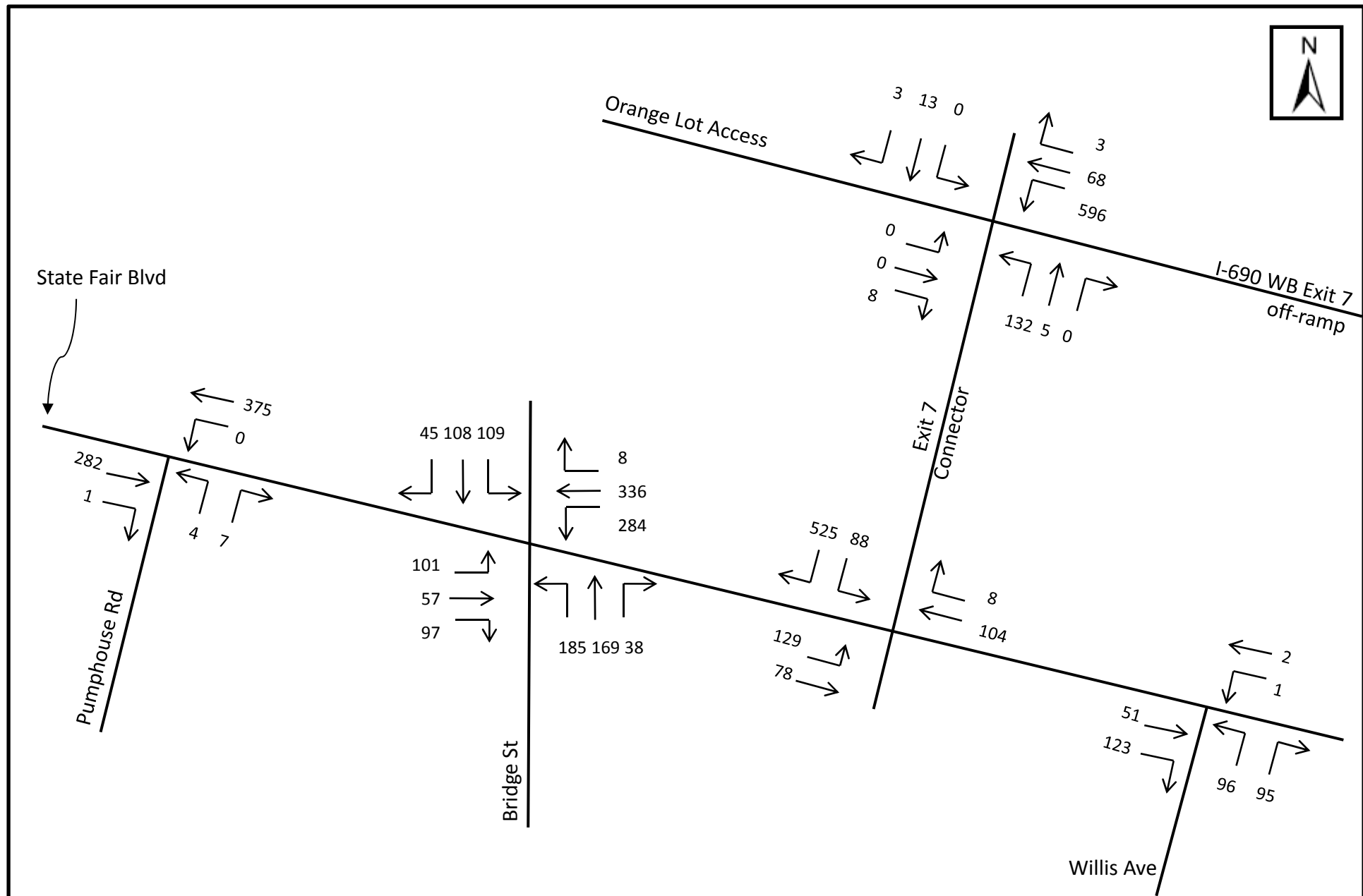
SOLD-OUT EVENT – LOCAL
DEPARTURE DISTRIBUTION

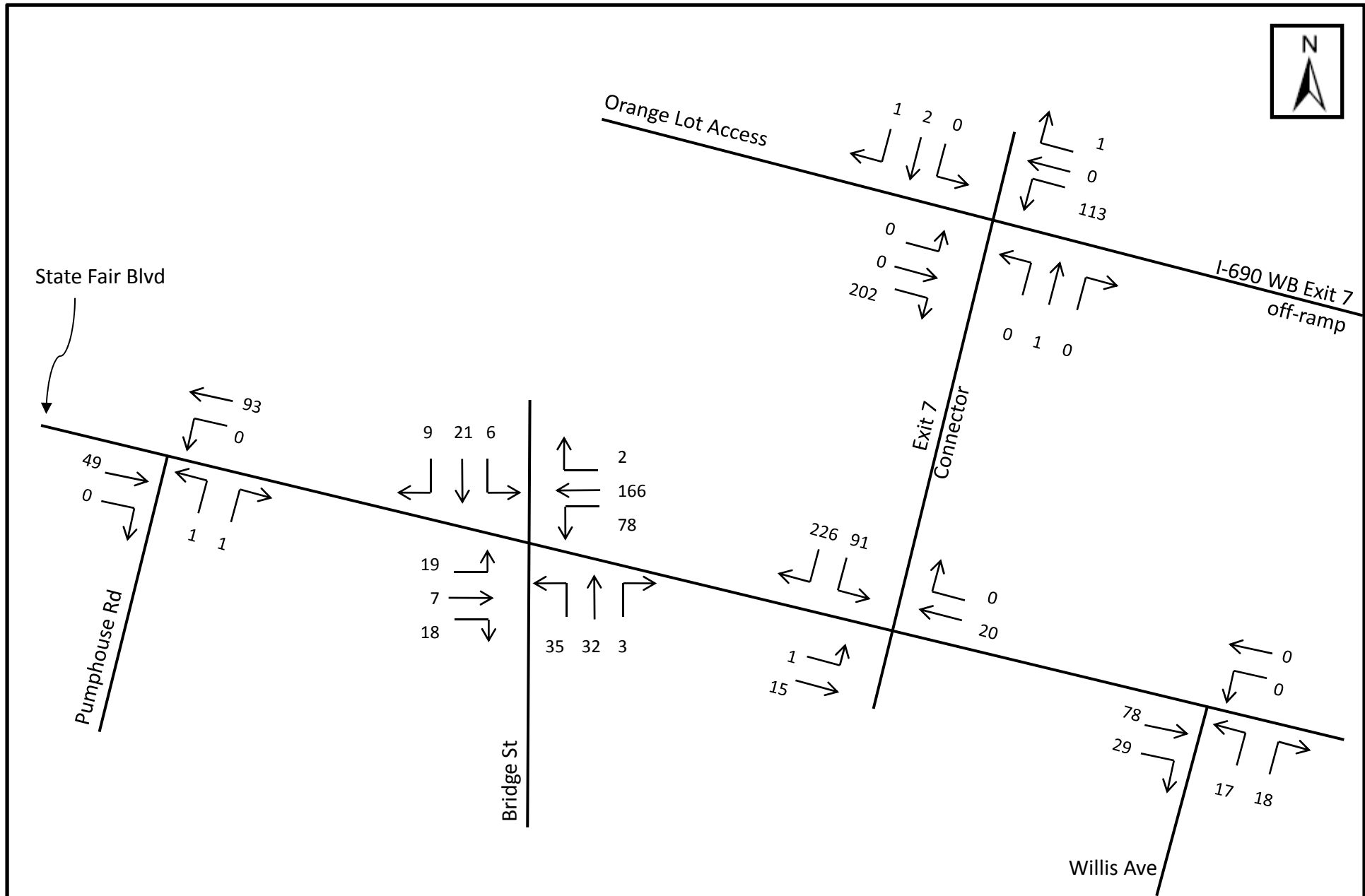


NOT TO SCALE

FIGURE

3-6





**LAKEVIEW
AMPHITHEATER**

TRAFFIC IMPACT STUDY

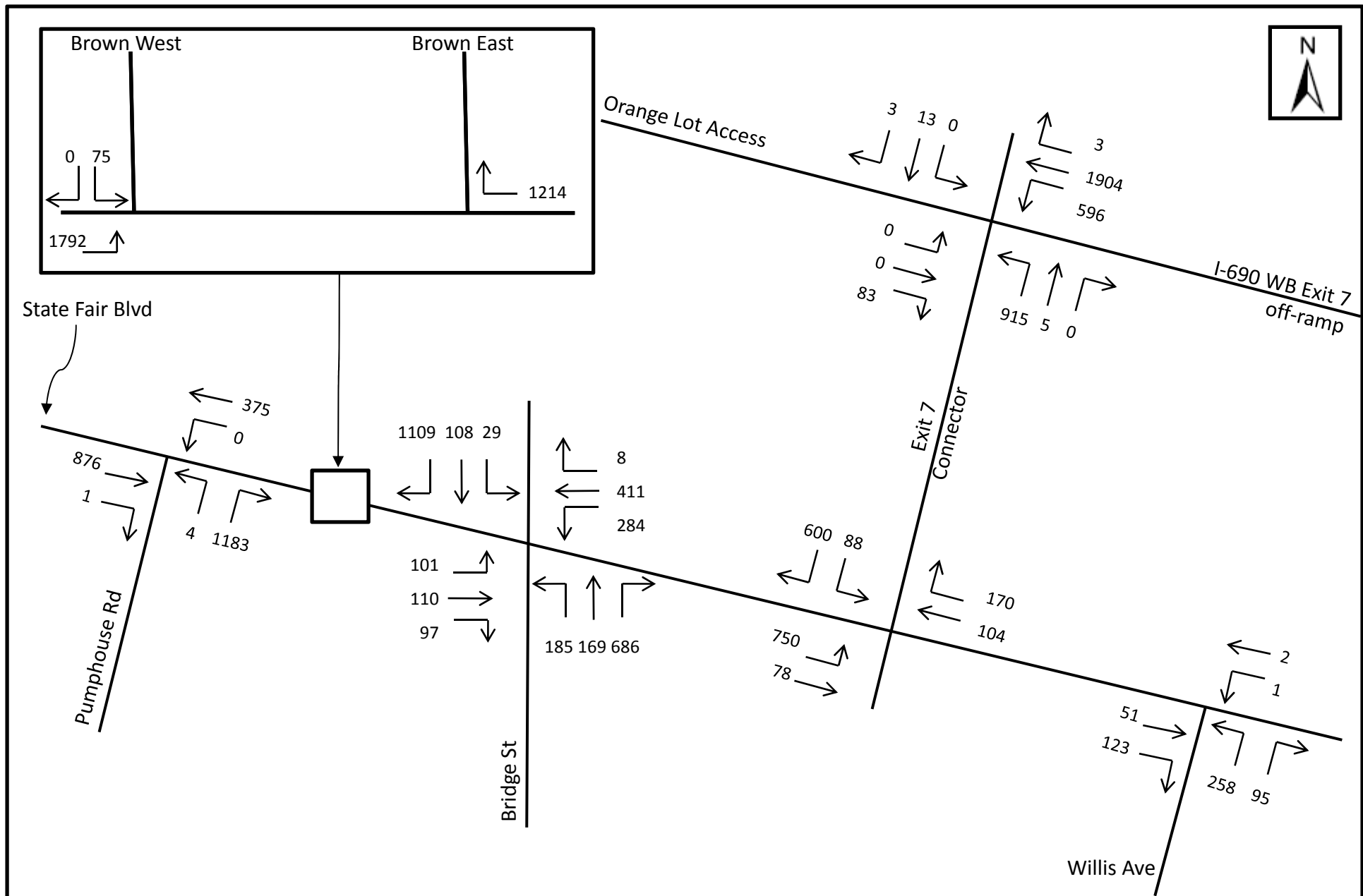
**SMALL EVENT – DEPARTURE
VOLUMES**

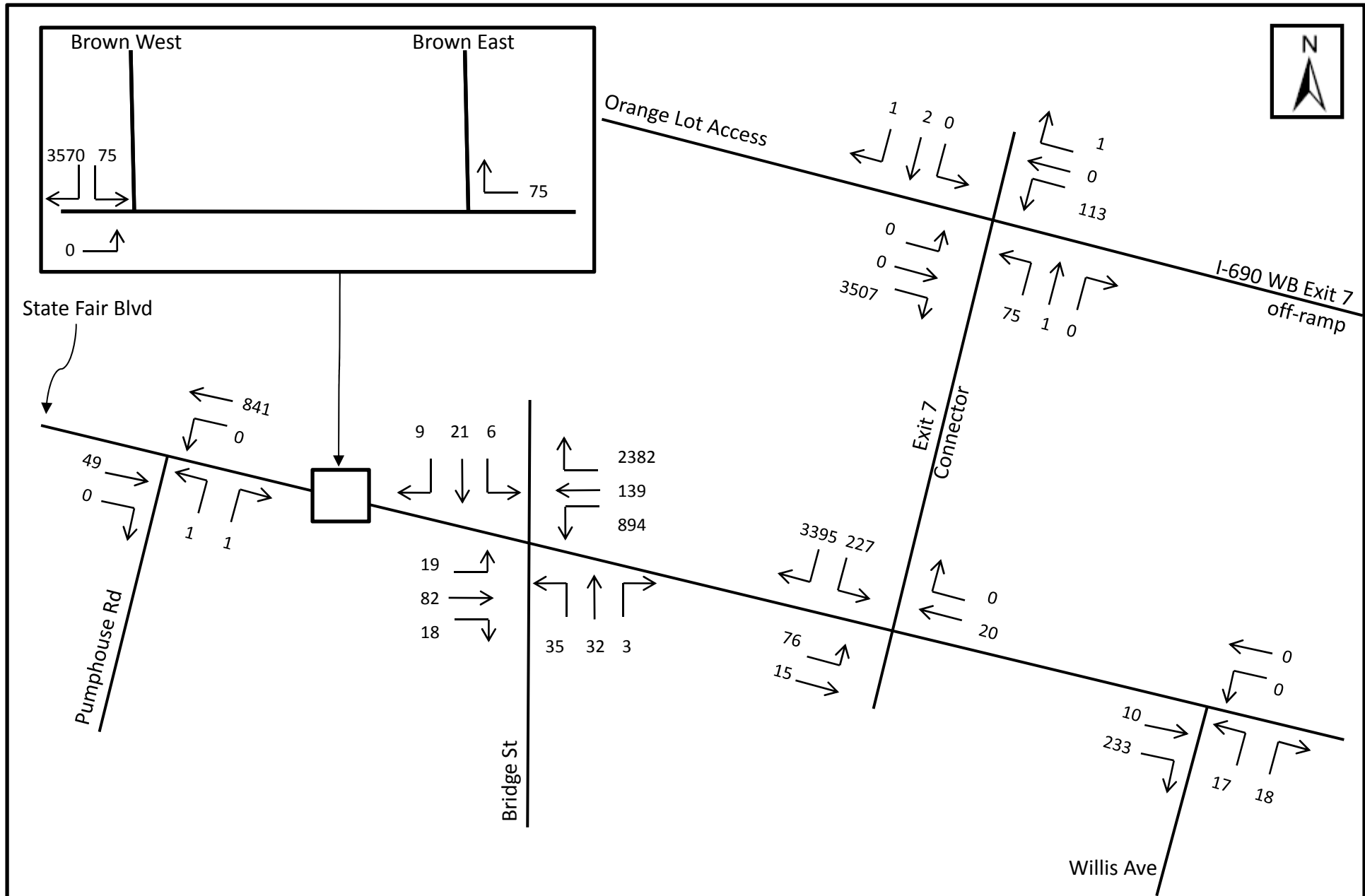


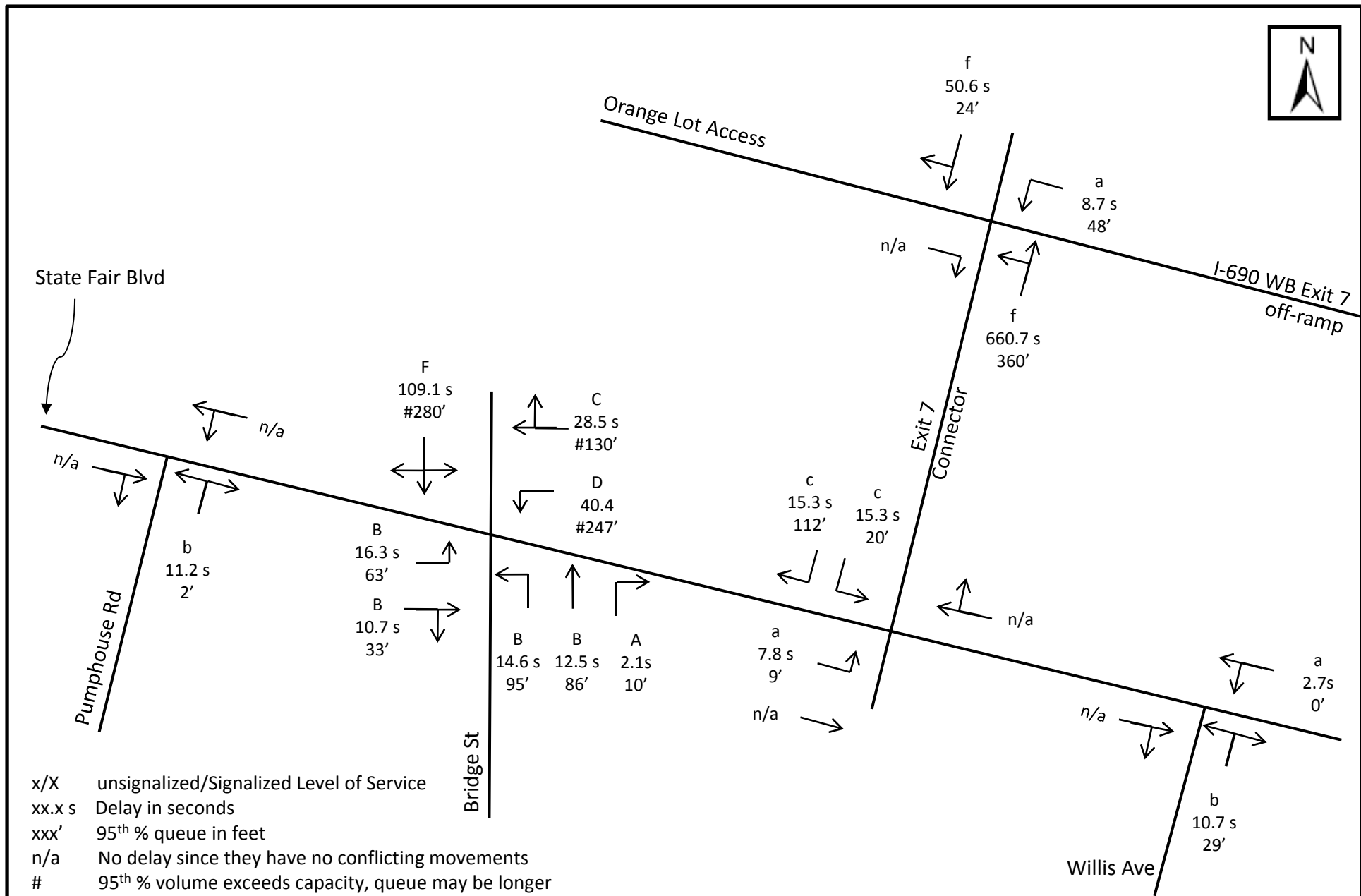
NOT TO SCALE

FIGURE

3-8







LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

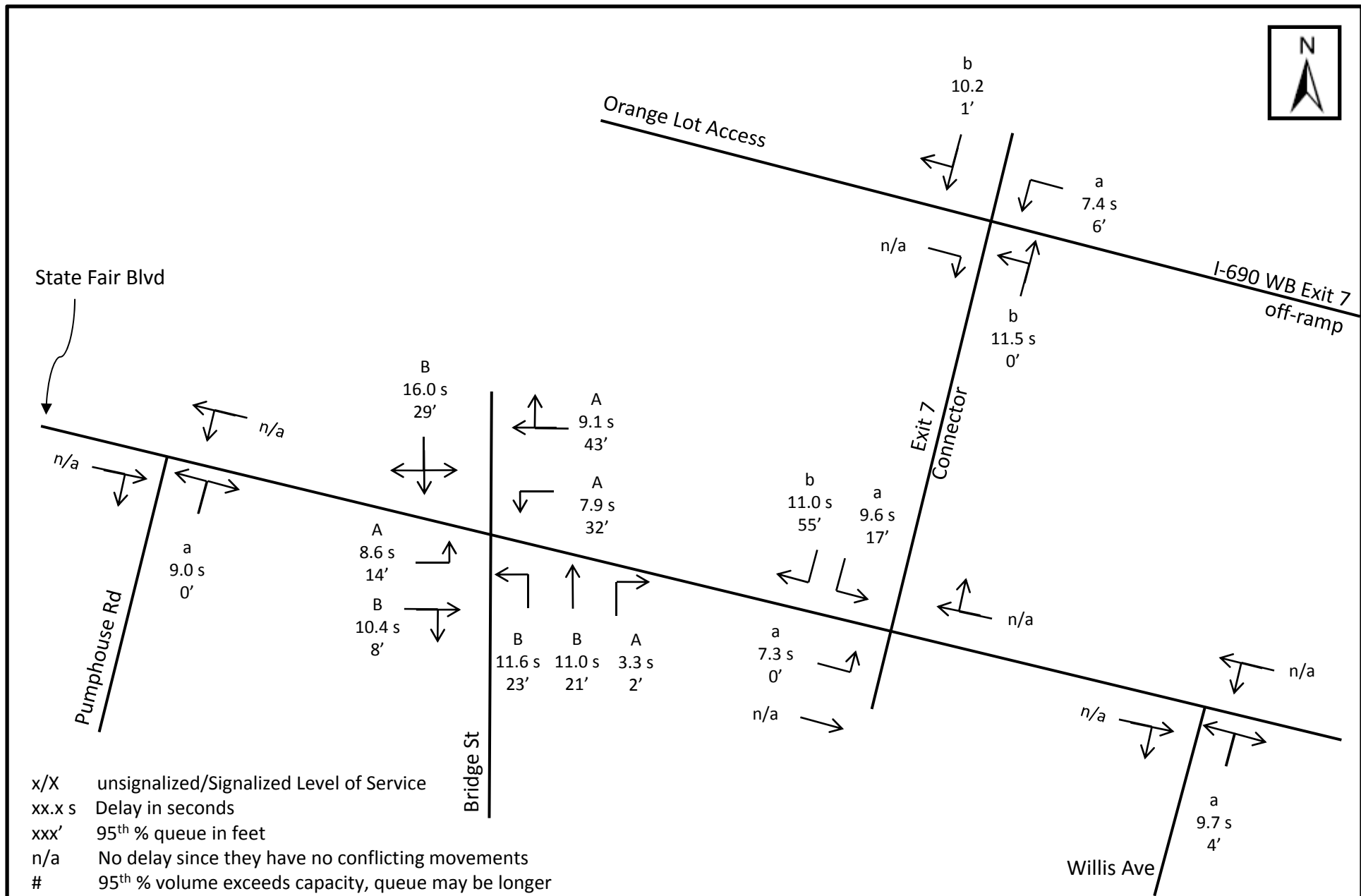
SMALL EVENT – ARRIVAL OPERATIONS SUMMARY



NOT TO SCALE

FIGURE

3-11



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

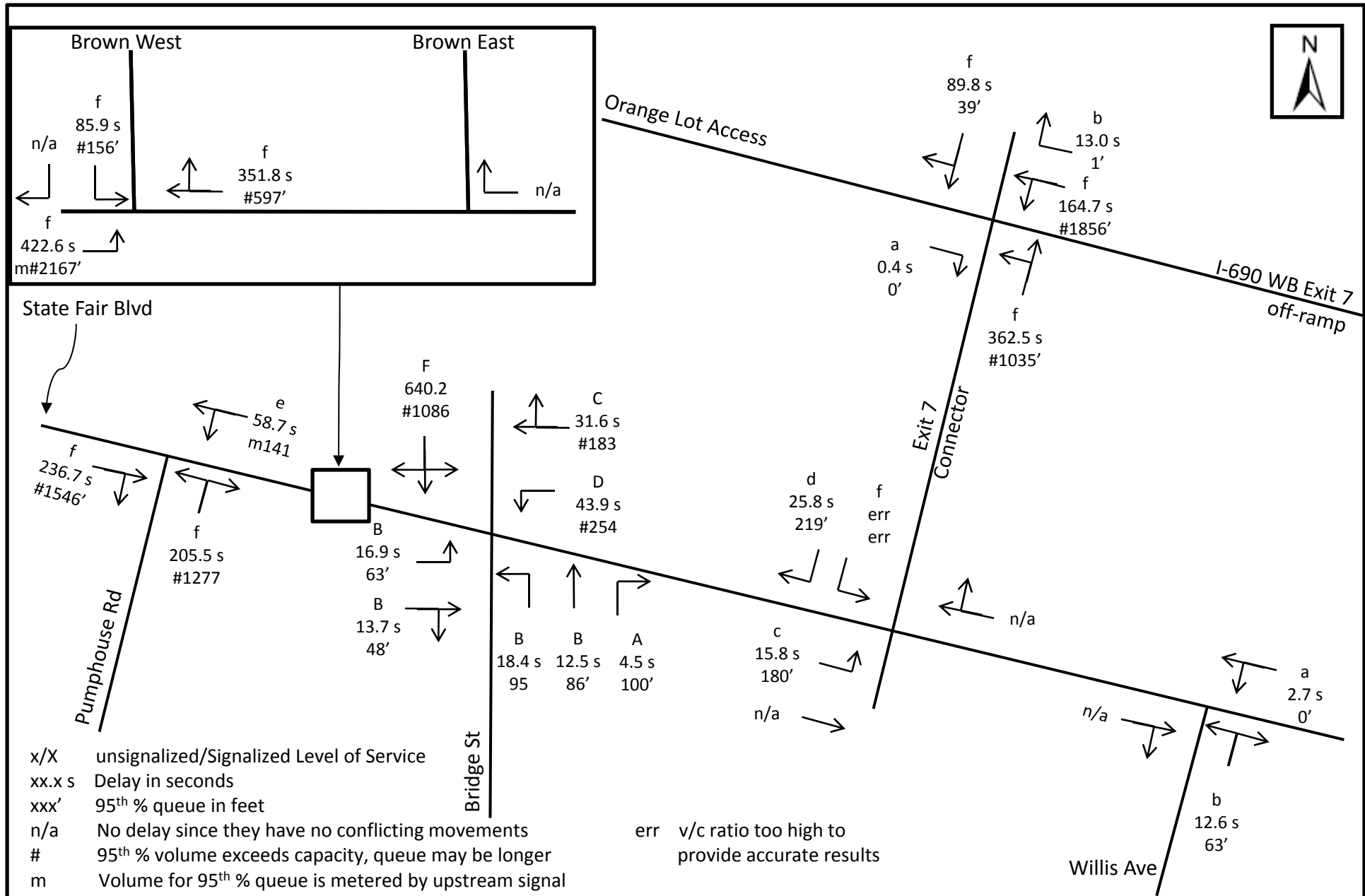
SMALL EVENT – DEPARTURE OPERATIONS SUMMARY



NOT TO SCALE

FIGURE

3-12



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – ARRIVAL OPERATIONS SUMMARY – MANNED CONTROL

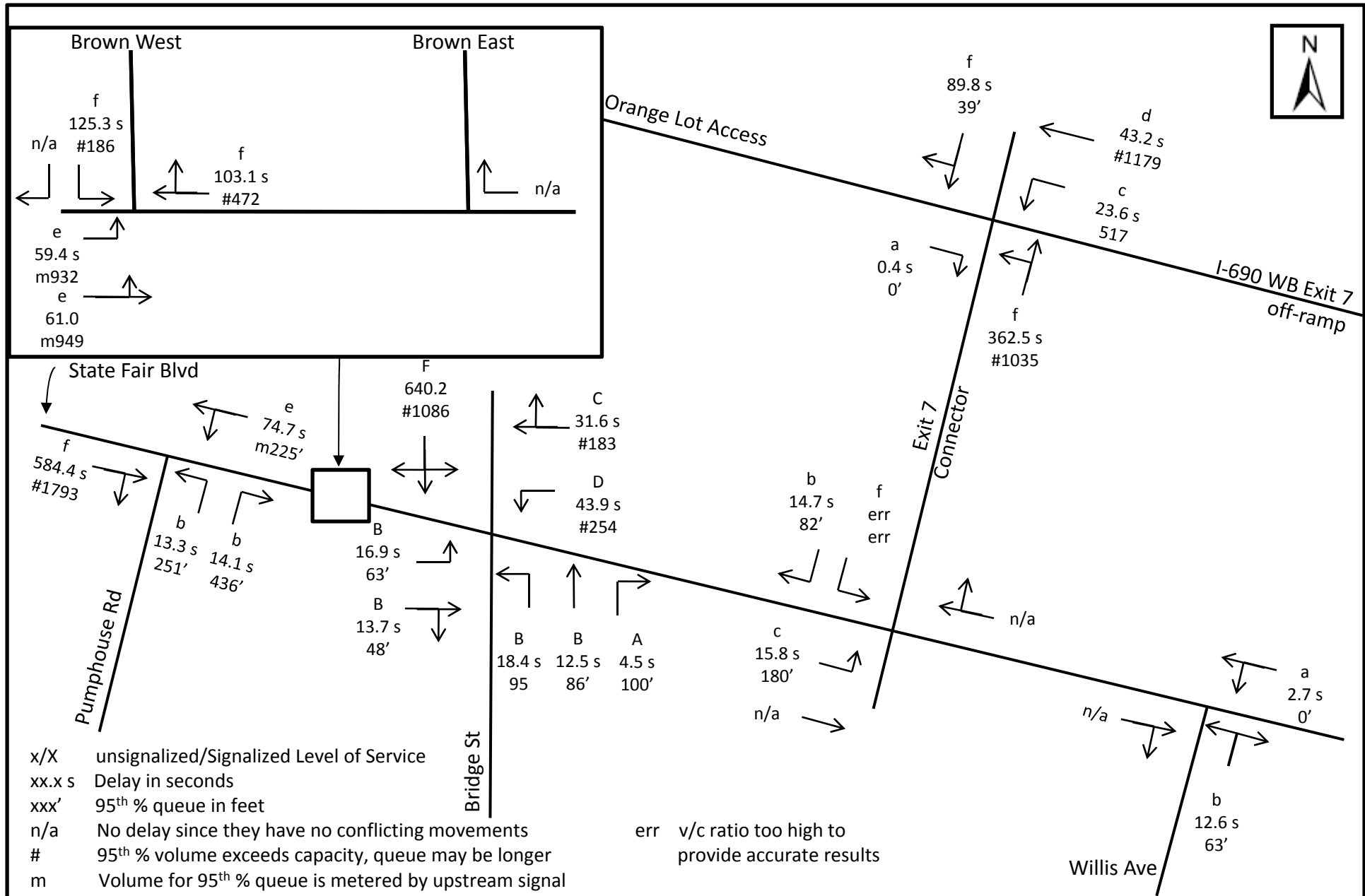


NOT TO SCALE

FIGURE

3-13





LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

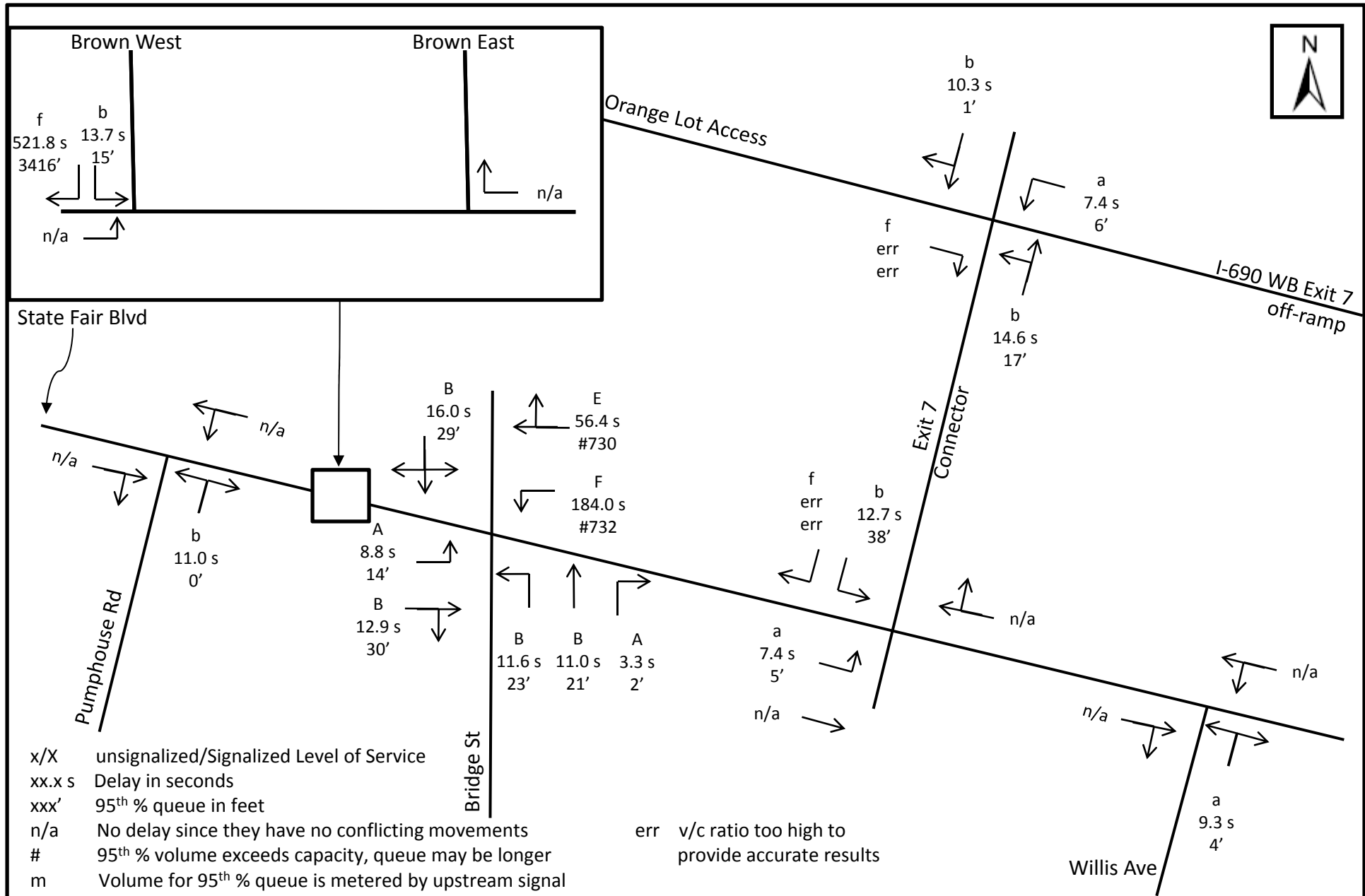
SOLD-OUT EVENT – ARRIVAL OPERATIONS SUMMARY – MANNED CONTROL/MITIGATION



NOT TO SCALE

FIGURE

3-15



**LAKEVIEW
AMPHITHEATER**

TRAFFIC IMPACT STUDY

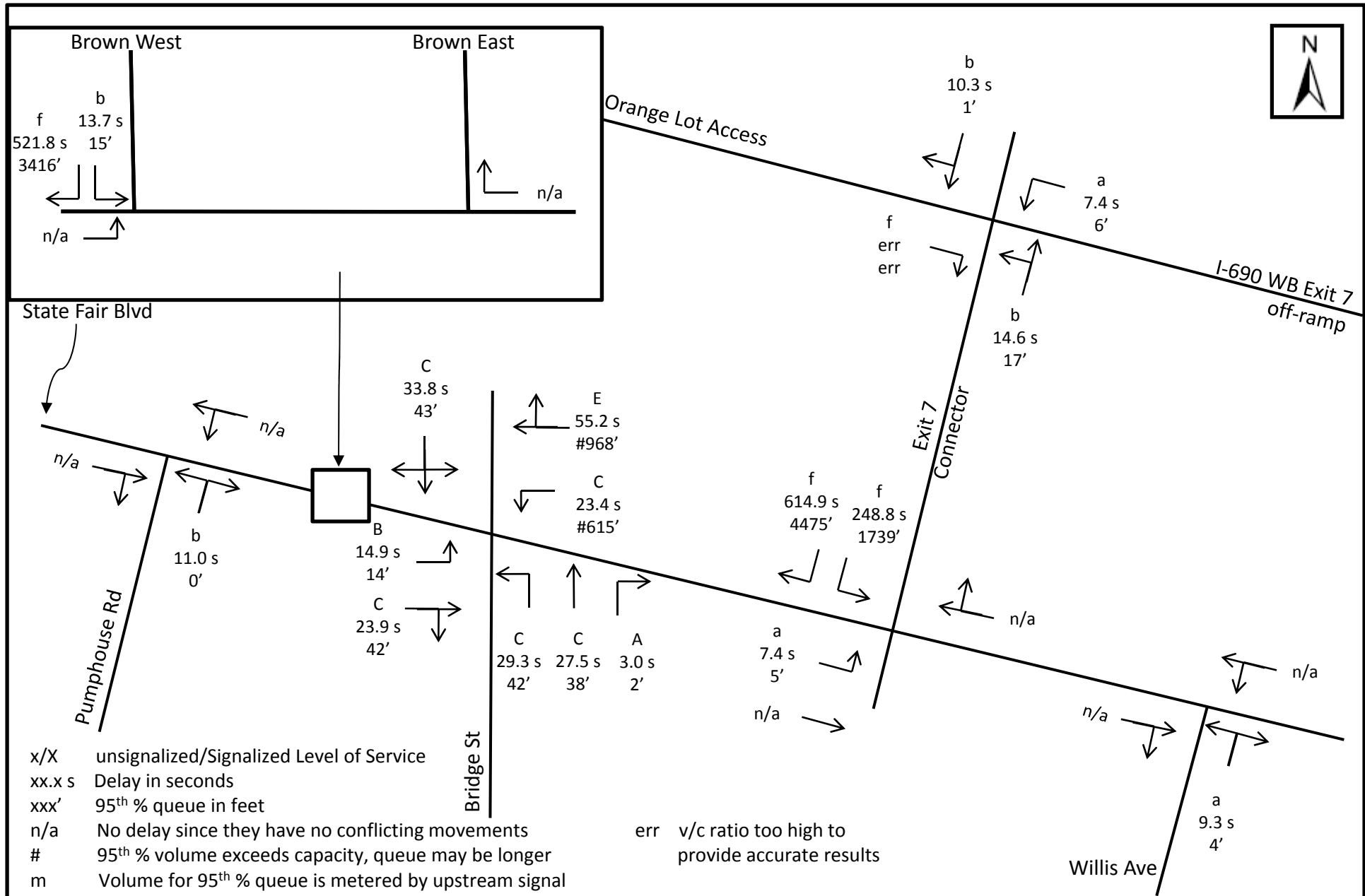
**SOLD-OUT EVENT – DEPARTURE
OPERATIONS SUMMARY**



NOT TO SCALE

FIGURE

3-16



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – DEPARTURE OPERATIONS SUMMARY WITH MITIGATION



NOT TO SCALE

FIGURE

3-17



LAKEVIEW
AMPHITHEATER

TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – LOCAL
ARRIVAL DISTRIBUTION
USING STATE FAIR ACCESS



NOT TO SCALE

FIGURE

3-18



IV. Recommendations and Conclusions

This traffic impact study evaluates the potential transportation impacts from the proposed Lakeview Amphitheater Facility. Onondaga County is proposing to construct a 17,500 seat outdoor events center on County-owned land on the western shore of Onondaga Lake. While events will range from small, local gatherings to popular musical acts, it is anticipated that a sold-out event could generate approximately 7,000 vehicles during the typical PM commuter period to be accommodated along the adjacent roadway network.

Parking for the facility will be accommodated with the Orange and Brown State Fair parking lots. While the Orange Lot will be able to accommodate the small, local event demand, the Brown Lot will be necessary for the larger, close to sold-out events. For the large, sold-out events, it is recommended that attendees are directed as follows based on anticipated travel routes:

- I-690 Westbound traffic take Exit 7 and will park in the Orange Lot
- I-690 Eastbound traffic will take Exit 6 towards Lakeland, onto Pumphouse Road, State Fair Boulevard, and the Brown Lot
- NYS RT 695 Northbound will transition onto I-690 Eastbound, take Exit 7 to State Fair Boulevard, and the Brown Lot
- Bridge Street (NYS RT 297) traffic will take a right onto State Fair Boulevard to the Orange Lot
- State Fair Boulevard traffic (from the west) will use the Brown Lot
- Willis Avenue traffic will use the Orange Lot via State Fair Boulevard

Based on numerous scenario analyses for a sold-out event, the following operational and capital improvement recommendations should be considered:

Operational Recommendations

- Educate the public on desired parking area and traffic flow based on incoming direction of travel by posting directions on the facility website
- Utilize police officers on the ground to manually control key intersections in the area, focusing on moving traffic along Pumphouse Road and off the I-690 Westbound Exit 7 off-ramp to avoid impacts to the I-690 mainline
- Utilize existing dynamic message signs (DMS) on the I-690 mainline and install a new DMS on NYS RT 695 Northbound to direct traffic in real-time and warn motorists of potential slowdowns

- Utilize existing intelligent transportation system (ITS) cameras during events to update the DMS in real-time and communicate with the police on the street controlling traffic will help to ensure traffic is flowing as efficiently and safely as possible
- Utilize temporary signage to direct traffic to the appropriate I-690 exit and parking area, as well as to inform vehicles on I-690 Eastbound Exit 6 off-ramp to utilize the shoulder as a second lane on Pumphouse Road and form two lanes eastbound on State Fair Boulevard between Pumphouse Road and the Brown Lot west access
- Utilize approximately 25 transit buses as shuttles to transport attendees between the Brown Lot and the facility before and after the event

Capital Improvement Recommendations

- Widen and lengthen the I-690 Westbound Exit 7 off-ramp to include three lanes approaching the Exit 7 Connector road and approximately 800 feet of a two-lane storage lane for a total length of approximately 1,200 feet
- Construct an auxiliary right turn lane for southbound event traffic on the Exit 7 Connector road approaching State Fair Boulevard
- Optimize signal timing at the intersection of State Fair Boulevard and Bridge Street during the event departure period to increase green times for westbound traffic

These recommendations are expected to minimize impacts to the adjacent roadway network for events at the proposed facility and also improve safety and operations during the State Fair, but will not reduce the need for the non-standard access points currently used while the State Fair is in session. Long-term improvements to the roadway network within the study area will be considered, outside of this study, to provide improved access to the Orange Lot.

Appendix A:

Volume Data and Calculations

C&S Engineers, Inc

499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 3641 Mike 690 WB Off

Site Code : 00000000

Start Date : 5/2/2014

Page No : 1

Groups Printed- Unshifted

	Southbound				690 WB off-Ramp (Exit 7) Westbound				Exit 7 Connector Northbound				from Upper (Orange) Lot Eastbound				Int. Total
Start Time	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	
04:00 PM	2	3	0	0	1	0	153	8	0	2	0	1	3	0	0	2	175
04:15 PM	1	6	0	1	0	0	157	6	0	1	0	1	2	0	0	0	175
04:30 PM	0	1	0	0	0	0	141	7	0	1	0	0	3	0	0	0	153
04:45 PM	0	3	0	1	2	0	139	3	0	1	0	0	0	0	0	0	149
Total	3	13	0	2	3	0	590	24	0	5	0	2	8	0	0	2	652
05:00 PM	0	3	0	0	1	0	133	4	0	2	0	0	0	0	0	0	143
05:15 PM	1	1	0	0	2	1	149	4	0	2	0	0	3	0	0	1	164
05:30 PM	1	2	0	0	3	1	96	4	0	5	0	0	2	0	0	0	114
05:45 PM	0	2	0	0	1	0	109	3	0	5	0	0	2	0	0	0	122
Total	2	8	0	0	7	2	487	15	0	14	0	0	7	0	0	1	543
06:00 PM	0	1	0	0	0	0	97	3	0	1	3	0	3	0	0	0	108
06:15 PM	1	24	0	0	0	1	95	3	0	1	0	0	1	0	0	0	126
06:30 PM	0	9	0	0	0	0	79	1	0	0	0	0	0	0	0	0	89
06:45 PM	0	5	0	0	0	0	78	0	0	1	0	0	1	0	0	0	85
Total	1	39	0	0	0	1	349	7	0	3	3	0	5	0	0	0	408
*** BREAK ***																	
Grand Total	6	60	0	2	10	3	1426	46	0	22	3	2	20	0	0	3	1603
Apprch %	8.8	88.2	0	2.9	0.7	0.2	96	3.1	0	81.5	11.1	7.4	87	0	0	13	
Total %	0.4	3.7	0	0.1	0.6	0.2	89	2.9	0	1.4	0.2	0.1	1.2	0	0	0.2	

C&S Engineers, Inc

499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 3641 Mike 690 WB Off

Site Code : 00000000

Start Date : 5/2/2014

Page No : 2

	Southbound					690 WB off-Ramp (Exit 7) Westbound					Exit 7 Connector Northbound					from Upper (Orange) Lot Eastbound					
Start Time	Right	Thru	Left	Trucks	App. Total	Right	Thru	Left	Trucks	App. Total	Right	Thru	Left	Trucks	App. Total	Right	Thru	Left	Trucks	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 07:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	2	3	0	0	5	1	0	153	8	162	0	2	0	1	3	3	0	0	2	5	175
04:15 PM	1	6	0	1	8	0	0	157	6	163	0	1	0	1	2	2	0	0	0	2	175
04:30 PM	0	1	0	0	1	0	0	141	7	148	0	1	0	0	1	3	0	0	0	3	153
04:45 PM	0	3	0	1	4	2	0	139	3	144	0	1	0	0	1	0	0	0	0	0	149
Total Volume	3	13	0	2	18	3	0	590	24	617	0	5	0	2	7	8	0	0	2	10	652
% App. Total	16.7	72.2	0	11.1		0.5	0	95.6	3.9		0	71.4	0	28.6		80	0	0	20		
PHF	.375	.542	.000	.500	.563	.375	.000	.939	.750	.946	.000	.625	.000	.500	.583	.667	.000	.000	.250	.500	.931

C&S Engineers, Inc

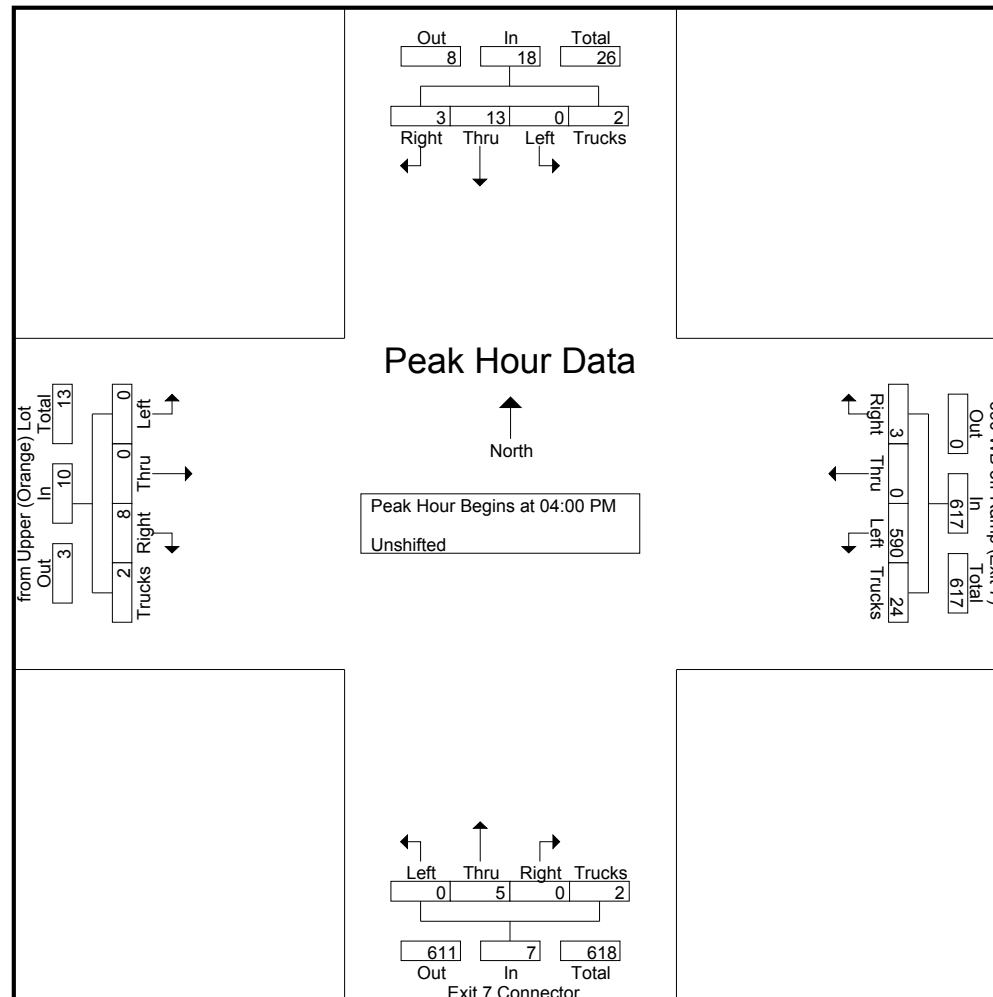
499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 3641 Mike 690 WB Off

Site Code : 00000000

Start Date : 5/2/2014

Page No : 3



C&S Engineers, Inc

499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 3638 SF-Connector

Site Code : 00000000

Start Date : 5/2/2014

Page No : 1

Groups Printed- Unshifted

	Exit 7 Connector Southbound				State Fair Blvd Westbound				Northbound				State Fair Blvd Eastbound				Int. Total
Start Time	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	
04:00 PM	134	0	25	10	2	31	0	4	0	0	0	0	0	13	1	2	222
04:15 PM	139	0	25	7	0	27	0	4	0	0	0	0	0	22	0	3	227
04:30 PM	125	0	17	7	0	22	0	1	0	0	0	0	0	19	1	3	195
04:45 PM	122	0	20	4	0	23	0	2	0	0	0	0	0	23	1	2	197
Total	520	0	87	28	2	103	0	11	0	0	0	0	0	77	3	10	841
05:00 PM	117	0	20	3	0	17	0	1	0	0	0	0	0	29	2	1	190
05:15 PM	136	0	17	5	0	22	0	2	0	0	0	0	0	19	1	1	203
05:30 PM	92	0	8	4	1	12	0	0	0	0	0	0	0	26	5	1	149
05:45 PM	98	0	15	3	0	27	0	2	0	0	0	0	0	24	4	3	176
Total	443	0	60	15	1	78	0	5	0	0	0	0	0	98	12	6	718
06:00 PM	83	0	15	3	1	21	0	0	0	0	0	0	0	22	3	0	148
06:15 PM	96	0	25	3	0	12	0	0	0	0	0	0	0	23	1	0	160
06:30 PM	72	0	16	2	0	22	0	0	0	0	0	0	0	12	0	1	125
06:45 PM	77	0	9	1	0	6	0	0	0	0	0	0	0	27	1	2	123
Total	328	0	65	9	1	61	0	0	0	0	0	0	0	84	5	3	556
Grand Total	1291	0	212	52	4	242	0	16	0	0	0	0	0	259	20	19	2115
Apprch %	83	0	13.6	3.3	1.5	92.4	0	6.1	0	0	0	0	0	86.9	6.7	6.4	
Total %	61	0	10	2.5	0.2	11.4	0	0.8	0	0	0	0	0	12.2	0.9	0.9	

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499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 3638 SF-Connector

Site Code : 00000000

Start Date : 5/2/2014

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	Exit 7 Connector Southbound					State Fair Blvd Westbound					Northbound					State Fair Blvd Eastbound					
Start Time	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	134	0	25	10	169	2	31	0	4	37	0	0	0	0	0	0	13	1	2	16	222
04:15 PM	139	0	25	7	171	0	27	0	4	31	0	0	0	0	0	0	22	0	3	25	227
04:30 PM	125	0	17	7	149	0	22	0	1	23	0	0	0	0	0	0	19	1	3	23	195
04:45 PM	122	0	20	4	146	0	23	0	2	25	0	0	0	0	0	0	23	1	2	26	197
Total Volume	520	0	87	28	635	2	103	0	11	116	0	0	0	0	0	0	77	3	10	90	841
% App. Total	81.9	0	13.7	4.4		1.7	88.8	0	9.5		0	0	0	0		0	85.6	3.3	11.1		
PHF	.935	.000	.870	.700	.928	.250	.831	.000	.688	.784	.000	.000	.000	.000	.000	.000	.837	.750	.833	.865	.926

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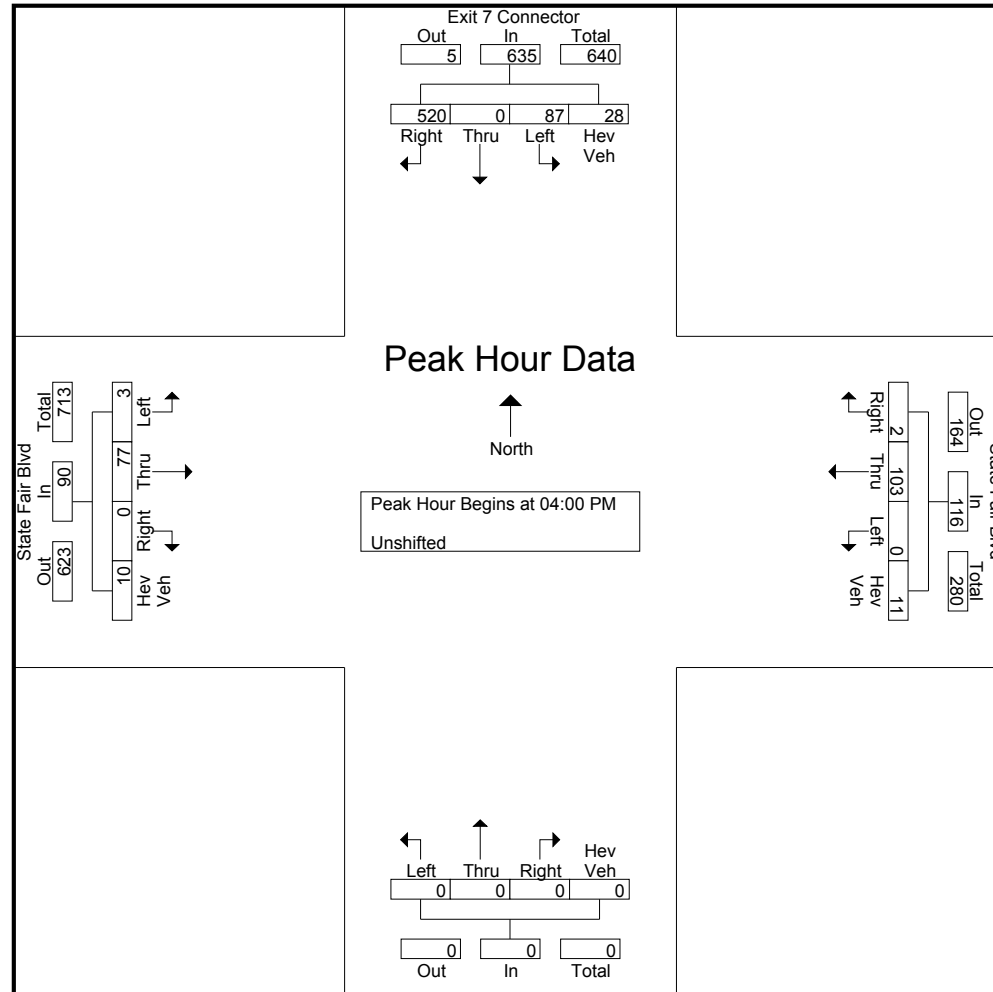
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Site Code : 00000000

Start Date : 5/2/2014

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499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 1387 PTT SF-Pumphouse

Site Code : 00000000

Start Date : 5/2/2014

Page No : 1

Groups Printed- Unshifted

	Southbound				State Fair Blvd Westbound				Pumphouse Rd Northbound				State Fair Blvd Eastbound				Int. Total
Start Time	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	
04:00 PM	0	0	0	0	0	104	0	2	2	0	0	0	1	59	0	3	171
04:15 PM	0	0	0	0	0	89	0	4	1	0	1	0	0	61	0	0	156
04:30 PM	0	0	0	0	0	83	0	3	1	0	3	0	0	65	0	4	159
04:45 PM	0	0	0	0	0	95	0	1	3	0	0	0	0	72	0	3	174
Total	0	0	0	0	0	371	0	10	7	0	4	0	1	257	0	10	660
05:00 PM	0	0	0	0	0	90	0	0	1	0	0	0	1	69	0	3	164
05:15 PM	0	0	0	0	0	113	0	3	2	0	0	0	0	67	0	3	188
05:30 PM	0	0	0	0	0	79	0	1	1	0	1	0	0	65	0	4	151
05:45 PM	0	0	0	0	0	73	1	1	4	0	1	0	0	69	0	0	149
Total	0	0	0	0	0	355	1	5	8	0	2	0	1	270	0	10	652
06:00 PM	0	0	0	0	0	64	0	0	1	0	0	0	0	66	0	1	132
06:15 PM	0	0	0	0	0	58	0	0	0	0	0	0	0	61	0	0	119
06:30 PM	0	0	0	0	0	59	0	0	0	0	2	0	0	54	0	0	115
06:45 PM	0	0	0	0	0	57	0	0	0	0	0	0	0	63	0	1	121
Total	0	0	0	0	0	238	0	0	1	0	2	0	0	244	0	2	487
Grand Total	0	0	0	0	0	964	1	15	16	0	8	0	2	771	0	22	1799
Apprch %	0	0	0	0	0	98.4	0.1	1.5	66.7	0	33.3	0	0.3	97	0	2.8	
Total %	0	0	0	0	0	53.6	0.1	0.8	0.9	0	0.4	0	0.1	42.9	0	1.2	

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Syracuse, NY 13212

File Name : 1387 PTT SF-Pumphouse

Site Code : 00000000

Start Date : 5/2/2014

Page No : 2

	Southbound					State Fair Blvd Westbound					Pumphouse Rd Northbound					State Fair Blvd Eastbound					
Start Time	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	83	0	3	86	1	0	3	0	4	0	65	0	4	69	159
04:45 PM	0	0	0	0	0	0	95	0	1	96	3	0	0	0	3	0	72	0	3	75	174
05:00 PM	0	0	0	0	0	0	90	0	0	90	1	0	0	0	1	1	69	0	3	73	164
05:15 PM	0	0	0	0	0	0	113	0	3	116	2	0	0	0	2	0	67	0	3	70	188
Total Volume	0	0	0	0	0	0	381	0	7	388	7	0	3	0	10	1	273	0	13	287	685
% App. Total	0	0	0	0	0	0	98.2	0	1.8		70	0	30	0		0.3	95.1	0	4.5		
PHF	.000	.000	.000	.000	.000	.000	.843	.000	.583	.836	.583	.000	.250	.000	.625	.250	.948	.000	.813	.957	.911

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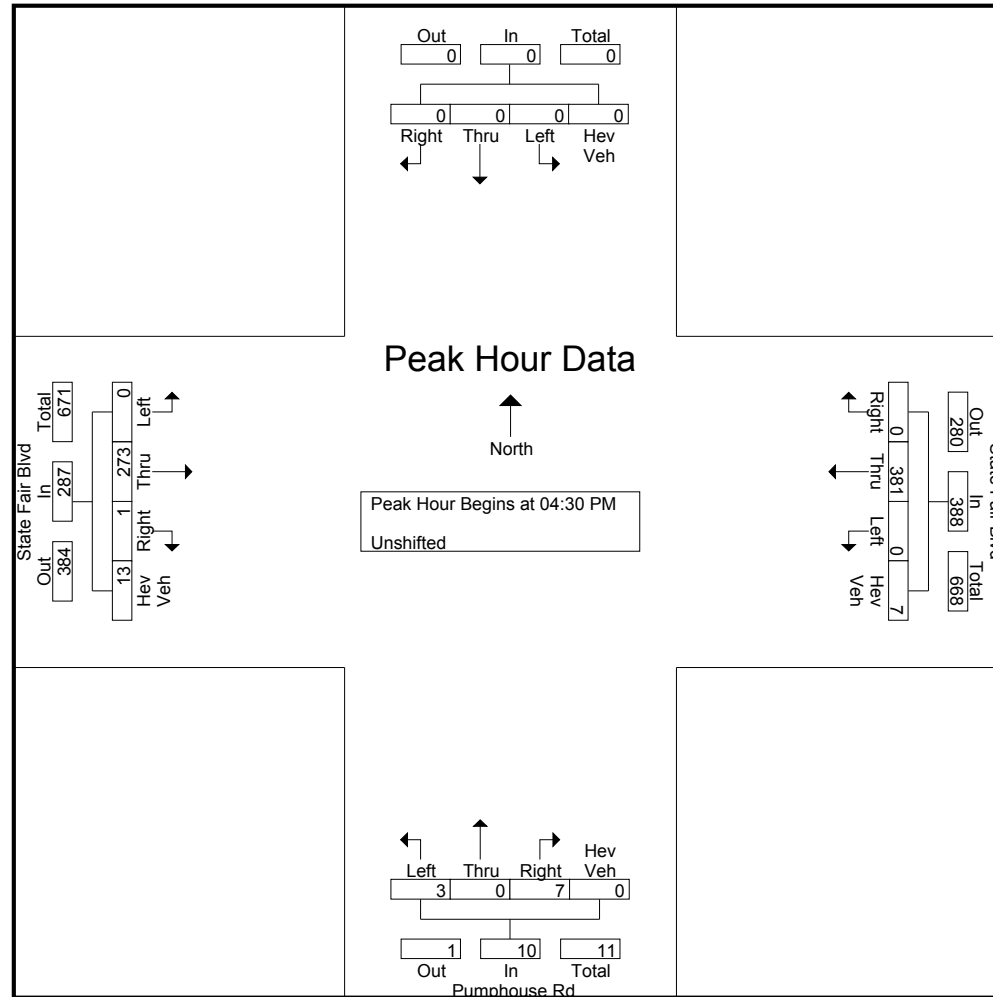
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File Name : 1387 PTT SF-Pumphouse

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499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 3639-3640 K-J SF-Ramps Bridge St

Site Code : 00000000

Start Date : 5/2/2014

Page No : 1

Groups Printed- Unshifted

	690 EB off-ramp Southbound				State Fair Blvd Westbound				Bridge St (RT 297) Northbound				State Fair Blvd Eastbound				Int. Total
Start Time	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	
04:00 PM	11	27	3	4	2	92	72	10	3	44	45	7	18	5	26	2	371
04:15 PM	14	24	10	6	2	79	84	12	2	47	49	4	20	10	22	0	385
04:30 PM	8	23	4	5	2	73	59	3	6	39	50	7	29	11	29	1	349
04:45 PM	12	33	12	4	2	89	66	6	3	37	39	3	29	9	23	0	367
Total	45	107	29	19	8	333	281	31	14	167	183	21	96	35	100	3	1472
05:00 PM	15	25	5	1	2	70	61	3	8	42	62	4	22	14	24	0	358
05:15 PM	10	15	8	2	4	87	71	9	2	38	68	4	20	11	20	2	371
05:30 PM	13	15	13	1	5	49	48	3	4	44	55	2	12	10	31	2	307
05:45 PM	9	24	13	2	3	61	54	6	4	39	47	6	19	10	25	0	322
Total	47	79	39	6	14	267	234	21	18	163	232	16	73	45	100	4	1358
06:00 PM	12	18	7	1	6	60	47	2	3	37	46	3	10	15	23	1	291
06:15 PM	12	23	10	2	12	49	49	2	3	27	37	0	15	12	28	0	281
06:30 PM	17	13	1	1	5	53	36	1	1	42	34	3	14	10	18	0	249
06:45 PM	11	13	12	2	1	48	30	0	3	26	20	0	12	13	24	1	216
Total	52	67	30	6	24	210	162	5	10	132	137	6	51	50	93	2	1037
Grand Total	144	253	98	31	46	810	677	57	42	462	552	43	220	130	293	9	3867
Apprch %	27.4	48.1	18.6	5.9	2.9	50.9	42.6	3.6	3.8	42	50.2	3.9	33.7	19.9	44.9	1.4	
Total %	3.7	6.5	2.5	0.8	1.2	20.9	17.5	1.5	1.1	11.9	14.3	1.1	5.7	3.4	7.6	0.2	

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499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 3639-3640 K-J SF-Ramps Bridge St

Site Code : 00000000

Start Date : 5/2/2014

Page No : 2

	690 EB off-ramp Southbound					State Fair Blvd Westbound					Bridge St (RT 297) Northbound					State Fair Blvd Eastbound					
Start Time	Right	Thru	Left	Trucks	App. Total	Right	Thru	Left	Trucks	App. Total	Right	Thru	Left	Trucks	App. Total	Right	Thru	Left	Trucks	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	11	27	3	4	45	2	92	72	10	176	3	44	45	7	99	18	5	26	2	51	371
04:15 PM	14	24	10	6	54	2	79	84	12	177	2	47	49	4	102	20	10	22	0	52	385
04:30 PM	8	23	4	5	40	2	73	59	3	137	6	39	50	7	102	29	11	29	1	70	349
04:45 PM	12	33	12	4	61	2	89	66	6	163	3	37	39	3	82	29	9	23	0	61	367
Total Volume	45	107	29	19	200	8	333	281	31	653	14	167	183	21	385	96	35	100	3	234	1472
% App. Total	22.5	53.5	14.5	9.5		1.2	51	43	4.7		3.6	43.4	47.5	5.5		41	15	42.7	1.3		
PHF	.804	.811	.604	.792	.820	1.000	.905	.836	.646	.922	.583	.888	.915	.750	.944	.828	.795	.862	.375	.836	.956

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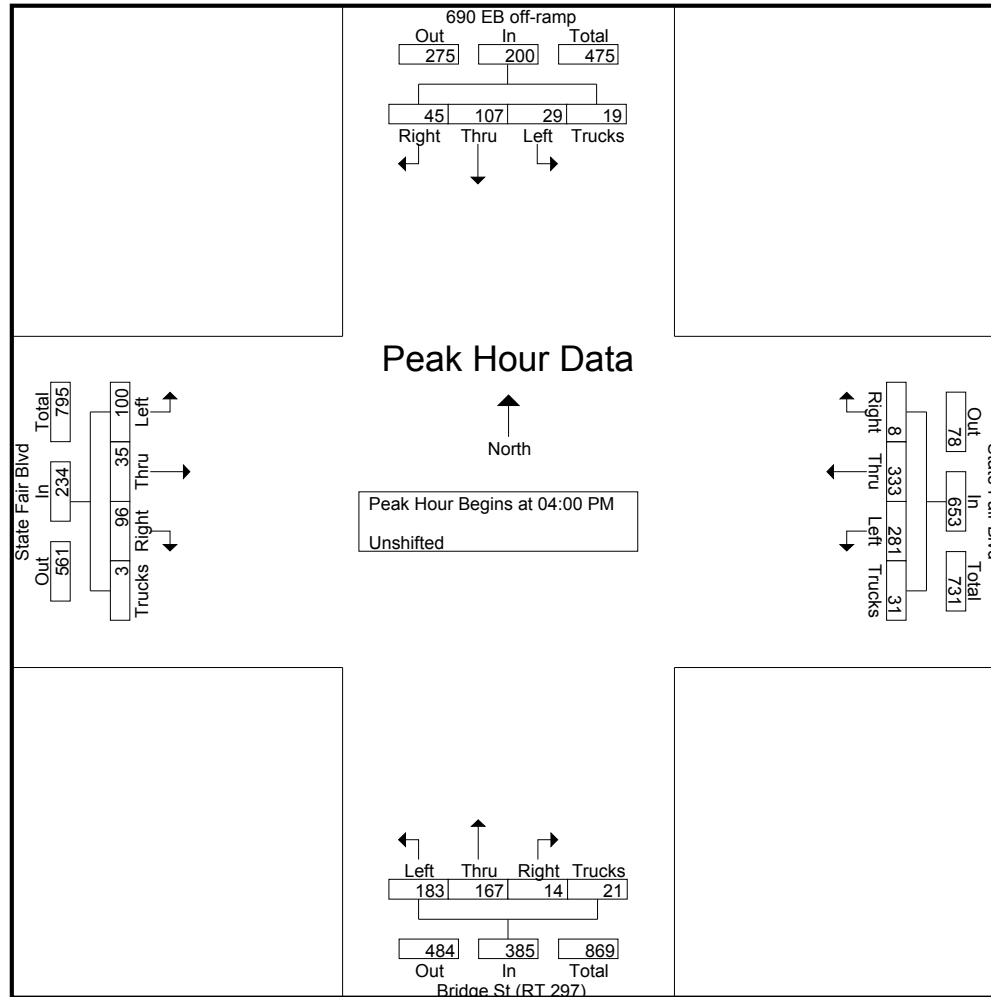
499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 3639-3640 K-J SF-Ramps Bridge St

Site Code : 00000000

Start Date : 5/2/2014

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499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 1388 April SF-Willis

Site Code : 00000000

Start Date : 5/2/2014

Page No : 1

Groups Printed- Unshifted

	Southbound				State Fair Blvd Westbound				Willis Ave Northbound				State Fair Blvd Eastbound				Int. Total
Start Time	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	
04:00 PM	0	0	0	0	0	1	0	1	32	0	27	5	25	16	0	10	117
04:15 PM	0	0	0	0	0	1	0	1	15	0	28	5	33	15	0	6	104
04:30 PM	0	0	0	0	0	0	1	1	25	0	15	2	30	9	0	9	92
04:45 PM	0	0	0	0	0	0	0	0	22	0	19	3	34	10	0	5	93
Total	0	0	0	0	0	2	1	3	94	0	89	15	122	50	0	30	406
05:00 PM	0	0	0	0	0	0	0	0	26	0	18	2	31	14	0	2	93
05:15 PM	0	0	0	0	0	0	0	0	24	0	21	5	32	8	0	3	93
05:30 PM	0	0	0	0	0	0	0	0	21	0	16	1	21	12	0	1	72
05:45 PM	0	0	0	0	0	1	0	0	27	0	21	2	27	14	0	4	96
Total	0	0	0	0	0	1	0	0	98	0	76	10	111	48	0	10	354
06:00 PM	0	0	0	0	0	0	0	0	17	0	17	2	32	8	0	2	78
06:15 PM	0	0	0	0	0	0	0	0	12	0	17	1	27	18	0	4	79
06:30 PM	0	0	0	0	0	0	0	0	16	0	15	0	19	9	0	2	61
06:45 PM	0	0	0	0	0	0	0	0	14	0	3	0	24	12	0	1	54
Total	0	0	0	0	0	0	0	0	59	0	52	3	102	47	0	9	272
Grand Total	0	0	0	0	0	3	1	3	251	0	217	28	335	145	0	49	1032
Apprch %	0	0	0	0	0	42.9	14.3	42.9	50.6	0	43.8	5.6	63.3	27.4	0	9.3	
Total %	0	0	0	0	0	0.3	0.1	0.3	24.3	0	21	2.7	32.5	14.1	0	4.7	

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499 Col Eileen Collins Blvd
Syracuse, NY 13212

File Name : 1388 April SF-Willis

Site Code : 00000000

Start Date : 5/2/2014

Page No : 2

	Southbound					State Fair Blvd Westbound					Willis Ave Northbound					State Fair Blvd Eastbound					
Start Time	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Right	Thru	Left	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	1	0	1	2	32	0	27	5	64	25	16	0	10	51	117
04:15 PM	0	0	0	0	0	0	1	0	1	2	15	0	28	5	48	33	15	0	6	54	104
04:30 PM	0	0	0	0	0	0	0	1	1	2	25	0	15	2	42	30	9	0	9	48	92
04:45 PM	0	0	0	0	0	0	0	0	0	0	22	0	19	3	44	34	10	0	5	49	93
Total Volume	0	0	0	0	0	0	2	1	3	6	94	0	89	15	198	122	50	0	30	202	406
% App. Total	0	0	0	0		0	33.3	16.7	50		47.5	0	44.9	7.6		60.4	24.8	0	14.9		
PHF	.000	.000	.000	.000	.000	.000	.500	.250	.750	.750	.734	.000	.795	.750	.773	.897	.781	.000	.750	.935	.868

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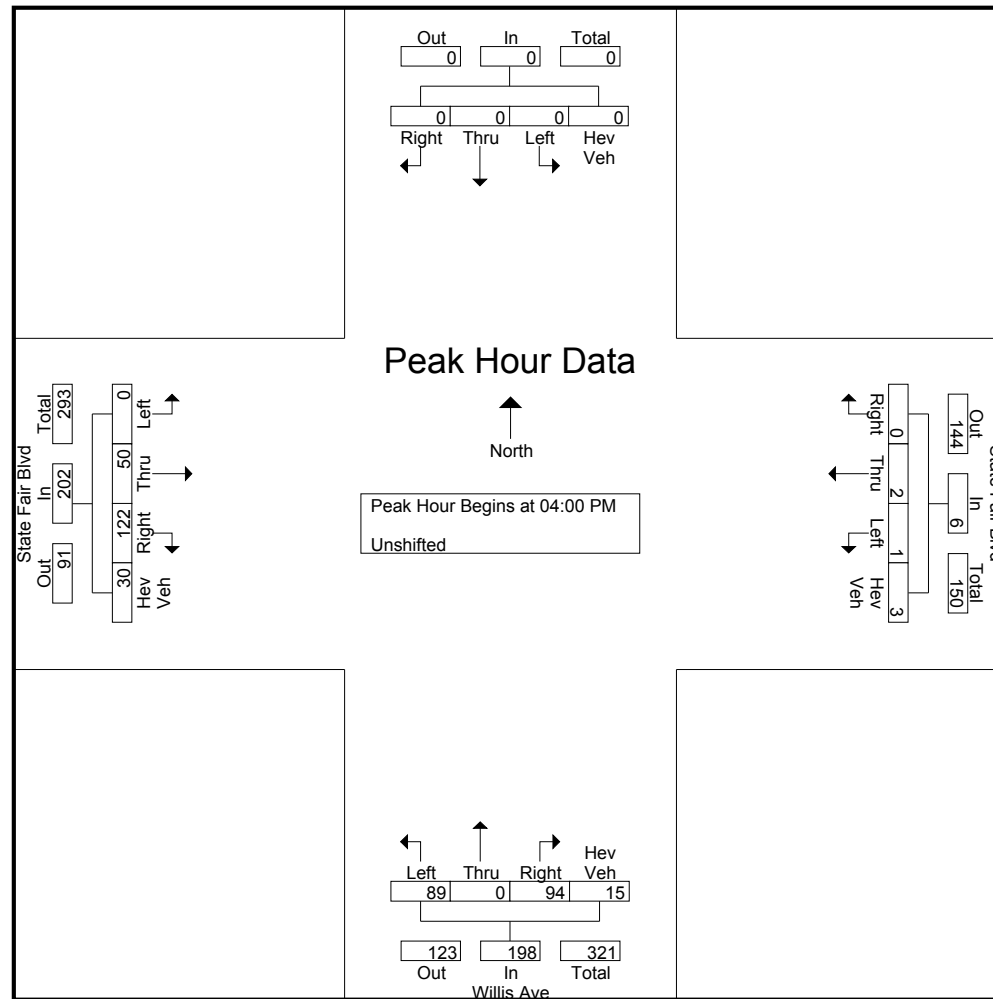
499 Col Eileen Collins Blvd
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File Name : 1388 April SF-Willis

Site Code : 00000000

Start Date : 5/2/2014

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**Onondaga County
Lakeview Amphitheater
Traffic Analysis
May 12, 2014**

Amphitheater Data

Number of attendees	17,500	
Number of events	15-20	
Date of completion	2016	with a possible event in Fall 2015

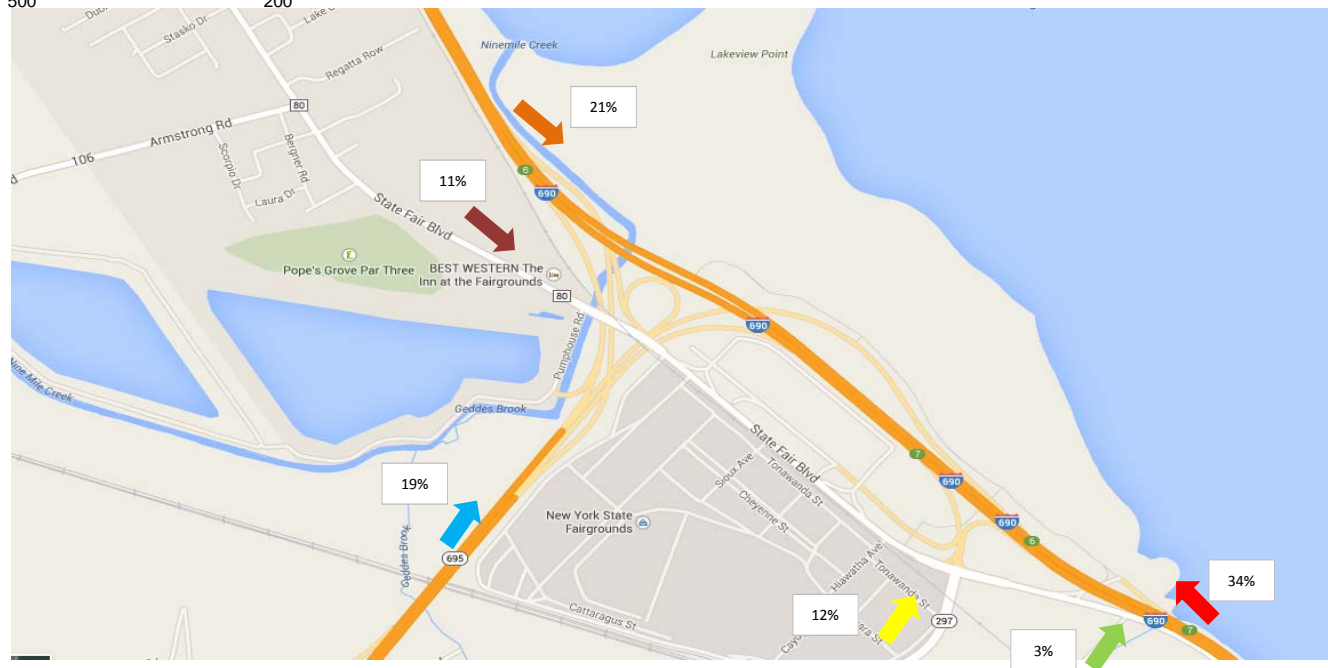
Assumptions

Assumed VOR = 2.5 occupants per vehicle
 No assumed mode share reductions
 Assume 80% of trips arrive during 1 hour for sold out event
 Assume 100% try to leave in 1 hour
 Assume 25 centro buses will make 75 total shuttle trips (see shuttle estimates tab)
 Growth rate = 0.5% (see growth rate tab)
 2007 state fair counts provided by the NYSDOT were used to estimate trip distribution (see map below & 2007 state fair counts tab)

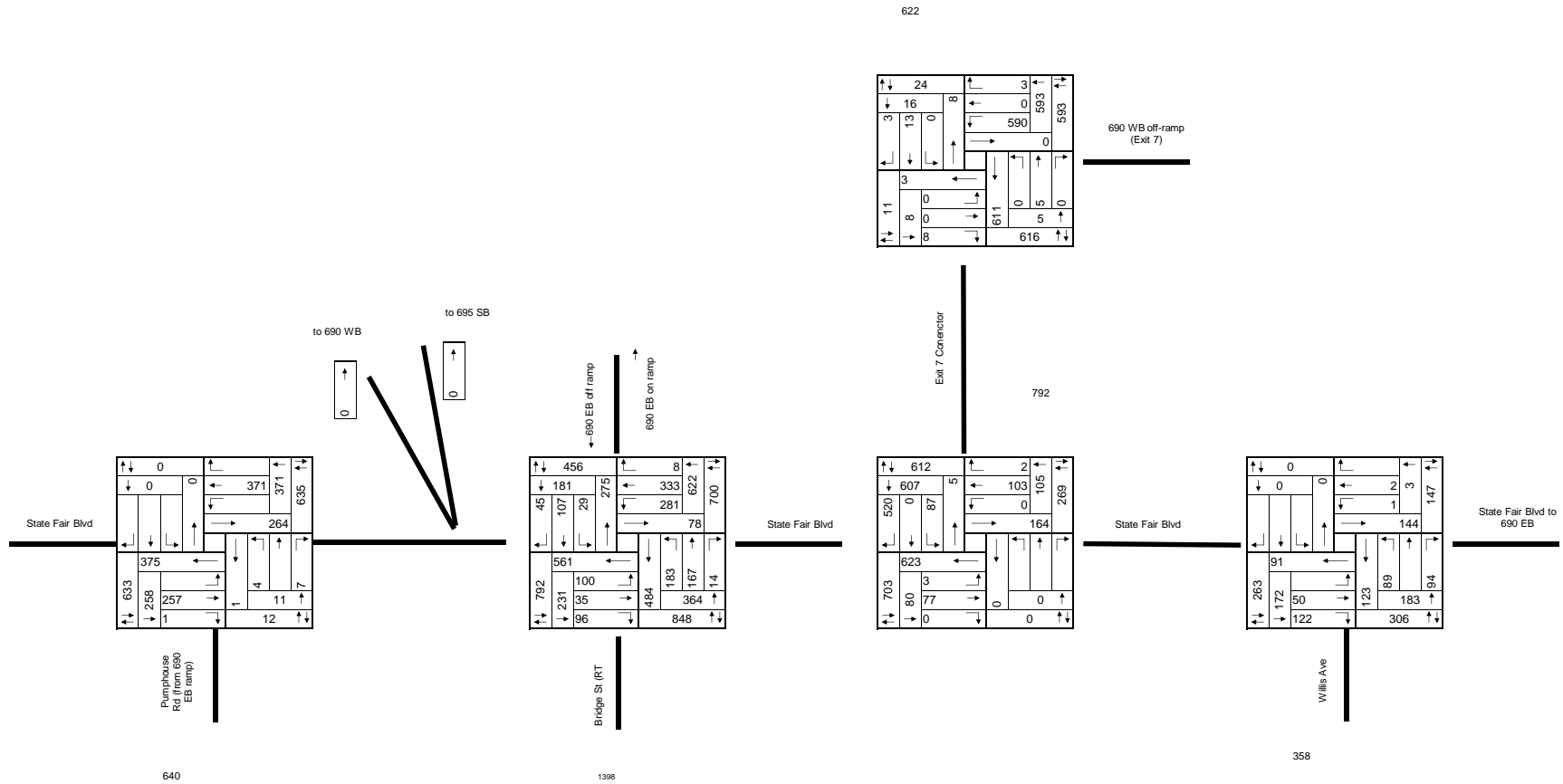
Assumed attendance
 17,500
 500

Vehicle Trips
 7000
 200

80%
 5600



Existing PM Peak Hour
2014 Volumes



Background Volume Estimation

Typical weeknight counts from NYSDOT Traffic Data Viewer

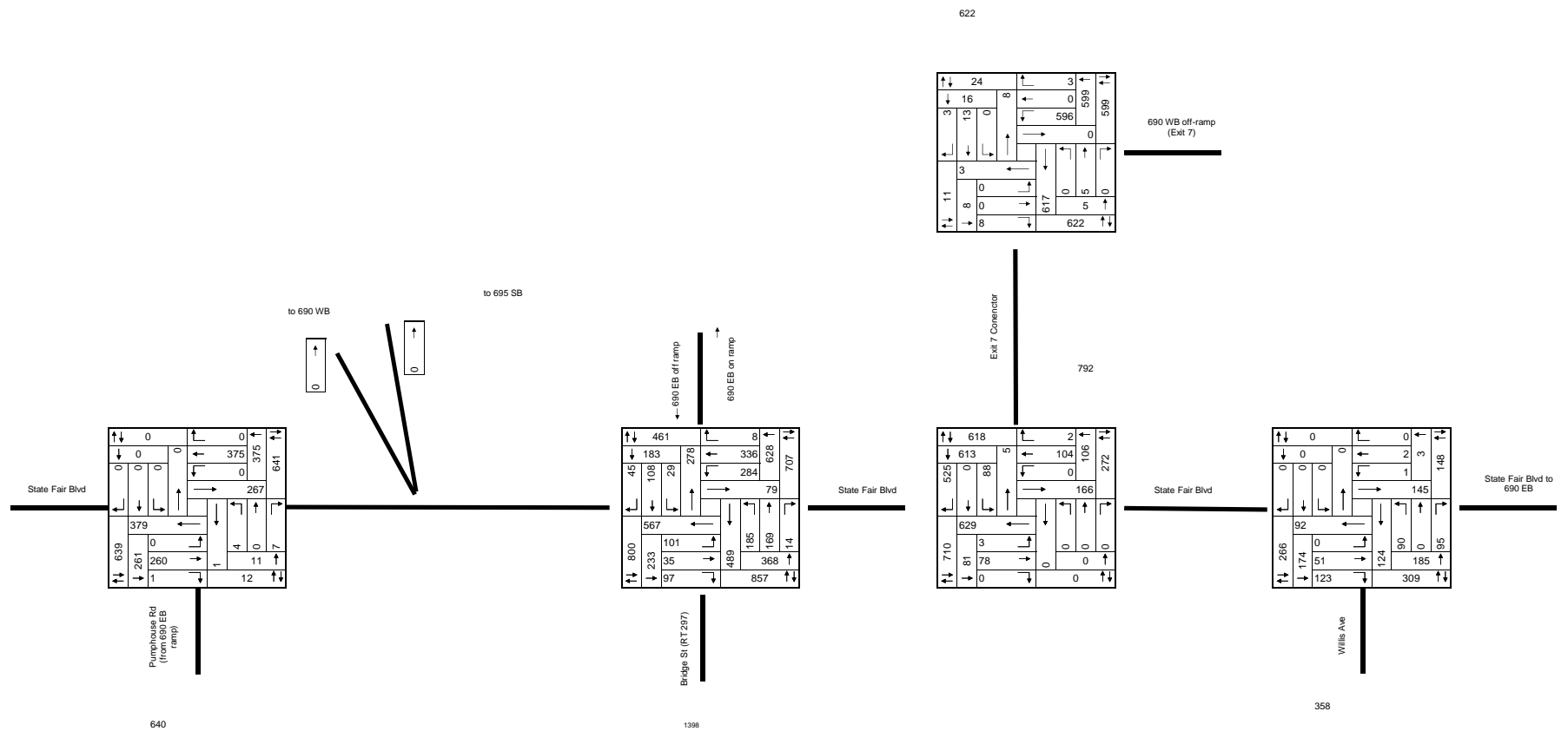
NYSDOT Station Location	336077 SFB (just E of Pumphouse)	330906 SFB (931B)	330019 RT 297	333004 Exit 7
10:00 PM	116	237	184	117
4:00 PM	640	1225	838	752
% volume	18%	19%	22%	16%

19%

Volumes at 10 PM are approximately 19% of the volu

**Background PM Peak Hour
2016 Volumes**

Background Growth Rate 0.5%
Build Out Years 2



During 2007 state fair

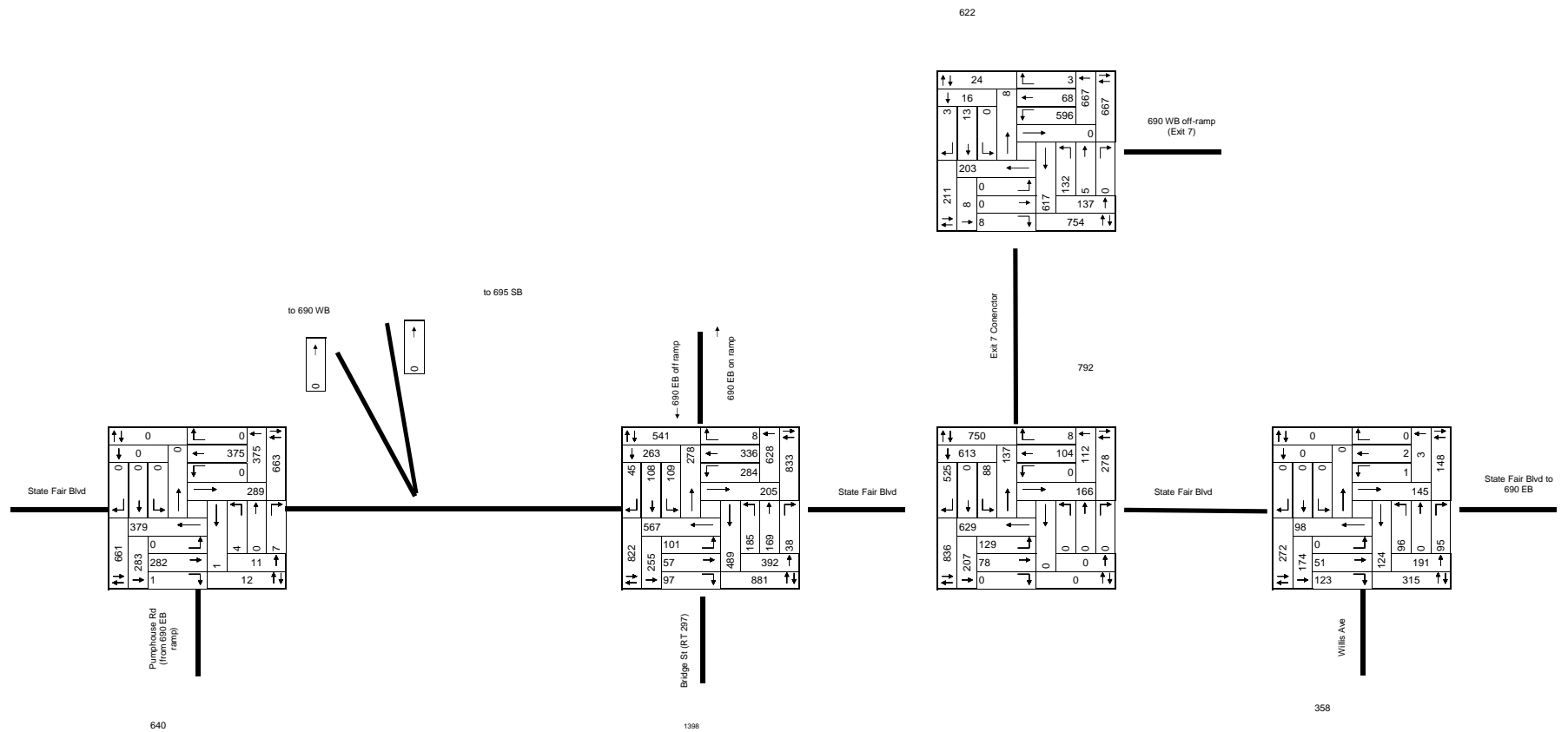
Distribution Estimation

Map Key NYSDOT Station	1 330246	2 330246	3 330545	4 330545	7 330135	8 330135	30 9324	30 9324	2007	2007	6157	6157	Total Inbound 1,4,8, 30NB, 2007S/EB, Willis NB	Total Outbound 2,3,7, 30SB, 2007N/WB
Movement	690 EB (W)	690 WB (W)	690 EB (E)	690 WB (E)	695 SB	695 NB	297 NB	297 SB	SFB (SB/EB)	SFB (NB/WB)	Willis NB*	Willis SB		
4pm	624	781	1066	1073	799	603	385	318	357	210	110		3152	3174
5pm	694	808	1013	1101	835	627	354	272	359	201	119		3254	3129
AADT	7317	8297	15813	13483	6554	6864	3779	3118	2791	1871	800		35034	35653
	20%	25%	34%	34%	25%	19%	12%	10%	11%	7%	3%		100%	100%
	21%	26%	32%	34%	27%	19%	11%	9%	11%	6%	4%		100%	100%
	21%	23%	44%	38%	18%	20%	11%	9%	8%	5%	2%		100%	100%
Say	21.0%	25.0%	33.0%	34.0%	26.0%	19.0%	12.0%	9.0%	11.0%	7.0%	3.0%			

* - Based on existing traffic, 49% of NB traffic turn left onto State Fair Blvd.

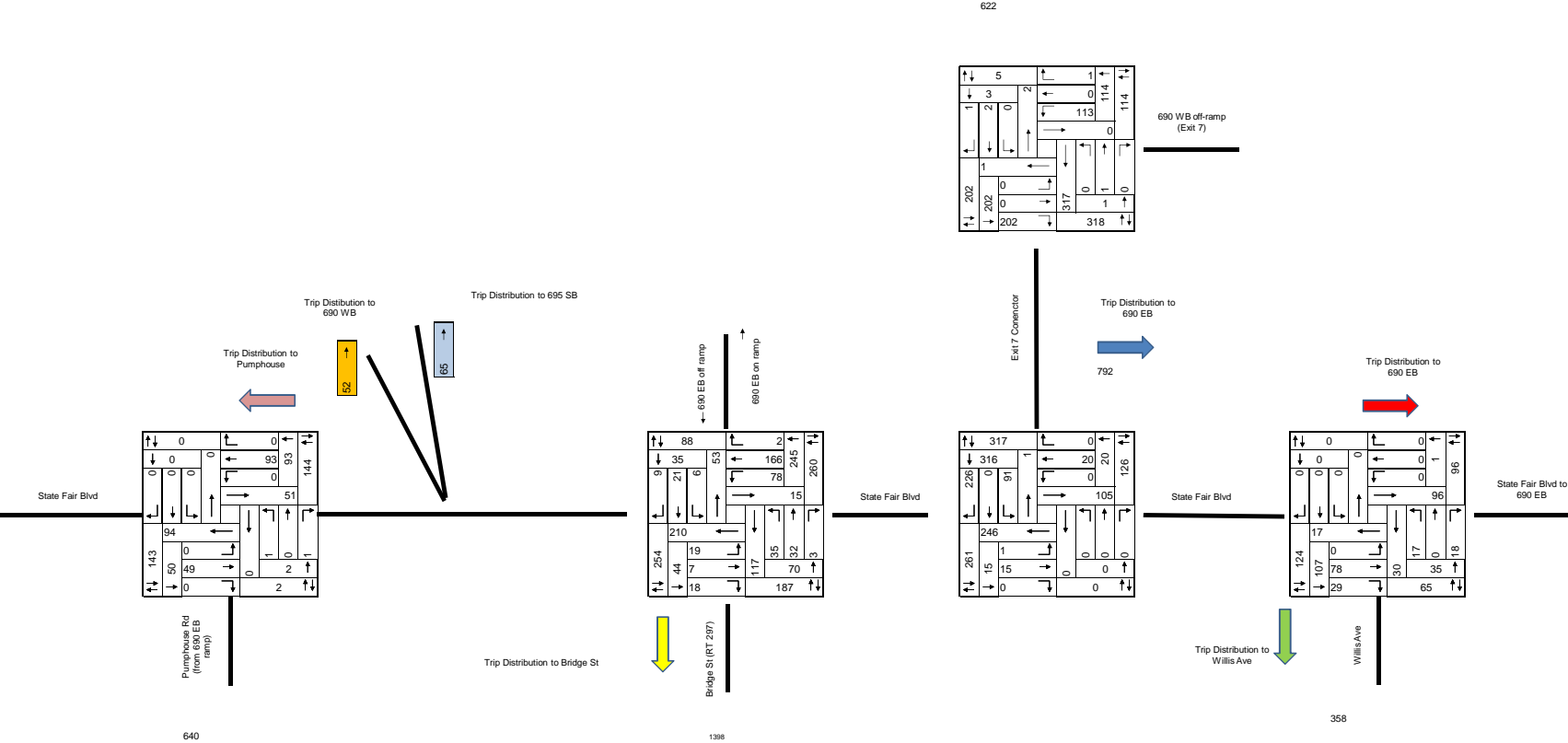
Volumes noted above for Willis NB is 49% of NB traffic that is assumed to be heading to event.

**PM Peak Hour Proposed Traffic
2016 Small Event Volumes - All
Inbound**



PM Peak Hour Project Traffic
2016 Small Event Volumes - Project Trips
Outbound

Small Event = 500 attendees
Total Project Trips 200



Shuttle Estimates/Assumptions

Transit bus 'crush capacity' = 60
from University Hill Park & Ride Feasibility Study

Brown lot capacity = 3500 vehicles

vehicle occupancy ratio = 2.5 occupants per vehicle

Number of attendees needed to shuttle = 8750

Assumed roundtrip time = 20 min

Assume buses operate 2 hours before show start time

Number of roundtrips per bus for 2 hours = 6

Each bus can carry = 360 for 2 hours

Number of buses needed = 24.30556 say 25

say 25 buses make 3 runs each during peak hour = 75 trips

A1

Total Project Trips 5600

check = 5600



PM Peak Hour Project Traffic
2016 Large Event Volumes - All Trips
 Outbound

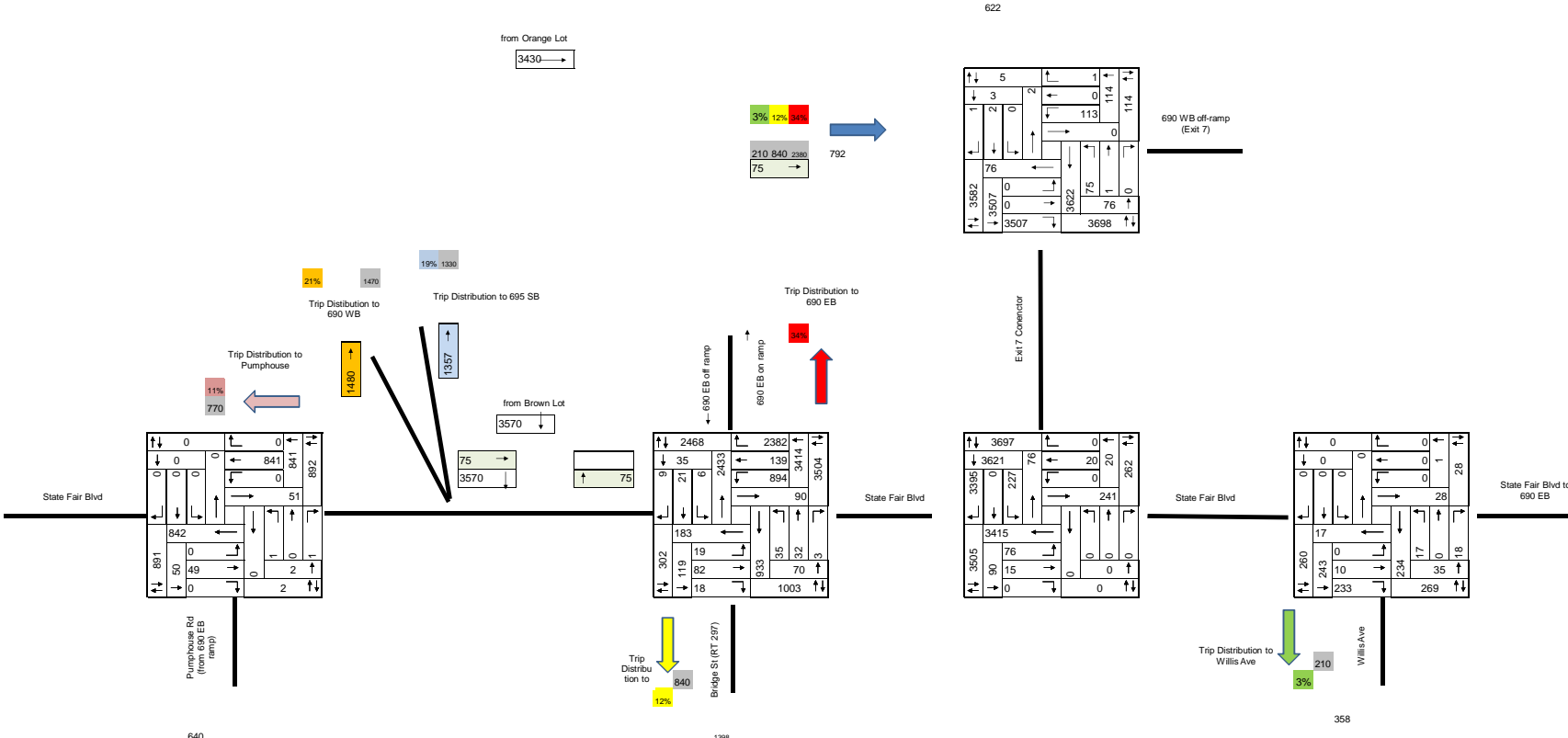
Major Event = 17,500 attendees

Total Project Trips	7000
---------------------	------

Outbound

shuttle trips = 75

check = 7187














Appendix B:

Analysis Reports

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Existing PM Peak Hour (4-5)

5/29/2014










						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (vph)	257	1	0	371	4	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt					0.902	
Flt Protected					0.987	
Satd. Flow (prot)	1827	0	0	3505	1692	0
Flt Permitted					0.987	
Satd. Flow (perm)	1827	0	0	3505	1692	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1004	
Travel Time (s)	5.7			19.0	22.8	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.69
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	286	1	0	417	6	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	287	0	0	417	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	23.6%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: State Fair Blvd & Pumphouse Rd

Existing PM Peak Hour (4-5)





















5/29/2014

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	257	1	0	371	4	11
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.69
Hourly flow rate (vph)	286	1	0	417	6	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			287		495	286
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			287		495	286
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	98
cM capacity (veh/h)			1265		509	717
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	287	139	278	22		
Volume Left	0	0	0	6		
Volume Right	1	0	0	16		
cSH	1700	1265	1700	646		
Volume to Capacity	0.17	0.00	0.16	0.03		
Queue Length 95th (ft)	0	0	0	3		
Control Delay (s)	0.0	0.0	0.0	10.8		
Lane LOS				B		
Approach Delay (s)	0.0	0.0		10.8		
Approach LOS				B		
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			23.6%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Bridge St &

Existing PM Peak Hour (4-5)

5/29/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	35	96	281	333	8	183	167	14	29	107	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.890			0.996				0.850		0.966	
Flt Protected	0.950			0.950			0.950				0.992	
Satd. Flow (prot)	1787	3181	0	1719	3424	0	1703	1792	1524	0	1655	0
Flt Permitted	0.514			0.653			0.388				0.912	
Satd. Flow (perm)	967	3181	0	1182	3424	0	695	1792	1524	0	1522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		114			3				15		18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	5%	6%	6%	6%	10%	10%	10%
Adj. Flow (vph)	119	42	114	299	354	9	197	180	15	37	135	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	156	0	299	363	0	197	180	15	0	229	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		













5/5/2014 Existing PM Peak Hour
KMF

Synchro 7 - Report
Page 8

Lanes, Volumes, Timings
7: Bridge St &

Existing PM Peak Hour (4-5)

5/29/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	81	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	20.4	12.7		18.3	13.7		27.8	27.8	40.0		13.0	
Actuated g/C Ratio	0.32	0.20		0.28	0.21		0.43	0.43	0.62		0.20	
v/c Ratio	0.29	0.22		0.77	0.50		0.44	0.23	0.02		0.71	
Control Delay	16.1	9.2		36.6	28.0		15.2	12.6	2.8		37.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	16.1	9.2		36.6	28.0		15.2	12.6	2.8		37.6	
LOS	B	A		D	C		B	B	A		D	
Approach Delay		12.2			31.9			13.5			37.6	
Approach LOS		B			C			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 64.3

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 24.6

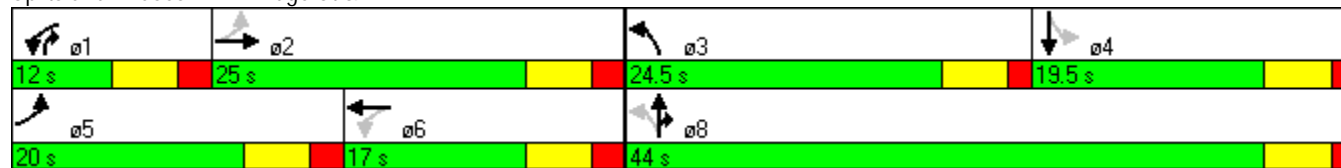
Intersection LOS: C

Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15









Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

Existing PM Peak Hour (4-5)

5/29/2014

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	119	156	299	363	197	180	15	229
v/c Ratio	0.29	0.22	0.77	0.50	0.44	0.23	0.02	0.71
Control Delay	16.1	9.2	36.6	28.0	15.2	12.6	2.8	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.1	9.2	36.6	28.0	15.2	12.6	2.8	37.6
Queue Length 50th (ft)	30	7	86	70	47	42	0	76
Queue Length 95th (ft)	62	26	#239	#127	94	85	6	#151
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	554	1029	387	731	602	1083	982	348
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.15	0.77	0.50	0.33	0.17	0.02	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
11: Exit 7 Connector &

Existing PM Peak Hour (4-5)

5/29/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	3	77	103	2	87	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1597	1681	1806	0	1719	1538
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1597	1681	1806	0	1719	1538
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	13%	13%	5%	5%	5%	5%
Adj. Flow (vph)	4	93	129	3	94	559
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	93	131	0	94	559
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.4%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

11: Exit 7 Connector &

Existing PM Peak Hour (4-5)

5/29/2014





















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	3	77	103	2	87	520
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	4	93	129	2	94	559
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	131				230	130
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	131				230	130
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	100				88	39
cM capacity (veh/h)	1389				750	912
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	4	93	131	94	559	
Volume Left	4	0	0	94	0	
Volume Right	0	0	2	0	559	
cSH	1389	1700	1700	750	912	
Volume to Capacity	0.00	0.05	0.08	0.12	0.61	
Queue Length 95th (ft)	0	0	0	11	108	
Control Delay (s)	7.6	0.0	0.0	10.5	15.0	
Lane LOS	A			B	C	
Approach Delay (s)	0.3		0.0	14.4		
Approach LOS				B		
Intersection Summary						
Average Delay			10.7			
Intersection Capacity Utilization			44.4%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Existing PM Peak Hour (4-5)

5/29/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	5	0	0	13	3	0	0	8	590	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	500		20
Storage Lanes	0		0	0		0	0		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt					0.976				0.865			0.850
Flt Protected										0.950	0.950	
Satd. Flow (prot)	0	1357	0	0	1656	0	0	0	1315	1649	1649	1553
Flt Permitted										0.950	0.950	
Satd. Flow (perm)	0	1357	0	0	1656	0	0	0	1315	1649	1649	1553
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		550			106			548			1009	
Travel Time (s)		12.5			2.4			12.5			22.9	
Peak Hour Factor	0.63	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	40%	40%	40%	12%	12%	12%	25%	25%	25%	4%	4%	4%
Adj. Flow (vph)	0	8	0	0	23	5	0	0	12	628	0	3
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	8	0	0	28	0	0	0	12	314	314	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 33.0% ICU Level of Service A



















Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

12: Exit 7 Connector & Exit 7 Access

Existing PM Peak Hour (4-5)










5/29/2014

																				
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR								
Lane Configurations																				
Volume (veh/h)	0	5	0	0	13	3	0	0	8	590	0	3								
Sign Control		Stop			Stop			Free			Free									
Grade		0%			0%			0%			0%									
Peak Hour Factor	0.63	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94								
Hourly flow rate (vph)	0	8	0	0	23	5	0	0	12	628	0	3								
Pedestrians																				
Lane Width (ft)																				
Walking Speed (ft/s)																				
Percent Blockage																				
Right turn flare (veh)																				
Median type								None			None									
Median storage veh																				
Upstream signal (ft)																				
pX, platoon unblocked																				
vC, conflicting volume	1272	1259	0	1265	1255	0	3			0										
vC1, stage 1 conf vol																				
vC2, stage 2 conf vol																				
vCu, unblocked vol	1272	1259	0	1265	1255	0	3			0										
tC, single (s)	7.5	6.9	6.6	7.2	6.6	6.3	4.3			4.1										
tC, 2 stage (s)																				
tF (s)	3.9	4.4	3.7	3.6	4.1	3.4	2.4			2.2										
p0 queue free %	100	91	100	100	77	100	100			61										
cM capacity (veh/h)	70	88	984	91	100	1056	1480			1610										
Direction, Lane #	EB 1	WB 1	SE 1	NW 1	NW 2	NW 3														
Volume Total	8	28	12	418	209	3														
Volume Left	0	0	0	418	209	0														
Volume Right	0	5	12	0	0	3														
cSH	88	120	1700	1610	1610	1700														
Volume to Capacity	0.09	0.23	0.01	0.39	0.39	0.00														
Queue Length 95th (ft)	7	21	0	47	47	0														
Control Delay (s)	49.9	43.7	0.0	8.7	8.7	0.0														
Lane LOS	E	E		A	A															
Approach Delay (s)	49.9	43.7	0.0	8.6																
Approach LOS	E	E																		
Intersection Summary																				
Average Delay			10.4																	
Intersection Capacity Utilization			33.0%			ICU Level of Service				A										
Analysis Period (min)			15																	

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

Existing PM Peak Hour (4-5)

5/29/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	89	94	50	122	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931		0.904			
Flt Protected	0.976					0.988
Satd. Flow (prot)	1599	0	1468	0	0	1251
Flt Permitted	0.976					0.988
Satd. Flow (perm)	1599	0	1468	0	0	1251
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.77	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	8%	8%	17%	17%	50%	50%
Adj. Flow (vph)	116	122	56	136	1	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	238	0	192	0	0	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	27.5%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

Existing PM Peak Hour (4-5)












5/29/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	89	94	50	122	1	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	116	122	56	136	1	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	129	123			191	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	129	123			191	
tC, single (s)	6.5	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.7	
p0 queue free %	86	87			100	
cM capacity (veh/h)	851	912			1141	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	238	191	4			
Volume Left	116	0	1			
Volume Right	122	136	0			
cSH	881	1700	1141			
Volume to Capacity	0.27	0.11	0.00			
Queue Length 95th (ft)	27	0	0			
Control Delay (s)	10.6	0.0	2.7			
Lane LOS	B		A			
Approach Delay (s)	10.6	0.0	2.7			
Approach LOS	B					
Intersection Summary						
Average Delay			5.8			
Intersection Capacity Utilization		27.5%		ICU Level of Service		A
Analysis Period (min)		15				

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Small event inbound

5/29/2014












						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (vph)	282	1	0	375	4	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt					0.916	
Flt Protected					0.982	
Satd. Flow (prot)	1827	0	0	3505	1709	0
Flt Permitted					0.982	
Satd. Flow (perm)	1827	0	0	3505	1709	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1004	
Travel Time (s)	5.7			19.0	22.8	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.69
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	313	1	0	421	6	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	314	0	0	421	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	24.9%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: State Fair Blvd & Pumphouse Rd

Small event inbound





















5/29/2014

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (veh/h)	282	1	0	375	4	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.69
Hourly flow rate (vph)	313	1	0	421	6	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			314		525	314
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			314		525	314
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1235		487	688
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	314	140	281	16		
Volume Left	0	0	0	6		
Volume Right	1	0	0	10		
cSH	1700	1235	1700	598		
Volume to Capacity	0.18	0.00	0.17	0.03		
Queue Length 95th (ft)	0	0	0	2		
Control Delay (s)	0.0	0.0	0.0	11.2		
Lane LOS				B		
Approach Delay (s)	0.0	0.0		11.2		
Approach LOS				B		
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			24.9%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Bridge St &

Small event inbound













5/29/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	57	97	284	336	8	185	169	38	109	108	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.906			0.996				0.850		0.977	
Flt Protected	0.950			0.950			0.950				0.980	
Satd. Flow (prot)	1787	3238	0	1719	3428	0	1703	1792	1599	0	1712	0
Flt Permitted	0.497			0.636			0.453				0.783	
Satd. Flow (perm)	935	3238	0	1151	3428	0	812	1792	1599	0	1368	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			3				41		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	120	68	115	302	357	9	199	182	41	138	137	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	183	0	302	366	0	199	182	41	0	332	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

Small event inbound

5/29/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	81	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	20.5	12.8		18.2	13.5		29.0	29.0	41.1		14.1	
Actuated g/C Ratio	0.31	0.20		0.28	0.21		0.44	0.44	0.63		0.22	
v/c Ratio	0.30	0.25		0.81	0.52		0.41	0.23	0.04		1.10	
Control Delay	16.3	10.7		40.4	28.5		14.6	12.5	2.1		109.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	16.3	10.7		40.4	28.5		14.6	12.5	2.1		109.1	
LOS	B	B		D	C		B	B	A		F	
Approach Delay		12.9			33.9			12.5			109.1	
Approach LOS		B			C			B			F	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 65.4

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 39.5

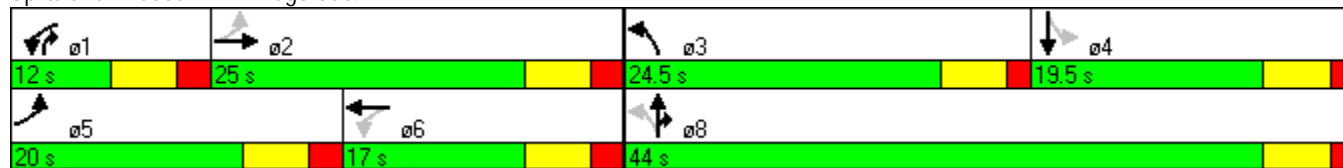
Intersection LOS: D

Intersection Capacity Utilization 67.9%

ICU Level of Service C









Analysis Period (min) 15

Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

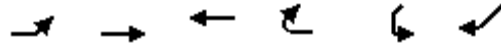
Small event inbound
5/29/2014

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	120	183	302	366	199	182	41	332
v/c Ratio	0.30	0.25	0.81	0.52	0.41	0.23	0.04	1.10
Control Delay	16.3	10.7	40.4	28.5	14.6	12.5	2.1	109.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	10.7	40.4	28.5	14.6	12.5	2.1	109.1
Queue Length 50th (ft)	31	11	87	71	47	42	0	~149
Queue Length 95th (ft)	63	33	#247	#130	95	86	10	#280
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	539	1028	373	710	620	1061	1023	303
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.18	0.81	0.52	0.32	0.17	0.04	1.10
Intersection Summary								
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.								
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.								

Lanes, Volumes, Timings
11: Exit 7 Connector &

Small event inbound

5/29/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	129	78	104	8	88	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1681	1796	0	1719	1538
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1787	1681	1796	0	1719	1538
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	1%	13%	5%	1%	5%	5%
Adj. Flow (vph)	155	94	130	10	95	565
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	94	140	0	95	565
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

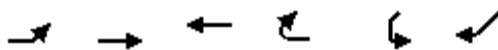
Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 45.1% ICU Level of Service A

Analysis Period (min) 15





















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	129	78	104	8	88	525
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	155	94	130	10	95	565
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	140				540	135
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	140				540	135
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	89				79	38
cM capacity (veh/h)	1449				444	906
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	155	94	140	95	565	
Volume Left	155	0	0	95	0	
Volume Right	0	0	10	0	565	
cSH	1449	1700	1700	444	906	
Volume to Capacity	0.11	0.06	0.08	0.21	0.62	
Queue Length 95th (ft)	9	0	0	20	112	
Control Delay (s)	7.8	0.0	0.0	15.3	15.3	
Lane LOS	A			C	C	
Approach Delay (s)	4.8		0.0	15.3		
Approach LOS				C		
Intersection Summary						
Average Delay			10.8			
Intersection Capacity Utilization			45.1%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Small event inbound

5/29/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	132	5	0	0	13	3	0	0	8	596	68	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	500		20
Storage Lanes	0		0	0		0	0		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.976				0.865			0.850
Flt Protected		0.955								0.950		
Satd. Flow (prot)	0	1761	0	0	1656	0	0	0	1315	1736	1881	1553
Flt Permitted		0.955								0.950		
Satd. Flow (perm)	0	1761	0	0	1656	0	0	0	1315	1736	1881	1553
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		550			106			548			1009	
Travel Time (s)		12.5			2.4			12.5			22.9	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	1%	40%	40%	12%	12%	12%	25%	25%	25%	4%	1%	4%
Adj. Flow (vph)	147	8	0	0	23	5	0	0	12	634	72	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	0	0	28	0	0	0	12	634	72	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.9% ICU Level of Service A



















Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

12: Exit 7 Connector & Exit 7 Access










Small event inbound

5/29/2014

																	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR					
Lane Configurations																	
Volume (veh/h)	132	5	0	0	13	3	0	0	8	596	68	3					
Sign Control		Stop			Stop			Free			Free						
Grade		0%			0%			0%			0%						
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94					
Hourly flow rate (vph)	147	8	0	0	23	5	0	0	12	634	72	3					
Pedestrians																	
Lane Width (ft)																	
Walking Speed (ft/s)																	
Percent Blockage																	
Right turn flare (veh)																	
Median type								None			None						
Median storage (veh)																	
Upstream signal (ft)																	
pX, platoon unblocked																	
vC, conflicting volume	1357	1344	0	1350	1340	72	76			0							
vC1, stage 1 conf vol																	
vC2, stage 2 conf vol																	
vCu, unblocked vol	1357	1344	0	1350	1340	72	76			0							
tC, single (s)	7.1	6.9	6.6	7.2	6.6	6.3	4.3			4.1							
tC, 2 stage (s)																	
tF (s)	3.5	4.4	3.7	3.6	4.1	3.4	2.4			2.2							
p0 queue free %	0	90	100	100	74	99	100			61							
cM capacity (veh/h)	71	77	984	78	88	963	1390			1610							
Direction, Lane #	EB 1	WB 1	SE 1	NW 1	NW 2	NW 3											
Volume Total	155	28	12	634	72	3											
Volume Left	147	0	0	634	0	0											
Volume Right	0	5	12	0	0	3											
cSH	71	106	1700	1610	1700	1700											
Volume to Capacity	2.16	0.26	0.01	0.39	0.04	0.00											
Queue Length 95th (ft)	360	24	0	48	0	0											
Control Delay (s)	660.7	50.6	0.0	8.7	0.0	0.0											
Lane LOS	F	F		A													
Approach Delay (s)	660.7	50.6	0.0	7.8													
Approach LOS	F	F															
Intersection Summary																	
Average Delay			120.6														
Intersection Capacity Utilization			53.9%		ICU Level of Service				A								
Analysis Period (min)			15														

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

Small event inbound
5/29/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	96	95	51	123	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.933		0.905			
Flt Protected	0.975					0.988
Satd. Flow (prot)	1600	0	1470	0	0	1251
Flt Permitted	0.975					0.988
Satd. Flow (perm)	1600	0	1470	0	0	1251
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.77	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	8%	8%	17%	17%	50%	50%
Adj. Flow (vph)	125	123	57	137	1	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	248	0	194	0	0	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	28.1%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

Small event inbound

5/29/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	96	95	51	123	1	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	125	123	57	137	1	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	130	125			193	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	130	125			193	
tC, single (s)	6.5	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.7	
p0 queue free %	85	86			100	
cM capacity (veh/h)	849	910			1138	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	248	193	4			
Volume Left	125	0	1			
Volume Right	123	137	0			
cSH	878	1700	1138			
Volume to Capacity	0.28	0.11	0.00			
Queue Length 95th (ft)	29	0	0			
Control Delay (s)	10.7	0.0	2.7			
Lane LOS	B		A			
Approach Delay (s)	10.7	0.0	2.7			
Approach LOS	B					
Intersection Summary						
Average Delay			6.0			
Intersection Capacity Utilization			28.1%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection: 3: State Fair Blvd & Pumphouse Rd

Movement	NB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	11
95th Queue (ft)	34
Link Distance (ft)	963
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: SFB to 695SB-690 WB & State Fair Blvd

Movement	NW
Directions Served	LR
Maximum Queue (ft)	67
Average Queue (ft)	4
95th Queue (ft)	27
Link Distance (ft)	3145
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: SFB to 695SB-690 WB & SFB to 695 SB

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Bridge St &

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	LTR
Maximum Queue (ft)	101	54	48	225	375	332	124	246	45	247
Average Queue (ft)	31	11	15	121	69	66	70	77	26	127
95th Queue (ft)	71	35	39	207	203	156	131	163	54	215
Link Distance (ft)		742	742		1167	1167		1878		1462
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100			200			100		20	
Storage Blk Time (%)	1			5	0		4	27	2	
Queuing Penalty (veh)	0			9	0		8	60	7	

Intersection: 11: Exit 7 Connector &

Movement	EB	WB	SW
Directions Served	L	TR	L
Maximum Queue (ft)	57	42	107
Average Queue (ft)	10	1	34
95th Queue (ft)	32	14	72
Link Distance (ft)	1167	628	439
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Exit 7 Connector & Exit 7 Access

Movement	EB	WB	NW	NW
Directions Served	LT	TR	L	R
Maximum Queue (ft)	113	55	12	28
Average Queue (ft)	58	10	1	3
95th Queue (ft)	96	33	6	16
Link Distance (ft)	439	40		
Upstream Blk Time (%)		1		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)			500	20
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 17: Willis Ave & State Fair Blvd

Movement	NB
Directions Served	LR
Maximum Queue (ft)	114
Average Queue (ft)	43
95th Queue (ft)	74
Link Distance (ft)	722
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	












Network Summary

Network wide Queuing Penalty: 85

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Small event outbound

5/28/2014












						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (vph)	49	0	0	93	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt					0.932	
Flt Protected					0.976	
Satd. Flow (prot)	1827	0	0	3574	1728	0
Flt Permitted					0.976	
Satd. Flow (perm)	1827	0	0	3574	1728	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1004	
Travel Time (s)	5.7			19.0	22.8	
Peak Hour Factor	0.90	0.90	0.89	0.50	0.69	0.69
Heavy Vehicles (%)	4%	4%	3%	1%	0%	0%
Adj. Flow (vph)	54	0	0	186	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	0	0	186	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.3%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: State Fair Blvd & Pumphouse Rd

Small event outbound

5/28/2014





						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (veh/h)	49	0	0	93	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.50	0.69	0.69
Hourly flow rate (vph)	54	0	0	186	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			54		147	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			54		147	54
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1542		836	1008
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	54	62	124	3		
Volume Left	0	0	0	1		
Volume Right	0	0	0	1		
cSH	1700	1542	1700	914		
Volume to Capacity	0.03	0.00	0.07	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	9.0		
Lane LOS				A		
Approach Delay (s)	0.0	0.0		9.0		
Approach LOS				A		
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: SFB to 695SB-690 WB & State Fair Blvd

Small event outbound

5/28/2014



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations					 	
Volume (vph)	0	50	0	0	93	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0
Storage Lanes	1	1	0	0	2	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt	0.850				0.916	
Flt Protected					0.978	
Satd. Flow (prot)	1863	1583	0	0	3237	0
Flt Permitted					0.978	
Satd. Flow (perm)	1863	1583	0	0	3237	0
Link Speed (mph)	30	30		30		
Link Distance (ft)	835	460		3201		
Travel Time (s)	19.0	10.5		72.8		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	54	0	0	101	127
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	0	0	228	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	12	0		24		
Link Offset(ft)	0	0		0		
Crosswalk Width(ft)	16	16		16		
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Free	Stop		Free		

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 9.7% ICU Level of Service A

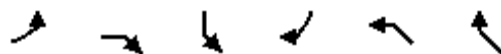
Analysis Period (min) 15





HCM Unsignalized Intersection Capacity Analysis

5: SFB to 695SB-690 WB & State Fair Blvd

Small event outbound

5/28/2014























Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations					 	
Volume (veh/h)	0	50	0	0	93	117
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	0	0	101	127
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	228		219	114		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	228		219	114		
tC, single (s)	4.1		6.8	6.9		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		100	100		
cM capacity (veh/h)	1337		749	917		
Direction, Lane #	EB 1	EB 2	NW 1	NW 2		
Volume Total	0	54	67	161		
Volume Left	0	0	0	0		
Volume Right	0	0	0	127		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.03	0.04	0.09		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			9.7%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Bridge St &

Small event outbound













5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	7	18	78	166	2	35	32	3	6	21	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.891			0.999				0.850		0.968	
Flt Protected	0.950			0.950			0.950				0.991	
Satd. Flow (prot)	1787	3185	0	1787	3571	0	1703	1792	1599	0	1681	0
Flt Permitted	0.550			0.612			0.514					
Satd. Flow (perm)	1035	3185	0	1151	3571	0	921	1792	1599	0	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			1				3		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.50	0.50	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	23	8	21	156	332	2	38	34	3	8	27	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	29	0	156	334	0	38	34	3	0	46	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

Small event outbound

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	81	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	19.0	16.3		23.8	27.8		9.5	10.5	14.1		7.2	
Actuated g/C Ratio	0.49	0.42		0.62	0.72		0.25	0.27	0.37		0.19	
v/c Ratio	0.04	0.02		0.19	0.13		0.11	0.07	0.01		0.14	
Control Delay	8.6	10.4		7.9	9.1		11.6	11.0	3.3		16.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	8.6	10.4		7.9	9.1		11.6	11.0	3.3		16.0	
LOS	A	B		A	A		B	B	A		B	
Approach Delay		9.6			8.7			11.0			16.0	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 38.4

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.19

Intersection Signal Delay: 9.6

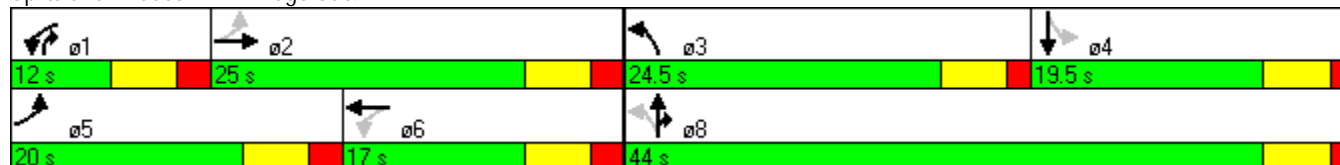
Intersection LOS: A

Intersection Capacity Utilization 33.7%

ICU Level of Service A

Analysis Period (min) 15

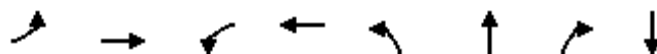
Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

Small event outbound

5/28/2014



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	23	29	156	334	38	34	3	46
v/c Ratio	0.04	0.02	0.19	0.13	0.11	0.07	0.01	0.14
Control Delay	8.6	10.4	7.9	9.1	11.6	11.0	3.3	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.6	10.4	7.9	9.1	11.6	11.0	3.3	16.0
Queue Length 50th (ft)	1	0	0	0	5	4	0	4
Queue Length 95th (ft)	14	8	32	43	23	21	2	29
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	965	1988	823	2589	932	1593	1422	687
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.01	0.19	0.13	0.04	0.02	0.00	0.07
Intersection Summary								

Lanes, Volumes, Timings
11: Exit 7 Connector &

Small event outbound

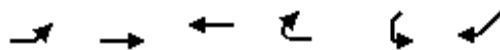
5/28/2014








Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	1	15	20	0	91	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1681	1810	0	1787	1599
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1787	1681	1810	0	1787	1599
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.50	0.50
Heavy Vehicles (%)	1%	13%	5%	1%	1%	1%
Adj. Flow (vph)	1	18	25	0	182	452
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	18	25	0	182	452
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.0%
Analysis Period (min)	15
	ICU Level of Service A





















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	1	15	20	0	91	226
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.50	0.50
Hourly flow rate (vph)	1	18	25	0	182	452
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	25				45	25
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	25				45	25
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				81	57
cM capacity (veh/h)	1596				967	1054
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	1	18	25	182	452	
Volume Left	1	0	0	182	0	
Volume Right	0	0	0	0	452	
cSH	1596	1700	1700	967	1054	
Volume to Capacity	0.00	0.01	0.01	0.19	0.43	
Queue Length 95th (ft)	0	0	0	17	55	
Control Delay (s)	7.3	0.0	0.0	9.6	11.0	
Lane LOS	A			A	B	
Approach Delay (s)	0.5		0.0	10.6		
Approach LOS				B		
Intersection Summary						
Average Delay			9.9			
Intersection Capacity Utilization			24.0%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Small event outbound

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1	0	0	2	1	0	0	202	113	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	500		20
Storage Lanes	0		0	0		0	0		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.955				0.865			0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	1357	0	0	1620	0	0	0	1627	1736	1881	1553
Flt Permitted										0.950		
Satd. Flow (perm)	0	1357	0	0	1620	0	0	0	1627	1736	1881	1553
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		550			106			548			1009	
Travel Time (s)		12.5			2.4			12.5			22.9	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.50	0.94	0.94	0.94
Heavy Vehicles (%)	1%	40%	40%	12%	12%	12%	25%	25%	1%	4%	1%	4%
Adj. Flow (vph)	0	2	0	0	4	2	0	0	404	120	0	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	6	0	0	0	404	120	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	32.1%				ICU Level of Service A							
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

12: Exit 7 Connector & Exit 7 Access

Small event outbound










5/28/2014

																				
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR								
Lane Configurations																				
Volume (veh/h)	0	1	0	0	2	1	0	0	202	113	0	1								
Sign Control		Stop			Stop			Free			Free									
Grade		0%			0%			0%			0%									
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.50	0.94	0.94	0.94								
Hourly flow rate (vph)	0	2	0	0	4	2	0	0	404	120	0	1								
Pedestrians																				
Lane Width (ft)																				
Walking Speed (ft/s)																				
Percent Blockage																				
Right turn flare (veh)																				
Median type								None			None									
Median storage veh																				
Upstream signal (ft)																				
pX, platoon unblocked																				
vC, conflicting volume	244	241	0	443	240	0	1			0										
vC1, stage 1 conf vol																				
vC2, stage 2 conf vol																				
vCu, unblocked vol	244	241	0	443	240	0	1			0										
tC, single (s)	7.1	6.9	6.6	7.2	6.6	6.3	4.3			4.1										
tC, 2 stage (s)																				
tF (s)	3.5	4.4	3.7	3.6	4.1	3.4	2.4			2.2										
p0 queue free %	100	100	100	100	99	100	100			93										
cM capacity (veh/h)	667	555	984	478	596	1056	1483			1610										
Direction, Lane #	EB 1	WB 1	SE 1	NW 1	NW 2	NW 3														
Volume Total	2	5	404	120	0	1														
Volume Left	0	0	0	120	0	0														
Volume Right	0	2	404	0	0	1														
cSH	555	697	1700	1610	1700	1700														
Volume to Capacity	0.00	0.01	0.24	0.07	0.00	0.00														
Queue Length 95th (ft)	0	1	0	6	0	0														
Control Delay (s)	11.5	10.2	0.0	7.4	0.0	0.0														
Lane LOS	B	B		A																
Approach Delay (s)	11.5	10.2	0.0	7.4																
Approach LOS	B	B																		
Intersection Summary																				
Average Delay			1.8																	
Intersection Capacity Utilization			32.1%			ICU Level of Service				A										
Analysis Period (min)			15																	

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

Small event outbound

5/28/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	17	18	78	29	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931		0.963			
Flt Protected	0.976					
Satd. Flow (prot)	1599	0	1812	0	0	1267
Flt Permitted	0.976					
Satd. Flow (perm)	1599	0	1812	0	0	1267
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.77	0.77	0.50	0.50	0.75	0.75
Heavy Vehicles (%)	8%	8%	1%	1%	50%	50%
Adj. Flow (vph)	22	23	156	58	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	214	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	15.9%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

Small event outbound












5/28/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	17	18	78	29	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.50	0.50	0.75	0.75
Hourly flow rate (vph)	22	23	156	58	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	185	185			214	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	185	185			214	
tC, single (s)	6.5	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.7	
p0 queue free %	97	97			100	
cM capacity (veh/h)	791	842			1117	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	45	214	0			
Volume Left	22	0	0			
Volume Right	23	58	0			
cSH	816	1700	1700			
Volume to Capacity	0.06	0.13	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			15.9%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Major event inbound

5/28/2014











						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (vph)	876	1	0	375	4	1183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt					0.866	
Flt Protected						
Satd. Flow (prot)	1827	0	0	3505	1645	0
Flt Permitted						
Satd. Flow (perm)	1827	0	0	3505	1645	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1004	
Travel Time (s)	5.7			19.0	22.8	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	973	1	0	421	6	1314
Shared Lane Traffic (%)						
Lane Group Flow (vph)	974	0	0	421	1320	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	126.3%			ICU Level of Service H		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: State Fair Blvd & Pumphouse Rd

Major event inbound

5/28/2014

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	876	1	0	375	4	1183
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Hourly flow rate (vph)	973	1	0	421	6	1314
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			974		1185	974
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			974		1185	974
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	0
cM capacity (veh/h)			697		185	255
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	974	140	281	1320		
Volume Left	0	0	0	6		
Volume Right	1	0	0	1314		
cSH	1700	697	1700	255		
Volume to Capacity	0.57	0.00	0.17	5.18		
Queue Length 95th (ft)	0	0	0	Err		
Control Delay (s)	0.0	0.0	0.0	Err		
Lane LOS				F		
Approach Delay (s)	0.0	0.0		Err		
Approach LOS				F		
Intersection Summary						
Average Delay		4860.4				
Intersection Capacity Utilization		126.3%		ICU Level of Service		H
Analysis Period (min)		15				

Lanes, Volumes, Timings
5: SFB to 695SB-690 WB & State Fair Blvd

Major event inbound

5/28/2014



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations						
Volume (vph)	0	2059	0	0	375	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0
Storage Lanes	1	1	0	0	2	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt		0.850			0.949	
Flt Protected					0.968	
Satd. Flow (prot)	1863	808	0	0	3320	0
Flt Permitted					0.968	
Satd. Flow (perm)	1863	808	0	0	3320	0
Link Speed (mph)	30		30		30	
Link Distance (ft)	835		460		572	
Travel Time (s)	19.0		10.5		13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	100%	2%	2%	2%	2%
Adj. Flow (vph)	0	2238	0	0	408	209
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2238	0	0	617	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	12		0		24	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Free		Stop		Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 130.8% ICU Level of Service H

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

5: SFB to 695SB-690 WB & State Fair Blvd

Major event inbound

5/28/2014

















Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations						
Volume (veh/h)	0	2059	0	0	375	192
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2238	0	0	408	209
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	616		2750	308		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	616		2750	308		
tC, single (s)	4.1		6.8	6.9		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		100	100		
cM capacity (veh/h)	960		16	688		
Direction, Lane #	EB 1	EB 2	NW 1	NW 2		
Volume Total	0	2238	272	345		
Volume Left	0	0	0	0		
Volume Right	0	0	0	209		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.00	1.32	0.16	0.20		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			130.8%		ICU Level of Service	H
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: SFB to 695SB-690 WB & SFB to 695 SB

Major event inbound

5/28/2014

						
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	1863	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	1863	1863	0	0	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	460			849	334	
Travel Time (s)	10.5			19.3	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type		Perm				
Protected Phases	2					
Permitted Phases		2				
Minimum Split (s)	20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0				
Yellow Time (s)	3.5	3.5				
All-Red Time (s)	0.5	0.5				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0				
Flash Dont Walk (s)	11.0	11.0				
Pedestrian Calls (#/hr)	0	0				
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						

						
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Approach Delay						
Approach LOS						
Intersection Summary						
Area Type:	Other					
Cycle Length: 20						
Actuated Cycle Length: 20						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green						
Natural Cycle: 40						
Control Type: Pretimed						
Maximum v/c Ratio: 0.00						
Intersection Signal Delay: 0.0				Intersection LOS: A		
Intersection Capacity Utilization 0.0%				ICU Level of Service A		
Analysis Period (min) 15						

Splits and Phases: 6: SFB to 695SB-690 WB & SFB to 695 SB



Queues

Major event inbound

6: SFB to 695SB-690 WB & SFB to 695 SB

5/28/2014

Lane Group

Lane Group Flow (vph)

v/c Ratio

Control Delay

Queue Delay

Total Delay

Queue Length 50th (ft)

Queue Length 95th (ft)

Internal Link Dist (ft)

Turn Bay Length (ft)

Base Capacity (vph)

Starvation Cap Reductn

Spillback Cap Reductn

Storage Cap Reductn





















Reduced v/c Ratio

Intersection Summary

Lanes, Volumes, Timings
7: Bridge St &

Major event inbound













5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	110	97	284	411	8	185	169	686	29	108	1109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930			0.997				0.850		0.880	
Flt Protected	0.950			0.950			0.950				0.999	
Satd. Flow (prot)	1787	3324	0	1719	3430	0	1703	1792	1599	0	1521	0
Flt Permitted	0.404			0.599			0.204				0.986	
Satd. Flow (perm)	760	3324	0	1084	3430	0	366	1792	1599	0	1502	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			2				533		434	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	120	131	115	302	437	9	199	182	738	37	137	1404
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	246	0	302	446	0	199	182	738	0	1578	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

Major event inbound

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	81	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	20.5	12.8		18.2	13.5		29.0	29.0	41.1		14.1	
Actuated g/C Ratio	0.31	0.20		0.28	0.21		0.44	0.44	0.63		0.22	
v/c Ratio	0.33	0.33		0.84	0.63		0.56	0.23	0.61		2.38	
Control Delay	16.9	13.7		43.9	31.6		18.4	12.5	4.5		640.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	16.9	13.7		43.9	31.6		18.4	12.5	4.5		640.2	
LOS	B	B		D	C		B	B	A		F	
Approach Delay		14.8			36.6			8.2			640.2	
Approach LOS		B			D			A			F	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 65.4

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 2.38

Intersection Signal Delay: 276.1

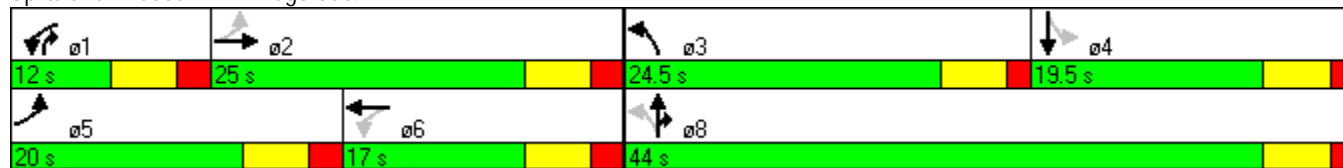
Intersection LOS: F

Intersection Capacity Utilization 140.7%

ICU Level of Service H

Analysis Period (min) 15

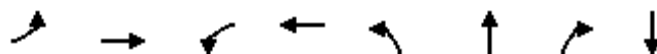
Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

Major event inbound

5/28/2014



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	120	246	302	446	199	182	738	1578
v/c Ratio	0.33	0.33	0.84	0.63	0.56	0.23	0.61	2.38
Control Delay	16.9	13.7	43.9	31.6	18.4	12.5	4.5	640.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	13.7	43.9	31.6	18.4	12.5	4.5	640.2
Queue Length 50th (ft)	31	23	87	88	47	42	30	~925
Queue Length 95th (ft)	63	48	#254	#183	95	86	100	#1086
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	510	1053	360	710	553	1061	1205	664
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.23	0.84	0.63	0.36	0.17	0.61	2.38

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
11: Exit 7 Connector &

Major event inbound

5/28/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	750	78	104	170	88	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.916			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1681	1698	0	1719	1538
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1787	1681	1698	0	1719	1538
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	1%	13%	5%	1%	5%	5%
Adj. Flow (vph)	904	94	130	213	95	645
Shared Lane Traffic (%)						
Lane Group Flow (vph)	904	94	342	0	95	645
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

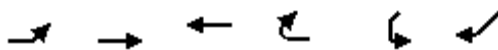
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	72.3%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis

11: Exit 7 Connector &

Major event inbound

5/28/2014





















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	750	78	104	170	88	600
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	904	94	130	212	95	645
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	342				2137	236
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	342				2137	236
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	26				0	19
cM capacity (veh/h)	1222				14	795
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	904	94	342	95	645	
Volume Left	904	0	0	95	0	
Volume Right	0	0	212	0	645	
cSH	1222	1700	1700	14	795	
Volume to Capacity	0.74	0.06	0.20	6.87	0.81	
Queue Length 95th (ft)	180	0	0	Err	219	
Control Delay (s)	15.8	0.0	0.0	Err	25.8	
Lane LOS	C			F	D	
Approach Delay (s)	14.3		0.0	1301.5		
Approach LOS				F		
Intersection Summary						
Average Delay			469.8			
Intersection Capacity Utilization			72.3%	ICU Level of Service		C
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Major event inbound

5/28/2014


















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											 	
Volume (vph)	915	5	0	0	13	3	0	0	83	596	1904	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		20
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt					0.976				0.865			0.850
Flt Protected		0.953									0.988	
Satd. Flow (prot)	0	1787	0	0	1656	0	0	0	822	0	3507	1553
Flt Permitted		0.953									0.988	
Satd. Flow (perm)	0	1787	0	0	1656	0	0	0	822	0	3507	1553
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		550			106				548		511	
Travel Time (s)		12.5			2.4				12.5		11.6	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	1%	40%	40%	12%	12%	12%	25%	25%	100%	4%	1%	4%
Adj. Flow (vph)	1017	8	0	0	23	5	0	0	124	634	2026	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1025	0	0	28	0	0	0	124	0	2660	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop				Free		Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	134.2%						ICU Level of Service H					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

12: Exit 7 Connector & Exit 7 Access

Major event inbound










5/28/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	915	5	0	0	13	3	0	0	83	596	1904	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Hourly flow rate (vph)	1017	8	0	0	23	5	0	0	124	634	2026	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2298	3297	0	3360	3294	1013	2029			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2298	3297	0	3360	3294	1013	2029			0		
tC, single (s)	7.5	7.3	7.7	7.7	6.7	7.1	4.6			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.4	3.7	3.6	4.1	3.4	2.5			2.2		
p0 queue free %	0	0	100	0	0	98	100			61		
cM capacity (veh/h)	0	3	973	0	4	220	203			1607		
Direction, Lane #	EB 1	WB 1	SE 1	NW 1	NW 2	NW 3						
Volume Total	1025	28	124	1309	1350	3						
Volume Left	1017	0	0	634	0	0						
Volume Right	0	5	124	0	0	3						
cSH	0	5	1700	1607	1700	1700						
Volume to Capacity	Err	5.35	0.07	0.39	0.79	0.00						
Queue Length 95th (ft)	Err	Err	0	48	0	0						
Control Delay (s)	Err	Err	0.0	7.1	0.0	0.0						
Lane LOS	F	F		A								
Approach Delay (s)	Err	Err	0.0	3.5								
Approach LOS	F	F										
Intersection Summary												
Average Delay			Err									
Intersection Capacity Utilization			134.2%		ICU Level of Service					H		
Analysis Period (min)			15									

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

Major event inbound

5/28/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	258	95	51	123	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.960		0.905			
Flt Protected	0.966					0.988
Satd. Flow (prot)	1709	0	1470	0	0	1251
Flt Permitted	0.966					0.988
Satd. Flow (perm)	1709	0	1470	0	0	1251
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	1%	8%	17%	17%	50%	50%
Adj. Flow (vph)	287	123	57	137	1	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	410	0	194	0	0	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	37.0%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

Major event inbound

5/28/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	258	95	51	123	1	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	287	123	57	137	1	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	130	125			193	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	130	125			193	
tC, single (s)	6.4	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.7	
p0 queue free %	67	86			100	
cM capacity (veh/h)	865	910			1138	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	410	193	4			
Volume Left	287	0	1			
Volume Right	123	137	0			
cSH	878	1700	1138			
Volume to Capacity	0.47	0.11	0.00			
Queue Length 95th (ft)	63	0	0			
Control Delay (s)	12.6	0.0	2.7			
Lane LOS	B		A			
Approach Delay (s)	12.6	0.0	2.7			
Approach LOS	B					
Intersection Summary						
Average Delay		8.6				
Intersection Capacity Utilization		37.0%		ICU Level of Service		A
Analysis Period (min)		15				

Lanes, Volumes, Timings
24: State Fair Blvd & Brown - West

Major event inbound

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	1792	267	567	0	75	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt						
Flt Protected		0.958			0.950	
Satd. Flow (prot)	0	1800	3539	0	902	1863
Flt Permitted		0.958			0.950	
Satd. Flow (perm)	0	1800	3539	0	902	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		572	2052		601	
Travel Time (s)		13.0	46.6		13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	2%	2%	2%	100%	2%
Adj. Flow (vph)	1991	297	630	0	83	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2288	630	0	83	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	143.1%
Analysis Period (min)	15
	ICU Level of Service H

HCM Unsignalized Intersection Capacity Analysis

24: State Fair Blvd & Brown - West

Major event inbound

5/28/2014



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↩	↩↩		↩	↩
Volume (veh/h)	1792	267	567	0	75	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1991	297	630	0	83	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	630				4909	315
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	630				4909	315
tC, single (s)	4.1				8.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				4.5	3.3
p0 queue free %	0				0	100
cM capacity (veh/h)	955				0	681
Direction, Lane #	SE 1	NW 1	NW 2	SW 1	SW 2	
Volume Total	2288	420	210	83	0	
Volume Left	1991	0	0	83	0	
Volume Right	0	0	0	0	0	
cSH	955	1700	1700	0	1700	
Volume to Capacity	2.08	0.25	0.12	Err	0.00	
Queue Length 95th (ft)	3376	0	0	Err	0	
Control Delay (s)	504.0	0.0	0.0	Err	0.0	
Lane LOS	F			F	A	
Approach Delay (s)	504.0	0.0		Err		
Approach LOS				F		
Intersection Summary						
Average Delay			Err			
Intersection Capacity Utilization		143.1%		ICU Level of Service		H
Analysis Period (min)		15				

Lanes, Volumes, Timings
26: State Fair Blvd & Brown - East

Major event inbound

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	308	567	1139	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.900			
Flt Protected						
Satd. Flow (prot)	0	1863	3206	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	3206	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2052	577		345	
Travel Time (s)		46.6	13.1		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	1%	2%	2%
Adj. Flow (vph)	0	342	630	1266	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	342	1896	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.7%
Analysis Period (min)	15
	ICU Level of Service B

HCM Unsignalized Intersection Capacity Analysis

26: State Fair Blvd & Brown - East

Major event inbound

5/28/2014














Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	308	567	1139	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	342	630	1266	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1896				1605	948
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1896				1605	948
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	311				96	262
Direction, Lane #	SE 1	NW 1	NW 2	SW 1		
Volume Total	342	420	1476	0		
Volume Left	0	0	0	0		
Volume Right	0	0	1266	0		
cSH	311	1700	1700	1700		
Volume to Capacity	0.00	0.25	0.87	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS				A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS				A		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			55.7%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Major event outbound

5/28/2014












						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (vph)	49	49	0	841	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.932				0.932	
Flt Protected					0.976	
Satd. Flow (prot)	1703	0	0	3505	1728	0
Flt Permitted					0.976	
Satd. Flow (perm)	1703	0	0	3505	1728	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1004	
Travel Time (s)	5.7			19.0	22.8	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	54	54	0	945	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	0	0	945	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.2%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: State Fair Blvd & Pumphouse Rd

Major event outbound

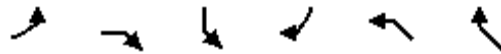
5/28/2014





						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (veh/h)	49	49	0	841	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Hourly flow rate (vph)	54	54	0	945	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			109		554	82
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			109		554	82
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1472		467	968
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	109	315	630	3		
Volume Left	0	0	0	1		
Volume Right	54	0	0	1		
cSH	1700	1472	1700	602		
Volume to Capacity	0.06	0.00	0.37	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	11.0		
Lane LOS				B		
Approach Delay (s)	0.0	0.0		11.0		
Approach LOS				B		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			33.2%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: SFB to 695SB-690 WB & State Fair Blvd

Major event outbound

5/28/2014



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations					 	
Volume (vph)	0	50	0	0	841	2837
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0
Storage Lanes	1	1	0	0	2	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt	0.850		0.884			
Flt Protected					0.989	
Satd. Flow (prot)	1863	808	0	0	3159	0
Flt Permitted					0.989	
Satd. Flow (perm)	1863	808	0	0	3159	0
Link Speed (mph)	30	30		30		
Link Distance (ft)	835	460		572		
Travel Time (s)	19.0	10.5		13.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	100%	2%	2%	2%	2%
Adj. Flow (vph)	0	54	0	0	914	3084
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	0	0	3998	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	12	0		24		
Link Offset(ft)	0	0		0		
Crosswalk Width(ft)	16	16		16		
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Free	Stop		Free		

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 117.4% ICU Level of Service H

Analysis Period (min) 15





HCM Unsignalized Intersection Capacity Analysis

5: SFB to 695SB-690 WB & State Fair Blvd

Major event outbound

5/28/2014











Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations					 	
Volume (veh/h)	0	50	0	0	841	2837
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	0	0	914	3084
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3998		2510	1999		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3998		2510	1999		
tC, single (s)	4.1		6.8	6.9		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		100	100		
cM capacity (veh/h)	44		23	50		
Direction, Lane #	EB 1	EB 2	NW 1	NW 2		
Volume Total	0	54	609	3388		
Volume Left	0	0	0	0		
Volume Right	0	0	0	3084		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.03	0.36	1.99		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			117.4%	ICU Level of Service	H	
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: SFB to 695SB-690 WB & SFB to 695 SB

Major event outbound







5/28/2014

						
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1480	1357	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	1863	1583	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	1863	1583	0	0	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	460			849	334	
Travel Time (s)	10.5			19.3	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1609	1475	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1609	1475	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type		Perm				
Protected Phases	2					
Permitted Phases		2				
Minimum Split (s)	20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0				
Yellow Time (s)	3.5	3.5				
All-Red Time (s)	0.5	0.5				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0				
Flash Dont Walk (s)	11.0	11.0				
Pedestrian Calls (#/hr)	0	0				
Act Effct Green (s)	20.0	20.0				
Actuated g/C Ratio	1.00	1.00				
v/c Ratio	0.86	0.93				
Control Delay	7.4	14.9				
Queue Delay	0.0	0.0				
Total Delay	7.4	14.9				
LOS	A	B				

Lanes, Volumes, Timings
 6: SFB to 695SB-690 WB & SFB to 695 SB

Major event outbound

5/28/2014

						
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Approach Delay	11.0					
Approach LOS	B					
Intersection Summary						
Area Type:	Other					
Cycle Length: 20						
Actuated Cycle Length: 20						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green						
Natural Cycle: 40						
Control Type: Pretimed						
Maximum v/c Ratio: 0.93						
Intersection Signal Delay: 11.0				Intersection LOS: B		
Intersection Capacity Utilization 87.4%				ICU Level of Service E		
Analysis Period (min) 15						

Splits and Phases: 6: SFB to 695SB-690 WB & SFB to 695 SB



Queues

Major event outbound

6: SFB to 695SB-690 WB & SFB to 695 SB

5/28/2014



Lane Group	NBT	NBR
Lane Group Flow (vph)	1609	1475
v/c Ratio	0.86	0.93
Control Delay	7.4	14.9
Queue Delay	0.0	0.0
Total Delay	7.4	14.9
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	#33	#63
Internal Link Dist (ft)	380	
Turn Bay Length (ft)		
Base Capacity (vph)	1863	1583
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.86	0.93





















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
7: Bridge St &

Major event outbound













5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	82	18	894	139	2382	35	32	3	6	21	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.858				0.850		0.968	
Flt Protected	0.950			0.950			0.950				0.991	
Satd. Flow (prot)	1787	3481	0	1719	3060	0	1703	1792	1599	0	1681	0
Flt Permitted	0.237			0.504			0.514					
Satd. Flow (perm)	446	3481	0	912	3060	0	921	1792	1599	0	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			989				3		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	23	98	21	951	148	2534	38	34	3	8	27	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	119	0	951	2682	0	38	34	3	0	46	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

Major event outbound

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8 1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	16.4	11.1		23.6	27.6		9.5	10.5	14.3		7.2	
Actuated g/C Ratio	0.43	0.29		0.62	0.72		0.25	0.28	0.38		0.19	
v/c Ratio	0.06	0.12		1.35	1.77dr		0.11	0.07	0.00		0.14	
Control Delay	8.8	12.9		184.0	56.4		11.6	11.0	3.3		16.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	8.8	12.9		184.0	56.4		11.6	11.0	3.3		16.0	
LOS	A	B		F	E		B	B	A		B	
Approach Delay		12.2			89.8			11.0			16.0	
Approach LOS		B			F			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 38.1

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.35

Intersection Signal Delay: 84.6

Intersection LOS: F

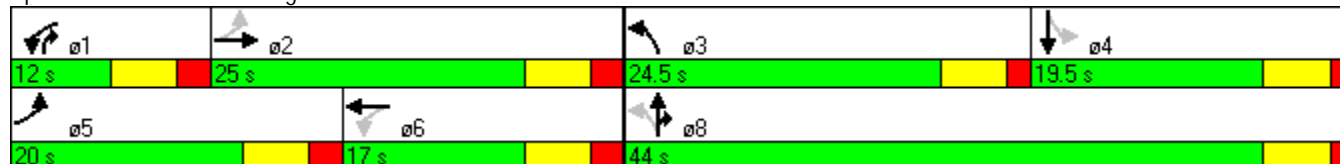
Intersection Capacity Utilization 99.1%

ICU Level of Service F

Analysis Period (min) 15

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

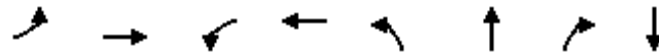
Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

Major event outbound

5/28/2014



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	23	119	951	2682	38	34	3	46
v/c Ratio	0.06	0.12	1.35	1.77dr	0.11	0.07	0.00	0.14
Control Delay	8.8	12.9	184.0	56.4	11.6	11.0	3.3	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	12.9	184.0	56.4	11.6	11.0	3.3	16.0
Queue Length 50th (ft)	1	4	~18	0	5	4	0	4
Queue Length 95th (ft)	14	30	#732	#730	23	21	2	29
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	828	1923	704	2490	941	1593	1422	694
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.06	1.35	1.08	0.04	0.02	0.00	0.07

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lanes, Volumes, Timings
11: Exit 7 Connector &

Major event outbound

5/28/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	76	15	20	0	227	3395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1681	1810	0	1719	1538
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1787	1681	1810	0	1719	1538
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	1%	13%	5%	1%	5%	5%
Adj. Flow (vph)	92	18	25	0	244	3651
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	18	25	0	244	3651
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	220.2%
Analysis Period (min)	15
	ICU Level of Service H

HCM Unsignalized Intersection Capacity Analysis

11: Exit 7 Connector &

Major event outbound

5/28/2014




















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	76	15	20	0	227	3395
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	92	18	25	0	244	3651
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	25				226	25
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	25				226	25
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				66	0
cM capacity (veh/h)	1596				712	1043
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	92	18	25	244	3651	
Volume Left	92	0	0	244	0	
Volume Right	0	0	0	0	3651	
cSH	1596	1700	1700	712	1043	
Volume to Capacity	0.06	0.01	0.01	0.34	3.50	
Queue Length 95th (ft)	5	0	0	38	Err	
Control Delay (s)	7.4	0.0	0.0	12.7	Err	
Lane LOS	A			B	F	
Approach Delay (s)	6.2		0.0	9373.1		
Approach LOS				F		
Intersection Summary						
Average Delay		9060.1				
Intersection Capacity Utilization		220.2%		ICU Level of Service		H
Analysis Period (min)		15				

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Major event outbound

5/28/2014


















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	75	1	0	0	2	1	0	0	3507	113	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		20
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt					0.955				0.865			0.850
Flt Protected		0.953									0.950	
Satd. Flow (prot)	0	912	0	0	1620	0	0	0	1611	0	3298	1553
Flt Permitted		0.953									0.950	
Satd. Flow (perm)	0	912	0	0	1620	0	0	0	1611	0	3298	1553
Link Speed (mph)		30			30				30		30	
Link Distance (ft)		550			106				3772		498	
Travel Time (s)		12.5			2.4				85.7		11.3	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	100%	40%	40%	12%	12%	12%	25%	25%	2%	4%	1%	4%
Adj. Flow (vph)	83	2	0	0	4	2	0	0	5234	120	0	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	6	0	0	0	5234	0	120	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0				0		0	
Link Offset(ft)		0			0				0		0	
Crosswalk Width(ft)		16			16				16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop				Free			Free
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	236.7%						ICU Level of Service H					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

12: Exit 7 Connector & Exit 7 Access

Major event outbound










5/28/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	75	1	0	0	2	1	0	0	3507	113	0	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Hourly flow rate (vph)	83	2	0	0	4	2	0	0	5234	120	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	244	241	0	2858	240	0	1			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	244	241	0	2858	240	0	1			0		
tC, single (s)	9.5	7.3	7.7	7.7	6.7	7.1	4.6			4.2		
tC, 2 stage (s)												
tF (s)	4.5	4.4	3.7	3.6	4.1	3.4	2.5			2.2		
p0 queue free %	82	100	100	100	99	100	100			93		
cM capacity (veh/h)	457	536	973	6	590	1053	1468			1607		
Direction, Lane #	EB 1	WB 1	SE 1	NW 1	NW 2	NW 3						
Volume Total	85	5	5234	120	0	1						
Volume Left	83	0	0	120	0	0						
Volume Right	0	2	5234	0	0	1						
cSH	458	691	1700	1607	1700	1700						
Volume to Capacity	0.19	0.01	3.08	0.07	0.00	0.00						
Queue Length 95th (ft)	17	1	Err	6	0	0						
Control Delay (s)	14.6	10.3	0.0	7.4	0.0	0.0						
Lane LOS	B	B		A								
Approach Delay (s)	14.6	10.3	0.0	7.4								
Approach LOS	B	B										
Intersection Summary												
Average Delay			0.4									
Intersection Capacity Utilization			236.7%	ICU Level of Service					H			
Analysis Period (min)			15									

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

Major event outbound

5/28/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	17	18	10	233	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926		0.871			
Flt Protected	0.978					
Satd. Flow (prot)	1641	0	1414	0	0	1267
Flt Permitted	0.978					
Satd. Flow (perm)	1641	0	1414	0	0	1267
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	1%	8%	17%	17%	50%	50%
Adj. Flow (vph)	19	23	11	259	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	270	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	24.9%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

Major event outbound

5/28/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	17	18	10	233	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	19	23	11	259	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	141	141			270	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	141	141			270	
tC, single (s)	6.4	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.7	
p0 queue free %	98	97			100	
cM capacity (veh/h)	855	892			1061	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	42	270	0			
Volume Left	19	0	0			
Volume Right	23	259	0			
cSH	875	1700	1700			
Volume to Capacity	0.05	0.16	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.3	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.3	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization		24.9%		ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
24: State Fair Blvd & Brown - West

Major event outbound

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	50	183	0	75	3570
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	3539	0	902	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	3539	0	902	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		572	2052		601	
Travel Time (s)		13.0	46.6		13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	2%	2%	2%	100%	2%
Adj. Flow (vph)	0	56	203	0	83	3967
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	56	203	0	83	3967
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	136.6%
Analysis Period (min)	15
	ICU Level of Service H

HCM Unsignalized Intersection Capacity Analysis

24: State Fair Blvd & Brown - West

Major event outbound

5/28/2014



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	50	183	0	75	3570
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	56	203	0	83	3967
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	203				259	102
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	203				259	102
tC, single (s)	4.1				8.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				4.5	3.3
p0 queue free %	100				83	0
cM capacity (veh/h)	1373				497	934
Direction, Lane #	SE 1	NW 1	NW 2	SW 1	SW 2	SW 3
Volume Total	56	136	68	83	1983	1983
Volume Left	0	0	0	83	0	0
Volume Right	0	0	0	0	1983	1983
cSH	1373	1700	1700	497	934	934
Volume to Capacity	0.00	0.08	0.04	0.17	2.12	2.12
Queue Length 95th (ft)	0	0	0	15	3416	3416
Control Delay (s)	0.0	0.0	0.0	13.7	521.8	521.8
Lane LOS				B	F	F
Approach Delay (s)	0.0	0.0		511.4		
Approach LOS				F		
Intersection Summary						
Average Delay		480.6				
Intersection Capacity Utilization		136.6%		ICU Level of Service		H
Analysis Period (min)		15				

Lanes, Volumes, Timings
26: State Fair Blvd & Brown - East

Major event outbound

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	50	183	75	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.956			
Flt Protected						
Satd. Flow (prot)	0	1863	2646	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	2646	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2052	577		345	
Travel Time (s)		46.6	13.1		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	100%	2%	2%
Adj. Flow (vph)	0	56	203	83	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	56	286	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	10.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

26: State Fair Blvd & Brown - East

Major event outbound

5/28/2014












Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	50	183	75	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	56	203	83	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	287				301	143
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	287				301	143
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1272				667	878
Direction, Lane #	SE 1	NW 1	NW 2	SW 1		
Volume Total	56	136	151	0		
Volume Left	0	0	0	0		
Volume Right	0	0	83	0		
cSH	1272	1700	1700	1700		
Volume to Capacity	0.00	0.08	0.09	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS				A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS				A		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			10.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Major event inbound - manned

5/28/2014

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	876	1	0	375	4	1183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt					0.866	
Flt Protected						
Satd. Flow (prot)	1827	0	0	3505	1645	0
Flt Permitted						
Satd. Flow (perm)	1827	0	0	3505	1645	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					32	
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1004	
Travel Time (s)	5.7			19.0	22.8	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	973	1	0	421	6	1314
Shared Lane Traffic (%)						
Lane Group Flow (vph)	974	0	0	421	1320	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Minimum Split (s)	20.0		20.0	20.0	20.0	
Total Split (s)	60.0	0.0	60.0	60.0	90.0	0.0
Total Split (%)	40.0%	0.0%	40.0%	40.0%	60.0%	0.0%
Maximum Green (s)	56.0		56.0	56.0	86.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	56.0			56.0	86.0	
Actuated g/C Ratio	0.37			0.37	0.57	
v/c Ratio	1.43			0.32	1.38	
Control Delay	236.7			58.7	205.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	236.7			58.7	205.5	

Lanes, Volumes, Timings
 3: State Fair Blvd & Pumphouse Rd

Major event inbound - manned

5/28/2014

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	F			E	F	
Approach Delay	236.7			58.7	205.5	
Approach LOS	F			E	F	

Intersection Summary

Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green	
Natural Cycle: 150	
Control Type: Pretimed	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay: 193.9	Intersection LOS: F
Intersection Capacity Utilization 126.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: State Fair Blvd & Pumphouse Rd

↖ ø2	→ ø4
90 s	60 s
	↖ ø8
	60 s

Queues

Major event inbound - manned

3: State Fair Blvd & Pumphouse Rd

5/28/2014



Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	974	421	1320
v/c Ratio	1.43	0.32	1.38
Control Delay	236.7	58.7	205.5
Queue Delay	0.0	0.0	0.0
Total Delay	236.7	58.7	205.5
Queue Length 50th (ft)	~1284	228	~1703
Queue Length 95th (ft)	#1546	m141	#1277
Internal Link Dist (ft)	170	755	924
Turn Bay Length (ft)			
Base Capacity (vph)	682	1309	957
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	1.43	0.32	1.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
7: Bridge St &

Major event inbound - manned













5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	110	97	284	411	8	185	169	686	29	108	1109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930			0.997				0.850		0.880	
Flt Protected	0.950			0.950			0.950				0.999	
Satd. Flow (prot)	1787	3324	0	1719	3430	0	1703	1792	1599	0	1521	0
Flt Permitted	0.404			0.599			0.204				0.986	
Satd. Flow (perm)	760	3324	0	1084	3430	0	366	1792	1599	0	1502	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			2				533		434	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	120	131	115	302	437	9	199	182	738	37	137	1404
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	246	0	302	446	0	199	182	738	0	1578	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

Major event inbound - manned

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	81	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	20.5	12.8		18.2	13.5		29.0	29.0	41.1		14.1	
Actuated g/C Ratio	0.31	0.20		0.28	0.21		0.44	0.44	0.63		0.22	
v/c Ratio	0.33	0.33		0.84	0.63		0.56	0.23	0.61		2.38	
Control Delay	16.9	13.7		43.9	31.6		18.4	12.5	4.5		640.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	16.9	13.7		43.9	31.6		18.4	12.5	4.5		640.2	
LOS	B	B		D	C		B	B	A		F	
Approach Delay		14.8			36.6			8.2			640.2	
Approach LOS		B			D			A			F	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 65.4

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 2.38

Intersection Signal Delay: 276.1

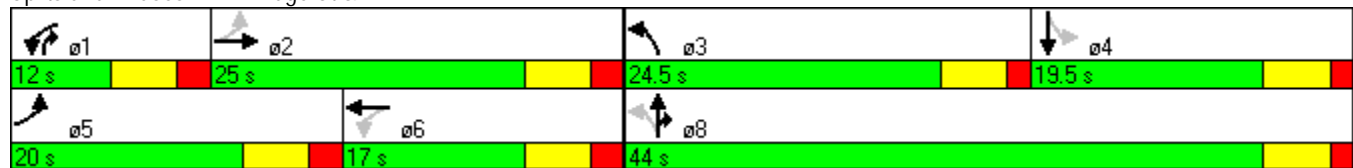
Intersection LOS: F

Intersection Capacity Utilization 140.7%

ICU Level of Service H

Analysis Period (min) 15









Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

Major event inbound - manned

5/28/2014

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	120	246	302	446	199	182	738	1578
v/c Ratio	0.33	0.33	0.84	0.63	0.56	0.23	0.61	2.38
Control Delay	16.9	13.7	43.9	31.6	18.4	12.5	4.5	640.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	13.7	43.9	31.6	18.4	12.5	4.5	640.2
Queue Length 50th (ft)	31	23	87	88	47	42	30	~925
Queue Length 95th (ft)	63	48	#254	#183	95	86	100	#1086
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	510	1053	360	710	553	1061	1205	664
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.23	0.84	0.63	0.36	0.17	0.61	2.38

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
11: Exit 7 Connector &

Major event inbound - manned

5/28/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	750	78	104	170	88	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.916			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1681	1698	0	1719	1538
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1787	1681	1698	0	1719	1538
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	1%	13%	5%	1%	5%	5%
Adj. Flow (vph)	904	94	130	213	95	645
Shared Lane Traffic (%)						
Lane Group Flow (vph)	904	94	342	0	95	645
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

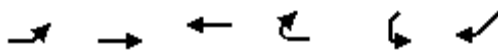
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	72.3%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis

11: Exit 7 Connector &

Major event inbound - manned

5/28/2014




















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	750	78	104	170	88	600
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	904	94	130	212	95	645
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	342				2137	236
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	342				2137	236
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	26				0	19
cM capacity (veh/h)	1222				14	795
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	904	94	342	95	645	
Volume Left	904	0	0	95	0	
Volume Right	0	0	212	0	645	
cSH	1222	1700	1700	14	795	
Volume to Capacity	0.74	0.06	0.20	6.87	0.81	
Queue Length 95th (ft)	180	0	0	Err	219	
Control Delay (s)	15.8	0.0	0.0	Err	25.8	
Lane LOS	C			F	D	
Approach Delay (s)	14.3		0.0	1301.5		
Approach LOS				F		
Intersection Summary						
Average Delay			469.8			
Intersection Capacity Utilization			72.3%		ICU Level of Service	C
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Major event inbound - manned













6/1/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	915	5	0	0	13	3	0	0	83	596	1904	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		20
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt					0.976				0.865			0.850
Flt Protected		0.953									0.988	
Satd. Flow (prot)	0	1787	0	0	1656	0	0	0	822	0	3507	1553
Flt Permitted		0.953									0.988	
Satd. Flow (perm)	0	1787	0	0	1656	0	0	0	822	0	3507	1553
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		550			106			548			511	
Travel Time (s)		12.5			2.4			12.5			11.6	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	1%	40%	40%	12%	12%	12%	25%	25%	100%	4%	1%	4%
Adj. Flow (vph)	1017	8	0	0	23	5	0	0	124	634	2026	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1025	0	0	28	0	0	0	124	0	2660	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split								Free	Perm		Perm
Protected Phases	4	4			8						2	
Permitted Phases									Free	2		2
Minimum Split (s)	6.0	6.0			6.0					20.0	20.0	20.0
Total Split (s)	52.0	52.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	90.0	90.0	90.0
Total Split (%)	34.7%	34.7%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	60.0%	60.0%	60.0%
Maximum Green (s)	50.0	50.0			6.0					88.0	88.0	88.0
Yellow Time (s)	2.0	2.0			2.0					2.0	2.0	2.0
All-Red Time (s)	0.0	0.0			0.0					0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	2.0	2.0	4.0	4.0	2.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)		50.0			6.0				150.0		88.0	88.0
Actuated g/C Ratio		0.33			0.04				1.00		0.59	0.59
v/c Ratio		1.72			0.42				0.15		1.29	0.00
Control Delay		362.5			89.8				0.4		164.7	13.0
Queue Delay		0.0			0.0				0.0		0.0	0.0
Total Delay		362.5			89.8				0.4		164.7	13.0

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Major event inbound - manned

6/1/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
LOS		F			F				A		F	B
Approach Delay		362.5			89.8						164.5	
Approach LOS		F			F						F	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.72

Intersection Signal Delay: 211.5

Intersection LOS: F

Intersection Capacity Utilization 134.2%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 12: Exit 7 Connector & Exit 7 Access

 8	 2	 4	
90 s		52 s	8 s

Queues

Major event inbound - manned

6/1/2014

12: Exit 7 Connector & Exit 7 Access



Lane Group	EBT	WBT	SER	NWT	NWR
Lane Group Flow (vph)	1025	28	124	2660	3
v/c Ratio	1.72	0.42	0.15	1.29	0.00
Control Delay	362.5	89.8	0.4	164.7	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	362.5	89.8	0.4	164.7	13.0
Queue Length 50th (ft)	~1475	27	0	~1741	1
Queue Length 95th (ft)	#1035	39	0	#1856	6
Internal Link Dist (ft)	470	26		431	
Turn Bay Length (ft)					20
Base Capacity (vph)	596	66	822	2057	911
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.72	0.42	0.15	1.29	0.00










Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

Major event inbound - manned

5/28/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	258	95	51	123	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.960		0.905			
Flt Protected	0.966					0.988
Satd. Flow (prot)	1709	0	1470	0	0	1251
Flt Permitted	0.966					0.988
Satd. Flow (perm)	1709	0	1470	0	0	1251
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	1%	8%	17%	17%	50%	50%
Adj. Flow (vph)	287	123	57	137	1	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	410	0	194	0	0	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	37.0%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

Major event inbound - manned











5/28/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	258	95	51	123	1	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	287	123	57	137	1	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	130	125			193	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	130	125			193	
tC, single (s)	6.4	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.7	
p0 queue free %	67	86			100	
cM capacity (veh/h)	865	910			1138	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	410	193	4			
Volume Left	287	0	1			
Volume Right	123	137	0			
cSH	878	1700	1138			
Volume to Capacity	0.47	0.11	0.00			
Queue Length 95th (ft)	63	0	0			
Control Delay (s)	12.6	0.0	2.7			
Lane LOS	B		A			
Approach Delay (s)	12.6	0.0	2.7			
Approach LOS	B					
Intersection Summary						
Average Delay		8.6				
Intersection Capacity Utilization		37.0%		ICU Level of Service		A
Analysis Period (min)		15				

Lanes, Volumes, Timings
24: State Fair Blvd & Brown - West

Major event inbound - manned

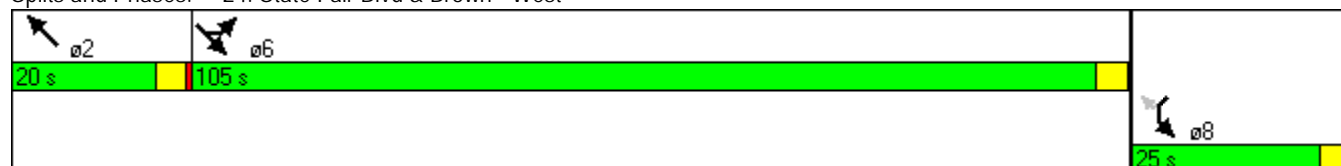
5/28/2014

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	1792	267	567	0	75	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt						
Flt Protected		0.958			0.950	
Satd. Flow (prot)	0	1800	3539	0	902	1863
Flt Permitted		0.958			0.950	
Satd. Flow (perm)	0	1800	3539	0	902	1863
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		572	2052		601	
Travel Time (s)		13.0	46.6		13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	2%	2%	2%	100%	2%
Adj. Flow (vph)	1991	297	630	0	83	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2288	630	0	83	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Split					Perm
Protected Phases	6	6	2		8	
Permitted Phases						8
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	105.0	105.0	20.0	0.0	25.0	25.0
Total Split (%)	70.0%	70.0%	13.3%	0.0%	16.7%	16.7%
Maximum Green (s)	101.0	101.0	16.0		21.0	21.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)		101.0	16.0		21.0	
Actuated g/C Ratio		0.67	0.11		0.14	
v/c Ratio		1.89	1.67		0.66	
Control Delay		422.6	351.8		85.9	
Queue Delay		0.0	0.0		0.0	
Total Delay		422.6	351.8		85.9	
LOS		F	F		F	
Approach Delay		422.6	351.8		85.9	
Approach LOS		F	F		F	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 0 (0%), Referenced to phase 2:NWT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.89
 Intersection Signal Delay: 398.4 Intersection LOS: F
 Intersection Capacity Utilization 143.1% ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 24: State Fair Blvd & Brown - West



Queues

Major event inbound - manned

24: State Fair Blvd & Brown - West

5/28/2014



Lane Group	SET	NWT	SWL
Lane Group Flow (vph)	2288	630	83
v/c Ratio	1.89	1.67	0.66
Control Delay	422.6	351.8	85.9
Queue Delay	0.0	0.0	0.0
Total Delay	422.6	351.8	85.9
Queue Length 50th (ft)	~3487	~471	78
Queue Length 95th (ft)	m#2167	#597	#156
Internal Link Dist (ft)	492	1972	521
Turn Bay Length (ft)			
Base Capacity (vph)	1212	377	126
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	1.89	1.67	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.










Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
26: State Fair Blvd & Brown - East

Major event inbound - manned

5/28/2014

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	308	567	1139	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.900			
Flt Protected						
Satd. Flow (prot)	0	1863	3206	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	3206	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2052	577		345	
Travel Time (s)		46.6	13.1		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	1%	2%	2%
Adj. Flow (vph)	0	342	630	1266	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	342	1896	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.7%			ICU Level of Service B		
Analysis Period (min)	15					




HCM Unsignalized Intersection Capacity Analysis

26: State Fair Blvd & Brown - East

Major event inbound - manned

5/28/2014



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	308	567	1139	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	342	630	1266	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1896				1605	948
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1896				1605	948
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	311				96	262
Direction, Lane #	SE 1	NW 1	NW 2	SW 1		
Volume Total	342	420	1476	0		
Volume Left	0	0	0	0		
Volume Right	0	0	1266	0		
cSH	311	1700	1700	1700		
Volume to Capacity	0.00	0.25	0.87	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS				A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS				A		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			55.7%		ICU Level of Service	B
Analysis Period (min)			15			

3: State Fair Blvd & Pumphouse Rd Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Total Delay (hr)	8.2	3.6	0.9	426.9	439.6
Delay / Veh (s)	51.0	51.4		4033.7	1310.0
Total Stops	256	260	0	1216	1732
Travel Dist (mi)	26.9	38.9	0.0	68.8	134.7
Travel Time (hr)	9.1	5.1	0.9	429.5	444.6
Avg Speed (mph)	3	8		2	3
Fuel Used (gal)	2.8	2.5	0.2	99.9	105.4
HC Emissions (g)	24	24	0	5	53
CO Emissions (g)	464	761	10	4846	6082
NOx Emissions (g)	54	83	0	43	180
Vehicles Entered	577	250	0	390	1217
Vehicles Exited	576	250	0	373	1199
Hourly Exit Rate	576	250	0	373	1199
Input Volume	876	378	4	1183	2442
% of Volume	66	66	0	32	49
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	2	793	795

5: SFB to 695SB-690 WB & State Fair Blvd Performance by movement

Movement	EBT	EBR	NWL	NWR	All
Total Delay (hr)	0.0	22.3	0.4	0.2	23.0
Delay / Veh (s)	44.7	85.1	5.6	6.3	62.8
Total Stops	1	1481	7	15	1504
Travel Dist (mi)	0.1	138.3	26.8	13.5	178.6
Travel Time (hr)	0.0	28.0	1.4	0.8	30.2
Avg Speed (mph)	5	6	20	18	7
Fuel Used (gal)	0.0	8.4	1.1	0.5	10.1
HC Emissions (g)	0	103	9	4	116
CO Emissions (g)	0	1857	353	147	2357
NOx Emissions (g)	0	155	41	19	215
Vehicles Entered	1	948	245	124	1318
Vehicles Exited	1	943	245	124	1313
Hourly Exit Rate	1	943	245	124	1313
Input Volume	6	2059	375	192	2633
% of Volume	17	46	65	65	50
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	7	0	0	7

6: SFB to 695SB-690 WB & SFB to 695 SB Performance by movement

Movement	NBT	All
Total Delay (hr)	0.0	0.0
Delay / Veh (s)	0.5	0.5
Total Stops	0	0
Travel Dist (mi)	6.9	6.9
Travel Time (hr)	0.5	0.5
Avg Speed (mph)	13	13
Fuel Used (gal)	0.6	0.6
HC Emissions (g)	6	6
CO Emissions (g)	300	300
NOx Emissions (g)	23	23
Vehicles Entered	124	124
Vehicles Exited	124	124
Hourly Exit Rate	124	124
Input Volume	192	192
% of Volume	65	65
Denied Entry Before	0	0
Denied Entry After	0	0

3: State Fair Blvd & Pumphouse Rd Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Total Delay (hr)	8.2	3.4	1.0	432.2	444.8
Delay / Veh (s)	51.1	50.9		4062.2	1328.9
Total Stops	263	246	0	1211	1720
Travel Dist (mi)	27.0	37.8	0.0	69.2	134.0
Travel Time (hr)	9.1	4.9	1.0	434.8	449.8
Avg Speed (mph)	3	8		2	3
Fuel Used (gal)	2.8	2.4	0.2	101.3	106.7
HC Emissions (g)	24	26	0	5	55
CO Emissions (g)	486	793	11	4906	6196
NOx Emissions (g)	60	87	0	45	191
Vehicles Entered	579	243	0	392	1214
Vehicles Exited	578	243	0	375	1196
Hourly Exit Rate	578	243	0	375	1196
Input Volume	876	378	4	1183	2442
% of Volume	66	64	0	32	49
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	2	798	800

5: SFB to 695SB-690 WB & State Fair Blvd Performance by movement

Movement	EBT	EBR	NWL	NWR	All
Total Delay (hr)	0.0	21.4	0.4	0.2	22.0
Delay / Veh (s)	21.8	81.1	5.7	6.6	60.5
Total Stops	1	1474	5	17	1497
Travel Dist (mi)	0.1	138.8	25.9	13.2	178.0
Travel Time (hr)	0.0	27.1	1.3	0.8	29.2
Avg Speed (mph)	9	6	19	17	7
Fuel Used (gal)	0.0	8.3	1.1	0.5	10.0
HC Emissions (g)	0	84	11	4	98
CO Emissions (g)	0	1620	386	140	2146
NOx Emissions (g)	0	141	45	18	203
Vehicles Entered	1	952	238	121	1312
Vehicles Exited	1	946	238	121	1306
Hourly Exit Rate	1	946	238	121	1306
Input Volume	6	2059	375	192	2633
% of Volume	17	46	63	63	50
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	4	0	0	4

6: SFB to 695SB-690 WB & SFB to 695 SB Performance by movement

Movement	NBT	All
Total Delay (hr)	0.0	0.0
Delay / Veh (s)	0.4	0.4
Total Stops	0	0
Travel Dist (mi)	6.7	6.7
Travel Time (hr)	0.5	0.5
Avg Speed (mph)	13	13
Fuel Used (gal)	0.6	0.6
HC Emissions (g)	6	6
CO Emissions (g)	293	293
NOx Emissions (g)	23	23
Vehicles Entered	121	121
Vehicles Exited	121	121
Hourly Exit Rate	121	121
Input Volume	192	192
% of Volume	63	63
Denied Entry Before	0	0
Denied Entry After	0	0

7: Bridge St & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.3	2.7	0.4	3.2	2.2	0.0	34.2	33.8	130.2	1.0	3.9	21.6
Delay / Veh (s)	18.8	158.4	33.4	54.9	24.3	4.6	1150.6	1398.7	1154.8	143.4	128.4	75.0
Total Stops	45	57	43	228	221	0	423	354	1639	61	250	1446
Travel Dist (mi)	7.5	9.4	7.1	49.4	79.2	0.9	37.9	30.7	145.6	7.7	31.4	252.8
Travel Time (hr)	0.5	3.0	0.7	5.2	5.3	0.0	35.5	34.8	135.5	1.3	5.0	30.1
Avg Speed (mph)	14	3	10	10	15	20	4	3	4	6	6	8
Fuel Used (gal)	0.2	0.8	0.3	2.6	3.5	0.0	8.8	8.2	33.8	0.4	1.8	12.0
HC Emissions (g)	2	3	2	36	78	0	71	163	42	0	10	280
CO Emissions (g)	39	85	38	973	1869	8	1321	2450	2191	34	266	4646
NOx Emissions (g)	6	9	6	106	220	1	87	191	101	3	32	611
Vehicles Entered	49	62	46	209	330	4	110	89	418	27	111	1049
Vehicles Exited	49	61	45	207	330	4	104	85	395	26	107	1024
Hourly Exit Rate	49	61	45	207	330	4	104	85	395	26	107	1024
Input Volume	101	113	97	284	412	8	185	169	686	29	108	1109
% of Volume	49	54	46	73	80	50	56	50	58	90	99	92
Denied Entry Before	0	0	0	0	0	0	0	0	1	0	0	0
Denied Entry After	0	0	0	0	0	0	70	65	271	0	0	0

7: Bridge St & Performance by movement

Movement	All
Total Delay (hr)	233.5
Delay / Veh (s)	340.4
Total Stops	4767
Travel Dist (mi)	659.6
Travel Time (hr)	256.9
Avg Speed (mph)	6
Fuel Used (gal)	72.6
HC Emissions (g)	687
CO Emissions (g)	13921
NOx Emissions (g)	1373
Vehicles Entered	2504
Vehicles Exited	2437
Hourly Exit Rate	2437
Input Volume	3301
% of Volume	74
Denied Entry Before	1
Denied Entry After	406

11: Exit 7 Connector & Performance by movement

Movement	EBL	EBT	WBT	WBR	SWL	SWT	SWR	All
Total Delay (hr)	58.3	2.7	0.5	0.9	0.3	0.2	0.6	63.5
Delay / Veh (s)	520.5	190.8	14.9	19.3	20.1	10.0	5.0	175.7
Total Stops	1390	105	46	97	64	20	14	1736
Travel Dist (mi)	93.3	10.3	14.7	21.9	5.2	4.0	35.2	184.8
Travel Time (hr)	61.9	3.0	1.0	1.8	0.6	0.4	2.2	71.0
Avg Speed (mph)	2	4	15	12	9	9	16	3
Fuel Used (gal)	17.0	1.1	0.5	0.7	0.3	0.2	1.4	21.2
HC Emissions (g)	31	27	8	2	5	54	39	166
CO Emissions (g)	1656	557	148	62	151	800	935	4309
NOx Emissions (g)	132	65	18	8	13	110	104	450
Vehicles Entered	438	52	117	172	62	70	426	1337
Vehicles Exited	368	48	118	172	62	70	425	1263
Hourly Exit Rate	368	48	118	172	62	70	425	1263
Input Volume	750	85	104	170	88	75	600	1872
% of Volume	49	56	113	101	70	93	71	67
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

12: Exit 7 Connector & Exit 7 Access Performance by movement

Movement	EBL	EBT	WBT	WBR	SER	NWL	NWT	NWR	All
Total Delay (hr)	12.0	0.3	0.1	0.1	0.0	3.1	9.1	0.0	24.8
Delay / Veh (s)	80.7	171.3	40.6	57.3	1.4	28.6	27.7	41.6	40.4
Total Stops	482	6	12	4	0	253	751	8	1516
Travel Dist (mi)	51.6	0.5	0.1	0.0	4.0	36.8	111.6	0.4	205.0
Travel Time (hr)	14.4	0.3	0.2	0.1	0.2	4.5	12.8	0.1	32.5
Avg Speed (mph)	4	3	1	1	21	8	9	6	6
Fuel Used (gal)	4.8	0.1	0.0	0.0	0.1	2.0	6.2	0.0	13.3
HC Emissions (g)	15	8	1	0	13	27	33	0	97
CO Emissions (g)	611	110	18	1	183	667	1201	3	2794
NOx Emissions (g)	68	9	2	0	26	81	150	0	337
Vehicles Entered	536	6	13	5	71	385	1184	4	2204
Vehicles Exited	538	6	13	5	72	388	1181	4	2207
Hourly Exit Rate	538	6	13	5	72	388	1181	4	2207
Input Volume	915	6	13	3	83	596	1904	3	3523
% of Volume	59	100	100	167	87	65	62	133	63
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0

17: Willis Ave & State Fair Blvd Performance by movement

Movement	NBL	NBR	SET	SER	NWT	All
Total Delay (hr)	0.6	0.2	0.0	0.1	0.0	0.8
Delay / Veh (s)	7.4	5.8	4.1	2.1	0.4	5.9
Total Stops	275	117	0	0	0	392
Travel Dist (mi)	37.7	16.2	16.0	44.6	0.9	115.4
Travel Time (hr)	2.0	0.8	0.6	1.6	0.0	5.1
Avg Speed (mph)	19	19	28	27	31	23
Fuel Used (gal)	1.1	0.5	0.4	1.2	0.0	3.2
HC Emissions (g)	5	10	16	52	4	88
CO Emissions (g)	258	226	245	786	60	1575
NOx Emissions (g)	18	26	42	131	13	230
Vehicles Entered	275	118	33	91	4	521
Vehicles Exited	275	117	34	92	4	522
Hourly Exit Rate	275	117	34	92	4	522
Input Volume	258	95	59	123	2	538
% of Volume	107	123	58	75	200	97
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0

24: State Fair Blvd & Brown - West Performance by movement

Movement	SEL	SET	NWT	SWL	All
Total Delay (hr)	6.0	0.9	65.6	1.4	73.8
Delay / Veh (s)	25.9	25.1	554.3	68.0	182.6
Total Stops	457	65	1931	66	2519
Travel Dist (mi)	96.7	13.9	170.8	7.7	289.0
Travel Time (hr)	11.2	1.6	71.3	1.7	85.8
Avg Speed (mph)	9	9	2	5	3
Fuel Used (gal)	5.5	0.8	20.0	0.5	26.8
HC Emissions (g)	31	24	48	123	226
CO Emissions (g)	1227	496	1744	1878	5344
NOx Emissions (g)	143	67	149	238	598
Vehicles Entered	833	126	496	72	1527
Vehicles Exited	834	124	356	72	1386
Hourly Exit Rate	834	124	356	72	1386
Input Volume	1792	285	567	75	2719
% of Volume	47	44	63	96	51
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

26: State Fair Blvd & Brown - East Performance by movement

Movement	SET	NWT	NWR	All
Total Delay (hr)	0.1	0.5	2.0	2.6
Delay / Veh (s)	1.5	3.3	7.2	5.2
Total Stops	0	3	16	19
Travel Dist (mi)	66.4	56.5	99.6	222.6
Travel Time (hr)	2.4	2.4	6.0	10.9
Avg Speed (mph)	28	24	17	21
Fuel Used (gal)	2.4	2.0	2.6	7.0
HC Emissions (g)	203	72	12	287
CO Emissions (g)	3524	1586	403	5513
NOx Emissions (g)	534	189	44	767
Vehicles Entered	222	595	975	1792
Vehicles Exited	224	594	970	1788
Hourly Exit Rate	224	594	970	1788
Input Volume	382	688	1139	2209
% of Volume	59	86	85	81
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Total Delay (hr)	1531.9
Delay / Veh (s)	1087.5
Total Stops	17151
Travel Dist (mi)	3683.7
Travel Time (hr)	1668.7
Avg Speed (mph)	7
Fuel Used (gal)	476.4
HC Emissions (g)	3406
CO Emissions (g)	83303
NOx Emissions (g)	8116
Vehicles Entered	5252
Vehicles Exited	4891
Hourly Exit Rate	4891
Input Volume	34755
% of Volume	14
Denied Entry Before	25
Denied Entry After	2414

Queuing and Blocking Report
A1 large event - manned control

6/1/2014

Intersection: 3: State Fair Blvd & Pumphouse Rd

Movement	EB	B22	WB	WB	NB
Directions Served	TR	T	LT	T	LR
Maximum Queue (ft)	299	1097	308	251	978
Average Queue (ft)	262	1035	211	76	972
95th Queue (ft)	276	1208	298	234	1016
Link Distance (ft)	191	1045	722	722	963
Upstream Blk Time (%)	64	61			78
Queuing Penalty (veh)	0	0			0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: SFB to 695SB-690 WB & State Fair Blvd

Movement	EB	NW	NW
Directions Served	R	L	LR
Maximum Queue (ft)	736	31	57
Average Queue (ft)	727	1	6
95th Queue (ft)	734	10	31
Link Distance (ft)	722	511	511
Upstream Blk Time (%)	29		
Queuing Penalty (veh)	603		
Storage Bay Dist (ft)			
Storage Blk Time (%)	67		
Queuing Penalty (veh)	0		

Intersection: 6: SFB to 695SB-690 WB & SFB to 695 SB

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report
A1 large event - manned control

6/1/2014

Intersection: 7: Bridge St &

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	B9
Directions Served	L	T	TR	L	T	TR	L	T	R	LTR	T
Maximum Queue (ft)	113	97	128	225	386	332	125	1912	54	1552	1583
Average Queue (ft)	20	49	32	120	102	56	84	1535	45	1320	772
95th Queue (ft)	54	101	88	228	266	151	163	2594	51	2042	1852
Link Distance (ft)		742	742		1167	1167		1878		1462	1520
Upstream Blk Time (%)								51		17	8
Queuing Penalty (veh)								0		0	0
Storage Bay Dist (ft)	100			200			100		20		
Storage Blk Time (%)	0	6		10			2	16	67		
Queuing Penalty (veh)	0	6		20			15	142	236		

Intersection: 11: Exit 7 Connector &

Movement	EB	EB	WB	SW	SW
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	1255	1219	362	70	190
Average Queue (ft)	1107	1075	125	31	13
95th Queue (ft)	1435	1520	266	55	79
Link Distance (ft)	1167	1167	628	445	445
Upstream Blk Time (%)	52	50			
Queuing Penalty (veh)	217	204			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 12: Exit 7 Connector & Exit 7 Access

Movement	EB	WB	NW	NW	NW	B28
Directions Served	LT	TR	LT	T	R	T
Maximum Queue (ft)	471	60	508	502	32	510
Average Queue (ft)	457	14	457	433	4	340
95th Queue (ft)	470	41	552	520	22	618
Link Distance (ft)	445	36	430	430		471
Upstream Blk Time (%)	46	5	8	5		7
Queuing Penalty (veh)	426	0	0	0		0
Storage Bay Dist (ft)					20	
Storage Blk Time (%)				39	0	
Queuing Penalty (veh)				1	1	

Queuing and Blocking Report

A1 large event - manned control

6/1/2014

Intersection: 17: Willis Ave & State Fair Blvd

Movement	NB
Directions Served	LR
Maximum Queue (ft)	189
Average Queue (ft)	68
95th Queue (ft)	120
Link Distance (ft)	722
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: State Fair Blvd & Brown - West

Movement	SE	NW	NW	SW
Directions Served	LT	T	TR	L
Maximum Queue (ft)	527	1724	1761	327
Average Queue (ft)	515	871	885	140
95th Queue (ft)	530	1648	1683	263
Link Distance (ft)	511	1995	1995	561
Upstream Blk Time (%)	13			
Queuing Penalty (veh)	275			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 26: State Fair Blvd & Brown - East

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)











Network Summary

Network wide Queuing Penalty: 2146

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Large event inbound - manned/mitigation

5/30/2014

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	876	1	0	375	4	1183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	1000
Storage Lanes		0	0		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt					0.851	0.850
Flt Protected						
Satd. Flow (prot)	1827	0	0	3505	1617	1534
Flt Permitted						
Satd. Flow (perm)	1827	0	0	3505	1617	1534
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					4	4
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1628	
Travel Time (s)	5.7			19.0	37.0	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	973	1	0	421	6	1314
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	974	0	0	421	663	657
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Minimum Split (s)	20.0		20.0	20.0	20.0	20.0
Total Split (s)	40.0	0.0	40.0	40.0	110.0	110.0
Total Split (%)	26.7%	0.0%	26.7%	26.7%	73.3%	73.3%
Maximum Green (s)	36.0		36.0	36.0	106.0	106.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0		5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effect Green (s)	36.0			36.0	106.0	106.0
Actuated g/C Ratio	0.24			0.24	0.71	0.71
v/c Ratio	2.22			0.50	0.58	0.61

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Large event inbound - manned/mitigation

5/30/2014

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Control Delay	584.4			74.7	13.3	14.1
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	584.4			74.7	13.3	14.1
LOS	F			E	B	B
Approach Delay	584.4			74.7	13.7	
Approach LOS	F			E	B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 2.22

Intersection Signal Delay: 227.9

Intersection LOS: F

Intersection Capacity Utilization 101.7%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 3: State Fair Blvd & Pumphouse Rd

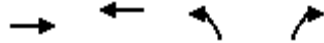
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	40 s

Queues

Large event inbound - manned/mitigation

3: State Fair Blvd & Pumphouse Rd

5/30/2014



Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	974	421	663	657
v/c Ratio	2.22	0.50	0.58	0.61
Control Delay	584.4	74.7	13.3	14.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	584.4	74.7	13.3	14.1
Queue Length 50th (ft)	~1531	230	295	317
Queue Length 95th (ft)	#1793	m225	251	436
Internal Link Dist (ft)	170	755	1548	
Turn Bay Length (ft)				1000
Base Capacity (vph)	438	841	1144	1085
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	2.22	0.50	0.58	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
7: Bridge St &

Large event inbound - manned/mitigation













5/30/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	110	97	284	411	8	185	169	686	29	108	1109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930			0.997				0.850		0.880	
Flt Protected	0.950			0.950			0.950				0.999	
Satd. Flow (prot)	1787	3324	0	1719	3430	0	1703	1792	1599	0	1521	0
Flt Permitted	0.404			0.599			0.204				0.986	
Satd. Flow (perm)	760	3324	0	1084	3430	0	366	1792	1599	0	1502	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			2				533		434	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	120	131	115	302	437	9	199	182	738	37	137	1404
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	246	0	302	446	0	199	182	738	0	1578	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

Large event inbound - manned/mitigation

5/30/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	81	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	20.5	12.8		18.2	13.5		29.0	29.0	41.1		14.1	
Actuated g/C Ratio	0.31	0.20		0.28	0.21		0.44	0.44	0.63		0.22	
v/c Ratio	0.33	0.33		0.84	0.63		0.56	0.23	0.61		2.38	
Control Delay	16.9	13.7		43.9	31.6		18.4	12.5	4.5		640.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	16.9	13.7		43.9	31.6		18.4	12.5	4.5		640.2	
LOS	B	B		D	C		B	B	A		F	
Approach Delay		14.8			36.6			8.2			640.2	
Approach LOS		B			D			A			F	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 65.4

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 2.38

Intersection Signal Delay: 276.1

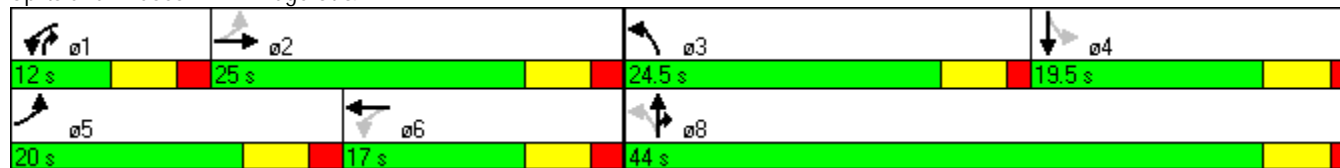
Intersection LOS: F

Intersection Capacity Utilization 140.7%

ICU Level of Service H

Analysis Period (min) 15









Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

Large event inbound - manned/mitigation

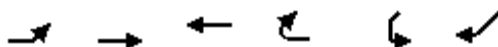
5/30/2014

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	120	246	302	446	199	182	738	1578
v/c Ratio	0.33	0.33	0.84	0.63	0.56	0.23	0.61	2.38
Control Delay	16.9	13.7	43.9	31.6	18.4	12.5	4.5	640.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	13.7	43.9	31.6	18.4	12.5	4.5	640.2
Queue Length 50th (ft)	31	23	87	88	47	42	30	~925
Queue Length 95th (ft)	63	48	#254	#183	95	86	100	#1086
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	510	1053	360	710	553	1061	1205	664
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.23	0.84	0.63	0.36	0.17	0.61	2.38
Intersection Summary								
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.								
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.								

Lanes, Volumes, Timings
11: Exit 7 Connector &

Large event inbound - manned/mitigation

5/30/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	750	78	104	170	88	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Frt			0.916		0.888	0.850
Flt Protected	0.950				0.987	
Satd. Flow (prot)	1787	1681	1698	0	1586	1461
Flt Permitted	0.950				0.987	
Satd. Flow (perm)	1787	1681	1698	0	1586	1461
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	775		550	
Travel Time (s)		27.8	17.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	1%	13%	5%	1%	5%	5%
Adj. Flow (vph)	904	94	130	213	95	645
Shared Lane Traffic (%)						43%
Lane Group Flow (vph)	904	94	342	0	372	368
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 84.6% ICU Level of Service E

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

11: Exit 7 Connector &

Large event inbound - manned/mitigation

5/30/2014





















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	750	78	104	170	88	600
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	904	94	130	212	95	645
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	342				2137	236
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	342				2137	236
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	26				0	19
cM capacity (veh/h)	1222				14	795
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	904	94	342	310	430	
Volume Left	904	0	0	95	0	
Volume Right	0	0	212	215	430	
cSH	1222	1700	1700	43	795	
Volume to Capacity	0.74	0.06	0.20	7.14	0.54	
Queue Length 95th (ft)	180	0	0	Err	82	
Control Delay (s)	15.8	0.0	0.0	Err	14.7	
Lane LOS	C			F	B	
Approach Delay (s)	14.3		0.0	4194.2		
Approach LOS				F		
Intersection Summary						
Average Delay			1498.7			
Intersection Capacity Utilization			84.6%		ICU Level of Service	E
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Large event inbound - manned/mitigation













5/30/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	915	5	0	0	13	3	0	0	83	596	1904	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	400		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.976				0.865			
Flt Protected		0.953									0.950	
Satd. Flow (prot)	0	1787	0	0	1656	0	0	0	822	1736	3574	0
Flt Permitted		0.953									0.950	
Satd. Flow (perm)	0	1787	0	0	1656	0	0	0	822	1736	3574	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		550			106			548			810	
Travel Time (s)		12.5			2.4			12.5			18.4	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	1%	40%	40%	12%	12%	12%	25%	25%	100%	4%	1%	4%
Adj. Flow (vph)	1017	8	0	0	23	5	0	0	124	634	2026	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1025	0	0	28	0	0	0	124	634	2029	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split								Free	Perm		
Protected Phases	4	4			8							2
Permitted Phases									Free	2		
Minimum Split (s)	6.0	6.0			6.0					20.0	20.0	
Total Split (s)	52.0	52.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	90.0	90.0	0.0
Total Split (%)	34.7%	34.7%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	60.0%	60.0%	0.0%
Maximum Green (s)	50.0	50.0			6.0					88.0	88.0	
Yellow Time (s)	2.0	2.0			2.0					2.0	2.0	
All-Red Time (s)	0.0	0.0			0.0					0.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	2.0	2.0	4.0	4.0	2.0	4.0	4.0	4.0	4.0	2.0	2.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)		50.0			6.0				150.0	88.0	88.0	
Actuated g/C Ratio		0.33			0.04				1.00	0.59	0.59	
v/c Ratio		1.72			0.42				0.15	0.62	0.97	
Control Delay		362.5			89.8				0.4	23.6	43.2	
Queue Delay		0.0			0.0				0.0	0.0	0.0	
Total Delay		362.5			89.8				0.4	23.6	43.2	

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Large event inbound - manned/mitigation

5/30/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
LOS		F			F				A	C	D	
Approach Delay		362.5			89.8						38.5	
Approach LOS		F			F						D	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:NWTL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.72

Intersection Signal Delay: 124.1

Intersection LOS: F

Intersection Capacity Utilization 117.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 12: Exit 7 Connector & Exit 7 Access

 8	 2	 4	
90 s		52 s	8 s

Queues

Large event inbound - manned/mitigation

12: Exit 7 Connector & Exit 7 Access

5/30/2014



Lane Group	EBT	WBT	SER	NWL	NWT
Lane Group Flow (vph)	1025	28	124	634	2029
v/c Ratio	1.72	0.42	0.15	0.62	0.97
Control Delay	362.5	89.8	0.4	23.6	43.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	362.5	89.8	0.4	23.6	43.2
Queue Length 50th (ft)	~1475	27	0	389	961
Queue Length 95th (ft)	#1035	39	0	517	#1179
Internal Link Dist (ft)	470	26			730
Turn Bay Length (ft)				400	
Base Capacity (vph)	596	66	822	1018	2097
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.72	0.42	0.15	0.62	0.97










Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

Large event inbound - manned/mitigation

5/30/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	258	95	51	123	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.960		0.905			
Flt Protected	0.966					0.988
Satd. Flow (prot)	1709	0	1470	0	0	1251
Flt Permitted	0.966					0.988
Satd. Flow (perm)	1709	0	1470	0	0	1251
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	1%	8%	17%	17%	50%	50%
Adj. Flow (vph)	287	123	57	137	1	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	410	0	194	0	0	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	37.0%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

Large event inbound - manned/mitigation












5/30/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	258	95	51	123	1	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	287	123	57	137	1	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	130	125			193	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	130	125			193	
tC, single (s)	6.4	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.7	
p0 queue free %	67	86			100	
cM capacity (veh/h)	865	910			1138	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	410	193	4			
Volume Left	287	0	1			
Volume Right	123	137	0			
cSH	878	1700	1138			
Volume to Capacity	0.47	0.11	0.00			
Queue Length 95th (ft)	63	0	0			
Control Delay (s)	12.6	0.0	2.7			
Lane LOS	B		A			
Approach Delay (s)	12.6	0.0	2.7			
Approach LOS	B					
Intersection Summary						
Average Delay		8.6				
Intersection Capacity Utilization		37.0%		ICU Level of Service		A
Analysis Period (min)		15				

Lanes, Volumes, Timings
24: State Fair Blvd & Brown - West

Large event inbound - manned/mitigation

5/30/2014

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	1792	267	567	0	75	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected	0.950	0.964			0.950	
Satd. Flow (prot)	1698	1718	3539	0	902	1863
Flt Permitted	0.950	0.964			0.950	
Satd. Flow (perm)	1698	1718	3539	0	902	1863
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		572	2052		601	
Travel Time (s)		13.0	46.6		13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	2%	2%	2%	100%	2%
Adj. Flow (vph)	1991	297	630	0	83	0
Shared Lane Traffic (%)	43%					
Lane Group Flow (vph)	1135	1153	630	0	83	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Split					Perm
Protected Phases	6	6	2		8	
Permitted Phases						8
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0
Total Split (s)	100.0	100.0	30.0	0.0	20.0	20.0
Total Split (%)	66.7%	66.7%	20.0%	0.0%	13.3%	13.3%
Maximum Green (s)	96.0	96.0	26.0		16.0	16.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	96.0	96.0	26.0		16.0	
Actuated g/C Ratio	0.64	0.64	0.17		0.11	
v/c Ratio	1.04	1.05	1.03		0.86	
Control Delay	59.4	61.0	103.1		125.3	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	59.4	61.0	103.1		125.3	
LOS	E	E	F		F	
Approach Delay		60.2	103.1		125.3	
Approach LOS		E	F		F	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:NWT, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 71.0

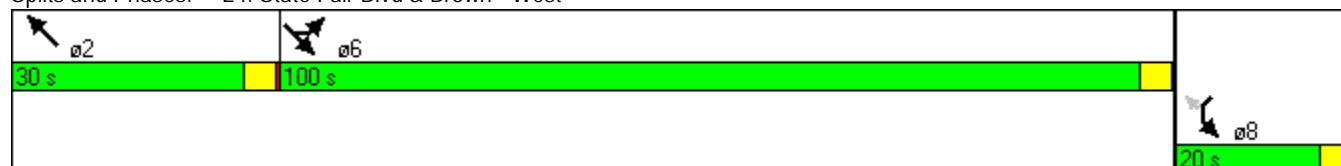
Intersection LOS: E

Intersection Capacity Utilization 86.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 24: State Fair Blvd & Brown - West



Queues

Large event inbound - manned/mitigation

24: State Fair Blvd & Brown - West

5/30/2014



Lane Group	SEL	SET	NWT	SWL
Lane Group Flow (vph)	1135	1153	630	83
v/c Ratio	1.04	1.05	1.03	0.86
Control Delay	59.4	61.0	103.1	125.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	59.4	61.0	103.1	125.3
Queue Length 50th (ft)	~1277	~1301	~345	81
Queue Length 95th (ft)	m932	m949	#472	#186
Internal Link Dist (ft)		492	1972	521
Turn Bay Length (ft)				
Base Capacity (vph)	1087	1100	613	96
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.04	1.05	1.03	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
26: State Fair Blvd & Brown - East

Large event inbound - manned/mitigation

5/30/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	308	567	1139	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.900			
Flt Protected						
Satd. Flow (prot)	0	1863	3206	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	3206	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2052	577		345	
Travel Time (s)		46.6	13.1		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	1%	2%	2%
Adj. Flow (vph)	0	342	630	1266	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	342	1896	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 55.7% ICU Level of Service B

Analysis Period (min) 15




HCM Unsignalized Intersection Capacity Analysis

26: State Fair Blvd & Brown - East

Large event inbound - manned/mitigation

5/30/2014



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	308	567	1139	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	342	630	1266	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1896				1605	948
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1896				1605	948
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	311				96	262
Direction, Lane #	SE 1	NW 1	NW 2	SW 1		
Volume Total	342	420	1476	0		
Volume Left	0	0	0	0		
Volume Right	0	0	1266	0		
cSH	311	1700	1700	1700		
Volume to Capacity	0.00	0.25	0.87	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS				A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS				A		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			55.7%	ICU Level of Service		B
Analysis Period (min)			15			

3: State Fair Blvd & Pumphouse Rd Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Total Delay (hr)	9.2	5.8	0.0	4.0	19.1
Delay / Veh (s)	79.3	69.1	25.7	11.9	35.2
Total Stops	258	308	2	426	994
Travel Dist (mi)	19.4	46.7	1.2	369.1	436.4
Travel Time (hr)	9.9	7.6	0.1	17.5	35.0
Avg Speed (mph)	2	6	18	22	13
Fuel Used (gal)	2.9	3.3	0.0	10.7	16.9
HC Emissions (g)	15	30	0	44	89
CO Emissions (g)	352	926	3	1439	2721
NOx Emissions (g)	38	103	1	147	289
Vehicles Entered	419	300	4	1231	1954
Vehicles Exited	419	300	4	1220	1943
Hourly Exit Rate	419	300	4	1220	1943
Input Volume	876	378	4	1183	2442
% of Volume	48	79	100	103	80
Denied Entry Before	0	0	0	1	1
Denied Entry After	0	0	0	0	0

5: SFB to 695SB-690 WB & State Fair Blvd Performance by movement

Movement	EBT	EBR	NWL	NWR	All
Total Delay (hr)	0.0	2.8	0.5	0.3	3.6
Delay / Veh (s)	1.8	6.2	6.2	6.6	6.2
Total Stops	0	382	5	14	401
Travel Dist (mi)	0.6	239.7	33.2	19.2	292.6
Travel Time (hr)	0.0	13.2	1.7	1.1	16.1
Avg Speed (mph)	20	18	19	18	18
Fuel Used (gal)	0.0	9.5	1.4	0.8	11.6
HC Emissions (g)	0	78	13	8	100
CO Emissions (g)	12	3609	420	232	4273
NOx Emissions (g)	1	317	52	31	401
Vehicles Entered	8	1637	297	173	2115
Vehicles Exited	7	1640	297	173	2117
Hourly Exit Rate	7	1640	297	173	2117
Input Volume	6	2059	375	192	2633
% of Volume	117	80	79	90	80
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

6: SFB to 695SB-690 WB & SFB to 695 SB Performance by movement

Movement	NBT	All
Total Delay (hr)	0.0	0.0
Delay / Veh (s)	0.4	0.4
Total Stops	0	0
Travel Dist (mi)	9.4	9.4
Travel Time (hr)	0.7	0.7
Avg Speed (mph)	14	14
Fuel Used (gal)	0.8	0.8
HC Emissions (g)	12	12
CO Emissions (g)	473	473
NOx Emissions (g)	40	40
Vehicles Entered	173	173
Vehicles Exited	173	173
Hourly Exit Rate	173	173
Input Volume	192	192
% of Volume	90	90
Denied Entry Before	0	0
Denied Entry After	0	0

7: Bridge St & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.6	2.5	1.2	6.2	2.1	0.0	30.4	35.3	130.0	0.9	4.0	24.0
Delay / Veh (s)	25.9	125.7	54.1	100.4	23.9	2.1	918.6	1165.8	1212.0	163.9	149.5	86.9
Total Stops	85	74	72	311	236	1	451	480	1629	54	243	1675
Travel Dist (mi)	12.9	11.7	12.9	52.4	74.7	1.6	42.6	39.7	137.3	6.0	28.1	243.5
Travel Time (hr)	1.1	2.9	1.8	8.4	5.0	0.1	31.9	36.6	134.9	1.1	5.0	32.2
Avg Speed (mph)	12	4	7	6	15	23	4	3	4	5	6	8
Fuel Used (gal)	0.5	0.9	0.6	3.4	3.4	0.1	7.9	9.2	33.6	0.4	1.8	12.4
HC Emissions (g)	1	1	1	74	89	0	114	61	71	0	36	299
CO Emissions (g)	45	70	56	1594	2023	20	1859	1277	2562	28	607	4911
NOx Emissions (g)	6	5	5	179	245	1	161	107	137	3	78	641
Vehicles Entered	85	76	83	224	319	7	124	113	398	21	98	1007
Vehicles Exited	84	71	81	224	312	7	115	106	375	20	97	986
Hourly Exit Rate	84	71	81	224	312	7	115	106	375	20	97	986
Input Volume	101	113	97	284	412	8	185	169	686	29	108	1109
% of Volume	83	63	84	79	76	88	62	63	55	69	90	89
Denied Entry Before	0	0	0	0	0	0	1	0	2	0	0	0
Denied Entry After	0	0	0	0	0	0	57	65	283	0	0	0

7: Bridge St & Performance by movement

Movement	All
Total Delay (hr)	237.3
Delay / Veh (s)	339.5
Total Stops	5311
Travel Dist (mi)	663.3
Travel Time (hr)	260.9
Avg Speed (mph)	6
Fuel Used (gal)	74.0
HC Emissions (g)	749
CO Emissions (g)	15053
NOx Emissions (g)	1568
Vehicles Entered	2555
Vehicles Exited	2478
Hourly Exit Rate	2478
Input Volume	3301
% of Volume	75
Denied Entry Before	3
Denied Entry After	405

11: Exit 7 Connector & Performance by movement

Movement	EBL	EBT	WBT	WBR	SWL	SWT	SWR	All
Total Delay (hr)	55.1	2.7	0.4	0.9	0.6	0.1	1.2	61.1
Delay / Veh (s)	511.6	194.5	14.0	17.7	32.7	8.7	9.7	170.0
Total Stops	1365	119	39	108	61	3	470	2165
Travel Dist (mi)	87.2	10.3	14.2	25.6	5.7	3.1	40.6	186.7
Travel Time (hr)	58.5	3.1	0.9	1.9	0.8	0.3	3.3	68.9
Avg Speed (mph)	1	4	16	13	7	10	12	3
Fuel Used (gal)	16.1	1.1	0.4	0.8	0.3	0.2	1.9	20.9
HC Emissions (g)	32	42	8	4	1	50	64	201
CO Emissions (g)	1645	798	158	86	72	735	1383	4877
NOx Emissions (g)	132	87	21	11	6	101	159	516
Vehicles Entered	423	51	105	191	62	55	443	1330
Vehicles Exited	354	50	106	187	61	54	444	1256
Hourly Exit Rate	354	50	106	187	61	54	444	1256
Input Volume	750	85	104	170	88	75	600	1872
% of Volume	47	59	102	110	69	72	74	67
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

12: Exit 7 Connector & Exit 7 Access Performance by movement

Movement	EBL	EBT	WBT	WBR	SER	NWL	NWT	NWR	All
Total Delay (hr)	11.5	0.1	0.2	0.0	0.0	2.3	7.6	0.0	21.6
Delay / Veh (s)	76.9	90.9	60.1	8.2	1.6	20.0	20.8	6.9	33.2
Total Stops	475	3	9	0	0	208	689	1	1385
Travel Dist (mi)	52.7	0.3	0.1	0.0	4.2	62.2	196.6	0.4	316.5
Travel Time (hr)	13.9	0.1	0.2	0.0	0.2	4.6	14.2	0.0	33.2
Avg Speed (mph)	4	3	1	3	20	14	14	19	10
Fuel Used (gal)	4.7	0.0	0.0	0.0	0.1	2.4	7.6	0.0	14.9
HC Emissions (g)	15	2	3	0	18	32	51	0	121
CO Emissions (g)	621	34	44	0	265	793	1564	2	3323
NOx Emissions (g)	70	4	4	0	38	91	176	0	383
Vehicles Entered	539	3	12	1	74	409	1310	3	2351
Vehicles Exited	533	3	12	1	74	410	1309	3	2345
Hourly Exit Rate	533	3	12	1	74	410	1309	3	2345
Input Volume	915	6	13	3	83	596	1904	3	3523
% of Volume	58	50	92	33	89	69	69	100	67
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0

17: Willis Ave & State Fair Blvd Performance by movement

Movement	NBL	NBR	SET	SER	NWL	NWT	All
Total Delay (hr)	0.7	0.2	0.0	0.0	0.0	0.0	1.0
Delay / Veh (s)	8.5	6.9	2.8	1.0	2.0	0.1	6.4
Total Stops	286	117	0	0	0	0	403
Travel Dist (mi)	39.8	16.1	20.3	40.7	0.2	0.2	117.4
Travel Time (hr)	2.2	0.9	0.7	1.5	0.0	0.0	5.2
Avg Speed (mph)	19	19	28	28	27	29	23
Fuel Used (gal)	1.2	0.5	0.6	1.1	0.0	0.0	3.4
HC Emissions (g)	7	13	32	56	2	2	113
CO Emissions (g)	322	274	471	863	30	29	1989
NOx Emissions (g)	23	35	79	148	5	5	295
Vehicles Entered	290	116	44	86	1	1	538
Vehicles Exited	287	117	44	86	1	1	536
Hourly Exit Rate	287	117	44	86	1	1	536
Input Volume	258	95	59	123	1	2	538
% of Volume	111	123	75	70	100	50	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

24: State Fair Blvd & Brown - West Performance by movement

Movement	SEL	SET	NWT	SWL	All
Total Delay (hr)	7.2	1.3	8.6	1.3	18.4
Delay / Veh (s)	17.9	21.7	65.4	79.2	30.2
Total Stops	786	171	432	58	1447
Travel Dist (mi)	163.7	24.5	185.6	6.2	380.0
Travel Time (hr)	15.8	2.5	14.8	1.6	34.7
Avg Speed (mph)	10	10	13	4	11
Fuel Used (gal)	8.8	1.3	7.2	0.4	17.7
HC Emissions (g)	38	23	49	88	198
CO Emissions (g)	1949	534	1047	1315	4845
NOx Emissions (g)	205	68	150	164	588
Vehicles Entered	1438	220	480	59	2197
Vehicles Exited	1436	217	468	60	2181
Hourly Exit Rate	1436	217	468	60	2181
Input Volume	1792	285	567	75	2719
% of Volume	80	76	83	80	80
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

26: State Fair Blvd & Brown - East Performance by movement

Movement	SET	NWT	NWR	All
Total Delay (hr)	0.2	0.6	2.0	2.8
Delay / Veh (s)	2.3	3.8	7.6	5.5
Total Stops	0	4	31	35
Travel Dist (mi)	99.8	56.2	96.0	251.9
Travel Time (hr)	3.6	2.5	6.0	12.1
Avg Speed (mph)	28	24	17	22
Fuel Used (gal)	3.4	2.1	2.6	8.2
HC Emissions (g)	156	83	18	257
CO Emissions (g)	2861	1806	505	5172
NOx Emissions (g)	420	224	59	703
Vehicles Entered	302	595	950	1847
Vehicles Exited	305	595	946	1846
Hourly Exit Rate	305	595	946	1846
Input Volume	382	688	1139	2209
% of Volume	80	86	83	84
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Total Delay (hr)	1134.1
Delay / Veh (s)	689.8
Total Stops	15429
Travel Dist (mi)	4890.5
Travel Time (hr)	1315.7
Avg Speed (mph)	10
Fuel Used (gal)	426.3
HC Emissions (g)	3928
CO Emissions (g)	91794
NOx Emissions (g)	9641
Vehicles Entered	6039
Vehicles Exited	5799
Hourly Exit Rate	5799
Input Volume	34329
% of Volume	17
Denied Entry Before	45
Denied Entry After	1772

Queuing and Blocking Report

A2 large manned-mitigation

5/30/2014

Intersection: 3: State Fair Blvd & Pumphouse Rd

Movement	EB	B22	WB	WB	NB	NB
Directions Served	TR	T	LT	T	LR	R
Maximum Queue (ft)	260	1084	393	420	259	264
Average Queue (ft)	258	1059	264	126	148	133
95th Queue (ft)	263	1069	363	344	244	235
Link Distance (ft)	188	1045	729	729	1584	
Upstream Blk Time (%)	75	75				
Queuing Penalty (veh)	0	0				
Storage Bay Dist (ft)					1000	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: SFB to 695SB-690 WB & State Fair Blvd

Movement	EB	EB	NW	NW
Directions Served	R	R	L	LR
Maximum Queue (ft)	308	315	30	55
Average Queue (ft)	67	112	1	5
95th Queue (ft)	183	248	10	26
Link Distance (ft)	729	729	510	510
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: SFB to 695SB-690 WB & SFB to 695 SB

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report

A2 large manned-mitigation

5/30/2014

Intersection: 7: Bridge St &

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	B9
Directions Served	L	T	TR	L	T	TR	L	T	R	LTR	T
Maximum Queue (ft)	125	201	178	225	723	476	125	1902	66	1553	1572
Average Queue (ft)	44	59	61	144	205	84	77	1559	44	1470	1187
95th Queue (ft)	99	142	155	267	561	284	167	2581	53	1799	2080
Link Distance (ft)		742	742		1151	1151		1878		1462	1520
Upstream Blk Time (%)								50		25	21
Queuing Penalty (veh)								0		0	0
Storage Bay Dist (ft)	100			200			100		20		
Storage Blk Time (%)	0	13		28	1		4	23	64		
Queuing Penalty (veh)	0	14		57	4		31	200	228		

Intersection: 11: Exit 7 Connector &

Movement	EB	EB	WB	SW	SW
Directions Served	L	T	TR	LR	R
Maximum Queue (ft)	1197	1203	353	304	226
Average Queue (ft)	1068	1048	126	112	65
95th Queue (ft)	1487	1560	241	226	170
Link Distance (ft)	1151	1151	672	437	437
Upstream Blk Time (%)	53	44			
Queuing Penalty (veh)	218	180			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 12: Exit 7 Connector & Exit 7 Access

Movement	EB	WB	NW	NW	NW
Directions Served	LT	TR	L	T	TR
Maximum Queue (ft)	457	54	317	392	428
Average Queue (ft)	441	8	180	293	322
95th Queue (ft)	449	33	282	379	410
Link Distance (ft)	437	41		729	729
Upstream Blk Time (%)	44	6			
Queuing Penalty (veh)	401	0			
Storage Bay Dist (ft)			400		
Storage Blk Time (%)				0	
Queuing Penalty (veh)				0	

Queuing and Blocking Report

A2 large manned-mitigation

5/30/2014

Intersection: 17: Willis Ave & State Fair Blvd

Movement	NB
Directions Served	LR
Maximum Queue (ft)	239
Average Queue (ft)	86
95th Queue (ft)	169
Link Distance (ft)	722
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: State Fair Blvd & Brown - West

Movement	SE	SE	NW	NW	SW
Directions Served	L	LT	T	TR	L
Maximum Queue (ft)	526	530	286	307	282
Average Queue (ft)	367	402	203	200	126
95th Queue (ft)	549	567	277	285	233
Link Distance (ft)	510	510	1983	1983	555
Upstream Blk Time (%)	1	2			
Queuing Penalty (veh)	12	24			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 26: State Fair Blvd & Brown - East

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)












Network Summary

Network wide Queuing Penalty: 1367

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

Large event outbound - mitigation

5/28/2014










						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (vph)	49	49	0	841	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.932				0.932	
Flt Protected					0.976	
Satd. Flow (prot)	1703	0	0	3505	1728	0
Flt Permitted					0.976	
Satd. Flow (perm)	1703	0	0	3505	1728	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1004	
Travel Time (s)	5.7			19.0	22.8	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	54	54	0	945	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	0	0	945	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.2%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: State Fair Blvd & Pumphouse Rd

Large event outbound - mitigation

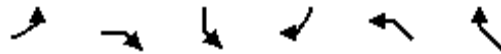
5/28/2014

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	49	49	0	841	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Hourly flow rate (vph)	54	54	0	945	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			109		554	82
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			109		554	82
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1472		467	968
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	109	315	630	3		
Volume Left	0	0	0	1		
Volume Right	54	0	0	1		
cSH	1700	1472	1700	602		
Volume to Capacity	0.06	0.00	0.37	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	11.0		
Lane LOS				B		
Approach Delay (s)	0.0	0.0		11.0		
Approach LOS				B		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			33.2%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: SFB to 695SB-690 WB & State Fair Blvd

Large event outbound - mitigation

5/28/2014



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations						
Volume (vph)	0	50	0	0	841	2837
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0
Storage Lanes	1	1	0	0	2	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt		0.850			0.884	
Flt Protected					0.989	
Satd. Flow (prot)	1863	808	0	0	3159	0
Flt Permitted					0.989	
Satd. Flow (perm)	1863	808	0	0	3159	0
Link Speed (mph)	30		30		30	
Link Distance (ft)	835		460		572	
Travel Time (s)	19.0		10.5		13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	100%	2%	2%	2%	2%
Adj. Flow (vph)	0	54	0	0	914	3084
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	0	0	3998	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	12		0		24	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Free		Stop		Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 117.4%

ICU Level of Service H

Analysis Period (min) 15





HCM Unsignalized Intersection Capacity Analysis

5: SFB to 695SB-690 WB & State Fair Blvd

Large event outbound - mitigation

5/28/2014











Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations					 	
Volume (veh/h)	0	50	0	0	841	2837
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	0	0	914	3084
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3998		2510		1999	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3998		2510		1999	
tC, single (s)	4.1		6.8		6.9	
tC, 2 stage (s)						
tF (s)	2.2		3.5		3.3	
p0 queue free %	100		100		100	
cM capacity (veh/h)	44		23		50	
Direction, Lane #	EB 1	EB 2	NW 1	NW 2		
Volume Total	0	54	609	3388		
Volume Left	0	0	0	0		
Volume Right	0	0	0	3084		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.03	0.36	1.99		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			117.4%		ICU Level of Service	H
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: SFB to 695SB-690 WB & SFB to 695 SB

Large event outbound - mitigation







5/28/2014

						
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1480	1357	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	1863	1583	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	1863	1583	0	0	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	460			849	334	
Travel Time (s)	10.5			19.3	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1609	1475	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1609	1475	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type		Perm				
Protected Phases	2					
Permitted Phases		2				
Minimum Split (s)	20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0				
Yellow Time (s)	3.5	3.5				
All-Red Time (s)	0.5	0.5				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0				
Flash Dont Walk (s)	11.0	11.0				
Pedestrian Calls (#/hr)	0	0				
Act Effct Green (s)	20.0	20.0				
Actuated g/C Ratio	1.00	1.00				
v/c Ratio	0.86	0.93				
Control Delay	7.4	14.9				
Queue Delay	0.0	0.0				
Total Delay	7.4	14.9				
LOS	A	B				

Lanes, Volumes, Timings
6: SFB to 695SB-690 WB & SFB to 695 SB

Large event outbound - mitigation

5/28/2014

						
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Approach Delay	11.0					
Approach LOS	B					
Intersection Summary						
Area Type:	Other					
Cycle Length: 20						
Actuated Cycle Length: 20						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green						
Natural Cycle: 40						
Control Type: Pretimed						
Maximum v/c Ratio: 0.93						
Intersection Signal Delay: 11.0				Intersection LOS: B		
Intersection Capacity Utilization 87.4%				ICU Level of Service E		
Analysis Period (min) 15						

Splits and Phases: 6: SFB to 695SB-690 WB & SFB to 695 SB



Queues

Large event outbound - mitigation

6: SFB to 695SB-690 WB & SFB to 695 SB

5/28/2014



Lane Group	NBT	NBR
Lane Group Flow (vph)	1609	1475
v/c Ratio	0.86	0.93
Control Delay	7.4	14.9
Queue Delay	0.0	0.0
Total Delay	7.4	14.9
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	#33	#63
Internal Link Dist (ft)	380	
Turn Bay Length (ft)		
Base Capacity (vph)	1863	1583
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.86	0.93





















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
7: Bridge St &

Large event outbound - mitigation













5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	82	18	894	139	2382	35	32	3	6	21	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.858				0.850		0.968	
Flt Protected	0.950			0.950			0.950				0.991	
Satd. Flow (prot)	1787	3481	0	1719	3060	0	1703	1792	1599	0	1681	0
Flt Permitted	0.233			0.502			0.534				0.931	
Satd. Flow (perm)	438	3481	0	908	3060	0	957	1792	1599	0	1579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			848				3		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	23	98	21	951	148	2534	38	34	3	8	27	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	119	0	951	2682	0	38	34	3	0	46	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

Large event outbound - mitigation

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8 1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	10.0	20.0	0.0	40.0	50.0	0.0	9.5	21.0	61.0	11.5	11.5	0.0
Total Split (%)	12.3%	24.7%	0.0%	49.4%	61.7%	0.0%	11.7%	25.9%	75.3%	14.2%	14.2%	0.0%
Maximum Green (s)	4.0	14.0		34.0	44.0		4.0	15.5		6.0	6.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	17.1	12.9		51.3	51.1		10.1	11.2	43.4		6.3	
Actuated g/C Ratio	0.25	0.19		0.75	0.75		0.15	0.16	0.63		0.09	
v/c Ratio	0.12	0.18		0.90	1.80dr		0.20	0.12	0.00		0.30	
Control Delay	14.9	23.9		23.4	55.2		29.3	27.5	3.0		33.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	14.9	23.9		23.4	55.2		29.3	27.5	3.0		33.8	
LOS	B	C		C	E		C	C	A		C	
Approach Delay		22.4			46.9			27.5			33.8	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 68.4

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 45.5

Intersection LOS: D








Intersection Capacity Utilization 99.1%

ICU Level of Service F

Analysis Period (min) 15

dr Defacto Right Lane. Recode with 1 though lane as a right lane.









Splits and Phases: 7: Bridge St &

 ø1	 ø2	 ø3	 ø4
40 s	20 s	9.5 s	11.5 s
 ø5	 ø6	 ø8	
10 s	50 s	21 s	

Queues
7: Bridge St &

Large event outbound - mitigation

5/28/2014

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	23	119	951	2682	38	34	3	46
v/c Ratio	0.12	0.18	0.90	1.80dr	0.20	0.12	0.00	0.30
Control Delay	14.9	23.9	23.4	55.2	29.3	27.5	3.0	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	23.9	23.4	55.2	29.3	27.5	3.0	33.8
Queue Length 50th (ft)	5	22	~326	~744	15	13	0	16
Queue Length 95th (ft)	14	42	#615	#968	42	38	2	43
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	192	763	1104	2501	187	426	1099	155
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.16	0.86	1.07	0.20	0.08	0.00	0.30
Intersection Summary								
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.								
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.								
dr Defacto Right Lane. Recode with 1 though lane as a right lane.								

Lanes, Volumes, Timings
11: Exit 7 Connector &

Large event outbound - mitigation

5/28/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	76	15	20	0	227	3395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Frt					0.869	0.850
Flt Protected	0.950				0.994	
Satd. Flow (prot)	1787	1681	1810	0	1563	1461
Flt Permitted	0.950				0.994	
Satd. Flow (perm)	1787	1681	1810	0	1563	1461
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	1%	13%	5%	1%	5%	5%
Adj. Flow (vph)	92	18	25	0	244	3651
Shared Lane Traffic (%)						47%
Lane Group Flow (vph)	92	18	25	0	1960	1935
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 150.1% ICU Level of Service H

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

11: Exit 7 Connector &

Large event outbound - mitigation

5/28/2014





















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	76	15	20	0	227	3395
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	92	18	25	0	244	3651
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	25				226	25
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	25				226	25
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				66	0
cM capacity (veh/h)	1596				712	1043
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	92	18	25	1461	2434	
Volume Left	92	0	0	244	0	
Volume Right	0	0	0	1217	2434	
cSH	1596	1700	1700	967	1043	
Volume to Capacity	0.06	0.01	0.01	1.51	2.33	
Queue Length 95th (ft)	5	0	0	1739	4475	
Control Delay (s)	7.4	0.0	0.0	248.8	614.9	
Lane LOS	A			F	F	
Approach Delay (s)	6.2		0.0	477.6		
Approach LOS				F		
Intersection Summary						
Average Delay			461.8			
Intersection Capacity Utilization			150.1%		ICU Level of Service	H
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

Large event outbound - mitigation

5/28/2014



















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	75	1	0	0	2	1	0	0	3507	113	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	500		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.955				0.865		0.850	
Flt Protected		0.953								0.950		
Satd. Flow (prot)	0	912	0	0	1620	0	0	0	1611	1736	2950	0
Flt Permitted		0.953								0.950		
Satd. Flow (perm)	0	912	0	0	1620	0	0	0	1611	1736	2950	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		550			106			3772			1257	
Travel Time (s)		12.5			2.4			85.7			28.6	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	100%	40%	40%	12%	12%	12%	25%	25%	2%	4%	1%	4%
Adj. Flow (vph)	83	2	0	0	4	2	0	0	5234	120	0	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	6	0	0	0	5234	120	1	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	236.7%						ICU Level of Service H					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

12: Exit 7 Connector & Exit 7 Access

Large event outbound - mitigation










5/28/2014

																				
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR								
Lane Configurations																				
Volume (veh/h)	75	1	0	0	2	1	0	0	3507	113	0	1								
Sign Control		Stop			Stop			Free			Free									
Grade		0%			0%			0%			0%									
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94								
Hourly flow rate (vph)	83	2	0	0	4	2	0	0	5234	120	0	1								
Pedestrians																				
Lane Width (ft)																				
Walking Speed (ft/s)																				
Percent Blockage																				
Right turn flare (veh)																				
Median type								None			None									
Median storage (veh)																				
Upstream signal (ft)																				
pX, platoon unblocked																				
vC, conflicting volume	244	241	0	2859	241	1	1			0										
vC1, stage 1 conf vol																				
vC2, stage 2 conf vol																				
vCu, unblocked vol	244	241	0	2859	241	1	1			0										
tC, single (s)	9.5	7.3	7.7	7.7	6.7	7.1	4.6			4.2										
tC, 2 stage (s)																				
tF (s)	4.5	4.4	3.7	3.6	4.1	3.4	2.5			2.2										
p0 queue free %	82	100	100	100	99	100	100			93										
cM capacity (veh/h)	457	536	973	6	589	1052	1468			1607										
Direction, Lane #	EB 1	WB 1	SE 1	NW 1	NW 2	NW 3														
Volume Total	85	5	5234	120	0	1														
Volume Left	83	0	0	120	0	0														
Volume Right	0	2	5234	0	0	1														
cSH	458	690	1700	1607	1700	1700														
Volume to Capacity	0.19	0.01	3.08	0.07	0.00	0.00														
Queue Length 95th (ft)	17	1	Err	6	0	0														
Control Delay (s)	14.6	10.3	0.0	7.4	0.0	0.0														
Lane LOS	B	B		A																
Approach Delay (s)	14.6	10.3	0.0	7.4																
Approach LOS	B	B																		
Intersection Summary																				
Average Delay			0.4																	
Intersection Capacity Utilization			236.7%			ICU Level of Service				H										
Analysis Period (min)			15																	

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

Large event outbound - mitigation

5/28/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	17	18	10	233	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926		0.871			
Flt Protected	0.978					
Satd. Flow (prot)	1641	0	1414	0	0	1267
Flt Permitted	0.978					
Satd. Flow (perm)	1641	0	1414	0	0	1267
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	1%	8%	17%	17%	50%	50%
Adj. Flow (vph)	19	23	11	259	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	270	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	24.9%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

Large event outbound - mitigation

5/28/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	17	18	10	233	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	19	23	11	259	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	141	141			270	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	141	141			270	
tC, single (s)	6.4	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.7	
p0 queue free %	98	97			100	
cM capacity (veh/h)	855	892			1061	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	42	270	0			
Volume Left	19	0	0			
Volume Right	23	259	0			
cSH	875	1700	1700			
Volume to Capacity	0.05	0.16	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.3	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.3	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		1.3				
Intersection Capacity Utilization		24.9%		ICU Level of Service		A
Analysis Period (min)		15				

Lanes, Volumes, Timings
24: State Fair Blvd & Brown - West

Large event outbound - mitigation

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	50	183	0	75	3570
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	3539	0	902	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	3539	0	902	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		572	2052		601	
Travel Time (s)		13.0	46.6		13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	2%	2%	2%	100%	2%
Adj. Flow (vph)	0	56	203	0	83	3967
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	56	203	0	83	3967
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 136.6% ICU Level of Service H

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

24: State Fair Blvd & Brown - West

Large event outbound - mitigation

5/28/2014



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↩	↩↪		↩	↩↪
Volume (veh/h)	0	50	183	0	75	3570
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	56	203	0	83	3967
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	203				259	102
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	203				259	102
tC, single (s)	4.1				8.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				4.5	3.3
p0 queue free %	100				83	0
cM capacity (veh/h)	1373				497	934
Direction, Lane #	SE 1	NW 1	NW 2	SW 1	SW 2	SW 3
Volume Total	56	136	68	83	1983	1983
Volume Left	0	0	0	83	0	0
Volume Right	0	0	0	0	1983	1983
cSH	1373	1700	1700	497	934	934
Volume to Capacity	0.00	0.08	0.04	0.17	2.12	2.12
Queue Length 95th (ft)	0	0	0	15	3416	3416
Control Delay (s)	0.0	0.0	0.0	13.7	521.8	521.8
Lane LOS				B	F	F
Approach Delay (s)	0.0	0.0		511.4		
Approach LOS				F		
Intersection Summary						
Average Delay		480.6				
Intersection Capacity Utilization		136.6%		ICU Level of Service		H
Analysis Period (min)		15				

Lanes, Volumes, Timings
26: State Fair Blvd & Brown - East

Large event outbound - mitigation

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	50	183	75	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.956			
Flt Protected						
Satd. Flow (prot)	0	1863	2646	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	2646	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2052	577		345	
Travel Time (s)		46.6	13.1		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	100%	2%	2%
Adj. Flow (vph)	0	56	203	83	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	56	286	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 10.8% ICU Level of Service A










Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

26: State Fair Blvd & Brown - East

Large event outbound - mitigation











5/28/2014

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	50	183	75	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	56	203	83	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	287				301	143
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	287				301	143
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1272				667	878
Direction, Lane #	SE 1	NW 1	NW 2	SW 1		
Volume Total	56	136	151	0		
Volume Left	0	0	0	0		
Volume Right	0	0	83	0		
cSH	1272	1700	1700	1700		
Volume to Capacity	0.00	0.08	0.09	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS				A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS				A		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			10.8%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

B1 large event arrival - SF access

5/28/2014

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	876	1	0	375	4	1183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	1000
Storage Lanes		0	0		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Fr _t					0.851	0.850
Flt Protected						
Satd. Flow (prot)	1827	0	0	3505	1617	1534
Flt Permitted						
Satd. Flow (perm)	1827	0	0	3505	1617	1534
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					14	14
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1670	
Travel Time (s)	5.7			19.0	38.0	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	973	1	0	421	6	1314
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	974	0	0	421	663	657
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Minimum Split (s)	20.0		20.0	20.0	20.0	20.0
Total Split (s)	50.0	0.0	50.0	50.0	100.0	100.0
Total Split (%)	33.3%	0.0%	33.3%	33.3%	66.7%	66.7%
Maximum Green (s)	46.0		46.0	46.0	96.0	96.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Act Effect Green (s)	46.0			46.0	96.0	96.0
Actuated g/C Ratio	0.31			0.31	0.64	0.64
v/c Ratio	1.74			0.39	0.64	0.67
Control Delay	371.9			64.5	19.5	20.7
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	371.9			64.5	19.5	20.7



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	F			E	B	C
Approach Delay	371.9			64.5	20.1	
Approach LOS	F			E	C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.74

Intersection Signal Delay: 153.2




Intersection LOS: F

Intersection Capacity Utilization 101.7%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 3: State Fair Blvd & Pumphouse Rd

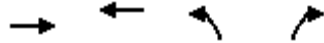
 Ø2	 Ø4
100 s	50 s
	 Ø6
	50 s

Queues

B1 large event arrival - SF access

3: State Fair Blvd & Pumphouse Rd

5/28/2014



Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	974	421	663	657
v/c Ratio	1.74	0.39	0.64	0.67
Control Delay	371.9	64.5	19.5	20.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	371.9	64.5	19.5	20.7
Queue Length 50th (ft)	~1407	229	366	393
Queue Length 95th (ft)	#1669	m225	311	543
Internal Link Dist (ft)	170	755	1590	
Turn Bay Length (ft)				1000
Base Capacity (vph)	560	1075	1040	987
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.74	0.39	0.64	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

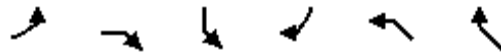
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
5: SFB to 695SB-690 WB & State Fair Blvd

B1 large event arrival - SF access

5/28/2014



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations						
Volume (vph)	0	2059	0	0	375	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0
Storage Lanes	1	2	0	0	2	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	0.88	1.00	1.00	0.97	0.95
Frt		0.850			0.949	
Flt Protected					0.968	
Satd. Flow (prot)	1863	2787	0	0	3320	0
Flt Permitted					0.968	
Satd. Flow (perm)	1863	2787	0	0	3320	0
Link Speed (mph)	30		30		30	
Link Distance (ft)	835		460		572	
Travel Time (s)	19.0		10.5		13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2238	0	0	408	209
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2238	0	0	617	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	12		0		24	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Free		Stop		Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 75.4% ICU Level of Service D

Analysis Period (min) 15




HCM Unsignalized Intersection Capacity Analysis

5: SFB to 695SB-690 WB & State Fair Blvd

B1 large event arrival - SF access

5/28/2014

















Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations						
Volume (veh/h)	0	2059	0	0	375	192
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2238	0	0	408	209
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage veh						
Upstream signal (ft)	835				572	
pX, platoon unblocked	0.84		0.84	0.84		
vC, conflicting volume	616		1631	308		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	146		1361	0		
tC, single (s)	4.1		6.8	6.9		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		100	100		
cM capacity (veh/h)	1197		116	906		
Direction, Lane #	EB 1	EB 2	EB 3	NW 1	NW 2	
Volume Total	0	1119	1119	272	345	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	209	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.00	0.66	0.66	0.16	0.20	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS						
Approach Delay (s)	0.0			0.0		
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			75.4%	ICU Level of Service		D
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: SFB to 695SB-690 WB & SFB to 695 SB

B1 large event arrival - SF access

5/28/2014

						
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	1863	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	1863	1863	0	0	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	460			849	334	
Travel Time (s)	10.5			19.3	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type		Perm				
Protected Phases	2					
Permitted Phases		2				
Minimum Split (s)	20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0				
Yellow Time (s)	3.5	3.5				
All-Red Time (s)	0.5	0.5				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0				
Flash Dont Walk (s)	11.0	11.0				
Pedestrian Calls (#/hr)	0	0				
Act Effect Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						

						
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Approach Delay						
Approach LOS						
Intersection Summary						
Area Type:	Other					
Cycle Length: 20						
Actuated Cycle Length: 20						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green						
Natural Cycle: 40						
Control Type: Pretimed						
Maximum v/c Ratio: 0.00						
Intersection Signal Delay: 0.0				Intersection LOS: A		
Intersection Capacity Utilization 0.0%				ICU Level of Service A		
Analysis Period (min) 15						

Splits and Phases: 6: SFB to 695SB-690 WB & SFB to 695 SB

↑	ø2
20 s	

Queues
6: SFB to 695SB-690 WB & SFB to 695 SB

B1 large event arrival - SF access

5/28/2014

Lane Group

Lane Group Flow (vph)

v/c Ratio

Control Delay

Queue Delay

Total Delay

Queue Length 50th (ft)

Queue Length 95th (ft)

Internal Link Dist (ft)

Turn Bay Length (ft)

Base Capacity (vph)

Starvation Cap Reductn

Spillback Cap Reductn

Storage Cap Reductn





















Reduced v/c Ratio

Intersection Summary

Lanes, Volumes, Timings
7: Bridge St &

B1 large event arrival - SF access













5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	110	97	284	411	8	185	169	686	29	108	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.930			0.997				0.850		0.967	
Flt Protected	0.950			0.950			0.950				0.992	
Satd. Flow (prot)	1787	3324	0	1719	3430	0	1703	1792	1599	0	1679	0
Flt Permitted	0.417			0.599			0.384				0.912	
Satd. Flow (perm)	784	3324	0	1084	3430	0	688	1792	1599	0	1544	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			2				533		18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			794	
Travel Time (s)		18.7			27.8			43.9			18.0	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	120	131	115	302	437	9	199	182	738	37	137	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	246	0	302	446	0	199	182	738	0	231	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

B1 large event arrival - SF access

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	81	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	20.4	12.7		18.3	13.7		27.9	27.9	40.0		12.9	
Actuated g/C Ratio	0.32	0.20		0.28	0.21		0.43	0.43	0.62		0.20	
v/c Ratio	0.32	0.33		0.82	0.61		0.45	0.23	0.62		0.71	
Control Delay	16.7	13.7		41.6	31.0		15.3	12.6	4.5		37.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	16.7	13.7		41.6	31.0		15.3	12.6	4.5		37.3	
LOS	B	B		D	C		B	B	A		D	
Approach Delay		14.7			35.3			7.8			37.3	
Approach LOS		B			D			A			D	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 64.3

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 19.9

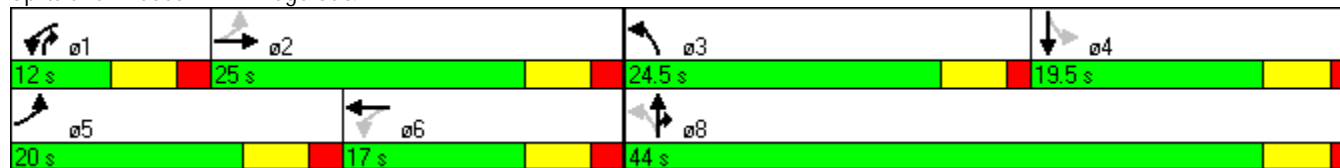
Intersection LOS: B

Intersection Capacity Utilization 75.0%

ICU Level of Service D

Analysis Period (min) 15

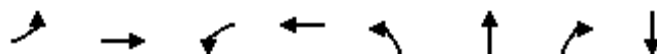
Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

B1 large event arrival - SF access

5/28/2014



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	120	246	302	446	199	182	738	231
v/c Ratio	0.32	0.33	0.82	0.61	0.45	0.23	0.62	0.71
Control Delay	16.7	13.7	41.6	31.0	15.3	12.6	4.5	37.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	13.7	41.6	31.0	15.3	12.6	4.5	37.3
Queue Length 50th (ft)	31	23	87	88	47	42	30	77
Queue Length 95th (ft)	63	48	#254	#183	95	86	100	#153
Internal Link Dist (ft)		744		1143		1853		714
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	523	1072	369	731	600	1082	1215	353
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.23	0.82	0.61	0.33	0.17	0.61	0.65








Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
9: 690 Ramps &

B1 large event arrival - SF access

5/28/2014








					
Lane Group	NBL	SER	SER2	NEL	NER
Lane Configurations					
Volume (vph)	278	183	1064	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00
Frt		0.865			
Flt Protected	0.950				
Satd. Flow (prot)	1770	1611	0	0	0
Flt Permitted	0.950				
Satd. Flow (perm)	1770	1611	0	0	0
Link Speed (mph)	30	30		30	
Link Distance (ft)	794	2300		578	
Travel Time (s)	18.0	52.3		13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	302	199	1157	0	0
Shared Lane Traffic (%)					
Lane Group Flow (vph)	302	1356	0	0	0
Enter Blocked Intersection	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Right
Median Width(ft)	12	0		0	
Link Offset(ft)	0	0		0	
Crosswalk Width(ft)	16	16		16	
Two way Left Turn Lane					
Headway Factor	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	15	9
Sign Control	Free	Free		Stop	
Intersection Summary					
Area Type:	Other				
Control Type:	Unsignalized				
Intersection Capacity Utilization	80.5%			ICU Level of Service D	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis

9: 690 Ramps &

B1 large event arrival - SF access

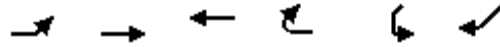
5/28/2014

					
Movement	NBL	SER	SER2	NEL	NER
Lane Configurations					
Volume (veh/h)	278	183	1064	0	0
Sign Control	Free	Free		Stop	
Grade	0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	302	199	1157	0	0
Pedestrians					
Lane Width (ft)					
Walking Speed (ft/s)					
Percent Blockage					
Right turn flare (veh)					
Median type	None	None			
Median storage (veh)					
Upstream signal (ft)	794				
pX, platoon unblocked					
vC, conflicting volume				1079	777
vC1, stage 1 conf vol					
vC2, stage 2 conf vol					
vCu, unblocked vol				1079	777
tC, single (s)				6.4	6.2
tC, 2 stage (s)					
tF (s)				3.5	3.3
p0 queue free %				100	100
cM capacity (veh/h)				242	397
Direction, Lane #	NB 1	SE 1			
Volume Total	302	1355			
Volume Left	0	0			
Volume Right	0	1157			
cSH	1700	1700			
Volume to Capacity	0.18	0.80			
Queue Length 95th (ft)	0	0			
Control Delay (s)	0.0	0.0			
Lane LOS					
Approach Delay (s)	0.0	0.0			
Approach LOS					
Intersection Summary					
Average Delay		0.0			
Intersection Capacity Utilization		80.5%	ICU Level of Service	D	
Analysis Period (min)		15			

Lanes, Volumes, Timings
11: Exit 7 Connector &

B1 large event arrival - SF access

5/28/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	750	78	104	170	88	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.916			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1681	1698	0	1719	1538
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1787	1681	1698	0	1719	1538
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	1%	13%	5%	1%	5%	5%
Adj. Flow (vph)	904	94	130	213	95	645
Shared Lane Traffic (%)						
Lane Group Flow (vph)	904	94	342	0	95	645
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 72.3% ICU Level of Service C

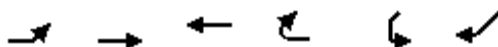
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

11: Exit 7 Connector &

B1 large event arrival - SF access

5/28/2014




















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	750	78	104	170	88	600
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	904	94	130	212	95	645
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	342				2137	236
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	342				2137	236
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	26				0	19
cM capacity (veh/h)	1222				14	795
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	904	94	342	95	645	
Volume Left	904	0	0	95	0	
Volume Right	0	0	212	0	645	
cSH	1222	1700	1700	14	795	
Volume to Capacity	0.74	0.06	0.20	6.87	0.81	
Queue Length 95th (ft)	180	0	0	Err	219	
Control Delay (s)	15.8	0.0	0.0	Err	25.8	
Lane LOS	C			F	D	
Approach Delay (s)	14.3		0.0	1301.5		
Approach LOS				F		
Intersection Summary						
Average Delay			469.8			
Intersection Capacity Utilization			72.3%		ICU Level of Service	C
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

B1 large event arrival - SF access













5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	915	5	0	0	13	3	0	0	83	596	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		20
Storage Lanes	0		0	0		0	0		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt					0.976				0.865			0.850
Flt Protected		0.953								0.950		
Satd. Flow (prot)	0	1787	0	0	1656	0	0	0	822	3367	0	1553
Flt Permitted		0.953								0.950		
Satd. Flow (perm)	0	1787	0	0	1656	0	0	0	822	3367	0	1553
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		550			106			548			506	
Travel Time (s)		12.5			2.4			12.5			11.5	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	1%	40%	40%	12%	12%	12%	25%	25%	100%	4%	1%	4%
Adj. Flow (vph)	1017	8	0	0	23	5	0	0	124	634	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1025	0	0	28	0	0	0	124	634	0	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split								Free	custom		custom
Protected Phases	4	4			8							
Permitted Phases									Free	2		2
Minimum Split (s)	20.0	20.0			8.0					20.0		20.0
Total Split (s)	90.0	90.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	52.0	0.0	52.0
Total Split (%)	60.0%	60.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	34.7%	0.0%	34.7%
Maximum Green (s)	86.0	86.0			4.0					48.0		48.0
Yellow Time (s)	3.5	3.5			3.5					3.5		3.5
All-Red Time (s)	0.5	0.5			0.5					0.5		0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)		86.0			4.0				150.0	48.0		48.0
Actuated g/C Ratio		0.57			0.03				1.00	0.32		0.32
v/c Ratio		1.00			0.64				0.15	0.59		0.01
Control Delay		60.0			125.0				0.4	45.4		35.0
Queue Delay		0.0			0.0				0.0	0.0		0.0
Total Delay		60.0			125.0				0.4	45.4		35.0

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

B1 large event arrival - SF access

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
LOS		E			F				A	D		C
Approach Delay		60.0			125.0							
Approach LOS		E			F							

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:NWL and 6:, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 51.8

Intersection LOS: D

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 12: Exit 7 Connector & Exit 7 Access

			
ø8	ø2	ø4	
52 s		90 s	8 s

Queues

B1 large event arrival - SF access

5/28/2014

12: Exit 7 Connector & Exit 7 Access



Lane Group	EBT	WBT	SER	NWL	NWR
Lane Group Flow (vph)	1025	28	124	634	3
v/c Ratio	1.00	0.64	0.15	0.59	0.01
Control Delay	60.0	125.0	0.4	45.4	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	125.0	0.4	45.4	35.0
Queue Length 50th (ft)	~970	28	0	268	2
Queue Length 95th (ft)	595	40	0	333	10
Internal Link Dist (ft)	470	26			
Turn Bay Length (ft)					20
Base Capacity (vph)	1025	44	822	1077	497
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.00	0.64	0.15	0.59	0.01










Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

B1 large event arrival - SF access

5/28/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	258	95	51	123	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.960		0.905			
Flt Protected	0.966					0.988
Satd. Flow (prot)	1709	0	1470	0	0	1251
Flt Permitted	0.966					0.988
Satd. Flow (perm)	1709	0	1470	0	0	1251
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	1%	8%	17%	17%	50%	50%
Adj. Flow (vph)	287	123	57	137	1	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	410	0	194	0	0	4
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	37.0%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

B1 large event arrival - SF access












5/28/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	258	95	51	123	1	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	287	123	57	137	1	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	130	125			193	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	130	125			193	
tC, single (s)	6.4	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.7	
p0 queue free %	67	86			100	
cM capacity (veh/h)	865	910			1138	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	410	193	4			
Volume Left	287	0	1			
Volume Right	123	137	0			
cSH	878	1700	1138			
Volume to Capacity	0.47	0.11	0.00			
Queue Length 95th (ft)	63	0	0			
Control Delay (s)	12.6	0.0	2.7			
Lane LOS	B		A			
Approach Delay (s)	12.6	0.0	2.7			
Approach LOS	B					
Intersection Summary						
Average Delay		8.6				
Intersection Capacity Utilization		37.0%		ICU Level of Service		A
Analysis Period (min)		15				

Lanes, Volumes, Timings
24: State Fair Blvd & Brown - West

B1 large event arrival - SF access

5/28/2014

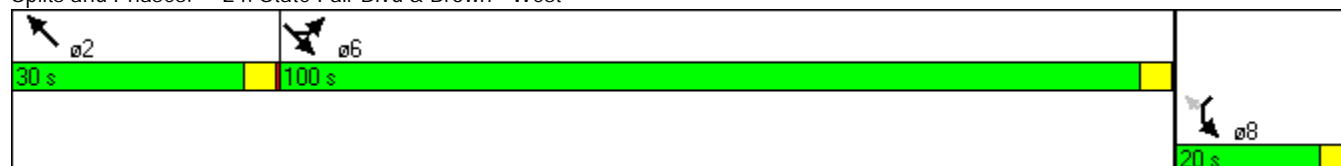
						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	1792	267	567	0	75	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	0.88
Fr t						
Flt Protected	0.950	0.964			0.950	
Satd. Flow (prot)	1698	1718	3539	0	902	3278
Flt Permitted	0.950	0.964			0.950	
Satd. Flow (perm)	1698	1718	3539	0	902	3278
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		572	2052		601	
Travel Time (s)		13.0	46.6		13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	2%	2%	2%	100%	2%
Adj. Flow (vph)	1991	297	630	0	83	0
Shared Lane Traffic (%)	43%					
Lane Group Flow (vph)	1135	1153	630	0	83	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Split					Perm
Protected Phases	6	6	2		8	
Permitted Phases						8
Minimum Split (s)	20.0	20.0	20.0		8.0	8.0
Total Split (s)	100.0	100.0	30.0	0.0	20.0	20.0
Total Split (%)	66.7%	66.7%	20.0%	0.0%	13.3%	13.3%
Maximum Green (s)	96.0	96.0	26.0		16.0	16.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	96.0	96.0	26.0		16.0	
Actuated g/C Ratio	0.64	0.64	0.17		0.11	
v/c Ratio	1.04	1.05	1.03		0.86	
Control Delay	58.6	60.2	103.1		125.3	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	58.6	60.2	103.1		125.3	
LOS	E	E	F		F	
Approach Delay		59.4	103.1		125.3	
Approach LOS		E	F		F	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 0 (0%), Referenced to phase 2:NWT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 70.4
 Intersection Capacity Utilization 86.5%
 Analysis Period (min) 15

Intersection LOS: E
 ICU Level of Service E

Splits and Phases: 24: State Fair Blvd & Brown - West



Queues

B1 large event arrival - SF access

24: State Fair Blvd & Brown - West

5/28/2014



Lane Group	SEL	SET	NWT	SWL
Lane Group Flow (vph)	1135	1153	630	83
v/c Ratio	1.04	1.05	1.03	0.86
Control Delay	58.6	60.2	103.1	125.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	58.6	60.2	103.1	125.3
Queue Length 50th (ft)	~1280	~1304	~345	81
Queue Length 95th (ft)	m1023	m1042	#472	#186
Internal Link Dist (ft)		492	1972	521
Turn Bay Length (ft)				
Base Capacity (vph)	1087	1100	613	96
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.04	1.05	1.03	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lanes, Volumes, Timings
26: State Fair Blvd & Brown - East

B1 large event arrival - SF access

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕	↕↕		↕	
Volume (vph)	0	308	567	75	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.983			
Flt Protected						
Satd. Flow (prot)	0	1863	3483	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	3483	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2052	577		345	
Travel Time (s)		46.6	13.1		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	1%	2%	2%
Adj. Flow (vph)	0	342	630	83	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	342	713	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.4%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

26: State Fair Blvd & Brown - East

B1 large event arrival - SF access

5/28/2014



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↩	↩↪		↩↪	
Volume (veh/h)	0	308	567	75	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	342	630	83	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	713				1014	357
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	713				1014	357
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	882				235	640
Direction, Lane #	SE 1	NW 1	NW 2	SW 1		
Volume Total	342	420	293	0		
Volume Left	0	0	0	0		
Volume Right	0	0	83	0		
cSH	882	1700	1700	1700		
Volume to Capacity	0.00	0.25	0.17	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS				A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS				A		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			21.4%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
30: 695 SB Ramp & Orange West

B1 large event arrival - SF access

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	511	952	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.902			
Flt Protected						
Satd. Flow (prot)	0	0	3192	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	0	3192	0	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		216	1306		515	
Travel Time (s)		4.9	29.7		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	555	1035	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1590	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Stop	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 48.1% ICU Level of Service A

Analysis Period (min) 15

Intersection Sign configuration not allowed in HCM analysis.

Lanes, Volumes, Timings
33: 695 SB Ramp & Orange East

B1 large event arrival - SF access

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations			↑↑	↑		
Volume (vph)	0	0	1463	952	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	3539	1583	0	0
Flt Permitted						
Satd. Flow (perm)	0	0	3539	1583	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1306	1488		226	
Travel Time (s)		29.7	33.8		5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	1590	1035	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1590	1035	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Stop	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 62.3% ICU Level of Service B












Analysis Period (min) 15

Intersection Sign configuration not allowed in HCM analysis.

Lanes, Volumes, Timings
3: State Fair Blvd & Pumphouse Rd

C large event outbound SF signal

5/28/2014










						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Volume (vph)	49	49	0	841	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.932				0.932	
Flt Protected					0.976	
Satd. Flow (prot)	1703	0	0	3505	1728	0
Flt Permitted					0.976	
Satd. Flow (perm)	1703	0	0	3505	1728	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	250			835	1004	
Travel Time (s)	5.7			19.0	22.8	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Heavy Vehicles (%)	4%	4%	3%	3%	0%	0%
Adj. Flow (vph)	54	54	0	945	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	0	0	945	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.2%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: State Fair Blvd & Pumphouse Rd

C large event outbound SF signal

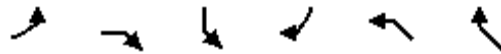
5/28/2014





						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	49	49	0	841	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.69	0.90
Hourly flow rate (vph)	54	54	0	945	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			109		554	82
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			109		554	82
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1472		467	968
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	109	315	630	3		
Volume Left	0	0	0	1		
Volume Right	54	0	0	1		
cSH	1700	1472	1700	602		
Volume to Capacity	0.06	0.00	0.37	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	11.0		
Lane LOS				B		
Approach Delay (s)	0.0	0.0		11.0		
Approach LOS				B		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			33.2%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: SFB to 695SB-690 WB & State Fair Blvd

C large event outbound SF signal

5/28/2014



Lane Group	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations					 	
Volume (vph)	0	50	0	0	841	2837
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0
Storage Lanes	1	1	0	0	2	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt	0.850		0.884			
Flt Protected					0.989	
Satd. Flow (prot)	1863	808	0	0	3159	0
Flt Permitted					0.989	
Satd. Flow (perm)	1863	808	0	0	3159	0
Link Speed (mph)	30	30		30		
Link Distance (ft)	835	460		572		
Travel Time (s)	19.0	10.5		13.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	100%	2%	2%	2%	2%
Adj. Flow (vph)	0	54	0	0	914	3084
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	0	0	3998	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	12	0		24		
Link Offset(ft)	0	0		0		
Crosswalk Width(ft)	16	16		16		
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Free	Stop		Free		

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 117.4% ICU Level of Service H

Analysis Period (min) 15





HCM Unsignalized Intersection Capacity Analysis

5: SFB to 695SB-690 WB & State Fair Blvd

C large event outbound SF signal

5/28/2014











Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations					 	
Volume (veh/h)	0	50	0	0	841	2837
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	0	0	914	3084
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3998		2510	1999		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3998		2510	1999		
tC, single (s)	4.1		6.8	6.9		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		100	100		
cM capacity (veh/h)	44		23	50		
Direction, Lane #	EB 1	EB 2	NW 1	NW 2		
Volume Total	0	54	609	3388		
Volume Left	0	0	0	0		
Volume Right	0	0	0	3084		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.03	0.36	1.99		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			117.4%	ICU Level of Service	H	
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: SFB to 695SB-690 WB & SFB to 690 WB

C large event outbound SF signal







5/28/2014

						
Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	1480	1357	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr t						
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	0	0	0	0
Right Turn on Red	Yes			Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		460	334		634	
Travel Time (s)		10.5	7.6		14.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1609	1475	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1609	1475	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Prot					
Protected Phases	2					
Permitted Phases		2				
Minimum Split (s)	20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0				
Yellow Time (s)	3.5	3.5				
All-Red Time (s)	0.5	0.5				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0				
Flash Dont Walk (s)	11.0	11.0				
Pedestrian Calls (#/hr)	0	0				
Act Effct Green (s)	20.0	20.0				
Actuated g/C Ratio	1.00	1.00				
v/c Ratio	0.91	0.79				
Control Delay	11.2	4.2				
Queue Delay	0.0	0.0				
Total Delay	11.2	4.2				
LOS	B	A				

Lanes, Volumes, Timings
6: SFB to 695SB-690 WB & SFB to 690 WB

C large event outbound SF signal

5/28/2014

						
Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Approach Delay	7.8					
Approach LOS	A					
Intersection Summary						
Area Type:	Other					
Cycle Length: 20						
Actuated Cycle Length: 20						
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green						
Natural Cycle: 40						
Control Type: Pretimed						
Maximum v/c Ratio: 0.91						
Intersection Signal Delay: 7.8				Intersection LOS: A		
Intersection Capacity Utilization 85.3%				ICU Level of Service E		
Analysis Period (min) 15						

Splits and Phases: 6: SFB to 695SB-690 WB & SFB to 690 WB





Queues

C large event outbound SF signal

6: SFB to 695SB-690 WB & SFB to 690 WB

5/28/2014

		
Lane Group	NBL	NBT
Lane Group Flow (vph)	1609	1475
v/c Ratio	0.91	0.79
Control Delay	11.2	4.2
Queue Delay	0.0	0.0
Total Delay	11.2	4.2
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	#54	#1
Internal Link Dist (ft)		380
Turn Bay Length (ft)		
Base Capacity (vph)	1770	1863
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.91	0.79






















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
7: Bridge St &

C large event outbound SF signal













5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	82	18	894	139	0	35	32	3	6	21	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974							0.850		0.968	
Flt Protected	0.950			0.950			0.950				0.991	
Satd. Flow (prot)	1787	3481	0	1719	3438	0	1703	1792	1599	0	1681	0
Flt Permitted	0.658			0.503			0.514					
Satd. Flow (perm)	1238	3481	0	910	3438	0	921	1792	1599	0	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21							3		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		824			1223			1933			1551	
Travel Time (s)		18.7			27.8			43.9			35.3	
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	5%	5%	1%	6%	6%	1%	1%	10%	10%
Adj. Flow (vph)	23	98	21	951	148	0	38	34	3	8	27	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	119	0	951	148	0	38	34	3	0	46	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			pm+pt			pm+pt		pt+ov	Perm		
Protected Phases	5	2		1	6		3	8	8 1		4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
7: Bridge St &

C large event outbound SF signal

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	81	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		6.0	6.0	
Minimum Split (s)	10.0	16.0		10.0	16.0		9.5	11.5		11.5	11.5	
Total Split (s)	20.0	25.0	0.0	12.0	17.0	0.0	24.5	44.0	56.0	19.5	19.5	0.0
Total Split (%)	24.7%	30.9%	0.0%	14.8%	21.0%	0.0%	30.2%	54.3%	69.1%	24.1%	24.1%	0.0%
Maximum Green (s)	14.0	19.0		6.0	11.0		19.0	38.5		14.0	14.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		3.0	3.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effect Green (s)	16.3	11.0		23.4	27.4		9.4	10.4	14.3		7.2	
Actuated g/C Ratio	0.43	0.29		0.62	0.72		0.25	0.27	0.38		0.19	
v/c Ratio	0.04	0.12		1.35	0.06		0.11	0.07	0.00		0.14	
Control Delay	8.6	13.0		186.2	10.0		11.4	10.8	3.3		15.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	8.6	13.0		186.2	10.0		11.4	10.8	3.3		15.9	
LOS	A	B		F	B		B	B	A		B	
Approach Delay		12.3			162.5			10.8			15.9	
Approach LOS		B			F			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 81

Actuated Cycle Length: 37.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.35

Intersection Signal Delay: 133.5

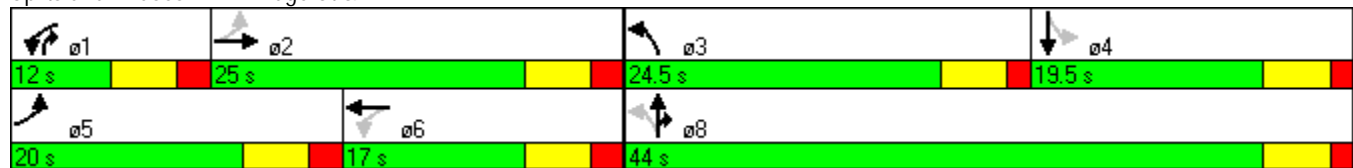
Intersection LOS: F

Intersection Capacity Utilization 74.1%

ICU Level of Service D

Analysis Period (min) 15

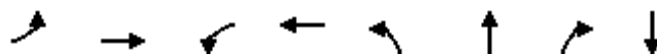
Splits and Phases: 7: Bridge St &



Queues
7: Bridge St &

C large event outbound SF signal

5/28/2014



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	23	119	951	148	38	34	3	46
v/c Ratio	0.04	0.12	1.35	0.06	0.11	0.07	0.00	0.14
Control Delay	8.6	13.0	186.2	10.0	11.4	10.8	3.3	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.6	13.0	186.2	10.0	11.4	10.8	3.3	15.9
Queue Length 50th (ft)	1	4	~18	0	5	4	0	4
Queue Length 95th (ft)	14	29	#724	42	22	20	2	28
Internal Link Dist (ft)		744		1143		1853		1471
Turn Bay Length (ft)	100		200		100		20	
Base Capacity (vph)	1013	1928	702	2495	943	1597	1426	695
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.06	1.35	0.06	0.04	0.02	0.00	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

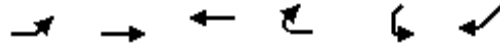
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
11: Exit 7 Connector &

C large event outbound SF signal

5/28/2014



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	76	15	20	0	227	1015
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Frt					0.904	0.850
Flt Protected	0.950				0.982	
Satd. Flow (prot)	1787	1681	1810	0	1606	1461
Flt Permitted	0.950				0.982	
Satd. Flow (perm)	1787	1681	1810	0	1606	1461
Link Speed (mph)		30	30		30	
Link Distance (ft)		1223	731		550	
Travel Time (s)		27.8	16.6		12.5	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Heavy Vehicles (%)	1%	13%	5%	1%	5%	5%
Adj. Flow (vph)	92	18	25	0	244	1091
Shared Lane Traffic (%)						40%
Lane Group Flow (vph)	92	18	25	0	680	655
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 51.9% ICU Level of Service A

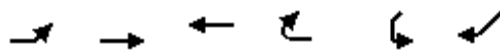
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

11: Exit 7 Connector &

C large event outbound SF signal

5/28/2014





















Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	76	15	20	0	227	1015
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.80	0.80	0.93	0.93
Hourly flow rate (vph)	92	18	25	0	244	1091
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1223				
pX, platoon unblocked						
vC, conflicting volume	25				226	25
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	25				226	25
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				66	0
cM capacity (veh/h)	1596				712	1043
Direction, Lane #	EB 1	EB 2	WB 1	SW 1	SW 2	
Volume Total	92	18	25	608	728	
Volume Left	92	0	0	244	0	
Volume Right	0	0	0	364	728	
cSH	1596	1700	1700	879	1043	
Volume to Capacity	0.06	0.01	0.01	0.69	0.70	
Queue Length 95th (ft)	5	0	0	144	150	
Control Delay (s)	7.4	0.0	0.0	17.8	16.0	
Lane LOS	A			C	C	
Approach Delay (s)	6.2		0.0	16.8		
Approach LOS				C		
Intersection Summary						
Average Delay			15.7			
Intersection Capacity Utilization			51.9%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
12: Exit 7 Connector & Exit 7 Access

C large event outbound SF signal

5/28/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	75	1	0	0	2	1	0	0	1127	113	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		20
Storage Lanes	0		0	0		0	0		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt					0.955				0.865			0.850
Flt Protected		0.953								0.950		
Satd. Flow (prot)	0	912	0	0	1620	0	0	0	1611	3367	0	1553
Flt Permitted		0.953								0.950		
Satd. Flow (perm)	0	912	0	0	1620	0	0	0	1611	3367	0	1553
Link Speed (mph)		30			30			30				30
Link Distance (ft)		550			106			1300				516
Travel Time (s)		12.5			2.4			29.5				11.7
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Heavy Vehicles (%)	100%	40%	40%	12%	12%	12%	25%	25%	2%	4%	1%	4%
Adj. Flow (vph)	83	2	0	0	4	2	0	0	1682	120	0	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	6	0	0	0	1682	120	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 86.4% ICU Level of Service E


















Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

12: Exit 7 Connector & Exit 7 Access

C large event outbound SF signal










5/28/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	75	1	0	0	2	1	0	0	1127	113	0	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.63	0.63	0.57	0.57	0.57	0.67	0.67	0.67	0.94	0.94	0.94
Hourly flow rate (vph)	83	2	0	0	4	2	0	0	1682	120	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	244	241	0	1082	240	0	1			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	244	241	0	1082	240	0	1			0		
tC, single (s)	8.1	6.9	6.6	7.2	6.6	6.3	4.3			4.1		
tC, 2 stage (s)												
tF (s)	4.4	4.4	3.7	3.6	4.1	3.4	2.4			2.2		
p0 queue free %	84	100	100	100	99	100	100			93		
cM capacity (veh/h)	512	555	984	176	596	1056	1483			1610		
Direction, Lane #	EB 1	WB 1	SE 1	NW 1	NW 2	NW 3						
Volume Total	85	5	1682	60	60	1						
Volume Left	83	0	0	60	60	0						
Volume Right	0	2	1682	0	0	1						
cSH	513	697	1700	1610	1610	1700						
Volume to Capacity	0.17	0.01	0.99	0.07	0.07	0.00						
Queue Length 95th (ft)	15	1	0	6	6	0						
Control Delay (s)	13.4	10.2	0.0	7.4	7.4	0.0						
Lane LOS	B	B		A	A							
Approach Delay (s)	13.4	10.2	0.0	7.4								
Approach LOS	B	B										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			86.4%	ICU Level of Service					E			
Analysis Period (min)			15									

Lanes, Volumes, Timings
17: Willis Ave & State Fair Blvd

C large event outbound SF signal

5/28/2014










						
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	17	18	10	233	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926		0.871			
Flt Protected	0.978					
Satd. Flow (prot)	1641	0	1414	0	0	1267
Flt Permitted	0.978					
Satd. Flow (perm)	1641	0	1414	0	0	1267
Link Speed (mph)	30		30			30
Link Distance (ft)	766		2768			1243
Travel Time (s)	17.4		62.9			28.3
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	1%	8%	17%	17%	50%	50%
Adj. Flow (vph)	19	23	11	259	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	270	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	24.9%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

17: Willis Ave & State Fair Blvd

C large event outbound SF signal

5/28/2014

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (veh/h)	17	18	10	233	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.77	0.90	0.90	0.75	0.75
Hourly flow rate (vph)	19	23	11	259	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	141	141			270	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	141	141			270	
tC, single (s)	6.4	6.3			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.7	
p0 queue free %	98	97			100	
cM capacity (veh/h)	855	892			1061	
Direction, Lane #	NB 1	SE 1	NW 1			
Volume Total	42	270	0			
Volume Left	19	0	0			
Volume Right	23	259	0			
cSH	875	1700	1700			
Volume to Capacity	0.05	0.16	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.3	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.3	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		1.3				
Intersection Capacity Utilization		24.9%		ICU Level of Service		A
Analysis Period (min)		15				

Lanes, Volumes, Timings
24: State Fair Blvd & Brown - West

C large event outbound SF signal

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	50	183	0	75	3570
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.88
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	3539	0	902	2787
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	3539	0	902	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		572	2052		601	
Travel Time (s)		13.0	46.6		13.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	2%	2%	2%	100%	2%
Adj. Flow (vph)	0	56	203	0	83	3967
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	56	203	0	83	3967
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	136.6%
Analysis Period (min)	15
	ICU Level of Service H

HCM Unsignalized Intersection Capacity Analysis

24: State Fair Blvd & Brown - West

C large event outbound SF signal

5/28/2014



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↩	↩↪		↩	↩↪
Volume (veh/h)	0	50	183	0	75	3570
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	56	203	0	83	3967
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	203				259	102
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	203				259	102
tC, single (s)	4.1				8.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				4.5	3.3
p0 queue free %	100				83	0
cM capacity (veh/h)	1373				497	934
Direction, Lane #	SE 1	NW 1	NW 2	SW 1	SW 2	SW 3
Volume Total	56	136	68	83	1983	1983
Volume Left	0	0	0	83	0	0
Volume Right	0	0	0	0	1983	1983
cSH	1373	1700	1700	497	934	934
Volume to Capacity	0.00	0.08	0.04	0.17	2.12	2.12
Queue Length 95th (ft)	0	0	0	15	3416	3416
Control Delay (s)	0.0	0.0	0.0	13.7	521.8	521.8
Lane LOS				B	F	F
Approach Delay (s)	0.0	0.0		511.4		
Approach LOS				F		
Intersection Summary						
Average Delay		480.6				
Intersection Capacity Utilization		136.6%		ICU Level of Service		H
Analysis Period (min)		15				

Lanes, Volumes, Timings
26: State Fair Blvd & Brown - East

C large event outbound SF signal

5/28/2014



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	50	183	75	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.956			
Flt Protected						
Satd. Flow (prot)	0	1863	2646	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	2646	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2052	577		345	
Travel Time (s)		46.6	13.1		7.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	100%	2%	2%
Adj. Flow (vph)	0	56	203	83	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	56	286	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	10.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

26: State Fair Blvd & Brown - East

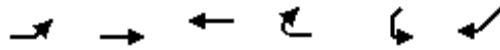
C large event outbound SF signal

5/28/2014



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↶	↶↷		↷	
Volume (veh/h)	0	50	183	75	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	56	203	83	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	287				301	143
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	287				301	143
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1272				667	878
Direction, Lane #	SE 1	NW 1	NW 2	SW 1		
Volume Total	56	136	151	0		
Volume Left	0	0	0	0		
Volume Right	0	0	83	0		
cSH	1272	1700	1700	1700		
Volume to Capacity	0.00	0.08	0.09	0.00		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS				A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS				A		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			10.8%		ICU Level of Service	A
Analysis Period (min)			15			

31: Int



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	↑
Volume (vph)	0	512	454	0	2380	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Fr t						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	3539	0	3433	950
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	3539	0	3433	950
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		1170	1368		522	
Travel Time (s)		26.6	31.1		11.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	2%	100%
Adj. Flow (vph)	0	557	493	0	2587	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	557	493	0	2587	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		100	100		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Minimum Split (s)		22.0	22.0		22.0	22.0
Total Split (s)	0.0	30.0	30.0	0.0	90.0	90.0
Total Split (%)	0.0%	25.0%	25.0%	0.0%	75.0%	75.0%
Maximum Green (s)		24.0	24.0		84.0	84.0
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)		24.0	24.0		84.0	
Actuated g/C Ratio		0.20	0.20		0.70	
v/c Ratio		0.79	0.70		1.08	
Control Delay		54.6	50.6		62.5	
Queue Delay		0.0	0.0		0.0	
Total Delay		54.6	50.6		62.5	
LOS		D	D		E	
Approach Delay		54.6	50.6		62.5	
Approach LOS		D	D		E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2: and 6:SWL, Start of Green

Natural Cycle: 120

Control Type: Pretimed

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 59.7

Intersection LOS: E

Intersection Capacity Utilization 92.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 31: Int





Lane Group	EBT	WBT	SWL
Lane Group Flow (vph)	557	493	2587
v/c Ratio	0.79	0.70	1.08
Control Delay	54.6	50.6	62.5
Queue Delay	0.0	0.0	0.0
Total Delay	54.6	50.6	62.5
Queue Length 50th (ft)	217	188	~1151
Queue Length 95th (ft)	283	248	#1278
Internal Link Dist (ft)	1090	1288	442
Turn Bay Length (ft)			
Base Capacity (vph)	708	708	2403
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.79	0.70	1.08

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Appendix C:

Accident Data

Accident Location Information System(ALIS)

Date: 5/19/2014
4:36:41 PM

Accident Verbal Description

Page: 1

Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011008 Street: STATE FAIR BLVD
10/9/2010 Sat 13:45 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33603662**
 Accident Class: NON-REPORTABLE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: RR CROSSING GATES
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 45 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 2 Driver's Age: 19 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: FOLLOWING TOO CLOSELY, DRIVER INATTENTION

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011002 Street: STATE FAIR BLVD
 31 Meters West of Unnamed Street
10/13/2010 Wed 14:10 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33607885**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: OVERTAKING Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

Date: 5/19/2014
4:36:41 PM

Accident Verbal Description

Page: 2

Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011002 Street: STATE FAIR BLVD
 ***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: 3248 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 56 Sex: F Citation Issued: N

Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, NOT APPLICABLE

Veh :1 TRUCK Registered Weight: State of Registration: IN
 Num of Occupants: 1 Driver's Age: 58 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011002 Street: STATE FAIR BLVD
 3 Meters West of Hiawatha Ave

10/20/2010 Wed 07:30 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33628234**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 OTHER Registered Weight: State of Registration:
 Num of Occupants: 0 Driver's Age: Sex: Citation Issued:
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Accident Location Information System(ALIS)

Date: 5/19/2014
 4:36:41 PM

Accident Verbal Description

Page: 3

Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011002 Street: STATE FAIR BLVD

***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 3256 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 17 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
 2 Meters West of Ramp

11/2/2010 Tue 21:50 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33636065**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE

Manner of Collision: OVERTAKING
 Road Surface Condition: DRY
 Loc. of Ped/Bicycle: NOT APPLICABLE

Road Char.: STRAIGHT AND LEVEL

Weather: CLOUDY
 Light Condition: DARK-ROAD LIGHTED
 Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4582 State of Registration: NY
 Num of Occupants: 1 Driver's Age: Sex: Citation Issued:
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: PARKED
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 OTHER Registered Weight: State of Registration: QC
 Num of Occupants: 1 Driver's Age: 24 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Accident Location Information System(ALIS)

Accident Verbal Description

Date: 5/19/2014
 4:36:41 PM

Page: 4

Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD
 30 Meters West of Walkway

11/6/2010 Sat 08:59 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33641391**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: RIGHT ANGLE Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 9900 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 44 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3072 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 77 Sex: M Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
805 Meters North of WILLIS AVE

12/7/2010	Tue 11:30 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2010-33688056
	Accident Class: PROPERTY DAMAGE		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE				Traffic Control: NONE
	Manner of Collision: OVERTAKING				Weather: SNOW
	Road Surface Condition: SNOW/ICE	Road Char.: STRAIGHT AND LEVEL			Light Condition: DAYLIGHT
	Loc. of Ped/Bicycle: NOT APPLICABLE	Action of Ped/Bicycle: NOT APPLICABLE			

Accident Location Information System(ALIS)

Accident Verbal Description

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
***** CONTINUED

Veh :1	CAR/VAN/PICKUP	Registered Weight: 4665	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 53	Sex: M Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, PAVEMENT SLIPPERY		

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3367	State of Registration: NY
	Num of Occupants: 2	Driver's Age:	Sex: Citation Issued:
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: PARKED		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011008 Street: STATE FAIR BLVD
1/18/2011 Tue 15:15 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2011-33738818**

Accident Class: NON-REPORTABLE	Police Agency: GEDDES TOWN PD	Num of Veh: 1
Type Of Accident: COLLISION WITH OTHER	Traffic Control: RR CROSSING GATES	
Manner of Collision: OTHER	Weather: CLEAR	
Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL	Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE	Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 78	Sex: M Citation Issued: N
	Direction of Travel: NORTH-WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: TRAF CNTRL DEV IMPROPER/NON-WRKG, DRIVER INATTENTION		

Accident Location Information System(ALIS)

Accident Verbal Description

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
AT INTERSECTION WITH BRIDGE ST

1/24/2011	Mon 18:45 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2011-33747608
	Accident Class: PROPERTY DAMAGE		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL	
	Manner of Collision: RIGHT TURN (AGAINST OTHER CAR)			Weather: CLOUDY	
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Veh :2	CAR/VAN/PICKUP	Registered Weight: 2727	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 25	Sex: M Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight: 4049	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 33	Sex: F Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
24 Meters West of Ramp

2/1/2011	Tue 22:50 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2011-33759381
	Accident Class: NON-REPORTABLE		Police Agency: ONONDAGA CO SHERIFF DEPT		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: NONE	
	Manner of Collision: REAR END			Weather: SNOW	
	Road Surface Condition: SNOW/ICE	Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 2	Driver's Age:	Sex: Citation Issued:

Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: PARKED
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 56 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: BACKING
 Apparent Factors: BACKING UNSAFELY, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD
 5 Meters East of Hiawatha Ave

2/5/2011 Sat 17:30 PM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2011-33765230**
 Accident Class: INJURY Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
 Manner of Collision: RIGHT ANGLE Weather: SLEET/HAIL/FREEZING RAIN
 Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3929 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 63 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD

***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 2 Driver's Age: 78 Sex: M Citation Issued: N
 Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: VIEW OBSTRUCTED/LIMITED, PAVEMENT SLIPPERY

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST
 30 Meters South of STATE FAIR BLVD

2/9/2011 Wed 17:15 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2011-33771776**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL

Manner of Collision: REAR END
 Road Surface Condition: WET
 Loc. of Ped/Bicycle: NOT APPLICABLE

Road Char.: STRAIGHT AND LEVEL
 Action of Ped/Bicycle: NOT APPLICABLE

Weather: CLEAR
 Light Condition: DUSK

Veh :2 CAR/VAN/PICKUP Registered Weight: 4416 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 51 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3455 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 44 Sex: F Citation Issued: Y
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

Accident Location Information System(ALIS)

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Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
 4 Meters East of Ramp

3/2/2011 Wed 19:20 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2011-33795041**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 5077 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 41 Sex: M Citation Issued: N
 Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: UNKNOWN, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: 2698 State of Registration: NY
 Num of Occupants: 3 Driver's Age: 44 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
AT INTERSECTION WITH Ramp

3/19/2011	Sat 13:08 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2011-33815468	Num of Veh: 2
	Accident Class: NON-REPORTABLE		Police Agency: ONONDAGA CO SHERIFF DEPT			
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL		
	Manner of Collision: REAR END			Weather: CLOUDY		
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT		
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE			

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 68	Sex: F Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 32	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: FOLLOWING TOO CLOSELY, DRIVER INATTENTION		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
33 Meters East of Willis Ave

5/3/2011	Tue 02:00 AM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: C	Case: 2011-33888776	Num of Veh: 1
	Accident Class: PROPERTY DAMAGE AND INJURY		Police Agency: ONONDAGA CO SHERIFF DEPT			
	Type Of Accident: OVERTURNED			Traffic Control: NONE		
	Manner of Collision: OTHER			Weather: CLEAR		
	Road Surface Condition: DRY	Road Char.: STRAIGHT/ GRADE		Light Condition: DARK-ROAD LIGHTED		
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE			

Veh :1	MOTORCYCLE	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 30	Sex: M Citation Issued: Y
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: AVOIDING OBJECT IN ROADWAY		
	Apparent Factors: ALCOHOL INVOLVEMENT, REACTION TO OTHER UNINVOLVED VEHICL		

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

93 Meters East of Unnamed Street

6/15/2011

Wed 11:25 AM

Persons Killed: 1

Persons Injured: 0

Extent of Injuries: K

Case: 2011-33937544

Accident Class: FATAL

Police Agency: GEDDES TOWN PD

Num of Veh: 2

Type Of Accident: COLLISION WITH MOTOR VEHICLE

Traffic Control: NONE

Manner of Collision: HEAD ON

Weather: CLEAR

Road Surface Condition: DRY

Road Char.: CURVE AND LEVEL

Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Veh :2

TRUCK

Registered Weight: 71250

State of Registration: NY

Num of Occupants: 1

Driver's Age: 43

Sex: M

Citation Issued: N

Direction of Travel: EAST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1

CAR/VAN/PICKUP

Registered Weight: 3396

State of Registration: NY

Num of Occupants: 1

Driver's Age: 26

Sex: F

Citation Issued: N

Direction of Travel: WEST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD

22 Meters West of Walkway

7/10/2011

Sun 12:05 PM

Persons Killed: 0

Persons Injured: 0

Extent of Injuries:

Case: 2011-33942672

Accident Class: PROPERTY DAMAGE

Police Agency: GEDDES TOWN PD

Num of Veh: 2

Type Of Accident: COLLISION WITH MOTOR VEHICLE

Traffic Control: NONE

Manner of Collision: OVERTAKING

Weather: CLEAR

Road Surface Condition: DRY

Road Char.: STRAIGHT AND LEVEL

Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD

***** CONTINUED

Veh :2

CAR/VAN/PICKUP

Registered Weight: 2978

State of Registration: NY

Num of Occupants: 2

Driver's Age: 52

Sex: F

Citation Issued: N

Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3571 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 21 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: CHANGING LANES
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
 46 Meters West of PUMPHOUSE RD

6/4/2011 Sat 12:45 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2011-33949374**
 Accident Class: NON-REPORTABLE Police Agency: ONONDAGA CO SHERIFF DEPT Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 4 Driver's Age: 60 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 3 Driver's Age: 29 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, FOLLOWING TOO CLOSELY

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
 229 Meters North of WILLIS AVE

7/31/2011 Sun 00:15 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: A **Case: 2011-33971846**
 Accident Class: INJURY Police Agency: GEDDES TOWN PD Num of Veh: 1
 Type Of Accident: COLLISION WITH PEDESTRIAN Traffic Control: NONE

Manner of Collision: OTHER
 Road Surface Condition: DRY
 Loc. of Ped/Bicycle: PED/BICYCLIST NOT AT INTERSECTION

Road Char.: STRAIGHT/ GRADE

Weather: CLOUDY
 Light Condition: DARK-ROAD LIGHTED
 Action of Ped/Bicycle: ALONG HIGHWAY WITH TRAFFIC

Veh :2 PEDESTRIAN Registered Weight: State of Registration:
 Num of Occupants: 1 Driver's Age: 47 Sex: M Citation Issued: N
 Direction of Travel: NOT APPLICABLE Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: NOT APPLICABLE
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 OTHER Registered Weight: State of Registration:
 Num of Occupants: 0 Driver's Age: Sex: Citation Issued:
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: UNKNOWN
 Apparent Factors: DRIVER INATTENTION, UNKNOWN

Accident Location Information System(ALIS)

Accident Verbal Description

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Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011006 Street: STATE FAIR BLVD
 21 Meters East of Unnamed Street

7/30/2011 Sat 10:55 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2011-33973115**
 Accident Class: NON-REPORTABLE Police Agency: ONEIDA SP Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: POLICE/FIRE EMERGENCY
 Manner of Collision: OVERTAKING Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 4 Driver's Age: 42 Sex: F Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 2 Driver's Age: 25 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MERGING
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
1 Meters East of Ramp

8/9/2011 Tue 15:30 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2011-33982239**
Accident Class: NON-REPORTABLE Police Agency: GEDDES TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

***** CONTINUED

Veh :2 TRUCK Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 75 Sex: M Citation Issued: N
Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 49 Sex: M Citation Issued: Y
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011006 Street: STATE FAIR BLVD
50 Meters East of Unnamed Street

8/29/2011 Mon 16:30 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2011-34004758**
Accident Class: PROPERTY DAMAGE Police Agency: SP SYLVAN BEACH (DHQT) Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: RIGHT TURN (WITH OTHER CAR) Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 5000 State of Registration: NY
Num of Occupants: 1 Driver's Age: 20 Sex: M Citation Issued: Y
Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING RIGHT TURN
Apparent Factors: TURNING IMPROPER, NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011006 Street: STATE FAIR BLVD

***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3573	State of Registration: NY
	Num of Occupants: 1	Driver's Age:	Sex: Citation Issued:
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: PARKED		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

68 Meters West of Ramp

8/30/2011	Tue 16:45 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2011-34004761
	Accident Class: NON-REPORTABLE		Police Agency: SP SYLVAN BEACH (DHQT)		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: NONE	
	Manner of Collision: OVERTAKING			Weather: CLEAR	
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE	Action of Ped/Bicycle: NOT APPLICABLE			

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 42	Sex: F Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, NOT APPLICABLE		

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 30	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, NOT APPLICABLE		

Accident Location Information System(ALIS)

Accident Verbal Description

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011006 Street: STATE FAIR BLVD

AT INTERSECTION WITH Belle Isle Ave

9/2/2011	Fri 11:25 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2011-34007147
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Accident Class: NON-REPORTABLE	Police Agency: PULASKI SP	Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE		Traffic Control: NONE
Manner of Collision: OVERTAKING		Weather: CLEAR
Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL	Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE	Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 3	Driver's Age: 60	Sex: M Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, NOT APPLICABLE		

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 79	Sex: M Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
88 Meters East of Ramp

9/3/2011	Sat 09:25 AM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: C	Case: 2011-34007393
	Accident Class: INJURY		Police Agency: PULASKI SP		Num of Veh: 1
	Type Of Accident: COLLISION WITH PEDESTRIAN			Traffic Control: TRAFFIC SIGNAL	
	Manner of Collision: OTHER			Weather: CLOUDY	
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: PED/BICYCLIST NOT AT INTERSECTION			Action of Ped/Bicycle: CROSSING WITH SIGNAL	

Accident Location Information System(ALIS)

Accident Verbal Description

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

***** CONTINUED

Veh :2	PEDESTRIAN	Registered Weight:	State of Registration:
	Num of Occupants: 1	Driver's Age: 62	Sex: M Citation Issued: N
	Direction of Travel: NOT APPLICABLE	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: NOT APPLICABLE		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 61	Sex: M Citation Issued: Y
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, VIEW OBSTRUCTED/LIMITED

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: COUNTY HWY 80
AT INTERSECTION WITH Ramp

9/1/2011 Thu 15:00 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2011-34008751**
 Accident Class: PROPERTY DAMAGE Police Agency: SP SYLVAN BEACH (DHQT) Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: UNKNOWN Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 OTHER Registered Weight: State of Registration: NY
 Num of Occupants: 0 Driver's Age: Sex: Citation Issued:
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: UNKNOWN
 Apparent Factors: TURNING IMPROPER, UNKNOWN

Accident Location Information System(ALIS)

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: COUNTY HWY 80
***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: 3605 State of Registration: NY
 Num of Occupants: 1 Driver's Age: Sex: Citation Issued:
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: PARKED
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street:

9/4/2011 Sun 19:47 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2011-34012378**
 Accident Class: NON-REPORTABLE Police Agency: ONEIDA SP Num of Veh: 1
 Type Of Accident: COLLISION WITH OTHER Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 52 Sex: F Citation Issued: Y
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: CHANGING LANES
 Apparent Factors: UNSAFE LANE CHANGE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011002 Street: STATE FAIR BLVD

37 Meters West of Unnamed Street

9/8/2011

Thu 12:48 PM

Persons Killed: 0

Persons Injured: 0

Extent of Injuries:

Case: 2011-34013059

Accident Class: PROPERTY DAMAGE

Police Agency: SP BALDWINSVILLE SATELLITE

Num of Veh: 1

Type Of Accident: COLL. W/LIGHT SUPPORT/UTILITY POLE

Traffic Control: NONE

Manner of Collision: OTHER

Weather: CLOUDY

Road Surface Condition: DRY

Road Char.: STRAIGHT AND LEVEL

Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011002 Street: STATE FAIR BLVD

***** CONTINUED

Veh :1

CAR/VAN/PICKUP

Registered Weight:

State of Registration: FL

Num of Occupants: 1

Driver's Age: 40

Sex: M

Citation Issued: Y

Direction of Travel: NORTH-EAST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: MAKING RIGHT TURN

Apparent Factors: NOT APPLICABLE, TURNING IMPROPER

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

37 Meters West of Ramp

8/31/2011

Wed 23:23 PM

Persons Killed: 0

Persons Injured: 0

Extent of Injuries:

Case: 2011-34017795

Accident Class: NON-REPORTABLE

Police Agency: AUBURN SP

Num of Veh: 1

Type Of Accident: COLLISION WITH OTHER FIXED OBJECT

Traffic Control: NONE

Manner of Collision: OTHER

Weather: CLEAR

Road Surface Condition: DRY

Road Char.: STRAIGHT AND LEVEL

Light Condition: DARK-ROAD UNLIGHTED

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Veh :1

OTHER

Registered Weight:

State of Registration: NY

Num of Occupants: 1

Driver's Age: 32

Sex: M

Citation Issued: N

Direction of Travel: NORTH-WEST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: MAKING U TURN

Apparent Factors: OBSTRUCTION/DEBRIS, VIEW OBSTRUCTED/LIMITED

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

2 Meters West of Ramp

9/16/2011

Fri 19:51 PM

Persons Killed: 0

Persons Injured: 0

Extent of Injuries:

Case: 2011-34021317

Accident Class: PROPERTY DAMAGE

Police Agency: GEDDES TOWN PD

Num of Veh: 2

Type Of Accident: COLLISION WITH MOTOR VEHICLE

Traffic Control: TRAFFIC SIGNAL

Manner of Collision: RIGHT TURN (AGAINST OTHER CAR)

Weather: CLOUDY

Road Surface Condition: DRY

Road Char.: STRAIGHT AND LEVEL

Light Condition: DARK-ROAD LIGHTED

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

***** CONTINUED

Veh :1	CAR/VAN/PICKUP	Registered Weight: 8500	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 62	Sex: M Citation Issued: N
	Direction of Travel: NORTH-EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE		

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3017	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 24	Sex: F Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST
AT INTERSECTION WITH STATE FAIR BLVD

9/18/2011	Sun 21:45 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2011-34023081
	Accident Class: NON-REPORTABLE		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL	
	Manner of Collision: HEAD ON			Weather: CLEAR	
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 20	Sex: M Citation Issued: Y
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING RIGHT TURN		
	Apparent Factors: ALCOHOL INVOLVEMENT, DRIVER INATTENTION		

Accident Location Information System(ALIS)

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST

***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 22	Sex: F Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
 AT INTERSECTION WITH BRIDGE ST
9/27/2011 Tue 09:03 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2011-34033610**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3049	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 62	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: IL
 Num of Occupants: 1 Driver's Age: 26 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STARTING IN TRAFFIC
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Accident Location Information System(ALIS)

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD 2 Meters East of Ramp			
10/15/2011 Sat 19:15 PM	Persons Killed: 0	Persons Injured: 3	Extent of Injuries: CCC Case: 2011-34054049
Accident Class: PROPERTY DAMAGE AND INJURY			Police Agency: GEDDES TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: NONE
Manner of Collision: LEFT TURN (WITH OTHER CAR)			Weather: RAIN
Road Surface Condition: WET	Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE	

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3548	State of Registration: NY
	Num of Occupants: 5	Driver's Age: 55	Sex: F Citation Issued: N
	Direction of Travel: NORTH-WEST	Public Property Damage: OTHER	School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3049	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 65	Sex: F Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN			
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE			

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
 AT INTERSECTION WITH BRIDGE ST

11/2/2011	Wed 08:20 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2011-34078627
Accident Class: NON-REPORTABLE		Police Agency: GEDDES TOWN PD		Num of Veh: 2	
Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL		
Manner of Collision: REAR END			Weather: CLEAR		
Road Surface Condition: DRY		Road Char.: STRAIGHT AND LEVEL	Light Condition: DAYLIGHT		
Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE			

Accident Location Information System(ALIS)

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
 ***** CONTINUED

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 85	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
Pre-Accd Action: SLOWED OR STOPPING			
Apparent Factors: GLARE, NOT APPLICABLE			

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 40	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC			
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE			

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD
 27 Meters West of Ramp

12/28/2011	Wed 17:45 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2011-34152487
Accident Class: NON-REPORTABLE		Police Agency: GEDDES TOWN PD		Num of Veh: 2	
Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: NONE		
Manner of Collision: OVERTAKING			Weather: SNOW		
Road Surface Condition: SNOW/ICE		Road Char.: STRAIGHT AND LEVEL	Light Condition: DARK-ROAD LIGHTED		

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Veh :2

CAR/VAN/PICKUP

Registered Weight:

State of Registration: NY

Num of Occupants: 1

Driver's Age: 18

Sex: F

Citation Issued: N

Direction of Travel: WEST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD

***** CONTINUED

Veh :1

CAR/VAN/PICKUP

Registered Weight:

State of Registration: NY

Num of Occupants: 3

Driver's Age: 38

Sex: M

Citation Issued: N

Direction of Travel: WEST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: CHANGING LANES

Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: WILLIS AVE
AT INTERSECTION WITH STATE FAIR BLVD

1/13/2012

Fri 08:43 AM

Persons Killed: 0

Persons Injured: 0

Extent of Injuries:

Case: 2012-34174021

Accident Class: PROPERTY DAMAGE

Police Agency: GEDDES TOWN PD

Num of Veh: 2

Type Of Accident: COLLISION WITH MOTOR VEHICLE

Traffic Control: STOP SIGN

Manner of Collision: REAR END

Weather: SNOW

Road Surface Condition: SNOW/ICE

Road Char.: STRAIGHT AND LEVEL

Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Veh :2

CAR/VAN/PICKUP

Registered Weight: 3578

State of Registration: NY

Num of Occupants: 1

Driver's Age: 43

Sex: F

Citation Issued: N

Direction of Travel: NORTH

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: STOPPED IN TRAFFIC

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1

CAR/VAN/PICKUP

Registered Weight: 8800

State of Registration: NY

Num of Occupants: 1

Driver's Age: 39

Sex: M

Citation Issued: N

Direction of Travel: NORTH

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: SLOWED OR STOPPING

Apparent Factors: NOT APPLICABLE, PAVEMENT SLIPPERY

Accident Location Information System(ALIS)

Date: 5/19/2014

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Accident Verbal Description

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011008 Street: STATE FAIR BLVD

53 Meters West of Ramp

1/13/2012	Fri 13:23 PM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: C	Case: 2012-34174028
	Accident Class: PROPERTY DAMAGE AND INJURY			Police Agency: GEDDES TOWN PD	Num of Veh: 1
	Type Of Accident: COLLISION WITH GUIDE RAIL			Traffic Control: NONE	
	Manner of Collision: OTHER			Weather: SNOW	
	Road Surface Condition: SNOW/ICE		Road Char.: STRAIGHT AND LEVEL	Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	CAR/VAN/PICKUP	Registered Weight: 2895	State of Registration: NY	
	Num of Occupants: 1	Driver's Age: 40	Sex: F	Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER		School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD			
	Apparent Factors: PAVEMENT SLIPPERY, NOT APPLICABLE			

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

402 Meters West of PUMPHOUSE RD

1/13/2012	Fri 07:29 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34175721
	Accident Class: NON-REPORTABLE			Police Agency: GEDDES TOWN PD	Num of Veh: 1
	Type Of Accident: OTHER NON-COLLISION			Traffic Control: NONE	
	Manner of Collision: OTHER			Weather: SNOW	
	Road Surface Condition: SNOW/ICE		Road Char.: STRAIGHT AND LEVEL	Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Accident Location Information System(ALIS)

Date: 5/19/2014

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

***** CONTINUED

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY	
	Num of Occupants: 4	Driver's Age: 31	Sex: M	Citation Issued: Y
	Direction of Travel: WEST	Public Property Damage: OTHER		School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD			
	Apparent Factors: PAVEMENT SLIPPERY, NOT APPLICABLE			

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

61 Meters West of Unnamed Street

1/23/2012 Mon 08:36 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2012-34186030**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: OVERTAKING Weather: CLOUDY
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 TRUCK Registered Weight: State of Registration: IN
 Num of Occupants: 1 Driver's Age: 50 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 25999 State of Registration: NY
 Num of Occupants: 0 Driver's Age: Sex: Citation Issued:
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: PARKED
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Accident Location Information System(ALIS)

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 695 33011019 Street: RAMP

2/25/2012 Sat 21:11 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2012-34225055**
 Accident Class: PROPERTY DAMAGE Police Agency: NYSP ELBRIDGE Num of Veh: 1
 Type Of Accident: COLLISION WITH GUIDE RAIL Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLOUDY
 Road Surface Condition: WET Road Char.: CURVE AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3195 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 51 Sex: F Citation Issued: Y
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: UNSAFE SPEED, FAILURE TO KEEP RIGHT

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
AT INTERSECTION WITH BRIDGE ST

3/10/2012 Sat 11:07 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2012-34229145**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLOUDY
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3490	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 50	Sex: M Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3030	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 60	Sex: F Citation Issued: N
	Direction of Travel: NORTH-EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
AT INTERSECTION WITH Ramp

4/24/2012	Tue 07:49 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34284865
	Accident Class: PROPERTY DAMAGE		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL	
	Manner of Collision: LEFT TURN (AGAINST OTHER CAR)			Weather: RAIN	
	Road Surface Condition: WET	Road Char.: STRAIGHT/ GRADE		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight: 2817	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 33	Sex: M Citation Issued: Y
	Direction of Travel: SOUTH-EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, VIEW OBSTRUCTED/LIMITED		

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight: 2626	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 33	Sex: M Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST
AT INTERSECTION WITH STATE FAIR BLVD

5/29/2012	Tue 16:15 PM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: C	Case: 2012-34318439
	Accident Class: PROPERTY DAMAGE AND INJURY			Police Agency: GEDDES TOWN PD	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL	
	Manner of Collision: LEFT TURN (WITH OTHER CAR)			Weather: RAIN	
	Road Surface Condition: WET	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3377	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 66	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE		

Veh :2	CAR/VAN/PICKUP	Registered Weight: 2672	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 18	Sex: M Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
AT INTERSECTION WITH WILLIS AVE

6/19/2012	Tue 07:16 AM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: C	Case: 2012-34340764
	Accident Class: PROPERTY DAMAGE AND INJURY			Police Agency: GEDDES TOWN PD	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: STOP SIGN	
	Manner of Collision: RIGHT ANGLE			Weather: RAIN	
	Road Surface Condition: WET	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	CAR/VAN/PICKUP	Registered Weight: 4681	State of Registration: NY
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Num of Occupants: 1	Driver's Age: 28	Sex: M	Citation Issued: N
Direction of Travel: EAST	Public Property Damage: OTHER		School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD			
Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, NOT APPLICABLE			

Veh :2	CAR/VAN/PICKUP	Registered Weight: 4281	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 42	Sex: F
	Direction of Travel: NORTH-WEST	Public Property Damage: OTHER	Citation Issued: N
	Pre-Accd Action: MAKING LEFT TURN		School Bus Involved: OTHER
	Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
AT INTERSECTION WITH [Route] 297

7/24/2012	Tue 11:29 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34379443
	Accident Class: PROPERTY DAMAGE		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL	
	Manner of Collision: LEFT TURN (AGAINST OTHER CAR)			Weather: CLOUDY	
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

***** CONTINUED

Veh :1	CAR/VAN/PICKUP	Registered Weight: 2837	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 33	Sex: M
	Direction of Travel: SOUTH-WEST	Public Property Damage: OTHER	Citation Issued: Y
	Pre-Accd Action: MAKING LEFT TURN		School Bus Involved: OTHER
	Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE		

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3844	State of Registration: NY
	Num of Occupants: 3	Driver's Age: 41	Sex: F
	Direction of Travel: EAST	Public Property Damage: OTHER	Citation Issued: Y
	Pre-Accd Action: GOING STRAIGHT AHEAD		School Bus Involved: OTHER
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street:

7/29/2012	Sun 17:28 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34383869
	Accident Class: NON-REPORTABLE		Police Agency: NYSP ELBRIDGE		Num of Veh: 1
	Type Of Accident: COLLISION WITH OTHER FIXED OBJECT			Traffic Control: OTHER	

Manner of Collision: OTHER
 Road Surface Condition: DRY
 Loc. of Ped/Bicycle: NOT APPLICABLE

Road Char.: CURVE AND GRADE

Weather: CLEAR

Light Condition: DAYLIGHT

Action of Ped/Bicycle: NOT APPLICABLE

Veh :1

CAR/VAN/PICKUP

Registered Weight:

State of Registration: NY

Num of Occupants: 3

Driver's Age: 44

Sex: M

Citation Issued: Y

Direction of Travel: NORTH-EAST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: ALCOHOL INVOLVEMENT, NOT APPLICABLE

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011005 Street: STATE FAIR BLVD
 73 Meters West of Walkway

7/29/2012

Sun 23:18 PM

Persons Killed: 0

Persons Injured: 1

Extent of Injuries: C

Case: 2012-34383986

Num of Veh: 4

Accident Class: PROPERTY DAMAGE AND INJURY

Police Agency: GEDDES TOWN PD

Traffic Control: NONE

Type Of Accident: COLLISION WITH MOTOR VEHICLE

Manner of Collision: OTHER

Weather: CLOUDY

Road Surface Condition: DRY

Road Char.: STRAIGHT AND LEVEL

Light Condition: DARK-ROAD LIGHTED

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Veh :2

CAR/VAN/PICKUP

Registered Weight: 2544

State of Registration: NY

Num of Occupants: 4

Driver's Age: 23

Sex: F

Citation Issued: N

Direction of Travel: EAST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: SLOWED OR STOPPING

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :3

CAR/VAN/PICKUP

Registered Weight: 3728

State of Registration: NY

Num of Occupants: 7

Driver's Age: 19

Sex: M

Citation Issued: N

Direction of Travel: EAST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: STOPPED IN TRAFFIC

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1

CAR/VAN/PICKUP

Registered Weight: 2889

State of Registration: NY

Num of Occupants: 2

Driver's Age: 23

Sex: M

Citation Issued: Y

Direction of Travel: EAST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: ALCOHOL INVOLVEMENT, FOLLOWING TOO CLOSELY

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011005 Street: STATE FAIR BLVD

***** CONTINUED

Veh :4	CAR/VAN/PICKUP	Registered Weight: 3131	State of Registration: NY
	Num of Occupants: 4	Driver's Age: 27	Sex: F Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

AT INTERSECTION WITH BRIDGE ST

8/7/2012	Tue 08:40 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34393567
	Accident Class: NON-REPORTABLE		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH SIGN POST		Traffic Control: TRAFFIC SIGNAL		
	Manner of Collision: OTHER		Weather: CLEAR		
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL	Light Condition: DAYLIGHT		
	Loc. of Ped/Bicycle: NOT APPLICABLE	Action of Ped/Bicycle: NOT APPLICABLE			

Veh :2	TRUCK	Registered Weight:	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 32	Sex: M Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: DRIVER INEXPERIENCE, NOT APPLICABLE		

Veh :1	TRUCK	Registered Weight:	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 32	Sex: M Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: NOT APPLICABLE, DRIVER INEXPERIENCE		

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

2 Meters West of Ramp

8/13/2012	Mon 16:15 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34401385
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Accident Class: PROPERTY DAMAGE	Police Agency: GEDDES TOWN PD	Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE		Traffic Control: STOP SIGN
Manner of Collision: REAR END		Weather: CLEAR
Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL	Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE	Action of Ped/Bicycle: NOT APPLICABLE	

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: FL
	Num of Occupants: 2	Driver's Age: 42	Sex: M
	Direction of Travel: SOUTH	Public Property Damage: OTHER	Citation Issued: N
			School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	TRUCK	Registered Weight: 150000	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 38	Sex: M
	Direction of Travel: SOUTH	Public Property Damage: OTHER	Citation Issued: N
			School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: HIAWATHA AVE
AT INTERSECTION WITH State Fair Blvd

8/23/2012	Thu 22:50 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34408731	Num of Veh: 1
	Accident Class: NON-REPORTABLE		Police Agency: WATERTOWN SP			
	Type Of Accident: COLLISION WITH SIGN POST			Traffic Control: STOP SIGN		
	Manner of Collision: OTHER			Weather: CLEAR		
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED		
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE			

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: HIAWATHA AVE

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Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 54	Sex: M
	Direction of Travel: SOUTH-EAST	Public Property Damage: OTHER	Citation Issued: N
			School Bus Involved: OTHER
	Pre-Accd Action: BACKING		
	Apparent Factors: BACKING UNSAFELY, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD
19 Meters East of Hiawatha Ave

8/27/2012	Mon 21:25 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34414178	Num of Veh: 2
	Accident Class: NON-REPORTABLE		Police Agency: ONEIDA SP			
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: NONE		

Manner of Collision: RIGHT TURN (WITH OTHER CAR) Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 23 Sex: M Citation Issued: Y
 Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 2 Driver's Age: 33 Sex: F Citation Issued: Y
 Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: TURNING IMPROPER, NOT APPLICABLE

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011002 Street: STATE RTE 931B
 51 Meters West of Unnamed Street

8/28/2012 Tue 18:04 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2012-34417174
 Accident Class: NON-REPORTABLE Police Agency: ONEIDA SP Num of Veh: 1
 Type Of Accident: COLLISION WITH OTHER FIXED OBJECT Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 4 Driver's Age: 58 Sex: F Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011004 Street: STATE RTE 931B
 17 Meters East of Walkway

8/28/2012 Tue 15:38 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2012-34417198
 Accident Class: NON-REPORTABLE Police Agency: SP MORRISVILLE (DHQT) Num of Veh: 1
 Type Of Accident: COLLISION WITH SIGN POST Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011004 Street: STATE RTE 931B

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Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 44	Sex: F Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: BACKING		
	Apparent Factors: BACKING UNSAFELY, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

31 Meters West of Ramp

8/31/2012	Fri 19:20 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34419153
	Accident Class: NON-REPORTABLE			Police Agency: PULASKI SP	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: POLICE/FIRE EMERGENCY	
	Manner of Collision: RIGHT TURN (WITH OTHER CAR)			Weather: CLOUDY	
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DUSK	
	Loc. of Ped/Bicycle: NOT APPLICABLE	Action of Ped/Bicycle: NOT APPLICABLE			

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 26	Sex: F Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	BUS	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 42	Sex: F Citation Issued: N
	Direction of Travel: NORTH-EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING RIGHT TURN		
	Apparent Factors: UNSAFE LANE CHANGE, NOT APPLICABLE		

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County: Onondaga Muni: Geddes(T) Ref. Marker: 690I33011035 Street: I 690

AT INTERSECTION WITH Ramp

9/2/2012 Sun 14:21 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2012-34419486**
 Accident Class: PROPERTY DAMAGE Police Agency: FULTON SP Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3368 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 44 Sex: F Citation Issued: Y
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: DRUGS (ILLEGAL), FOLLOWING TOO CLOSELY

Veh :2 CAR/VAN/PICKUP Registered Weight: 4423 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 52 Sex: F Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011006 Street: STATE FAIR BLVD
 21 Meters East of Unnamed Street

9/2/2012 Sun 22:35 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: B **Case: 2012-34419702**
 Accident Class: INJURY Police Agency: SP SYLVAN BEACH (DHQT) Num of Veh: 1
 Type Of Accident: COLLISION WITH PEDESTRIAN Traffic Control: OTHER
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: PED/BICYCLIST NOT AT INTERSECTION Action of Ped/Bicycle: ALONG HIGHWAY WITH TRAFFIC

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011006 Street: STATE FAIR BLVD

***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 3057 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 24 Sex: F Citation Issued: Y
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: ALCOHOL INVOLVEMENT, TRAFFIC CONTROL DEVICES DISREGARDED

Veh :2 PEDESTRIAN Registered Weight: State of Registration: -3
 Num of Occupants: 1 Driver's Age: Sex: F Citation Issued: N
 Direction of Travel: NOT APPLICABLE Public Property Damage: OTHER School Bus Involved: OTHER

Pre-Accd Action: NOT APPLICABLE

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: COUNTY HWY 80
82 Meters East of Ramp

9/2/2012 Sun 18:18 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2012-34419709**
Accident Class: NON-REPORTABLE Police Agency: ONEIDA SP Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: RIGHT TURN (WITH OTHER CAR) Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 2 Driver's Age: 46 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING RIGHT TURN
Apparent Factors: TURNING IMPROPER, NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: COUNTY HWY 80
***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: Sex: U Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: PARKED
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
23 Meters East of BRIDGE ST

7/29/2012 Sun 11:00 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2012-34451615**
Accident Class: NON-REPORTABLE Police Agency: ONONDAGA CO SHERIFF DEPT Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 34 Sex: M Citation Issued: Y
Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 20	Sex: M Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

AT INTERSECTION WITH BRIDGE ST

10/3/2012	Wed 07:30 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34482778
	Accident Class: NON-REPORTABLE		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL	
	Manner of Collision: LEFT TURN (AGAINST OTHER CAR)			Weather: CLOUDY	
	Road Surface Condition: WET	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Veh :1	OTHER	Registered Weight:	State of Registration:
	Num of Occupants: 1	Driver's Age:	Sex: Citation Issued:
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: NOT APPLICABLE, FAILURE TO YIELD RIGHT OF WAY		

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 47	Sex: M Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

61 Meters North of WILLIS AVE

10/6/2012	Sat 07:35 AM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: C	Case: 2012-34483420
	Accident Class: PROPERTY DAMAGE AND INJURY		Police Agency: GEDDES TOWN PD		Num of Veh: 1
	Type Of Accident: COLLISION WITH GUIDE RAIL			Traffic Control: NONE	
	Manner of Collision: OTHER			Weather: RAIN	
	Road Surface Condition: WET	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

***** CONTINUED

Veh :1	CAR/VAN/PICKUP	Registered Weight: 2254	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 26	Sex: M Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: PAVEMENT SLIPPERY, UNSAFE SPEED		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

152 Meters North of WILLIS AVE

10/26/2012	Fri 06:02 AM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: C	Case: 2012-34497797
	Accident Class: PROPERTY DAMAGE AND INJURY			Police Agency: GEDDES TOWN PD	Num of Veh: 1
	Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH			Traffic Control: NONE	
	Manner of Collision: OTHER			Weather: CLEAR	
	Road Surface Condition: DRY			Light Condition: DARK-ROAD UNLIGHTED	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3382	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 25	Sex: F Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

AT INTERSECTION WITH Ramp

11/4/2012	Sun 14:47 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34521156
	Accident Class: NON-REPORTABLE			Police Agency: ONONDAGA CO SHERIFF DEPT	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: NONE	
	Manner of Collision: REAR END			Weather: CLOUDY	
	Road Surface Condition: DRY			Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 4	Driver's Age:	Sex: U Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: PARKED		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 66	Sex: M Citation Issued: Y
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: OVERTAKING		
	Apparent Factors: DRIVER INATTENTION, PASSING OR LANE USAGE IMPROPERLY		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: COUNTY HWY 80
AT INTERSECTION WITH Ramp

11/4/2012	Sun 14:45 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34521170	Num of Veh: 2
	Accident Class: NON-REPORTABLE		Police Agency: ONONDAGA CO SHERIFF DEPT			
	Type Of Accident: COLLISION WITH MOTOR VEHICLE				Traffic Control: NONE	
	Manner of Collision: REAR END			Weather: CLOUDY		
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT		
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE			

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 66	Sex: M Citation Issued: Y
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STARTING IN TRAFFIC		
	Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE		

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: COUNTY HWY 80
***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 4	Driver's Age: 43	Sex: M Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
AT INTERSECTION WITH [Route] 297

11/17/2012	Sat 23:00 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34534514
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Accident Class: PROPERTY DAMAGE	Police Agency: GEDDES TOWN PD	Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE	Traffic Control: TRAFFIC SIGNAL	
Manner of Collision: LEFT TURN (WITH OTHER CAR)	Weather: CLOUDY	
Road Surface Condition: DRY	Light Condition: DARK-ROAD LIGHTED	
Loc. of Ped/Bicycle: NOT APPLICABLE	Action of Ped/Bicycle: NOT APPLICABLE	

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3180	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 27	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight: 2604	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 59	Sex: M Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: UNSAFE SPEED, ALCOHOL INVOLVEMENT		

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD
2 Meters East of Hiawatha Ave

12/7/2012	Fri 16:30 PM	Persons Killed: 0	Persons Injured: 2	Extent of Injuries: AA	Case: 2012-34563615
	Accident Class: PROPERTY DAMAGE AND INJURY			Police Agency: GEDDES TOWN PD	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: STOP SIGN	
	Manner of Collision: LEFT TURN (WITH OTHER CAR)			Weather: RAIN	
	Road Surface Condition: WET	Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3975	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 25	Sex: F Citation Issued: N
	Direction of Travel: SOUTH-EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3164	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 46	Sex: M Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, DRIVER INATTENTION		

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
16 Meters East of Ramp

11/28/2012	Wed 11:15 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34566418	Num of Veh: 2
Accident Class: NON-REPORTABLE		Police Agency: NYSP NORTH SYRACUSE		Traffic Control: YIELD SIGN		
Type Of Accident: COLLISION WITH MOTOR VEHICLE				Weather: CLOUDY		
Manner of Collision: REAR END		Road Char.: CURVE AND GRADE		Light Condition: DAYLIGHT		
Road Surface Condition: DRY				Action of Ped/Bicycle: NOT APPLICABLE		
Loc. of Ped/Bicycle: NOT APPLICABLE						

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 60	Sex: F Citation Issued: N
	Direction of Travel: NORTH-WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		
Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 31	Sex: M Citation Issued: Y
	Direction of Travel: NORTH-WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: DRIVER INATTENTION, FOLLOWING TOO CLOSELY		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011005 Street: STATE FAIR BLVD
10 Meters East of Belle Isle Ave

11/21/2012	Wed 06:31 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2012-34592655	Num of Veh: 1
Accident Class: PROPERTY DAMAGE		Police Agency: SP BALDWINSVILLE SATELLITE		Traffic Control: NO PASSING ZONE		
Type Of Accident: COLL. W/LIGHT SUPPORT/UTILITY POLE				Weather: CLEAR		
Manner of Collision: OTHER		Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED		
Road Surface Condition: DRY				Action of Ped/Bicycle: NOT APPLICABLE		
Loc. of Ped/Bicycle: NOT APPLICABLE						

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3700	State of Registration: NY
	Num of Occupants: 1	Driver's Age:	Sex: Citation Issued:
	Direction of Travel: SOUTH-EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: DRIVER INATTENTION, UNKNOWN		

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County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST

AT INTERSECTION WITH STATE FAIR BLVD

1/5/2013 Sat 02:30 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2013-34602311
Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (WITH OTHER CAR) Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 2627 State of Registration: NY
Num of Occupants: 2 Driver's Age: 27 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3326 State of Registration: NY
Num of Occupants: 2 Driver's Age: 21 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, TURNING IMPROPER

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST

AT INTERSECTION WITH STATE FAIR BLVD

1/9/2013 Wed 15:15 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2013-34607067
Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (WITH OTHER CAR) Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

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County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST

***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 3401 State of Registration: NY
Num of Occupants: 1 Driver's Age: 77 Sex: F Citation Issued: Y

Direction of Travel: SOUTH-WEST
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: ILLNESS, GLARE

Public Property Damage: OTHER

School Bus Involved: OTHER

Veh :2

CAR/VAN/PICKUP
 Num of Occupants: 1

Registered Weight: 6069

Driver's Age: 47

State of Registration: NY

Sex: F

Citation Issued: Y

Direction of Travel: NORTH

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: STOPPED IN TRAFFIC

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST

15 Meters South of STATE FAIR BLVD

1/16/2013

Wed 14:15 PM

Persons Killed: 0

Persons Injured: 1

Extent of Injuries: B

Case: 2013-34619903

Accident Class: PROPERTY DAMAGE AND INJURY

Police Agency: ONONDAGA CO SHERIFF DEPT

Num of Veh: 2

Type Of Accident: COLLISION WITH MOTOR VEHICLE

Traffic Control: STOPPED SCHOOL BUS W/RED LIGHT FLSH

Manner of Collision: REAR END

Weather: CLOUDY

Road Surface Condition: WET

Road Char.: STRAIGHT AND LEVEL

Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Veh :1

CAR/VAN/PICKUP

Registered Weight: 3327

State of Registration: NY

Num of Occupants: 1

Driver's Age: 47

Sex: F

Citation Issued: Y

Direction of Travel: SOUTH

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: NOT APPLICABLE, FOLLOWING TOO CLOSELY

Accident Location Information System(ALIS)

Accident Verbal Description

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Veh :2

BUS

Registered Weight: 44

State of Registration: NY

Num of Occupants: 2

Driver's Age: 59

Sex: F

Citation Issued: N

Direction of Travel: SOUTH

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: STOPPED IN TRAFFIC

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: COUNTY HWY 80

AT INTERSECTION WITH Ramp

2/19/2013

Tue 09:53 AM

Persons Killed: 0

Persons Injured: 0

Extent of Injuries:

Case: 2013-34664723

Accident Class: NON-REPORTABLE

Police Agency: GEDDES TOWN PD

Num of Veh: 1

Type Of Accident: COLLISION WITH SIGN POST

Traffic Control: TRAFFIC SIGNAL

Manner of Collision: OTHER Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 TRUCK Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 24 Sex: F Citation Issued: N
 Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: NOT APPLICABLE, OVERSIZED VEHICLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST
 AT INTERSECTION WITH STATE FAIR BLVD

3/5/2013 Tue 07:45 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2013-34686846
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

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County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST

***** CONTINUED

Veh :2 BUS Registered Weight: 44 State of Registration: NY
 Num of Occupants: 16 Driver's Age: 40 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4650 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 37 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: DRIVER INATTENTION, FOLLOWING TOO CLOSELY

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST
 61 Meters South of STATE FAIR BLVD

3/11/2013 Mon 07:45 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C Case: 2013-34695868
 Accident Class: INJURY Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAWN

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3185	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 53	Sex: M Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: SLOWED OR STOPPING		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Accident Location Information System(ALIS)

Accident Verbal Description

Date: 5/19/2014
4:36:41 PM

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST

***** CONTINUED

Veh :1	CAR/VAN/PICKUP	Registered Weight: 2773	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 19	Sex: M Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011009 Street: STATE FAIR BLVD
3 Meters East of Ramp

4/12/2013	Fri 20:50 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2013-34734789
	Accident Class: PROPERTY DAMAGE		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE				Traffic Control: NONE
	Manner of Collision: OVERTAKING				Weather: RAIN
	Road Surface Condition: WET	Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3368	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 27	Sex: F Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3357	State of Registration: NY
	Num of Occupants: 2	Driver's Age: 70	Sex: M Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING U TURN		
	Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION		

Accident Location Information System(ALIS)

Date: 5/19/2014

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Accident Verbal Description

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011009 Street: STATE FAIR BLVD

AT INTERSECTION WITH PUMPHOUSE RD

4/24/2013

Wed 18:39 PM

Persons Killed: 0

Persons Injured: 0

Extent of Injuries:

Case: 2013-34749508

Num of Veh: 2

Accident Class: NON-REPORTABLE

Police Agency: ONONDAGA CO SHERIFF DEPT

Traffic Control: NONE

Type Of Accident: COLLISION WITH MOTOR VEHICLE

Weather: RAIN

Manner of Collision: LEFT TURN (AGAINST OTHER CAR)

Road Surface Condition: WET

Road Char.: STRAIGHT AND LEVEL

Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Veh :1

OTHER

Registered Weight:

State of Registration:

Num of Occupants: 1

Driver's Age:

Sex:

Citation Issued:

Direction of Travel: SOUTH

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: MAKING LEFT TURN

Apparent Factors: TURNING IMPROPER, UNKNOWN

Veh :2

CAR/VAN/PICKUP

Registered Weight:

State of Registration: MD

Num of Occupants: 1

Driver's Age:

Sex: U

Citation Issued: N

Direction of Travel: SOUTH

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: PARKED

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD

30 Meters West of Walkway

6/7/2013

Fri 16:35 PM

Persons Killed: 0

Persons Injured: 0

Extent of Injuries:

Case: 2013-34802378

Num of Veh: 2

Accident Class: NON-REPORTABLE

Police Agency: GEDDES TOWN PD

Traffic Control: NONE

Type Of Accident: COLLISION WITH MOTOR VEHICLE

Weather: RAIN

Manner of Collision: REAR END

Road Surface Condition: WET

Road Char.: STRAIGHT AND LEVEL

Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE

Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

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Accident Verbal Description

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD

***** CONTINUED

Veh :1

CAR/VAN/PICKUP

Registered Weight:

State of Registration: NY

Num of Occupants: 2

Driver's Age: 31

Sex: F

Citation Issued: Y

Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, FOLLOWING TOO CLOSELY

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 23 Sex: F Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: STATE FAIR BLVD
 AT INTERSECTION WITH BRIDGE ST

6/10/2013 Mon 15:15 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34807967**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 1
 Type Of Accident: COLLISION WITH SIGN POST Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: OTHER Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4237 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 59 Sex: F Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Accident Location Information System(ALIS)

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Accident Verbal Description

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Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011008 Street: STATE FAIR BLVD
 50 Meters West of Unnamed Street

6/13/2013 Thu 07:50 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34812796**
 Accident Class: PROPERTY DAMAGE Police Agency: ONONDAGA CO SHERIFF DEPT Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3318 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 30 Sex: F Citation Issued: Y
 Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: OH
 Num of Occupants: 1 Driver's Age: 64 Sex: M Citation Issued: Y
 Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: DRIVER INATTENTION, FOLLOWING TOO CLOSELY

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011009 Street: STATE FAIR BLVD
 18 Meters West of Ramp

6/20/2013 Thu 07:57 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34821518**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: RR CROSSING SIGN
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011009 Street: STATE FAIR BLVD
 ***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 3148 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 17 Sex: M Citation Issued: Y
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FOLLOWING TOO CLOSELY, DRIVER INATTENTION

Veh :2 BUS Registered Weight: 21 State of Registration: NY
 Num of Occupants: 4 Driver's Age: 58 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD
 9 Meters West of Ramp

7/19/2013 Fri 17:09 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34857471**
 Accident Class: PROPERTY DAMAGE Police Agency: GEDDES TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: OVERTAKING Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 TRUCK Registered Weight: State of Registration: IN

Num of Occupants: 1	Driver's Age: 45	Sex: M	Citation Issued: N
Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER	
Pre-Accd Action: CHANGING LANES			
Apparent Factors: NOT APPLICABLE, UNSAFE LANE CHANGE			

Accident Location Information System(ALIS)

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

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County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: ON
	Num of Occupants: 2	Driver's Age: 58	Sex: M Citation Issued: N
	Direction of Travel: WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD			
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE			

County: Onondaga Muni: Geddes(T) Ref. Marker: 695 33011019 Street: [Route] 695

AT INTERSECTION WITH STATE FAIR BLVD

7/21/2013	Sun 13:25 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2013-34857473
	Accident Class: PROPERTY DAMAGE		Police Agency: GEDDES TOWN PD		Num of Veh: 1
	Type Of Accident: FIRE/EXPLOSION			Traffic Control: NONE	
	Manner of Collision: OTHER			Weather: CLEAR	
	Road Surface Condition: DRY	Road Char.: CURVE AND GRADE		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3290	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 44	Sex: M Citation Issued: N
	Direction of Travel: SOUTH	Public Property Damage: OTHER	School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD			
Apparent Factors: OTHER (VEHICLE), NOT ENTERED			

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

322 Meters North of WILLIS AVE

7/22/2013	Mon 13:53 PM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: B	Case: 2013-34861241
	Accident Class: PROPERTY DAMAGE AND INJURY		Police Agency: GEDDES TOWN PD		Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE		Traffic Control: HIGHWAY WORK AREA		
	Manner of Collision: OVERTAKING		Weather: CLOUDY		
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE		Action of Ped/Bicycle: NOT APPLICABLE		

Accident Location Information System(ALIS)

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Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: STATE FAIR BLVD

***** CONTINUED

Veh :1	TRUCK	Registered Weight: 117000	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 47	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: FOLLOWING TOO CLOSELY, DRIVER INATTENTION		

Veh :2	TRUCK	Registered Weight: 107000	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 50	Sex: M Citation Issued: N
	Direction of Travel: EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: STOPPED IN TRAFFIC		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD
AT INTERSECTION WITH BRIDGE ST

7/25/2013	Thu 21:35 PM	Persons Killed: 0	Persons Injured: 1	Extent of Injuries: C	Case: 2013-34866146
	Accident Class: PROPERTY DAMAGE AND INJURY			Police Agency: GEDDES TOWN PD	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: TRAFFIC SIGNAL	Weather: CLEAR
	Manner of Collision: LEFT TURN (AGAINST OTHER CAR)			Light Condition: DARK-ROAD LIGHTED	
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Action of Ped/Bicycle: NOT APPLICABLE	
	Loc. of Ped/Bicycle: NOT APPLICABLE				

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: CT
	Num of Occupants: 1	Driver's Age: 22	Sex: F Citation Issued: N
	Direction of Travel: NORTH-EAST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN		
	Apparent Factors: NOT APPLICABLE, FAILURE TO YIELD RIGHT OF WAY		

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011000 Street: STATE FAIR BLVD

***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight: 3410	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 17	Sex: M Citation Issued: N

Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD
 27 Meters East of Hiawatha Ave

8/23/2013 Fri 18:24 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34898640**
 Accident Class: NON-REPORTABLE Police Agency: ONEIDA SP Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: FL
 Num of Occupants: 1 Driver's Age: 41 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 MOTORCYCLE Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 54 Sex: M Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, FOLLOWING TOO CLOSELY

Accident Location Information System(ALIS)

Accident Verbal Description

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Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD
 9 Meters East of Walkway

8/26/2013 Mon 17:50 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34902203**
 Accident Class: PROPERTY DAMAGE Police Agency: SP MORRISVILLE (DHQT) Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: OFFICER/FLAGMAN/GUARD
 Manner of Collision: OVERTAKING Weather: CLOUDY
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 6500 State of Registration: NY
 Num of Occupants: 3 Driver's Age: 20 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 TRUCK Registered Weight: State of Registration: SC
 Num of Occupants: 1 Driver's Age: 53 Sex: M Citation Issued: Y
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: CHANGING LANES
 Apparent Factors: UNSAFE LANE CHANGE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011007 Street: STATE FAIR BLVD
 AT INTERSECTION WITH Unnamed Street

8/25/2013 Sun 18:00 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34902265**
 Accident Class: PROPERTY DAMAGE Police Agency: ONEIDA SP Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: OFFICER/FLAGMAN/GUARD
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011007 Street: STATE FAIR BLVD
 ***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 3120 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 30 Sex: F Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: CHANGING LANES
 Apparent Factors: UNSAFE LANE CHANGE, FOLLOWING TOO CLOSELY

Veh :2 CAR/VAN/PICKUP Registered Weight: 10000 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 42 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD
 30 Meters East of Walkway

8/28/2013 Wed 19:16 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34906781**
 Accident Class: NON-REPORTABLE Police Agency: ONEIDA SP Num of Veh: 1
 Type Of Accident: COLLISION WITH PEDESTRIAN Traffic Control: OFFICER/FLAGMAN/GUARD
 Manner of Collision: OTHER Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: PED/BICYCLIST NOT AT INTERSECTION Action of Ped/Bicycle: WORKING IN ROADWAY

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY

Num of Occupants: 2 Driver's Age: 21 Sex: M Citation Issued: Y
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: ALCOHOL INVOLVEMENT, TRAFFIC CONTROL DEVICES DISREGARDED

Accident Location Information System(ALIS)

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County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD

***** CONTINUED

Veh :2 PEDESTRIAN Registered Weight: State of Registration:
 Num of Occupants: 1 Driver's Age: 32 Sex: M Citation Issued: N
 Direction of Travel: NOT APPLICABLE Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: NOT APPLICABLE
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011001 Street: STATE FAIR BLVD

22 Meters East of Hiawatha Ave

8/30/2013 Fri 22:30 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2013-34907078**
 Accident Class: NON-REPORTABLE Police Agency: SP MORRISVILLE (DHQT) Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: OVERTAKING Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 2 Driver's Age: 34 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 45 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Accident Location Information System(ALIS)

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Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: BRIDGE ST
12 Meters South of Ramp

8/28/2013	Wed 21:40 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2013-34909070
	Accident Class: NON-REPORTABLE			Police Agency: AUBURN SP	Num of Veh: 1
	Type Of Accident: COLLISION WITH FENCE			Traffic Control: POLICE/FIRE EMERGENCY	
	Manner of Collision: OTHER			Weather: CLOUDY	
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL		Light Condition: DARK-ROAD LIGHTED	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	BUS	Registered Weight:	State of Registration: NY		
	Num of Occupants: 1		Driver's Age: 24	Sex: M	Citation Issued: N
	Direction of Travel: NORTH-EAST		Public Property Damage: OTHER		School Bus Involved: OTHER
	Pre-Accd Action: MAKING LEFT TURN				
	Apparent Factors: TURNING IMPROPER, NOT APPLICABLE				

County: Onondaga Muni: Geddes(T) Ref. Marker: 690I33011030 Street: I 690
AT INTERSECTION WITH Ramp

9/1/2013	Sun 12:45 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2013-34909102
	Accident Class: NON-REPORTABLE			Police Agency: ALEXANDRIA BAY SP	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE			Traffic Control: NONE	
	Manner of Collision: REAR END			Weather: CLOUDY	
	Road Surface Condition: DRY	Road Char.: STRAIGHT/ GRADE		Light Condition: DAYLIGHT	
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Accident Location Information System(ALIS)

Date: 5/19/2014

4:36:41 PM

Accident Verbal Description

Page: 64

Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 690I33011030 Street: I 690
***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY		
	Num of Occupants: 1		Driver's Age: 32	Sex: F	Citation Issued: N
	Direction of Travel: EAST		Public Property Damage: OTHER		School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD				
	Apparent Factors: FOLLOWING TOO CLOSELY, DRIVER INATTENTION				

Veh :1	CAR/VAN/PICKUP	Registered Weight:	State of Registration: NY		
	Num of Occupants: 2		Driver's Age: 49	Sex: M	Citation Issued: N
	Direction of Travel: EAST		Public Property Damage: OTHER		School Bus Involved: OTHER

Pre-Accd Action: SLOWED OR STOPPING

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011003 Street: STATE FAIR BLVD
 42 Meters East of Unnamed Street

8/30/2013	Fri 18:25 PM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2013-34911369
	Accident Class: PROPERTY DAMAGE			Police Agency: ONEIDA SP	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE				Traffic Control: NONE
	Manner of Collision: OVERTAKING				Weather: CLEAR
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL			Light Condition: DAYLIGHT
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3349	State of Registration: NY
	Num of Occupants: 3	Driver's Age: 45	Sex: F Citation Issued: N
	Direction of Travel: NORTH-WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: CHANGING LANES		
	Apparent Factors: UNSAFE LANE CHANGE, NOT APPLICABLE		

Accident Location Information System(ALIS)

Accident Verbal Description

Date: 5/19/2014
 4:36:41 PM

Page: 65

Date in this report covers the period - 10/1/2010 thru 9/30/2013

Complete Accident data from NYSDMV is only available thru 9/30/2013 12:00:00 AM

County: Onondaga Muni: Geddes(T) Ref. Marker: 931B33011003 Street: STATE FAIR BLVD
 ***** CONTINUED

Veh :2	CAR/VAN/PICKUP	Registered Weight: 2698	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 59	Sex: F Citation Issued: N
	Direction of Travel: NORTH-WEST	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		
	Apparent Factors: NOT APPLICABLE, NOT APPLICABLE		

County: Onondaga Muni: Geddes(T) Ref. Marker: 297 33011022 Street: STATE FAIR BLVD
 AT INTERSECTION WITH BRIDGE ST

9/26/2013	Thu 08:55 AM	Persons Killed: 0	Persons Injured: 0	Extent of Injuries:	Case: 2013-34939100
	Accident Class: PROPERTY DAMAGE			Police Agency: GEDDES TOWN PD	Num of Veh: 2
	Type Of Accident: COLLISION WITH MOTOR VEHICLE				Traffic Control: TRAFFIC SIGNAL
	Manner of Collision: RIGHT ANGLE				Weather: CLEAR
	Road Surface Condition: DRY	Road Char.: STRAIGHT AND LEVEL			Light Condition: DAYLIGHT
	Loc. of Ped/Bicycle: NOT APPLICABLE			Action of Ped/Bicycle: NOT APPLICABLE	

Veh :1	CAR/VAN/PICKUP	Registered Weight: 3518	State of Registration: NY
	Num of Occupants: 1	Driver's Age: 22	Sex: M Citation Issued: N
	Direction of Travel: NORTH	Public Property Damage: OTHER	School Bus Involved: OTHER
	Pre-Accd Action: GOING STRAIGHT AHEAD		

Apparent Factors: OTHER (VEHICLE), NOT APPLICABLE

Veh :2

TRUCK

Registered Weight: 80000

State of Registration: NY

Num of Occupants: 1

Driver's Age: 46

Sex: M

Citation Issued: N

Direction of Travel: SOUTH-EAST

Public Property Damage: OTHER

School Bus Involved: OTHER

Pre-Accd Action: MAKING LEFT TURN

Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE



Lakeview Amphitheater Traffic Impact Study Segment or Intersection	Denotes accidents occurring during 10 days of the NYS State Fair ending on Labor Day	Key #	Case #	Date	Day	Time	# of Veh	Severity	Accident Type	Manner of Collision	Environment				Contributing Factor(s)
											Light	Roadway Character	Roadway Surface	Weather	
State Fair Blvd: West of Pumphouse Rd		17	2011-33949374	6/4/2011	Sat	12:45 PM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Wet	Rain	Following Too Closely
		37	2012-34175721	1/13/2012	Fri	7:29 AM	1	NR	Other Non-Coll	Other	Daylight	Straight & Level	Snow/Ice	Snow	Pavement Slippery
State Fair Blvd: Pumphouse Rd Intersection		73	2013-34734789	4/12/2013	Fri	8:50 PM	2	PDO	Coll with Mot Veh	Overtaking	Dark-Road Lighted	Straight & Level	Wet	Rain	Driver Inattention
		74	2013-34749508	4/24/2013	Wed	6:39 PM	2	NR	Coll with Mot Veh	Left Turn (against other car)	Daylight	Straight & Level	Wet	Rain	Turning Improperly
State Fair Blvd: Pumphouse Rd to Bridge St		1	2010-33603662	10/9/2010	Sat	1:45 PM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Clear	Following Too Closely / Driver Inattention
		2	2010-33607885	10/13/2010	Wed	2:10 PM	2	PDO	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Dry	Clear	Passing or Lane Usage Improper / Failure to Yield Right of Way
		3	2010-33628234	10/20/2010	Wed	7:30 AM	2	PDO	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Cloudy	Driver Inattention
		5	2010-33641391	11/6/2010	Sat	8:59 AM	2	PDO	Coll with Mot Veh	Right Angle	Daylight	Straight & Level	Dry	Cloudy	Failure to Yield Right of Way
		7	2011-3378818	1/18/2011	Tue	3:15 PM	1	NR	Coll with Other	Other	Daylight	Straight & Level	Dry	Clear	Traffic Control Device Improper/Not Working / Driver Inattention
		10	2011-33765230	2/5/2011	Sat	5:30 PM	2	2 INJ	Coll with Mot Veh	Right Angle	Dark-Road Lighted	Straight & Level	Snow/Ice	Sleet/Hail/Freezing Rain	View Obstructed/Limited / Pavement Slippery
		16	2011-33942672	7/10/2011	Sun	12:05 PM	2	PDO	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Dry	Clear	Driver Inattention
		19	2011-33973115	7/30/2011	Sat	10:55 AM	2	NR	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Dry	Clear	Failure to Yield Right of Way
	State Fair	21	2011-34004758	8/29/2011	Mon	4:30 PM	2	PDO	Coll with Mot Veh	Right Turn (against other car)	Daylight	Straight & Level	Dry	Clear	Turning Improperly
		23	2011-34007147	9/2/2011	Fri	11:25 AM	2	NR	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Dry	Clear	Passing or Lane Usage Improper
	State Fair	27	2011-34013059	9/8/2011	Thu	12:48 PM	1	PDO	Coll with Light Support/Utility Pole	Other	Daylight	Straight & Level	Dry	Cloudy	Turning Improperly
		34	2011-34152487	12/28/2011	Wed	5:45 PM	2	NR	Coll with Mot Veh	Overtaking	Dark-Road Lighted	Straight & Level	Snow/Ice	Snow	Driver Inattention
	State Fair	36	2012-34174028	1/13/2012	Fri	1:23 PM	1	1 INJ	Coll with Guide Rail	Other	Daylight	Straight & Level	Snow/Ice	Snow	Pavement Slippery
		46	2012-34383986	7/29/2012	Sun	11:18 PM	4	1 INJ	Coll with Mot Veh	Other	Dark-Road Lighted	Straight & Level	Dry	Cloudy	Alcohol Involvement / Following Too Closely
	State Fair	49	2012-34408731	8/23/2012	Thu	10:50 PM	1	NR	Coll with Sign Post	Other	Dark-Road Lighted	Straight & Level	Dry	Clear	Backing Unsafely
		50	2012-34414178	8/27/2012	Mon	9:25 PM	2	NR	Coll with Mot Veh	Right Turn (against other car)	Dark-Road Lighted	Straight & Level	Wet	Rain	Turning Improperly
	State Fair	51	2012-34417174	8/28/2012	Tue	6:04 PM	1	NR	Coll with Other Fixed Object	Other	Daylight	Straight & Level	Dry	Clear	Driver Inattention
	State Fair	52	2012-34417198	8/28/2012	Tue	3:38 PM	1	NR	Coll with Sign Post	Other	Daylight	Straight & Level	Dry	Clear	Backing Unsafely
	State Fair	53	2012-34419153	8/31/2012	Fri	7:20 PM	2	NR	Coll with Mot Veh	Right Turn (against other car)	Dusk	Straight & Level	Dry	Cloudy	Unsafe Lane Change
	State Fair	55	2012-34419702	9/2/2012	Sun	10:35 PM	1	1 INJ	Coll with Pedestrian	Other	Dark-Road Unlighted	Straight & Level	Dry	Clear	Alcohol Involvement / Traffic Control Disregard
	State Fair	56	2012-34419709	9/2/2012	Sun	6:18 PM	2	NR	Coll with Mot Veh	Right Turn (against other car)	Daylight	Straight & Level	Dry	Clear	Turning Improperly
	State Fair	64	2012-34563615	12/7/2012	Fri	4:30 PM	2	2 INJ	Coll with Mot Veh	Left Turn (against other car)	Dark-Road Lighted	Straight & Level	Wet	Rain	Failure to Yield Right of Way / Driver Inattention
		66	2012-34592655	11/21/2012	Wed	6:31 AM	1	PDO	Coll with Light Support/Utility Pole	Other	Dark-Road Lighted	Straight & Level	Dry	Clear	Driver Inattention / Unknown
	State Fair	75	2013-34802378	6/7/2013	Fri	4:35 PM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Wet	Rain	Following Too Closely
		77	2013-34812796	6/13/2013	Thu	7:50 AM	2	PDO	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Wet	Rain	Driver Inattention / Following Too Closely
	State Fair	78	2013-34821518	6/20/2013	Thu	7:57 AM	2	PDO	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Clear	Following Too Closely / Driver Inattention
		83	2013-34898640	8/23/2013	Fri	6:24 PM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Clear	Following Too Closely
	State Fair	84	2013-34902203	8/26/2013	Mon	5:50 PM	2	PDO	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Wet	Cloudy	Unsafe Lane Change
	State Fair	85	2013-34902265	8/25/2013	Sun	6:00 PM	2	PDO	Coll with Mot Veh	Rear End	Daylight	Straight & Grade	Dry	Cloudy	Unsafe Lane Change / Following Too Closely
	State Fair	86	2013-34906781	8/28/2013	Wed	7:16 PM	1	NR	Coll with Pedestrian	Other	Daylight	Straight & Level	Dry	Cloudy	Alcohol Involvement / Traffic Control Disregard
	State Fair	87	2013-34907078	8/30/2013	Fri	10:30 PM	2	NR	Coll with Mot Veh	Overtaking	Dark-Road Lighted	Straight & Level	Wet	Rain	Failure to Yield Right of Way
	State Fair	90	2013-34911369	8/30/2013	Fri	8:25 AM	2	PDO	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Dry	Clear	Unsafe Lane Change
State Fair Blvd: Bridge St Intersection		4	2010-33636065	11/2/2010	Tue	9:50 PM	2	PDO	Coll with Mot Veh	Overtaking	Dark-Road Lighted	Straight & Level	Dry	Cloudy	Driver Inattention
		8	2011-33747608	1/24/2011	Mon	6:45 PM	2	PDO	Coll with Mot Veh	Right Turn (against other car)	Dark-Road Lighted	Straight & Level	Dry	Cloudy	Failure to Yield Right of Way
		11	2011-33771776	2/9/2011	Wed	5:15 PM	2	1 INJ	Coll with Mot Veh	Rear End	Dusk	Straight & Level	Wet	Clear	Following Too Closely
		12	2011-33795041	3/2/2011	Wed	7:20 PM	2	PDO	Coll with Mot Veh	Left Turn (against other car)	Dark-Road Lighted	Straight & Level	Dry	Cloudy	Driver Inattention
		13	2011-33815468	3/19/2011	Sat	1:08 PM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Cloudy	Following Too Closely / Driver Inattention
		20	2011-33982239	8/9/2011	Tue	3:30 PM	2	NR	Coll with Mot Veh	Other	Daylight	Straight & Level	Wet	Rain	Failure to Yield Right of Way
	State Fair	25	2011-34008751	9/1/2011	Thu	3:00 PM	2	PDO	Coll with Mot Veh	Unknown	Daylight	Straight & Level	Dry	Clear	Turning Improperly
		29	2011-34021317	9/16/2011	Fri	7:51 PM	2	PDO	Coll with Mot Veh	Right Turn (against other car)	Dark-Road Lighted	Straight & Level	Dry	Cloudy	Failure to Yield Right of Way
	State Fair	30	2011-34023081	9/18/2011	Sun	9:45 PM	2	NR	Coll with Mot Veh	Head On	Dark-Road Lighted	Straight & Level	Dry	Clear	Alcohol Involvement / Driver Inattention
		31	2011-34033610	9/27/2011	Tue	9:03 AM	2	1 INJ	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Cloudy	Driver Inattention
	State Fair	33	2011-34078627	11/2/2011	Wed	8:20 AM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Clear	Glare
		40	2012-34229145	3/10/2012	Sat	11:07 AM	2	1 INJ	Coll with Mot Veh	Left Turn (against other car)	Daylight	Straight & Level	Wet	Cloudy	Driver Inattention
	State Fair	41	2012-34284865	4/24/2012	Tue	7:49 AM	2	PDO	Coll with Mot Veh	Left Turn (against other car)	Daylight	Straight & Grade	Wet	Rain	Failure to Yield Right of Way / View Obstructed/Limited
		42	2012-34318439	5/29/2012	Tue	4:15 PM	2	1 INJ	Coll with Mot Veh	Left Turn (against other car)	Daylight	Straight & Level	Wet	Rain	Failure to Yield Right of Way
	State Fair	44	2012-34379443	7/24/2012	Tue	11:29 AM	2	PDO	Coll with Mot Veh	Left Turn (against other car)	Daylight	Straight & Level	Dry	Cloudy	Failure to Yield Right of Way
		47	2012-34393567	8/7/2012	Tue	8:40 AM	1	NR	Coll with Sign Post	Other	Daylight	Straight & Level	Dry	Clear	Driver Inexperience
	State Fair	48	2012-34401385	8/13/2012	Mon	4:15 PM	2	PDO	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Clear	Driver Inattention
		58	2012-34482778	10/3/2012	Wed	7:30 AM	2	NR	Coll with Mot Veh	Left Turn (against other car)	Daylight	Straight & Level	Wet	Cloudy	Failure to Yield Right of Way
	State Fair	61	2012-34521156	11/4/2012	Sun	2:47 PM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Cloudy	Driver Inattention / Passing or Lane Usage Improper
		62	2012-34521170	11/4/2012	Sun	2:45 PM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Cloudy	Driver Inattention
	State Fair	63	2012-3454514	11/17/2012	Sat	11:00 PM	2	PDO	Coll with Mot Veh	Left Turn (against other car)	Dark-Road Lighted	Straight & Grade	Dry	Cloudy	Unsafe Speed / Alcohol Involvement
		67	2013-34602311	1/5/2013	Sat	2:30 AM	2	PDO	Coll with Mot Veh	Left Turn (against other car)	Dark-Road Lighted	Straight & Level	Dry	Cloudy	Failure to Yield Right of Way / Turning Improperly
	State Fair	68	2013-34607067	1/9/2013	Wed	3:15 PM	2	PDO	Coll with Mot Veh	Left Turn (against other car)	Daylight	Straight & Level	Dry	Clear	Illness / Glare
		70	2013-34664723	2/19/2013	Tue	9:53 AM	1	NR	Coll with Sign Post	Other	Daylight	Straight & Level	Dry	Cloudy	Oversized Vehicle
	State Fair	71	2013-34686846	3/5/2013	Tue	7:45 AM	2	PDO	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Wet	Cloudy	Driver Inattention / Following Too Closely
		76	2013-34807967	6/10/2013	Mon	3:15 PM	1	PDO	Coll with Sign Post	Other	Daylight	Straight & Level	Wet	Rain	Driver Inattention
	State Fair	82	2013-34866146	7/25/2013	Thu	9:35 PM	2	1 INJ	Coll with Mot Veh	Left Turn (against other car)	Dark-Road Lighted	Straight & Level	Dry	Clear	Failure to Yield Right of Way
		91	2013-34939100	9/26/2013	Thu	8:55 AM	2	PDO	Coll with Mot Veh	Right Angle	Daylight	Straight & Level	Dry	Clear	Failure to Yield Right of Way
State Fair Blvd: Bridge St to Exit 7 Connector Rd	State Fair	24	2011-34007393	9/3/2011	Sat	9:25 AM	1	1 INJ	Coll with Pedestrian	Other	Daylight	Straight & Level	Dry	Cloudy	Failure to Yield Right of Way / View Obstructed/Limited
		57	2012-34451615	7/29/2012	Sun	11:00 AM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Dry	Clear	Driver Inattention
State Fair Blvd: Exit 7 Connector Rd Intersection															
Exit 7 Connector & 690 WB Off-Ramp (Exit 7)															



Lakeview Amphitheater Traffic Impact Study Segment or Intersection	Denotes accidents occurring during 10 days of the NYS State Fair ending on Labor Day	Key #	Case #	Date	Day	Time	# of Veh	Severity	Accident Type	Manner of Collision	Environment				Contributing Factor(s)
											Light	Roadway Character	Roadway Surface	Weather	
Exit 7 Connector & 690 WB Off-Ramp (Exit 7) Intersection	State Fair	54	2012-34419486	9/2/2012	Sun	2:21 PM	2	PDO	Coll with Mot Veh	Rear End	Daylight	Straight & Grade	Dry	Clear	Drugs / Following Too Closely
State Fair Blvd: Exit 7 Connector Rd to Willis Ave		6	2010-33688056	12/7/2010	Tue	11:30 AM	2	PDO	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Snow/Ice	Snow	Pavement Slippery
		14	2011-33888776	5/3/2011	Tue	2:00 AM	1	1 INJ	Overtaken	Other	Dark-Road Lighted	Straight & Level	Dry	Clear	Alcohol Involvement / Reaction to Other Uninvolved Vehicle
		15	2011-33937544	6/15/2011	Wed	11:15 AM	2	1 Killed	Coll with Mot Veh	Head On	Daylight	Curve & Level	Dry	Clear	Passing or Lane Usage Improper
		18	2011-33971846	7/31/2011	Sun	12:15 AM	1	1 INJ	Coll with Pedestrian	Other	Dark-Road Lighted	Straight & Grade	Dry	Cloudy	Driver Inattention / Unknown
		59	2012-34483420	10/6/2012	Sat	7:35 AM	1	1 INJ	Coll with Guide Rail	Other	Daylight	Straight & Level	Wet	Rain	Pavement Slippery / Unsafe Speed
		60	2012-34497797	10/26/2012	Fri	6:02 AM	1	1 INJ	Coll with Earth Ele./Rock Cut/Ditch	Other	Dark-Road Unlighted	Straight & Grade	Dry	Clear	Animal's Action
		81	2013-34861241	7/22/2013	Mon	1:53 PM	2	1 INJ	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Dry	Cloudy	Following Too Closely / Driver Inattention
State Fair Blvd: Willis Ave Intersection		35	2012-34174021	1/13/2012	Fri	8:43 AM	2	PDO	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Snow/Ice	Snow	Pavement Slippery
		43	2012-34340764	6/19/2012	Tue	7:16 AM	2	1 INJ	Coll with Mot Veh	Right Angle	Daylight	Straight & Level	Wet	Rain	Passing or Lane Usage Improper / Failure to Yield Right of Way
State Fair Blvd: East of Willis Ave															
Location Indeterminate or Not Indicated	State Fair	9	2011-33759381	2/1/2011	Tue	10:50 PM	2	NR	Coll with Mot Veh	Rear End	Dark-Road Lighted	Straight & Level	Snow/Ice	Snow	Backing Unsafely
		22	2011-34004761	8/30/2011	Tue	4:45 PM	2	NR	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Dry	Clear	Passing or Lane Usage Improper / Passing or Lane Usage Improper
		26	2011-34012378	9/4/2013	Wed	7:47 PM	1	NR	Coll with Other	Other	Dark-Road Lighted	Straight & Grade	Dry	Cloudy	Unsafe Lane Change
	State Fair	28	2011-34017795	8/31/2011	Wed	11:23 PM	1	NR	Coll with Other Fixed Object	Other	Dark-Road Unlighted	Straight & Level	Dry	Clear	Obstruction/Debris / View Obstructed/Limited
		32	2011-34054049	10/15/2011	Sat	7:15 PM	2	3 INJ	Coll with Mot Veh	Left Turn (against other car)	Dark-Road Lighted	Straight & Level	Wet	Rain	Failure to Yield Right of Way
		38	2012-34186030	1/23/2012	Mon	8:36 AM	2	PDO	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Wet	Cloudy	Driver Inattention
		39	2012-34225055	2/25/2012	Sat	9:11 PM	1	PDO	Coll with Guide Rail	Other	Dark-Road Unlighted	Curve & Level	Wet	Cloudy	Unsafe Speed / Failure to Keep Right
		45	2012-34383869	7/29/2012	Sun	5:28 PM	1	NR	Coll with Other Fixed Object	Other	Daylight	Curve & Grade	Dry	Clear	Alcohol Involvement
		65	2012-34566418	11/28/2012	Wed	11:15 AM	2	NR	Coll with Mot Veh	Rear End	Daylight	Curve & Grade	Dry	Cloudy	Driver Inattention / Following Too Closely
		69	2013-34619903	1/16/2013	Wed	2:15 PM	2	1 INJ	Coll with Mot Veh	Rear End	Daylight	Straight & Level	Wet	Cloudy	Following Too Closely
		72	2013-34695868	3/11/2013	Mon	7:45 AM	2	1 INJ	Coll with Mot Veh	Rear End	Dawn	Straight & Grade	Dry	Cloudy	Driver Inattention
		79	2013-34857471	7/19/2013	Fri	5:09 PM	2	PDO	Coll with Mot Veh	Overtaking	Daylight	Straight & Level	Dry	Clear	Unsafe Lane Change
		80	2013-34857473	7/21/2013	Sun	1:25 PM	1	PDO	Fire/Explosion	Other	Daylight	Curve & Grade	Dry	Clear	Other Vehicular
		88	2013-34909070	8/28/2013	Wed	9:40 PM	1	NR	Coll with Fence	Other	Dark-Road Lighted	Straight & Level	Dry	Cloudy	Turning Improperly
	State Fair	89	2013-34909102	9/1/2013	Sun	12:45 PM	2	NR	Coll with Mot Veh	Rear End	Daylight	Straight & Grade	Dry	Cloudy	Following Too Closely / Driver Inattention

AVERAGE ACCIDENT RATES FOR STATE HIGHWAYS BY FACILITY TYPE

(BASED ON ACCIDENT DATA August 1, 2011 TO July 31, 2013)

Average accident rates are based on both reportable and available non-reportable crashes.

MAINLINE ACCIDENTS ONLY: "Non-Intersection Accidents/MVM" is used for linear highway sections where there are no intersecting roads or ramp junctions within analysis limits. An example of the correct use of these rates would involve a linear section of highway which contains no intersections with other public highways, but may contain intersections with private roads or driveways.

MAINLINE & JUNCTURE ACCIDENTS: "Intersection & Non-Intersection Accidents/MVM" includes intersection and mainline accidents. They are used for analysis of linear highway sections where intersections are involved within the analysis limits and are the most commonly used rates for accident analysis purposes.

FACILITY TYPE

FREE ACCESS CONTROLLED	MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
	ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
RURAL FUNCTION CLASS	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
UNDIVIDED						
2 LANES	2.24	0.41	0.62	2.68	0.49	0.7
3 LANES	1.81	0.35	0.51	2.14	0.41	0.61
4 LANES	2.01	0.39	0.32	2.66	0.53	0.36
ALL LANES	2.22	0.41	0.6	2.67	0.49	0.7
DIVIDED						
2 LANES	2.21	0.4	0.49	2.75	0.55	0.54
4 LANES	1.91	0.33	0.49	2.11	0.35	0.53
ALL LANES	2.01	0.36	0.5	2.31	0.41	0.53
URBAN FUNCTION CLASS						
UNDIVIDED						
2 LANES	2.25	0.41	0.34	3.38	0.62	0.46
3 LANES	2.48	0.5	0.22	3.71	0.72	0.29
4 LANES	3.2	0.65	0.2	5.08	1.01	0.41
ALL LANES	2.46	0.46	0.31	3.75	0.7	0.42
DIVIDED						
2 LANES	2.81	0.5	0.24	4.46	0.8	0.29
4 LANES	2.79	0.54	0.2	4.25	0.81	0.25
6 LANES	3.84	0.72	0.16	4.9	0.92	0.2
7 LANES	3.29	0.73	0.19	4.14	0.85	0.2
ALL LANES	3.07	0.58	0.19	4.48	0.84	0.26

PARTIAL CONTROL OF ACCESS		MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
RURAL FUNCTION CLASS		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
UNDIVIDED		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
2 LANES		1.74	0.3	0.43	2.1	0.39	0.49
ALL LANES		1.73	0.29	0.44	2.08	0.38	0.47
DIVIDED							
4 LANES		1.62	0.31	0.69	1.72	0.33	0.71
ALL LANES		1.64	0.31	0.69	1.75	0.33	0.71
URBAN FUNCTION CLASS							
UNDIVIDED							
2 LANES		1.66	0.32	0.4	2.27	0.43	0.45
ALL LANES		1.99	0.38	0.35	2.89	0.56	0.39
DIVIDED							
4 LANES		1.4	0.3	0.3	1.68	0.35	0.34
6 LANES		1.53	0.31	0.28	1.73	0.35	0.3
ALL LANES		1.49	0.31	0.31	1.79	0.36	0.32
CONTROLLED ACCESS (FULL)							
RURAL FUNCTION CLASS							
UNDIVIDED							
2 LANES		1.79	0.33	0.47	2.12	0.39	0.55
ALL LANES		1.85	0.34	0.48	2.18	0.4	0.56
DIVIDED							
4 LANES		0.99	0.16	0.41	1.01	0.17	0.41
5 LANES		1.09	0.21	0.56	1.1	0.22	0.57
6 LANES		0.84	0.15	0.36	0.88	0.16	0.38
ALL LANES		1	0.17	0.42	1.02	0.17	0.42

URBAN FUNCTION CLASS	MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
	ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
UNDIVIDED	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
ALL LANES	1.44	0.26	0.22	1.97	0.36	0.27
DIVIDED						
4 LANES	1.01	0.21	0.28	1.09	0.22	0.3
5 LANES	0.94	0.17	0.33	1.11	0.22	0.36
6 LANES	1.04	0.2	0.21	1.09	0.21	0.21
7 LANES	1.28	0.38	0.43	1.38	0.4	0.46
ALL LANES	1.02	0.2	0.21	1.08	0.22	0.22

AVERAGE INTERSECTION ACCIDENT RATES FOR STATE HIGHWAYS BY INTERSECTION TYPE

(BASED ON ACCIDENT DATA August 1, 2011 TO July 31, 2013)

INTERSECTION TYPE	ALL TYPES ACC/MEV	WET ROAD ACC/MEV	LEFT TURN ACC/MEV	REAR END ACC/MEV	OVER- TAKING ACC/MEV	RIGHT ANGLE ACC/MEV	RIGHT TURN ACC/MEV	HEAD ON ACC/MEV	SIDE- SWIPE ACC/MEV
RURAL FUNCTION CLASS									
3 LEGGED INTERSECTIONS									
SIGNAL ALL LANES	0.22	0.04	0.02	0.08	0.02	0.03	0.01	0.00	0.00
SIGN ALL LANES	0.14	0.03	0.01	0.02	0.01	0.01	0.00	0.00	0.00
NO CONTROL ALL LANES	0.07	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00
4 LEGGED > INTERSECTIONS									
SIGNAL ALL LANES	0.49	0.09	0.05	0.13	0.02	0.12	0.02	0	0.01
SIGN ALL LANES	0.3	0.06	0.02	0.04	0.01	0.09	0.01	0	0.01
NO CONTROL ALL LANES	0.19	0.03	0	0.03	0.01	0.03	0.01	0	0
ON RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.57	0	--	--	--	--	--	--	--
MERGE W/ 2 > LANES	0.01	0	--	--	--	--	--	--	--
OFF RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.08	0.08	--	--	--	--	--	--	--
MERGE W/ 2 > LANES	0.04	0.01	--	--	--	--	--	--	--

INTERSECTION TYPE	ALL TYPES ACC/MEV	WET ROAD ACC/MEV	LEFT TURN ACC/MEV	REAR END ACC/MEV	OVER- TAKING ACC/MEV	RIGHT ANGLE ACC/MEV	RIGHT TURN ACC/MEV	HEAD ON ACC/MEV	SIDE- SWIPE ACC/MEV
URBAN FUNCTION CLASS									
3 LEGGED INTERSECTIONS									
SIGNAL 1-4 LANES	0.27	0.05	0.02	0.1	0.03	0.03	0.01	0	0
SIGNAL W/ LEFT TURN 5 & > LANES	0.16	0.03	0.01	0.06	0.03	0.02	0.01	0	0
SIGNAL W/O LEFT TURN 5 & > LANES	0.13	0.02	0.01	0.05	0.02	0.02	0	0	0
SIGN 1-3 LANES	0.15	0.03	0.01	0.05	0.01	0.02	0	0	0
SIGN 4 LANES	0.1	0.02	0.01	0.03	0.01	0.01	0	0	0
SIGN 5 & > LANES	0.06	0.01	0.01	0.02	0.01	0.01	0	0	0
NO CONTROL ALL LANES	0.04	0.01	0	0.01	0	0	0	0	0
4 LEGGED &> INTERSECTIONS									
SIGNAL 1-4 LANES	0.45	0.09	0.05	0.17	0.04	0.06	0.01	0.01	0
SIGNAL W/ LEFT TURN 5 & > LANES	0.21	0.04	0.02	0.09	0.03	0.03	0.01	0	0
SIGNAL W/O LEFT TURN 5 & > LANES	0.14	0.03	0.01	0.04	0.02	0.03	0	0	0
SIGN 1-3 LANES	0.26	0.05	0.02	0.07	0.01	0.06	0.01	0	0
SIGN 4 & > LANES	0.14	0.03	0.01	0.04	0.01	0.03	0	0	0
NO CONTROL ALL LANES	0.13	0.02	0.01	0.03	0.01	0.02	0.01	0	0
ON RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.12	0.02	--	--	--	--	--	--	--
MERGE W/ 2 LANES	0.02	0	--	--	--	--	--	--	--
MERGE W/ 3&> LANES	0.01	0	--	--	--	--	--	--	--
OFF RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.08	0.01	--	--	--	--	--	--	--
MERGE W/ 2 LANES	0.02	0	--	--	--	--	--	--	--
MERGE W/ 3&> LANES	0.01	0	--	--	--	--	--	--	--

Lakeview Amphitheater Traffic Impact Study Accident Summary	October 2011 - September 2013				
	Total # Accidents	PDO	Injury	Fatality	Non-Reportable
Intersections - All Days, Including State Fair					
State Fair Boulevard at Pumpphouse Road	2	1	0	0	1
State Fair Boulevard at Bridge Street	28	14	5	0	9
State Fair Boulevard at Exit 7 Connector Road	0	0	0	0	0
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	1	1	0	0	0
State Fair Boulevard at Willis Avenue	2	1	1	0	0
Totals	33	17	6	0	10
Segments - All Days, Including State Fair					
State Fair Boulevard: West of Pumpphouse Road	2	0	0	0	2
State Fair Boulevard: Pumpphouse Road to Bridge Street	32	12	5	0	15
State Fair Boulevard: Bridge Street to Exit 7 Connector Road	2	0	1	0	1
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	0	0	0	0
State Fair Boulevard: Exit 7 Connector Road to Willis Avenue	7	1	5	1	0
State Fair Boulevard: East of Willis Avenue	0	0	0	0	0
Totals	43	13	11	1	18
Intersections - Excluding State Fair Days					
State Fair Boulevard at Pumpphouse Road	2	1	0	0	1
State Fair Boulevard at Bridge Street	27	13	5	0	9
State Fair Boulevard at Exit 7 Connector Road	0	0	0	0	0
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	0	0	0	0
State Fair Boulevard at Willis Avenue	2	1	1	0	0
Totals	31	15	6	0	10
Segments - Excluding State Fair Days					
State Fair Boulevard: West of Pumpphouse Road	2	0	0	0	2
State Fair Boulevard: Pumpphouse Road to Bridge Street	17	8	4	0	5
State Fair Boulevard: Bridge Street to Exit 7 Connector Road	1	0	0	0	1
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	0	0	0	0
State Fair Boulevard: Exit 7 Connector Road to Willis Avenue	7	1	5	1	0
State Fair Boulevard: East of Willis Avenue	0	0	0	0	0
Totals	27	9	9	1	8

Lakeview Amphitheater Traffic Impact Study Entire Year Analysis	Total # Accidents (over 3 years)	AADT*	Segment Length (mi)	Total Acc Rate (MEV)	SWA Rate	% > SWA
Intersections - All Days, Including State Fair						
State Fair Boulevard at Pumpphouse Road	2	5340		0.34	0.15	127%
State Fair Boulevard at Bridge Street	28	11650		2.19	0.21	943%
State Fair Boulevard at Exit 7 Connector Road	0	6600			0.15	
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	1	5190		0.18	0.13	38%
State Fair Boulevard at Willis Avenue	2	2990		0.61	0.15	307%
Segments - All Days, Including State Fair				Total Acc Rate (MVM)		
State Fair Boulevard: West of Pumpphouse Road	2	5280	0.30	1.15	2.25	-49%
State Fair Boulevard: Pumpphouse Road to Bridge Street	32	6600	0.90	4.92	2.48	98%
State Fair Boulevard: Bridge Street to Exit 7 Connector Road	2	5880	0.23	1.35	3.20	-58%
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	5190	0.22		2.25	
State Fair Boulevard: Exit 7 Connector Road to Willis Avenue	7	2250	0.66	4.3	2.25	91%
State Fair Boulevard: East of Willis Avenue	0	1230	0.30		2.25	
Intersections - Excluding State Fair Days				Total Acc Rate (MEV)		
State Fair Boulevard at Pumpphouse Road	2	5340		0.35	0.15	133%
State Fair Boulevard at Bridge Street	27	11650		2.19	0.21	943%
State Fair Boulevard at Exit 7 Connector Road	0	6600			0.15	
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	5190			0.13	
State Fair Boulevard at Willis Avenue	2	2990		0.63	0.15	320%
Segments - Excluding State Fair Days				Total Acc Rate (MVM)		
State Fair Boulevard: West of Pumpphouse Road	2	5280	0.30	1.19	2.25	-47%
State Fair Boulevard: Pumpphouse Road to Bridge Street	17	6600	0.90	2.7	2.48	9%
State Fair Boulevard: Bridge Street to Exit 7 Connector Road	1	5880	0.23	0.70	3.20	-78%
Exit 7 Connector Road & 690 WB Off-Ramp (Exit 7)	0	5190	0.22		2.25	
State Fair Boulevard: Exit 7 Connector Road to Willis Avenue	7	2250	0.66	4.45	2.25	98%
State Fair Boulevard: East of Willis Avenue	0	1230	0.30		2.25	

*AADT for intersections estimated using existing PM peak hour entering volumes and the Suburban through route factor below to obtain AADT

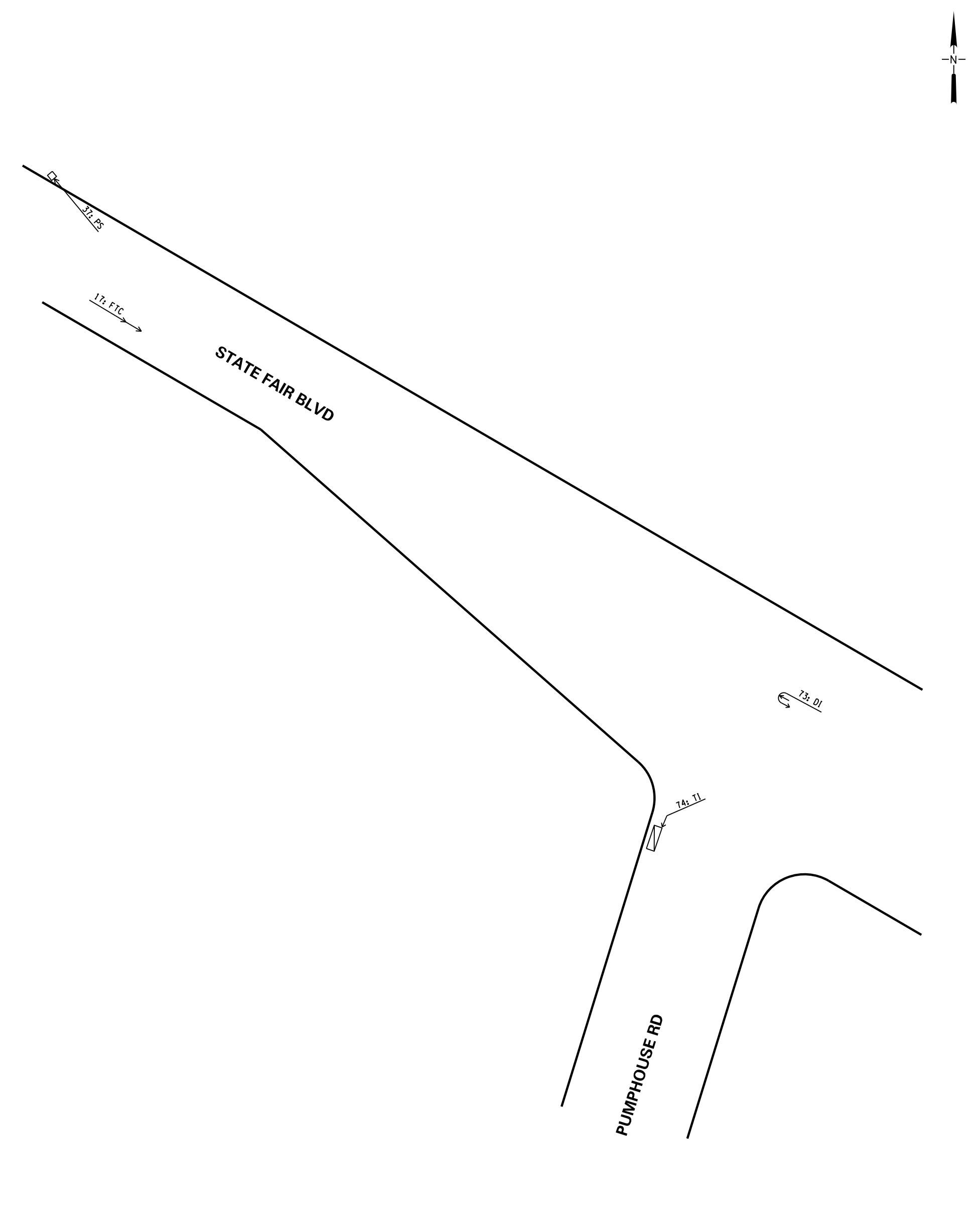
Exhibit 5-1 Design Hourly Volume as a Function of AADT

DHV as a Percentage of AADT	Primary Function of Route
38%	Highly Recreational Route
24%	Partially Recreational Route
19%	Secondary Rural Route
15%	Main Rural Route
12%	Suburban Route
8%	Urban Through Route

Data based on the Traffic Engineering Handbook, Institute of Traffic Engineers (ITE), 1992, p. 50, Figure 2-18.

COLLISION DIAGRAM

MUNICIPALITY <u>TOWN OF GEDDES</u> COUNTY <u>ONONDAGA</u>	FILE <u>125.407.100</u>	LAKEVIEW AMPHITHEATER TRAFFIC IMPACT STUDY
INTERSECTION OR SEGMENT <u>STATE FAIR BLVD: PUMPHOUSE RD INTERSECTION AND WEST</u>	FIGURE NO. <u>1</u>	
PERIOD <u>3</u> YRS <u>0</u> MOS FROM <u>OCT 1/10</u> TO <u>SEPT 30/13</u>	BY <u>M. ARNER</u> DATE <u>5/27/14</u>	



KEY TO ACCIDENT DESCRIPTION: REFERENCE NUMBER: CONTRIBUTING FACTOR

SYMBOLS		MANNER OF COLLISION		KEY TO CONTRIBUTING FACTORS	
← MOVING VEHICLE	↔ BACKING VEHICLE	↔ HEAD-ON	↔ LEFT-TURN	AD - AGGRESSIVE DRIVING	I - ILLNESS
← STOPPED VEHICLE	▢ PARKED VEHICLE	↔ OUT OF CONTROL	↔ OVERTAKING	AL - ALCOHOL INVOLVEMENT	OD - OBSTRUCTION/DEBRIS
▢ FIXED OBJECT	○ PERSONAL INJURY	↔ OVERTURNED	↔ OVERTURNED	ANM - ANIMAL'S ACTION	OED - OTHER ELECTRONIC DEVICE
● FATAL INJURY	←P- PEDESTRIAN	↔ REAR-END	↔ RIGHT-ANGLE	ASL - DRIVER FELL ASLEEP	PASS - PASSING OR LANE USAGE IMPROPER
←B- BICYCLE	←A- ANIMAL	↔ RIGHT TURN	↔ SIDE IMPACT	BD - BRAKES DEFECTIVE	PD - PASSENGER DISTRACTION
		↔ SIDE-SWIPE	↔ SKIDDING	BU - BACKING UNSAFELY	PED - PEDESTRIAN CONFUSION/ERROR
				CP - CELL PHONE	PS - PAVEMENT SLIPPERY
				DI - DRIVER INATTENTION	ROUV - REACTION TO UNINVOLVED VEHICLE
				DINEX - DRIVER INEXPERIENCE	TCD - TRAFFIC CONTROL DISREGARD
				DRUG - DRUGS (ILLEGAL)	TCI - TRAFFIC CONTROL DEVICE IMPROPER/NOT WORKING
				FD - FATIGUED/DROWSY	TI - TURNING IMPROPERLY
				FTC - FOLLOWING TOO CLOSELY	ULC - UNSAFE LANE CHANGE
				FTKR - FAILURE TO KEEP RIGHT	UNK - UNKNOWN
				FTYROW - FAILURE TO YIELD ROW	US - UNSAFE SPEED
				GL - GLARE	VOL - VIEW OBSTRUCTED/LIMITED

COLLISION DIAGRAM

MUNICIPALITY TOWN OF GEDDES COUNTY ONONDAGA

INTERSECTION OR SEGMENT STATE FAIR BLVD: PUMPHOUSE RD TO GATE 4

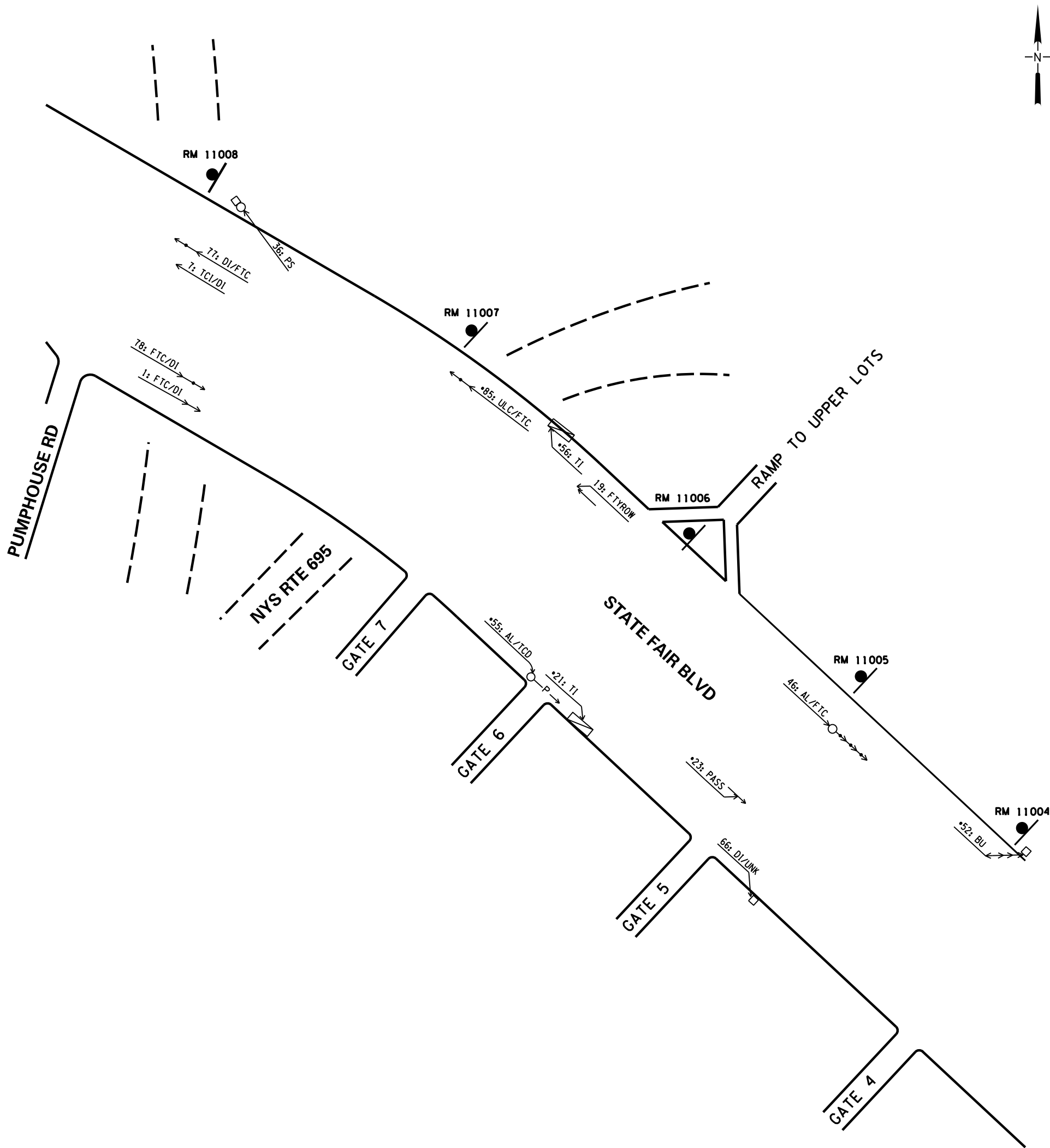
PERIOD 3 YRS 0 MOS FROM OCT 1/10 TO SEPT 30/13

FILE 125.407.100

FIGURE NO. 2

BY M. ARNER DATE 5/27/14

LAKEVIEW AMPHITHEATER
TRAFFIC IMPACT STUDY



KEY TO ACCIDENT DESCRIPTION: REFERENCE NUMBER: CONTRIBUTING FACTOR (*REFERENCE NUMBER DENOTES ACCIDENT OCCURRED DURING NEW YORK STATE FAIR)

SYMBOLS		MANNER OF COLLISION		KEY TO CONTRIBUTING FACTORS	
← MOVING VEHICLE	↔ BACKING VEHICLE	↔ HEAD-ON	↔ LEFT-TURN	AD - AGGRESSIVE DRIVING	I - ILLNESS
← STOPPED VEHICLE	▢ PARKED VEHICLE	↔ OUT OF CONTROL	↔ OVERTAKING	AL - ALCOHOL INVOLVEMENT	OD - OBSTRUCTION/DEBRIS
▢ FIXED OBJECT	○ PERSONAL INJURY	↔ OVERTURNED	↔ OVERTAKING	ANM - ANIMAL'S ACTION	OED - OTHER ELECTRONIC DEVICE
● FATAL INJURY	←P- PEDESTRIAN	↔ REAR-END	↔ RIGHT-ANGLE	ASL - DRIVER FELL ASLEEP	PASS - PASSING OR LANE USAGE IMPROPER
←B- BICYCLE	←A- ANIMAL	↔ RIGHT TURN	↔ SIDE IMPACT	BD - BRAKES DEFECTIVE	PD - PASSENGER DISTRACTION
		↔ SIDE-SWIPE	↔ SKIDDING	BU - BACKING UNSAFELY	PED - PEDESTRIAN CONFUSION/ERROR
				CP - CELL PHONE	PS - PAVEMENT SLIPPERY
				DI - DRIVER INATTENTION	ROUV - REACTION TO UNINVOLVED VEHICLE
				DINEX - DRIVER INEXPERIENCE	TCD - TRAFFIC CONTROL DISREGARD
				DRUG - DRUGS (ILLEGAL)	TCI - TRAFFIC CONTROL DEVICE IMPROPER/NOT WORKING
				FD - FATIGUED/DROWSY	TI - TURNING IMPROPERLY
				FTC - FOLLOWING TOO CLOSELY	ULC - UNSAFE LANE CHANGE
				FTKR - FAILURE TO KEEP RIGHT	UNK - UNKNOWN
				FTYROW - FAILURE TO YIELD ROW	US - UNSAFE SPEED
				GL - GLARE	VOL - VIEW OBSTRUCTED/LIMITED

COLLISION DIAGRAM

MUNICIPALITY TOWN OF GEDDES COUNTY ONONDAGA

INTERSECTION OR SEGMENT STATE FAIR BLVD: GATE 4 TO BRIDGE ST

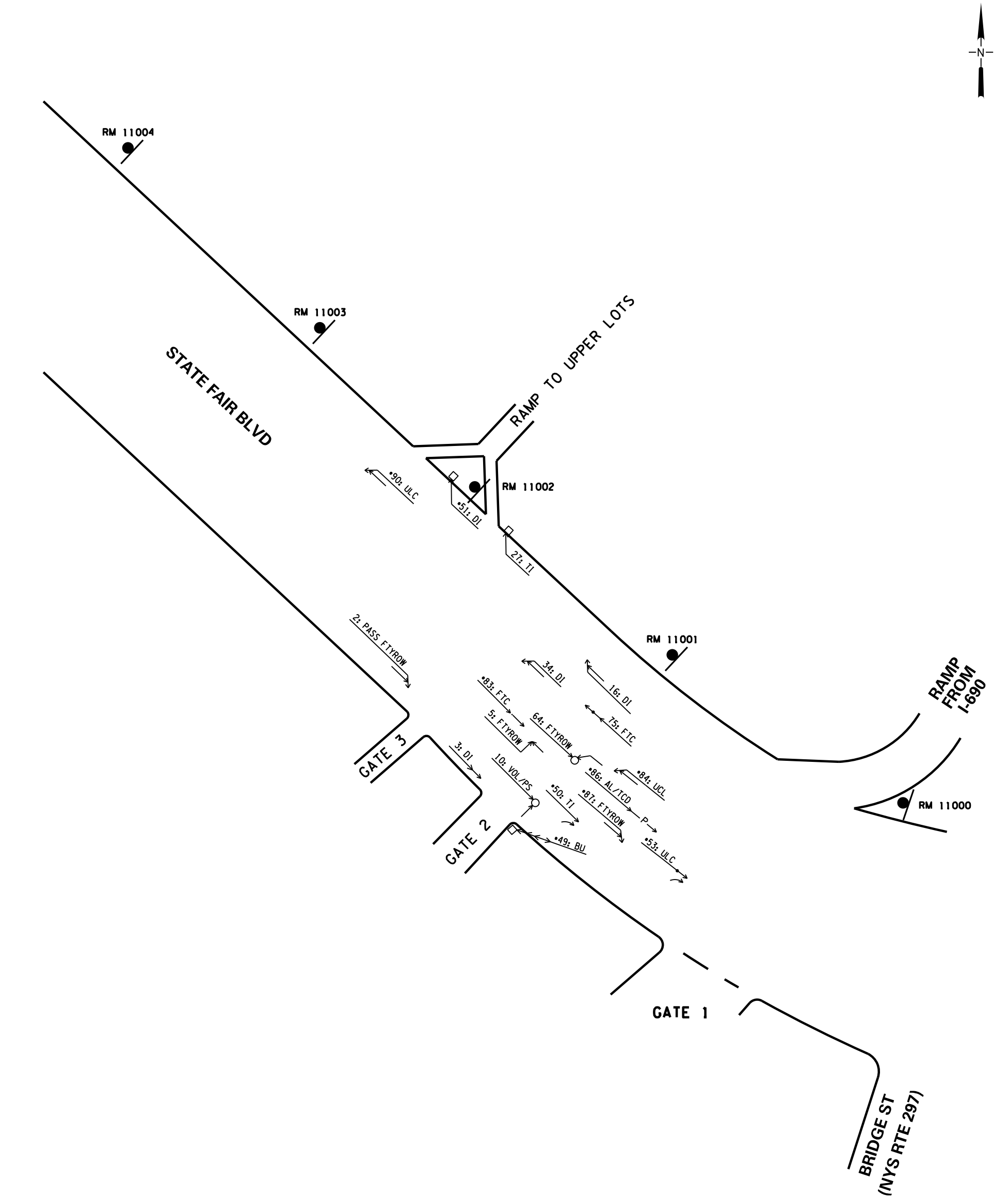
PERIOD 3 YRS 0 MOS FROM OCT 1/10 TO SEPT 30/13

FILE 125.407.100

FIGURE NO. 3

BY M. ARNER DATE 5/27/14

LAKEVIEW AMPHITHEATER
TRAFFIC IMPACT STUDY



KEY TO ACCIDENT DESCRIPTION: REFERENCE NUMBER: CONTRIBUTING FACTOR (*REFERENCE NUMBER DENOTES ACCIDENT OCCURRED DURING NEW YORK STATE FAIR)

SYMBOLS		MANNER OF COLLISION		KEY TO CONTRIBUTING FACTORS	
← MOVING VEHICLE	↔ BACKING VEHICLE	↔ STOPPED VEHICLE	▢ PARKED VEHICLE	□ FIXED OBJECT	○ PERSONAL INJURY
● FATAL INJURY	←P— PEDESTRIAN	←B— BICYCLE	←A— ANIMAL	AD - AGGRESSIVE DRIVING	AL - ALCOHOL INVOLVEMENT
				ANM - ANIMAL'S ACTION	ASL - DRIVER FELL ASLEEP
				BD - BRAKES DEFECTIVE	BU - BACKING UNSAFELY
				CP - CELL PHONE	DI - DRIVER INATTENTION
				DINEX - DRIVER INEXPERIENCE	DRUG - DRUGS (ILLEGAL)
				FD - FATIGUED/DROWSY	FTC - FOLLOWING TOO CLOSELY
				FTKR - FAILURE TO KEEP RIGHT	FTYROW - FAILURE TO YIELD ROW
				GL - GLARE	I - ILLNESS
					OD - OBSTRUCTION/DEBRIS
					OED - OTHER ELECTRONIC DEVICE
					PASS - PASSING OR LANE USAGE IMPROPER
					PD - PASSENGER DISTRACTION
					PED - PEDESTRIAN CONFUSION/ERROR
					PS - PAVEMENT SLIPPERY
					ROUV - REACTION TO UNINVOLVED VEHICLE
					TCD - TRAFFIC CONTROL DISREGARD
					TCI - TRAFFIC CONTROL DEVICE IMPROPER/NOT WORKING
					TI - TURNING IMPROPERLY
					ULC - UNSAFE LANE CHANGE
					UNK - UNKNOWN
					US - UNSAFE SPEED
					VOL - VIEW OBSTRUCTED/LIMITED

COLLISION DIAGRAM

MUNICIPALITY TOWN OF GEDDES COUNTY ONONDAGA

INTERSECTION OR SEGMENT STATE FAIR BLVD: BRIDGE ST INTERSECTION

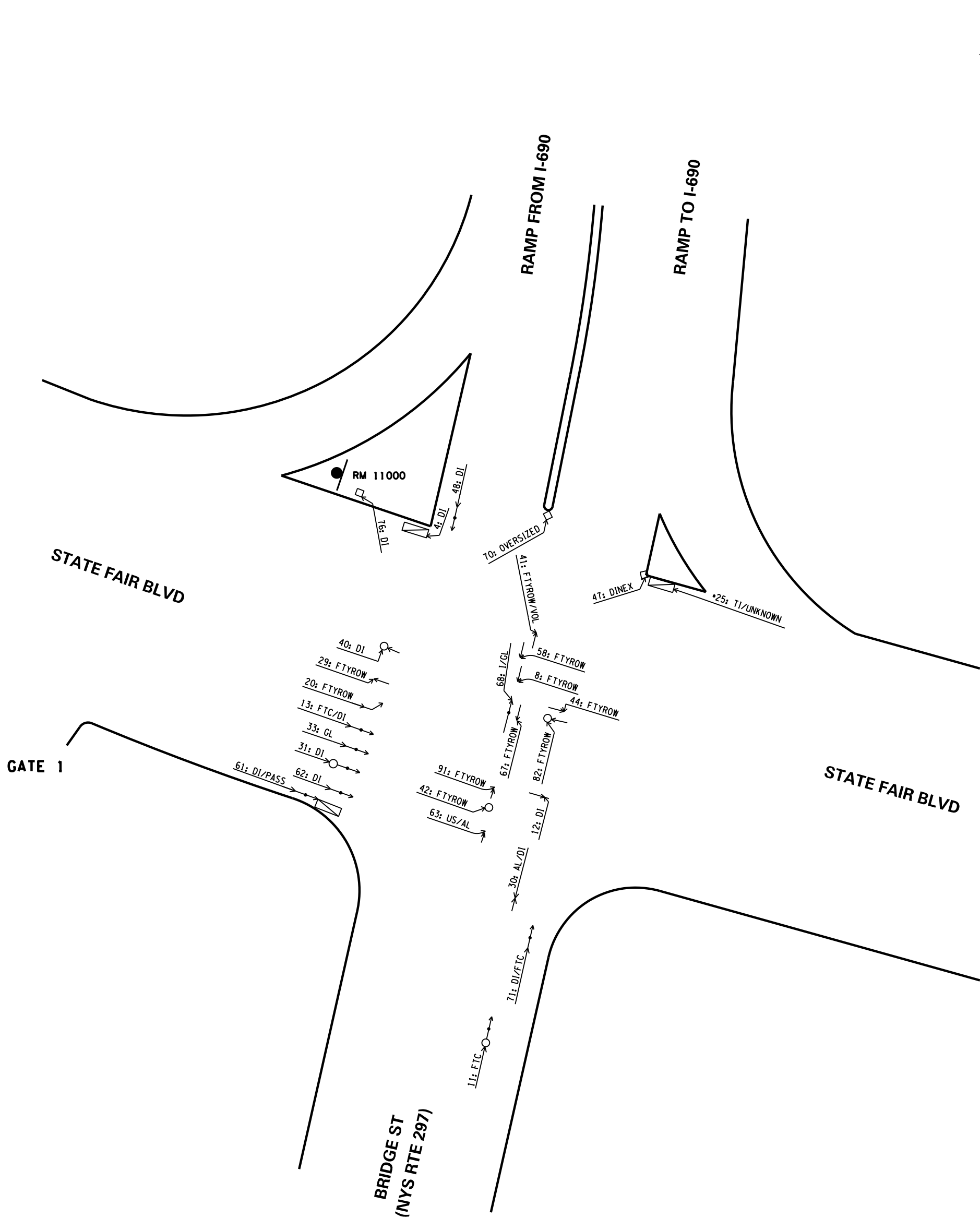
PERIOD 3 YRS 0 MOS FROM OCT 1/10 TO SEPT 30/13

FILE 125.407.100

FIGURE NO. 4

BY M. ARNER DATE 5/27/14

LAKEVIEW AMPHITHEATER
TRAFFIC IMPACT STUDY



KEY TO ACCIDENT DESCRIPTION: REFERENCE NUMBER: CONTRIBUTING FACTOR (*REFERENCE NUMBER DENOTES ACCIDENT OCCURRED DURING NEW YORK STATE FAIR)

SYMBOLS		MANNER OF COLLISION		KEY TO CONTRIBUTING FACTORS	
← MOVING VEHICLE	↔ BACKING VEHICLE	↔ HEAD-ON	↔ LEFT-TURN	AD - AGGRESSIVE DRIVING	I - ILLNESS
← STOPPED VEHICLE	◻ PARKED VEHICLE	↔ OUT OF CONTROL	↔ OVERTAKING	AL - ALCOHOL INVOLVEMENT	OD - OBSTRUCTION/DEBRIS
○ PERSONAL INJURY	● FATAL INJURY	↔ OVERTURNED	↔ OVERTAKING	ANM - ANIMAL'S ACTION	OED - OTHER ELECTRONIC DEVICE
←P- PEDESTRIAN	←B- BICYCLE	↔ REAR-END	↔ RIGHT-ANGLE	ASL - DRIVER FELL ASLEEP	PASS - PASSING OR LANE USAGE IMPROPER
←A- ANIMAL		↔ RIGHT TURN	↔ SIDE IMPACT	BD - BRAKES DEFECTIVE	PD - PASSENGER DISTRACTION
		↔ SIDE-SWIPE	↔ SKIDDING	BU - BACKING UNSAFELY	PED - PEDESTRIAN CONFUSION/ERROR
				CP - CELL PHONE	PS - PAVEMENT SLIPPERY
				DI - DRIVER INATTENTION	ROUV - REACTION TO UNINVOLVED VEHICLE
				DINEX - DRIVER INEXPERIENCE	TCD - TRAFFIC CONTROL DISREGARD
				DRUG - DRUGS (ILLEGAL)	TCI - TRAFFIC CONTROL DEVICE IMPROPER/NOT WORKING
				FD - FATIGUED/DROWSY	TI - TURNING IMPROPERLY
				FTC - FOLLOWING TOO CLOSELY	ULC - UNSAFE LANE CHANGE
				FTKR - FAILURE TO KEEP RIGHT	UNK - UNKNOWN
				FTYROW - FAILURE TO YIELD ROW	US - UNSAFE SPEED
				GL - GLARE	VOL - VIEW OBSTRUCTED/LIMITED

COLLISION DIAGRAM

MUNICIPALITY TOWN OF GEDDES COUNTY ONONDAGA

INTERSECTION OR SEGMENT STATE FAIR BLVD: BRIDGE ST TO WILLIS AVE

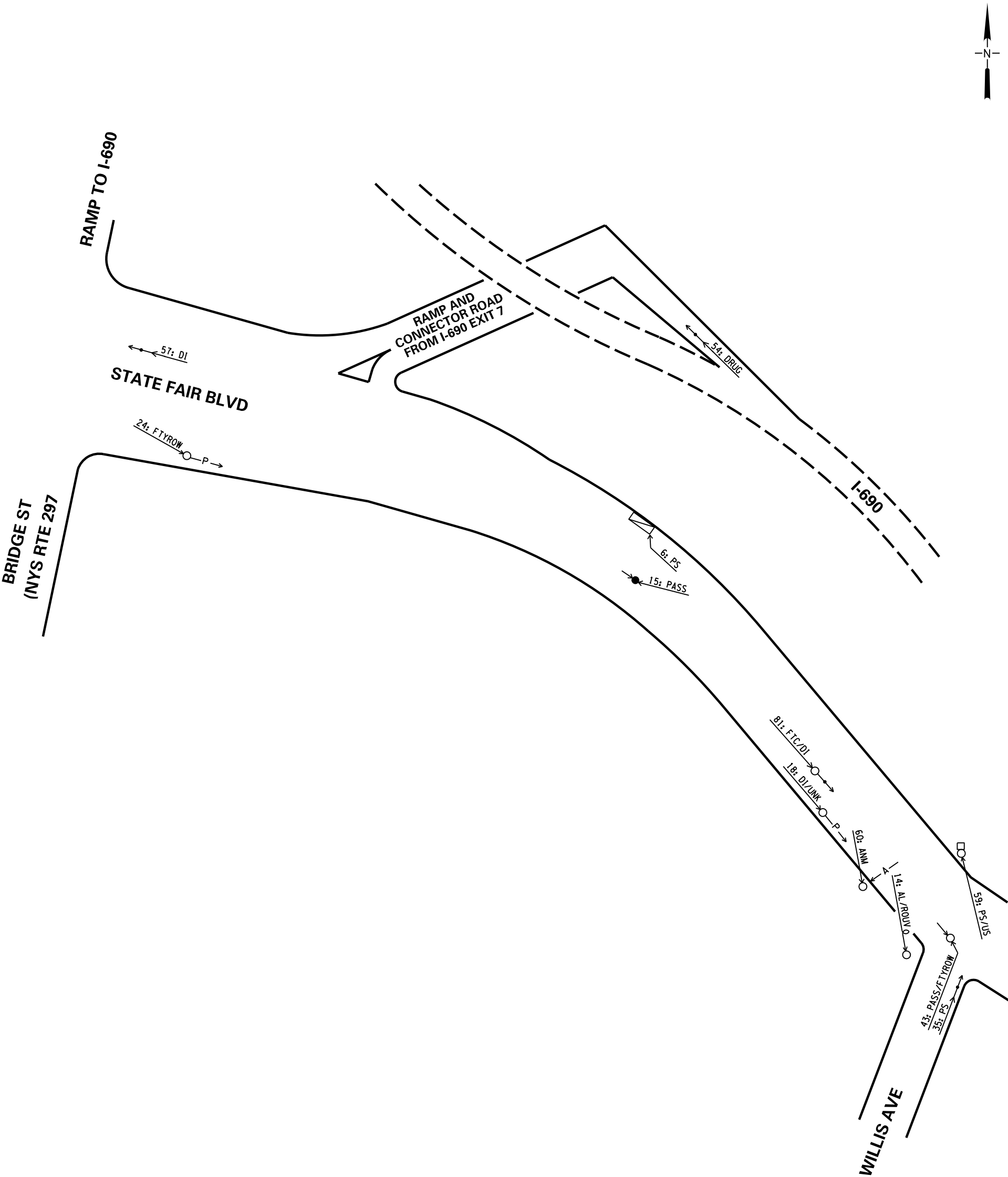
PERIOD 3 YRS 0 MOS FROM OCT 1/10 TO SEPT 30/13

FILE 125.407.100

FIGURE NO. 5

BY M. ARNER DATE 5/27/14

LAKEVIEW AMPHITHEATER
TRAFFIC IMPACT STUDY



KEY TO ACCIDENT DESCRIPTION: REFERENCE NUMBER: CONTRIBUTING FACTOR (*REFERENCE NUMBER DENOTES ACCIDENT OCCURRED DURING NEW YORK STATE FAIR)

SYMBOLS		MANNER OF COLLISION		KEY TO CONTRIBUTING FACTORS	
← MOVING VEHICLE	↔ BACKING VEHICLE	↔ HEAD-ON	↔ LEFT-TURN	AD - AGGRESSIVE DRIVING	I - ILLNESS
← STOPPED VEHICLE	◻ PARKED VEHICLE	↔ OUT OF CONTROL	↔ OVERTAKING	AL - ALCOHOL INVOLVEMENT	OD - OBSTRUCTION/DEBRIS
◻ FIXED OBJECT	○ PERSONAL INJURY	↔ OVERTURNED	↔ OVERTAKING	ANM - ANIMAL'S ACTION	OED - OTHER ELECTRONIC DEVICE
● FATAL INJURY	←P- PEDESTRIAN	↔ REAR-END	↔ OVERTAKING	ASL - DRIVER FELL ASLEEP	PASS - PASSING OR LANE USAGE IMPROPER
←B- BICYCLE	←A- ANIMAL	↔ RIGHT-ANGLE	↔ RIGHT TURN	BD - BRAKES DEFECTIVE	PD - PASSENGER DISTRACTION
		↔ SIDE IMPACT	↔ SIDE-SWIPE	BU - BACKING UNSAFELY	PED - PEDESTRIAN CONFUSION/ERROR
		↔ SKIDDING		CP - CELL PHONE	PS - PAVEMENT SLIPPERY
				DI - DRIVER INATTENTION	ROUV - REACTION TO UNINVOLVED VEHICLE
				DINEX - DRIVER INEXPERIENCE	TCD - TRAFFIC CONTROL DISREGARD
				DRUG - DRUGS (ILLEGAL)	TCI - TRAFFIC CONTROL DEVICE IMPROPER/NOT WORKING
				FD - FATIGUED/DROWSY	TI - TURNING IMPROPERLY
				FTC - FOLLOWING TOO CLOSELY	ULC - UNSAFE LANE CHANGE
				FTKR - FAILURE TO KEEP RIGHT	UNK - UNKNOWN
				FTYROW - FAILURE TO YIELD ROW	US - UNSAFE SPEED
				GL - GLARE	VOL - VIEW OBSTRUCTED/LIMITED

Appendix H

Sound Propagation Report

ONONDAGA COUNTY EVENTS AREA SOUND PROPAGATION REPORT

ACOUSTICAL ANALYSIS

A. NYS AND LOCAL ORDINANCES

The Amphitheater site lies within the Town of Geddes, NY, which is bounded by Onondaga Lake and Liverpool to the East, Camillus to the West, Solvay to the South and Van Buren and Lysander to the North. The community of Lakeland, within the Town of Geddes, as well as the Villages of Liverpool, Solvay and Camillus, will be most affected with respect to sound from the Amphitheater. The nearest residential areas to the proposed Amphitheater site appear to be located along State Fair Boulevard in Geddes, approximately ½ mile south-west of the proposed site. The Village of Liverpool, including Onondaga Lake Park, is approximately 1 mile north-west of Lakeview Point across Onondaga Lake.

The NY State Department of Environmental Conservation (NYSDEC) is responsible for interpreting and applying regulations and statutes regarding noise impacts from facility operations that are located in close proximity to other land uses. In addition, the Code of the Town of Geddes includes regulations regarding noise control which may be applicable to this project.

A Program Policy publication of the NYSDEC, “Assessing and Mitigating Noise Impacts”, dated 02.02.01, appears to provide the most recent guidance regarding sound propagation relative to NYS law. According to this document:

- In non-industrial settings, the SPL should probably not exceed ambient noise by more than 6 dB(A) at the receptor. An increase of 6 dB(A) may cause complaints. There may be occasions where an increase in SPLs of greater than 6 dB(A) might be acceptable. The addition of any noise source, in a nonindustrial setting, should not raise the ambient noise level above a maximum of 65 dB(A). This would be considered the “upper end” limit since 65 dB(A) allows for undisturbed speech at a distance of approximately three feet. Still lower ambient noise levels may be necessary if there are sensitive receptors nearby.
- Ambient noise SPLs in industrial or commercial areas may exceed 65 dB(A) with a high end of approximately 79 dB(A). The goal in an industrial/commercial area, where ambient SPLs are already at a high level, should be not to exceed the ambient SPL.

Based on the above, it appears that it may be appropriate to establish 65 dBA as a goal for sound levels from the Amphitheater when measured in residential areas. However, meeting this goal will not ensure that residents in areas where sound levels are below 65 dBA will not be adversely affected, as discussed below.

The Town of Geddes code, Section 140 Paragraph 4 states:

- It shall be unlawful for any person to maintain and operate in any building or on any premises in the Town of Geddes any radio device or mechanical musical instrument, loudspeaker or device of any kind whereby the sound there from can be heard to the annoyance or inconvenience of travelers upon any public street or public place or of persons in neighboring premises.

We believe this is a stringent requirement which is based predominately on the perception of the receptors and may be difficult to quantify. The Town of Geddes code includes further restrictions on sound propagation in specific zoning districts for both conforming and non-conforming uses. The proposed Onondaga County Events Area is in an area zoned Industrial A – General Industrial District.



We note that the NY State NYSDEC policy guidelines and Town of Geddes Code both reference A-weighted sound levels (dBA). The use of dBA as a sound level descriptor is an industry-standard approach. The abbreviation dBA refers to a single-figure-of-merit sound level descriptor which is meant to approximate the frequency sensitivity of normal hearing. The sound maps have been prepared using dBA to relate to the relevant documents.

In addition to the above, we anticipate that community response to sound propagation from the Amphitheater will also relate to sound levels having significant low-frequency spectral content which is not readily characterized when sound levels are measured in dBA. The reasons for this include:

1. Low frequency sound is more prominent over long distances, since mid and high frequency sound energy is subject to air absorption.
2. The directionality of low frequency sound is difficult to control; bass sound energy from the loudspeakers serving the lawn seating will be propagated relatively uniformly and widely dispersed over a large radius.

B. SOUND PROPAGATION

Sound propagation levels are based upon estimated average source levels. It should be noted these levels will fluctuate from one performance to the next. For any given performance, the total sound level will consist of a combination of these primary sources.

1. Source One is sound generated on the stage by instruments, instrument amplifiers, and stage monitors. These sounds are the Artist's means of expression.
2. Source Two is generated by the large-scale sound reinforcement loudspeakers flanking the stage. These sounds are mixed (adjusted) for the enjoyment of the audience located under the roof.
3. Source Three is generated by medium-scale loudspeakers distributed along the back edge of the roof. These sounds are mixed for the audience located on the lawn.
4. Source Four is sound generated by the audience. The source is often overlooked. However, the audience members themselves are capable of generating sound levels equal to or greater than the other sources.

It is often asked if venue management can monitor and control the sound levels. Sound level monitoring in the community can be conducted during events, through automated systems or by manual sound level measurements. With this information, Source Three can be directly controlled by the venue. Sources One and Two are controlled by the Artist and their technicians. Source Four can't be controlled.

Sound levels can be monitored by various methods and the results can be communicated to the system operators, who can take action to control Source Three sounds as noted above. In some situations, ensuring the system operators comply with local sound level requirements can be challenging.

We have estimated sound levels in the nearby communities due to sound reinforcement at the Amphitheater. These estimates are based on typical Amphitheater sound levels for amplified music, estimated to be 100 dBA at the rear of the lawn seating area. Sound levels of this magnitude will occur during loud rock and pop music concerts.



In our analysis, we considered both of the amphitheater configurations being discussed (Cove and Beacon). Sound propagation over long distances from the Amphitheater will vary significantly depending on atmospheric, weather and wind conditions; the effect of these conditions cannot be precisely predicted, although it could impact sound levels at any one location by 10 dB or more.

In addition, sound propagation from the Cove and Beacon options will be similar enough that for the purposes of this analysis, sound levels in the nearby community will be the same for the two proposed facility orientations.

The two images included in Figure 2-1 depict the results of our analysis of sound propagation during loud rock and pop music concerts. The sound levels shown are not continuous expected sound levels during each event, but instead are maximum anticipated sound levels that are will occur for a portion of some events during certain times at the Amphitheater. The duration of these maximum sound levels, the number of times during an event they will occur, and the number of events during the season during which these sound levels may occur, will depend on the events that are scheduled.

SK-3 shows the anticipated maximum sound levels within approximately 2 miles of the Amphitheater location. Note that there are residential areas in which we expect maximum sound levels from some events to exceed 65 dBA. SK-4 compares expected maximum sound levels from concerts in the proposed Amphitheater with expected maximum sound level from concerts in the existing State Fair Grandstand.



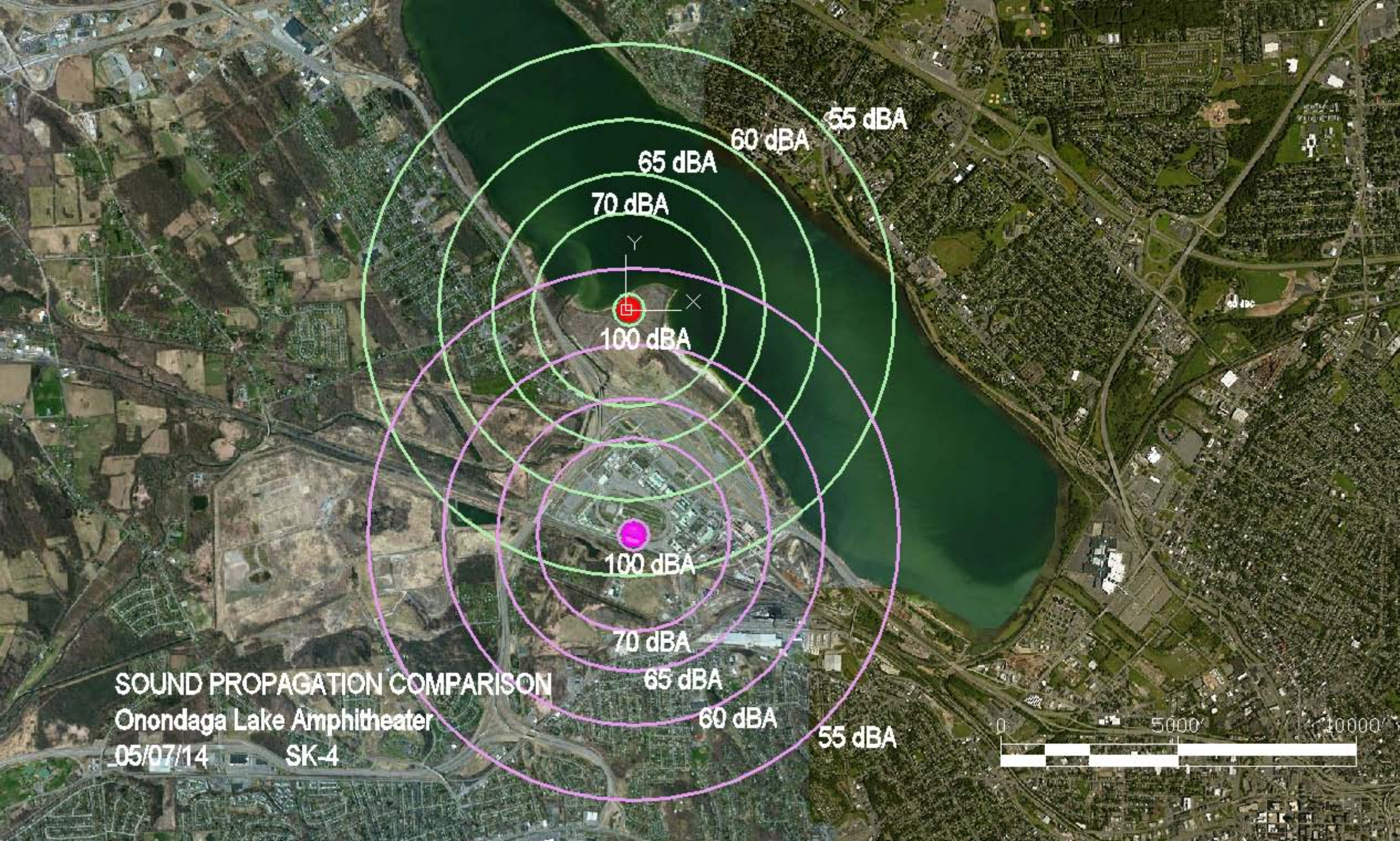
SOUND PROPAGATION FROM PROPOSED AMPHITHEATER

Onondaga Lake Amphitheater

05/07/14

SK-3





65 dBA

60 dBA

55 dBA

70 dBA

100 dBA

100 dBA

70 dBA

65 dBA

60 dBA

55 dBA

SOUND PROPAGATION COMPARISON

Onondaga Lake Amphitheater

05/07/14

SK-4



Appendix I

Preliminary SWPPP Outline

DRAFT OUTLINE

STORM WATER POLLUTION PREVENTION PLAN FOR THE CONSTRUCTION OF

ONONDAGA COUNTY LAKEVIEW AMPHITHEATER

ONONDAGA COUNTY, NEW YORK

**C&S ENGINEERS, INC.
499 COL. EILEEN COLLINS BOULEVARD
SYRACUSE, NEW YORK 13212**

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1.0 INTRODUCTION

The Clean Water Act states that storm water discharges associated with an industrial activity from a point source, including through a separate municipal storm sewer system, is unlawful unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. In New York State, the New York State Department of Environmental Conservation (NYSDEC) administers the NPDES through the State Pollutant Discharge Elimination System (SPDES) program. According to the SPDES General Permit, construction sites or common plans of development that result in disturbance of one or more acres are subject to permitting requirements.

This plan outlines the manner in which to reduce the potential of storm water runoff pollution during construction activities and assigns responsibilities to ensure that the contractor and his subcontractors implement the requirements of the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP was developed based on the SPDES General Permit (GP-0-08-001) for Storm Water Discharges from Construction Activities that are classified as "Associated with Construction Activity", effective May 1, 2008.

2.0 NOTICE OF INTENT REQUIREMENTS

To obtain coverage under a general permit, a Notice of Intent (NOI) must be submitted by the owner at least five days prior to commencement of construction activities. A copy of the completed NOI for this project has been included in Appendix A.

3.0 STORM WATER POLLUTION PREVENTION PLAN

This Storm Water Pollution Prevention Plan (SWPPP) was developed to set operating guidelines during construction activities. A copy of this SWPPP shall be retained at the construction site throughout the duration of this project.

The Contractor shall meet all conditions of this SWPPP and all conditions within the NYSDEC SPDES General Permit for Stormwater discharges from Construction Activities - Permit No. GP-0-08-001 effective date May 1, 2008.

During the course of the project and upon approval by the owner, the contractor shall amend the plan whenever there is a change in construction, operation, or maintenance, which may have an effect on the potential for the discharge of pollutants. In addition, if a new subcontractor is utilized at the site who will implement tasks included in the plan, the SWPPP shall be amended.

3.1 Site Description

3.2 Controls - The Contractor shall be required to construct and maintain the following controls in accordance with this document and the associated Contract Documents for this project.

A. Stabilization Practices

1. Seeding

Immediately after completion of grading operations, topsoil shall be replaced where it is required and all areas disturbed from grading operations shall be seeded in an effort to stabilize the site. Stabilization measures (including topsoiling, seeding and mulching) shall be initiated as soon as practicable in portions of the site where

construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity if that portion of the site has temporarily or permanently ceased, except as noted below:

- Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover. In this situation, stabilization measures shall be initiated as soon as possible.

2. Mulching

Directly after seeding, all disturbed areas shall be mulched to prevent surface compaction, reduce runoff and erosion, control weeds and help establish plant cover.

3. Preservation of Vegetation

The contractor shall make every effort to protect trees, shrubs, ground cover and any other vegetation adjacent to the work areas. The purpose of preserving existing vegetation where obtainable is to reduce soil erosion and enhance water quality.

4. Stabilized Construction Entrance

A stabilized construction entrance shall be constructed where traffic will be entering or leaving any portion of the construction site to or from a street, alley, sidewalk or parking area. The purpose of the

stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public streets.

Vehicle and construction equipment access to the site shall be limited to the gravel drive area to prevent tracking of sediment into the roadway of the project or roadways adjacent to the project site.

5. Check Dams

Check dams are small barriers constructed of stone, bagged sand, or gravel placed across a drainage way or channel to reduce erosion by restricting the velocity of stormwater runoff within that channel or drainage way.

Check dams shall be inspected after heavy rains for erosion at the sides and ends of the stone aprons and for stone displacement. Repairs should be made immediately using appropriate stone sizes. Accumulated sediment behind the dam should be removed to allow runoff to drain through the stone check dam and prevent larger flows from carrying sediment laden runoff over the dam.

Replace stones as needed to maintain the design cross section and size of stone as shown on the plan.

6. Rock Dams

Rock dams are rock embankments utilized to capture sediment on the project site and prevent sediment laden runoff from entering off site water bodies or courses.

Remove accumulated sediment once sediment reaches 1/2 the design volume. Check the structure for erosion, piping and rock displacement after heavy rains and replace stone as necessary. Replace stones as needed to maintain the design cross section and size of stone as shown on the plan. These structures should be removed from the site once the site has been permanently stabilized

B. Structural Practices

C. Other Pollution Prevention Measures (Chemicals and Debris)

- Hazardous products shall be maintained in their original containers when possible, and be kept with their original labels and applicable Material Safety Data Sheets (MSDS);
- All petroleum product spills, if such occurs, shall be cleaned up immediately, the source of the spill be repaired or removed, and contained material shall be disposed of as required by applicable law.
- Fertilizers shall only be applied as recommended by the manufacturer, and once applied shall be worked into the soil to limit exposure to storm water runoff. Storage shall be within an enclosed or covered area.
- Paints, coatings and sealants shall be maintained in a tightly enclosed, leak-proof container at all times. Excess materials shall be disposed of as required by applicable laws and regulations;

- Excess concrete material shall be removed and disposed of off-site in an appropriate manner. Concrete wash water shall not be allowed to discharge to storm water conveyances.

1. NYS DEC Spills Hotline (1-800-457-7362)

All petroleum spills that occur within New York State (NYS) must be reported to the NYS Spill Hotline (1-800-457-7362) within 2 hours of discovery, except spills which meet **all of the following criteria:**

- a) The quantity is known to be less than 5 gallons; and
- b) The spill is contained and under the control of the spiller; and
- c) The spill has not and will not reach the State's water or any land; and
- d) The spill is cleaned up within 2 hours of discovery.
- e) A spill is considered to have not impacted land if it occurs on a paved surface such as asphalt or concrete. A spill in a dirt or gravel parking lot is considered to have impacted land and is reportable.

More details on notification and reporting requirements can be found at the NYSDEC Website (<http://www.dec.ny.gov/chemical/8428.html>).

D. Good Housekeeping and Control of Construction Wastes and Chemicals

1. Good Housekeeping

It is anticipated that construction materials such as concrete, asphalt, petroleum based products, stone, and fertilizers will be present on-site at various stages during the project. In order to prevent the conveyance to and contamination of any adjacent and/or downstream property, lands or water bodies, good housekeeping practices shall be employed. Such precautions shall include:

- Storing of only enough materials to complete the project, or active phases of the project;
- Materials stored on-site shall be stored in a neat and orderly manner and in their appropriate containers and, if possible, under a covered area or enclosed structure;
- The manufacturer's recommendations for use and disposal shall be followed at all times;
- The project site superintendent shall inspect the site daily to ensure proper use, storage and disposal of all materials on-site.

2. Hazardous Products

- Hazardous products shall be maintained in their original containers when possible, and be kept with their original labels and applicable Material Safety Data Sheets (MSDS);
- All petroleum product spills, if such occurs, shall be cleaned up immediately, the source of the spill be repaired or removed, and

contained material shall be disposed of as required by applicable law.

- Fertilizers shall only be applied as recommended by the manufacturer, and once applied shall be worked into the soil to limit exposure to storm water runoff. Storage shall be within an enclosed or covered area.
- Paints, coatings and sealants shall be maintained in a tightly enclosed, leak-proof container at all times. Excess materials shall be disposed of as required by applicable laws and regulations;
- Excess concrete material shall be removed and disposed of off-site in an appropriate manner. Concrete wash water shall not be allowed to discharge to storm water conveyances.

3.3 Storm Water Management

The best approach to storm water management for construction activities is through the use of a project specific designed Storm Water Pollution Prevention Plan (SWPPP). The development of the SWPPP is to prevent erosion and pollutants from the construction materials mixing with storm water runoff and being discharged from the project sites.

Specific requirements for management of storm water and maintaining water quality include, but are not limited to:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural condition;
2. There shall be no suspended, colloidal, and settle-able solids that will cause deposition or impair the waters for their best usages, and;

3. There shall be no residue from oil and floating substances, visible oil film, globules or grease.

3.4 Other Requirements

1. Any discharges other than storm water must be in compliance with the appropriate SPDES permit (other than this permit).
2. All construction activities shall be in compliance with all federal, state and local laws as required.
3. The contractor shall be responsible to insure that the plan has been approved by the City of Syracuse, the NYSDEC, and all other appropriate local officials and authorized agencies.

3.5 Inspections

Inspections are important for visually evaluating potential storm water runoff pollution sources at the facility. All projects should be inspected periodically to ensure contaminants are not present in the storm water exiting a project site. On projects which apply for coverage under the SPDES General Permit, a qualified professional (professional engineer, soil scientist, registered landscape architect or certified professional in erosion and sediment control) must inspect and evaluate the site. These inspections shall occur at least once every seven calendar days. If more than 5 acres are disturbed at one time, inspection shall be performed twice per week with a minimum separation of 2 days. Where portions of the construction area have been finally stabilized, the inspection of such portions shall be conducted at least once every month, until the entire site is finally stabilized. A copy of the

weekly soil erosion and sediment control inspection checklist has been included in Appendix C.

Each inspection shall, at the minimum, include the following:

- Disturbed areas must be inspected for evidence of, or the potential for, pollutants entering the drainage system.
- Erosion and sediment control measures shall be inspected to ensure they are operating correctly.
- Discharge locations shall be inspected to ensure erosion control measures are effective in preventing significant impacts to receiving waters.
- Location where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

The process for conducting the evaluation shall follow these steps:

- Review the Storm Water Pollution Prevention Plan and draw up a list of any items of concern.
- List all specified control measures and areas covered in the plan.
- Conduct inspections to determine whether all storm water pollution prevention measures are accurately identified in the plan, are in place, and working properly.
- Document findings (See Appendix C).
- Modify SWPPP as appropriate. (Note: The plan shall only be modified by the plan preparer. Modifications shall be acknowledged and agreed to by the site contractor, site inspector and owner within 7 days of the modification).

3.6 Maintenance

The contractor is required to inspect and maintain all soil erosion and sediment controls throughout the duration of the project and until final stabilization of the site. "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that a uniform, perennial vegetative cover with a density of 80% has been obtained.

Maintenance shall include, but not be limited to repair or replacement of any existing controls, removal of sediment and any other measures deemed necessary which would reduce soil erosion and sediment runoff. Refer to Section 3.2 for maintenance of individual controls.

3.7 Contractors

The general site contractor, and all other contractors which will perform activities with potential to result in soil and vegetative disturbances on site, must sign a SWPPP

Contractor's Certification Form before undertaking any construction activity at the site. The contractor is responsible for any and all subcontractors working on the SWPPP. A copy of the Contractor's Certification Form has been included in Appendix D.

4.0 RECORD RETENTION

A copy of the SWPPP shall be retained at the job site throughout the duration of the project. The Owner shall retain copies of the SWPPP, all reports, and records of data used to complete Notice of Intent, for three years from the date the site is finally stabilized.

5.0 NOTICE OF TERMINATION

When the project is completed and the site has been stabilized, the Contractor shall notify the Owner, and request the completion of the Notice of Termination (NOT) and submittal to the NYS Department of Environmental Conservation, certifying completion and final stabilization of the project, and compliance with the approved Storm Water Pollution Prevention Plan (SWPPP). The NOT form shall be submitted to the following address, with a copy provided to the Owner:

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, NY 12233-3505