Onondaga County

Lakeview Amphitheater

Conceptual Design Report

June 2014

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C&S COMPANIES®

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THEATRE PROJECTS Consultants

ONONDAGA COUNTY
LAKEVIEW AMPHITHEATER
CONCEPTUAL DESIGN REPORT

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Background

Onondaga County (the 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 (see Figures 1-1 through 1-5). 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. Associated infrastructure will include access roads/driveways and site utilities (power, water, sewer, data/communications and natural gas). The amphitheater project is a component of a larger community revitalization initiative for the western shore of Onondaga Lake, the Village of Solvay and Town of Geddes. The project is being funded through a combination of State and County resources. Construction will occur in phases and is anticipated to begin in the late fall/winter of 2014 and conclude in the fall of 2015. The Lakeview Amphitheater will be owned by Onondaga County, and the entire site is expected to remain in public ownership.

This Conceptual Design Report summarizes the work performed during the conceptual engineering phase of the project. The scope of this phase of the project was to assess the general feasibility of construction of a large scale outdoor entertainment venue on County owned property along the west shore of Onondaga Lake; to provide further definition of the scope and characteristics of the project and to evaluate the project site from an engineering perspective. This report will serve as the blue print for the County's plans for subsequent phases of the project.

Project Location

Environmental Compliance and Health Effects

The Lakeview Point site is located within one of the Onondaga Lake superfund subsites, known as Waste Beds 1 through 8. In parallel with the conceptual engineering efforts, SEQR compliance efforts are ongoing and a Draft Environmental Impact Statement has recently been completed for the project. It is anticipated that the SEQRA process will be completed in the October/November, 2014.

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 has prepared 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 Waste Beds 1 through 8. The FS proposes 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

In addition to the FS, the USEPA has completed a Draft Supplemental Human Health Risk Evaluation (HHRE) as an addendum to the 2011 HHRA document reflecting current information on site conditions and the intended use of the Waste Bed 5 and 6 areas for the amphitheater venue. 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.

Amphitheater Facility Design

The Lakeview Amphitheater is both a public outdoor park and a combination of large and small performance spaces. The whole of the amphitheater complex is designed with consideration for these several missions:

1. Serve as a public space for the benefit of the citizens of the Onondaga County
2. Contribute to the rebirth of Onondaga Lake and the revitalization of nearby communities
3. Raise the profile of the region surrounding the lake
4. Incorporate to the greatest extent possible the adjacent park amenities: bike path, trails, etc.
5. Complement, rather than compete with, the existing large, outdoor venues within a 300 mile radius
6. Allow flexibility to provide low-cost public access to the seats nearest the stage (which are typically top-dollar VIP areas) for certain events where desired
7. Scale in size to accommodate large audiences for high-profile artists and smaller audiences for local presenters
8. Provide audience with optimum views of both the stage and the natural surroundings
9. Arrange the site to mitigate impact of low-setting sunlight on artist or audience
10. Develop a top-tier performance space which will be a must-play destination for high-profile artists

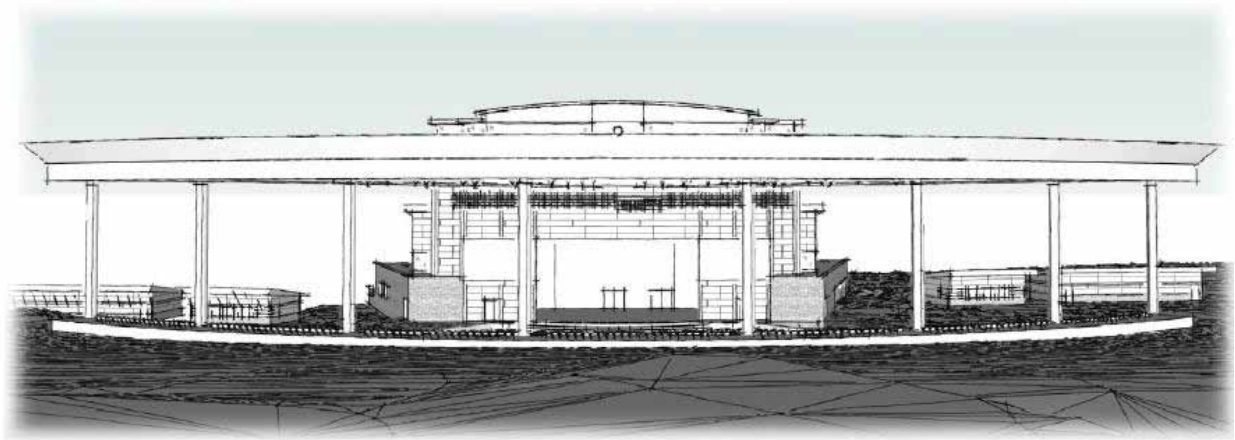
Primary components of the project as they relate to the performance venues include:

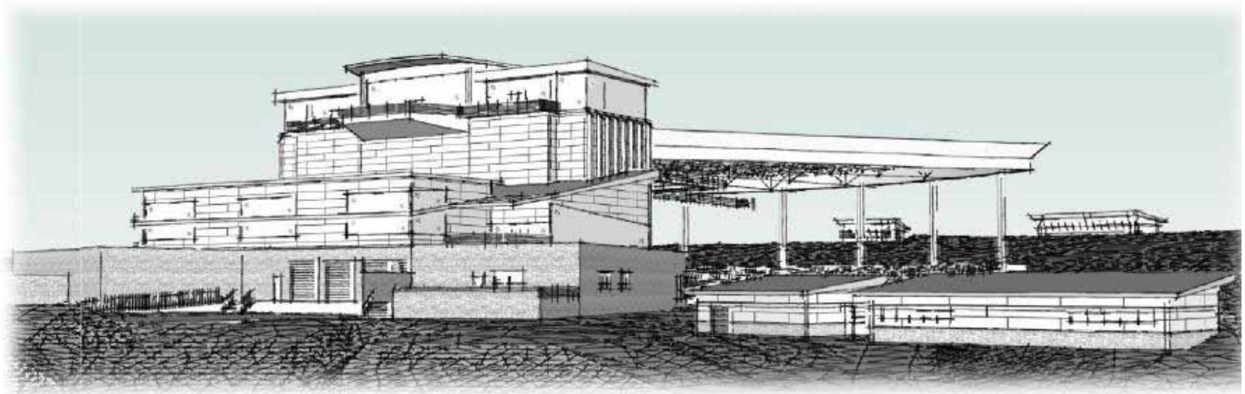
- Main Event Complex: Large amphitheater with seating for up to 17,500 guests
- Community Event Amphitheater: Small outdoor performance space for approximately 300 guests
- General Service Building: Administration and security offices, food and beverage storage and distribution, and facility and grounds support

- Box Office and Entrance Gate: Portal to the public facilities
- Security: Staffed shed for control of access to back-of-house during events

The Lakeview Amphitheater, in some respects, is a celebration of the rebirth of Onondaga Lake. The initiatives that have improved the environment in and around the Lake allow the public to once again enjoy the nature and scenery of the western shore. The design of the amphitheater is intended to be both organic and iconic. Using contemporary building materials and dynamic forms, the buildings are inspired, complement, and participate in the natural environment, while creating a presence and visual experience that is memorable. As the building rises, textures and materials become lighter as in the natural world. The first floor of the building is stone, tying the building to the ground and providing the visual base for the reclaimed-wood clad exterior columns to launch towards the airy glass of the Event Center. The sloped and angular metal roofs below mimic the random striations of geology, while the curved metal roof at the top of the structure appears to float in air. On the exterior wall above the covered seating canopy, a lighted logo will glow during performances to enhance the Lakeview Amphitheater brand.

The amphitheater is purposely nestled in a natural cove and is meant to be ‘discovered’ as one approaches it upon the entrance path. From far, very little is seen. As one approaches, more of the building is revealed until its full detail is apparent. As if coming upon a natural feature like a rock outcropping or waterfall, its grandeur isn’t fully understood until you are completely in its presence.





Proposed Amphitheater

Facility Siting

Careful consideration and evaluation was given to potential amphitheater sites for the project. Options considered include an alternative west shore site and four different facility siting options on Lakeview Point. Alternatives were evaluated for their potential to mitigate impacts and for their ability to meet the goals of the County; primary of which are 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.

Along with meeting the stated objectives outlined above, there are many considerations that factor into determination of the suitability of a proposed site or concept design. These include issues such as ingress/egress to the facility from the local road network, parking for attendees, parking and staging areas for performer support vehicles, orientation of the stage house to the sun, topography of the site, access to utilities, visual impacts/aesthetics and acoustics/noise propagation.

Various County owned public lands along the western shore of the lake were screened for their ability to support the project concept. In summary, 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. With regard to siting of the facility on Lakeview Point, several different alternatives were evaluated that considered a variety of factors such as suitability for the proposed amphitheater facilities, constructability, geotechnical issues, acoustics, noise impacts, visual impacts and other environmental considerations. A total of 4 site locations were considered on Lakeview Point, with two being evaluated in further detail based on an initial screening.

The two concepts evaluated with the greatest potential involved what were titled the “Cove” option which sites the primary amphitheater structure along the northern shore of Waste Bed 6 and the “Beacon” option which sites the facility on top of the Lakeview Point peninsula between Waste Beds 5 and 6. A design workshop was conducted with Onondaga County staff in May 2014 where each option was reviewed with regard to its layout on the site, suitability to support amphitheater operations, constructability, costs, visual impacts and other factors. Based on a review of these considerations, the Cove Option was identified as the preferred option for facility siting.

Beacon Option

The Cove option is a somewhat significant departure from the early project concept for the facility in that it is not located on the top of Lakeview Point. This option was conceived based on a consideration to develop an alternative that embraces the water, but at the same time blends into the natural topography of Lakeview Point, and creates a "park" atmosphere for the community. The Cove option achieves this objective by situating the main amphitheater along the lower elevations of the northern shoreline of Lakeview Point and is positioned to blend in with the existing topography much better than any of the other options considered. The views of Onondaga Lake for the audience are excellent for this option and the background noise is lowest of any of the options considered due to it being furthest from I-690 of all of the options considered. As a result of this option blending best with existing topography, the amount of fill and earthwork required for this option is significantly less than the other options, thereby reducing the relative cost of construction. This option also minimizes construction impacts to the Crucible landfill which is viewed favorably by the NYSDEC.

Cove Option

Site Development Master Plan

The proposed Site Development Master Plan (see Figures 4-1 and 4-2) is intended to provide a cohesive set of spatial relationships to harmonize a variety of program elements with the opportunities and constraints provided by the project site. As documented elsewhere in this report, the site is the subject of an intensive remediation effort and has a long history as an industrial waste bed. The unique topography of the "peninsula", a result of its prior use as a series of waste beds, creates a high plateau along the shoreline of Onondaga Lake which is unrivaled in the views it offers of the lake and surrounding community. Also, the project site has recently been made available for public recreation, in a limited fashion, through the recently completed extension to the Onondaga Lake West Shore multi-use trail. Finally, the site is located adjacent to one of the major parking lots for the New York State Fair. These factors, along with other operational considerations, were the driving factors in the development of the proposed master plan. The master plan provides a vision for the amphitheater facility that holistically addresses the following:

- Amphitheater Building
- Community Amphitheater
- Green Space and Community Areas
- Administration Support Services
- Facility Gateway/Entry
- Concessions and Merchandising
- Restrooms
- Parking
- Pedestrian Access
- On-Site Transportation Network
- ADA Considerations
- Water Access and Amenities
- Bike path Reconfiguration
- Site Security
- Site Use During Non-Performance Periods

Site Master Plan-Cove Option

Site and Facilities Engineering

Geotechnical

As a result of the history of the site, its unusual topography, and the current state of the site, geotechnical and engineering issues will play a critical role in the design of the amphitheater. The Waste Beds are engineered systems constructed with stronger outer containment berms holding interior areas of weaker material. .During this conceptual design, it was assumed that cutting into the existing Waste Beds and their containment berms should be minimized to the extent possible due to concerns about slope stability. Based on the preliminary geotechnical assessment, the slope stability of the berms does not appear to be a significant issue based on the current site layout and grading plan. This issue will be examined further during detailed design. If it is found that the Waste Beds and containment berms can be cut, the volume of imported fill will be able to be reduced, which would reduce the overall project cost. At this time, the conceptual design shows very little cutting into the existing waste bed system. Relative to earthwork, another geotechnical concern is the ability of the Waste Beds to bear the weight of the required fill. It is expected that placing earthen fill will result in the settling of the weaker areas of the waste beds. Based on existing geotechnical reports and recent consultations with the report's authors, placing approximately 15 feet of fill on the waste beds may result in up to 6 feet of settling over a period of several months. Based on these conditions, it will be necessary to "pre-load" certain areas by placing fill well in advance of the construction of finished surfaces. This will allow these areas to settle and stabilize prior to more formal site construction work.

The Solvay Process Waste contains calcium carbonate ($CaCO_3$) with gypsum, sodium chloride ($NaCl$), and calcium chloride ($CaCl$). These compounds can be corrosive to steel and concrete such that when mixed with water (e.g., groundwater, infiltrating rainwater) can produce an electrolytic solution. Protective measures will need to be included in the project design may include but not be limited to: sacrificial anodes for foundation elements; coating specific foundation elements; separating foundation elements from the SPW and electrolytic solution, to name a few alternatives. In addition, the use of non-metallic pipe (e.g., High Density Polyethylene – HDPE) should be considered for buried utilities that do not require metallic piping.

Based upon the subsurface stratigraphy, the amphitheater structure (i.e., loading dock truck apron, stage area, and seating area, etc…) and other large structures associated with this project should be supported by a pile foundation founded on/in the underlying Vernon Shale. By driving piles to bedrock, these structures will not settle as a result of the underlying SPW, soft cohesive soils and/or loose granular soils consolidating from the additional loads applied by these new structures. Additional soil borings be performed during the design phase with rock coring such that rock core samples can be collected and subsequently tested for strength parameters to identify an allowable bearing capacity. For lightly loaded structures (e.g., restroom facilities, vendor facilities, drainage structures, etc…) methods for reducing settlements include surcharging as discussed above and/or "floating" the structure. A method for floating structures is to remove a known amount of in-situ material and replace it with light weight fill (e.g., red-dog, geofoam) and subsequently construct upon the light weight fill. The new roadways that are being planned must support heavy loads, in particular semi tractor trailer trucks and buses. Since the subgrade of these roadways will most likely consist of soft to medium stiff SPW, the roadway section (e.g., sub-base material and pavement) will require addition support and/or means to distribute the wheel loading over a large area. One method for distributing the wheel loading over a large area would be to place a geotextile rated for stabilization on the prepared subgrade followed by a Geogrid. The geotextile will provide a separation between the sub-base material and underlying subgrade as well as some strength when a load is applied. The Geogrid will assist in spreading out the wheel loads over a much larger area thus reducing the applied load to the subgrade material.

Storm Water Management

While serving as a focal point for Onondaga County in many ways, the Lakeview Amphitheater can certainly serve as a showcase for the principles developed during the County's award-winning "SaveThe Rain" program. The development of this site will allow for the implementation of a wide variety of practices to protect Onondaga Lake, educate the public, and drive the conversation forward. The opportunity for a working set of storm water management examples will be created in this new public space. This project will be an opportunity to showcase what is possible when storm water management is considered during the conceptual design of the site, rather than solely as a “retrofit”.

Utilities

A review of existing utilities infrastructure in the project area was performed to support the facility infrastructure requirements to support the proposed facility was performed and existing infrastructure in the project area to support the facility. Given the accelerated pace that the conceptual engineering portion of the project has progressed, definitive estimates of all utility loads has not yet been determined at this time. Definitive parameters for each service will be defined in the preliminary design phase of the project. Efforts to date have focused on identifying the likely source of the various utilities required based on meetings conducted with each provider and making a preliminary assessment with regard to their adequacy to serve the proposed facility. The following utilities were assessed as part of this evaluation:

Utility	Provider
Water	Onondaga County Water Authority (OCWA)
Sewage	Onondaga County Dept. Water Environment Protection (OCWEP)
Electric	Village of Solvay Electric
Data/Communications	Verizon Wireless & Time Warner Cable
Natural Gas	National Grid

In summary, it was determined that the existing utilities infrastructure is adequate to support the proposed facility and connection points are all within reasonable proximity to the project site.

Transportation and Traffic Impact Assessment

A primary engineering challenge with the proposed site is its currently restricted access. Because of the adjacent location of Interstate Route 690, FHWA regulates a “without access” boundary line that separates the site from other existing public highways. There is one access point to the site, which is currently utilized by contractors under special permit from FHWA. Also at this entrance, Onondaga County has obtained a permit for access and limited parking for the recently completed West Shore Trail Extension, which provides bicycle and pedestrian access around Onondaga Lake, and will be linked to the amphitheater site. Three other access points to NY 695 and I-690 are only allowed for use during the New York State Fair by FHWA. Linking the site to other public streets like Bridge Street and State Fair Boulevard is hampered by the physical barrier of the I-690 lanes and connector ramp to NY 695.

Routing all concert traffic to the Orange lot which abuts the amphitheater site by way of a single entrance is feasible for small events (up to 500 people), but larger events and sold-out attractions generate too much traffic for this scenario. For that reason, splitting incoming traffic and using directional routing to both the Orange and Brown lots is proposed (see Figure 6-2). Several options were investigated, starting with use of the existing roadway network, then supplemented by mitigation measures. An alternative using all temporary access points similar to Fair operations was modeled, but eliminated from further consideration based on FHWA feedback that such an option would not be acceptable for use beyond NYS Fair events. Ultimately, any alternative that provides access to the amphitheater site will require a separate break-in-access study to be reviewed and approved by NYSDOT and FHWA.

To assess traffic impacts during an amphitheater event, background traffic conditions were modeled using manual traffic counts at the five intersections in the study area, and supplemented by NYSDOT machine counts.

As the models were created and evaluated for a sold-out event arrivals using existing traffic control (i.e. no infrastructure improvements), it became evident that mitigation would be required to eliminate traffic congestion throughout the study area. Traffic can be expected to have queue 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.

Based on the evaluations performed, both short and long-term improvements have been identified as summarized below.

Short-Term Improvements

The proposed mitigation alternative includes modifications to the existing highway network to improve operations and traffic flow during sold-out events, and to keep delays to acceptable levels typically expected for a similarly sized attraction. Most improvements focus on areas in proximity to the main entry road opposite the I-690 WB off-ramp at Exit 7. These include elongating and widening the off-ramp to two lanes with improved deceleration and storage distance, widening to three lanes at the intersection with local streets, reconstructing the main entry road to lower the grade for easier shuttle bus operation and improved two-way traffic flow, and adding an auxiliary lane at the State Fair Boulevard wye to increase capacity of exiting traffic (see Figure 6-3). The ramp widening would require modification of an overhead sign truss. Additional traffic signs and guide signs for amphitheater traffic are recommended. Installation of an electronic DMS on northbound NY 695 approaching the fairgrounds is also recommended.

Short-Term Transportation Improvements

Long-Term Improvements

This report focuses on short term improvements deemed necessary to mitigate anticipated traffic volumes that result from operation of the proposed amphitheater during peak usage. The current configuration of interstate access consists two overlapping interchanges with nine ramps spread over a distance of 2.3 miles, with three ramps having nonstandard access control. In discussions with FHWA and NYSDOT, it is apparent that further long term improvements that provide a permanent solution to event traffic and Orange lot access for the New York State Fair will be required. FHWA has commented that the temporary signal and direct access driveways from I-690 and NY 695 connector will not be allowed in the near future.

In order to test the feasibility of proposed short term improvements to ensure they fit in with an overall concept for a long term solution, potential concept level layouts that modify the existing interchange layout have been developed. One possible long term solution, which consists of constructing new I-690 WB on- and off-ramps in the vicinity of the existing crossover and temporary signal, is illustrated on Figure 6-4. Further development of long-term design solutions for the Interchange 6 and 7 ramps is beyond the scope of this report and the evaluation of this long term solution is being discussed between the FHWA, NYSDOT and Onondaga County.

In addition to the above, additional operational measures will need to be implemented during large scale events including the following:

- Manned Traffic Control
- Supplemental Signage
- Emergency Vehicle Access
- Shuttle Buses
- Intelligent Transportation Systems and Dynamic Message Signs

Sustainable Infrastructures Development

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Based on the current project schedule, it is expected that the project will be registered under LEED 2009 criteria. As detailed in Appendix G, the design team completed a LEED checklist in which various strategies are gauged to be possible ('Yes'), unknown to be possible ('?'), or most likely not possible ('No'). Based on the result of evaluating each prerequisite and credit, a possible score of 66 was determined. This score corresponds to the mid-range of Gold Certification. As the design progresses, the LEED checklist will continue to be updated, and credits for Innovation in Design will be sought where possible.

There are many opportunities to integrate these sustainable infrastructure elements into the project moving forward, given the variety of facilities and improvements that will be part of this project. There will be pavements, building roofs, landscape areas and facilities such as bathrooms which need water. Each of these technologies should be evaluated in the final design for this project and utilized to the maximum extent feasible throughout the project site.

Project Schedule and Implementation Plan

The County has expressed a desire to have an event at the amphitheater facility on Labor Day weekend of 2015. Given the size and complexity of the proposed facility, unique environmental and geotechnical conditions at the site, and the necessary coordination that must take place with Honeywell's ongoing construction operations, this is a very ambitious completion date for this facility. In an effort to implement the project in this accelerated timeline, the project was given approval by the State of New York to implement the project through a "Best Value" Design-Build Procurement method. A related issue affecting the schedule is the need to complete the SEQRA process for the project before any construction commences.

At this time, there are many variables that could impact the targeted completion date, particularly any delays in the SEQRA/Environmental review process as this is the controlling item to allow construction to start on the site. As the project progresses, the design team will have work in conjunction with the County to refine the project schedule based on developments with the environmental review process and other project developments that adequately balances the target completion date with issues such as construction costs, risk, quality of construction and other factors.

Proposed Amphitheater Rendering

Proposed Gateway Building Entry

1.0 INTRODUCTION

1.1 BACKGROUND

Onondaga County (the 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 (see Figures 1-1 through 1-5). 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. Associated infrastructure will include access roads/driveways and site utilities (power, water, sewer, data/communications and natural gas). The amphitheater project is a component of a larger community revitalization initiative for the western shore of Onondaga Lake, the Village of Solvay and Town of Geddes. The project is being funded through a combination of State and County resources.

It is anticipated that vehicular access to the amphitheater site 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/State Fair Blvd. and Onondaga Lake (i.e. Orange and Brown Lots). These lots are currently utilized primarily during the New York State Fair and are owned by the State of New York. 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 will be owned by Onondaga County, and the entire site is expected to remain in public ownership.

In February 2014, C&S Engineers, Inc. (C&S) was retained by the County to perform a Conceptual Engineering Report and initiate the required environmental studies and compliance efforts associated with the project. This Conceptual Engineering Report summarizes the work performed during the conceptual engineering phase of the project. The scope of this phase of the project was to assess the general feasibility of constructing of a large scale outdoor entertainment venue on County owned property along the west shore of Onondaga Lake, to provide further definition of the scope and characteristics of the project, and evaluate the project site from an engineering perspective. This report will serve as the blue print for the County's plans for subsequent phases of the project.

Given the unique characteristics of this project both from a facility design perspective and the complex environmental and geotechnical conditions of the proposed site/area, a multi-disciplined team of professionals was assembled to complete this phase of the project. The project team contributing to this assessment is listed below along with each firm's primary role.

Firm	Role
C&S Companies	Lead Project Consultant
Environmental Design & Research	Planning, Landscape Architecture & Environmental Review
Theater Project Consultants	Amphitheater Specialty Consultant
Acoustic Dimensions	Acoustical and Noise Consultants
Venue Consulting	Cost Consultant
Geosyntec, LLC	Geotechnical Consultant
1st Point Construction Solutions	Construction Consultation

The environmental assessment of this project is being conducted in in accordance with the requirements of the New York State Environmental Quality Review Act (SEQR). A summary of the process being followed for SEQR is summarized later in this section and the results of the environmental studies performed are documented in an Environmental Impact Statement (EIS) prepared for the project.

1.2 PROJECT OBJECTIVES

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 report[1] 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*[2].

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 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 the 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 Amphitheater will further this effort by capitalizing on a unique landform present on the western shore by helping to protect and improve the lake oriented vistas which were previously unavailable to the public and by allowing opportunity for visitors to experience Onondaga Lake from atop this peninsula.

1.3 PROJECT LOCATION OVERVIEW

The Project site is located on Lakeview Point, on the western shore of Onondaga Lake (see Figures 1-1 through 1-5). Situated north of the existing New York State Fairgrounds parking lots and the I-690 and NYS Route 695 interchange, and east-southeast of the mouth of Nine Mile Creek, the project site is located

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

[2] 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).

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 1-2). 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).[3]

Image 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. The Project site is located on what are known as the Solvay Process Waste Beds. Waste Beds 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).[4] As depicted on Figure 1-3, the Lakeview Amphitheater project site is generally located on Waste Beds 5 and 6. Portions of Waste Beds 1-4, 7, and

[3] Thompson, D.H. 2002. *The Golden Age of Onondaga Lake Resorts*. Purple Mountain Press, Ltd., Fleischmanns, NY. 141 pp.
[4] 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.

8 are currently used for State Fair parking. The upper levels of the Waste Beds 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).[5]

Image 2. 1938 aerial photograph illustrating the then-active Waste Beds.

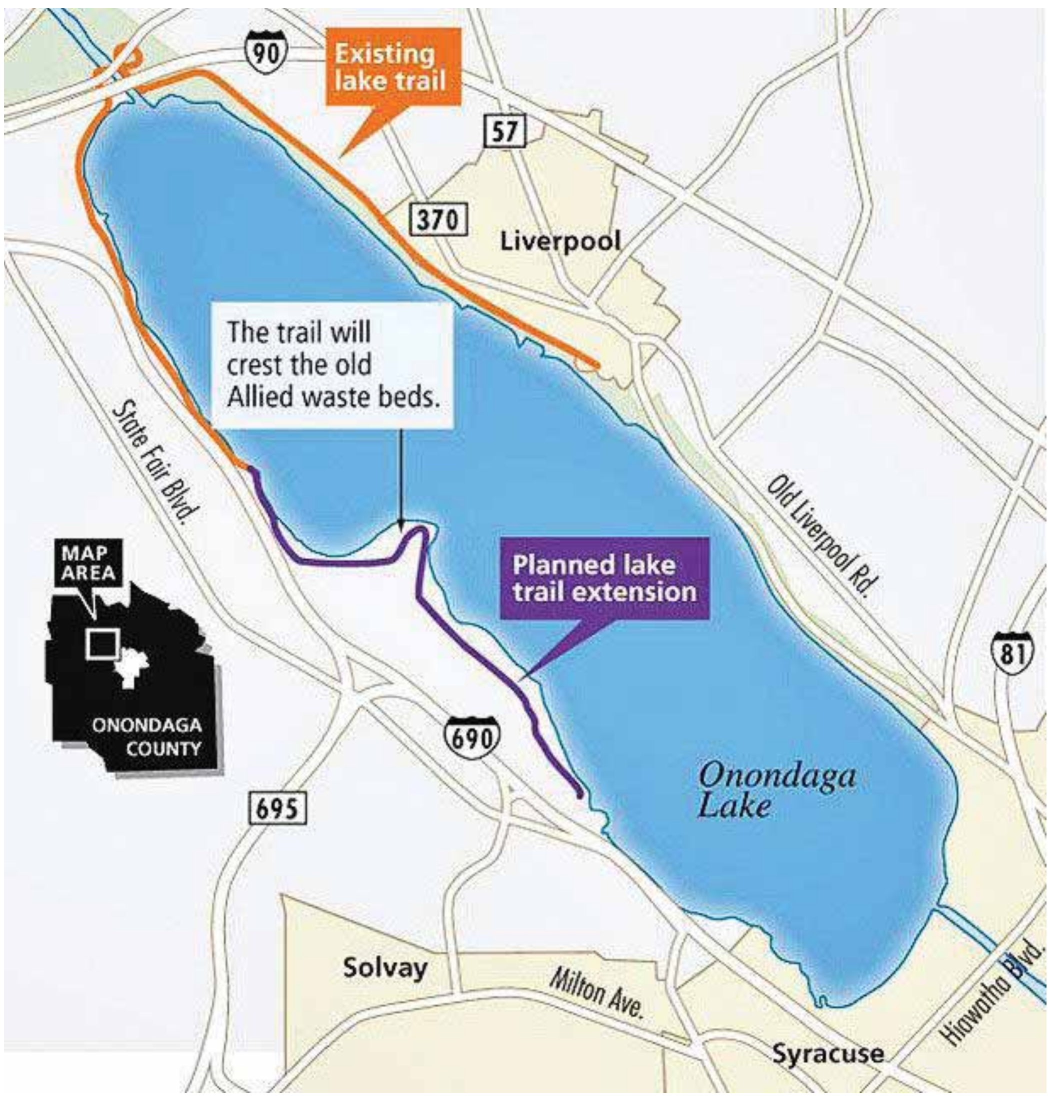
In addition to the Waste Beds, the Project site also contains a capped landfill (Figures 1-3 and Figure 1-4). In 1973, Crucible Specialty Metals began operating a landfill on Waste Bed 5 that was used for disposal of both hazardous and non-hazardous wastes. Capped in 1988, the Crucible landfill contains approximately 225,000 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

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

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 and is 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.

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 363 feet above mean sea level (AMSL) to 425 feet AMSL.



Onondaga Lake Trail System

1.4 REVIEWS, APROVALS, AND ENVIRONMENTAL CONSIDERATIONS

1.4.1 STATE ENVIRONMENTAL QUALITY REVIEW ACT

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.
- 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).

[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).

- 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 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 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, the DEIS prepared for the project addresses those potentially significant adverse environmental impacts that can reasonably be anticipated and/or have been identified in the scoping process. Based on the current status, it is anticipated that the SEQR process for the amphitheater project will be completed in September-October 2014 timeframe.

[8] 6 NYCRR Part 617.6(b)(3)(i).
[9] 6 NYCRR Part 617.8(a).

1.4.2 Agency and Public Review

Opportunities for detailed agency and public review in relation to the project will continue to be provided throughout the SEQR process. The DEIS, along with a copy of the public notice, will be distributed for review and comment to the public and to the various 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.

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 require certain ministerial approvals from local and state agencies. The approvals that are expected to be required are listed in Table 1-1.

Table 1-1. 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.

Agency	SEQR Status	Description of Approval Required or Project Interest
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.
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.

1.4.3 SITE ENVIRONMENTAL CONSIDERATIONS

As stated previously, the Lakeview Point site is located within one of the Onondaga Lake superfund subsites, known as Waste Beds 1 through 8. Specifically, the project site is located within the areas known as Waste Beds 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 Waste Bed 5 is the capped 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.[10] 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 Waste Beds 1 through 8 excluding site groundwater, which is a separate unit. This FS document[11] 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)

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[10] *Crucible Landfill Revised Landfill Closure Plan Volumes 1 & 2 (C&S, 1986)*
[11] *Draft Feasibility Study Report-Operable Unit No. 1, Wastebeds 1 through 8, Geddes, NY. O'Brien and Gere, May 2014*

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 (see Figure 1-6 for summary of IRM being implemented) 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)
4. Areas of Ecological Resources Value (undeveloped upland areas supporting native flora and fauna)

In addition to the FS, the USEPA is completing a Draft Supplemental Human Health Risk Evaluation (HHRE)[12] as an addendum to the 2011 HHRA document reflecting current information on site conditions and the intended use of the Waste Bed 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

[12] USEPA, *Draft Supplemental Human Health Risk Evaluation, Onondaga Lake Superfund Site, Wastebeds 1-8, Lakeview Amphitheater, Geddes, NY, May 2014*

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 or use controls such as fencing or signage. It is important to note 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.

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.

2.0 AMPHITHEATER FACILITY DESIGN

2.1 INTRODUCTION

The Lakeview Amphitheater is both a public outdoor park and a combination of large and small performance spaces. The whole of the amphitheater complex is designed with consideration for these several missions:

1. Serve as a public space for the benefit of the citizens of the Onondaga County
2. Contribute to the rebirth of Onondaga Lake and the revitalization of nearby communities
3. Raise the profile of the region surrounding the lake
4. Incorporate to the greatest extent possible the adjacent park amenities: bike path, trails, etc.
5. Complement, rather than compete with, the existing large, outdoor venues within a 300 mile radius
6. Allow the flexibility to provide low-cost public access to the seats nearest the stage (which are typically top-dollar VIP areas) when desire for certain events
7. Scale in size to accommodate large audiences for high-profile artists and smaller audiences for local presenters
8. Provide audience with optimum views of both the stage and the natural surroundings
9. Arrange the site to mitigate impact of low-setting sunlight on artist or audience
10. Develop a top-tier performance space which will be a must-play destination for high-profile artists

Primary components of the project as they relate to the performance venues include:

- Main Event Complex: Large amphitheater with seating for up to 17,500 guests
- Community Event Amphitheater: Small outdoor performance space for approximately 300 guests
- General Service Building: Administration and security offices, food and beverage storage and distribution, and facility and grounds support
- Box Office and Entrance Gate: Portal to the public facilities
- Security: Staffed shed for control of access to back-of-house during events

2.1.1 DESIGN CONSIDERATIONS

The Main Event Complex – the large amphitheater with stage support and performer support is the cornerstone of the project. This concept design addresses the needs of the artist, the audience, the owner, the operator, the show designers, and the technicians through these five primary considerations:

1. Theatrical functionality: The over-arching goal has been to ensure that the venue functions as a performance space and is an efficient working factory for shows, complete with appropriate access, sufficient area, and requisite technical support. Accommodation has been made for efficient load-in and load-out. Appropriate theater equipment and infrastructure to support touring equipment has been included. Sufficient storage space, shops, and production support are included.

2. Audience experience: The team focused on the quality of the experience of the guests in their arrival to the site, journey to their seats, and access to basic needs including sufficient quantities and appropriate ratios of men's and women's restrooms, food and beverage outlets, and opportunities for merchandise purchasing. The sightlines have been established to ensure maximum visibility and audience intimacy. Large format projectors and screens to the left and right of the stage provide image magnification (IMAG) to ensure that the furthest audience member still has a view of the action on stage.

3. Artist experience: Even though a professional strives always to give his very best regardless of the circumstances, we are all undeniably affected by our environments. It then follows that it may be difficult to quantify the experience of the artist in their dressing rooms, backstage and onstage, however the quality of that experience is directly related to the caliber of performance the artist shares with the audience. This concept design seeks to nurture that experience through consideration of easy artist access to backstage, direct access to dressing rooms and other performer support, and appropriate stage dimensions and stage support to ensure that the artists who play here will feel comfortable, secure, and will trust that their needs offstage and onstage are well met. In exchange they will give a better performance here than anywhere else on their tour and will want to return time and again.

4. Audience-artist relationship: Sightlines, audience configuration and circulation have been considered for their immediate, obvious reasons but also for maximum energy between artist and audience. A live performance is not a one-way street but rather a two-way dialogue between artist and audience with a rhythm and pace all its own each night. The optimum audience configuration has been considered in order to provide maximum opportunities for that dialogue and to ensure that even at this large scale a sense of intimacy and energy can be achieved and developed.

5. Efficiency and cost of operation and maintenance: An amphitheater is a factory for industrial-scale performances. Successfully moving a dozen trucks worth of equipment and 50 artists and crew in and out on a regular basis requires facilities which can withstand rough use without requiring an abundance of upkeep, and equipment must have duty cycles to reduce downtime for maintenance or repair. Systems planned for this facility are intended to make the operation flow smoothly and keep maintenance time and expense low.

While the facilities will be a welcoming place for the visitor, they will be the working home for the artists, technicians and management who work in the building and on the grounds. In this large amphitheater, the stages and backstage contain formidable technical facilities and considerable spatial volume, however the whole of the working areas have been laid-out in a way that ensures they are places where creativity and productivity can flourish in a humane and hospitable atmosphere.

Also, great emphasis has been placed upon the facilities' accessibility and their character as places for people and for communication between people. Ultimately, the meeting of people – whether spontaneously, at random, or as part of a precisely choreographed and considered event – shall animate the Lakeview Amphitheater throughout the public areas and within the working heart backstage.

2.1.2 MAIN EVENT COMPLEX OVERVIEW

The Main Event Complex is a large amphitheater with fully equipped stage, covered and lawn seating for up to 17,500 guests, and significant stage support, performer support, technical accommodation and guest amenities.

A. STAGE

The permanent stage and stage house are designed to meet the needs of large scale contemporary touring musical acts typically travelling in a dozen or more tractor trailers and several busses, touring to comparable venues in the warmer months of spring and summer. This amphitheater will also accommodate conventional theater, opera, symphony, ballet, other smaller functions, and a wide range of community events.

The stage floor is concrete slab construction measuring 108' W x 50'D with a covered, closable, full stage house and a proscenium opening measuring 60' W x 35' H. A vertical shutter will deploy to seal-off the stage house during non-performance times to secure it and protect it from weather. This also allows the stage house to be used as a small "black box theater" accommodating smaller theatrical productions and special events even in harsh weather.

Located 50' above the stage floor is the grid, a walkable work floor, which is intended to carry permanent and temporary structural loads to accommodate lighting, rigging, sound, and backdrops and masking for typical touring music acts. Downstage of the proscenium wall, the grid also extends over the forestage to support performance in that zone.

Stage galleries include the operating and fly/loading galleries along the stage left and stage right walls, and the crossover gallery long the upstage wall. These fixed equipment support structures also provide access and work floors for technicians and are locations for production elements including temporary chain hoists, speaker clusters, lighting and scenery trusses and adjustable acoustic elements.

Appropriate structural and electrical accommodation for temporary touring equipment and necessary cable management for that equipment is identified.

B. AUDITORIUM

The outdoor auditorium includes covered seats and lawn seating for up to 17,500 people. A large roof covers 5,000 seats including 500 "Inner Circle" and 4,500 reserved, fixed seats. The roof shades the seats but also serves as a structure to support and provide access to house lighting, announcement speakers, and theater lighting, sound and video equipment. A tiered, uncovered lawn provides space for up to 12,500 people; around the perimeter of the lawn are also VIP Pavilions – permanent pads which can accommodate temporary tents.

C. PERFORMER SUPPORT

Backstage includes a complement of dressing rooms, wardrobe support, temporary production offices, warming kitchen and indoor/outdoor dining facilities, and a meet-and-greet room for artists to visit with invited guests.

D. STAGE SUPPORT

Provided are a complement workshop and technical offices and storage for lighting, rigging, sound, and video.

E. ADMINISTRATION

Sufficient office space for show technical operations are included; all other administrative offices are located at the General Services Building located on the site southwest of the amphitheater.

F.BUILDING SERVICES

Building Services include operational considerations such as a truck dock with direct access to stage, dumpster pads, and electrical switchgear for temporary theater equipment. Also included on the north side of the stage house is a 150 person Event Center which faces the lake.

Additional details related to the space programming are provided in Appendix C and conceptual drawings of the buildings referenced above are provided in Figures 2-3 though 2-14.

2.2 TYPE OF PERFORMANCES

The two performance spaces will accommodate a broad range of different performance types as described in the following sections.

2.2.1 MAIN EVENT COMPLEX

At the fullest end of the range, the amphitheater is designed for high-energy musical acts. During the concept design, the team identified the Dave Matthews Band and the Zac Brown Band as two examples of the kinds of acts the venue should be designed to accommodate. These acts each currently travel with between 11 to 13 trucks, from 4 to 9 buses, and approximately 50 artists and crew.

These types of acts always travel self-contained, bringing their own rigging (chain hoists, trusses and accessories), lighting, sound, and video media content; what they need is the infrastructure to support their equipment: structural capacity to hang their scenery, lighting trusses and speakers; electrical infrastructure to power that equipment; data infrastructure to easily distribute signal; and, cable management to route temporary cabling from the temporary equipment around the amphitheater. Typically the only equipment they will depend on locally are follow spots, video walls (or projectors and screens) for IMAG assuming the house equipment scaled to meet the needs of the artist, and back-of house communications, paging and video.

The size of the amphitheater stage and the types of theater equipment infrastructure provided will also accommodate more conventional theater and opera, ballet and symphony performances. Two important considerations by the team and County were:

- Orchestra enclosure: Outdoor symphony concerts present a special opportunity to reach out to the community, however performing outdoors always becomes a compromise for the musicians without the support of an orchestra enclosure which allows them to hear each other. Also, distance from stage to back of lawn dictates microphones and amplifiers will be required. We considered the many ramifications or procuring, storing, and deploying a conventional enclosure and it was determined in collaboration with the County to incorporate instead infrastructure for future rental of an electronic stage shell like those in use by many other orchestras when performing outdoors.

- Grid height and rigging system: Considered was that the stage house should be no taller than absolutely necessary, and that most of the programming would likely be large touring acts with no need for conventional counterweight rigging. We chose to set the grid at 50’ above the stage floor and to use a modular grid which will allow chain hoists to be hung from stands placed on the grid thus taking full advantage of the full 50’ of potential travel.

In order to scale the facility to accommodate smaller acts and smaller audiences, conventional stage masking drapes will be provided which can be arranged to reduce the functional size of the proscenium opening from its hard structural dimensions of 60’ W x 35’H to any smaller size desired. Also, a complement of lighting and sound equipment will be provided for use by local groups, along with infrastructure to accommodate temporary equipment which local groups might own or rent from elsewhere.

2.2.2 COMMUNITY EVENT AMPHITHEATER

A simple, unstaffed outdoor performance space for up to 300 guests, the smaller Community Event Amphitheater will be able host impromptu daytime performances in a true park setting. Also, accommodation has been made for structural support of a temporary space-frame over the raised slab stage for adding lights or speakers for more organized evening events. Behind the stage is a pad; a road provides vehicle access to the pad for loading equipment onto the stage or for parking a vehicle behind the stage to serve as an informal backdrop. Easy access to one of the main restrooms and one of the food and beverage outbuildings means that public services can be easily available for any event sized for this performance space.

2.3 FACILITY SIZING/CAPACITY

The seat count of 17,500 for the Onondaga Lakeview Amphitheater is consistent with the goals established by the County to attract large musical events and it is similar to the current seat count for the Grandstand at the New York State Fair Grounds facility.

Also, the new amphitheater is intended as a complement to comparable facilities within about a 250 to 300 mile radius. When planning a tour, this rule of thumb distance is used by touring industry promoters as a minimum distance between cities for two reasons: (1) a minimum distance, adjusted for market density, should be maintained between consecutive stops to reduce the likelihood that any individual stop might cannibalize potential audience from the other stop; and, (2) cost efficient tour scheduling is based on overnight travel in trucks and buses with one driver per vehicle, therefore the maximum distance between overnight stops, without adding the cost of additional drivers, is limited by DOT regulations which restrict drivers to, among other things, a maximum of 11 hours driving per day and 70 hours driving per week.

See below a list of comparables within that driving distance from Syracuse:

Name Operator Location	Capacity	Miles from Syracuse
Artpark Outdoor Amphitheater Independent operator Lewiston, NY	20,000	170
Bethel Woods Center for the Arts Independent operator Bethel, NY	15,000	150
Constellation Brand-Marvin Sands Performing Arts Center (formerly Finger Lakes PAC) Operated by SMG Canandaigua, NY	15,000	71
Darien Lake Performing Arts Center Operated by Live Nation Darien, NY	21,600	131
Saratoga Performing Arts Center Operated by Live Nation Saratoga Springs, NY	25,100	140
Nikon at Jones Beach Theater Operated by Live Nation Wantagh, NY	15,000	283
Toyota Pavilion at Montage Mountain (formerly Ford Pavilion) Operated by Live Nation Scranton, PA	18,000	130
XFINITY Music Theater Operated by Live Nation Hartford, CT	30,000	256

2.4 GENERAL SITING CONSIDERATIONS

When determining where and in what orientation to place the amphitheater on the site, the team considered multiple factors including: the position of the sun during probable show times; the public view to the lake and surrounding area; commercial access to the back-of-house areas; potential for road noise to affect performances; probable costs associated with amount of soil required to achieve necessary slope; and, potential impact on existing conditions including subsurface soils.

Several site options were explored and two site layouts with sufficient merit were explored in depth. Section 3 described the various locations considered as part of the siting of the facility.

- SUN

  By logic, the most favorable orientation for an amphitheater is for the centerline running through the center of the stage and the audience to fall generally along a north to south axis. This orientation prevents the setting sun from providing discomfort to either the artist onstage or the audience facing the stage. In practice, the majority of amphitheaters in North America (as well as NFL stadiums) are so oriented.

- PUBLIC VIEW

  Consideration of the view that the audience would have of the lake and the surrounding area is an important criteria in siting the facility.

- COMMERCIAL ACCESS

  An inherent dilemma when considering the siting of an amphitheater near a lake or river is the desire to focus the audience towards the surrounding natural beauty but also to have commercial access of trucks and buses to back of the stage house so it can function as a performance space. Both the options evaluated in detail provide the required vehicle access.

- ROAD NOISE

  Consideration was given to the potential impact of road noise on the performances in the amphitheater.

2.5 COVERED SEATING AREAS

2.5.1 DESCRIPTION

A large, deep roof structure covers approximately 5,000 seats closest to the stage, shielding those seats from the elements. The structure also includes a series of catwalks to access house lighting and public address speakers. It serves also as a location for a follow spot gallery, front-of-house performance lighting catwalks, and is location for temporary theater equipment technical for rigging, lighting, sound and video. It also provides locations for securable weather-proof equipment closets for permanent front-of-house audio, video, and lighting equipment racks.

The two zones of covered seats include the Inner Circle and the Covered Pavilion. Weather-resistance, durability and ease of maintenance have been considered in the choice of seating type and materials.

1. INNER CIRCLE
   The Inner Circle is the zone of approximately 500 seats nearest the stage. Most of the seats are fixed (permanently mounted), however the first several rows of seats are demountable ganged seats on flat-floor hardscape area allowing this area to double as a lay-down area for the assembly and disassembly of show-specific temporary performance equipment such as lights, rigging, sound, and video during load-in and load-out.

2. COVERED PAVILION
   The Covered Pavilion is the zone of approximately 4,500 reserved seats also under the roof. They are permanently fixed, hard plastic back and bottom, self-rising, weather resistant.

2.5.2 SIGHTLINES

Note that for the fixed, covered seats, second row of vision sightlines are used. Generally, each guest is viewing the stage by looking between the two heads in the row ahead of him and over the head of the person two rows ahead. Factors considered included the the need to keep the row-to-row rise to a minimum so the furthest row is not too very high; the need to provide sufficient legroom between rows; and, the need to maintain sufficiently tight row to row spacing for both maximum sightlines and audience intimacy. The balanced solution in this case is a 36” row-to-row spacing.

2.6 LAWN/UNCOVERED SEATING AREAS

The lawn provides two distinct seating zones as described in the following sections.

2.6.1 GENERAL ADMISSION

General admission “seating” on the lawn will accommodate up to 12,500 guests on a tiered, open landscape, with the audience using blankets or low beach-style folding chairs. There is no shade from the sun, nor cover from the rain. Consideration was given to the slope of the lawn seats as well as the covered seats in order to strike a balance between audience comfort and sightlines. Sightlines on the lawn are more fluid than in the fixed seats because some people will be on blankets, some in chairs, and their ability to shift and move in front of those behind them.

The greater the slope, the better the view any audience member will have over the heads of the people in front. However, too steep of a slope can result in awkward walking conditions or even present a hazard of round or cylindrical items “rolling downhill.” Also, directly proportional to the amount of slope is the change in elevation to the most distant seats which is directly related to the height of the underside of the roof in order for those distant seats to have a clear view of the stage. After weighing those considerations a slope of 10-12% was determine to be optimum.

2.6.2 VIP PAVILIONS

VIP Pavilions are concrete pads distributed around the perimeter of the lawn. These four pads provide locations which will function similar in nature to sky boxes in an arena. They are sites which can be covered by open sided tents and are intended for targeted VIP or group sales. Electrical, audio, and media infrastructure is provided for local large screen capacity. Service from wait staff service is envisioned. When not used as VIP areas, these pads may also double as additional locations for local food truck vendors for large or small events as appropriate.

2.7 EVENT SUPPORT FACILITIES

Event support facilities for the public include restrooms, food and beverage outlets, and merchandise stations, and first aid.

2.7.1 RESTROOMS

Distributed around the perimeter of the lawn and covered seating are four outbuildings with public restrooms in sufficient quantity and ratio to serve the public during performances. The quantities of users planned for takes into consideration that if there is one or more opening act high, restroom usage is expected during breaks between bands. As with public spaces for any performance space, the ratio of fixtures favors women in order to reduce long lines and improve customer experience.

2.7.2 FOOD AND BEVERAGE

Distributed around the perimeter of the lawn and covered seating, and in close proximity to the Restroom outbuildings, are outbuildings for serving food and beverage. These buildings include sales windows, dry storage, and cold storage, and are accessible by vehicles distributing to them from the General Services Building.

To either supplement the food and beverage sales during large events or to meet the needs of small events in either the large amphitheater or the smaller Community Events Amphitheater, the pads for these out-buildings will be large enough to accommodate “food trucks” from local vendors; shore power will be available to eliminate the need to run generators for electrical power.

2.7.3 MERCHANDISING

Consideration was given for the need for locations for retail merchandise sales by the artist’s team. The majority of these sales take place after the performance essentially as impulse buys. Distributed along the path between the amphitheater and guest parking are several pads and covered “Market Sheds” where the vendors can set-up sales stations. Lighting and utility power will be available at the Market Sheds, and utility power will be available at the pads.

2.7.4 FIRST AID

A first aid station is included in the offices at the Entrance Gate building as well as the General Services Building.

2.8 PERFORMANCE TECHNOLOGY EQUIPMENT AND REQUIREMENTS OVERVIEW

2.8.1 GENERAL

The Lakeview Amphitheater will require infrastructure to support touring acts' theatrical equipment including rigging, lighting, audio, video, and communications. The facilities will also require a complement of this equipment in-house to support other events including local theater, opera, ballet, symphony and other community events.

The decisions made regarding theatrical equipment and infrastructure for the Lakeview Amphitheater are supported by information gathered during the Concept Design phase of the project. Decisions made by the design team shall be confirmed with potential user groups and relevant staff during subsequent phases. A theatrical equipment plan has been developed based on the building design parameters, our knowledge of industry practices, and our experience with similar projects. Appendix A provides a narrative discussion of the Performance Technology Systems elements of the project design,

In developing the outline for the performance technology systems, considerations included the need for weather resistant theater equipment exposed to the elements; need for some otherwise permanently mounted equipment to be demountable during non-peak months; and the need for year-round temperature control for weather-proof theater equipment closets located in the roof covering the fixed seats.

2.8.2 ARCHITECTURAL ELEMENTS

This section provides specific recommendations and advice on architectural elements that significantly impact theatrical equipment and require careful coordination. These elements include:

- Stage floors
- Stage galleries and catwalks
- Grids (over-stage and forestage)
- Acoustical doors
- Weather seal doors
- Cable management system

2.8.2.1 STAGE FLOORS

The stage floor will be concrete construction designed to achieve the structural loading criteria to be defined in the TPC Structural Loading Guidelines. The stage floor will not contains traps, however floor pockets or other hatches may be required for routing of cable for temporary performance equipment on a show-by-show basis, These floor pockets and troughs will needs to be coordinated with the stage floor construction.

2.8.2.2 STAGE GALLERIES AND CATWALKS

Structural steel members are required at the roof in regular 8' intervals, spanning the width of the auditorium, running upstage to downstage and also the depth of the stage house running upstage to downstage. The upper steel members could be used to mount perpendicular rigging beams for chain motors and spot-line block attachment. This structure could be combined with required roof steel.

Structural catwalks and bridges over the covered seating and integrated into the roof are required to provide front lighting positions and follow spot positions for the stage area; these can be suspended from the upper steel members, or constructed to operate independently. The catwalks will carry a great quantity of theatrical lighting equipment and circuitry, and must be able to support specialty scenic and projection equipment for individual productions. Horizontal railings in these areas must be of a diameter to accommodate standard lighting equipment clamps, typically 1.9" OD, and often must be adjustable vertically. Access catwalks in the roof structure covering the fixed reserved seating will provide a path to and a place from which to work to service and maintain house lights, announcement/public address speakers, banners, temporary power positions, and other theatrical equipment and equipment closets.

Stage galleries include the operating galleries and fly/loading galleries along the stage left and stage right walls, and the crossover catwalk at the upstage wall. These fixed equipment support structures also carry production elements and provide access and work floors for technicians. Scenic and other production items can be suspended and flown from these locations.

Galleries and catwalks will be designed to meet the functional requirements of installed mechanical systems and the anticipated production needs of the facility. These systems may include temporary chain hoists, speaker clusters, and adjustable acoustic elements. Theatrical lighting catwalks must accommodate and provide access to stage lighting fixtures, projection equipment, follow spots with operators, electrical distribution, and other theatrical equipment.

2.8.2.3 GRIDS (OVER-STAGE AND FORESTAGE)

A technical grid is required as a walking surface both above the stage (below the rigging support steel) and above the forestage. The above-stage grid accommodates the rigging for theatrical lighting and masking machinery, fire curtain machinery if required, and proscenium weather seal shutter. It also provides access to high roof smoke vent systems. These grids are likely to have a floor constructed of demountable "subway" type grating panels. The forestage grid will be used for rigging additional theatrical equipment as required by each production. Both grids should be painted OSHA safety yellow on top. Since the underside of both grids will be visible to the audience they should be painted an appropriate color on the underside to allow stage personnel to observe rigging elements fly out against a contrasting background.

2.8.2.4 ACOUSTICAL DOORS

Large acoustical doors along the wall of the stage at stage left, stage right, and center will close off the main stage area from the scene dock areas during performances. These large double or single doors should be manually operable with oversized leaves and will conform to NC ratings as determined by the Acoustician. Local fire codes may require a roll-down fire shutter on the scene dock side for proper fire separations. The acoustical door provides noise separation between the stage and the back of house area, and is not intended to function as a fire door, weather seal, or for any other purpose.

2.8.2.5 WEATHER SEAL DOORS

A large robust weather seal door will be required to close off the proscenium opening of the stage house to prevent vandalism and theft and to protect the stage from the elements. This door must be capable of operating in a harsh environment, must work in extreme temperatures, and must handle high wind loads.

2.8.2.6 CABLE MANAGEMENT SYSTEM

The cable management system is a network of cable passes, cable doors, cable hooks, and cable trays that allow temporary production cabling to be run between loading areas, house mix positions, disconnect locations, and the stage house. Penetrations are usually provided through the proscenium walls, stage floor slab, pit walls, and all four walls of the stage house. Fire protection is achieved by installing intumescent sacks that reside in the cable opening at all times.

2.8.3 THEATRICAL EQUIPMENT

The theatrical equipment includes specialty technical theater equipment. Equipment is planned to support current performance programming while providing for reasonable future expansion. Organized by CSI division, the theatrical equipment we've identified includes:

Division 11: Equipment
11 61 33 Theatrical Rigging
11 61 35 Theatrical Rigging Controls
11 61 37 Fire Safety Curtain
11 61 43 Theatrical Draperies
11 61 91 Theatrical Lighting Instruments and Accessories

Division 12: Furnishings
12 62 13 Fixed Audience Seating
12 63 11 Loose Audience Seating

Division 26: Electrical
26 61 11 Theatrical Dimming and Controls
26 61 20 Company Switches

Division 27: Communications
27 41 16.61 Integrated Audio-Video Systems and Equipment for Theaters

An outline of the equipment components for each of these items is provided in Appendix A.

2.9 NOISE GENERATION AND ACOUSTICS ANALYSIS OVERVIEW

2.9.1 GENERAL

Noise is defined by NYSDEC as any loud, discordant or disagreeable sound or sounds1. 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

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

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.

2.9.2 NOISE IMPACT ANALYSIS

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 B.

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.

Figures 2-1 and 2-2 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 2-1 shows the anticipated maximum sound levels within approximately 2 miles of the Amphitheater location. Image 2-2 compares expected maximum sound levels from concerts in the proposed Amphitheater with expected maximum sound level from concerts in the existing State Fair 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 2-2, 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 can be expected in the Lakeland area based on the modeling conducted by Acoustic Dimensions. However, as depicted in Image 2-2, no receptors are predicted to experience noise in excess of 70 dBA as a result of the Amphitheater.

2.9.3 NOISE MITIGATION

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 national 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.

2.10 EVENT OPERATIONAL CONSIDERATIONS

A number of conceptual design decisions were made for this project based upon what is expected to be the typical usage of the facility. Some of the most demanding requirements for an amphitheater are for performances by high-level rock, pop, or country acts. Specific sizes, shapes, quantities, functions, and orientations of the design elements are all affected by the needs of the performance and audience. These were all taken into consideration.

Perhaps the best way to understand some of the design decisions is to take a look at a typical “Day in the Life” of a performance at the amphitheater. These are typical performance related events which are mostly behind the scenes. Additional consideration was given to operational issues, including arrival times and traffic flow for administration, box office, security, emergency, concession, usher, and parking staff.

Time	Performance Related Events
6:00 AM	Eight tractor-trailers and four tour buses begin to arrive in the backstage parking area. These trucks and buses carry the Artist’s equipment and crew.
6:00 AM	Touring crew of 40 continues to sleep in their buses.
6:30 AM	Local caterer delivers breakfast for local crew of 30.
6:45 AM	House crew of truck loaders, stagehands, riggers, and electricians begin to arrive in 30 personal vehicles.
7:00 AM	Touring caterer prepares breakfast for touring crew and drivers.

Time	Performance Related Events
7:00 AM	Amphitheater’s technical director, Artist’s production manager, and Promoter’s representative meet to discuss ticket sales, day’s schedule, etc.
7:00 AM	Some crew members eat breakfast while others start unloading trucks.
7:30 AM	Local electrician connects power for all touring equipment.
7:30 AM	Touring and local riggers begin to hang 55 electric chain hoists.
8:00 AM	Local electrician connects power for tour buses.
8:00 AM	Touring crew breaks down into specialty areas (sound, lights, video, staging, etc.).
8:00 AM	House crew is distributed to specialty areas as needed.
8:00 AM	Touring production manager and accountant set up offices backstage.
8:30 PM	As trucks are unloaded, they move from the dock to the parking area where they continue to run while drivers catch up on sleep.
9:00 AM	All crews work together as setup continues through the day.
10:00 AM	Runners are sent on various errands in their personal vehicles.
11:00 AM	Touring and local caterers prepare lunch for respective crews.
12:00 PM	Touring and house crews break for lunch in shifts.
12:30 PM	All crews work together to complete setup.
1:00 PM	Touring crew interfaces with amphitheater’s sound, intercom, house light, spotlight, and video systems.
2:00 PM	Trucks for two opening acts arrive at dock and are unloaded into stage wings and storage areas.
3:00 PM	Buses for two opening acts arrive in the backstage area.
4:00 PM	Audience of 15,000 begins to arrive in parking areas.
4:00 PM	Bulk of house crew dismissed until load-out, and leave in personal vehicles.

Time	Performance Related Events
4:00 PM	Artist’s buses arrive and park directly adjacent to backstage area.
5:00 PM	Artist takes the stage for sound check/rehearsal.
5:30 PM	Audience begins to gather at ticket booth, will call, and entrance gates.
6:00 PM	As soon as Artist leaves the stage, word is given to open the gates to the audience.
6:00 PM	Some of performer’s equipment is moved to make room for opening acts.
6:15 PM	While audience enters, visits concessions and restrooms, and finds their seats, equipment for opening acts is set on stage and they may do quick sound checks.
6:30 PM	Touring crew breaks for dinner.
6:30 PM	Some Artists eats dinner.
7:00 PM	Some number of Artist guests and VIPs arrive by car or limo in the backstage area.
7:30 PM	First opening act performs.
8:15 PM	Second opening act performs.
9:00 PM	Artist performs.
9:15 PM	During Artist’s performance, opening act’s equipment is packed up and loaded onto their trucks.
10:00 PM	First four Artist’s trucks are returned to the dock, ready for loading.
10:00 PM	Opening act trucks and buses will probably leave the amphitheater during the Artist’s performance.
10:30 PM	Full house crew returns in personal vehicles.
10:30 PM	Some audience members begin to leave so they can beat the crowd.
10:45 PM	Touring caterer delivers some Artist dinners to their bus.
11:00 PM	Show ends.
11:00 PM	Immediately after the last encore, Artist will often go directly to their bus and leave the

Time	Performance Related Events
	amphitheater.
11:00 PM	Touring crew and house crew work together to tear down, pack up, and load out the show.
11:15 PM	Remaining audience all head for the exits; many stopping at concessions on the way out.
11:30 PM	Bulk of concert-goers attempt to leave parking areas.
12:00 AM	Runner goes for end-of-night crew bus food.
12:30 AM	As touring crew finish their specific tasks, they shower and head for their buses.
1:00 AM	When the last truck door is closed, the local crew is dismissed and they depart.
1:00 AM	Runner delivers food to crew buses.
1:30 AM	Last of touring crew finish showers and go to buses.
***	For the amphitheater, the day ends and there may be some number of "dark" days until the next performance.
***	For the Artist, touring costs require them to perform at least five times a week, and logistics require the next venue to be no more than six hours away.
2:00 AM	Touring crew sleeps while trucks and buses drive to the next venue.
7:00 AM	It begins again.

No one day at the amphitheater will ever be exactly like this, but each of these events will occur at some time, on some date, in some venue, for some performance.

Another consideration made was that since the amphitheater is located in a public park there is the requirement to close-off the stagehouse from the public during non-show days. This is to protect it from vandalism or theft, and also to protect it from the harsh winter climate. This requirement also presents the opportunity to use the closed performance space as a "black box theater" for smaller theatrical productions and special events. The shutter required to close-off a 60' W x 35' H opening will require significant structural accommodation and will be a costly element of the design.

2.11 SPACE PROGRAMMING ANALYSIS

The space program is divided by general building units and further subdivided by zones: public areas, stage and auditorium; stage support; performer support; administration; and, building services. Appendix C provides a detailed space programming analysis for all of the building superstructures. The preliminary building floor plans developed to date have been based on this space program.

AMPHITHEATER

Includes covered seating for 5,000, stage, stage support, performer support, and event space above.

LAWN SEATING

Includes uncovered seating, VIP Pavilions, and four food and beverage outbuildings and four restroom outbuildings to serve 17,500 audience.

COMMUNITY AMPHITHEATER

Includes bench seating, fixed stage, pad for truck as backdrop, and infrastructure to support small events.

TICKET GATE

Includes box office for will-call and ticket purchase, box office offices, entrance gates and additional exit gates.

GENERAL SERVICES BUILDING

Includes administration, grounds maintenance, security, parking, and F&B receiving, storage, and distribution.

2.12 CONCEPTUAL BUILDING DEVELOMENT PLANS

This section provides a summary of the architectural concepts and themes for each building structure. Figures 2-3 through 2-14 provide various conceptual building plans, sections, elevations and renderings as summarized below:

Figure	Title
2-3	Amphitheater First Floor Plan
2-4	Amphitheater Second Floor Plan
2-5	Amphitheater Third Floor Plan
2-6	Amphitheater Building Section
2-7	Amphitheater Building Elevations
2-8	Amphitheater Building Elevations
2-9	Amphitheater Isometric Views
2-10	Amphitheater Isometric Views
2-11	Amphitheater Building Rendering
2-12	Box Office Building Floor Plan and Elevations
2-13	Concession and Restroom Building Plans and Elevations
2-14	Box Office Building Rendering
2-15	General Services Building-First Floor Plan
2-16	General Services Building-Second Floor Plan

2.12.1 DESIGN CONCEPTS AND MATERIALS OF CONSTRUCTION

The Lakeview Amphitheater, in some respects, is a celebration of the rebirth of Onondaga Lake. The initiatives that have improved the environment in and around the Lake allow the public to once again enjoy the nature and scenery of the western shore.

The design of the amphitheater is intended to be both organic and iconic. Using contemporary building materials and dynamic forms, the buildings are inspired, complement, and participate in the natural environment, while creating a presence and visual experience that is memorable. As the building rises, textures and materials become lighter as in the natural world. The first floor of the building is stone, tying the building to the ground and providing the visual base for the reclaimed-wood clad exterior columns to launch towards the airy glass of the Event Center. The sloped and angular metal roofs below mimic the random striations of geology, while the curved metal roof at the top of the structure appears to float in air. On the exterior wall above the covered seating canopy, a lighted logo will glow during performances to enhance the Lakeview Amphitheater brand.

The amphitheater is purposely nestled in a natural cove and is meant to be 'discovered' as one approaches it upon the entrance path. From far, very little is seen. As one approaches, more of the building is revealed until its full detail is apparent. As if coming upon a natural feature like a rock outcropping or waterfall, its grandeur isn't fully understood until you are completely in its presence.

2.12.2 AMPHITHEATER BUILDING

The first floor of the Amphitheater features splayed wings to house the separate artist and house crew functions. In addition to creating a visually dynamic exterior, the wings work to further block public view to the utilitarian and vehicular spaces to the rear. Between the wings, the docks and storage rooms serve to allow lighting and sound rigging, scenery, and equipment to be brought efficiently from trucks to the Stage. The west first floor lobby contains an elevator to the third floor Event Center. This lobby is configured with secure doors that can isolate it from the stage and back-of-house spaces during non-performance times, so that the public can access the Event Center without being able to enter restricted areas.

The second floor contains further program space for artist and house crew functions as well as mechanical space. On this level, the roofs of the spaces below may be vegetated and terraced for outdoor activities. The Event Center on the third floor is envisioned as a year-round space for community and visiting performer functions. High above the ground, enclosed by glass curtain walls, and with a balcony overlooking Onondaga Lake, the views will be breathtaking.

2.12.3 BOX OFFICE BUILDING

The Box Office building, as the gateway to the park, sets the opening tones for the aesthetic themes seen in the amphitheater, but also stands as a beacon to event goers arriving in the parking lot. From a distance, the soaring columns and sloped roof focus all to the point of entry; and the dynamic form produce the first notes of excitement.

2.12.4 GENERAL SERVICES BUILDING

Containing the utilitarian and administrative functions of the Amphitheater Park, the General Services Building is intentionally set aside from event goers experience and the procession from the parking lots to the Box Office Gate, and eventually to the amphitheater itself. The building houses the necessary functions of food preparation and storage, first aid, building and grounds repair, and the operator's administrative offices. Though easily accessed by service trucks, staff, and administrators, the building is mostly hidden from view.

2.12.5 MISCELLANEOUS SUPPORT BUILDINGS

Several smaller structures stand in support of the event goers' experience, including concessions, restrooms, and merchandise sheds. Though of smaller stature, the structures will carry the aesthetic of the larger buildings in material and form.

3.0 FACILITY SITING AND ALTERNATIVES REVIEW

3.1 GENERAL

This section provides a description and evaluation of potential amphitheater siting alternatives considered for the project. Options considered include an alternative west shore site and four different facility siting options on Lakeview Point. Alternatives were evaluated for their potential to mitigate impacts and for their ability to meet the goals of the County. As stated in Section 1, the primary 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.

Along with meeting the stated objectives outlined above, there are many considerations that factor into determination of the suitability of a proposed site or concept design. These include issues such as ingress/egress to the facility from the local road network, parking for attendees, parking and staging areas for performer support vehicles, orientation of the stage house to the sun, topography of the site, access to utilities, visual impacts/aesthetics and acoustics/noise propagation.

3.2 ALTERNATIVE PROJECT LOCATION

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 (see Figure 3-1).

The planning document shows a proposed location for an amphitheater near Lakeview point. As can be seen from Figure 3-1, 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 for further consideration. This site is on County property at the Northwest corner of the lake, in the area known as Maple Bay as shown on Figure 3-3.

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 conceptual site layout for this site is shown on Figure 3-4.

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 the amphitheater 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 7,000 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 it's 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 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 Lakeview Point area.

3.3 LAKEVIEW POINT SITING ALTERNATIVES

With regard to siting of the facility on Lakeview Point, several different alternatives were evaluated that considered a variety of factors such as suitability for the proposed amphitheater facilities, constructability, geotechnical issues, acoustics, noise impacts, visual impacts and other environmental considerations. A total of 4 site locations were considered on Lakeview Point, with two being evaluated in further detail based on an initial screening.

One option considered consisted of constructing the main stage house facilities on top of Lakeview Point at the far eastern end of the point. This location most closely resembled the location that was depicted when the project was first announced publically. After a more detailed review of this location, it was determined that it was not suitable for properly supporting the operational requirements of the amphitheater due to poor access to the backstage facilities by large delivery vehicles, buses, etc. In addition, the width of Lakeview Point in this proposed location was not wide enough to support the outdoor seating and significant earthwork would have been required. Based on the above, this location was not considered for further development.

A second location considered consisted of locating the amphitheater closer to the NYS Fair parking lots to more readily access the back stage facilities. While this option was ideal from a facility access standpoint, several significant issues rendered this option not suitable for further consideration. First, being closer to I-690, this location had significant background noise from the highway that was deemed to be detrimental to the intended use of the site. A second disadvantage of this option related to a significant portion of the venue being located on the old Crucible landfill. This would have required a significant amount of fill to be placed on the capped landfill to develop the grades needed for the amphitheater and lawn seating. In addition to these drawbacks, the location was also somewhat removed from the lake resulting in poor views of Onondaga Lake and unobstructed views of I-690.

The two concepts evaluated with the greatest potential involved what were titled the “Cove” option which sites the primary amphitheater structure along the northern shore of Waste Bed 6 and the “Beacon” option which sites the facility on top of the Lakeview Point peninsula between Waste Beds 5 and 6. These two options are shown conceptually in Figures 3-5 and 3-6. A design workshop was conducted with Onondaga County staff in May 2014 where each option was reviewed with regard to its layout on the site, suitability to support amphitheater operations, constructability, costs, visual impacts and other factors. To further assist with the review of these options from an aesthetic and visual impact perspective, a detailed visual assessment of these two options was performed. This consisted of simultaneously flying two high visibility balloons at the location of both the Beacon and Cove options. The balloons were flown to a height of approximately 87 feet above grade which represents the approximate height of the proposed superstructure based on the conceptual engineering work performed on the building to date. The assessment included taking pictures from various vantage points throughout the project area to ascertain the visual differences between these two options. For a select number of vantage points, the photos were superimposed with conceptual 3D building renderings to provide the County with a sense for the scale and appearance of the facility from these vantage points. A complete copy of the visual impact assessment and data is provided in Appendix D and Figures 3-7 thru 3-18 illustrate the key findings of the analysis.

With regard to the Beacon option, this location would site the primary amphitheater facility on the most prominent location of Lakeview Point. This location would provide excellent views of the lake for the audience and the building would be highly visible from different vantage points. Given its location on top of Lakeview Point, the construction of the facilities would also have less impact on Honeywell’s ongoing environmental remediation activities in this area. From a disadvantage standpoint, being closer to I-690, the background noise in the outdoor seating area is quite noticeable. Of more significance, the Beacon option requires a significant portion of the outdoor seating to be located over the Crucible Landfill, with significant quantities of fill required (approximately 25 feet in certain areas) to create the sloped seating areas required to support the amphitheater. In addition to being very costly to construct, this would be a significant disturbance to the closed landfill and would likely not be viewed favorably by the NYSDEC.

The Cove option is a somewhat significant departure from the early project concept for the facility in that it is not located on the top of Lakeview Point. This option was conceived based on a consideration to develop an alternative that embraces the water, but at the same time blends into the natural topography of Lakeview Point, and creates a “park” atmosphere for the community. The Cove option achieves this objective by situating the main amphitheater along the lower elevations of the northern shoreline of Lakeview Point and is positioned to blend in with the existing topography much better than any of the other options considered. The views of Onondaga Lake for the audience are excellent for this option and the background noise is lowest of any of the options considered due to it being furthest from I-690 of all of the options considered. As a result of this option blending best with existing topography, the amount of fill and earthwork required for this option is significantly less than the other options, thereby reducing the relative cost of construction. This option also minimizes construction impacts to the Crucible landfill which is viewed favorably by the NYSDEC.

Challenges associated with the Cove option include the need for significant coordination of the County’s project with Honeywell’s remediation project as this area will be actively utilized by Honeywell until at least the spring of 2015. In addition, due to the need to reconfigure the existing grading to accommodate the amphitheater slopes required, portions of the recently constructed existing bike trail will need to be reconstructed. With the main amphitheater building close to the water, access for large tractor trailers and buses required careful consideration. Ultimately, it was determined that the best means of access was to utilize and extend an existing service road that is currently being utilized for Honeywell’s construction operations. While the access road is somewhat longer than required for the other options considered, it has the benefit of already being partially constructed and the circuitous routing inherently separates the large delivery vehicles from the venue attendees.

Based on the factors described above, the Cove option was identified as the preferred option for all work going forward at the May design workshop with County staff.

4.0 CONCEPTUAL SITE DEVELOPMENT MASTER PLAN

4.1 OVERVIEW OF PROPOSED DEVELOPMENT PLAN

The proposed Site Development Master Plan (see Figures 4-1 and 4-2) is intended to provide a cohesive set of spatial relationships to harmonize a variety of program elements with the opportunities and constraints provided by the project site. As documented elsewhere in this report, the site is the subject of an intensive remediation effort and has a long history as an industrial waste bed. The unique topography of the "peninsula", a result of its prior use as a series of waste beds, creates a high plateau along the shoreline of Onondaga Lake which is unrivaled in the views it offers of the lake and surrounding community. Also, the project site has recently been made available for public recreation, in a limited fashion, through the recently completed extension to the Onondaga Lake West Shore multi-use trail. Finally, the site is located adjacent to one of the major parking lots for the New York State Fair. These factors, along with other operational considerations, were the driving factors in the development of the proposed master plan. Below is a discussion of the key program elements and their relationship to the site master plan.

4.2 AMPHITHEATER BUILDING

The siting of the Amphitheater Building is the result of consideration of several alternatives as discussed in Section 3. The most important factors to consider are solar orientation and topography, followed by vehicular and pedestrian access. The ideal orientation for an outdoor covered amphitheater facility is along a north/south axis, with the stage proscenium facing south and the audience facing north. This provides the least interference from the setting sun. The amphitheater itself requires an internal change in elevation from the floor in front of the stage area to the rear of the covered area of approximately 15 feet. From the rear of the roofed area upward to the rear of the lawn area, the slope can vary from 12 to 17 percent. The total required elevation change required to provide the sight lines needed for a satisfactory audience experience is approximately 40 feet. A landform which is a natural "bowl" suits the requirements of this type of facility the best.

The "Cove" location was identified as the preferred siting location for the Amphitheater building because it satisfies the first two criteria: the siting allows for a north/south orientation, with a panoramic view of the lake beyond the building, and the natural topography in the "notch" of the waste bed peninsula accommodates the topographic requirements of the facility. As for access, this location will allow service functions to be routed behind (on the lake side) the facility, while pedestrian access will be from the front of the facility on the high (peninsula) side.

4.3 COMMUNITY AMPHITHEATER

The Community Amphitheater is envisioned as an open air facility which will provide a location for smaller, community based performances such as concerts by local musicians, theater productions, movies, graduations and other community events. Like the main amphitheater, this facility has certain topographic requirements. The main stage area is slightly elevated surrounded by a level lawn or paved area. The surrounding seating area is envisioned as a series of semi-circular terraces, each retained by a low wall at seating height. These terraced areas would have a grass surface and would be wide enough for patrons to place lawn chairs or spread blankets to sit on. This facility would be much smaller in its overall footprint than the main amphitheater, and would have an overall elevation change of 10-12 feet from the level area in front of the stage to the highest of the terraced area.

The selected orientation for the Community Amphitheater is on an east/west axis, along the same alignment as the peninsula. The stage area would face westward, while the amphitheater audience would face east, looking out across the peninsula and with a panoramic view of the lake beyond. This location would allow the facility to take advantage of the same main pedestrian and service vehicle access from the entry gate as the main amphitheater. It would also allow the facility to have a connection to the green space that will be developed in the internal part of the peninsula area. Finally, it would be in close proximity to the bathroom and concession facilities at the outer edge of the main amphitheater lawn, and some, or all of these facilities could be opened for smaller community events, depending on the need.

4.4 GREEN SPACE AND COMMUNITY AREAS

The development of this site provides several opportunities to enhance the existing landscape to create additional green space which will enhance the view shed surrounding the amphitheater facilities, as well as providing additional active and passive recreational opportunities for both the community at large and patrons of events at the amphitheater. These areas include the following:

- Festival Grounds on the former Crucible Landfill Site

This capped landfill will require some fill/re-grading to level the deep swales which bisect it, but can be turned into a large lawn area which could accommodate festival activities such as vending, and camping and other recreational activities. An access path surrounding this area will link it to the internal trail network.

- Nature Area on the Lakeview Point Peninsula

The peninsula area is an excellent place to show the unique community of plants and animals that have developed on the site over the last 50-75 years. This area can be easily accessed from the existing multi use trail, and would be directly connected to the more developed Community Amphitheater area.

- Picnic/Festival Grounds

The transitional area between the Peninsula nature area and the community amphitheater is an ideal area for a Picnic/Festival grounds. This would be an open lawn area interspersed with some tree groups.

- Nature Area on the Northwestern Portion of the Site

This area has been substantially cleared and leveled during Honeywell cleanup operations, but it provides an additional opportunity to add green space to the site, to provide an enhanced buffer to I-690 and to improve the views on the approach to the amphitheater from the bike trail.

4.5 GENERAL SERVICE BUILDING

The General Service Building houses a number of important functions in the operation of the Amphitheater facility, but does not necessary need to have a strong connection to the public spaces in the master plan. The building is proposed to have a more conventional architecture, as opposed to the iconic form of the amphitheater structure. As such, the proposed location on the north side of the former Crucible landfill, the future “Festival Grounds” provides good proximity to the main amphitheater, but places the building in a location that is somewhat less conspicuous to patrons of the site.

The parking for the General Service Building can also double as public parking for the site during non-event times, and provides a good point to access the multi use trail and internal pedestrian network from the north side of the site. The nearest access points to the multi use trail with parking are about a mile to the south at the new trailhead parking area at the southern end of the State Fair parking lot, and several miles to the north on Long Branch Road.

4.6 FACILITY GATEWAY/ENTRY

The site orientation of the gateway and entrance to the amphitheater facility is one of the most significant elements in the master plan. The selected location is on a direct axis with the Amphitheater structure, but is also clearly visible from all areas of the existing parking lot. This will provide an important visual reference and way-finding cue to visitors arriving at the site for the first time. In addition, the iconic architecture of the entrance gateway makes a bold statement that lets patrons know they have arrived at a special place, and begins a sequence which will culminate when they come upon the Amphitheater itself, nestled in the cove.

The gateway structure will also house the box office, and a drop off loop with a small number of adjacent parking spaces. This will serve patrons who wish to stop by to purchase tickets or conduct other business at the box office during non-event times. The loop will be employed to provide tram and shuttle service to the entrance from the main parking area, and remote parking areas during large events.

4.7 CONCESSIONS AND MERCHANDISING

Small buildings/kiosks for vending and merchandise sales are proposed along the walkway into the facility, just inside the entrance gate. This is a natural location which allows space for vendors to set up but assures maximum visibility from virtually all patrons entering and leaving the park. Concessions selling food and beverages are proposed at several locations surrounding the main amphitheater, at both the upper and lower levels. The buildings housing these functions will also be co-located with the restroom facilities.

In addition, the loop access drive/path surrounding the Festival Grounds will contain a small parking/vending area along the northern side of the grounds which will provide an ideal location for vendors servicing the area with mobile facilities, such as food trucks and trailers.

4.8 RESTROOMS

Restroom facilities are an important amenity for a facility of this type and their location has been carefully considered. Restroom buildings are located at either side of the stage house, as well as along the top of the lawn area. These upper facilities will also serve the community amphitheater when events area being held there. They are also located in close proximity to the multi use trail, so the County could have the option to make some or all of these facilities accessible to the public during non-event times as well, similar to the bathroom buildings elsewhere along Onondaga Lake Park.

4.9 PARKING

The project site is conveniently located to take advantage of the significant amount of existing parking in the State Fair parking lot to the south (Orange Lot). Tram and/or shuttle service can provide easy access from this large parking area, and other off-site lots (i.e., Brown Lot), to the drop-off circle located immediately in front of the entrance gateway.

There are also parking needs for the interior areas of the site. The drop-off loop has a small parking area for patrons using the box office area. The General Service Building has a small amount of staff parking, as well as adjacent parking for public trail access. The Festival Grounds has a small parking area for vendors located on the north side of the grounds. The operation of the main Amphitheater requires a large number of tractor trailer and bus parking spaces, which are located behind the facility on the northern edge of the peninsula.

4.10 PEDESTRIAN ACCESS

Pedestrians may access the site through the main gateway entrance only during amphitheater events, but will also have access via the multi use path at other times. This existing path enters the site from the north and south sides and wraps around the peninsula. This alignment will be preserved, but slightly modified to allow the trail to pass through the amphitheater site. A network of internal pedestrian pathways connects all the major site elements. These pathways will be constructed so that service vehicles will be able to use them for access, though only the major services drives will be constructed for heavy truck traffic.

4.11 ON-SITE TRANSPORTATION NETWORK

The amphitheater site requires both a vehicular and pedestrian circulation network. The master plan seeks to keep those uses separated through the use of dedicated pedestrian walk ways along the parking area and inside the site, with major vehicular traffic inside the site routed to the outer perimeter. There will be occasional use of the pedestrian path network by service vehicles, but this will be mainly for maintenance and concessions functions. This level of interaction is common in the adjacent Onondaga Lake Park and presents minimal conflicts.

4.12 ADA CONSIDERATIONS

The main amphitheater site will be developed with an accessible network of paths and walkways. To the maximum extent feasible, the intent is to avoid ramps, which will require more structural elements such as handrails and landings, and keep slopes to more gentle levels which are accessible to all users. However, due to the grade changes that are inherent in an amphitheater, there may be physical constraints which will require alternate methods of achieving accessibility.

4.13 WATER ACCESS AND AMENITIES

A waterfront pier is shown on the master plan at a location on the north side of the peninsula, however, dependent upon the final configuration of the site and the requirements of the lake improvement monitoring equipment, other locations, may need to be considered. This amenity would give visitors to the site direct access to the water, which is not currently provided anywhere on the site. Depending on the topographic orientation of the final location, a series of ramps may be necessary to descend from the site to the pier level.

4.14 BIKE PATH RECONFIGURATION

As mentioned previously, the existing multi use trail which follows the west shore of the lake will be maintained in its current alignment, except at the amphitheater, where it will be reconfigured to be integrated into the site. This reconfiguration may require reconstructing a portion of the trail approaching the amphitheater from either side in order to match the required grades.

4.15 SITE SECURITY

The entire site will require security fencing in order to ensure that only paying patrons are able to access the facility during a performance. Locking gates at the perimeter of the site where the multi use path enters will also be required. During non-event times, these gates will be left open to allow public access to the site.

A restricted access service road, with a small security building, will enter the site to the west of the main gateway. This will allow the buses and trucks associated with amphitheater productions, as well as vehicles of staff members, to access the site, while restricting access for un-authorized vehicles. This post will also be open during non-event times to allow public access to the parking along the nature area and to the future waterfront pier area.

4.16 SITE USE DURING NON-PERFORMANCE PERIODS

While the site is being designed and developed with the function of the main Amphitheater as a primary concern, it is understood that the majority of the time, events will not be taking place and the site (with the exception of the amphitheater building itself) will be entirely accessible to the public as a park and recreation area. The master plan creates spaces for a variety of both active and passive uses of the site, including biking, running, picnicking, nature observation, kayaking and boating, taking part in programs at the community amphitheater, among other activities.

5.0 SITE AND FACILITY ENGINEERING

5.1 TOPOGRAPHY AND GRADING TO SUPPORT AMPHITHEATER AND LAWN AREA

This section of the report describes the engineering requirements and considerations for creating an amphitheater on Lakeview Point. A description of the existing site conditions is also provided in Sections 1 and 3 of this report. A description of the general design requirements of an amphitheater of this scale are provided in Section 2 of this report.

In order to provide the line of sight conditions for a satisfactory audience experience, an amphitheater of this scale will require a difference in elevation of approximately 40 feet from the bottom of the stage to the top of the lawn seating area. To minimize the costs associated with imported earthen materials to create this difference in elevation, many amphitheaters are constructed on areas of long steep slopes. The preferred site layout provides differences in elevation of approximately 40 feet for approximately half of the amphitheater footprint. The other half of the amphitheater footprint contains elevation differences of approximately 25 feet. Accordingly, up to 15 feet of fill will be required in certain locations (see Figures 5-1 and 5-2). The maximum depths of fill will be required to create the eastern extents of the lawn seating area. As the detailed design begins, one goal will be to minimize the amount of imported fill required for the project and the preferred site layout minimizes the imported fill required compared to other options considered. Nonetheless, it is expected that the project will require a considerable volume of imported fill to construct the necessary lawn slopes for the venue.

As a result of the history of the site and the current state of the site, geotechnical issues will play a critical role in the design of the amphitheater. The geotechnical conditions are summarized in Section 5.2 and a preliminary geotechnical assessment is provided in Appendix E. The Waste Beds are engineered systems constructed with stronger outer containment berms holding interior areas of weaker material. During this conceptual design, it was assumed that cutting into the existing Waste Beds and their containment berms should be minimized to the extent possible due to concerns about slope stability. Based on the preliminary geotechnical assessment (see Appendix E), the slope stability of the berms does not appear to be a significant issue based on the current site layout and grading plan. This issue will be examined further during detailed design. If it is found that the Waste Beds and containment berms can be cut, the volume of imported fill will be able to be reduced, which would reduce the overall project cost. At this time, the conceptual design shows very little cutting into the existing waste bed system.

Relative to earthwork, another geotechnical concern is the ability of the Waste Beds to bear the weight of the required fill. It is expected that placing earthen fill will result in the settling of the weaker areas of the waste beds. Based on existing geotechnical reports and recent consultations with the report's authors, placing approximately 15 feet of fill on the waste beds may result in up to 6 feet of settling over a period of several months. Based on these conditions, it will be necessary to "pre-load" certain areas by placing fill well in advance of the construction of finished surfaces. This will allow these areas to settle and stabilize prior to more formal site construction work.

5.2 GEOTECHNICAL

5.2.1 OVERVIEW OF EXISTING CONDITIONS

The general area where the project site is located is within the Erie-Ontario Lowlands province, which is an area of low relief lying south of the Great Lakes characterized primarily by glacial deposits. This area was a former glacial lake bottom which has been modified by erosion and repeated glacial deposition. The project site is located along the southwest shore of Onondaga Lake. This area was previously marsh land that was subsequently filled by the Solvay Process Company, later known as Allied Chemical Company, between 1916 and 1943. During this time eight lagoons, commonly referred to as "Waste Beds 1–8", were constructed to accept waste material generated as a result of the production of soda ash. This waste material is commonly referred to as "Solvay Process Waste" (SPW) which is a chalky material consisting mainly of calcium carbonate with gypsum, sodium chloride, and calcium chloride. Each Waste Bed was constructed as a diked/bermed area where SPW was pumped as liquid slurry. The liquid portion of the slurry was allowed to decant and/or evaporate over time prior to additional liquid slurry being added to the same Waste Bed. After a Waste Bed reach a certain portion of the capacity, another dike/berm was constructed using a portion of the solid material within the Waste Bed and the disposal process then continued. The solid material subsequently forms the upper soil-like strata and is approximately 40- to 60-feet in thickness. The western portion of Waste Beds 1–8 also includes a former steel mill landfill which was capped and closed in 1989 per NYSDEC regulations.

The native soil underlying the SPW is part of a region within the Erie-Ontario Lowlands known as the Oneida Lake Plain consisting of soft cohesive or loose to medium dense granular lacustrine deposits. The underlying soils, in descending order, consist of: organic Peat; loose sandy Marl; soft Silt and Clay; loose to medium dense Silt and Sand; medium dense Sand and Gravel; and very dense silty Glacial Till. The thickness of the overburden soil ranges from approximately 100 feet to approximately 250 feet. Beneath the glacial till is the Vernon Shale which is part of the Salina Group. Shale beds vary in thickness from approximately 1 foot to approximately 7 feet and may contain thin dolomitic limestone and/or gypsum seams between Shale beds. Traversing through the project site area is the former stream bed of Nine Mile Creek. In this area, the overburden soil can be up to 220 feet thick with an additional 40 to 60 feet of overlying SPW. This trough is due to erosion activity caused by Nine Mile Creek and repeated glacial scour.

Site topography is fairly flat with slopes generally at 3-percent or less with the exception where the former Waste Bed berms were constructed. At these locations the terraced slopes can exceed 15-percent. The elevation at the edge of Onondaga Lake is approximately +363.0 feet above mean sea level (ft-AMSL) and at the top of the Waste Bed the ground surface elevations is approximately +425 ft-AMSL.

5.2.2 HISTORICAL AND SUPPLEMENTAL DATA OVERVIEW

Since the early to late 1980's, subsurface investigations have been conducted within Waste Beds 1-8 to characterize the subsurface materials (e.g., SPW, in-situ soils, bed rock) and groundwater for the presence of various chemical constituents. These constituents are associated with the SPW and other items disposed in the former steel mill landfill. During those studies, most SPW and/or soil samples were retrieved using the Standard Penetration Test method in accordance with ASTM D1586, or by advancing thin-walled tubes (e.g., Shelby Tubes) in accordance with ASTM D1587. The information included on the boring logs allows for an understanding of the subsurface soil stratigraphy and an approximation of the bedrock surface. Figure 5-3 illustrates the location of various subsurface investigation performed in the area of the proposed amphitheater.

For the immediate area where the Amphitheater is proposed, the following borings, test pits and/or groundwater wells were reviewed to identify the subsurface soil conditions.

Location	Type of Exploration	Surface Elevation (ft)	Depth Explored (ft)	Bottom of Boring Elevation (ft)	Terminated in Soil Unit
SB-15	Soil Boring	NA	80.0	--	SILT and CLAY
SB-16BR	Soil Boring	NA	134.7	--	Bedrock – Shale
SB-17	Soil Boring	NA	62.0	--	clayey SILT
SB-28NM	Soil Boring	NA	50.0	--	SAND, and Silt
SB-29NM	Soil Boring	NA	54.0	--	clayey SILT
SB-30NM	Soil Boring	NA	50.0	--	medium to fine SAND
TP-11	Test Pit	NA	10.0	--	Solvay Waste
TP-13	Test Pit	NA	10.0	--	Solvay Waste
TP-14	Test Pit	NA	10.0	--	Solvay Waste
MW-04-S	Monitoring Well	388.61	18.0	370.61	SILT
MW-04-I	Monitoring Well	388.75	34.0	354.75	medium to fine SAND
MW-04-D	Monitoring Well	388.66	154.0	234.66	TILL (SILT)
MW-04-G	Monitoring Well	388.84	50.0	338.84	SAND
MW-04-BR	Monitoring Well	388.19	204.0	184.19	SHALE
MW-17-S	Monitoring Well	409.20	56.0	353.2	SAND
MW-17-I	Monitoring Well	409.33	72.0	337.33	SAND
MW-17-D	Monitoring Well	409.18	185.6	223.58	TILL (SILT)
OW-01S	Observation Well	388.62	26.0	362.62	MARL
OW-02S	Observation Well	388.44	26.0	362.44	MARL
OW-05G	Observation Well	388.18	54.0	334.18	fine SAND, and Silt
OW-06G	Observation Well	388.24	50.0	338.24	SAND, and Gravel
TW-01S	Observation Well	388.47	28.0	360.47	MARL
TW-03G	Observation Well	388.54	54.0	334.54	fine SAND, and Silt
DW-102	Monitoring Well	NA	140.0	--	sandy SILT
CM-108	Monitoring Well	NA	66.0	--	Organic PEAT
LVA-B1	Soil Boring	410.0	165.0	245.0	SILT and CLAY
LVA-B2	Soil Boring	424.0	162.0	262.0	SILT and CLAY

Note: NA – Not Available within information reviewed

In addition to the above exploration locations, the following borings, and monitoring wells were also used to approximate the bedrock surface beneath Waste Beds 1–8.

Location	Type of Exploration	Surface Elevation (ft)	Depth to Bedrock (ft)	Top of Bedrock Elevation (ft)	Depth Explored (ft)	Bottom of Boring Elevation (ft)
SB-09BR	Soil Boring	NA	114.8	--	114.8	--
SB-13BR	Soil Boring	NA	248.8	--	248.9	--
SB-16BR	Soil Boring	NA	134.5	--	134.7	--
SB-19BR	Soil Boring	NA	136.0	--	136.1	--
MW-03BR	Monitoring Well	366.17	142.0	224.17	175.0	191.17
MW-04BR	Monitoring Well	388.98	170.5	218.48	204.0	184.98
MW-06BR	Monitoring Well	430.74	138.0	292.74	175.0	255.74
MW-09BR	Monitoring Well	368.24	91.0	277.24	125.0	243.24
MW-13BR	Monitoring Well	374.65	68.0	306.65	106.0	268.65
MW-14BR	Monitoring Well	374.84	94.0	280.84	130.0	244.84
MW-19BR	Monitoring Well	365.95	107.0	258.95	109.1	256.85
MW-20BR	Monitoring Well	366.41	114.1	252.31	148.5	217.91
MW-02D	Monitoring Well	366.34	97.7	268.64	98.0	268.34
MW-16D	Monitoring Well	426.12	132.9	293.22	133.0	293.12
MW-18D (SB-24BR)	Monitoring Well	425.00	146.0	279	146.6	278.4
MW-100D/BR	Monitoring Well	NA	74.3	--	76.1	--

Note: NA – Not Available within information reviewed

During this planning study, two soil borings were advanced through the SPW and into the underlying in-situ native soils. Each boring was terminated within the Silt and Clay unit. Soil samples were retrieved from each stratigraphic unit encountered and select soil samples were submitted for geotechnical laboratory testing. Select samples retrieved were analyzed using one or more of the following test methods.

- Moisture Content (ASTM D2216);
- Sieve Analysis of Soil w/o Hydrometer (ASTM C117 & C136);
- Sieve Analysis of Soil w/ Hydrometer (ASTM C136, D421 & D422);
- Atterberg Limits (ASTM D4318);
- Unit Weight (ASTM D7263);
- Unconfined Compression Strength (ASTM D2166);
- Void Ratio; and/or
- Uniaxial Consolidation (ASTM D2435)

The results from these tests will be available at a later date and can be used to refine the preliminary settlement and preliminary slope stability calculations as provided in the *Onondaga Lakeview Amphitheater*

Geotechnical Conceptual Evaluation by Geosyntec Consultants (Geosyntec Report) included in Appendix E. In addition, these results can also be used to guide a site specific subsurface geotechnical investigation during the design phase of this project.

5.2.3 SUBSURFACE SOILS CHARACTERISTICS SUMMARY

As previously indicated, subsurface investigations have been conducted within Waste Bed 1–8 since the early to late 1980's; however, most of the work as been associated with the environmental aspects associated with the disposition of waste materials (e.g., SPW, steel mill. Provided below is a summary of the historical geotechnical laboratory testing results that was available for review.

Boring	Depth (ft – bgs)	Soil Strata	Specific Gravity	Hydraulic Conductivity (cm/sec)	Uni-Axial Consolidation Test			CU Triaxial Test	
					Preconsol. Press (tsf)	C_c	C_r	C' / C (psf)	ϕ' / ϕ (degrees)
SB-01	32-34	Clayey Silt	--	--	--	--	--	80.6 / 181.4	34.1 / 19.3
SB-03	38-40	Clayey Silt	2.74	1.66×10^{-7}	12.17	0.31	0.02	--	--
SB-07	6-8	Marl	--	--	--	--	--	93.6 / 231.8	39.3 / 23.7
SB-10	44-46	Marl	--	--	--	--	--	164.2 / 506.8	39.1 / 16.2
SB-13BR	40-42	Solvay Waste	--	--	--	--	--	371.5 / 1565	51.0 / 16.6
SB-14	72-74	Marl	--	--	--	--	--	0.0 / 165.6	34.4 / 15.5
SB-16BR	58-60	Clayey Silt	--	--	--	--	--	123.8 / 1570	36.4 / 15.0
SB-17	10-12	Solvay Waste	--	--	--	--	--	1248 / 1698	22.6 / 6.2
	58-60	Clayey Silt	2.76		2.73	0.19	0.01	--	--
SB-18	10-12	Solvay Waste	2.61	1.12×10^{-5}	0.47	3.18	0.03	--	--
SB-19BR	24-26	Solvay Waste	2.55	1.99×10^{-5}	2.02	1.85	0.02	--	--
SB-20	48-50	Clayey Silt	--	1.13×10^{-7}	--	--	--	525.6 / 766.1	27.5 / 12.2
SB-21	14-16	Solvay Waste	--	--	--	--	--	1371 / 2416	18.7 / 0.0
SB-22	24-26	Marl	2.69	--	0.92	0.72	0.01	--	--
SB-23	32-34	Silt	2.72	--	2.39	0.06	0	--	--
SB-24BR	48-50	Solvay Waste	2.43	8.96×10^{-6}	5.82	0.92	0.01	--	--
SB-25	18-20	Clayey Silt	--	--	--	--	--	452.2 / 602.0	30.2 / 19.2
SB-27NM	20-22	Solvay Waste	--	--	--	--	--	509.8 / 1591	31.1 / 6.6
	38-40	Marl	--	--	--	--	--	0.0 / 293.8	40.2 / 27.8
SB-28NM	14-16	Solvay Waste	--	--	--	--	--	0.0 / 648.0	42.4 / 19.3
SB-29NM	18-20	Solvay Waste	--	--	--	--	--	548.6 / 594.7	42.4 / 17.6
SB-31NM	16-18	Solvay Waste	2.59	1.85×10^{-5}	2.86	1.98	0.14	--	--
SB-20MW	18-20	Marl	2.72	1.02×10^{-5}	0.28	0.53	0.01	--	--

Notes: ft – bgs – feet below ground surface
cm/sec – centimeter per second
tsf – tons per square foot
psf – pounds per square foot

5.2.4 PRELIMINARY SLOPE STABILITY EVALUATION

Geosyntec conducted a slope stability evaluation for three cross sections through the area where the amphitheater structure is planned to be constructed. The evaluation was conducted using Spencer's method for rotational failure surfaces and Janbu's Simplified method for block type failure surfaces. The calculations for these two slope stability methods were conducted using the SLIDE computer program developed by Rocscience, Inc. The preliminary evaluation indicated that the lowest factor of safety (FOS) for the proposed construction is 1.32 which exceeds the minimum targeted FOS of 1.30. Additional information regarding this evaluation is provided in the Geosyntec Report provided in Appendix E. Additional evaluations should be conducted using the data collected during the preliminary geotechnical investigation since the information used to model the area was from borings conducted at other areas within Waste Beds 1–8 and at Waste Bed 13.

5.2.5 PRELIMINARY FILL AND SETTLEMENT EVALUATION AND CONSIDERATIONS

Geosyntec also conducted a preliminary settlement evaluation based upon the anticipated amount of fill that will be placed to create the proper grades and sight lines for the amphitheater. The evaluation was conducted using uni-dimensional consolidation theory in which total settlement is the sum of primary (due to applied loading) and secondary (due to soil creep) settlement. The analysis was performed using the Settle3D computer program developed by Rocscience, Inc. Settlement of up to approximately 6-feet was calculated based upon placing approximately 16-feet of fill for the lawn area. Additional information regarding this evaluation is provided in the Geosyntec Report provided in Appendix E. Additional evaluations should be conducted using the data collected during the preliminary geotechnical investigation since the information used to model the area was from borings conducted at other areas within Waste Beds 1–8 and at Waste Bed 13.

5.2.6 PRELIMINARY DESIGN CONSIDERATIONS

5.2.6.1 CORROSION

The SPW contains calcium carbonate ($CaCO_3$) with gypsum, sodium chloride (NaCl), and calcium chloride (CaCl). These compounds can be corrosive to steel and concrete such that when mixed with water (e.g., groundwater, infiltrating rainwater) can produce an electrolytic solution. This type of solution can be aggressive towards steel by causing it to oxidize (rust) and loose strength and/or attack the lime within the concrete matrix. In addition, the salts that form from the chemical transformations have the ability to substitute with the bonding agents within the concrete. Protective measures could include but not be limited to: sacrificial anodes for foundation elements; coating specific foundation elements; separating foundation elements from the SPW and electrolytic solution, to name a few alternatives. In addition, the use of non-metallic pipe (e.g., High Density Polyethylene – HDPE) should be considered for buried utilities that do not require metallic piping.

5.2.6.2 FILL AREAS AND OTHER OPEN AREAS

For large areas that will be open and subsequently loaded either by new fill or vehicles (e.g., lawn seating area, parking lots) one method to reduce post construction settlement would be to preload the area with controlled compacted fill placed in layers. The method of inducing settlement prior to construction is referred to as surcharging. The principle of this method is to add weight to the area (e.g., soil fill) while monitoring the settlement and in-situ pore water pressure. The amount of weight to be added to a specific area should be in excess of the anticipated loading upon completion of construction. Since the in-situ SWP has a fairly low shear strength, it would be prudent to load the areas in stages such that as the in-situ pore water pressure decreases to a determined level, additional fill material could then be applied. This method of staging and monitoring the surcharge should preclude a deep-seated bearing capacity failure and/or slope failure from occurring.

5.2.6.3 FOUNDATIONS – HEAVILY LOADED STRUCTURES

Based upon the subsurface stratigraphy, the amphitheater structure (i.e., loading dock truck apron, stage area, and seating area, etc…) and other large structures associated with this project should be supported by a pile foundation founded on/in the underlying Vernon Shale. By driving piles to bedrock, these structures will not settle as a result of the underlying SPW, soft cohesive soils and/or loose granular soils consolidating from the additional loads applied by these new structures. It is recommended that during the design phase additional soil borings be conducted with rock coring such that rock core samples can be collected and subsequently tested for strength parameters to identify an allowable bearing capacity. In addition, depending upon the type of pile to be used (e.g., steel H-piles, steel pipe piles filled with concrete, reinforced concrete piles, etc…), some form of corrosion protection may be required as discussed above.

5.2.6.4 FOUNDATIONS – LIGHTLY LOADED STRUCTURES

For lightly loaded structures (e.g., restroom facilities, vendor facilities, drainage structures, etc…) methods for reducing settlements include surcharging as discussed above and/or "floating" the structure. A method for floating structures is to remove a known amount of in-situ material and replace it with light weight fill (e.g., red-dog, geofoam) and subsequently construct upon the light weight fill. The intent is to remove enough in-situ material such that when replaced with the light weight fill and the structure load the increase in loading at the bottom of the light weight fill is zero or less.

5.2.6.5 ROADWAYS

The new roadways that are being planned must support heavy loads, in particular semi tractor trailer trucks and buses. Since the subgrade of these roadways will most likely consist of soft to medium stiff SPW, the roadway section (e.g., sub-base material and pavement) will require addition support and/or means to distribute the wheel loading over a large area. One method for distributing the wheel loading over a large area would be to place a geotextile rated for stabilization on the prepared subgrade followed by a Geogrid. The geotextile will provide a separation between the sub-base material and underlying subgrade as well as some strength when a load is applied. The Geogrid will assist in spreading out the wheel loads over a much larger area thus reducing the applied load to the subgrade material.

5.2.6.6 SETTLEMENT BETWEEN PILE SUPPORTED AND NON-PILE SUPPORTED ITEMS

To minimize settlement between pile supported and non-pile supported items (e.g., seating area and lawn, roadway and loading dock apron, etc…), a portion of the unsupported item may be "floated" for a specified distance away from the supported item. Floating of structures is discussed above.

5.2.6.7 FLEXIBLE CONNECTIONS FOR UTILITIES

For utilities that are hard piped and cannot tolerate displacements, it is recommended that flexible connections be used where the piping enters the structure and/or the area that has been prepared so as not to settle. In addition, utilities should not be rigidly connected to the foundation but rather sleeved through them with enough space to anticipate potential settlements.

5.2.7 PRELIMINARY CONSTRUCTION CONSIDERATIONS

As previously indicated, the upper stratum consists of SPW that is in a soft to very soft condition. During the remedial construction activities that are being conducted in this area in conjunction with the Onondaga Lake Cleanup project, it has been reported that large pieces of construction equipment have become buried up to the top of their tracks or tires when traversing over the SPW. In addition, it has been reported that temporary construction roads were built by placing granular fill consisting brick, rock, broken up concrete, and gravel in several layers until settlement of the fill material ceased. Apparently, the built up temporary construction road is approximately 5 to 6 feet in thickness in which 3- to 4-feet of the material settled into the SPW.

During construction, temporary construction roads should be aligned to the best practical extent as the final roadways so that as much settlement can occur prior to the final roadway being placed. By aligning the temporary roadways in this manner, the fill material could be used for the final roadway subgrade. Depending upon area and subsurface conditions where temporary roadways and/or final roadways will be constructed, there is also the possibility that stabilization methods may be required. One such method is to place a geotextile stabilization fabric on the subgrade (e.g., SPW) and also use a Geogrid within the granular fill to assist with spreading out the load induced by the construction and/or design vehicles upon the subgrade.

Another consideration to take into account is the type of construction equipment that should be used. Until haul roads and/or hard no-yielding surfaces are available to support conventional construction equipment, low ground pressure equipment (e.g., wide-tracked light weight equipment, light weight equipment with oversized balloon-like tires) will be required.

5.2.8 FUTURE DATA COLLECTION AND ANALYSES

Prior to conducting a final foundation design for the amphitheater structure, supporting structures (e.g., box office, office & maintenance building, etc.), roadways and other appurtenances, additional subsurface investigation work should be conducted. This work would include advancing soil borings to the top of and into the underlying Vernon Shale to identify the depth to competent bedrock and refine the anticipated pile lengths as well as advancing shallower borings in the areas where roadways and lightly loaded structures (e.g., restroom facilities, vendor facilities) will be located.

While advancing the borings, SPW and soil samples would be collected for geotechnical laboratory testing to further identify geotechnical design parameters. The samples would be analyzed using one or more of the following test methods.

- Moisture Content (ASTM D2216);
- Sieve Analysis of Soil w/o Hydrometer (ASTM C117 & C136);
- Sieve Analysis of Soil w/ Hydrometer (ASTM C136, D421 & D422);
- Atterberg Limits (ASTM D4318);
- Unit Weight (ASTM D7263);
- Unconfined Compression Strength (ASTM D2166);
- Void Ratio;
- Uniaxial Consolidation (ASTM D2435);
- Triaxial Unconsolidated-Undrained (ASTM D2850);
- Triaxial Consolidated-Undrained (ASTM D4767);
- Unconfined Uniaxial Rock Core Compression (ASTM D7012) and/or
- Corrosion testing that could include: pH, Sulfate, Chloride, Calcium, Sodium, Resistivity, Reduction-Oxidation (REDOX) Potential, Cation Exchange Capacity (CEC), and/or other parameters.

The number of borings to be advanced and the amount of testing to be conducted has yet to be finalized. These items would be identified during the design phase of the project after a final conceptual design has been identified. The purpose of the geotechnical laboratory testing is to obtain addition information to use to design the appropriate foundations and roadway sub-base sections in order to limit the amount of settlement of the new structures. In addition, this data will also be used to further refine/calibrate the slope stability and anticipated settlement analyses that were initially begun during this phase and as detailed in the Geosyntec Report provided in Appendix E.

5.3 STRUCTURAL CONSIDERATIONS

5.3.1 GENERAL

As stated above, the soil at the proposed site is not ideal for supporting large structures on shallow foundations. For this reason, any structures of significant size and with significant load to be transferred to the foundation will make use of deep foundations founded on bedrock. As the depth to bedrock can be over 200 feet at the proposed site, it is not practical to use this same system for supporting lighter structures. Where possible, lighter structures will be supported on stiffened shallow foundations designed to withstand the stresses applied from the minor subgrade movement that is expected even after the recommended geotechnical improvements.

With respect to the superstructure, the intent is to support the function of the facility while blending in to the form of the facility. Primarily, the superstructure will be structural steel. For structures of this size and type, this generally presents the best solution in terms of strength, durability, and cost. However, there will most likely also be some load bearing masonry walls as well as some structural light gage steel framing in the support buildings.

5.3.2 AMPHITHEATER

The amphitheater consists of two main building sections: the stage house and the canopy over the covered seating.

5.3.2.1 THE STAGE HOUSE

The stage house will be a typical steel framed structure. Non-composite and composite steel joists and joist girders will make up the floor and roof systems and will be supported on steel columns. Columns will be hidden within the partition walls where possible and will be laterally braced at floor elevations. The stage presents the only location in the stage house where long, open spans and tall, laterally unbraced columns will be required due to the function of that area. The girder over the proscenium opening will be a deep truss designed to withstand the loading from the event space floor structure above, the canopy girders that it supports, and the lateral wind load from the proscenium opening enclosure in the closed position. Access stairs and elevated galleries above the stage will be supported off of the columns and/or hung from the joists above. Since the area above the stage will be used as event space, the design of the long span composite floor joists will account for vibration due to human activity.

The foundation will be driven H-piles founded on bedrock. Pile caps will be located at column locations and will generally be supported by 2 to 4 piles as loading requires. Due to the existing subgrade, the structural floor will be designed to be fully supported off of the deep foundation and will not account for any support from surface materials. This will prevent serviceability issues resulting from differential settlement between the floor slab and structural elements within the building. The floor system will have a grid of integral grade beams that will be tied to the pile caps as well as be supported by a single pile at beam intersections where the distance between pile caps exceeds the allowable beam span. The structural slab will be a reinforced concrete slab spanning between grade beams. The pile caps, grade beams, and floor slab will be cast monolithically. The truck apron at the back end of the building will also be supported in this method so that the elevation difference between the apron and the loading dock remains constant and is immune to differential settlement.

5.3.2.2 THE CANOPY

The canopy framing requires long spans to a limited number of tall, laterally unbraced columns. Preliminary design of this structure consists of 8 deep trussed box girders spanning from the stage house to the edge of the canopy. The box girders will likely be shop fabricated in sections allowing them to be transported to the site and spliced together in the field during erection. These box girders will likely be deep and wide enough that utility and/or personnel access along the interior of the trussed box girder could be accommodated. Spanning between the girders will be long span steel joists. Catwalks and access platforms will be hung from the roof structure. Since this is the open part of the structure, the design of the canopy structure will account for more wind uplift than the stage house structure.

The foundation will be similar to the stage house foundation in concept. The pile caps under the canopy supporting columns will be larger due to the heavier loading. Also, due to the wind uplift stated above, the piles will likely also need to be able to resist a net uplift. The structural floor slab under the canopy will be gridded with grade beams and intermediate piles as described above.

5.3.3 MISCELLANEOUS SUPPORT BUILDINGS

Where possible, smaller structures will be founded on stiffened shallow foundations. However, this is not likely to be possible for the box office or the general services building. These two structures will likely be on piles driven to bedrock similar to the amphitheater.

Structures such as the restrooms and concession buildings will probably be on stiffened shallow foundations. The primary foundation consideration at these locations will be accounting for differential settlement. As stated in the geotechnical considerations, differential settlement at the proposed site is a significant design consideration that will need to be dealt with in the design of anything not on piles as well as anything that is adjacent and is functionally connected to a structure on piles. To address this, the structural design will take into account the recommended subgrade improvements stated in the geotechnical section of this report. Utility connections to these buildings will need to account for a small amount of movement. Typically, this is done with pipe sleeves and flexible connections. This will be especially important for plumbing connections.

Structural framing for the miscellaneous support buildings will be primarily structural steel. However, some load bearing masonry and light gage metal framing may be appropriate for the smaller structures.

5.3.4 SITE ACCESS ROADS/PATHS

Site access roads and paths will be built on improved subgrade. As described in the geotechnical section of this report, this primarily consists of base stabilization by pre-loading the existing subgrade followed by placement of geogrid and the addition of suitable materials on top of a geotextile fabric. Depending on grading requirements, this may be done in conjunction with other cut/fill operations. The intended purpose of this improvement is to reduce settlement to within acceptable limits. A significant consideration in the design of these access roads and paths will be their functional interaction with structures that will be constructed on a deep foundation and will effectively not experience settlement. The paths will be of flexible construction materials to account for some movement. This may consist of well graded gravel and stone dust, asphalt, or other flexible pavement options.

5.4 STORM WATER MANAGEMENT

The construction of the Lakeview Amphitheater will require the management of storm water runoff. The project will disturb more than 1 acre of land, which will result in the need for a SPDES permit under GP-0-10-001. This permit requires the implementation of facilities to meet designated management criteria, the creation of an erosion and sediment control plan, and the preparation of a Storm Water Pollution Prevention Plan (SWPPP). This site is located in the Onondaga Lake watershed. A Total Maximum Daily Load (TMDL) of phosphorus has been established for Onondaga Lake. Additional phosphorus management considerations will be incorporated into the final site design.

The site drains directly to Onondaga Lake which is a large body of water. This should relieve the requirement to manage the quantity of storm water runoff from the project area. The SPDES permit allows relief from this requirement if the applicant can demonstrate that the peak rate of storm water runoff from the site will not affect the peak rate of flow in the receiving water body. The peak runoff from the amphitheater site will occur approximately 12 to 15 hours into the 24-hour design storm. The peak flow in Onondaga Lake will occur perhaps days after the 24-hour design storm. This difference in peak timing is a result of the relative size differences of the two watersheds. The peak flow from the amphitheater site will occur well before the peak in Onondaga Lake. Storm water runoff from the outer reaches of the Onondaga Lake watershed requires considerable travel time through its drainage network. The Onondaga Dam on the Onondaga Nation also provides a delay in the arrival of the peak flow to the lake. The relief from quantity management can noticeably reduce the amount of space needed for a project. Large areas of land are typically required to manage storm water quantity from projects of this scale.

While treatment of storm water quantity should not be necessary, treatment for storm water quality will be required. Storm water quality treatment volumes are generally a direct result of the measurement of impervious area of the site. These treatment volumes can be reduced through the minimization of impervious area, the use of grass-lined swales rather than pipes, the harvesting of rainwater, and other methods. Some of these practices come with considerable implementation and maintenance costs, which will be evaluated with the County during detailed design.

The construction of the amphitheater and its related site improvements will result in the creation of a considerable amount of impervious surfaces. In some areas, impervious surfaces may be able to be reduced. For example, the parking areas for large tractor trailers account for a considerable percentage of the potential impervious area. These areas will be subjected to tractor trailer traffic relatively infrequently. These areas may offer a good opportunity for a grass-based paving system. Honeywell is currently conducting a demonstration project to assess the effectiveness of various grass-based paving systems and it is anticipated that the remedial strategy for the NYS Fair parking lots will involve covering the lots with a vegetative parking lot rather than pavement or granular material. With regard to the amphitheater building, the substantial roof area may present an opportunity to harvest rainwater for non-potable use at the facility, reducing the effective impervious area of the site.

While the detailed design of any storm water management has not yet commenced, it is likely that a certain amount of traditional infrastructure (catch basins, pipes, roof leaders, etc.) will need to be constructed to keep the site usable and maintainable. However, one goal during detailed design will be to minimize the use of traditional infrastructure in favor of practices with a lower initial capital cost and reduced maintenance requirements. Where feasible, grass-lined swales can be used in lieu of piped storm water conveyances. Footpaths and site access can be designed to minimize the crossing of drainage paths, reducing the need for cross-culverts. The "pros and cons" of these types of approaches will be discussed with the County during final design. The reduction of the piped system in favor of a more natural system can provide a reduction to the volume of water required to be treated for quality by the SPDES permit.

While serving as a focal point for Onondaga County in many ways, the Lakeview Amphitheater can certainly serve as a showcase for the principles developed during the County's award-winning "SaveThe Rain" program. The development of this site will allow for the implementation of a wide variety of practices to protect Onondaga Lake, educate the public, and drive the conversation forward. The opportunity for a working set of storm water management examples will be created in this new public space. This project will be an opportunity to showcase what is possible when storm water management is considered during the conceptual design of the site, rather than solely as a "retrofit".

5.5 SITE UTILITIES

5.5.1 GENERAL

The section provides an overview of the utilities infrastructure requirements to support the proposed facility and identifies the existing infrastructure in the project area to support the facility. Given the accelerated pace that the conceptual engineering portion of the project has progressed, definitive estimates of all utility loads has not yet been determined at this time. Definitive parameters for each service will be defined in the preliminary design phase of the project. Efforts to date have focused on identifying the likely source of the various utilities required based on meetings conducted with each provider and making a preliminary assessment with regard to their adequacy to serve the proposed facility. The following utilities were assessed as part of this evaluation:

Utility	Provider
Water	Onondaga County Water Authority (OCWA)
Sewage	Onondaga County Dept. Water Environment Protection (OCWEP)
Electric	Village of Solvay Electric
Data/Communications	Verizon Wireless & Time Warner Cable
Natural Gas	National Grid

5.5.2 WATER

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. Based on meetings with Honeywell, this source was previously evaluated as part of the visitor's center and construction support offices and found to be in poor condition and of limited capacity. A meeting was held with OCWA in March 2014 to discuss providing a water service to the 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 Blvd. that could be utilized for the facility's water service. This pipeline is fed from an elevated water tank in the Lakeland area which has a normal operating water surface elevation of approximately 590 feet AMSL. Based on the highest ground elevation at the Lakeview Point location, static water pressure at the facility would be approximate 70 psi. Obviously, working pressures will be less due to friction losses thru the system, however, delivery pressure at the facility will be adequate without the need for a booster pumping station. 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. Estimates of water demands for the facility have been prepared based on various attendance volumes at the facility (see Appendix I.) Instantaneous peak water demand from a 17,500 person event is estimated to be approximately 200 gpm (assumed to be the same as peak sewage flow) or 87,500 gallons per day (peak day). As would be expected, fire flow requirements will dictate the sizing of the service since the instantaneous fire flow will exceed peak water demand from attendees. While specific fire flows will be determined as the facility design progresses further, it is expected that needed fire flows will be at least 500 gpm. In order to provide the greatest flexibility to support the County's long term options for the western shore of the lake, it is anticipated that a 12 inch diameter water service will be extended from State Fair Blvd. to the amphitheater. Based on discussions with OCWA, the meter for the service would need to be immediately adjacent to the connection point on State Fair Blvd in an underground manhole per OCWA standards. From that point, the service line would be a private water service owned and maintained by Onondaga County. With regard to backflow prevention, OCWA will require a backflow preventer on the service line which can be located on the amphitheater grounds (rather than at the connection point).

Extension of underground utilities from State Fair Blvd to the proposed amphitheater is complicated due to the need to cross I-690. A preliminary review of the potential routing indicates that it will be necessary to directionally drill under I-690 and install casings to support any needed utilities being routed from State Fair Blvd. Honeywell has indicated that they have already installed a casing for some of their utilities, which may be abandoned at the end of 2014. Honeywell has indicated that the County could potentially utilize this casing to assist with the routing of utilities under I-690. Due to the potential corrosive effects of Solvay waste materials on underground metal, water pipelines will be constructed of either HDPE with heat fused joints or PVC with push-on joints in accordance with AWWA standards. Due to the potential for significant differential settlement in Solvay waste areas, pipe material/joint selections will need to be evaluated in more detail during the design phase of the project.

5.5.3 SEWAGE

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 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 based on the peak sewage flow rate estimates (conservatively assumed to match peak water demands-see Appendix I). Given the location of the Lakeside Pumping Station and similar to the situation with the water service, the sewage pipeline will need to be directionally drilled under I-690 to serve the amphitheater facility. As several utilities will need to be drilled under I-690, it is anticipated that multiple casings will be drilled/installed at the same time from an efficiency and cost-savings standpoint. All gravity sewage pipes will be constructed of PVC with push on joints per ASTM standards, with the exception to sewage force mains, which may be HDPE with heat fused joints. Due to the need to cross I-690 to get to the Lakeside Pumping Station, it is expected that a sewage force main will be utilized to convey the sewage from the amphitheater facility. While no detailed utilities layouts have been developed for the amphitheater site at this phase of the project, it is anticipated that a submersible sewage pumping station would be constructed adjacent to the proposed administration building, which is located at a low elevation relative to the majority of the amphitheater site. Sewage from the restrooms throughout the facility would flow by gravity to this pumping station, where it would then be conveyed by a force main to the Lakeside Pumping Station. It is anticipated that the forece main, along with other key site utilities would be routed along the proposed service road to the facility administration/maintenance building.

5.5.4 ELECTRIC

Electric service in the vicinity of the project site is provided by the Village of Solvay Electric Company. This municipally owned utility provides electric service to the Village of Solvay and immediate surrounding area. A meeting was held with the Solvay Electric in March 2014 to discuss available options for providing an electric service to the facility. Solvay electric currently has a primary voltage (4,000 volt) electrical distribution line that runs through the entire “orange” parking lot of the NYS Fairgrounds which terminates just south of the proposed box office/ticket building for the facility. This distribution line is relatively new as it was recently installed to provide lighting for the State Fair Parking lots. Based on discussions with Solvay Electric, it is anticipated that the existing distribution lines would be capable of supporting the proposed facility without modification. However, there may need to be some improvements to their existing fuses depending on the proposed electrical demand from the amphitheater facility. This will be ascertained once more definitive electrical loads are determined during the design phase of the project. Similar to the intended routing for the sewage utilities, it is anticipated that the primary underground electrical service will be routed along the proposed service road to the location of administrative/maintenance building where the primary electrical switchgear for the facility will be located. It is anticipated that an emergency generator with automatic transfer switch will also be installed in this general location to keep the facility operational in the event of a power outage. Facility electrical distribution will likely consist of both 480 VAC and 208 VAC systems. Due to the potential corrosive effects of Solvay waste on metal conduits, all buried electrical systems will be installed in PVC conduit.

5.5.5 DATA AND COMMUNICATIONS

With the significant growth in the use of high speed data on cell phones and the need to support the data needs of the facility (i.e., potential live internet streaming of concert events), it is important that a robust data and communications infrastructure be installed at the facility. To this end, a meeting was held with Verizon Wireless in May 2014 to provide an overview of the proposed project and to discuss options for providing the necessary data/communications infrastructure. Verizon Wireless has significant experience in providing high speed data infrastructure to many similar facilities including CMAC (Finger Lakes facility), Bethel Woods, the Syracuse Carrier Dome and other large campuses and venues. Verizon indicated that for these types of facilities, Verizon would typically furnish and install all of the necessary data/ communications infrastructure including the installation of a fiber optic feed to the facility from the nearest available source. Verizon would install what is called “neutral host” infrastructure equipment which would not only bolster Verizon's network capacity to handle the surge in data needs during a large scale event, but would also allow other wireless carriers (i.e., AT&T, Sprint, T-Mobile, etc.) to connect to that infrastructure to provide a similar enhancement to their networks if needed and/or desired. Verizon indicated that it has mutual infrastructure use agreements with the other carriers and these connections to the infrastructure would not require any involvement of the County. The infrastructure would also be capable of supporting the installation of secured and unsecured Wi-Fi networks at the facility if desired by the County. For the scenario described above, Verizon would pay for the costs of the data/communications infrastructure installation at the facility and would own and maintain that infrastructure as needed. Based on the initial meeting, Verizon is currently reviewing its infrastructure in the area to evaluate the details of providing services to the amphitheater facility. Further discussions related to the specifics of the installation will take place after Verizon completes its initial engineering review. Time Warner cable was also consulted during this phase of the project and it was confirm that Time Warner has a high speed data cable on the northern end of the orange parking lot (at the existing cellular communication tower site).

5.5.6 NATURAL GAS

Natural gas will be required to support the heating and cooling needs of the buildings at the facility. National Grid is the local service provider for natural gas in the area and has distribution lines along the northeastern side of State Fair Blvd. As with the other utilities, the intended routing to the amphitheater will likely involve directionally drilling under I-690. The timing of the gas line installation will be coordinated such that it is installed at the same time as the other utilities. Due to the conceptual nature of the building design, no estimate of gas loads has been performed, however, it is expected that the existing that the National Grid distribution lines will have adequate capacity to support needs of the amphitheater facility.

6.0 TRANSPORTATION AND TRAFFIC IMPACT ASSESSMENT

6.1 EXISTING CONDITIONS

6.1.1 NON-NYS FAIR (BACKGROUND) CONDITIONS

For the purpose of this report, the area surrounding the amphitheater site and New York State Fairgrounds is defined as being served by six roads: State Fair Boulevard (CR 80 and NY 931B), Bridge Street (NY 297), Willis Avenue (CR 85), NYS Route 695 (freeway), and Interstate Route 690 EB and WB (freeway). There are two interchanges: Exit 6, which provides direct access between I-690 EB/WB and NY 695 SB, and Exit 7, which provides access between I-690 EB/WB and Bridge Street/State Fair Boulevard. Pumphouse Road is a dead-end access road that connects the Exit 6 EB off-ramp with State Fair Boulevard. East of Willis Avenue, State Fair Boulevard turns into an on-ramp to I-690 EB. Figures 6-1 and 6-2 illustrate the project area and local transportation network.

The Bridge Street/State Fair Boulevard/Exit 7 ramp intersection is signalized. Another traffic signal is located at a parking lot across from Crucible Steel east of Bridge Street, but is being proposed for decommissioning. All other intersections are stop sign controlled.

The fairgrounds is located along the southwest side of State Fair Boulevard, between Bridge Street and NY 695. Parking for the fair includes three lots on the northeast side of State Fair Boulevard: the Pink and Brown lots, located between State Fair Boulevard and I-690, and the Orange lot, located between I-690 and Onondaga Lake, adjacent to the proposed amphitheater site.

There are four access points to the Orange lot: on the east end; a driveway across from the Exit 7 WB off-ramp, on the west end; a gated drive connecting to a crossover on I-690, and on the south side two gated entrances directly from the shoulder of NY 695. All four access points are defined as “Without Access” by FHWA and are only allowed for use by special permit during the New York State Fair, which occurs every August and September on the twelve days preceding and including Labor Day.

The Brown lot is accessed by two ramps that connect with State Fair Boulevard. Additionally, there is a direct entrance ramp access from the I-690 exit 7 EB off-ramp. This access point, like the four Brown lot entrances, are defined as “Without Access” by FHWA and are only allowed for use during the New York State Fair. An overhead pedestrian footbridge which crosses State Fair Boulevard, the Exit 7 EB off-ramp, and I-690 connects the fairgrounds with the Brown and Orange lots.

To assess traffic impacts during an amphitheater event, background traffic conditions were modeled using manual traffic counts at the five intersections in the study area, and supplemented by NYSDOT machine counts.

6.1.2 NYS FAIR CONDITIONS (SPECIAL NYSDOT TRAFFIC MANAGEMENT PLAN)

During the annual NYS Fair, several temporary changes to the highway network are implemented by NYSDOT in a special traffic management and operations plan. These include temporary pavement markings, temporary signage, overhead signs, variable message signs, temporary signals, speed limit reductions, and State Police manned traffic control which take weeks of coordination to implement. The five parking lot access points described in Section 6.1.1 are opened during Fair operation as integral components for moving traffic in and out of the Orange and Brown lots. On peak days the Fair attendance exceeds 100,000 visitors, often coinciding with major concert events at the Grandstand.

During fair operations, traffic flow in the Orange lot is one-way, from east to west. Vehicles entering the parking lot utilize the driveway across from the Exit 7 WB off-ramp and the two gated entrances directly from the shoulder of NY 695. All traffic exiting the lot utilize the western access road intersecting I-690 which is controlled by a temporary traffic control signal and allows movement to both I-690 EB and WB. Shuttle buses to the main fairgrounds gates utilize the driveway across from the Exit 7 WB off-ramp in both directions. The pedestrian footbridge is heavily used by fairgoers parked in the Orange lot.

It is anticipated that most Fair concerts currently held at the Grandstand will be moved to the Lakeview Amphitheater once the new venue is opened. It is assumed that traffic operations under this scenario would be similar to current Fair operations, and that the existing NYSDOT traffic management plan would still be implemented. For that reason, a study of amphitheater traffic during the Fair was not studied.

6.2 TRAFFIC ANALYSIS OVERVIEW (PROPOSED EVENT TRAFFIC)

6.2.1 KEY DESIGN ASSUMPTIONS

In order to predict traffic flow during an amphitheater event, a model was developed and SYNCHRO computer simulations were run to assess expected level of service, delays, and queue lengths within the highway network. The Traffic Impact Study in Appendix F provides a detailed discussion of assumptions used to create the model.

In summary, the traffic model assumes a “worst case scenario” with a sold-out event (17,500 attendees) occurring coincident with a summertime Friday evening traffic peak and most concertgoers (80%) arriving within one peak hour with an average occupancy rate of 2.5 persons per vehicle. Other modes of transportation, including transit bus and water taxi, were assumed to not contribute. Distribution of arriving vehicles from six highways was assumed to be the same percentages generated by the Fair, as derived from special NYSDOT traffic counts conducted during actual Fair operations. Traffic volumes were extrapolated at a 0.5 % growth rate to account for projected volumes in the 2016 when the facility will first be open for a full concert season. Departure operations were modeled as well, assuming all attendees leaving within one hour of the event conclusion, mixing with low volume background traffic typical for late evening conditions.

It was assumed that all traffic from I-690 WB, Bridge Street, and Willis Avenue would be directed to the Orange lot. All traffic from I-690 EB, NY 695, and State Fair Boulevard would be directed to the Brown lot. All traffic would leave in the opposite direction of their arrival. Shuttle buses would bring attendees parking in the Brown lot to the venue. For a sold-out event, a total of 75 shuttle bus runs were estimated to be needed. This operational scenario prevents the Orange lot from exceeding its capacity, and distributes traffic more efficiently to reduce delays.

6.2.2 TRAFFIC DATA

The Traffic Impact Study in Appendix F provides a detailed discussion of simulation results for both existing and proposed conditions. Traffic volumes were obtained for all roads and intersections in the study area.

Using both existing and projected volumes, 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. The level of service (LOS), delay in seconds, and 95th percentile queues for each lane group of each study intersection were calculated. The results of this analysis indicate that all movements are currently operating at an acceptable LOS. To this background data, projected traffic generated by an amphitheater event was added, and the resultant change in LOS, delays, and queue lengths was determined for each scenario.

6.2.3 TRAFFIC ALTERNATIVES EVALUATED

A primary engineering challenge with the proposed site is its currently restricted access. Because of the adjacent location of Interstate Route 690, FHWA regulates a "without access" boundary line that separates the site from other existing public highways. There is one access point to the site, which is currently utilized by contractors under special permit from FHWA. Also at this entrance, Onondaga County has obtained a permit for access and limited parking for the recently completed West Shore Trail Extension, which provides bicycle and pedestrian access around Onondaga Lake, and will be linked to the amphitheater site. Three other access points to NY 695 and I-690 are only allowed for use during the New York State Fair by FHWA. Linking the site to other public streets like Bridge Street and State Fair Boulevard is hampered by the physical barrier of the I-690 lanes and connector ramp to NY 695.

Routing all concert traffic to the Orange lot which abuts the amphitheater site by way of a single entrance is feasible for small events (up to 500 people), but larger events and sold-out attractions generate too much traffic for this scenario. For that reason, splitting incoming traffic and using directional routing to both the Orange and Brown lots is proposed (see Figure 6-2). Several options were investigated, starting with use of the existing roadway network, then supplemented by mitigation measures. An alternative using all temporary access points similar to Fair operations was modeled, but eliminated from further consideration based on FHWA feedback that such an option would not be acceptable for use beyond NYS Fair events. Ultimately, any alternative that provides access to the amphitheater site will require a separate break-in-access study to be reviewed and approved by NYSDOT and FHWA.

6.2.4 TRAFFIC ANALYSIS CONCLUSIONS

The traffic analysis for the future build condition was performed for both small events and large events, including modeling both arrival and departure traffic under both existing and mitigated conditions.

For a small event, queues 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. There is an increase to the average intersection delay of approximately 15 seconds. Levels of service 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 decrease, with 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. There are no proposed mitigation measures for the departure time period associated with a small event.

As the models were created and evaluated for a sold-out event arrivals using existing traffic control, it became evident that mitigation would be required to eliminate significant traffic congestion throughout the study area. Traffic can be expected to queue 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.

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, there will still be significant queues 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. The mitigation measures will not improve the queues 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.

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. Mitigation measures were considered to improve operations during departure.

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

6.3 TRANSPORTATION INFRASTRUCTURE IMPROVEMENTS

6.3.1 SHORT TERM IMPROVEMENTS

The proposed mitigation alternative includes modifications to the existing highway network to improve operations and traffic flow during sold-out events, and to keep delays to acceptable levels typically expected for a similarly sized attraction. Most improvements focus on areas in proximity to the main entry road opposite the I-690 WB off-ramp at Exit 7. These include elongating and widening the off-ramp to two lanes with improved deceleration and storage distance, widening to three lanes at the intersection with local streets, reconstructing the main entry road to lower the grade for easier shuttle bus operation and improved two-way traffic flow, and adding an auxiliary lane at the State Fair Boulevard wye to increase capacity of exiting traffic (see Figure 6-3). The ramp widening would require modification of an overhead sign truss. Additional traffic signs and guide signs for amphitheater traffic are recommended. Installation of an electronic DMS on northbound NY 695 approaching the fairgrounds is also recommended.

6.3.2 LONG TERM IMPROVEMENTS

This report focuses on short term improvements deemed necessary to mitigate anticipated traffic volumes that result from operation of the proposed amphitheater during peak usage. The current configuration of interstate access consists two overlapping interchanges with nine ramps spread over a distance of 2.3 miles, with three ramps having nonstandard access control. In discussions with FHWA and NYSDOT, it is apparent that further long term improvements that provide a permanent solution to event traffic and Orange lot access for the New York State Fair will be required. FHWA has commented that the temporary signal and direct access driveways from I-690 and NY 695 connector will not be allowed in the near future.

In order to test the feasibility of proposed short term improvements to ensure they fit in with an overall concept for a long term solution, potential concept level layouts that modify the existing interchange layout have been developed. One possible long term solution, which consists of constructing new I-690 WB on- and off-ramps in the vicinity of the existing crossover and temporary signal, is illustrated on Figure 6-4. Further development of long-term design solutions for the Interchange 6 and 7 ramps is beyond the scope of this report and the evaluation of this long term solution is being discussed between the FHWA, NYSDOT and Onondaga County.

6.4 EVENT OPERATIONAL CONSIDERATIONS

6.4.1 MANNED TRAFFIC CONTROL

During large scale amphitheater events, a traffic operations plan should be implemented that utilizes police personnel to direct traffic at intersections and parking lot entrances. It is not practical to assume automated intersection control can handle large traffic volumes expected during sold-out events. Police traffic control is customary at similar venues and should be employed at this facility in a similar fashion.

6.4.2 SUPPLEMENTAL SIGNAGE

Additional roadside signs are recommended for installation that will provide information to drivers during concert events. These would be permanently installed sign assemblies, hinged with flip-down panels that appear blank during most times when event traffic is not a concern. Current signing along I-690 directs motorists to the fairgrounds, and would need to be modified or supplemented to indicate access to the amphitheater site. The I-690 EB off-ramp to Pumphouse Road would require a flip-down sign directing motorists to form two lanes on the ramp and local street during special events, a message that would be reinforced by the preceding DMS described in Section 6.4.5.

6.4.3 EMERGENCY VEHICLE ACCESS

During amphitheater events, all Orange lot traffic would enter and exit using the driveway across from the Exit 7 WB off-ramp. The western access road intersecting I-690 which is controlled by a temporary traffic control signal during the Fair and allows movement to both I-690 EB and WB would be manned by security and would be available for use only by emergency vehicles. The temporary signal would not be included in this scenario.

6.4.4 SHUTTLE BUSES

It is assumed that few people who park in the Brown lot will utilize the existing pedestrian footbridge and walk to the amphitheater, which can be as long as 1.5 miles in distance. It is assumed that shuttle buses will be used, similar to Syracuse University events at the Carrier Dome that utilize Centro transit buses to remote parking facilities. It is estimated that a fleet of 25 buses would be required to accommodate sold-out events. Buses would run on a loop from the Brown lot onto State Fair Boulevard to the driveway across from the Exit 7 WB off-ramp, then up through the Orange lot to the amphitheater gate. To expedite headways, the buses would run on a dedicated route, utilizing the shoulder of State Fair Boulevard to avoid traffic entering and exiting the lots.

6.4.5 ITS OPERATIONS

During major amphitheater events, the use of Intelligent Transportation Systems (ITS) would be utilized to improve communication and mitigate traffic flow in real time. This technology employs video cameras, dynamic message signs (DMS) and cell phone connectivity that allow personnel to monitor traffic situations in real time and transmit operational changes to the field.

Existing video cameras at the Exit 6 and 7 interchanges relay images to the NYSDOT Traffic Management Center (TMC) at the State Office building in Syracuse. There are two existing DMS installations, one along I-690 WB near the Geddes Street exit east of the fairgrounds, and one along I-690 EB just west of the fairgrounds, which can be programmed with messages to instruct drivers. A third DMS, to be installed along NY 695 south of the fairgrounds, is recommended. TMC personnel monitoring traffic in the areas during an event using the existing ITS cameras, can immediately change DMS messages as needed to direct traffic or warn through vehicles of potential slowdowns, and communicate with police on the street controlling traffic to help ensure traffic is flowing as efficiently and safely as possible. The DMS would warn through traffic to be aware of event traffic and direct event traffic to their designated exit, lane, and parking area.

7.0 SUSTAINABLE INFRASTRUCTURE DEVELOPMENT

7.1 LEED CERTIFICATION

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Based on the current project schedule, it is expected that the project will be registered under LEED 2009 criteria.

As detailed in Appendix G, the design team completed a LEED checklist in which various strategies are gauged to be possible (‘Yes’), unknown to be possible (‘?’), or most likely not possible (‘No’).

Based on the result of evaluating each prerequisite and credit, a possible score of 66 was determined. This score corresponds to the mid-range of Gold Certification. As the design progresses, the LEED checklist will continue to be updated, and credits for Innovation in Design will be sought where possible.

7.2 OTHER SUSTAINABLE DESIGN INITIATIVES

Since one of the catalysts for this project has been the County’s ongoing efforts to clean up Onondaga Lake, it makes perfect sense that a high profile element of this project would be integration of what is perhaps the County’s most notable program in the realm of sustainability, the “Save the Rain” program. The "Save the Rain" program is a comprehensive storm water management plan intended to reduce pollution to Onondaga Lake and its tributaries. During wet weather events, storm water flows into the local sewer system, causing heavy flow periods that can overload the system. The County has employed the program to develop green infrastructure solutions to capture and treat storm water naturally where it lands. The technologies that have been employed include:

- Porous pavements
- Bio-retention and rain gardens
- Green roofs
- Rainwater harvesting

There are many opportunities to integrate these elements into the project moving forward, given the variety of facilities and improvements that will be part of this project. There will be pavements, building roofs, landscape areas and facilities such as bathrooms which need water. Each of these technologies should be evaluated in the final design for this project and utilized to the maximum extent feasible throughout the project site.

Another opportunity for a sustainable element to be integrated into the project is to explore the possibility of using the products of the County's innovative composting facility to improve and amend the poor (or non-existent) soils of this former waste site. This landscape could be a showcase of the benefits of OCRRA produced compost, and would provide much needed organic matter to the existing substrate which will be critical for the healthy growth of vegetation.

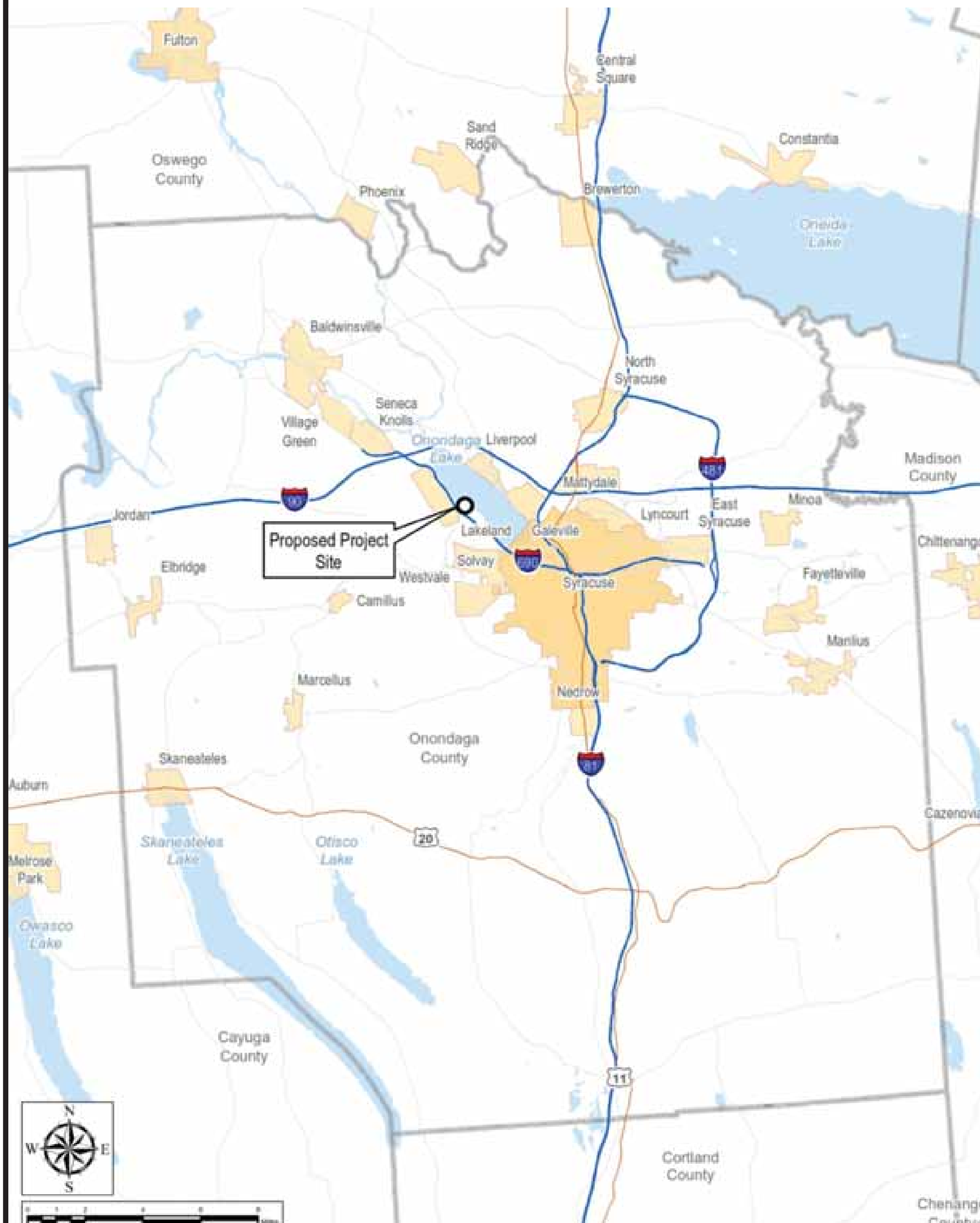
Also, as the resurgence of the bald eagle population on the south shore of the lake has shown, the project site has the potential to provide significant additional wildlife habitat along the lake shoreline, particularly for birds. With this in mind, the buildings at the Amphitheater grounds will incorporate bird-friendly design where possible. The glass incorporated in the building will be designed to reduce reflectivity and transparency. In addition, tint and pattern can be used to avoid strikes, which will reduce bird mortality while adding to the building aesthetic. Lighting will be evaluated both in type and time of operation, to reduce attracting birds to the building.

8.0 PROJECT SCHEDULE AND IMPLEMENTATION PLAN

The County has expressed a desire to have an event at the amphitheater facility on Labor Day weekend of 2015. Given the size and complexity of the proposed facility, unique environmental and geotechnical conditions at the site, and the necessary coordination that must take place with Honeywell's ongoing construction operations, this is a very ambitious completion date for this facility. In an effort to implement the project in this accelerated timeline, the project was given approval by the State of New York to implement the project through a "Best Value" Design-Build Procurement method. A related issue affecting the schedule is the need to complete the SEQRA process for the project before any construction commences.

At this time, there are many variables that could impact the targeted completion date, particularly any delays in the SEQRA/Environmental review process as this is the controlling item to allow construction to start on the site. As the project progresses, the design team will have work in conjunction with the County to refine the project schedule based on developments with the environmental review process and other project developments that adequately balances the target completion date with issues such as construction costs, risk, quality of construction and other factors.

FIGURES



ONONDAGA COUNTY SEAL

ONONDAGA COUNTY LAKEVIEW AMPHITHEATER

CONCEPTUAL DESIGN REPORT

JUNE, 2014

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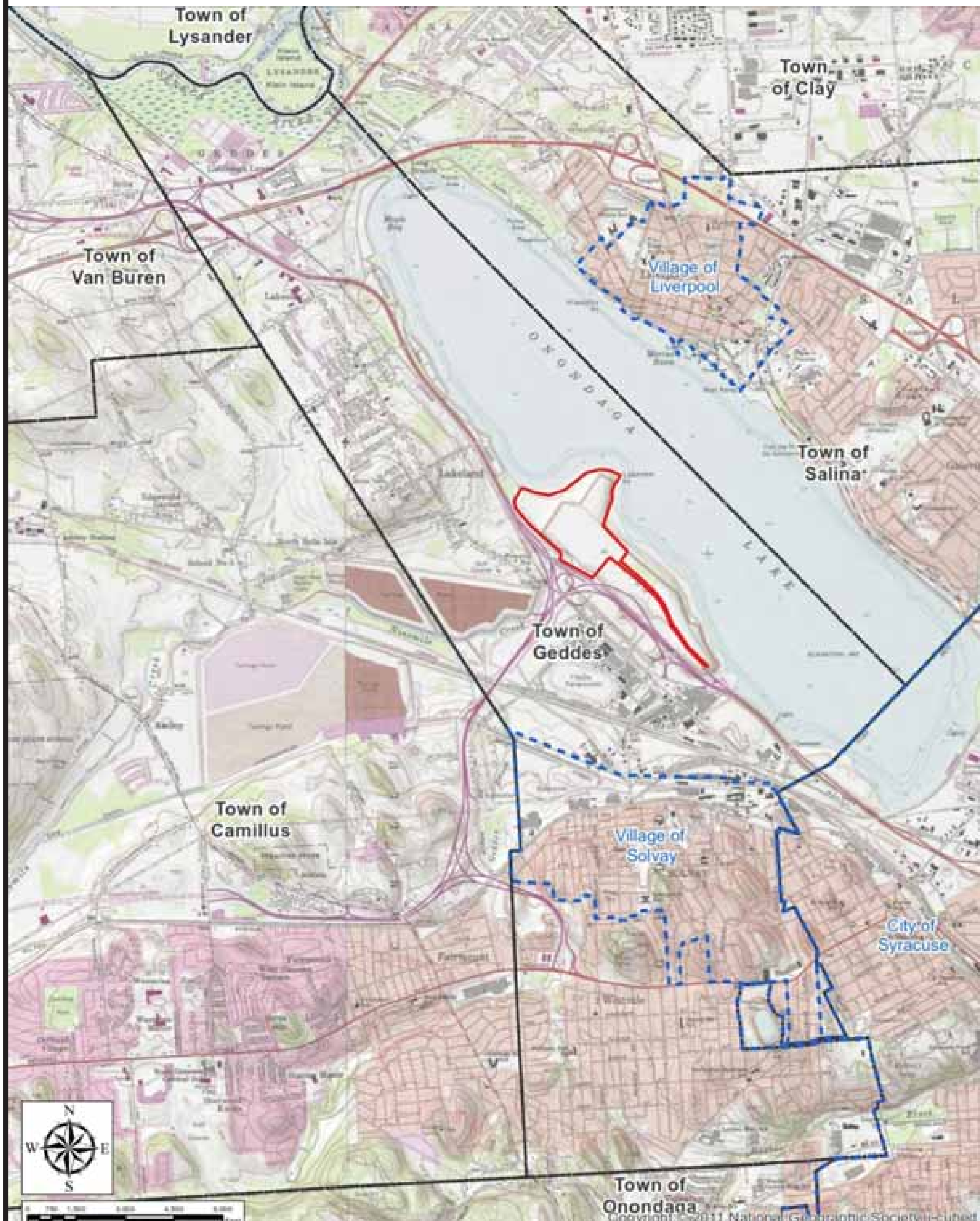
REGIONAL PROJECT LOCATION

FIGURE 1-1



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PROJECT
LOCATION

FIGURE 1-2

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WASTEBED
LOCATIONS

FIGURE 1-3

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SITE AERIAL
PHOTO LOOKING
NORTH

FIGURE 1-4

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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SITE AERIAL
PHOTO LOOKING
SOUTH

FIGURE 1-5

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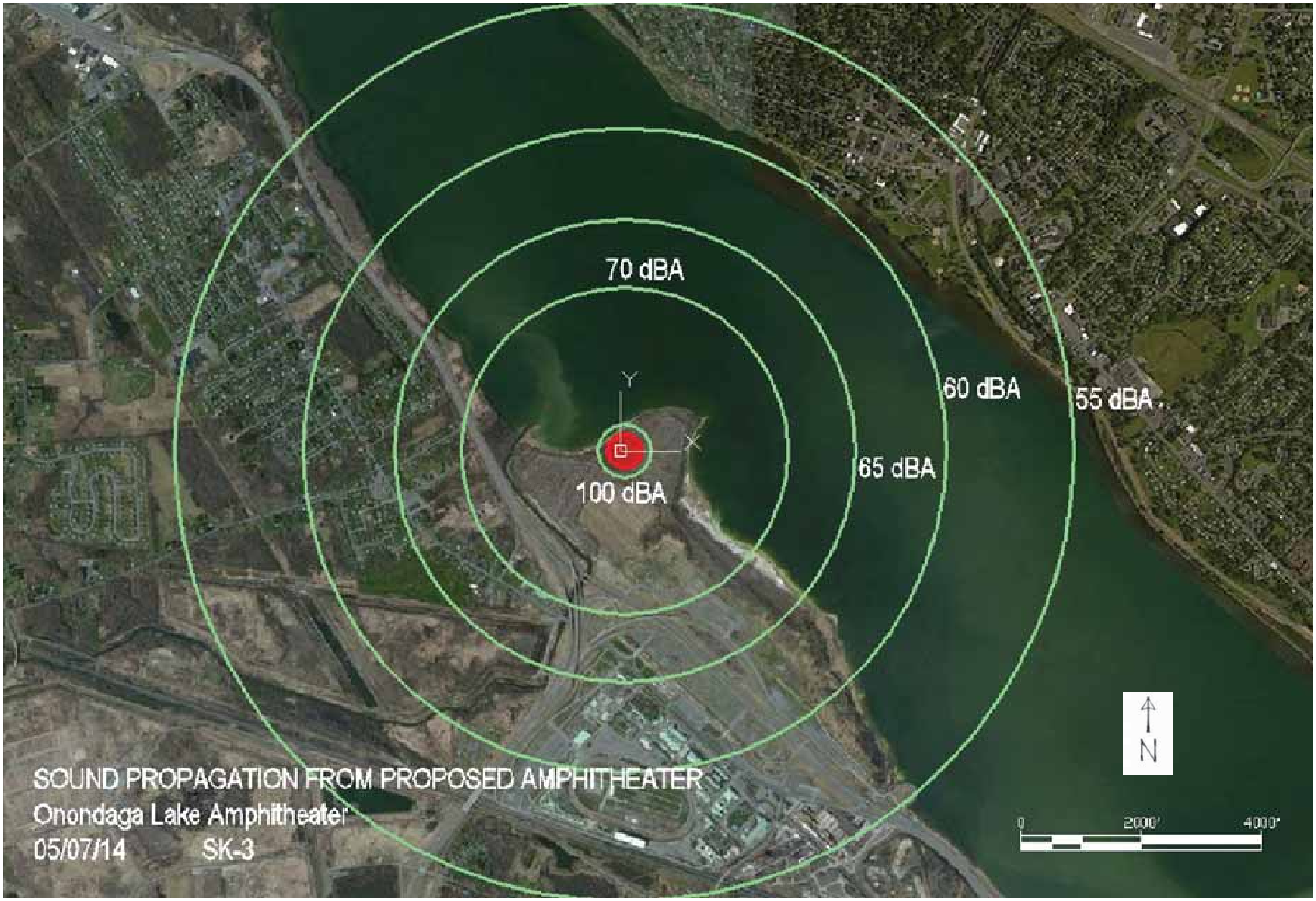
HONEYWELL WASTEBEDS 1-8 INTERIM REMEDIAL MEASURES

FIGURE 1-6



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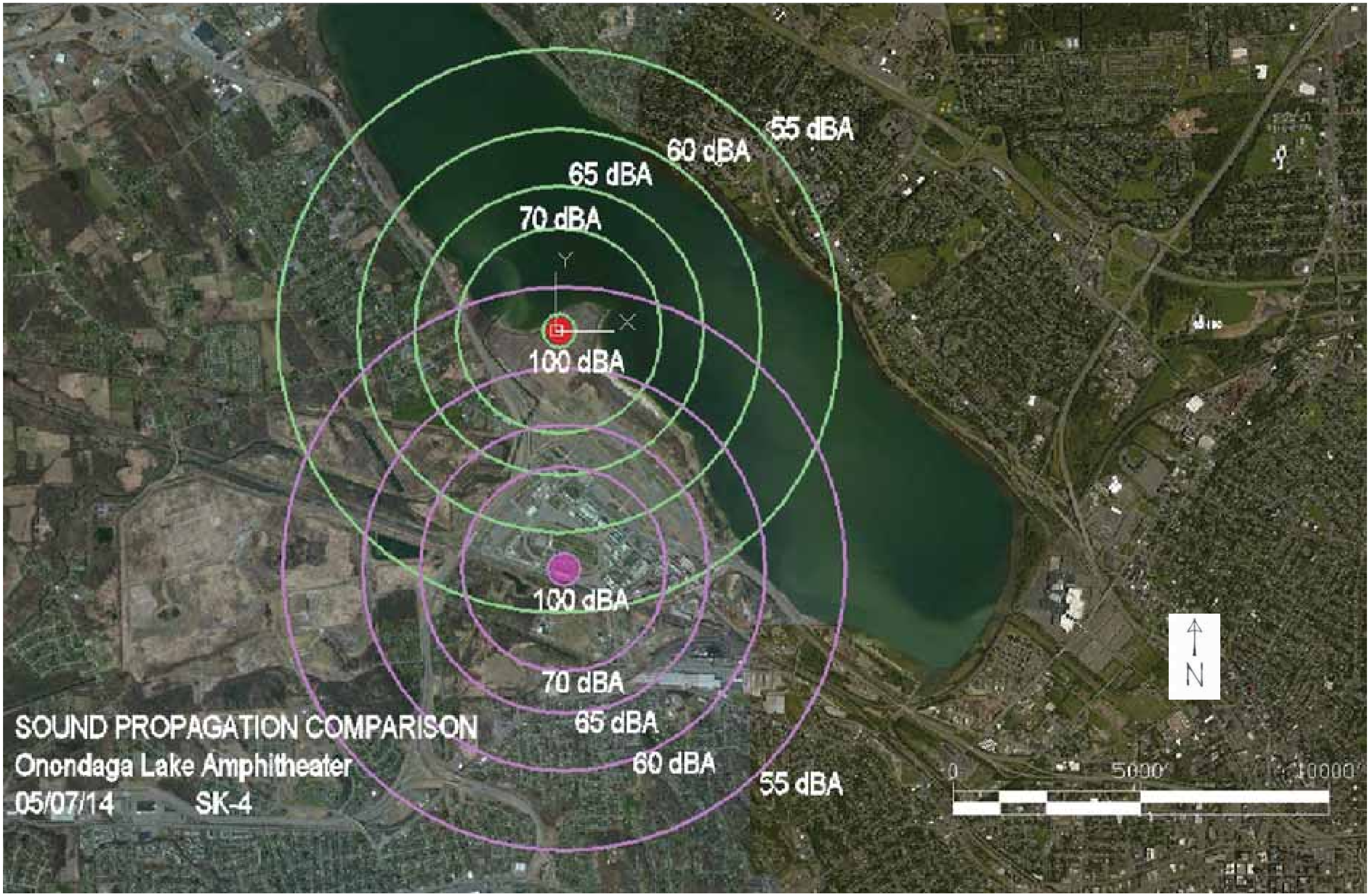
SOUND
PROPAGATION

FIGURE 2-1



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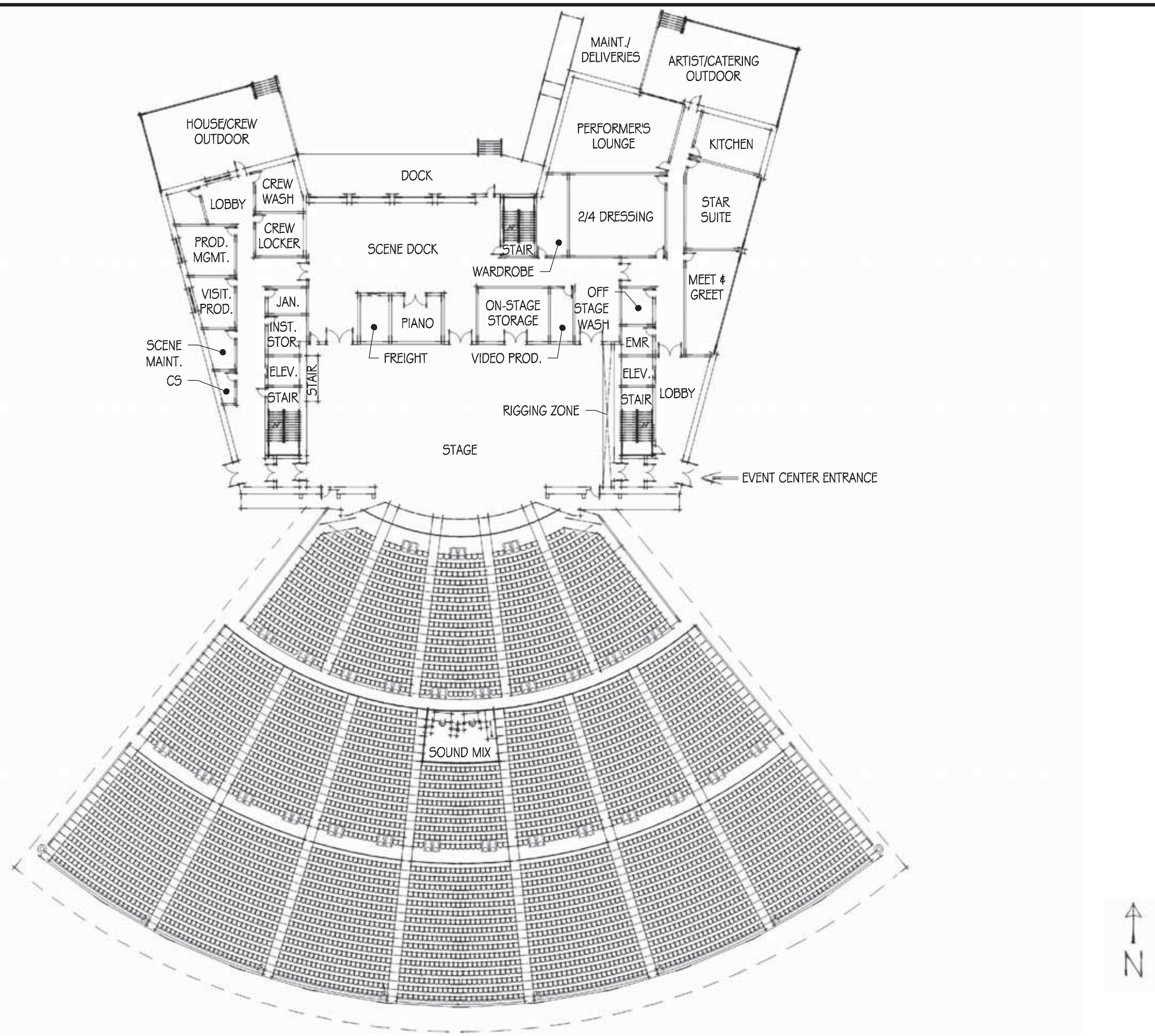
SOUND
PROPAGATION
COMPARISON

FIGURE 2-2



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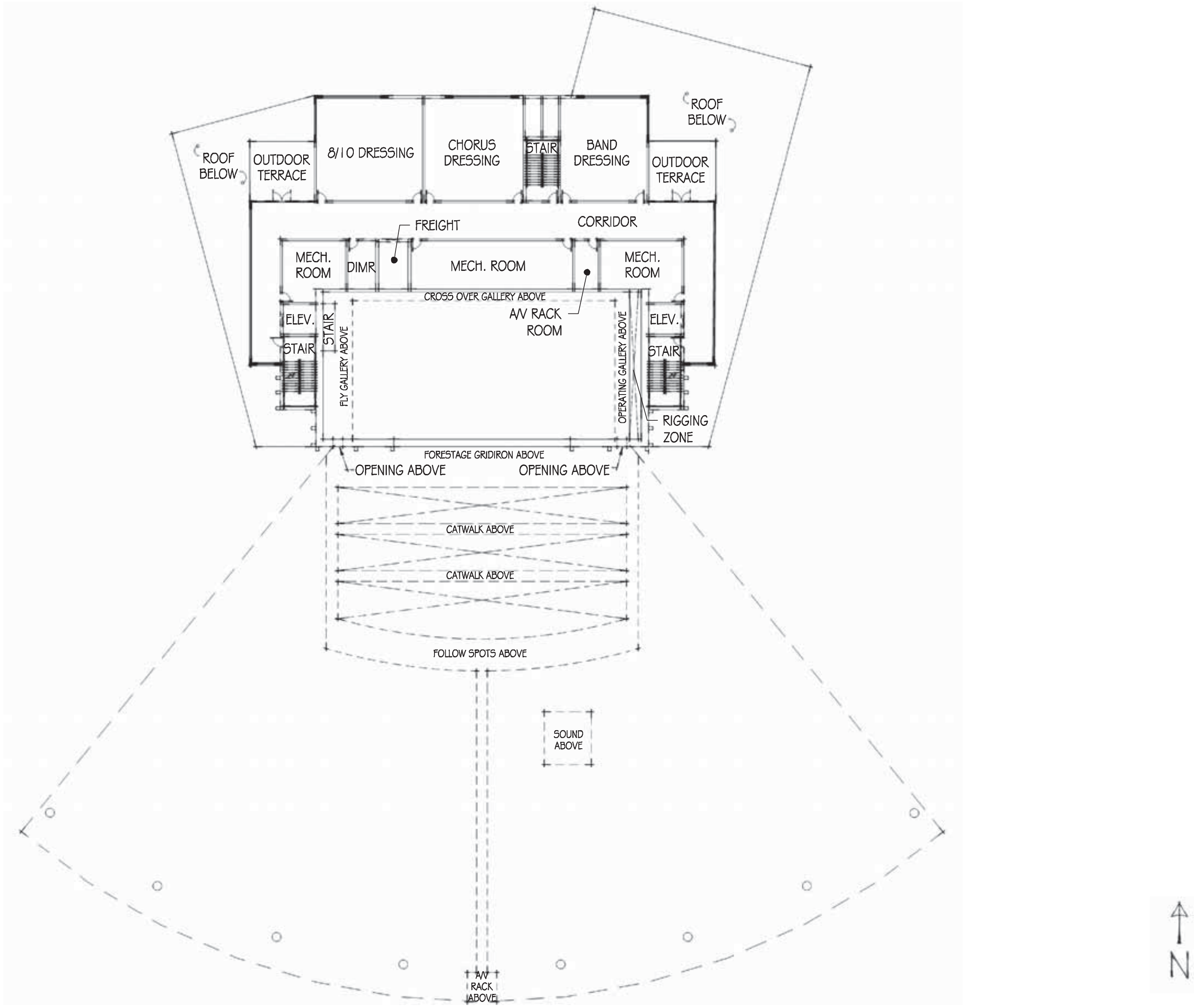
AMPHITHEATER
FIRST FLOOR
PLAN

FIGURE 2-3



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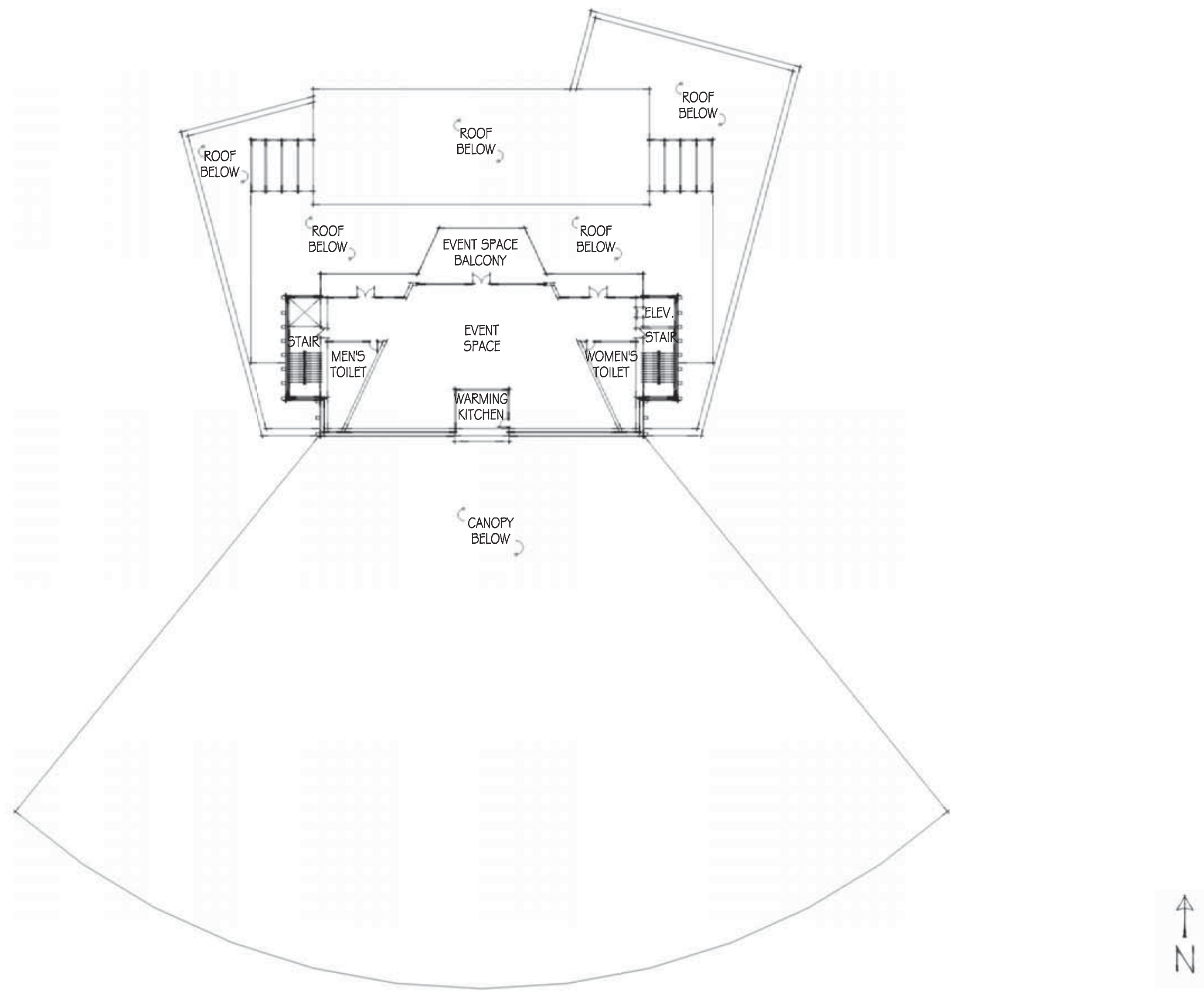
AMPHITHEATER
SECOND
FLOOR PLAN

FIGURE 2-4



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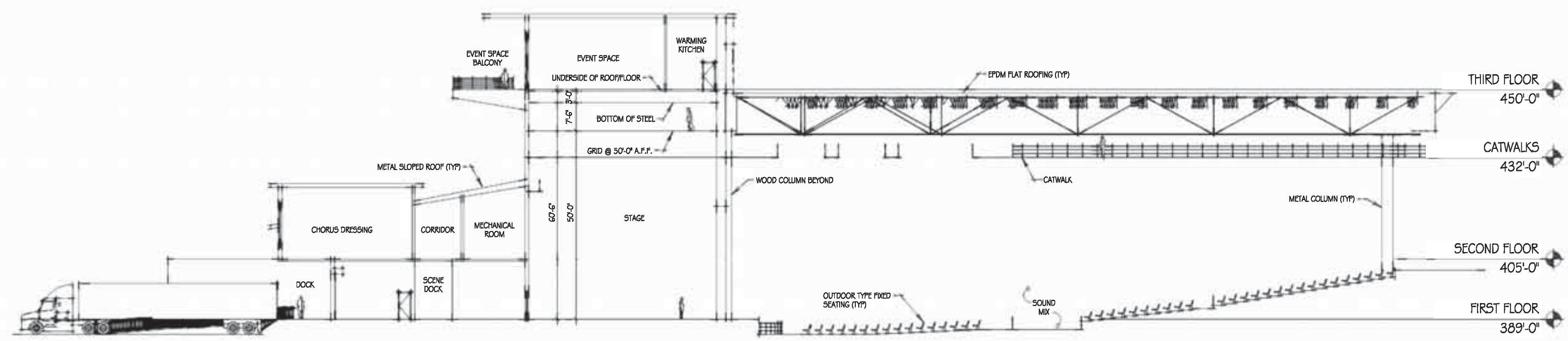
AMPHITHEATER
THIRD
FLOOR PLAN

FIGURE 2-5



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AMPHITHEATER

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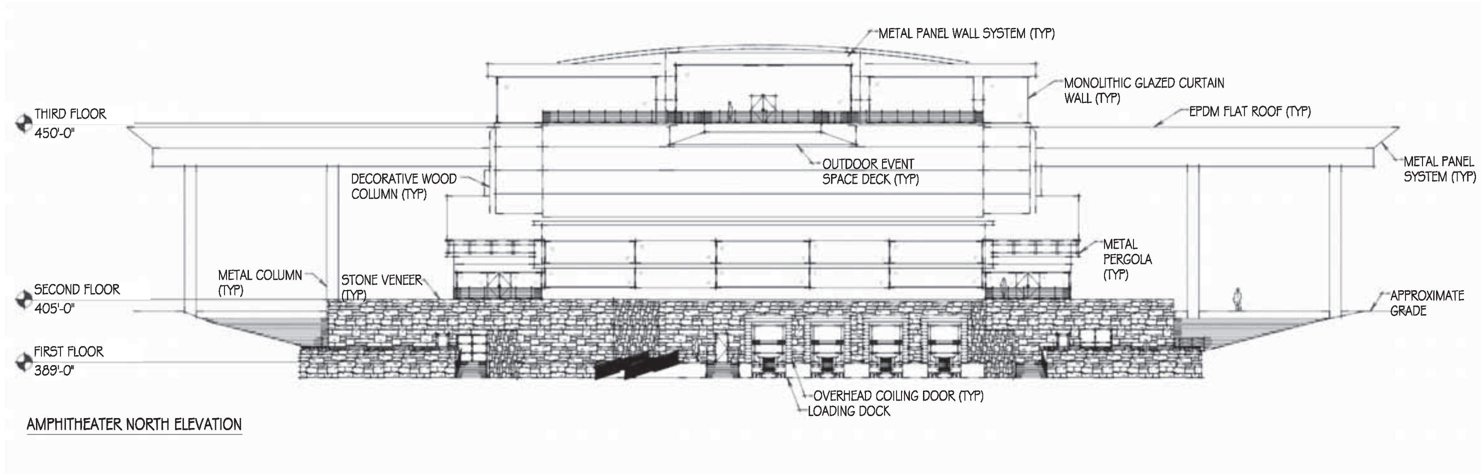
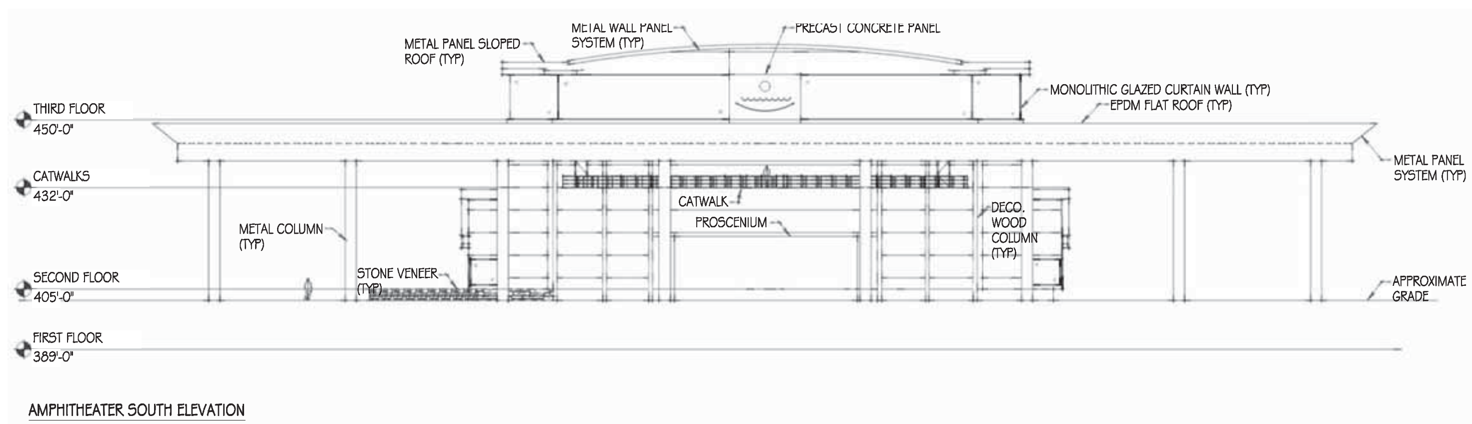
AMPHITHEATER
BUILDING
SECTION

FIGURE 2-6





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AMPHITHEATER

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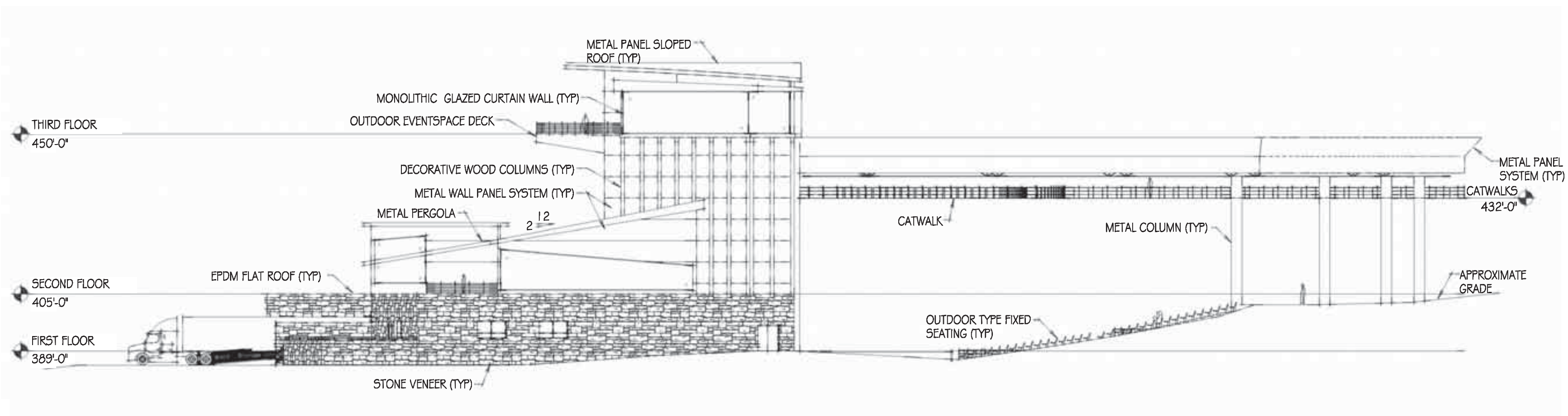
AMPHITHEATER
BUILDING
ELEVATIONS

FIGURE 2-7



AMPHITHEATER WEST ELEVATION (EAST ELEVATION SIM.)

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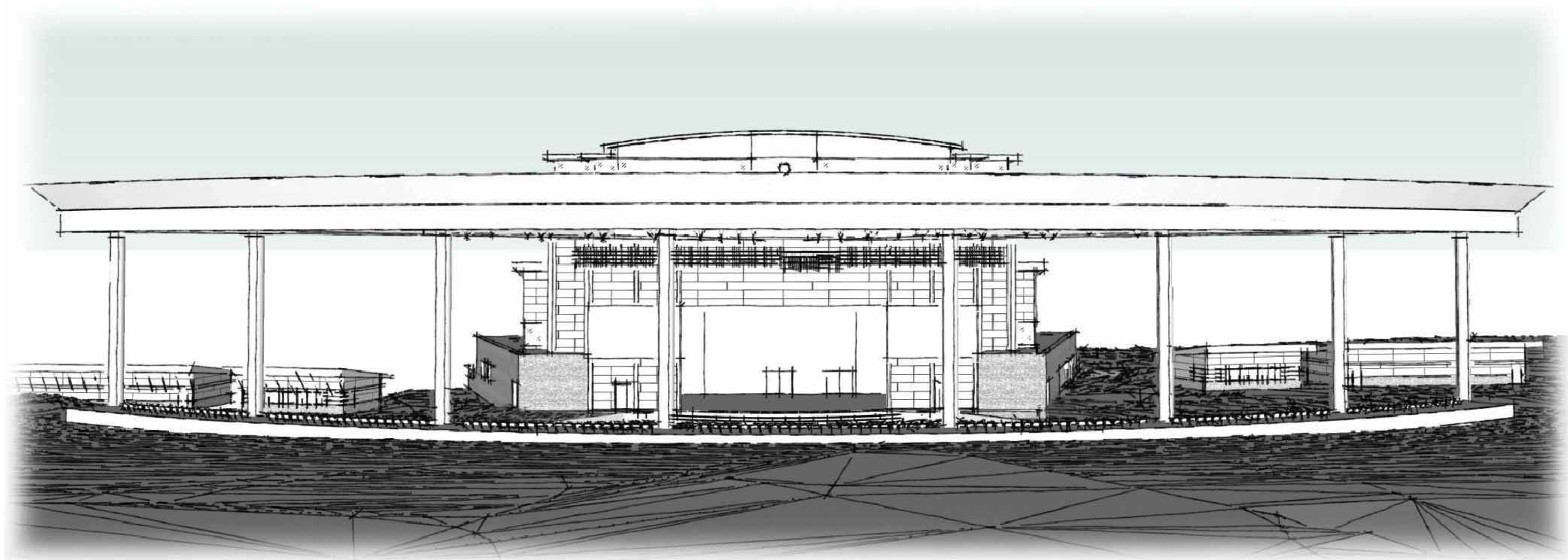
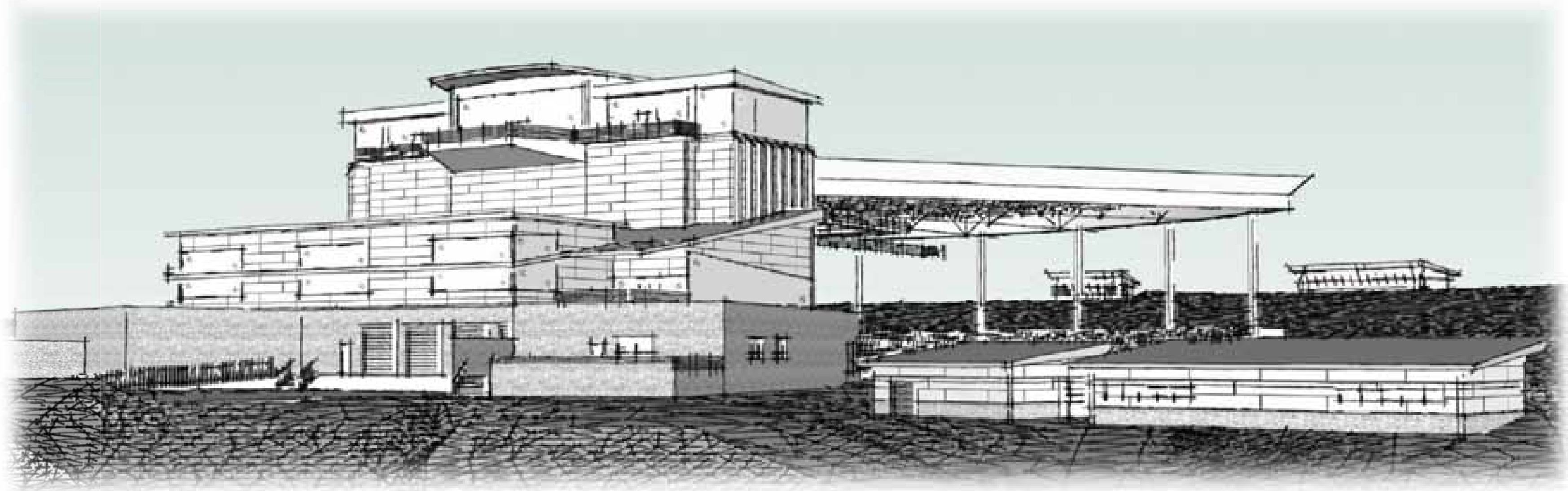
AMPHITHEATER
BUILDING
ELEVATIONS

FIGURE 2-8





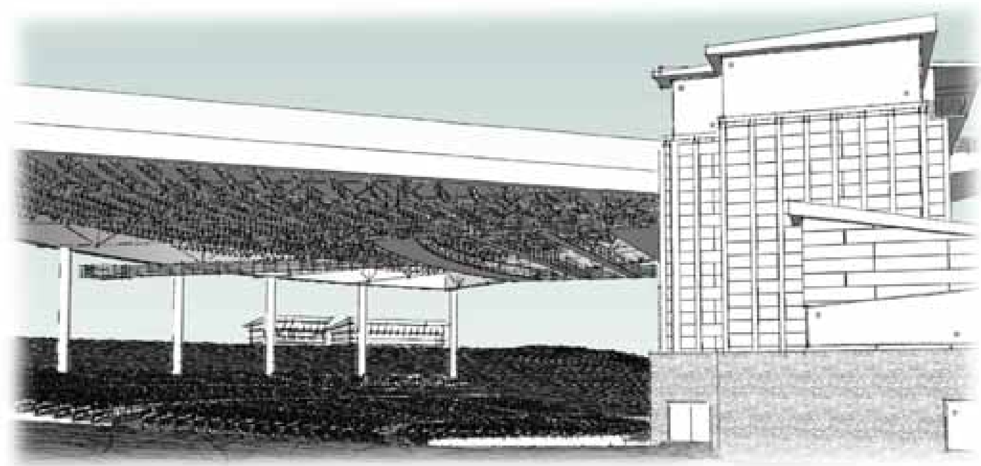
ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

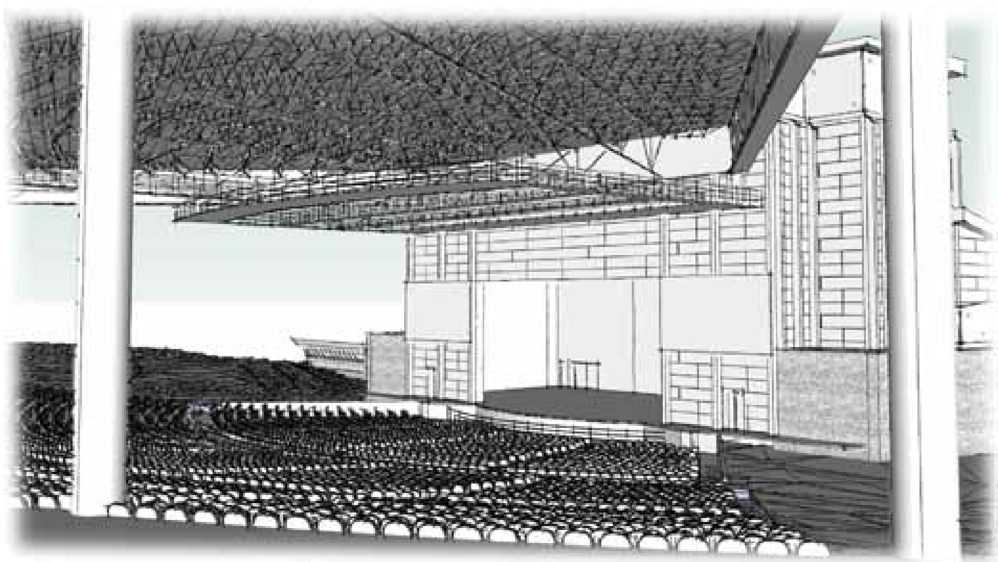
CONCEPTUAL
DESIGN REPORT

JUNE, 2014

AMPHITHEATER
ISOMETRIC
VIEWS

FIGURE 2-9





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LAKEVIEW
AMPHITHEATER

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DESIGN REPORT

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AMPHITHEATER
ISOMETRIC
VIEWS

FIGURE 2-10

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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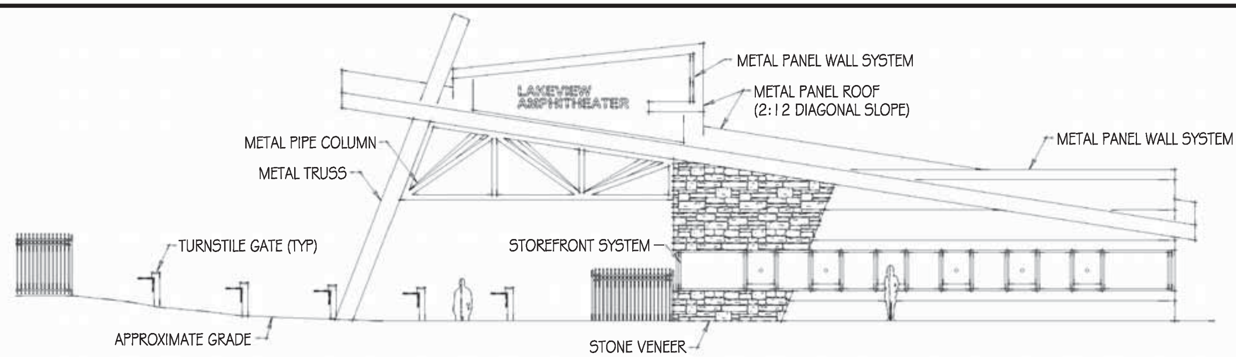
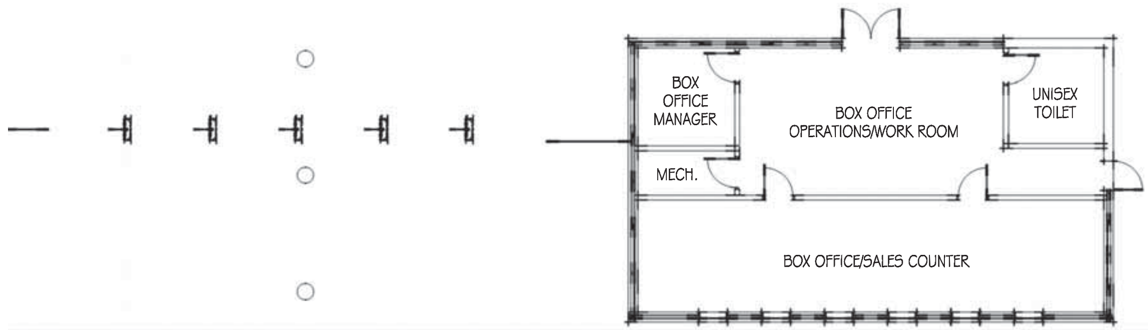
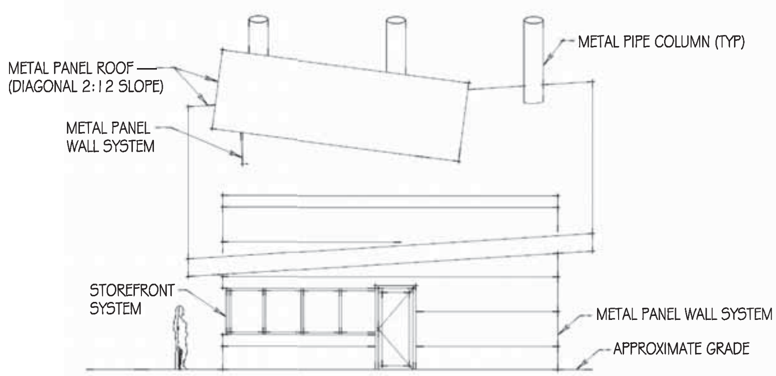
AMPHITHEATER
BUILDING
RENDERING

FIGURE 2-11

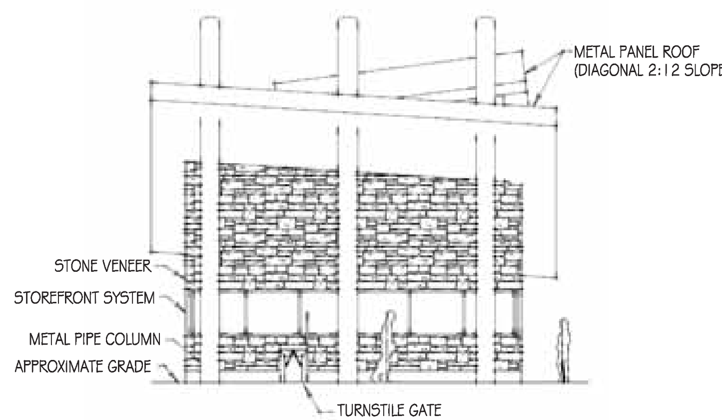


BOX OFFICE SOUTH ELEVATION (NORTH ELEVATION SIM.)





BOX OFFICE EAST ELEVATION



BOX OFFICE WEST ELEVATION

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LAKEVIEW
AMPHITHEATER

CONCEPTUAL
DESIGN REPORT

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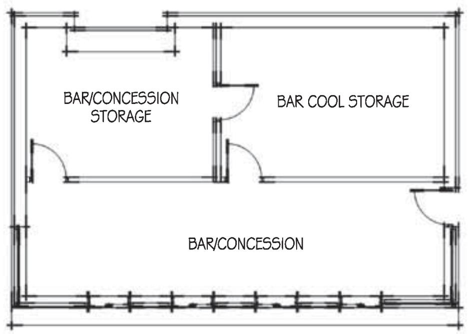
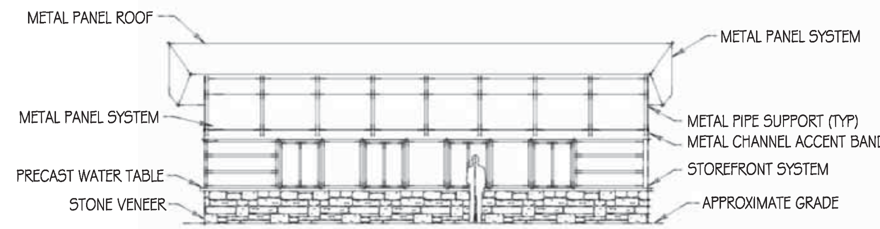
BOX OFFICE
FLOOR PLAN
AND
ELEVATIONS

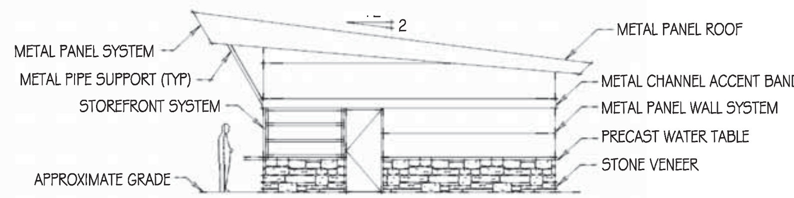
FIGURE 2-12



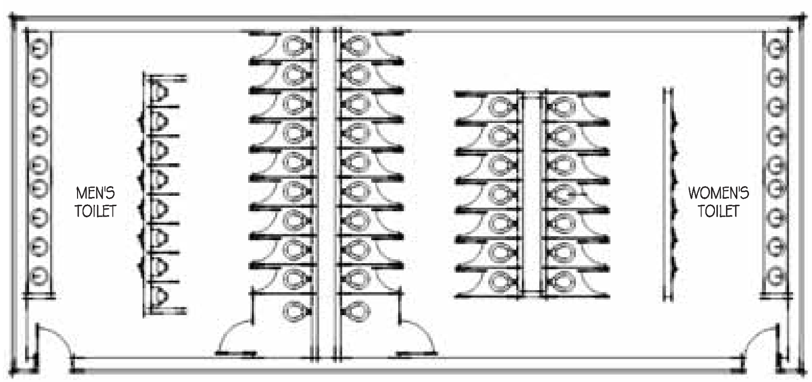
CONCESSION FLOOR PLAN (TYPICAL OF 5)



CONCESSION FRONT ELEVATION (RESTROOM FINISHES SIM.)



CONCESSION SIDE ELEVATION (RESTROOM FINISHES SIM.)



RESTROOM FLOOR PLAN (TYPICAL OF 5)

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LAKEVIEW
AMPHITHEATER

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CONCESSION AND
RESTROOM
BUILDING PLANS
ELEVATIONS

FIGURE 2-13

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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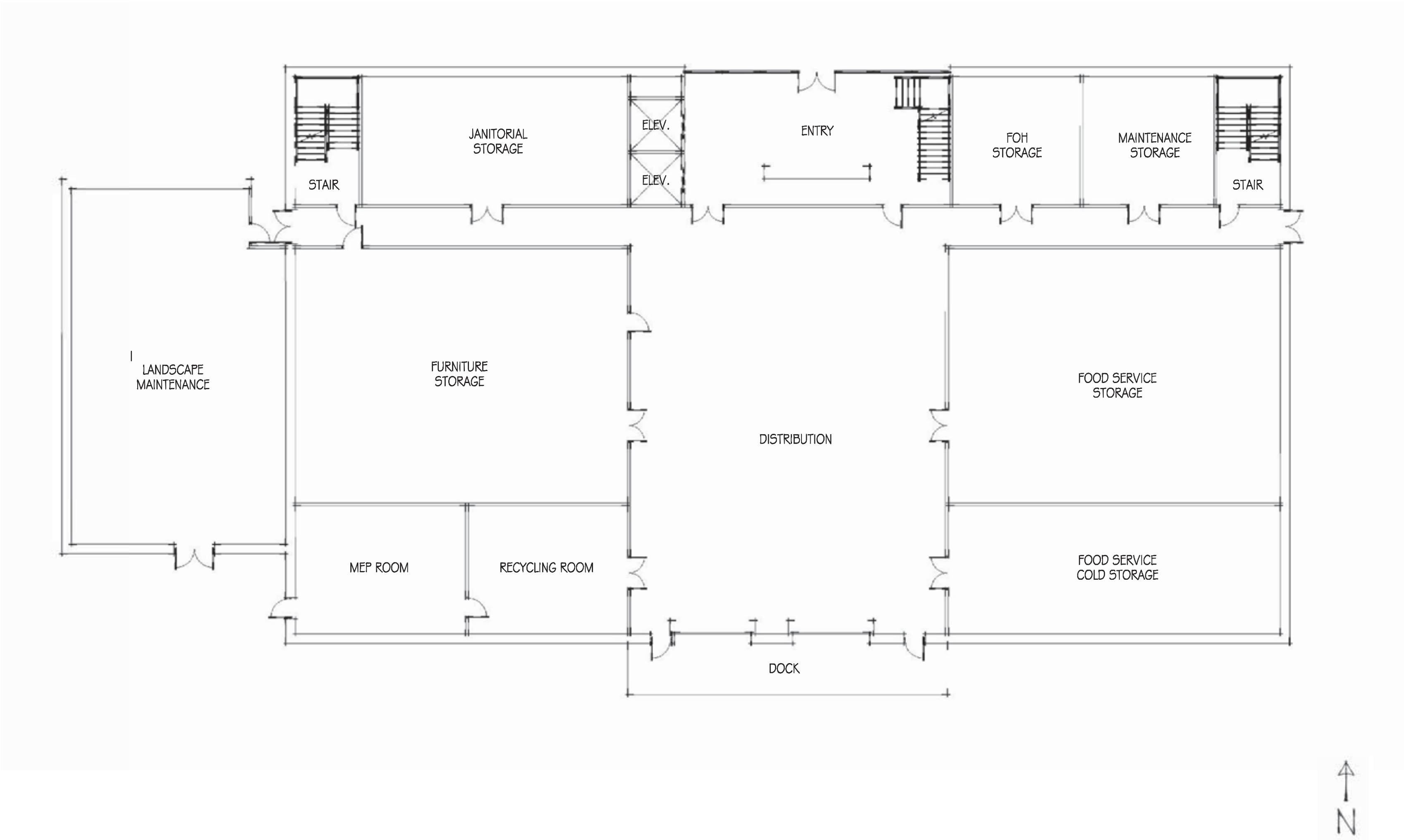
BOX OFFICE
BUILDING
RENDERING

FIGURE 2-14



ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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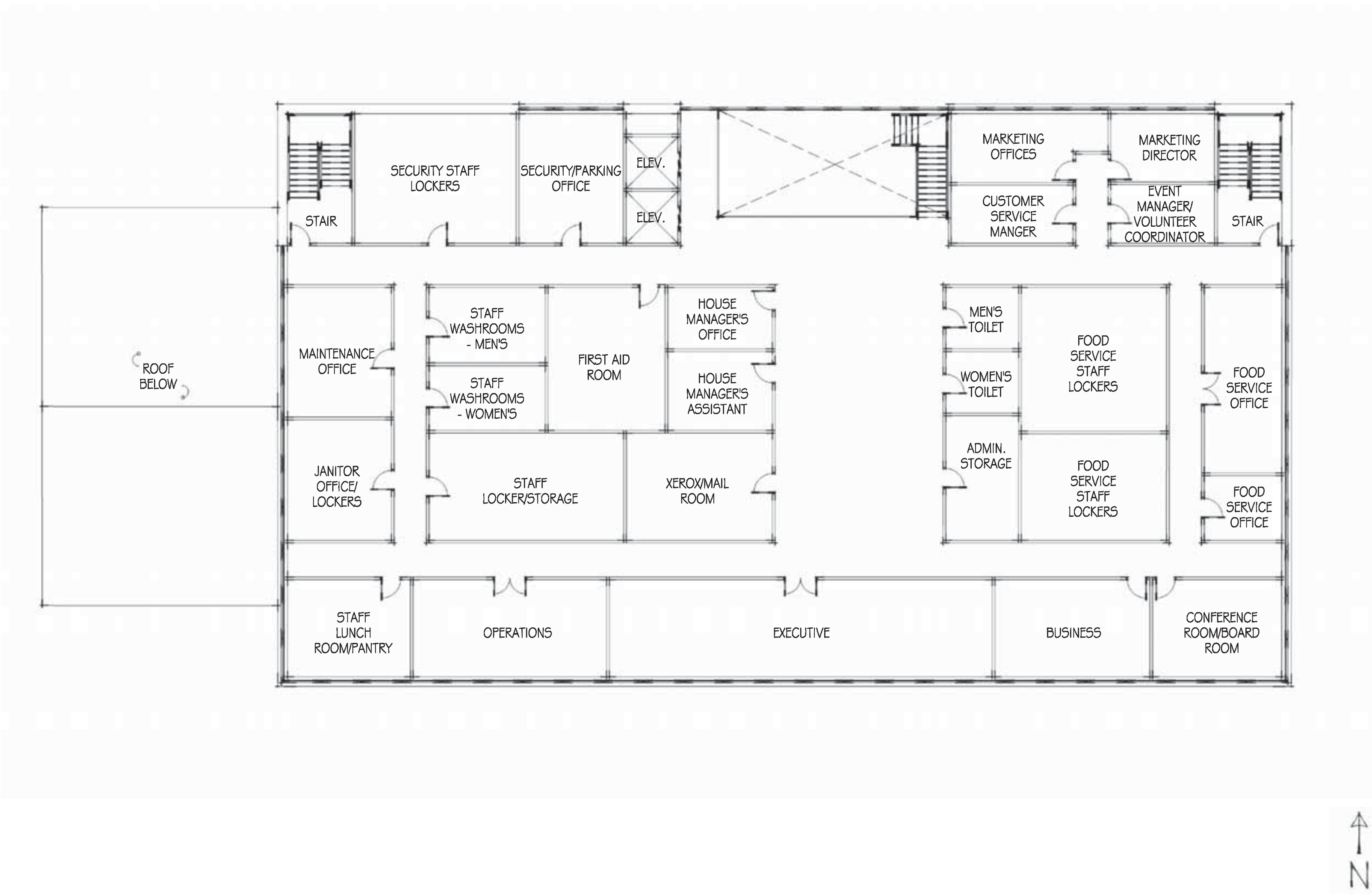
GENERAL SERVICES BUILDING FIRST FLOOR PLAN

FIGURE 2-15



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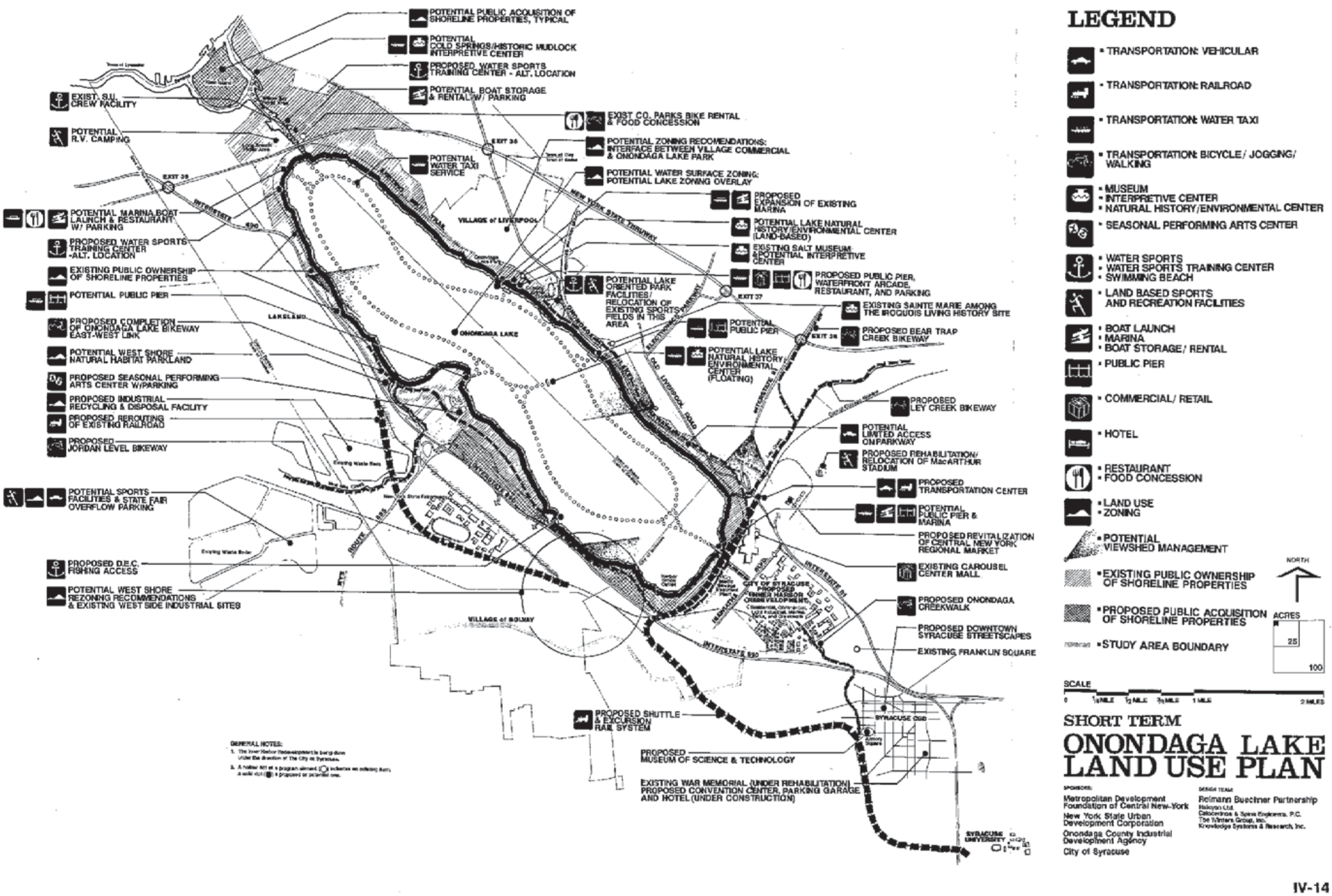
GENERAL
SERVICES
BUILDING SECOND
FLOOR PLAN

FIGURE 2-16



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AMPHITHEATER

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1991 ONONDAGA LAKE LAND USE PLAN

FIGURE 3-1

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

CONCEPTUAL
ENGINEERING STUDY

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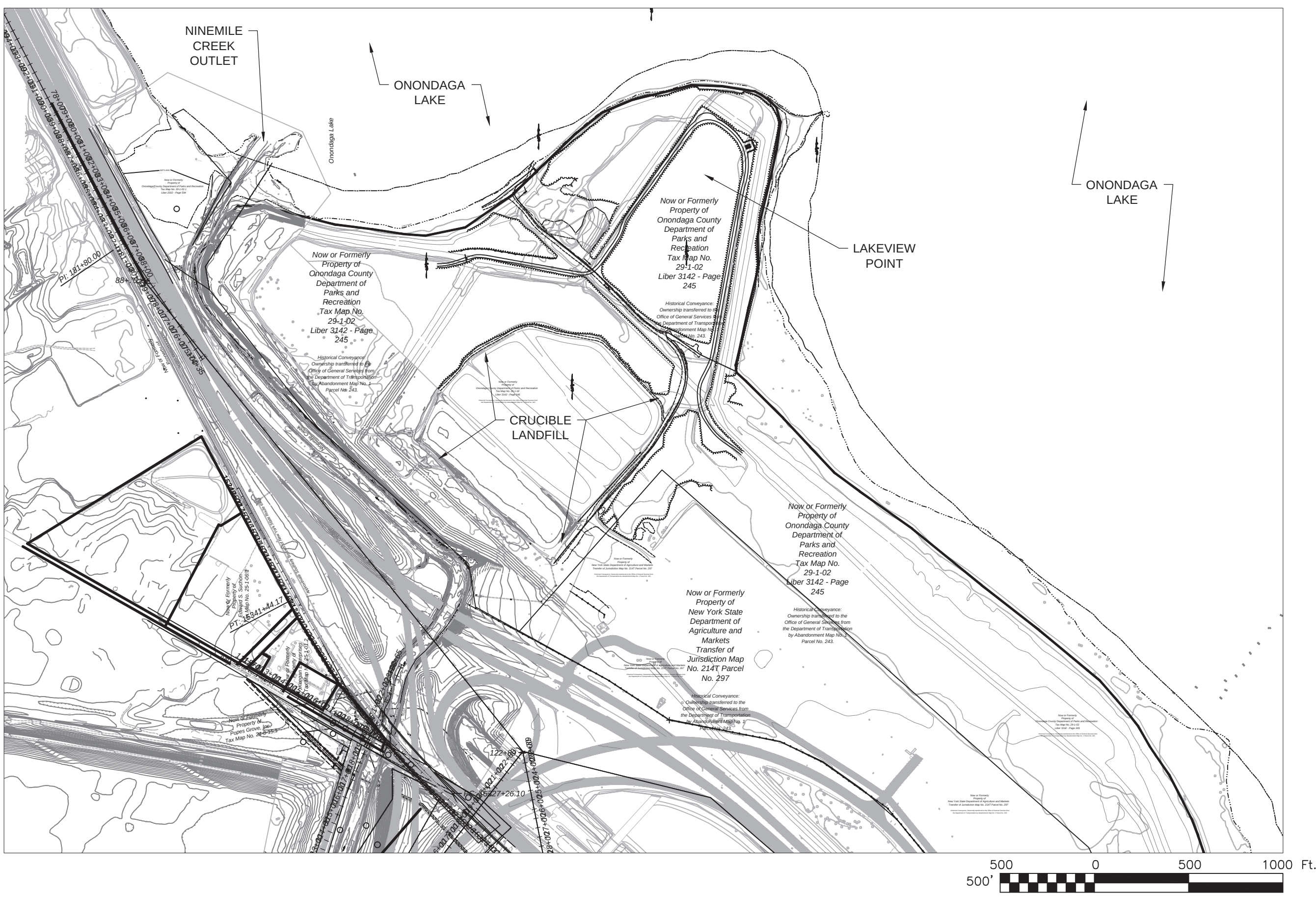

NORTH

EXISTING
CONDITIONS
PLAN

FIGURE 3-2

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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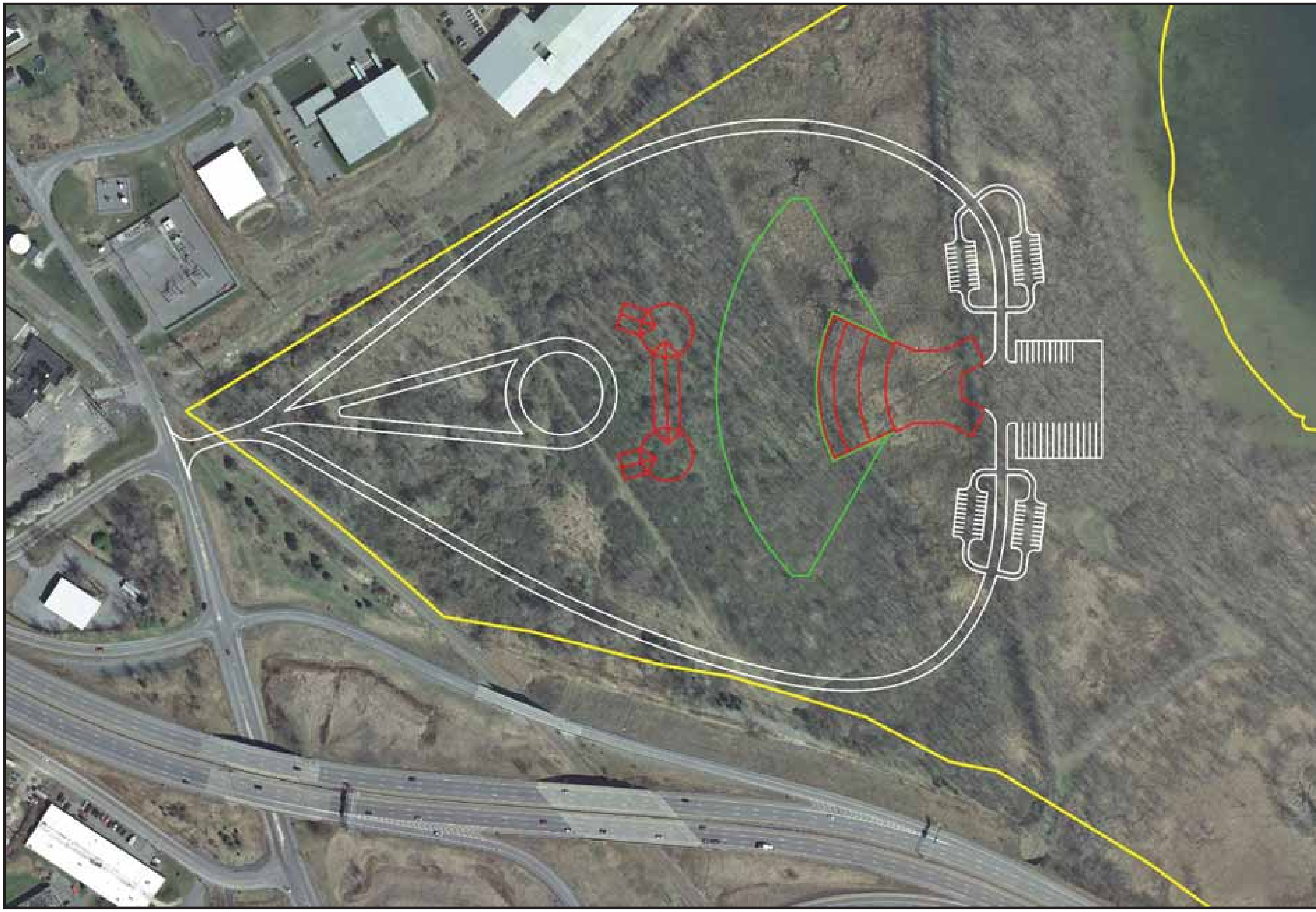
ALTERNATE
SITING

FIGURE 3-3



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AMPHITHEATER

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MAPLE BAY
SITE LAYOUT

FIGURE 3-4

ONONDAGA COUNTY SEAL

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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"COVE"
CONCEPT

FIGURE 3-5

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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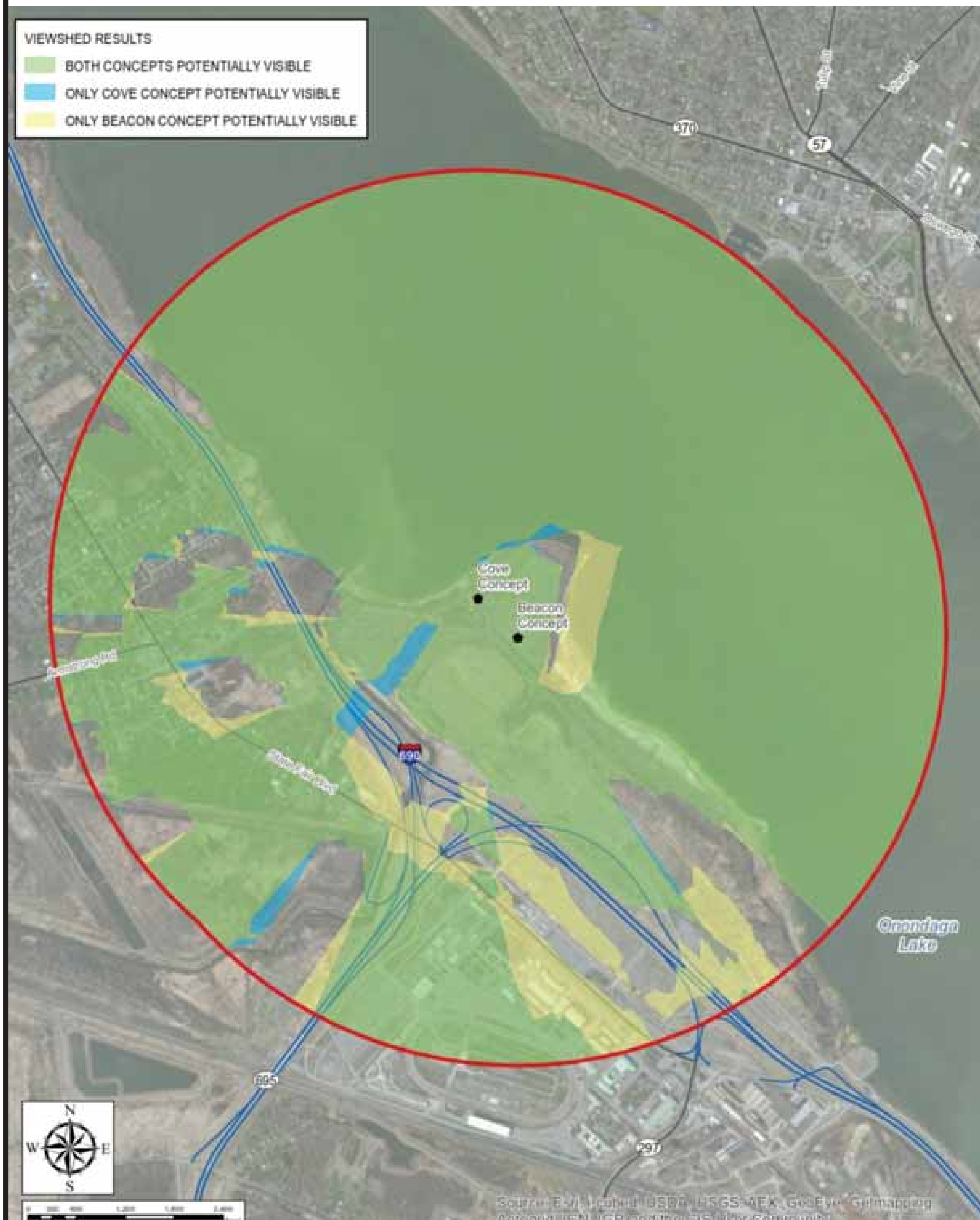
"BEACON"
CONCEPT

FIGURE 3-6



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LAKEVIEW
AMPHITHEATER

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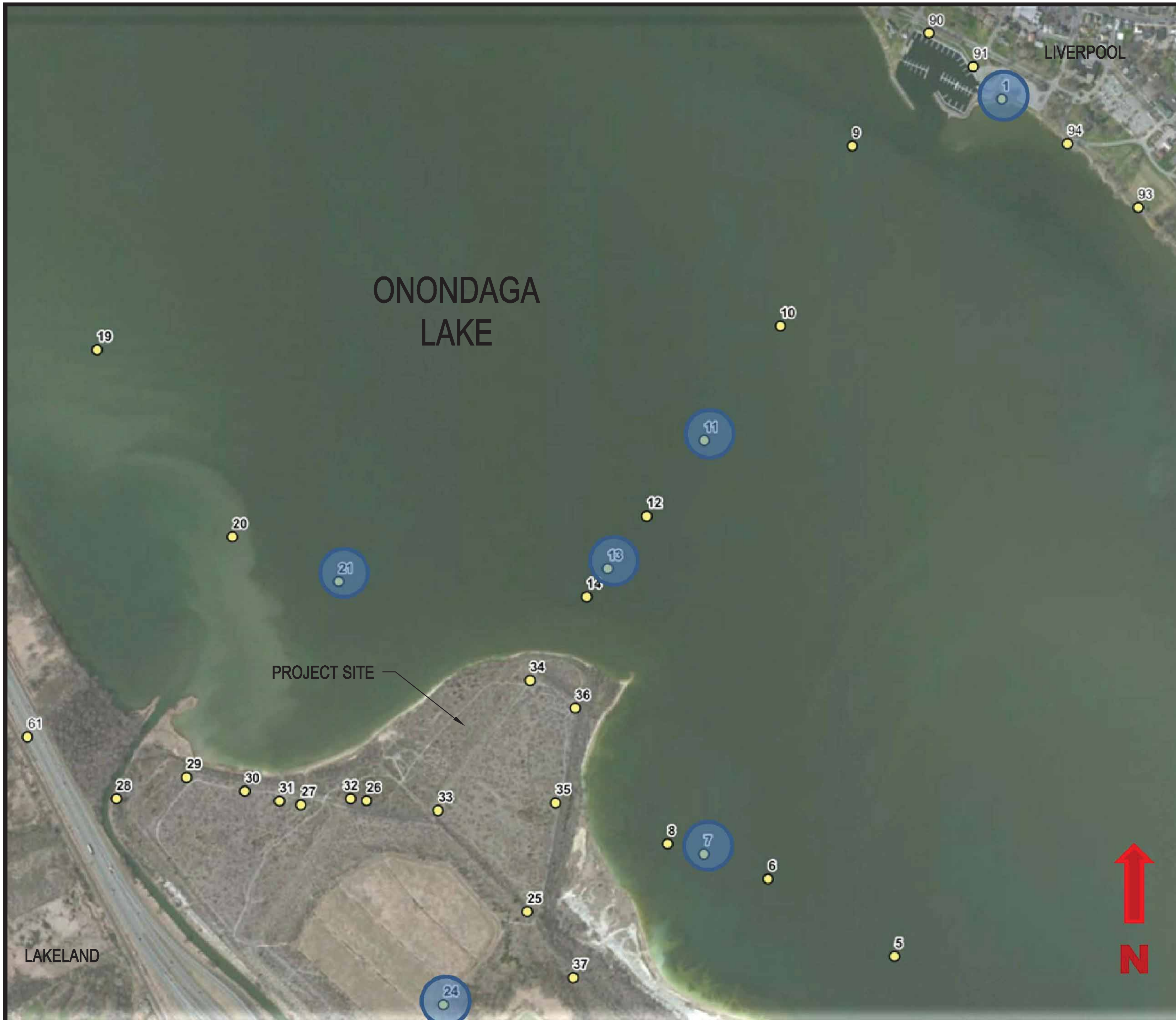
VIEWSHED
ANALYSIS

FIGURE 3-7



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AMPHITHEATER

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VISUAL
SIMULATION
REFERENCE MAP

FIGURE 3-8

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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BEACON VISUAL #1
(CAMERA 1)

FIGURE 3-9

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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BEACON VISUAL #2
(CAMERA 7)

FIGURE 3-10

ONONDAGA COUNTY
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AMPHITHEATER

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BEACON VISUAL #3
(CAMERA 11)

FIGURE 3-11

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

CONCEPTUAL
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BEACON VISUAL #4
(CAMERA 21)

FIGURE 3-12

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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BEACON VISUAL #5
(CAMERA 24)

FIGURE 3-13

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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COVE VISUAL #1
(CAMERA 1)

FIGURE 3-14

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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COVE VISUAL #2
(CAMERA 7)

FIGURE 3-15

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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COVE VISUAL #3
(CAMERA 13)

FIGURE 3-16

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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COVE VISUAL #4
(CAMERA 21)

FIGURE 3-17

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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COVE VISUAL #5
(CAMERA 24)

FIGURE 3-18

ONONDAGA COUNTY
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AMPHITHEATER

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SITE
DEVELOPMENT
MASTER PLAN

FIGURE 4-1

ONONDAGA COUNTY LAKEVIEW AMPHITHEATER

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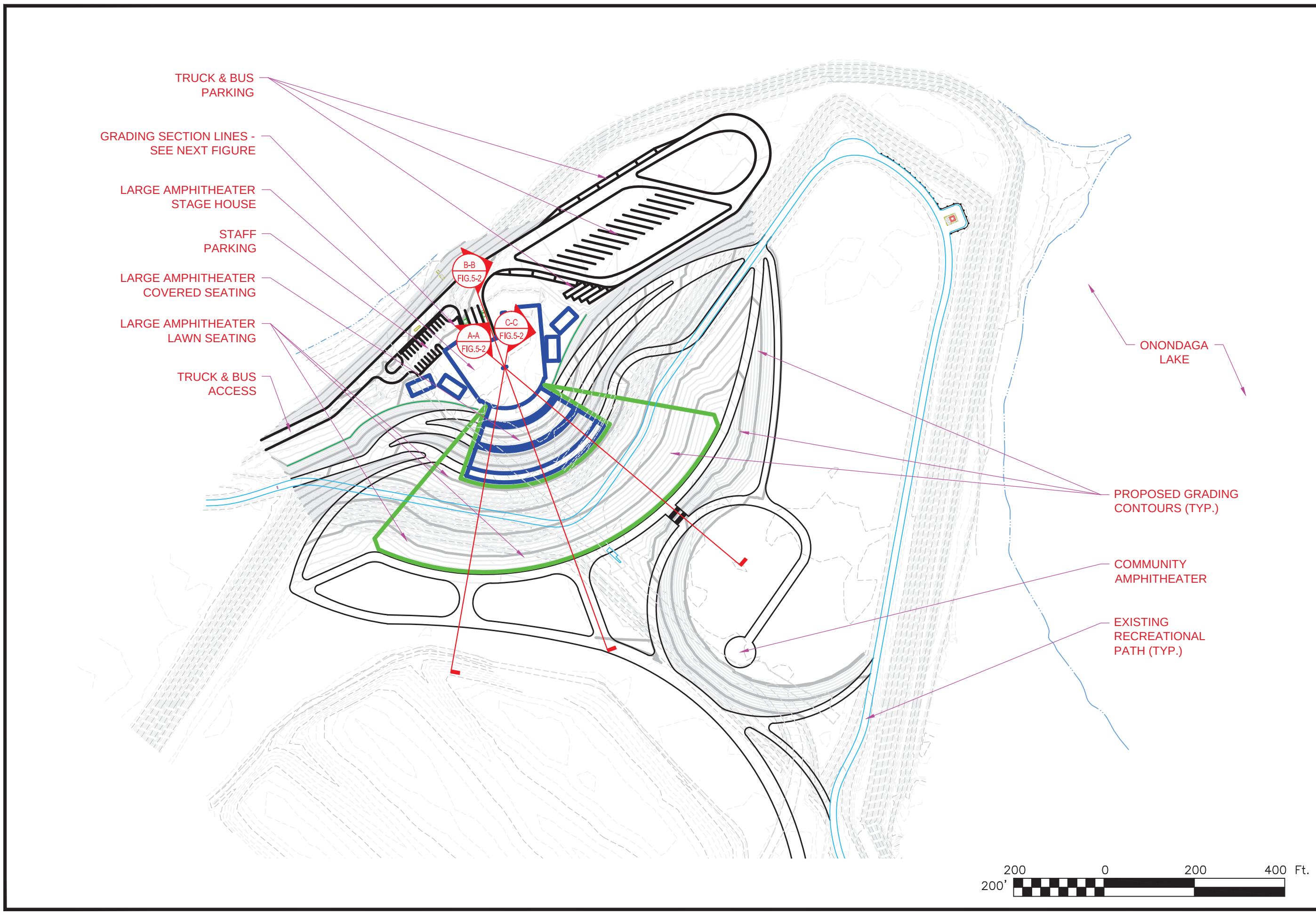
SITE DEVELOPMENT MASTER PLAN (ENLARGED)

FIGURE 4-2



ONONDAGA COUNTY LAKEVIEW AMPHITHEATER

CONCEPTUAL ENGINEERING STUDY

JUNE, 2014

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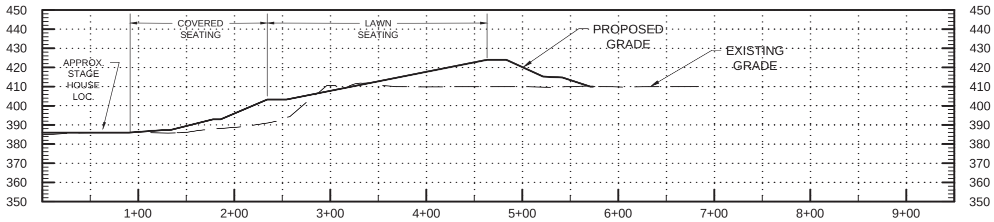
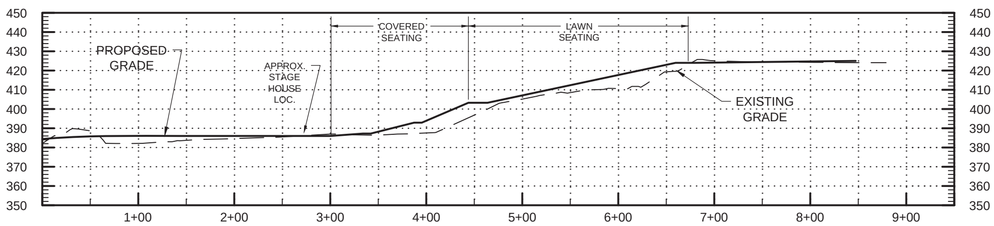
CONCEPTUAL GRADING PLAN

FIGURE 5-1

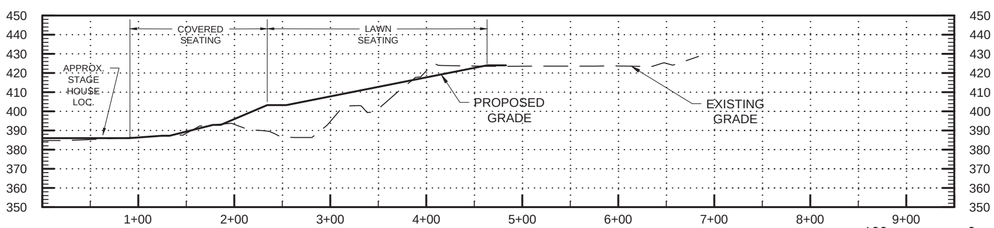
SECTION A-A PROFILE



SECTON B-B PROFILE



SECTION C-C PROFILE



100 0 100 200 Ft.

100'

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

CONCEPTUAL
ENGINEERING STUDY

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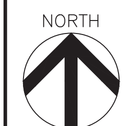


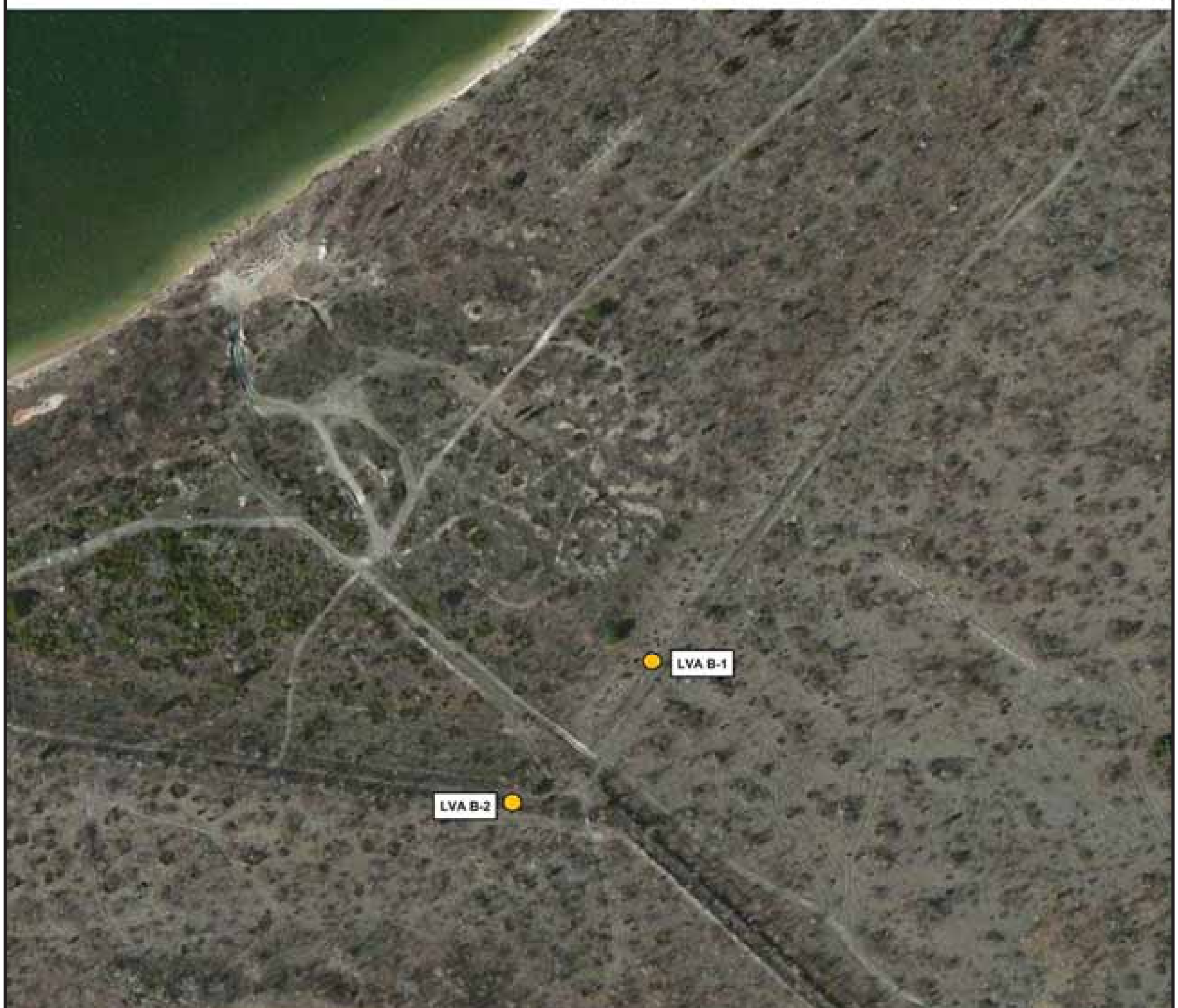
SITE
CROSS
SECTIONS

FIGURE 5-2

GENERAL NOTES:

1. THIS FIGURE IS NOT TO BE USED FOR CONSTRUCTION, ESTIMATING OR LAYOUT PURPOSES.
2. PRIOR TO ADVANCING ANY EXCAVATION (E.G., BORING, TEST PIT) THE EXCAVATING CONTRACTOR SHALL CONTACT DIG SAFELY NEW YORK.
3. EXCAVATION LOCATIONS WILL BE LAID OUT IN THE FIELD BY THE ENGINEER .
4. MAP AND AERIAL PHOTOGRAPH OBTAINED FROM bingMAPS. NOT DRAWN TO A STANDARD SCALE.

PROPOSED BORING LOCATION



ONONDAGA COUNTY LAKEVIEW AMPHITHEATER

CONCEPTUAL DESIGN REPORT

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SITE BORING LOCATION PLAN

FIGURE 5-3

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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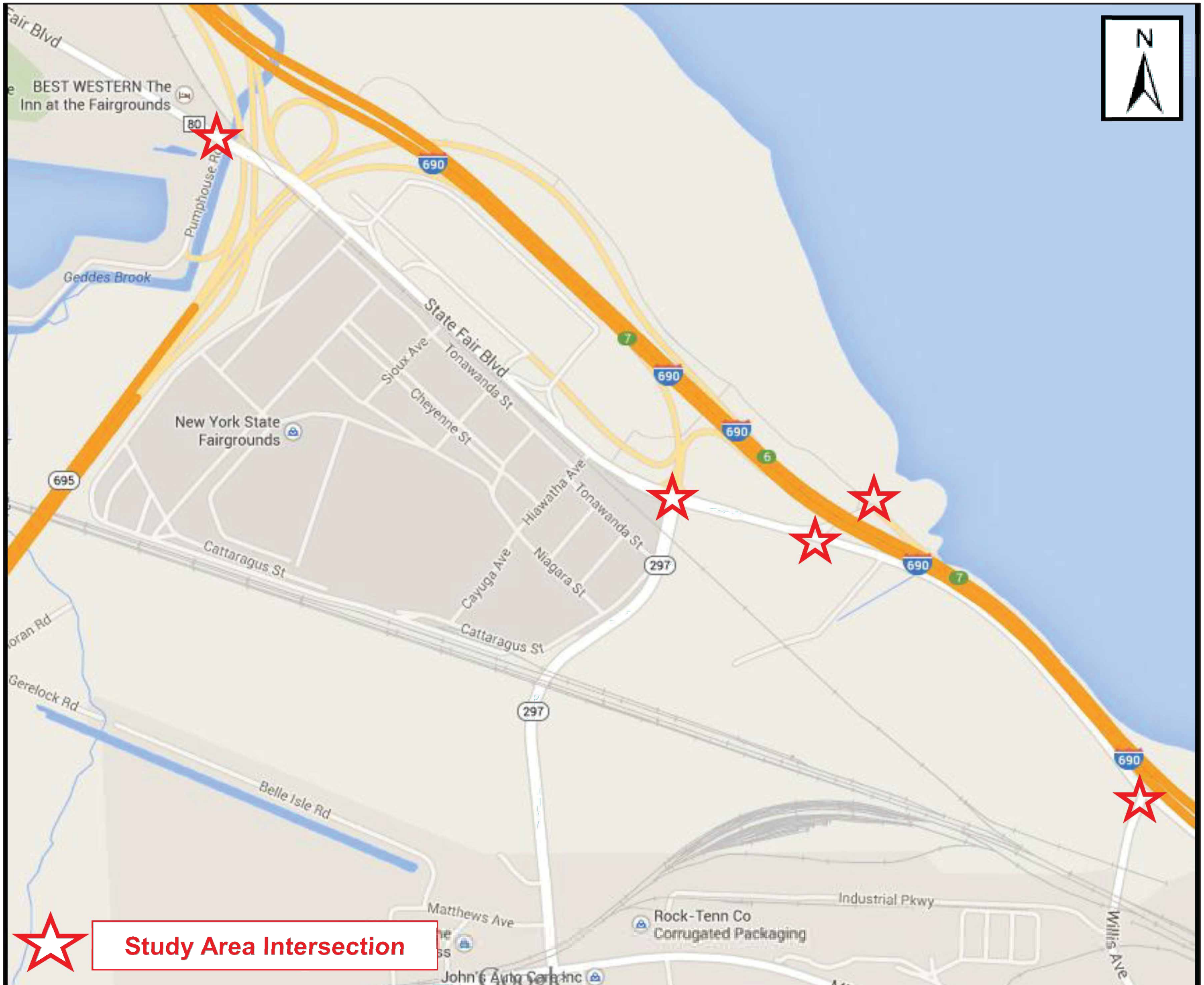
UTILITY
SERVICES
LOCATION
PLAN

FIGURE 5-4



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EXISTING
TRANSPORTATION
NETWORK

FIGURE 6-1

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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SOLD-OUT
EVENT LOCAL
ARRIVAL
DISTRIBUTION

FIGURE 6-2

ONONDAGA COUNTY
LAKEVIEW
AMPHITHEATER

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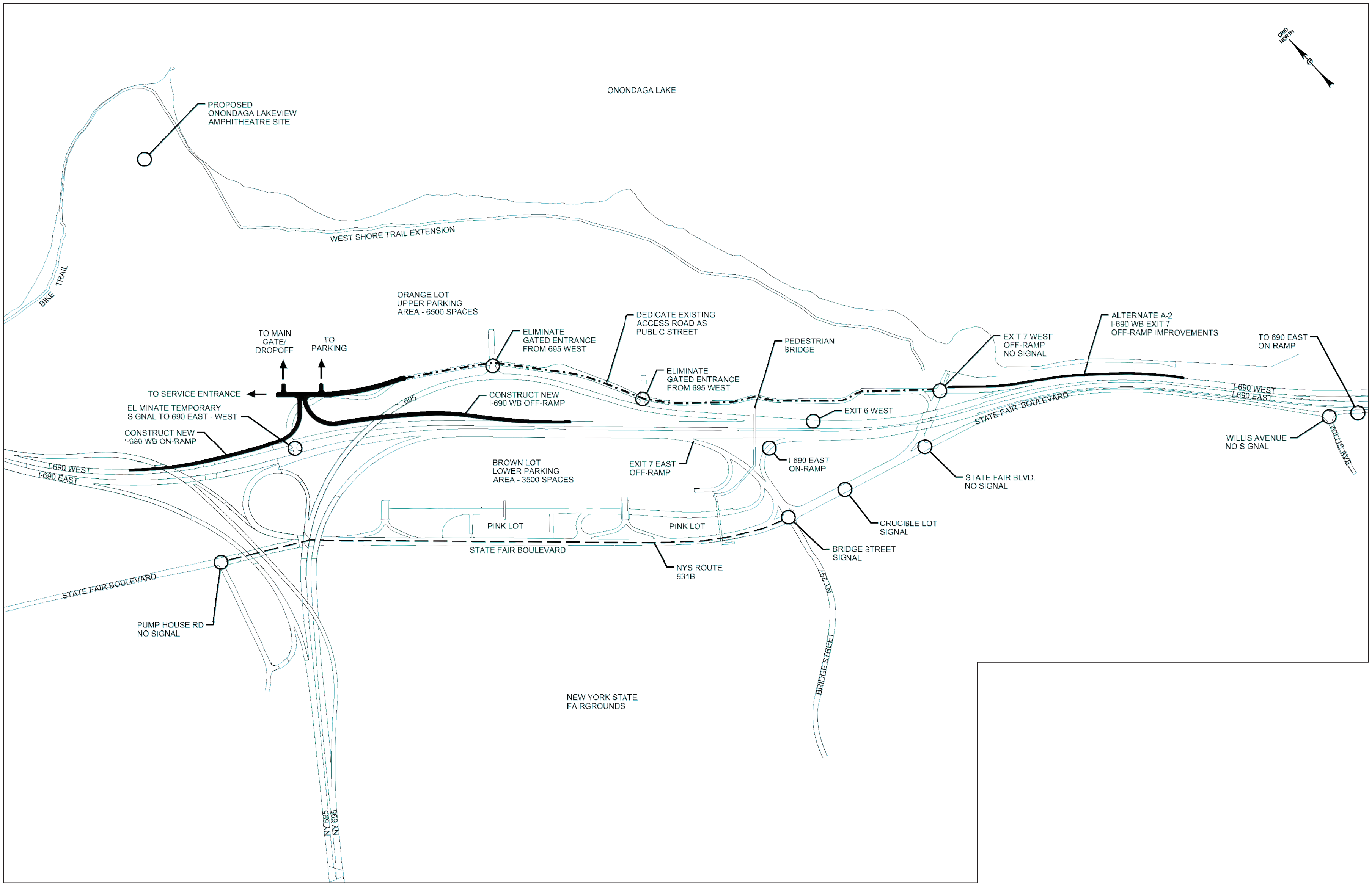
PROPOSED
SHORT-TERM
TRAFFIC
MITIGATION
MEASURES

FIGURE 6-3



ONONDAGA COUNTY LAKEVIEW AMPHITHEATER

CONCEPTUAL DESIGN REPORT

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LONG-TERM IMPROVEMENTS CONCEPT PLAN

FIGURE 6-4

APPENDIX A

PERFORMANCE TECHNOLOGY SYSTEMS INFORMATION

Onondaga Lakeview Amphitheatre Theatrical Equipment Narrative Concept Design Report

Solvay, NY
June 5, 2014

THEATRE PROJECTS Consultants

PREPARED FOR C&S Companies
C&S Companies
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PREPARED BY THEATRE PROJECTS CONSULTANTS, INC.
47 Water Street
South Norwalk, CT 06854
T 203 299-0830 F 203 299-0835
www.theatreprojects.com

The following pages form a theatrical equipment narrative for Onondaga Lakeview Amphitheatre. This material is for review and discussion.

THEATRE PROJECTS Consultants

Overview

Introduction

The preliminary theatrical equipment narrative and probable cost estimate for Onondaga Lakeview Amphitheatre are supported by information gathered during the Concept Design phase of the project and incorporates decisions made by the design team which shall be confirmed with potential user groups and relevant staff during subsequent phases. We've created this theatrical equipment narrative and budget based on the development of the building design parameters, our knowledge of industry practices, and our experience with similar projects.

We intend these documents as an estimating guide for theatrical equipment accommodation. Budget figures listed are rough-order-of-magnitude "bare" costs for the theatrical equipment; others must develop mark-ups and costs for related work by other trades.

These documents are to be considered preliminary. We'll develop precise equipment details and requirements throughout the design process as the building evolves.

Architectural elements

We use this section to give specific recommendations and advice on architectural elements that significantly impact theatrical equipment and require careful coordination. These elements include:

Stage floors
Stage galleries and catwalks
Grids (over-stage and forestage)
Acoustical doors and moving partitions
Cable management system

Theatrical equipment

The theatrical equipment section includes specialty technical theatre equipment. We plan equipment to support current performance programming while providing for reasonable future expansion. Organized by CSI division, the theatrical equipment we've identified includes:

Division 11: Equipment
11 61 33 Theatrical Rigging
11 61 35 Theatrical Rigging Controls
11 61 37 Theatrical Fire Safety Curtain
11 61 43 Theatrical Draperies
11 61 91 Theatrical Lighting Instruments and Accessories

Division 12: Furnishings
12 61 13 Fixed Audience Seating
12 62 11 Loose Audience Seating

Division 26: Electrical
26 61 11 Theatrical Dimming and Controls
26 61 20 Company Switches

Division 27: Communications
27 41 16.61 Integrated Audio-Video Systems and Equipment for Theatres

Theatrical equipment probable cost estimate

This Theatrical Equipment Narrative" is intended to provide detail for the accompanying budget, the "Theatrical Equipment Probable Cost Estimate," both of which are found in this concept design report at Appendix A: Performance Technology Systems Information.

Architectural elements

Stage floor

The stage floor will be concrete construction designed to achieve the structural loading criteria to be defined in the TPC Structural Loading Guidelines, to be issued during Schematic Design. The stage floor will not contains traps, however floor pockets or other hatches may be required for routing of cable for temporary performance equipment on a show-by-show basis, These floor pockets and troughs will needs to be coordinated with the stage floor construction.

Accommodation required

Architect: coordinate finishes, acoustic absorption criteria, and structural supports with the Acoustician and Structural Engineer.
Structural Engineer: coordinate acoustic absorption criteria and structural supports.
Acoustician: provide acoustic absorption criteria.

Rigging beams, FOH catwalks, and lighting positions

Structural steel members are required at the roof in regular 8' intervals, spanning the width of the auditorium, running upstage to downstage and also the depth of the stagehouse running upstage to downstage. The upper steel members could be used to mount perpendicular rigging beams for chain motors and spot-line block attachment. This structure could be combined with required roof steel.

Structural catwalks and bridges over the covered seating and integrated into the roof are required to provide front lighting positions and followspot positions for the stage area; these can be suspended from the upper steel members, or constructed to operate independently. The catwalks will carry a great quantity of theatrical lighting equipment and circuitry, and must be able to support specialty scenic and projection equipment for individual productions. Horizontal railings in these areas must be of a diameter to accommodate standard lighting equipment clamps, typically 1.9" OD, and often must be adjustable vertically.

Accommodation required

Architect: coordinate finishes and structural supports with the Structural Engineer.
Structural Engineer: coordinate structural support system.
Electrical Engineer: coordinate electrical system services with clear spaces in catwalks and other lighting positions.

Access catwalks

Access catwalks in the roof structure covering the fixed reserved seating will provide a path to and a place from which to work to service and maintain house lights, announcement/public address speakers, banners, temporary power positions, and other theatrical equipment and equipment closets.

Accommodation required

Architect: coordinate structural loading requirements, framing, and attachments with the Structural Engineer.
MEP Engineer: coordinate all MEP systems to allow clear area for operation.
Structural Engineer: coordinate structural loading requirements, framing, and attachments with the Architect.
Electrical Engineer: coordinate electrical power, safety devices, and power and control conduit and wiring.

Stage galleries

Stage galleries include the operating galleries and fly/loading galleries along the stage left and stage right walls, and the crossover catwalk at the upstage wall. These fixed equipment support structures also carry production elements and provide access and work floors for technicians. Scenic and other production items can be suspended and flown from these locations.

Galleries and catwalks will be designed to meet the functional requirements of installed mechanical systems and the anticipated production needs of the facility. These systems may include temporary chain hoists, speaker clusters, and adjustable acoustic elements.

Theatrical lighting catwalks must accommodate and provide access to stage lighting fixtures, projection equipment, follow spots with operators, electrical distribution, and other theatrical equipment.

Accommodation required

Architect: coordinate structural loading requirements, framing, and attachments with the Structural Engineer.
MEP Engineer: coordinate MEP systems in the stage house to allow clear area for operation.
Structural Engineer: coordinate structural loading requirements, framing, and attachments with the Architect.

Electrical Engineer: coordinate electrical power, safety devices, and power and control conduit and wiring.

Stage house grid

A technical grid is required as a walking surface both above the stage (below the rigging support steel) and above the forestage. The above-stage grid accommodates the rigging for theatrical lighting and masking machinery, fire curtain machinery if required, and proscenium weather seal shutter. It also provides access to high roof smoke vent systems. These grids are likely to have a floor constructed of demountable “subway” type grating panels.

The forestage grid will be used for rigging additional theatrical equipment as required by each production.

Both grids should be painted OSHA safety yellow on top. Since the underside of both grids will be visible to the audience they should be painted an appropriate color on the underside to allow stage personnel to observe rigging elements fly out against a contrasting background.

Accommodation required

Architect: coordinate finishes, and structural loading requirements, framing, and attachments with the Structural Engineer.
MEP Engineer: coordinate MEP systems to allow clear area for rigging elements.
Structural Engineer: coordinate structural loading requirements, framing, and attachments with the Architect.
Electrical Engineer: coordinate electrical power, safety devices, and power and control conduit and wiring.

Acoustical doors

Large acoustical doors along the rea wall of the stage at stage left, stage right, and center will close off the main stage area from the scene dock areas during performances. These large double or single doors should be manually operable with oversized leaves and will conform to NC ratings as determined by the Acoustician. Local fire codes may require a roll-down fire shutter on the scene dock side for proper fire separations. The acoustical door provides noise separation between the stage and the back of house area, and is not intended to function as a fire door, weather seal, or for any other purpose.

Accommodation required

Architect: coordinate finishes. Coordinate structural loading requirements and framing with the Structural Engineer. Coordinate with fire protection.
Mechanical Engineer: coordinate with Architect for fire protection strategy.
Structural Engineer: coordinate structural loading requirements with the Architect.
Acoustician: provide acoustic criteria.

Weather seal door

A large robust weather seal door will be required to close off the proscenium opening of the stagehouse to prevent vandalism and theft and to protect the stage from the elements. This door must be capable of operating in a harsh environment, must work in extreme temperatures, and must handle high wind loads. Typical products include Assa Abloy Megadoor and others.

Accommodation required

Architect: coordinate finishes. Coordinate structural loading requirements and framing with the Structural Engineer. Coordinate with fire protection.
Mechanical Engineer: coordinate with Architect for fire protection strategy.
Structural Engineer: coordinate structural loading requirements with the Architect.
Acoustician: provide acoustic criteria.

Cable management

The cable management system is a network of cable passes, cable doors, cable hooks, and cable trays that allow temporary production cabling to be run between loading areas, house mix positions, disconnect locations, and the stage house. Penetrations are usually provided through the proscenium walls, stage floor slab, pit walls, and all four walls of the stage house. Fire protection is achieved by installing intumescent sacks that reside in the cable opening at all times. (Cable pass locations are provided by Theatre Projects in Design Development.)

Accommodation required

Architect: coordinate finishes, acoustic separation criteria, fire protection criteria, and structural impact.
Structural Engineer: coordinate structural impact.
Acoustician: provide analysis of acoustic impact.

Conduit, wiring, and back boxes

The theatrical equipment systems described in this document and indicated on the accompanying or future drawings require electrical wiring services and materials. These include theatrical equipment on the attached schedule, the cable pass system, and the empty raceway and outlet box system for the SVC systems.

Accommodation required

Architect: coordinate finishes, acoustic separation criteria, fire protection criteria, and structural impact.
Structural Engineer: coordinate finishes, locations, access, and structural support system with Architect and Engineers.
MEP Engineer: coordinate finishes, locations, access, and structural support system with Architect.
Acoustician: provide noise and isolation criteria.

Theatrical equipment

11 61 33 - Theatrical rigging

Power flying battens

The power flying rigging set consists of mechanically-lifted linesets for general purpose, lighting electrics, cycloramas, act curtains, and heavy scenic pieces. These self-contained winches or specifically-designed motorized winches can be controlled individually or grouped into presets with the integrated computer controller. For safety, this panel has restricted access to the controls via a key switch or lock out commands.

Stage traveler track

Main curtain and mid-stage traveler drapery require portable manual traveler tracks attached to overhead battens. These two-panel draperies are operated by hand, splitting down the middle.

Speaker cluster rigging

Single-speed motors for FOH speaker clusters (left, right, and center) allow each cluster to move between a high operational position and a floor maintenance position. This system may also activate panel doors which conceal space for storage and service of the speaker cluster. Coordinate locations with the A/V Consultant. Control is via master panel and remote pickle.

Chain motors

The chain motor system includes quarter-ton, half-ton, and one-ton chain motors, chain motor controller, and rigging truss sections attached to the grid for use with lighting, masking, or scenery.

Spotline rigging system

The spotline rigging system uses synthetic rope, sheaves, belaying pins, sandbags, cable cradles, and other theatrical rigging elements to suspend scenery and theatrical lighting cables.

Trolley and beams

A trolley and beam system will be required for a chain hoist system to be used for raising and lowering equipment to the lighting catwalks, followspot position, and equipment closets located in the roof structure covering the fixed reserved seats.

Accommodation required

Architect: coordinate, structural columns, and architectural finishes and color. Coordinate finishes, acoustic mass criteria, storage zones, electrical conduit and wiring, and structural support system with MEP Engineer, Structural Engineer, and Acoustician.
MEP Engineer: coordinate MEP systems to allow clear area for rigging operation.
Structural Engineer: coordinate stage house structural framing systems.

Electrical Engineer: coordinate electrical services and connections as required for electric motors and electric rigging devices.

11 61 35 – Theatrical rigging controls

A central theatrical equipment machinery panel will control winches, motorized electrics sets, and other stage machinery. Portable local controls will supplement the central control station.

Accommodation required

Electrical Engineer: coordinate electrical services and connections as required for electric motors and the raceway connecting device locations to winch motor starters.

11 61 37 - Theatrical fire safety curtain

Local code may require a fire safety curtain made of synthetic flame-retardant material. In an emergency, it will automatically deploy. In non-emergency situations, it can be motorized or manually operated. Vertical edge smoke pockets at the stage side of the proscenium are designed to create a fire and smoke barrier between the stage and auditorium, as required by life safety standards, and local and national building codes.

Accommodation required

Architect: coordinate acoustical doors, structural columns, and architectural finishes and color.
MEP Engineer: coordinate MEP systems to allow clear area for rigging operation.
Structural Engineer: coordinate stage house structural framing systems.
Electrical Engineer: coordinate electrical services and connections as required for electric motors.

11 61 43 - Theatrical draperies

Theatrical draperies include the fabric and related connection accessories required for visual masking, decoration, and scenic effects on the stage. Velour drapery will be made from opaque, inherently flame-retardant polyester fabric, providing long service life with little maintenance.

The main curtain will have 100% fullness, a lining, and could include decorative trimmings. The stage masking drapes could include flat-sewn legs, borders, and mid-stage traveler. Remaining inventory includes a filled leno cyclorama and both white and black scrims. Muslin drawstring bags and hampers with lids and heavy-duty casters are required for storage.

The color of drapes is to be selected from standard manufacturer’s colors.

Accommodation required

Architect: select main curtain color to match designed décor.
Theatrical rigging contractor: provide counterweight rigging sets and traveler track.
Storage: provide storage for hampers.

11 61 91 - Theatrical lighting instruments and accessories

The complement of equipment for this section includes stage lighting fixtures for onstage, front-of-house, cyclorama, drop, plus followspots.

Inventory

The inventory includes a quantity of demountable theatrical lighting fixtures with mounting and distribution accessories. Fixtures contain an inventory of ellipsoidals, pars, and cyc lights.

Inventory includes long throw followspots which are large, manually-operated theatrical spotlights for highlighting lead performers.

Moving lights: an inventory of moving light fixtures capable of remote pan/tilt, pattern, color, and iris control. Fixtures may be controlled independently or connected along a "daisy chain." Fixtures will be equipped with lamp, clamp, dichroic color mixing capabilities, patterns, and control cable.

Accessories: an inventory of mounting and distribution accessories for theatrical fixtures, including clamps, side-arms, booms, multi-cables, extension cables, two-fers, irises, barn-doors, template holders, donuts, and tophats.

Accommodation required

Architect: coordinate floor finishes, adjacent surfaces, storage locations, column placements, and slab accommodation. Coordinate finish fascias as required.
MEP Engineer: coordinate mechanical systems to allow clear area for operation. Coordinate fire sprinkler systems.
Structural Engineer: coordinate theatrical fixture mounting pipes and catwalks. See Structural Guidelines to be issued by Theatre Projects during Schematic Design for additional information.
Electrical Engineer: coordinate electrical services and connections as required for work and performance lighting equipment.

12 61 13 – Fixed audience seating

This project requires approximately 5,000 high-quality plastic, weather resistant chairs with self-rising seats, seat arms, letter and number plates, and aisle lights incorporated in end standards. The rear of each seat will be hard plastic, the seat bottom will be hard plastic, and the seat arms will be hard plastic. Fixed audience seating may require aisle fixed seats with flip-out arms for disabled access, according to ADA and local codes.

Demountable chairs

Provide a quantity of demountable chairs for wheelchair positions. All demountable chairs shall be capable of being provided in pairs with sled bases.

Accommodation required

Architect: coordinate riser layout, sightlines, finishes, and fixing details.
Electrical Engineer: coordinate electrical connections for aisle lights.

Acoustician: provide acoustic mass and seat acoustical materials and properties criteria.

12 62 11 - Loose audience seating

Provide high-quality demountable, gangable seats matching the fixed seating finishes. Seating will be used in the Inner Circle closest to the stage as shown on Architect's and Theatre Consultant's drawings.

Accommodation required

Architect: coordinate riser layout, sightlines, finishes, and fixing details.
Electrical Engineer: coordinate electrical connections for aisle lights.
Acoustician: provide acoustic mass and seat acoustical materials and properties criteria.

26 61 11 - Theatrical lighting dimmers and control

This group of systems includes the dimmers, computer control console(s), and electronic control systems required for: theatrical lighting, concert and score-reading lighting, and architectural house lighting. Theatrical performance dimmers are wired to individual theatrical lighting outlets distributed throughout the audience chamber and performance area. Architectural house lighting dimmers are wired to fixed house lighting fixtures.

Central: A quantity of central dimmer banks with 2400-watt and 6000-watt capacity dimmers.
Theatrical performance lighting: A quantity of remote-controlled standard rise dimmers.
Architectural house lighting: remote-controlled standard rise dimmers.
House lighting control: fixed, architectural-style controls.
Control console: A portable, computer-based control console to control theatrical lighting. Console operation shall be possible from the control room, stage area, and technical rehearsal position in the audience area.
Theatrical lighting network: Accommodation for both wired and wireless Ethernet infrastructure for remote operation of theatrical lighting and lighting data. Portable and/or fixed Ethernet nodes are included.

Worklight relay panel: central relay cabinet with 20 amp relays and front end electronics receiving a DMX512 control signal from the control console and house lighting controls. Relays are used to control worklight and similar circuits that do not require dimming.

Cue light system: a custom low voltage cue light system that enable stage management personnel to "cue" stage crew silently with small lights. System allows for manual control or programming of cues via desk top controller and can be designed for line voltage operation if required.

Accommodation required

Architect: coordinate with house lighting designed by Architectural Lighting Designer.
Mechanical Engineer: coordinate air handling needs in dimmer room.
Electrical Engineer: coordinate electrical services to dimmer racks and two-wire plus ground branch circuits to fixed lighting and theatrical lighting outlets, including all labor, wire, raceways,

and fittings. Coordinate general services power and work lighting systems. Coordinate raceways, back boxes, and wire for control systems.

26 61 20 – Company Switches

A Company Switch is an industry standard fused or circuit-breaker protected disconnect that provides a safe and convenient means of supplying temporary power utilizing Cam-lock connectors for the installation of temporary theatrical equipment. The project will include several Company Switches in various amperages, configurations, and locations depending on specific lighting, scenic, and audio requirements. Configurations include multiple amperages (100A, 200A, and 400A) and all are 120/208 3 phase 4 wire w/ ground; double neutral to accommodate non-linear loads in lighting; isolated ground for audio. These are in addition to disconnects or switches for any other specific uses.

Probable sizes, uses, and quantities:
400A: 7 total: 4 for lighting, 1 for audio, 2 for stage machinery
200A: 2 for audio
100A: 2 for stage machinery and miscellaneous

Accommodation required

Architect: coordinate locations with other services and surrounding finishes.
Electrical Engineer: Provide electrical service to each device including all labor, wire, raceways, and fittings.

27 41 16.61 – Integrated audio-visual systems and equipment

Audio, visual, and communications systems include equipment and infrastructure for technical audio and video communications, back-of-house and front-of-house paging, background music to the public, public address announcements, assisted listening system including:

1. MAIN EVENT COMPLEX
    a. Onstage Area
        1) Intercom
        2) Infrastructure and tie lines
        3) Company switches
    b. Backstage Area
        1) Video production room
        2) AV rack room
        3) Intercom
        4) Paging
        5) Distributed multimedia
    c. Covered Audience Area
        1) Large-scale video projection (with weather protection)
        2) House mixing position
        3) Infrastructure and tie lines
        4) ADA compliant hearing assist
        5) Modest public address for small events (<500) (with weather protection)

d. Lawn Audience Area
   1) Sound reinforcement for all events (with weather protection)
   2) AV rack room
e. Event Space
   1) Distributed multimedia
   2) Infrastructure and tie lines
   3) Small sound system for live performance

2. <u>COUNTY EVENT AMPHITHEATER</u>
   a. Stage Area Utility Bunker (with weather protection)
      1) Intercom
      2) Infrastructure and tie lines
      3) Company switch
3. <u>OUT BUILDINGS AND PADS</u>
   a. Distributed multimedia

Accommodation required

Architect coordination :

The house mixing position is an operations area in the audience seating area. Portable consoles, processing gear, and operators will be located here. This space requires easy rolling access to and from the stage and loading dock. It is approximately 24 feet wide by 18 feet deep; located on the center line of the venue, 80 to 100 feet from the stage.

The video production room is an operations area containing all of the rack-mounted video processing equipment, video monitors, remote cameras controls, and the production switcher. It is typically located in the stage house at stage level. This room is approximately 150 square feet.

The AV rack rooms contain all of the large, power consuming, heat producing AV components. One is located in the stage house area and one is located at the center of the roof edge. These rooms are approximately 100 square feet.

The AV storage room is located with easy rolling access to the stage area. Portable loudspeakers, microphones, stands, cables, and accessories are stored here when not in use. This room is approximately 100 square feet.

Mechanical Engineer coordination:

The mechanical engineer will design and specify HVAC systems for rooms containing AV equipment. These rooms ideally should be maintained at an ambient temperature between 60 and 80 degrees Fahrenheit, and at a relative humidity between 40% and 55%, non-condensing. These environmental requirements are in effect 24 hours a day and often necessitate a separate air handling system for each room containing AV equipment.

Electrical Engineer coordination:

Coordinate isolated ground general services power, raceways, back boxes, and wire for control systems; coordinate electrical and video services to amp racks, control locations, and technical power circuits to fixed S&C outlets, including all labor, wire, raceways, and fittings.

Specify the following items for exclusive use by the AV equipment (design criteria will be supplied by the AV designer as the project develops during design): AV technical power system fed from K-13 rated isolation transformer with copper windings and electrostatic shield; AV technical power isolated grounding system; AV technical power panel board providing programmable, sequential start-up and shut-down of the AV systems; AV technical power company switches; AV portable power distribution panel providing multiple outlets for use with portable AV equipment; and, empty conduit and raceway systems (with pull strings) connecting all AV equipment terminations. Note that the wire and wire-pull labor for low voltage AV cables are included in the installed AV systems cost estimate.

I.T. Systems for AV systems:

The IT designer will specify the following items for use with the AV equipment: Router/switch for connection of AV Equipment to building network; Outlet types and wall jacks for connection of AV Equipment to the building network; and, Cable types and closet destinations.

Various:

Coordinate empty cable management system for temporary cabling for temporary performance equipment for audio and video recording and broadcast.

XX XX XX - Other (items required but not specified)

Personnel lifts: Several portable motorized unit for elevating a worker to service lighting and scenery to a maximum of 36' above the stage floor. Accommodation required: storage.

Lectern: A portable, adjustable lectern with integral lighting and sound features. Accommodation required: finishes and colors as per Architect. Storage.

Washers and dryers: Two pairs of heavy-duty washers and dryers for the wardrobe/laundry room. Accommodation required: Mechanical Engineer to coordinate plumbing and exhaust needs. Electrical Engineer to coordinate electrical hook-ups.

Pianos: One performance-quality grand piano. Provide piano with associated dollies, benches, and heavy-duty quilted covers which include leg protection. Accommodation required: storage. Storage will be equipped with humidity control.

Miscellaneous stage equipment: A complement of stage equipment including hand tools, safety gear, maintenance equipment, ladders, dollies, and hand trucks, as well as various pieces of hardware required for facility operation. Accommodation required: Storage.

APPENDIX B

ACOUSTICAL ANALYSIS

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. <u>SOUND PROPAGATION</u>

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.

APPENDIX C

BUILDING SPACE PROGRAMMING

GENERAL SUMMARY			MAIN AMPHITHEATRE BUILDING	LAWN SEATING	MINI AMPHITHEATRE	GENERAL SERVICES BUILDING	Total		Notes
			Includes covered seating, stage, stage support, performer support, restrooms, F&B, event space	Includes uncovered seating and pads for VIP Pavilions		Includes main entrance ticketing, administration, grounds maintenance, security, parking, F&B storage and distribution			
		Capacity:	**5,000**	**12,500**	**300**	**17,800**	**18,100**		
					net sf	net sf	**net sf**		
		Name	net sf	net sf					
1000		PUBLIC AREAS	14,691	0	0	9,090	**23,781**		
2000		PERFORMANCE SPACES	66,089	0	4,080	0	**70,169**		
3000		STAGE SUPPORT	2,425	0	0	0	**2,425**		
4000		PERFORMERS SUPPORT	6,104	0	0	0	**6,104**		
5000		PRODUCTION SPACES	1,416	0	0	0	**1,416**		
6000		SHOP SPACES	0	0	0	0	**0**		
7000		ADMINISTRATION	0	0	0	3,372	**3,372**		
8000		SERVICES	1,960	0	0	6,340	**8,300**		
9000		EXTERNAL	0	125,640	0	0	**125,640**		
		Subtotal Program Net SF	**92,685**	**125,640**	**4,080**	**18,802**			
		Total Net SF					**241,207**		

SUMMARY BY ZONE										
			MAIN AMPHITHEATRE BUILDING	**LAWN SEATING**	**MINI AMPHITHEATRE**		**GENERAL SERVICES BUILDING**	**Total**		**Notes**
			Includes covered seating, stage, stage support, performer support, restrooms, F&B, public event space	Includes uncovered seating and pads for VIP Pavilions			Includes main entrance ticketing, administration, grounds maintenance, security, parking, F&B storage and distribution			
		Building Area	5,000	**12,500**	**300**		**17,800**	**18,100**		
		Name			net sf		net sf	**net sf**		
			net sf	net sf						
1000		**PUBLIC AREAS**	14,691	0	0		9,090	**23,781**		
		Food and beverage	2,386				(Box office, food storage, FOH staff support)			
		Restrooms	7,740							
		Event Space	3,360							
		Reception/stage door/other	895							
2000		**PERFORMANCE SPACES**	66,089	0	4,080		0	**70,169**		
		Covered - "Inner Circle"	5,000							
		Covered - "Fixed Seats"	54,000							
		Stage	6,957							
3000		**STAGE SUPPORT**	2,425	0	0		0	**2,425**		
		(Offices, crew rooms and storage)								
4000		**PERFORMERS SUPPORT**	6,104	0	0		0	**6,104**		
		(Dressing rooms, wardrobe, performer lounge)								
5000		**PRODUCTION SPACES**	1,416	0	0		0	**1,416**		
		(Artist catering/dining, warming kitchen)								
6000		**SHOP SPACES**	0	0	0		0	**0**		
7000		**ADMINISTRATION**	0	0	0		3,372	**3,372**		
							(Administrative offices)			
8000		**SERVICES**	1,960	0	0		6,340	**8,300**		
		(Stage door, truck dock, scene dock)					(Receiving, Security, Janitorial, Maintenance, Recycling)			
9000		**EXTERNAL**	0	125,640	0		0	**125,640**		
		Subtotal Program Net SF	**92,685**	**125,640**	**4,080**		**18,802**			
		Total Net SF						**241,207**		

Space Program- Space List
Notes

Onandaga Laveview Amphitheatre
Version 1
April 24, 2014

Space Program - Space List Notes

1 Note: Areas shown highlighted YELLOW are line items which have changed from the previous

2 All areas in this worksheet are calculated via one of the following methods:
a. Width (W) x depth (D)
b. Number of occupants (Occup) x Unit (SF per person)
c. A specific-use formula as identified in the "Notes" column

3 Unless otherwise noted, the quantity of all spaces listed is one

5 All square footages should be confirmed by the ADA consultant.

6 a. Final gross calculations are to be determined by the cost consultant.
b. Total gross includes to allowance for:
i. Circulation (increased for both patrons and scenery/equipment)
GENEF ii. Mechanical and Electrical Services (increased for larger ducts, and more conduits)
iii. Inaccessible spaces (due to space layout and open volumes of room shapes)
iv. Thicker walls (due to acoustic isolation)

8 Common abbreviations used in this document.
SL Stage left
SR Stage right
FOH Front of house
BOH Back of house
DSL Down stage left
DSR Down stage right
USL Up stage left
USR Up stage right
SLL Sound and light lock

MAIN COMPLEX INCLUDING AMPHITHEATRE

Rm #		Level	Name	Net SF V.2	Occup	Unit	No	W	D	H	Comments
					P	SF	Qty	F	F	F	
	1000		PUBLIC AREAS	14,691							
	2000		PERFORMANCE SPACES	66,089							
	3000		STAGE SUPPORT	2,425							
	4000		PERFORMERS SUPPORT	6,104							
	5000		PRODUCTION SPACES	1,416							
	6000		SHOP SPACES	0							
	7000		ADMINISTRATION	0							
	8000		SERVICES	1,960							
	9000		EXTERNAL	0							
			Total Program NET	**92,685**							
	1000		**PUBLIC AREAS**		Cap.	Levels					
	1000		*LOBBIES*		**5,000**	**1**					
GENER/	1001	FOH	Enclosed Lobby	0	0	8					
	1002	Street	Covered Lobby	0	4000	6					
	1007	Multi	Corridors	*0*		0	0	10	0	8	
	1009	Multi	Stairs	*0*		140	**0**	*in gross*			
	1010	FOH	Stair Lobby	*0*		45	0	*in gross*			
	1100		*LOBBY SERVICES*								
	1101	FOH	Elevators	*100*		100	**1**	*in gross*		7	
	1102	FOH	Elevator Machine Room	*80*		80	1	*in gross*			
	1103	FOH	Elevator Lobby	*0*		40	0	*in gross*			
	1104	Multi	Service Elevator	*0*		80	**0**	**8**	**10**	8	
	1105	FOH	Telephones / Water Fountains	*0*		36	0	*in gross*			
	1400		*CATERING*								
	1401	FOH	Bars / Concessions	1,907	1100			293	6.5	2750	
	1402	FOH	Bar / Concession Storage	289		**15%**	bars				
	1403	FOH	Bar Cool Storage	191		**10%**	bars				
			Total Bar Area		2,386						
	1404	Ground	Event Space	2,400	**150**	**16**					
	1405	Ground	Event Space - Kitchen	360		**15%**					Warming kitchen; assume catered
	1406	Ground	Event Space - Storage	600		**25%**					
	1407	U/L	Restaurant Kitchen / Services					*in gross*			

Rm #	Level	Name	Net SF V.2	Occup	Unit	No	W	D	H	Comments
				P	SF	Qty	F	F	F	
1500		*RECEPTION*								
1507	FOH	Washrooms - Unisex	130		65	**2**				
1516	Ground	Meet & Greet / Press Room	500	**25**	20					Greenroom
1700		*SERVICES*								
1703	FOH	Janitor Closet - FOH	15		15	**1**				
1800		*STORAGE*								
1801	FOH	FOH / Operations Storage	250		**5%**					
1900		*RESTROOMS*								
1901	FOH	Washrooms - Male	2,500	71	35				8	
1902	FOH	Washrooms - Female	5,000	100	50				8	
1903	FOH	Uni-sex H/C / Family Assist Washrooms	240	**4**	60				7	
		TOTAL PUBLIC - AREAS	**14,691**							
2000		**PERFORMANCE SPACES**								
2100		*AUDITORIUM*		5000						
2101	Auditori	Inner Circle	5,000	**500**	10				100%	Loose seats nearest stage; lay-down area
2102	Auditori	Covered	54,000	**4,500**	12				0%	Fixed reserved seats
				Pros Arch					100%	
2200		*STAGE* *Proscenium*		W	H		W	D	H	
2201	Stage	Mainstage	5,400	**60**	**35**		108	**50**	**50**	50' from stage to top of grid
2202	Stage	Wing Left / Side Stage	0			**0**	19	50		Included in stage dimensions
2203	Stage	Wing Right / Side Stage	0			**0**	19	50		Included in stage dimensions
2204	Stage	Support Stage	0			**0**	70	**20**		
		Total Stage Area		5,400		Grid Dims	108	50		
2212	Stage	Apron	750			**1**	75	**10**		
2213	Stage	Stage Sound & Light Locks	640		80	4	**8**	10	8	
2300		*GALLERIES*					W	L		
2301	Stg Hse	Loading Gallery	*0*			**0**	6	50	*in gross*	
2304	Stg Hse	Fly Gallery	*300*			**1**	6	50	*in gross*	
2305	Stg Hse	Operating Gallery	*300*			**1**	6	50	*in gross*	
2307	Stage	Crossover Gallery	*288*			1	96	3	*in gross*	
2312	Auditori	Auditorium Catwalks	*1,080*			**3**	**4**	90	*in gross*	include followspot position

Rm #	Level	Name	Net SF V.2	Occup	Unit	No	W	D	H	Comments
				P	SF	Qty	F	F	F	
2500		*OVERHEAD*								
2501	Upper	Grid	*5,400*				108	50	8	*in gross*
2504	Auditori	Forestage Grid	*1,050*		1050	**1**	75	**14**		*in gross*
2600		*OFFICES / SUPPORT*								
2612	Auditori	Light & Sound Platform	480	**6**	80	1				
2700		*SERVICES*								
2701	Upper	Dimmer Room	95		25	**1**		70	9	Two rooms: one backstage, one in roof
2702	Upper	Sound Rack Room	204		22	**7**		50		Two rooms: one backstage, one in roof
2703	Stage	Company Switch / Transfer	*64*			**1**	8	8		*in gross*
2704	Auditori	Sound Cockpit / Mix Position	*0*	**6**		**0**	**20**	**9**		
		TOTAL - PERFORMANCE SPACES	**66,089**							
3000		STAGE SUPPORT								
3100		*COMMON*								
3102	Stage	Janitor's Closet - BOH	15	**1**	15					
3200		*STORAGE*								
3201	Stage	On Stage Storage	1,080		20%		20	40		
3212	Stage	Shell Storage - Tower	0		600	**0**	**30**	**20**	30	
3214	Stage	Piano Storage	80	**1**	80	1				
3215	Stg/Low	Instrument Storage	0		3%	**0**				incl office / work area
3300		*WORKSHOPS*								
3301	Stage	Scenery Maintance & Repair / Tool Room	120		120	**1**			10	incl office / work area
3400		*STAGE OFFICES*								
3401	Stage	Production Management	320	**2**	160	1			7	
3402	Stage	Visiting Production Office	240	**3**	80	1			7	
3500		*STAFF ROOMS*								
3501	Stage	Crew Locker / Ready Room	240	**20**	12				7	
3900		*RESTROOMS*								
3901	Stage	Crew Washrooms / Showers	200	2	100				7	

Rm #	Level	Name	Net SF V.2	Occup	Unit	No	W	D	H	Comments
				P	SF	Qty	F	F	F	
3902	Stage	Offstage Washrooms - Unisex	130	2	65	**2**			7	
		TOTAL - STAGE SUPPORT	**2,425**							
4000		**PERFORMERS SUPPORT**					total P			
4100		*DRESSING ROOMS*								
4101	Stage	Star Suite	640	1	320	**2**	2		8	
4105	S/U	2/4 Dressing Room	960	4	60	**4**	16			
4110	S/U	8/10 Dressing Room	1,152	10	384	**3**	30			
4112	Lower	Chorus Dressing Room	1,064	24	532	**2**	48		8	
4117	Lower	Band Dressing Room	1,000	**25**	40	**1**	25			
							121			
4300		*WARDROBE*								
4309	L/U	Laundry / Wardrobe Room	200	2	100				8	Close to Dressing Rooms
4600		*COMMON*								
4601	Stage	Performers Lounge	968	61	16	1			8	Green Room / pantry
4605	Stage	Janitor's Closet - Perf	120		40	**3**				
		TOTAL - PERFORMERS SUPPORT	**6,104**							
5000		**PRODUCTION SPACES**								
5100		*COMMON*								
5101	Stage	Artist Catering / Assembly	1,089	61	18	**1**				
5102	Stage	Kitchenette / Storage	327		**30%**					
		TOTAL - PRODUCTION SPACES	**1,416**							
6000		**SHOP SPACES**								
6100		*SCENE SHOP*								
		TOTAL - SHOP SPACES	**0**							
7000		**ADMINISTRATION**								
		TOTAL - ADMINISTRATION	**0**							
8000		**SERVICES**								
8000		*BOH SERVICES*								
8001	Stage	Stage Door Reception	0		200	**0**				incl receiving
8002	Stage	Stage Door Office	0		250	**0**			7	incl fire control / security

Rm #		Level	Name	Net SF V.2	Occup	Unit	No	W	D	H	Comments
					P	SF	Qty	F	F	F	
	8200		*PLANT / SERVICES*								
	8201	Stage	Truck bays (apron)	*4,920*		1230	**4**	15	**82**	15	external parking required
	8202	Stage	Truck dock	*720*		180	4	15	12	15	4' above apron; covered
	8203	Stage	Scene dock	1,800		1800	1	60	30	20	transfer / assembly area
	8206	Stage	Freight Elevator	160			**1**	**10**	**16**	**8**	interior cab dims
	8208	Stage	Garbage Disposal - Exterior	*192*		48	**4**	8	6		
	8300		*ELECTRICS / COMMUNICATIONS*								
	8301	L/U	Phone Intake				1				
	8304	L/U	Electrical Intake				1				
	8400		*MEP / HVAC*		12%	of total gross					
	8407	L/U	HVAC Plant								
			TOTAL - SERVICES	1,960							
	9000		EXTERNAL								
			TOTAL - EXTERNAL	0							
LAWN											
Rm #		Level	Name	Proposed net sf	Occup	Unit	No	W	D	H	Comments
					P	sf	Qty	f	f	f	
	1000		PUBLIC AREAS	0							
	2000		PERFORMANCE SPACES	0							
	3000		STAGE SUPPORT	0							
	4000		PERFORMERS SUPPORT	0							
	5000		PRODUCTION SPACES	0							
	6000		SHOP SPACES	0							
	7000		ADMINISTRATION	0							
	8000		SERVICES	0							
	9000		EXTERNAL	125,640							
			Total Program NET	**125,640**							
	1000		PUBLIC AREAS								

Rm #		Level	Name	Net SF V.2	Occup	Unit	No	W	D	H	Comments
					P	SF	Qty	F	F	F	
			TOTAL - PUBLIC AREAS	0							
	2000		PERFORMANCE SPACES								
			TOTAL - PERFORMANCE SPACES	0							
	3000		STAGE SUPPORT								
			TOTAL - STAGE SUPPORT	0							
	4000		PERFORMERS SUPPORT								
			TOTAL - PERFORMERS SUPPORT	0							
	5000		PRODUCTION SPACES								
			TOTAL - PRODUCTION SPACES	0							
	6000		SHOP SPACES								
			TOTAL - SHOP SPACES	0							
	7000		ADMINISTRATION								
			TOTAL - ADMINISTRATION	0							
	8000		SERVICES								
			TOTAL - SERVICES	0							
	9000		EXTERNAL		Cap.	Levels					
	9140		*CATERING*		**12,500**	**1**					
ATL-	9141	Lawn	Bar / Concessions	1,406	3,125	60	0.5	6	9		
ATL-	9142	Lawn	Bar / Concessions Storage	844		60%	bars				
ATL-	9143	Lawn	Bar Cool Storage	984		70%	bars				
	9190		*RESTROOMS*								
ATL-	9194	Lawn	Washrooms - Male (Lawn)	3,125	104	30	52				
ATL-	9195	Lawn	Washrooms - Female (Lawn)	8,036	179	45	89.29			8	
ATL-	9196	Lawn	Uni-sex H/C Washrooms (Lawn)	480	8	60				7	
	9210		*SEATING AREA*								
ATL-	9211	Lawn	Lawn	125,000	12,500	10				**100%**	
ATL-	9220	Lawn	VIP Pavillions	640	**8**	20	**4**				

Rm #		Level	Name	Net SF V.2	Occup	Unit	No	W	D	H	Comments
					P	SF	Qty	F	F	F	
					12,500					100%	
			TOTAL - EXTERNAL	125,640							

COMMUNITY EVENT AMPHITHEATRE

Rm #		Level	Name	Proposed net sf	Occup	Unit	No	W	D	H	Comments
					P	sf	Qty	f	f	f	
	1000		PUBLIC AREAS	0							
	2000		PERFORMANCE SPACES	4,080							
	3000		STAGE SUPPORT	0							
	4000		PERFORMERS SUPPORT	0							
	5000		PRODUCTION SPACES	0							
	6000		SHOP SPACES	0							
	7000		ADMINISTRATION	0							
	8000		SERVICES	0							
	9000		EXTERNAL	0							
			Total program NET	**4,080**							
	1000		**PUBLIC AREAS**		Cap.	Levels					
	1000		*LOBBIES*		**300**	**1**					
			TOTAL - PUBLIC AREAS	0							
	2000		**PERFORMANCE SPACES**								
	2100		*AUDITORIUM*		300						
ATF-	2101		Tiered Concrete Benches	2,400	*0*	8					
	2200		*STAGE* *Proscenium*		W	H		W	D	H	
ATF-	2201		Festival Stage	1,200	**40**	**35**		40	**30**	**0**	H=f72*2.5
ATF-	2204		Support Pad	480				40	**12**		W=e72*2
	2700		*SERVICES*								
ATF-	2703		Company Switch / Transfer	*225*	0			15	15		
ATF-	2704		Sound Cockpit / Mix Position	*750*	6			30	25		
			TOTAL - PERFORMANCE SPACES	4,080							

Rm #		Level	Name	Net SF V.2	Occup	Unit	No	W	D	H	Comments
					P	SF	Qty	F	F	F	
	3000		STAGE SUPPORT								
			TOTAL - STAGE SUPPORT	0							
	4000		PERFORMERS SUPPORT					total P			
			TOTAL - PERFORMERS SUPPORT	0							
	5000		PRODUCTION SPACES								
			TOTAL - PRODUCTION SPACES	0							
	6000		SHOP SPACES								
			TOTAL - SHOP SPACES	0							
	7000		ADMINISTRATION								
			TOTAL - ADMINISTRATION	0							
	8000		SERVICES								
			TOTAL - SERVICES	0							
	9000		EXTERNAL								
			TOTAL - EXTERNAL	0							

GENERAL SERVICES - TICKETING										
Rm #	Level	Name	Net SF	Occup	Unit	No	W	D	H	Comments
				P	SF	Qty	F	F	F	
1000		PUBLIC AREAS	9,090							
2000		PERFORMANCE SPACES	0							
3000		STAGE SUPPORT	0							
4000		PERFORMERS SUPPORT	0							
5000		PRODUCTION SPACES	0							
6000		SHOP SPACES	0							
7000		ADMINISTRATION	3,372							
8000		SERVICES	6,340							
9000		EXTERNAL	0							
		Total Program NET	**18,802**							
							5,000	Main Complex		
							12,500	Lawn		
1000		**PUBLIC AREAS**		Cap.	Levels		300	Mini Amphitheatre		
1000		*LOBBIES*		**17,800**	**3**		17,800	Total		Cap = perf/public areas + reh / function rooms
1002	Street	Exterior Lobby	*2,670*	890	3					
1100		*LOBBY SERVICES*								
1101	FOH	Elevators	*100*		100	**1**	*in gross*		7	
1102	FOH	Elevator Machine Room	*80*		80	1	*in gross*			
				2,850	0	sf per person (plus individual theatres sf)				Total lobby provisions - **Note** that gross numbers are the
1200		*TICKETING*								
1202	Ground	Box Office Sales / Counter	550	**10**	50	**1**				open counter
1204	Ground	Box Office Operations / Workroom	400	**4**	100	1			7	BO Staff
1207	Ground	Box Office Manager	100	**1**	100	1			7	Ticket / Technologies Mgr
1300		*SALES*								
1307	Ground	Merchandizing Area	*1,800*		180	**10**	12	15		
1400		*CATERING*								
1413	Upp/Lo	Food Service Storage	2,000		2,000	**1**				General Commisary

GENERAL SERVICES - TICKETING										
Rm #	Level	Name	Net SF	Occup	Unit	No	W	D	H	Comments
1414	Upp/Lo	Food Service Cold Storage	1,000		1,000	1				General Commisary
1600		*OFFICES*								
1601	FOH	House Manager's Office	120	1	120				7	HM & Asst. / files & workspace
1603	FOH	House Manager Assist	200	2	100				7	2 Asst. / files & workspace
1605	FOH	First Aid Room	400	4	100				7	
1608	FOH	Staff Lockers / Storage	500	50	10					lockers & WC/stroller storage only
1611	FOH	Food Services Manager	120	1	120					
1612	FOH	Food Service Office	330	3	110					Head + asst. / chef
1613	FOH	Food Service Staff Lockers	500	50	10					Café / Bar staff
1700		*SERVICES*								
1703	FOH	Janitor Closet - FOH	30		30	1				Supply storage
1705	FOH	Staff Washrooms - Male	210		35	6				
1706	FOH	Staff Washrooms - Female	180		45	4				
1800		*STORAGE*								
1801	FOH	FOH / Operations Storage	400	2	400	1				
1803	FOH	Furniture Storage	2,000	2	2000	1				
1900		*RESTROOMS*								
		TOTAL - PUBLIC AREAS	9,090		0	= total WC sf				
2000		PERFORMANCE SPACES								See Individual Areas
		TOTAL - PERFORMANCE SPACES	0							
3000		STAGE SUPPORT								See Individual Areas
		TOTAL - STAGE SUPPORT	0							
4000		PERFORMERS SUPPORT					total P			See Individual Areas

GENERAL SERVICES - TICKETING										
Rm #	Level	Name	Net SF	Occup	Unit	No	W	D	H	Comments
		TOTAL - PERFORMERS SUPPORT	0							
5000		PRODUCTION SPACES								See Individual Areas
		TOTAL - PRODUCTION SPACES	0							
6000		SHOP SPACES								See Individual Areas
6500		*COMMON AREAS*								
6501	Street	Truck Apron	*0*		795	**0**	15	**53**	15	external parking required for additional trucks / busses
6502	Shop	Loading Dock w/ levelers	*0*		120	0	15	8	15	external area for levelers / bumpers / lights etc.
6503	Shop	Scene Dock	0		3,720	0	93	40	16	circulation between truck dock and stage
6506	Multi	Freight Elevator	in gross				10	22	14	
6508	Street	Garbage Disposal - Exterior	*0*		144	**0**	12	12		
6511		General Storage Units	0			**0**	**7**	**42**	**8**	container units stacked
		TOTAL - SHOP SPACES	0							
7000		ADMINISTRATION								
7000		*EXECUTIVE*			890					
7001B	FOH	Executive Director	250	**1**	250					
7006	FOH	Admin Assistant	300	**2**	150					
7007	FOH	Office Manager	120	**1**	120				7	
7010	FOH	Reception Area	220	**4**	55	1			12	Waiting area
7100		*FUNDRAISING*			0					
7200		*MARKETING*			600					
7201A	FOH	Marketing Director	150	**1**	150					
7205	FOH	Event Manager / Volunteer Coordinator	120	**1**	120	1			7	Volunteer Services Director
7206	FOH	Customer Service Manager	110	**1**	110	1			7	
7212	FOH	Marketing Offices	220	**2**	110					Publicist / Sec. / graphics

GENERAL SERVICES - TICKETING										
Rm #	Level	Name	Net SF	Occup	Unit	No	W	D	H	Comments
7300		*BUSINESS*			360					
7301A	FOH	Business Manager	120	**1**	120					BM / Asst.
7303	FOH	Bookeeper	110	**1**	110				7	Controller
7315	FOH	Information Technologies Tech	130	**1**	130	1			7	
7400		*OPERATIONS*			455					
7401A	FOH	VP - Operations	125	**1**	125	1			7	Operations Manager
7405A	FOH	Programming Manager	110	**1**	110					Asst. / Sec.
7407	FOH	Booking Manager	120	**1**	120					
7413	FOH	Building Engineer	100	**1**	100					
7900		*SERVICES*			1,067					
7901	FOH	Conference / Board Room	300	**20**	15	1			10	
7904	FOH	Staff Lunch Room / Pantry	150		150	**1**				
7907	FOH	Xerox / Mail Room	200		200	**1**			7	
7908	FOH	Restrooms - Male	72	2	36	**1**			7	
7909	FOH	Restrooms - Female	100	2	50	**1**			7	
7910	Baseme	Administrative Storage	200		200	**1**	200		7	Business storage
7911	FOH	Janitor's Closet - ADM	45		45	**1**				
		TOTAL - ADMINISTRATION	**3,372**				16	Total PAC Staff		FT & PT
								Tech offices shown in Stage Support		
8000		**SERVICES**						BO / FOH staff shown in Public Areas		
8000		*BOH SERVICES*								
8008	Street	Security / Parking Office	220	2	110	**1**				Head security / equip
8009		Security Staff Lockers	500	**50**	10	**1**				
8100		*BUILDING SERVICES*								
8101	Upp/Lo	Janitorial Storage	1,000		1000	**1**				main storage
8102	Upp/Lo	Janitorial Office / Lockers	300	**30**	10	**1**				Head custodian + 6
8105	Upp/Lo	Maintenance Store / Shop	500		500	**1**				main storage / work area
8107	Upp/Lo	Maintenance Office / Lockers	320	**2**	160	**1**				Building engineer + 1
8200		*PLANT / SERVICES*								

GENERAL SERVICES - TICKETING										
Rm #	Level	Name	Net SF	Occup	Unit	No	W	D	H	Comments
8201	Street	Loading Bays	*2,220*		1,110	2	15	74	15	external parking required for additional trucks / busses
8203	Stage	Receiving, storage / Distribution Area	3,000		3,000	1	60	50	16	
8206	Multi	Freight Elevator	*0*			0	12	24	10	interior cab dims
8207	Stage	Garbage Disposal - Interior	0		48	0	8	6		Catering / Loading Docks
8208	Street	Garbage Disposal - Exterior	*0*		144	0	12	12		
8209	Street	Recycling Room	500		500	1	20	25		
8210		Dock Storage								
8211	Stg/Low	Stage Air Compressors	*0*			1				
8300		*ELECTRICS / COMMUNICATIONS*								
8301	Lower	Phone Intake	*100*		100	1				
8302	Low/Up	Communications Hub Room (IT)	*240*		120	2				
8303	Low/Up	Telephone Closets	*300*		50	6				
8304	Lower	Electrical Intake	*200*		200	1				
8305	Lower	Transformer Room	*200*		200	1				
8306	Lower	High Voltage Room	*300*		300	1				
8307	Lower	Low Voltage Room	*300*		300	1				
8308	All	Electrical Closets	*384*		64	6				
8400		*MEP / HVAC*			12%	of total gross typical				
8401	Lower	Boiler Room	*400*		400	1				
8402	Lower	Chiller Room	*2,000*		2,000	1				
8403	Upper	Fan Room	*750*		150	5				
8404	Lower	Domestic Water Room	*50*		50	1				
8405	All	Mechanical Room - Misc	*600*		200	3				
8406	Low/Up	Supply Plenum	*0*		100	0				
		TOTAL - SERVICES	**6,340**		5,824					
9000		**EXTERNAL**								
9100		*EXTERIOR SERVICES*								
9103		Landscape Maintenance	1,764		1764	1	42	42		
		TOTAL - EXTERNAL	**0**							

CHANGE TRACKING	
V.1	Initial
V.2	Change Restaurant to Event Space
	Change Restaurant Kitchen to Warming Kitchen only
	Reduce Kitchen and Storage in size
V.3	Resized Chorus dressing rooms (no SF delta)
	Adjusted size of proscenium opening to reflect drawings
	Deleted orchestra enclosure and storage
	Deleted Stage Door Offices and Reception
	Deleted secondary sound cockpit/house mix position

APPENDIX D

VISUAL IMPACT ASSESSMENT

3.5 VISUAL AND AESTHETIC RESOURCES

3.5.1 Existing Conditions

The visual study area was defined as the area within a one-mile radius[1] 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).[2] 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.

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

[1] 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.
[2] USDA Soil Conservation Service (SCS). 1997. *Soil Survey of Onondaga County, NY,* January 1977.

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,[3] 2014b;[4] NYSOPRHP, 2012,[5] 2014a[6]). 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).[7] This database identifies 24 structures within the New York State Fairgrounds as NRHP-eligible, 10 of which fall within the visual study area.

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[3] National Register of Historic Places. 2014a. *Historic Districts* [website]. Available at: http://www.nationalregisterofhistoricplaces.com/districts.html (Accessed April 9, 2014).
[4] National Register of Historic Places. 2014b. *State Listings* [website]. Available at: http://www.nationalregisterofhistoricplaces.com/state.html (Accessed April 9, 2014).
[5] 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.
[6] 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).
[7] NYSOPRHP. 2014b. *SPHINX System*. Available at: http://pwa.parks.ny.gov/SPHINX/ (Accessed March 10, 2014).

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).[8]

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).[9] 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).[10]

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).[11]

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;[12] NYSDEC, 2014d[13]).

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).[14]

National Parks, Recreation Areas, Seashores and/or Forests

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

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

[10] 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).

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

[12] 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).

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

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

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;[15] USFS, 2014[16]).

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;[17] NYSDEC, 2014e[18]). The Nationwide Rivers 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).[19]

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, 2014[20]; USDOT, 2014).[21]

Scenic Areas of Statewide Significance

According to the NYS Department of State (2014)[22], 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;[23] NYSOPRHP, 2014f[24]).

Adirondack Park Scenic Vistas

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

[15] NPS. 2014b. *Find a Park in NY* [website]. Available at: http://www.nps.gov/state/ny/index.htm (Accessed April 4, 2014).
[16] 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).
[17] 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).
[18] NYSDEC. 2014e. *Wild, Scenic and Recreational Rivers* [website]. Available at: http://www.dec.ny.gov/permits/32739.html (Accessed April 9, 2014).
[19] NPS. 2014c. *Nationwide Rivers Inventory* [website]. Available at: http://www.nps.gov/ncrc/programs/rtca/nri/index.html (Accessed April 9, 2014).
[20] 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).
[21] 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).
[22] 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).
[23] NPS. 2014d. *National Trails System* [website]. Available at: http://www.nps.gov/nts/nts_trails.html (Accessed April 9, 2014).
[24] NYSOPRHP. 2014f. *Trails* [website]. Available at: http://www.nysparks.com/recreation/trails/. (Accessed April 11, 2014).

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.

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).[25]

Onondaga Lake Park is the most popular park in Central New York with over 1 million visitors per year (Onondaga County Parks, 2014).[26] 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.

[25] New York State Fair. 2014. *The Great New York State Fair* [website]. Available at: http://www.nysfair.org/ (Accessed May 9, 2014).
[26] 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 mass model 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 mass model 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 Mass Model Renderings

The photo documentation that resulted from EDR's field verification effort was used by C&S Companies for development of mass model renderings. The mass model 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 the 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 (Figure 13).

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

Mass model 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 __). 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 __). 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 __). 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 __, 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 __, 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 __). 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, 2009[27]).

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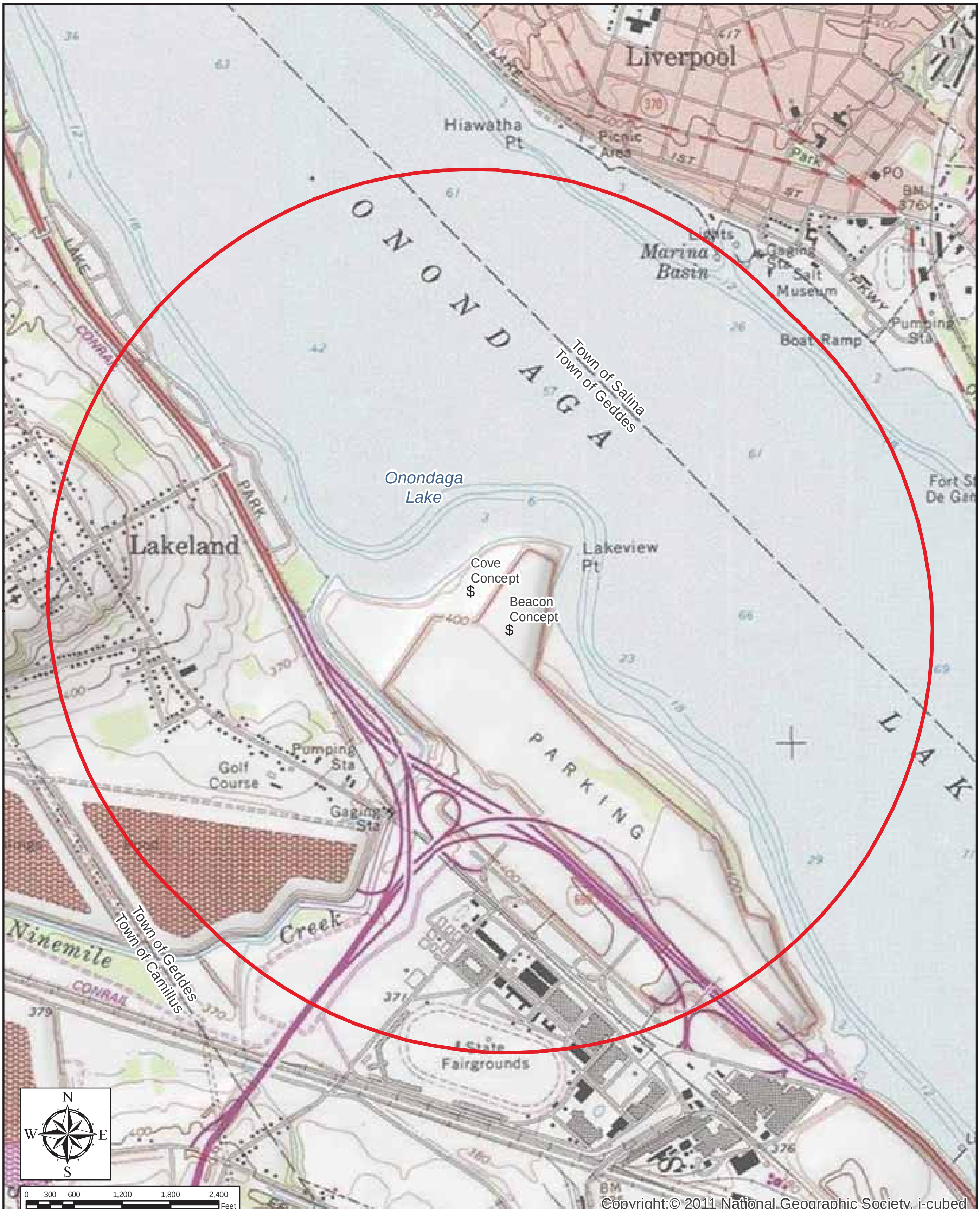
[27] The Dark Sky Society. 2009. Guidelines for Good Exterior Lighting Plans. Available at: http://www.darkskysociety.org/handouts/LightingPlanGuidelines.pdf.



ONONDAGA COUNTY LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT
JUNE, 2014

FIGURE 9: VISUAL STUDY AREA

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

$ POTENTIAL PROJECT LOCATION

ONE-MILE VISUAL STUDY AREA

ONONDAGA COUNTY LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT
JUNE, 2014

FIGURE 10: VISUALLY SENSITIVE RESOURCES

$ POTENTIAL PROJECT LOCATION

ONE-MILE VISUAL STUDY AREA

NOTES: BASEMAP: ESRI STREETMAP NORTH AMERICA, 2008.

ONONDAGA COUNTY LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT
JUNE, 2014

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

ONONDAGA COUNTY LAKEVIEW AMPHITHEATER
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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

ONONDAGA COUNTY LAKEVIEW AMPHITHEATER

DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

FIGURE 12: VIEWPOINT LOCATION MAP

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

EDR Project: Amphitheatre (14006)

Date: 4/28/14 Weather: Sunny → Ptly. 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	Balloon Visible 2	Location/ Sensitive Resource/ Comments	Direction of View
1	1	264 - 265	10:42	✓	✓	Onondaga Lake Park - Boat Launch	
2	-	266 - 268	10:58	✓	✓	Onondaga Lake - South end - No GPS	
3	2	269 - 271	11:03	✓	✓	" "	
4	3	272 - 273	11:05	✓	✓	" "	
5	4	274 - 276	11:08	✓	✓	" "	
6	5	277 - 279	11:10	✓	✓	" "	
7	6	280 - 282	11:12	✓	✓	" "	
8	7	283 - 285	11:14	✓	✓	" "	
9	8	286 - 287	11:18	✓	✓	" " - Just outside marina	
10	9	288	11:20	✓	✓	" " - Middle of lake	
11	10	289 - 290	11:21	✓	✓	" "	
12	11	291 - 292	11:23	✓	✓	" "	
13	12	293 - 294	11:24	✓	✓	" "	
14	13	295 - 296	11:25	✓	✓	" " - Just off point	
15	14	297 - 298	11:30	✓	✓	" " - North end near T'way	
16	15	299 - 300	11:31	✓	✓	" "	
17	16	301 - 302	11:33	✓	✓	" "	
18	17	303	11:35	✓	✓	" "	
19	18	304	11:37	✓	✓	" "	
20	19	305 - 306	11:38	✓	✓	" "	
21	20	307 - 308	11:43	✓	✓	" "	
22	21	309 - 310	11:56	✓	✓	Parkway	
23	22	311 - 312	12:17	✓	✓	Trailers on site - parking area	
24	23	313 - 314	12:20	✓	✓		
25	24	315	12:25	✓	✓	High Point on bike trail	
26	25	316 - 317	12:32	✓	✓		
27	26	318	12:35		✓		
28	27	319 - 320	12:40	✓		Bridge on bike path (actual bridge closed)	
29	28	321	12:42	✓	✓		
30	29	322 - 323	12:43	✓	✓		
31	30	324 - 326	12:45	✓	✓		
32	31	327 - 329	12:50	✓	✓		
33	32	330 - 331	12:52	✓	✓		
34	33	332 - 333	12:55	✓	✓	Overlook on bike trail	

EDR Project: Amphitheatre (14006)

Date: 4/28/14 Weather: Winds: Light Sheet: 2 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	Balloon Visible 2	Location/ Sensitive Resource/ Comments	Direction of View
35	35	334 - 337	1:00	✓	✓	Pavillion on bike trail	
36	34	338 - 342	1:05	✓	✓	Bike trail - end of card	
25	24	01	1:15	✓	✓	Reshoot of VP 25 (Waypoint 24) - New card	
37	36	02	1:18	✓	✓		
38	37	03-04	1:21	✓	✓	Pavillion 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	✓		Bridge over I690	
43	42	10 - 11	1:40	✓		Parking Lot Road	
44	44	12 - 13	1:45	✓		" " " extra GPS pt. ?	
45	45	14	1:50	✓		Parking Lot	
46	46	15	1:52	✓		" "	
47	47	16	1:55	✓	✓	" " - Balloon #2 barely vis through trees	
48	48	17	2:00	✓	✓	Trailer p. lot - GPS?	
23	22	18	2:02	✓	✓	Reshoot of VP 23 (Waypoint 22)	
24	23	19-21	2:05	✓	✓	Reshoot 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.	
						→ Regatta ROW - balloons vis. above rooftops	
51	50	26-27	2:28		✓	Balloon #1 behind bldg. - Luber Supply	

EDR Project: Amphitheatre (14006)

Date: Weather: Winds: Sheet: ___of___ Initials:

Balloon One: Orange GPS #: Height: 87' Color: Camera:

Balloon Two: Red GPS #: Height: 87' Color:

VP #	GPS #	Photo Reference	Time	Balloon Visible 1	Balloon Visible 2	Location/ Sensitive Resource/ Comments	Direction of View
1		0207 - 0212	10:24	X		State fair Parking lot	N
2	1	0213 - 0218	11:14	X	X	Creek walk near benches	N
3	2	0219 - 0221	11:22			Destiny USA parking lot	NW
4	3	0222 - 0227	11:28	X		Best Buy upper parking area	NW
5	4	0228 - 0231	11:41	X	X	Hiawatha Blvd Bridge	N
6	5	0232 - 0236	11:47			I-690 west near exit 7	N
7	6	0237 - 0240	11:51	X		695 to Auburn exit	NE
8	7	0241 - 0244	12:00	X		695 toward 690	E
9	8	0245 - 0249	12:10	X	X	695 overpass to 690 west	E
10	9	0250 - 0253	12:15			I-690 east - no visibility	S
11	10	0254 - 0260	12:18	X	X	I-690 east - near bridge on site	E
12	11	0261 - 0266	12:21			I-690 east - near fairgrounds exit	NE
13	12	0267 - 0273	12:26			Gate 4 - NYS Fairgrounds	NE
14	13	0274 - 0279	12:32	X	X	NYS Fairgrounds	E
15	14	0280 - 0284	12:38			" " - Ag Museum	E?
16	15	0285 - 0291	12:45	?	?	State fair Boulevard - near car mechanic	E
17	16	0292 - 0295	12:50	X	X	Senior landing living facility	E
18	17	0296 - 0300	1:05			Lake country drive - no visibility	SE
19	18	0301 - 0306	1:10	one visible		our lady peace church	SE
20	19	0307 - 0309	1:15		X	End of church Street	SE
21	20	0310 - 0317	1:28			Secret Heart cementary	SE
22	21	0318 - 0327	1:34			Solvay Middle School	SE
23	22	0328 - 0339	1:48		X	west lake shore trail overpass	SE
24	23	0340 - 0346	1:52			new trail connecting to west shore trail	S
25	24	0347 - 0353	2:06	X	X	West lake shore trail - Bench	S
26	25	0354 - 0356	2:01	X	X	" "	S
27	26	0357 - 0364	2:15	X	X	" " observation deck	S
28	27	0365 - 0368	2:21			" "	
29	28	0369 - 0373	2:44	X	X	Onondaga County lake park - picnic area	S
30	29	0374 - 0379	2:48	X	X	" "	S
31	30	0380 - 0383	2:51	X	X	" "	SW
32	31	0384 - 0387	2:54	X	X	" " pavilion	W
33	32	0388 - 0391	3:00	X	X	" "	W
34	33	0392 - 0399	3:02	X	X	" "	W
35	34	0400 - 0402	3:26			ST Paul's lutheran church	W

EDR Project: Amphitheatre (14006)

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

VP #	GPS #	Photo Reference	Time	Balloon Visible 1	Balloon Visible 2	Location/ Sensitive Resource/ Comments	Direction of View
36	35	0403 - 0410	3:32			Gleason center Museum – liverpool	W
37	36	0411 - 0416	3:36			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 WP	W
40	39	0427 - 431	3:53	X	X		W
41	40	0432 - 439	3:53	X	X	onondaga Yacht club boat launch	
42	41	0440 - 0444	4:03	X	X	Onondaga county lake park – Baseball fields	W
43	42	0445 - 0448	4:05	X	X	" "	W
44	43	0449 - 0454	4:08	X	X	" " observation point	W
45	44	0455 - 0459	4:16	X	X	Butterfly Garden Onondaga lake parkway	W
46	45	0460 - 0464	4:19	X	X	Onondaga lake parkway	W
47	46	0465 - 0476	4:23	X	X	" "	W
48	47	0477 - 0482	4:26			" "	W
49	48	0483 - 0487	4:35	X		over pass/walking Bridge to state fair parking	W
50	49	0488 - 0494	4:37	X			

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

ORIGINAL PHOTO

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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.

C&S COMPANIES

edr

LAKEVIEW AMPHITHEATER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

JUNE, 2014

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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Viewpoint 3:

Viewpoint 4:

Viewpoint 5:

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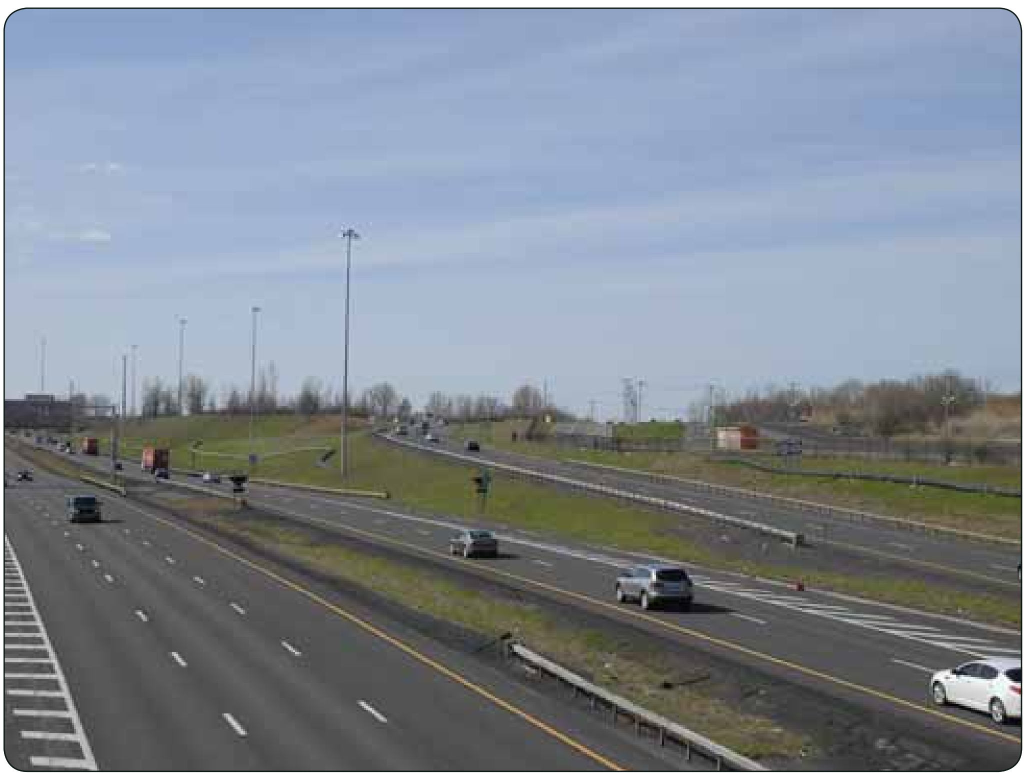

Viewpoint 100:

Viewpoint 101:

APPENDIX E

PRELIMINARY GEOTECHNICAL ASSESSMENT

Written by:	M. Erten/A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.: GD5598		Task No.:	01

ONONDAGA LAKEVIEW AMPHITHEATER CONCEPTUAL GEOTECHNICAL EVALUATION

INTRODUCTION

This calculation package was prepared in support of the conceptual design of the Onondaga Lakeview Amphitheater. The proposed amphitheater will be located at the northern shoreline of Wastebeds 1 through 8 near Onondaga Lake in Syracuse, New York. The site was historically used as a disposal area for the byproduct (i.e., Solvay waste) from the chemical process to manufacture soda ash. Figure 1 shows the proposed conceptual grading plan of the amphitheater provided by C&S Engineers. The major components of the amphitheater include a building with performance stage, a covered concrete seating area, a lawn area, and associated access roads. According to the information provided by C&S Engineers, the proposed amphitheater building and seating area is expected to be supported by deep pile foundations founded on bedrock; while the lawn area will not be supported by piles. The pile-supported building and seating area and the non-pile-supported lawn area is delineated by a bike path on the grading plan, as shown in Figure 1. The proposed conceptual grading plan involves cutting and filling of the existing wastebed. At the request of C&S Engineers, Geosyntec performed a conceptual geotechnical evaluation of the slope stability, settlement, and pile foundations for the proposed amphitheater conceptual grading plan.

Specifically, the purpose of the conceptual geotechnical evaluation was to: (i) develop the subsurface stratigraphy and material properties at selected cross sections using available geotechnical data; (ii) evaluate the slope stability of the site under the existing and post-grading conditions; (iii) estimate the settlement of subsurface materials under the loading from fill and access roads and evaluate potential differential settlement at critical locations; (iv) provide an initial estimate of the end bearing and skin friction capacities for the pile foundations founded on bedrock; and (v) provide preliminary recommendations on geotechnical approaches regarding amphitheater structure foundation, site and slope development, site access roads, and miscellaneous site support structures.

GEOTECHNICAL INVESTIGATIONS

Previous geotechnical investigations were conducted by O'Brien and Gere (OBG) in the area where the proposed amphitheater is located as part of the ongoing Onondaga Lake Cleanup project. The purpose of the geotechnical investigations was to characterize the subsurface conditions and geotechnical properties of the subsurface materials. Details of these geotechnical investigations were summarized in the reports titled "*Wastebeds 1 through 8 Integrated IRM 50% Design*" dated May, 2010 [OBG, 2010a], "*Focused Feasibility Report for Wastebeds 1 through 8*" dated June, 2010 [OBG 2010b], and "*SMU-4 Pre-Design Investigation Addendum Summary Report*" dated June 2011 [OBG 2011]. Figure 1 presents the approximate locations of soil borings in or near the proposed footprint of the amphitheater based on the historical geotechnical investigations conducted by OBG. The available geotechnical data from the OBG reports were used to develop the subsurface stratigraphy and geotechnical properties of subsurface materials that were used in the preliminary slope stability analyses, settlement calculations, and pile foundation evaluation presented in this package. Two new soil borings (i.e., Borings LVA-B1 and LVA-B2) were advanced by C&S Engineers in May 2014 within the proposed footprint of the amphitheater. The information from these two new borings was also considered in the development of subsurface stratigraphy. Samples were collected and sent to a geotechnical laboratory; however, the test results were not available at the time when this conceptual geotechnical evaluation was performed.

SUBSURFACE STRATIGRAPHY

Figures 2 through 4 show the interpreted subsurface stratigraphy at three selected cross sections (i.e., Cross Sections 1 to 3 shown on Figure 1) based on the information from historical borings conducted by OBG and two new borings recently conducted by C&S Engineers.

In general, the site stratigraphy consists of (from top to bottom) a 25 to 50 ft-thick layer of Solvay waste (SOLW), a 15 to 20 ft-thick layer of marl, silt and sand, silt and clay, and bedrock. Nine borings used for developing the subsurface stratigraphy of the selected three cross sections were terminated in the silt and sand or silt and clay layer. One boring (i.e, WB18-SB-16BR located close to the shoreline) was advanced to bedrock. The encountered bedrock was described as shale with a reported standard penetration test blow count (or, SPT N-value) of greater than 80 at a depth of 134 ft below the ground surface.

MATERIAL PROPERTIES

Parameters for Slope Stability Analysis

The material properties (i.e., total unit weight and shear strength) used in the slope stability analysis are presented in Table 1. The properties of SOLW and marl were interpreted by Geosyntec from the available geotechnical laboratory test results provided in OBG's reports. The properties of the fill, the compacted SOLW (i.e., the wastebed berm material), and the silt and sand were assumed by Geosyntec for the purpose of conceptual geotechnical evaluation.

Parameters for Settlement Calculations

The material properties (i.e., total unit weight and consolidation parameters) used in the settlement calculations are presented in Table 2. The properties of SOLW and marl were interpreted by Geosyntec from the available geotechnical laboratory test results provided in OBG's reports. The deeper layers (i.e., the silt and sand and the silt and clay) were not considered in the settlement calculations for the purpose of conceptual geotechnical evaluation, as the settlement of these deeper layers is not expected to be significant.

EXTERNAL LOADING

No external loading from construction equipment were considered in the slope stability analysis and settlement calculations during the conceptual geotechnical evaluation. It will be evaluated in the next stage of design.

SLOPE STABILITY ANALYSES

Methodology

The rotational and block slip surface modes were considered in the slope stability analyses. The slope stability analyses were performed using Spencer's Method [Spencer, 1973] for rotational slip surfaces and Janbu's Simplified Method [Janbu, 1973] for block type of slip surfaces, as implemented in the computer program SLIDE, version 6.025 by Rocscience.

The SLIDE program generated potential circular and block slip surfaces, calculated the factor of safety for each of these surfaces, and identified the most critical slip surface with the lowest factor of safety. Information required for the analyses included the slope geometry, the subsurface soil stratigraphy, the groundwater elevation, the external loading condition if applicable, and the properties of subsurface materials.

Written by:	**M. Erten/A. Ebrahimi**	Date:	**5/30/2014**	Reviewed by:	**Ming Zhu/Jay Beech**	Date:	**6/02/2014**
Client:	**C&S Engineers**	Project:	**Amphitheater Conceptual Geotechnical Evaluation**	Project No.: **GD5598**		Task No.:	**01**

Target Factor of Safety

The target factor of safety was selected as 1.30 for the interim-undrained conditions, which were analyzed during the conceptual geotechnical evaluation, in accordance with the Engineering Manual "*Engineering and Design – Slope Stability*" prepared by the U.S. Army Corps of Engineers [USACE, 2003].

Slope Stability Analysis Results

Slope stability analyses were performed on two of the three cross sections (i.e., Cross Sections 1 and 2) for the undrained conditions with the existing and post-grading geometries. The initial undrained shear strength values of the subsurface materials were used in the analyses. No shear strength increase due to placement of the fill was considered, as it takes time for the subsurface materials to consolidate and thereby, gain shear strength under the loading from the fill. The minimum calculated factors of safety were reported for both the slopes near the shoreline and under the proposed seating area. The calculated minimum factors of safety are presented in Table 3. Cross Section 3 was not analyzed, but the results are expected to be similar to the other two cross sections.

The calculate factors of safety for the shoreline slope under the existing conditions at Cross Sections 1 and 2 were shown in Figures 5 and 6, respectively. The calculated minimum factors of safety for the shoreline slope are both 1.25. Since the post-grading geometry of this shoreline area did not change from the existing geometry in the slope stability models, the same factors of safety (i.e., 1.25) were calculated for the shoreline slope under the post-grading conditions as well. Figures 7 and 8 show the calculated factors of safety for the seating area slope at Cross Section 1, with 1.42 for the existing conditions and 1.66 for the post-grading conditions. Figures 9 and 10 show the calculated factors of safety for the seating area slope in Cross Section 2, with 1.55 for the existing conditions and 1.32 for the post-grading conditions.

The calculated minimum factors of safety were considered acceptable, except for the berm slope near the shoreline that has a calculated factor of safety slightly less than the target factor of safety. Geotechnical approaches to improve the slope stability are discussed in the end of this calculation package. It is recommended that more detailed slope stability analyses be performed in the next stage of design.

Written by:	M. Erten/A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	01

SETTLEMENT CALCULATIONS

Methodology

The settlement of compressible materials was calculated using the 1-D consolidation theory, which is widely accepted in geotechnical engineering practice [e.g., Holtz and Kovacs, 1981]. The total consolidation settlement consists of the primary settlement caused by the drainage of porewater under surcharge loading and the secondary settlement due to soil creep:

$$S_c = S_p + S_s \tag{1}$$

where,

S_c = total consolidation settlement
S_p = primary settlement
S_s = secondary settlement

The primary settlement was calculated using the following equations:

$$S_p = C_{r\varepsilon}\,\Delta H \log\left(\frac{\sigma'_{vo} + \Delta\sigma'_v}{\sigma'_{vo}}\right) \qquad \text{for } \sigma'_{vo} + \Delta\sigma'_v \le \sigma'_p \tag{2}$$

$$S_p = C_{r\varepsilon}\,\Delta H \log\left(\frac{\sigma'_p}{\sigma'_{vo}}\right) + C_{c\varepsilon}\,\Delta H \log\left(\frac{\sigma'_{vo} + \Delta\sigma'_v}{\sigma'_p}\right) \qquad \text{for } \sigma'_{vo} + \Delta\sigma'_v > \sigma'_p \tag{3}$$

where,

$C_{c\varepsilon}$ = $C_c / (1+e_0)$, modified compression index
C_c = compression index
e_0 = initial void ratio
$C_{r\varepsilon}$ = $C_r / (1+e_0)$, modified recompression index
C_r = recompression index
ΔH = layer thickness
σ'_{vo} = initial vertical effective stress
σ'_p = preconsolidation pressure
$\Delta\sigma'_v$ = vertical effective stress increase due to loading

The secondary settlement was calculated using the equation below:

$$S_s = C_{\alpha\varepsilon}\,\Delta H \log\left(\frac{t_2}{t_1}\right) \tag{4}$$

where,

$C_{\alpha\varepsilon}$ = $C_\alpha / (1+e_0)$, modified secondary compression index
C_α = secondary compression index
t_1 = time for completion of primary consolidation
t_2 = time when settlement due to secondary compression is computed (assumed as 100 years in the settlement calculations in this package)

The following equation related to the time rate of consolidation was used to calculate t_1:

$$t_1 = \frac{TH_{dr}^2}{c_v} \tag{5}$$

where,

T = time factor
c_v = coefficient of consolidation
H_{dr} = longest drainage path.

The time factor (T) is a function of the average degree of consolidation (U). For U = 90%, which is usually assumed as the end of primary consolidation for practical purposes, the value of T is 0.848. Therefore, Equation 5 became:

$$t_{1,90\%} = 0.848\frac{H_{dr}^2}{c_v} \tag{6}$$

Settlement analyses were performed using the computer program Settle 3D by Rocscience. Settle 3D is a three-dimensional (3D) program for analysis of settlement and consolidation, which computes settlements, stresses and porewater pressures throughout the 3-D volume. Settle 3D was selected for use due to the program's ability to model load dissipation (e.g., using Boussinesq stress dissipation methods) and time-dependent consolidation. Input parameters required for Settle 3D include loading (i.e., the fill geometry and weight), subsurface stratigraphy, consolidation parameters, and unit weights.

Written by:	**M. Erten/A. Ebrahimi**	Date:	**5/30/2014**	Reviewed by:	**Ming Zhu/Jay Beech**	Date:	**6/02/2014**
Client:	**C&S Engineers**	Project:	**Amphitheater Conceptual Geotechnical Evaluation**	Project No.: **GD5598**		Task No.:	**01**

Calculation Results

Settlement calculations were performed at four selected locations along Cross Section 1, as shown in Figure 11. The settlement calculation results are presented in Table 4. It should be noted that the calculated settlement is depending on fill thickness and subsurface geometry. For the purpose of conceptual geotechnical evaluation, only four locations along Cross Section 1 were evaluated and a parametric study was conducted by varying the fill thickness at each location to understand the sensitivity and estimate the anticipated approximate range of settlement. It is recommended that more detailed settlement calculations will be performed in the next stage of design.

The settlement calculation results indicate that the calculated total settlement ranges approximately from 0.4 ft to 5.8 ft depending on the fill thickness, which was assumed to vary from 1 ft to 16 ft, and subsurface geometry. The maximum settlement of 5.8 ft was calculated at the highest point of the lawn area corresponding to the anticipated maximum fill thickness of 16 ft. It is also expected that significant differential settlement may occur at critical locations, including an order of approximately 3 ft (corresponding to 10 ft fill) in the transition area between the pile-supported seating area and the lawn area and an order of approximately 1 to 2 ft (corresponding to 8 ft fill) at the connection between the access road and the pile-supported loading deck in the rear of the amphitheater structure. As discussed in the next section, the pile-supported area is expected to have minimal settlement.

The simplified method by US Department of the Interior [2001] was used to estimate the minimum required gravel thickness for the access roads for the purpose of preliminary settlement calculations. The gravel thickness was estimated for a wheel load of 16 kips (i.e., half of the total 32-kips axle load from an HS-20 vehicle) based on an assumed California Bearing Ratio (CBR) of 4 for the subsurface material, which is about 23 inches as shown in Figure 12. It is important to note that the value for CBR of 4 was assumed as a minimum value required since materials with lower values of CBR than 4 will likely need to be improved (e.g., excavated and replaced with competent materials or reinforced with geosynthetics). Due to the potentially nonhomogeneous foundation materials, the access roads may experience differential settlement along the proposed route. The amount of differential settlement along the access road should be estimated during the next stage of design when the proposed route is available.

PILE FOUNDATION EVALUATION

The anticipated column loading from the amphitheater structure was not provided to Geosyntec. For the purposes of conceptual deep foundation design, Geosyntec recommends the installation of steel H-piles driven to refusal at or below the top of shale bedrock, which is expected to be 150 ft to 200 ft below ground surface. For compression loads on individual steel piles driven to refusal, an allowable compression stress of 16 kips per square inch (ksi) may be used as an initial estimate for developing working structural and geotechnical resistances (International Building Code 2009, Table 1810.3.2.6). Uplift resistance can be preliminarily estimated considering a working unit skin friction of 300 psf, with embedded length in the SOLW being excluded for any calculations (International Building Code 2009, Section 1810.3.3.1.4). Table 5 provides a few commonly available steel H sections along with required geometric data. Prior experience with toe bearing steel H-piles indicates that settlement can be expected to be approximately 1 in or less.

It should be noted that for this conceptual design, Geosyntec did not perform: (i) drivability analysis, (ii) group effect evaluation, (iii) lateral load analysis, (iv) downdrag analysis, if applicable, (v) feasibility of a friction pile foundation that would not extend to bedrock, (vi) detailed analysis for allowable resistances (tip and skin), or (vii) detailed settlement calculations. Detailed geotechnical evaluation of the pile foundation should be performed as part of the next stage of design.

RECOMMENDATIONS

The following geotechnical approaches are recommended based on the results of the conceptual geotechnical evaluation presented above in this package.

Amphitheater Structure Foundation

It is recommended that the amphitheater structure be supported by steel H-piles bearing on bedrock. An allowable compression stress of 16 ksi and a working unit skin friction of 300 psf may be used as an initial estimate for developing working structural and geotechnical resistances. More detailed geotechnical analysis should be performed in the next stage of design to evaluate the pile foundation. In addition, the compatibility of the steel H-piles with the surrounding Solvay waste should be evaluated and corrosion protection of the piles should be considered as needed.

Site and Slope Development

The proposed conceptual grading plan involves cutting a portion of the existing ground (including the berms that contain the SOLW) and placing up to approximately 16 ft of fill on the existing ground. The slope stability analysis based on the proposed conceptual grading plan indicates that the calculated minimum factor of safety is generally considered acceptable, expect for the berm slope near the shoreline where the calculated factor of safety is slightly less than the target factor of safety. Further slope stability analysis should be performed when the final grading plan is proposed. Several approaches can be used to improve the slope stability as needed, including regrading to a gentle slope, toe buttressing, and placing light-weight fill.

As mentioned before, up to approximately 16 ft of fill is expected to be placed on the existing ground. Results of the settlement calculations indicate that the estimated settlement is up to approximately 6 ft. Since the amphitheater structure will be supported by piles, it is expected that significant differential settlement on the order of approximately 3 ft (corresponding to 10 ft fill) may occur in the transition zone between the amphitheater structure and the lawn area, as the latter will not be supported by piles. Light-weight fill may be considered to reduce the loading and thereby, reduce the amount of settlement. This can be used in conjunction with structural considerations, e.g., a structure joint that allows a certain amount of differential settlement.

In addition, surcharging may be considered as an approach to reduce the differential settlement, because most, if not all, of the settlement is expected to happen during the surcharging prior to the start of site construction. Staged construction may be required during surcharging in order to maintain slope stability due to the existing soft ground. Previous experience with the SOLW from the test pad in Wastebed 13 at the Onondaga Lake site indicated that generally the SOLW reached 80% to 90% consolidation within approximately 3 to 5 months. Wick drains may be effective at accelerating the consolidation as needed during surcharging.

Site Access Roads

Stability of the side slopes of the access roads under vehicle loading was not evaluated as part of the conceptual design. Due to the existing soft foundation materials at the site, georeinforcements (e.g., geogrids and geotextiles) may be required at the base of the access road to improve the slope stability; or, the foundation materials may be required to be excavated and replaced with adequate competent base materials (e.g., gravels) before constructing the access roads. The analysis should be performed during the next stage of design when the proposed access road plan is available.

The proposed route of the access roads was not available on the conceptual grading plan received by Geosyntec. Settlement calculations of the access roads were performed at limited locations on one representative cross section. The calculated settlement ranges approximately from 0.4 to 2 ft corresponding to an assumed road thickness of 2 to 8 ft. Due to the potentially nonhomogeneous foundation materials, the access roads may experience differential settlement along the proposed route. Based on the calculation results, the most significant differential settlement on the order of approximately 1 to 2 ft (corresponding to 8 ft fill) is expected to occur at the connection between the access road and the loading deck in the rear of the amphitheater structure, as the latter will be supported by piles. As discussed previously, surcharging the access road route may be used as an approach to reduce the settlement. In addition, light-weight fill may be used to replace part of the foundation materials of the access roads to reduce the net increase of loading and thereby, reduce the settlement.

Miscellaneous Site Support Structures

No specific information was available regarding the site support structures and therefore, no evaluation was performed for the foundations of these structures as part of the conceptual geotechnical evaluation. Conceptually, a “floating foundation” approach may be used for these small structures to minimize potential settlement, i.e., by excavating the foundation materials the net increase of loading on the subsurface materials may become zero or negative.

Summary

In summary, the conceptual geotechnical evaluation results indicate that the proposed conceptual grading plan appears to be feasible with respect to geotechnical considerations. Potential issues of settlement and slope stability should be further evaluated in more details and addressed during the next stage of design by considering geotechnical approaches recommended above. It is our understanding that additional geotechnical investigation will be performed and more detailed geotechnical analysis will be performed during the next stage of design.

Written by:	**M. Erten/A. Ebrahimi**	Date:	**5/30/2014**	Reviewed by:	**Ming Zhu/Jay Beech**	Date:	**6/02/2014**
Client:	**C&S Engineers**	Project:	**Amphitheater Conceptual Geotechnical Evaluation**	Project No.: **GD5598**		Task No.:	**01**

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Written by:	M. Erten/A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	01

Table 1. Summary of Material Properties Used in Slope Stability Analysis

Material	Total Unit Weight (pcf)	Drained Shear Strength[1]		Undrained Shear Strength[1] (psf)
		c’	ϕ’	From CU Tests
Fill	120	5	30	N/A
Compacted SOLW (Berm Material)	100	5	30	N/A
SOLW	80	250	36	S_u/σ'_v =0.40 $S_{u,min}$ =300
Marl	110	0	33	S_u/σ'_v = 0.30 $S_{u,min}$ =200
Silt and Sand	120	0	32	N/A

Notes:

1. Undrained shear strength values were interpreted from the CU test results included in OBG reports as discussed in the text.
2. N/A = Not Available

Table 2. Summary of Material Properties Used in Settlement Calculations

Material	**Total Unit Weight (pcf)**	**Consolidation Parameters**					
		$C_{c\varepsilon}$	**$C_{r\varepsilon}$**		**$C_{\alpha\varepsilon}$**	**C_v (ft^2/d)**	***OCR***
SOLW	80	0.36	0.026	For $\sigma_v/\sigma_p' < 1.0$	0.0035	0.55	2.0
				For $\sigma_v/\sigma_p' > 1.0$	0.0059	1.21	
Marl	110	0.19	0.020	For $\sigma_v/\sigma_p' < 1.0$	0.0024	0.74	2.0; for 0 to 20 ft deep 1.5; for 20 to 40 ft deep 1.0; for > 40 ft deep
				For $\sigma_v/\sigma_p' > 1.0$	0.0055	1.86	

Note:

1. The consolidation parameters were interpreted by Geosyntec from the available geotechnical data included in OBG reports as discussed in the text. For SOLW, the parameters were interpreted one consolidation test from WB18-SB-31NM located in Wastebeds 1 through 8, but not in the area where the proposed amphitheater is located.

Table 3. Summary of Calculated Minimum Factors of Safety

Cross Section	Geometry	Location	Factor of Safety	Note
1	Existing Conditions	Seating Area	1.42	Figure 7
		Shoreline	1.25	Figure 5
	Post-grading Conditions	Seating Area	1.66	Figure 8
		Shoreline	1.25	--
2	Existing Conditions	Seating Area	1.55	Figure 9
		Shoreline	1.25	Figure 6
	Post-grading Conditions	Seating Area	1.32	Figure 10
		Shoreline	1.25	--

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	01

Table 4. Summary of Settlement Calculation Results

Cross Section	Fill Thickness (ft)	Assumed Ground Water Depth (ft)	Calculated Primary Consolidation Settlement (ft)	Calculated Secondary Consolidation Settlement (ft)	Total Settlement (ft)
Point #1 (Representing Access Road)					
1	2	10	0.2	0.3	0.5
1	4		0.4	0.3	0.7
1	6		1.0	0.3	1.3
1	8		1.6	0.3	1.9
Point #2 (Representing Connection between Access Road and Loading Deck)					
1	2	10	0.1	0.3	0.4
1	4		0.3	0.3	0.6
1	6		0.4	0.3	0.7
1	8		0.5	0.3	0.8
Point #3 (Representing Transition between Seating Area and Lawn Area)					
1	1	10	0.1	0.3	0.4
1	5		0.6	0.3	0.9
1	10		2.2	0.3	2.5
Point #4 (Representing Middle of Lawn Area)					
1	8	10	1.2	0.3	1.5
1	16		5.4	0.4	5.8

Table 5. Common Sizes of Steel H-Piles

Pile Size	Cross-Sectional Area (in^2)	Max. Working Compression Resistance (kips)	Perimeter Side Area (ft^2/ft) (1)	Max. Working Tension Resistance (kips) (2)
HP 12x53	15.5	240	4.0	100
HP 14x73	21.4	340	4.7	110
HP 14x89	26.1	410	4.7	110
HP 16x101	29.8	470	5.2	130

Notes:

1. The skin area given is the boxed perimeter area. Analysis of soil plugging has not been made.
2. It was assumed the depth to rock of 134 ft and excluding 50 ft of embedment in Solvay Waste. The actual depth of rock may vary and the maximum working tension resistance should be re-evaluated during the next stage of design.

Written by:	M. Erten/ A. Ebrahimi, W. Tanner	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	**C&S Engineers**	Project:	**Amphitheater Conceptual Geotechnical Evaluation**	Project No.: **GD5598**		Task No.:	**01**

Figure 1. Conceptual Grading Plan and Approximate Locations of Available Soil Borings

Written by:	**M. Erten/ A. Ebrahimi**	Date:	**5/30/2014**	Reviewed by:	**Ming Zhu/Jay Beech**	Date:	**6/02/2014**
Client:	**C&S Engineers**	Project:	**Amphitheater Conceptual Geotechnical Evaluation**	Project No.: **GD5598**		Task No.:	**01**

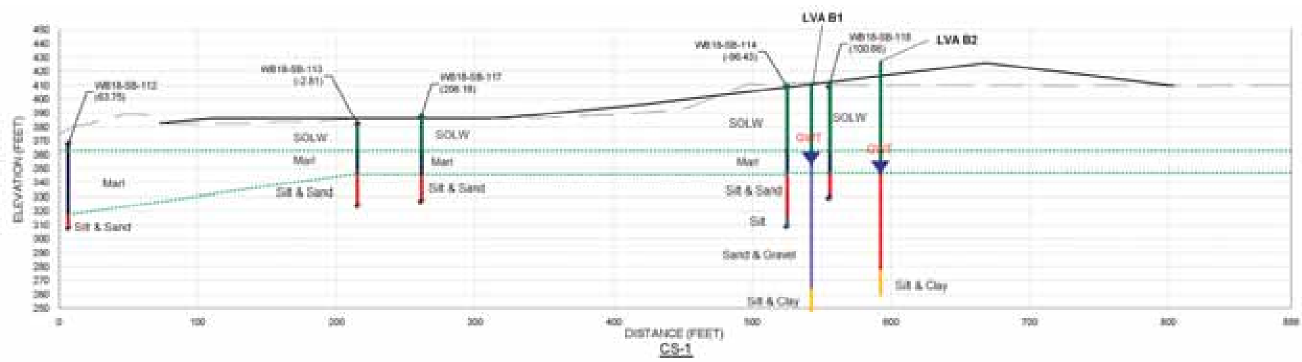

Figure 2. Geometry of Cross Section 1

Note: The dashed line at the top represents the existing ground and the solid line at the top represents the proposed grading.

Written by:	**M. Erten/ A. Ebrahimi**	Date:	**5/30/2014**	Reviewed by:	**Ming Zhu/Jay Beech**	Date:	**6/02/2014**
Client:	**C&S Engineers**	Project:	**Amphitheater Conceptual Geotechnical Evaluation**	Project No.: **GD5598**		Task No.:	**01**

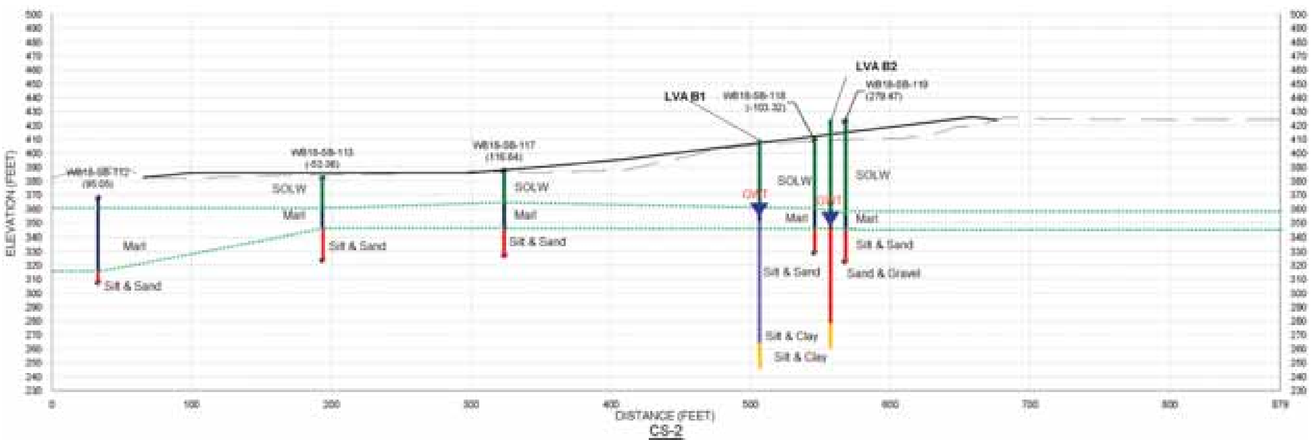

Figure 3. Geometry of Cross Section 2

Note: The dashed line at the top represents the existing ground and the solid line at the top represents the proposed grading.

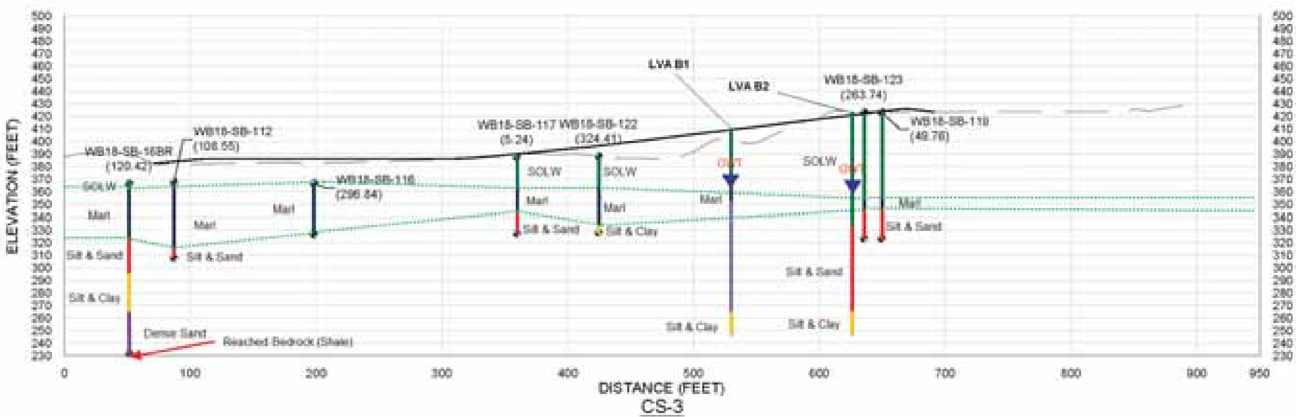

Figure 4. Geometry of Cross Section 3

Note: The dashed line at the top represents the existing ground and the solid line at the top represents the proposed grading.

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.: GD5598		Task No.:	01

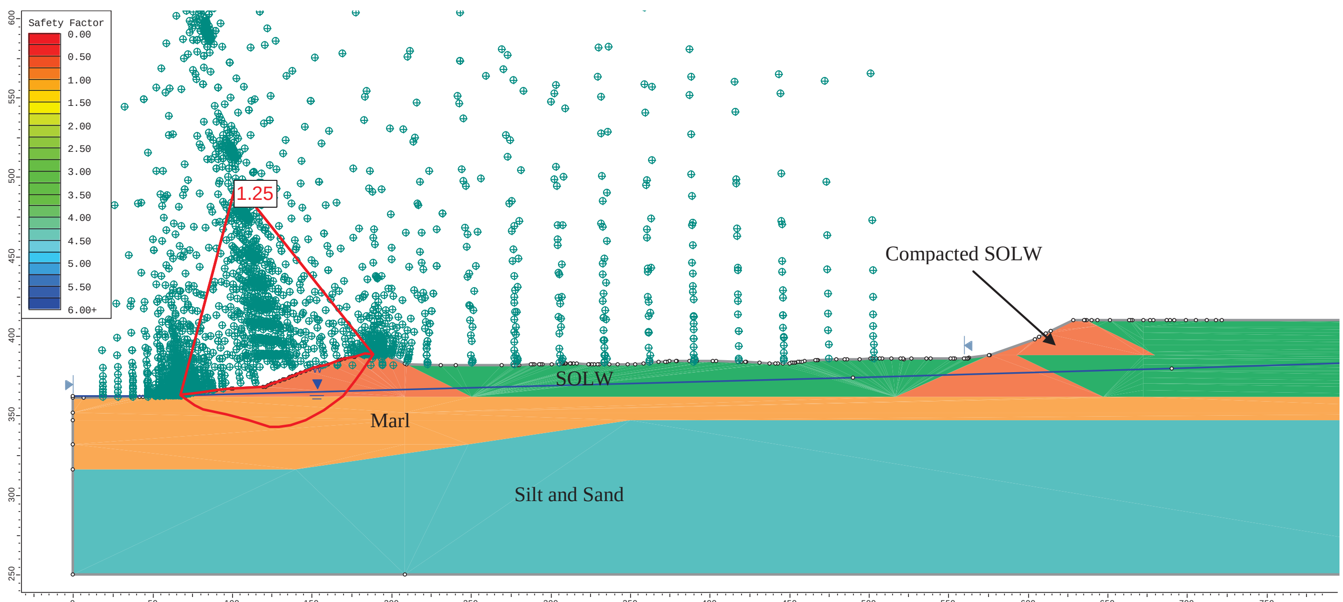

Figure 5. Slope Stability Analysis Results of Cross Section 1 (Shoreline Berm, Existing Undrained Conditions)

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	01

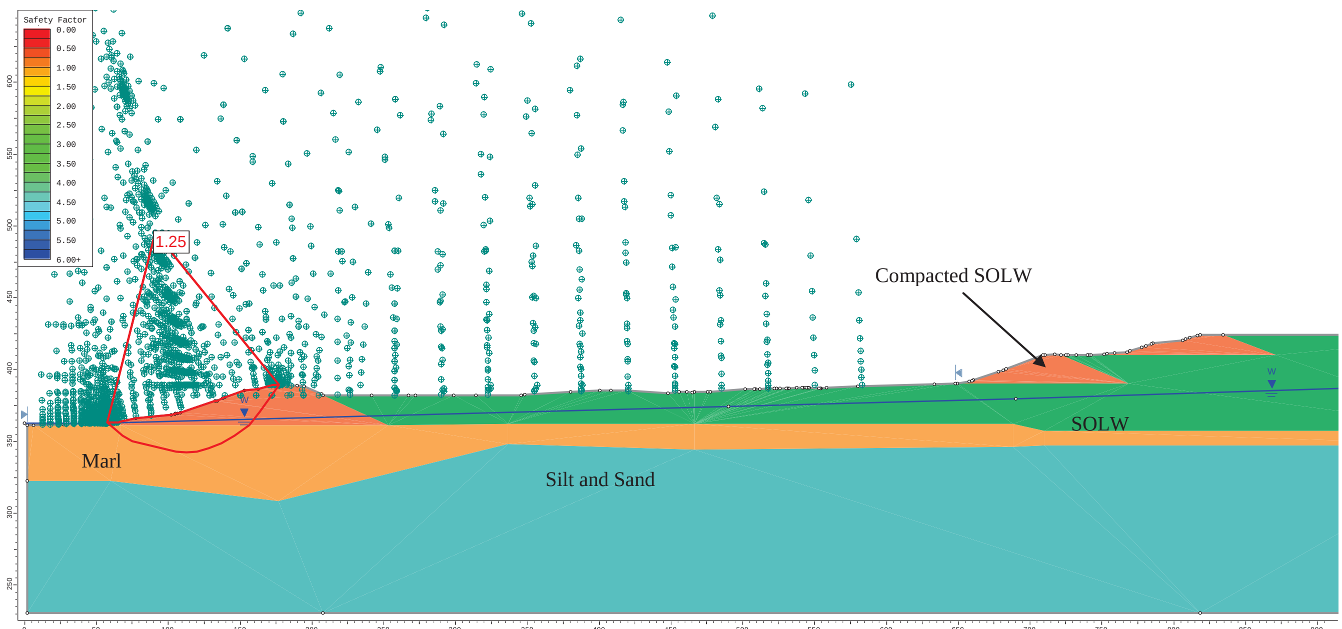

Figure 6. Slope Stability Analysis Results of Cross Section 2 (Shoreline Berm, Existing Undrained Conditions)

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	01

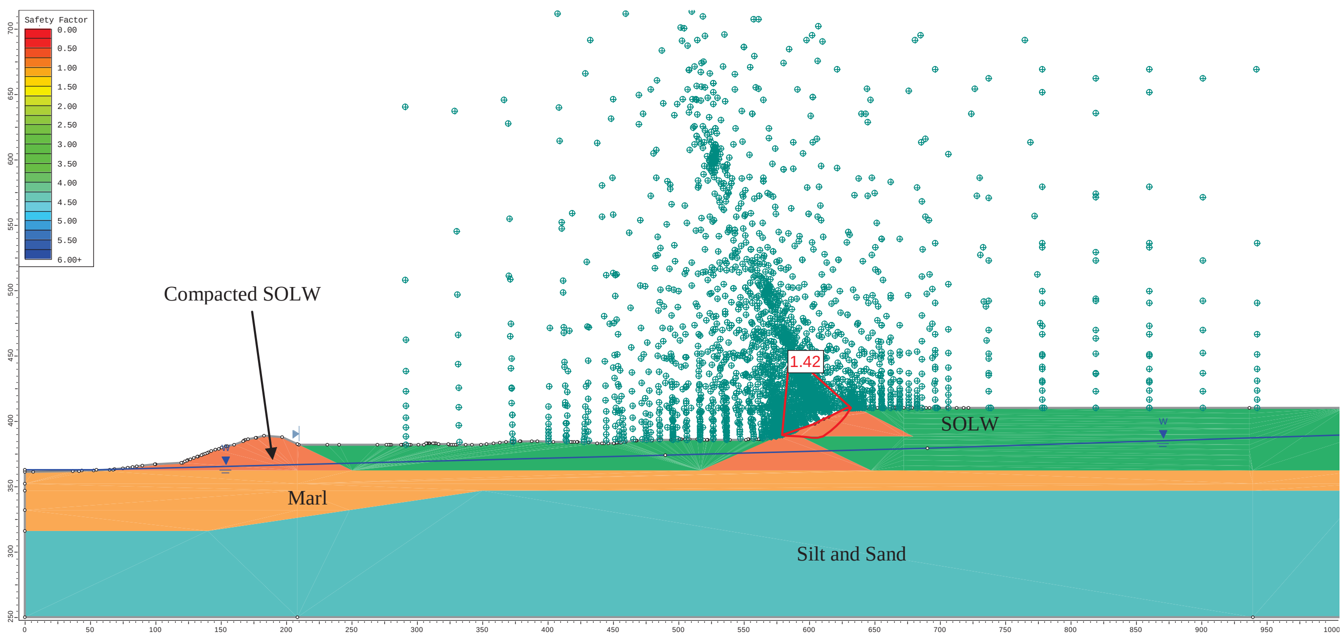

Figure 7. Slope Stability Analysis Results of Cross Section 1 (Proposed Seating Area, Existing Undrained Conditions)

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	01

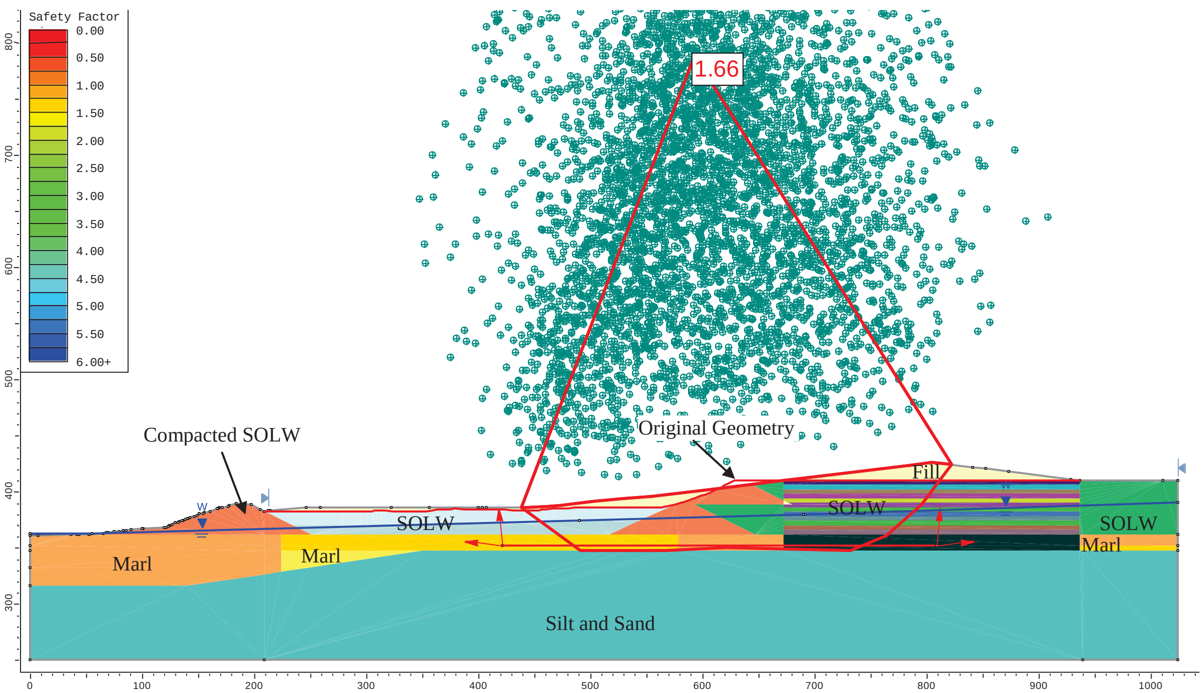

Figure 8. Slope Stability Analysis Results of Cross Section 1 (Proposed Seating Area, Post-grading Undrained Analysis)

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.: GD5598		Task No.:	01

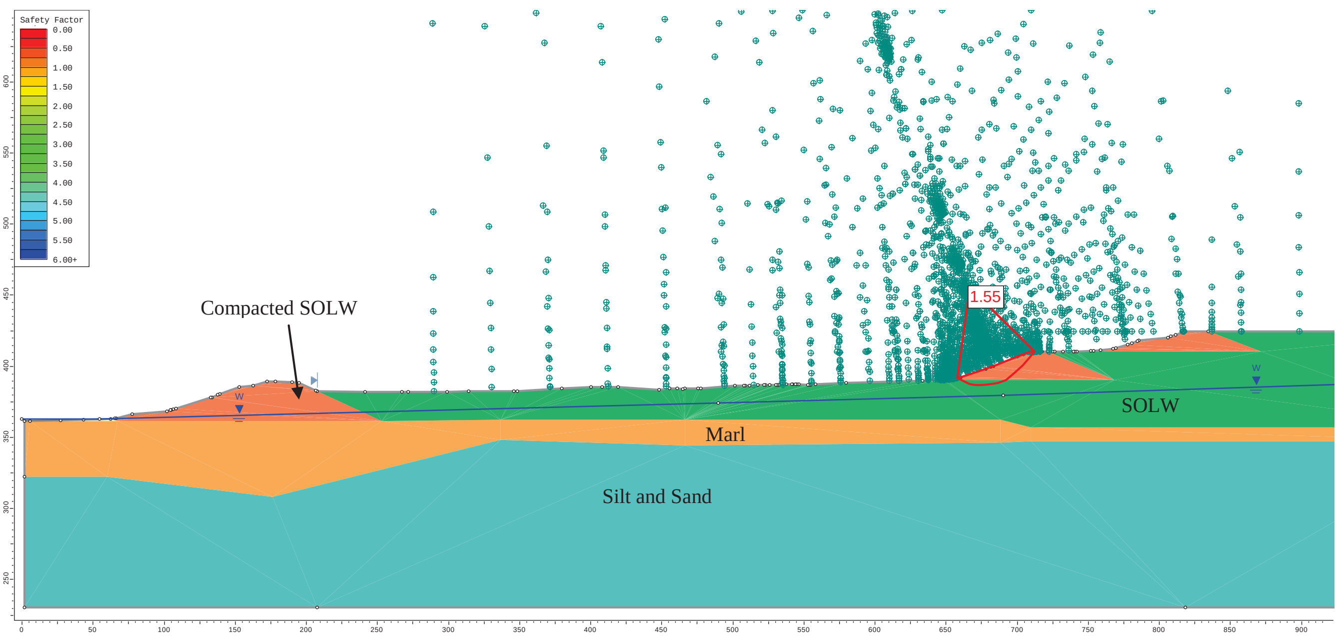

Figure 9. Slope Stability Analysis Results of Cross Section 2 (Proposed Seating Area, Existing Undrained Conditions)

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	01

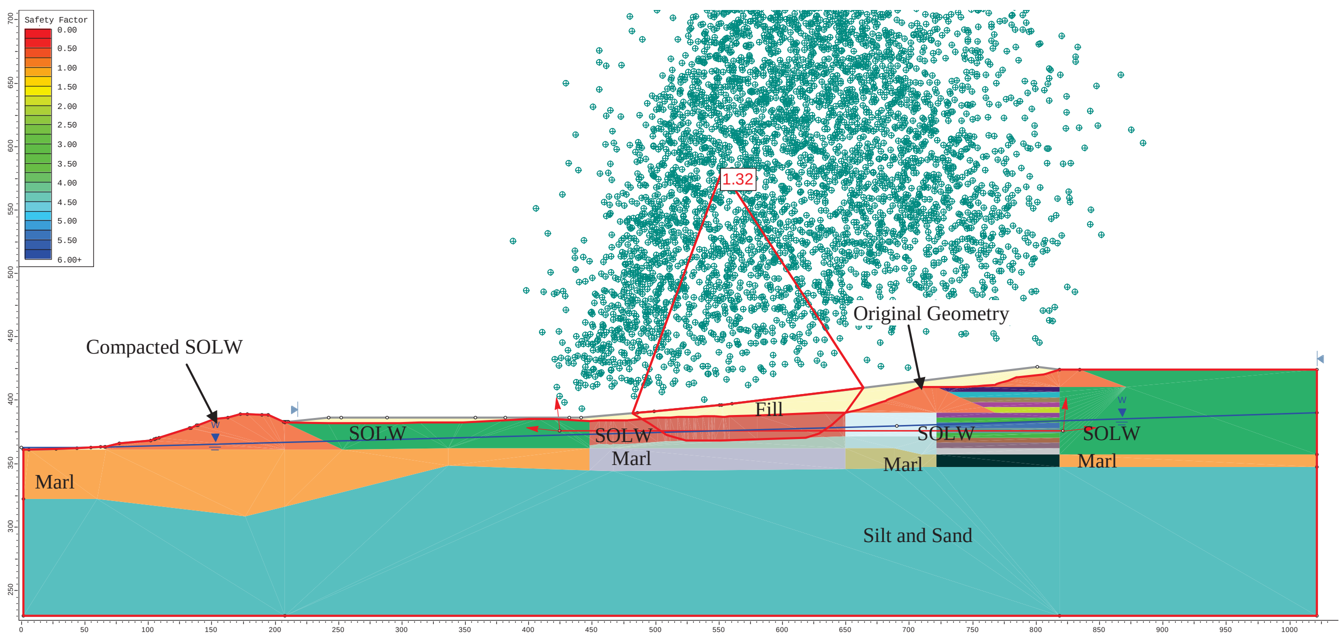

Figure 10. Slope Stability Analysis Results of Cross Section 2 (Proposed Seating Area, Post-grading Undrained Conditions)

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/2014
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	01

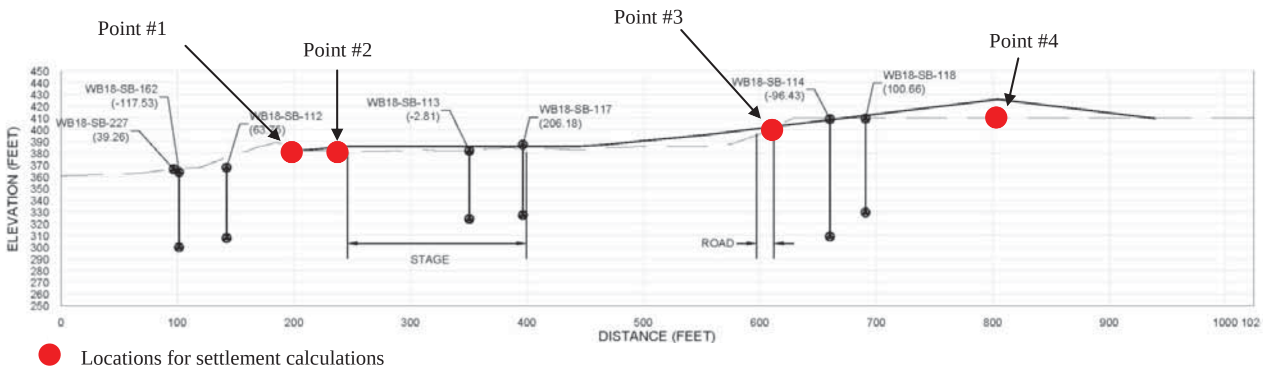

Figure 11. Locations of Points Used for Settlement Calculations along Cross Section 1

Written by:	M. Erten/ A. Ebrahimi	Date:	5/30/2014	Reviewed by:	Ming Zhu/Jay Beech	Date:	6/02/20
Client:	C&S Engineers	Project:	Amphitheater Conceptual Geotechnical Evaluation	Project No.:	GD5598	Task No.:	

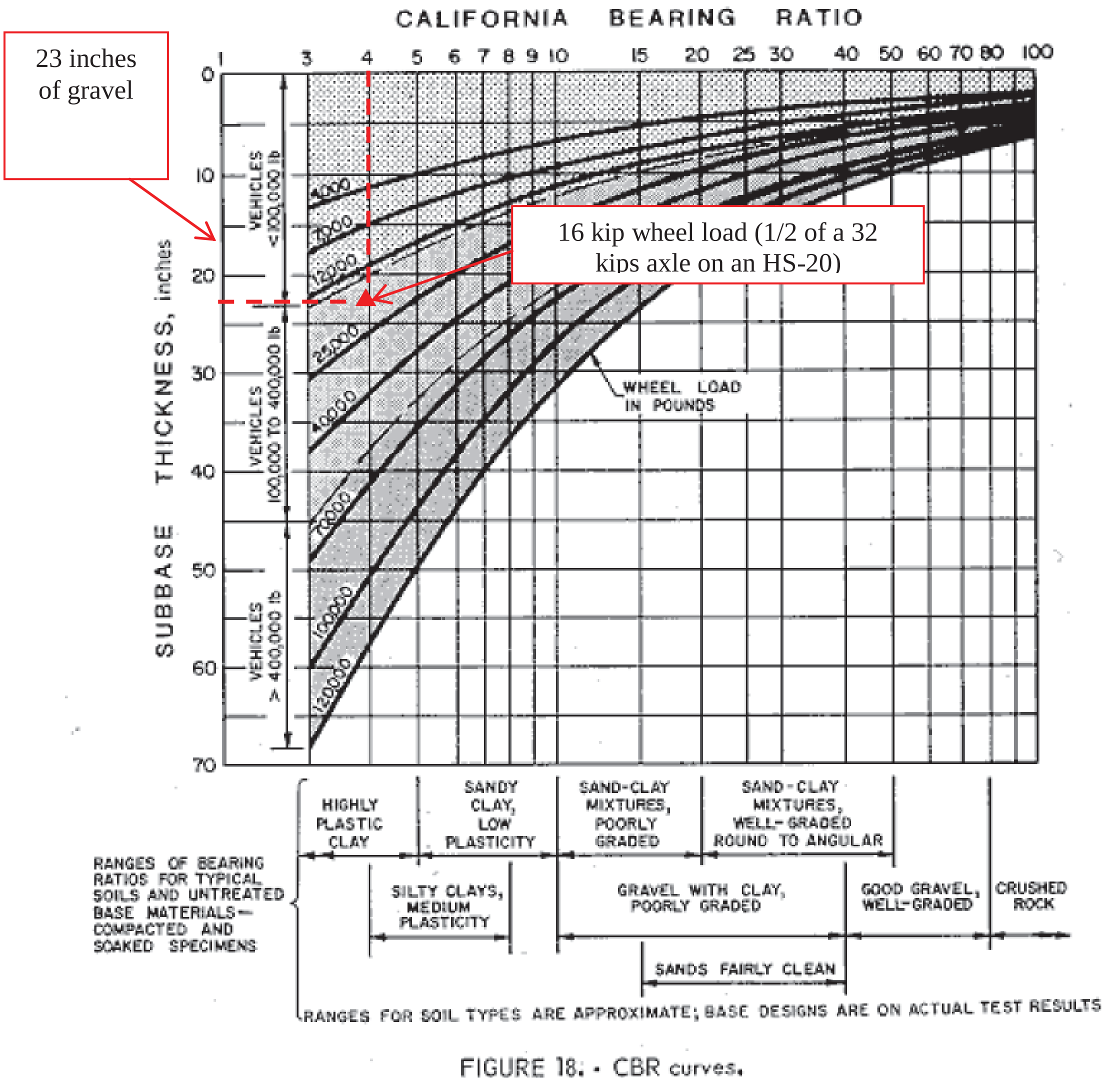

Figure 12. Estimated Minimum Gravel Thickness for Access Roads [USDOI, 2001]

APPENDIX F

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:

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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
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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 7[1] which is a computer program that implements the methods presented in the 2000 Highway Capacity Manual[2]**.** 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.

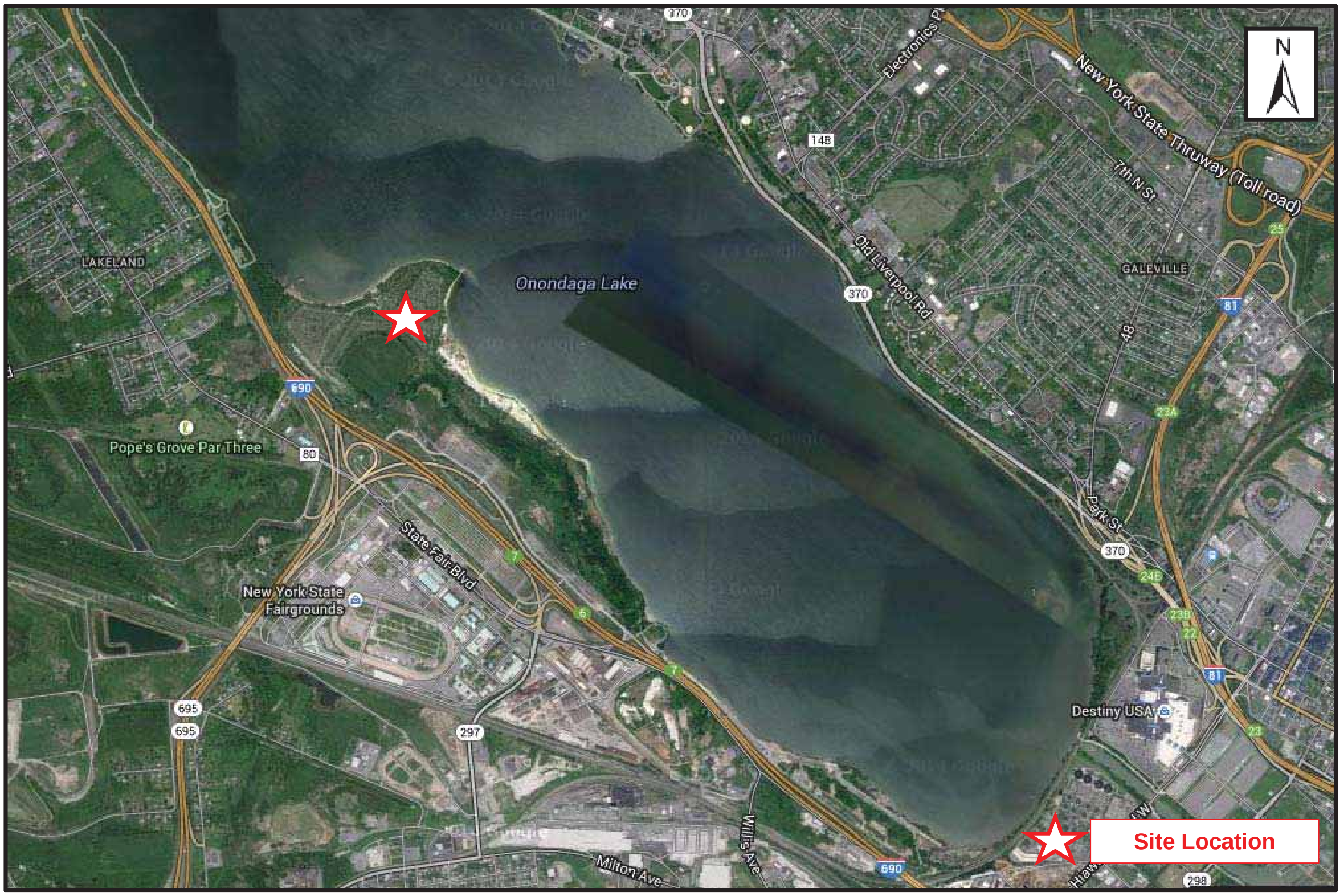
The ranges of delay for each level of service are shown in **Table 1-1** on the following page.

[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 Delay (sec)	Unsignalized Intersections 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)	C&S COMPANIES® NOT TO SCALE	FIGURE 1-1

LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

STUDY AREA INTERSECTIONS

(MAP FROM GOOGLE MAPS 2013)

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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.


Google Maps 2013

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.


Google Maps 2013

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.


Google Maps 2013

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

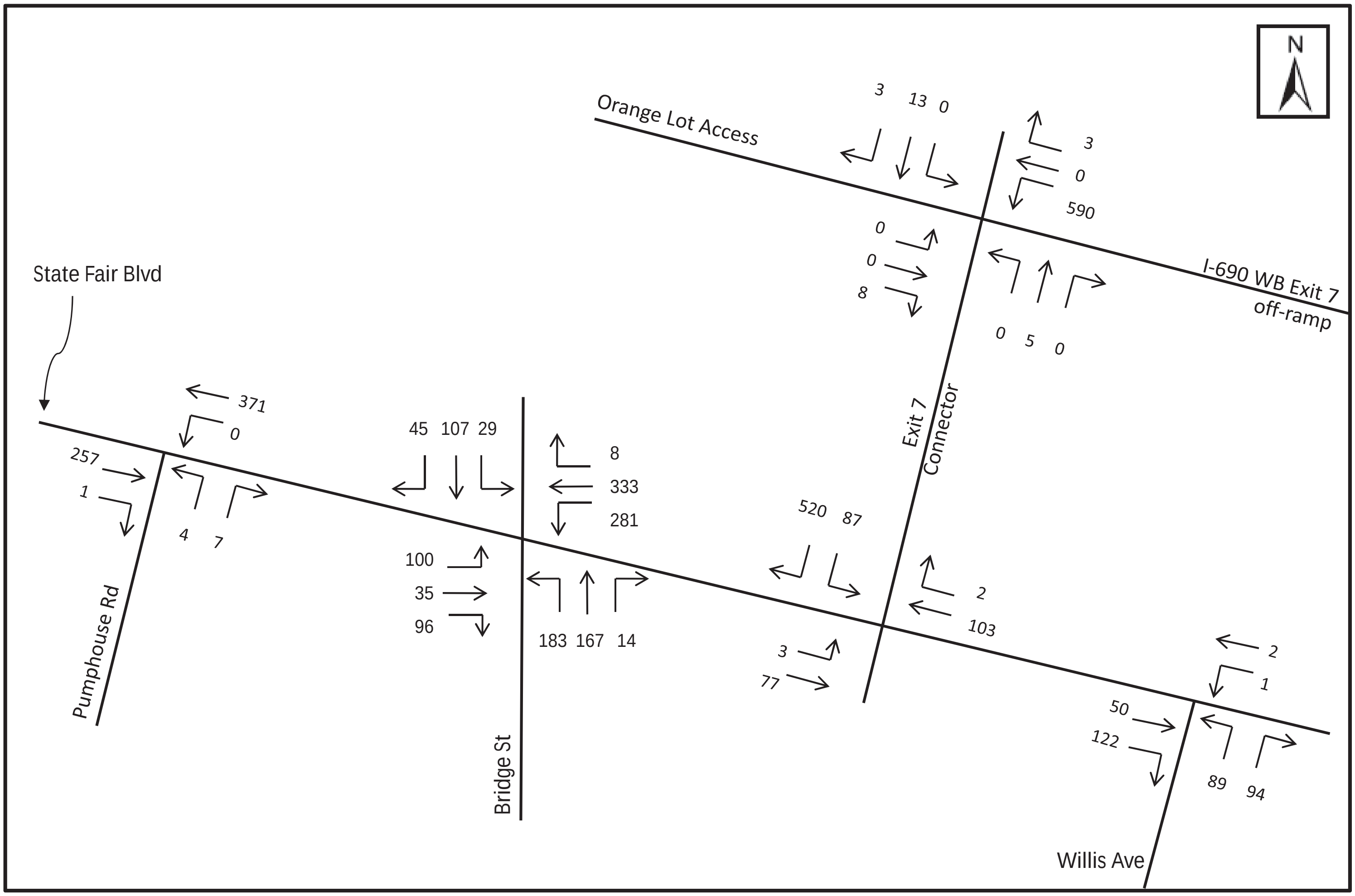
	Total # Accidents	AADT*	Segment Length (mi)	Total Acc Rate (MEV)	SWA Rate	% > SWA
Intersections - All Days, Including State Fair						
State Fair Boulevard at Pumphouse Road	2	5340		0.34	0.15	127%
State Fair Boulevard at Bridge Street	28	11650		2.19	0.21	943%
State Fair Boulevard at Exit 7 Connector 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**.



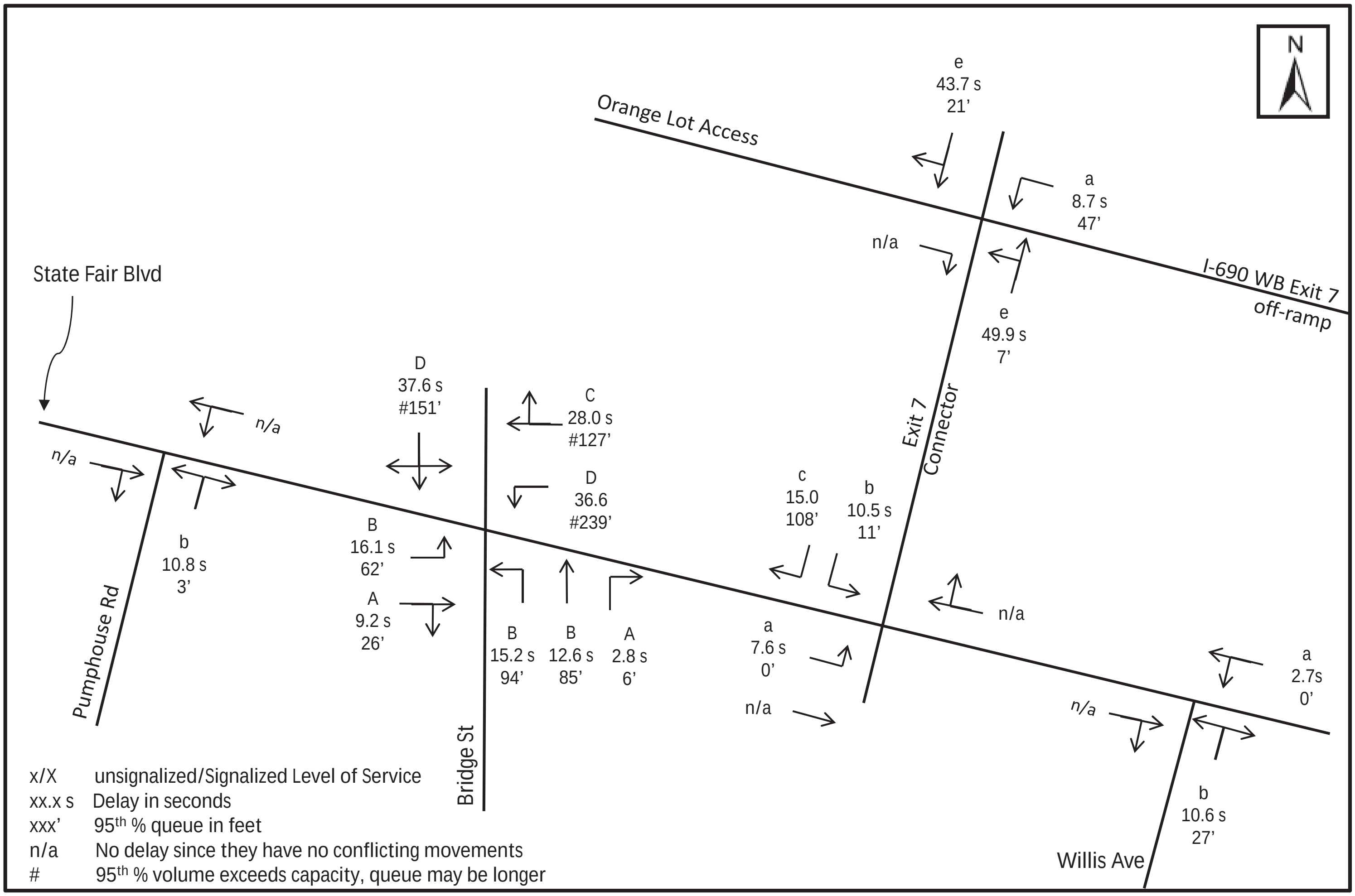
LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

EXISTING CONDITION PM PEAK HOUR VOLUMES

NOT TO SCALE

FIGURE 2-1



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

EXISTING CONDITION OPERATIONS SUMMARY

C&S COMPANIES®

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.


Google Maps 2013

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 in 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 pretimed 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 warm motorists on I-690 of the stop in traffic.

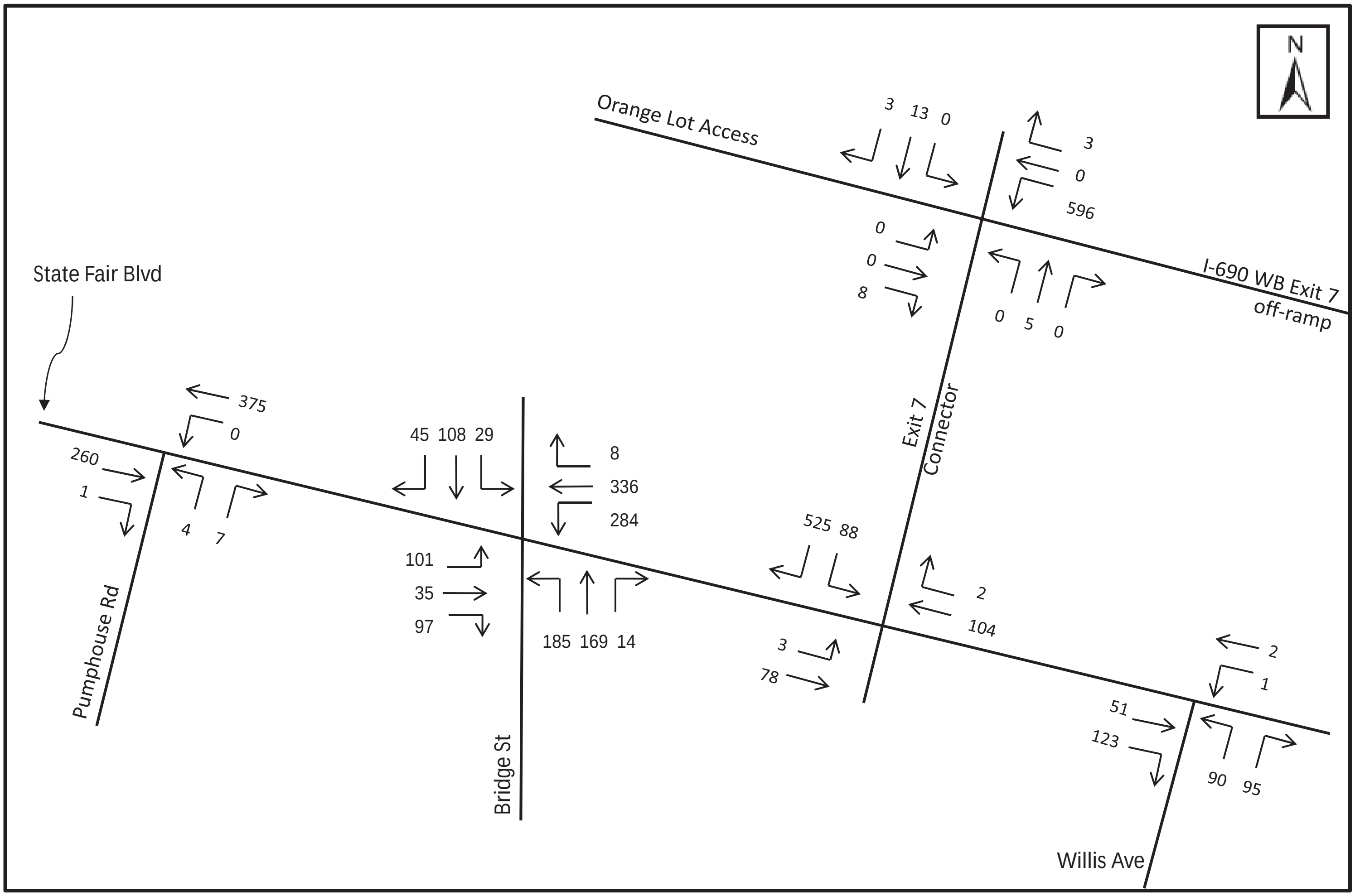
The detailed analysis reports for the above-mentioned scenarios are included in **Appendix B**.

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

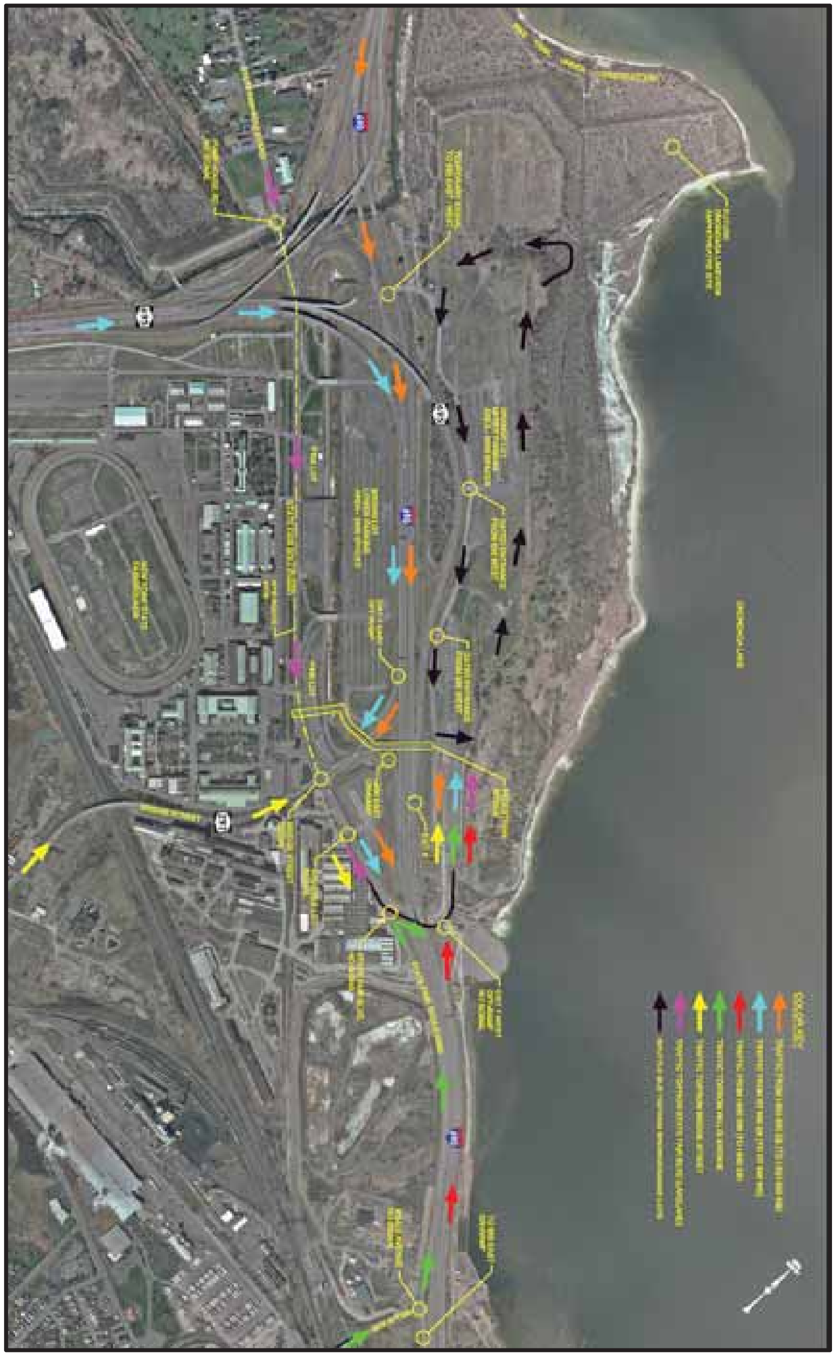
(MAP FROM GOOGLE MAPS 2013)

C&S COMPANIES®

NOT TO SCALE

FIGURE

3-2



LAKEVIEW AMPHITHEATER

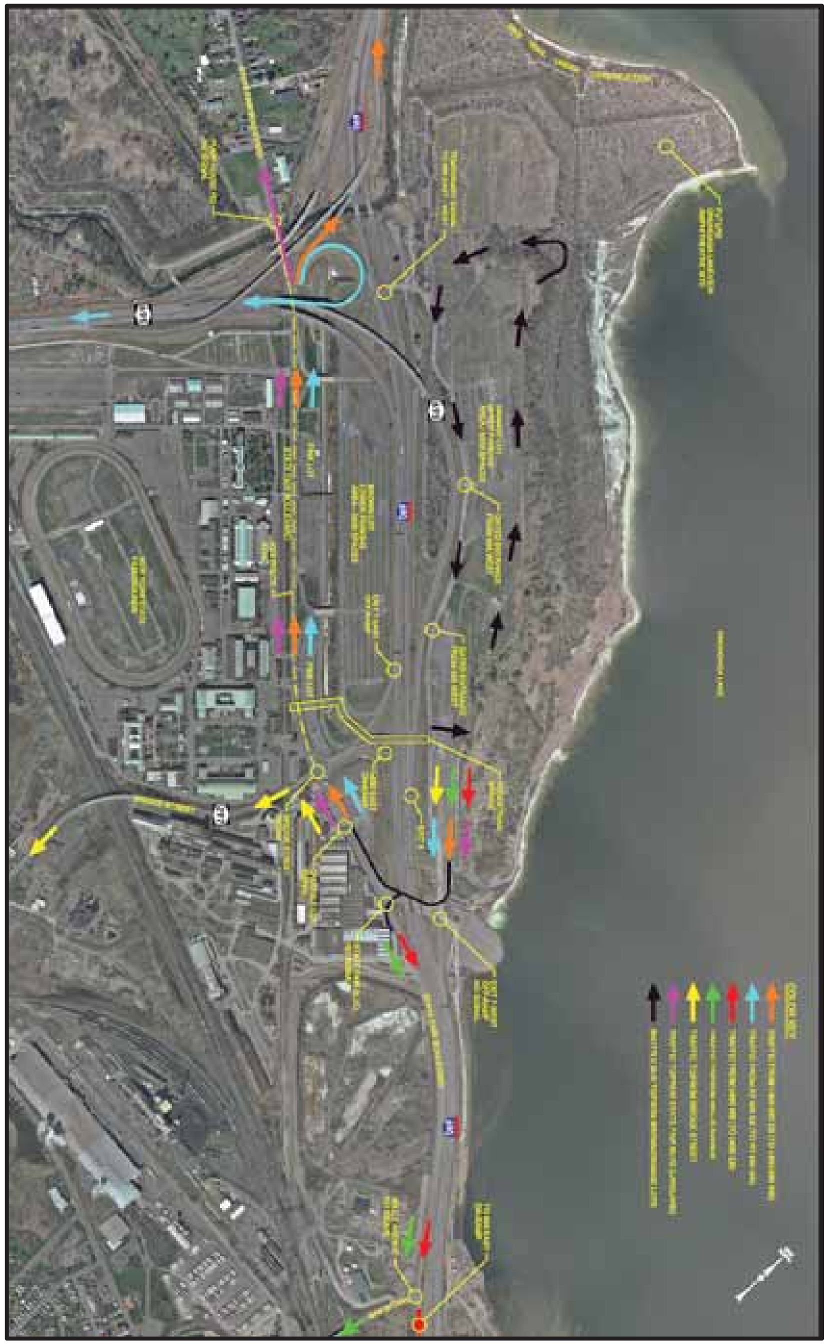
TRAFFIC IMPACT STUDY

SMALL EVENT – LOCAL ARRIVAL DISTRIBUTION

C&S COMPANIES®

NOT TO SCALE

FIGURE 3-3



LAKEVIEW AMPHITHEATER

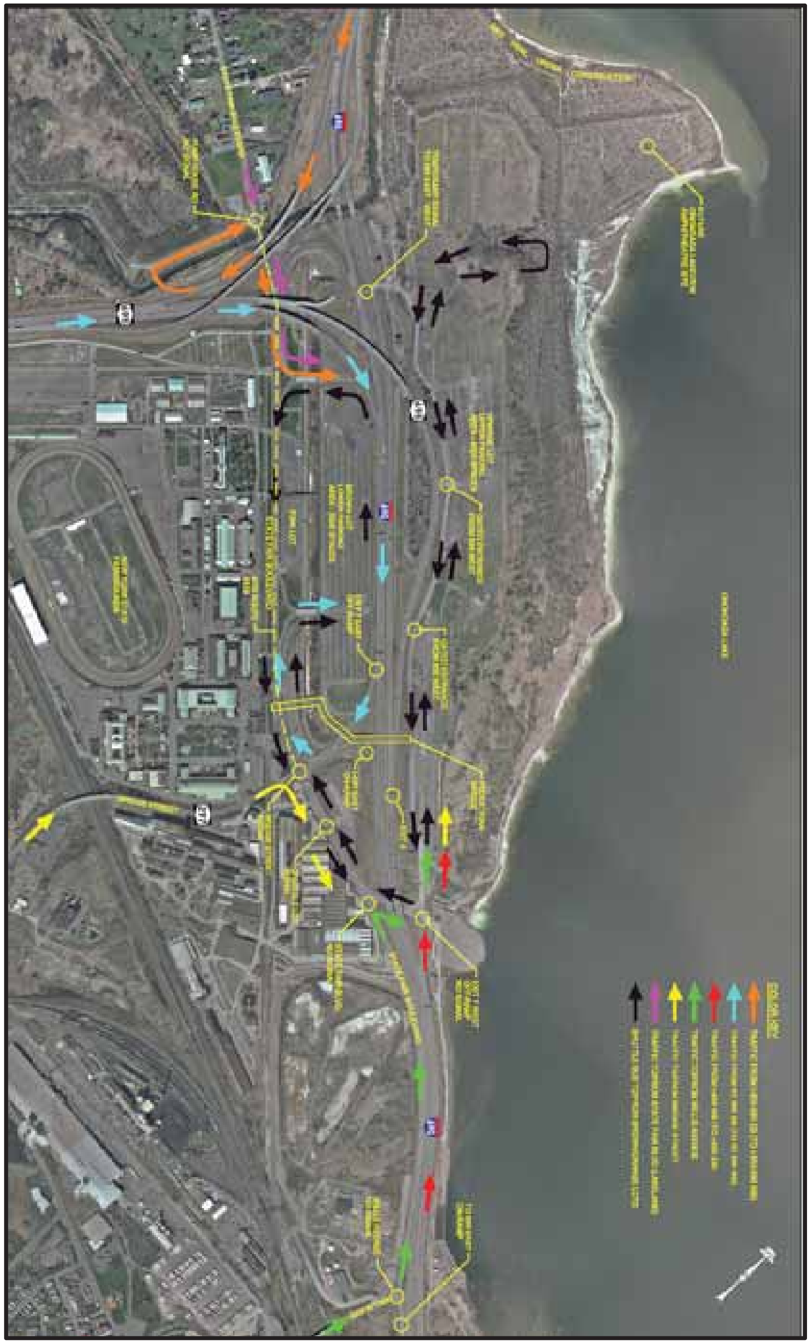
TRAFFIC IMPACT STUDY

SMALL EVENT – LOCAL DEPARTURE DISTRIBUTION

NOT TO SCALE

FIGURE

3-4



LAKEVIEW AMPHITHEATER

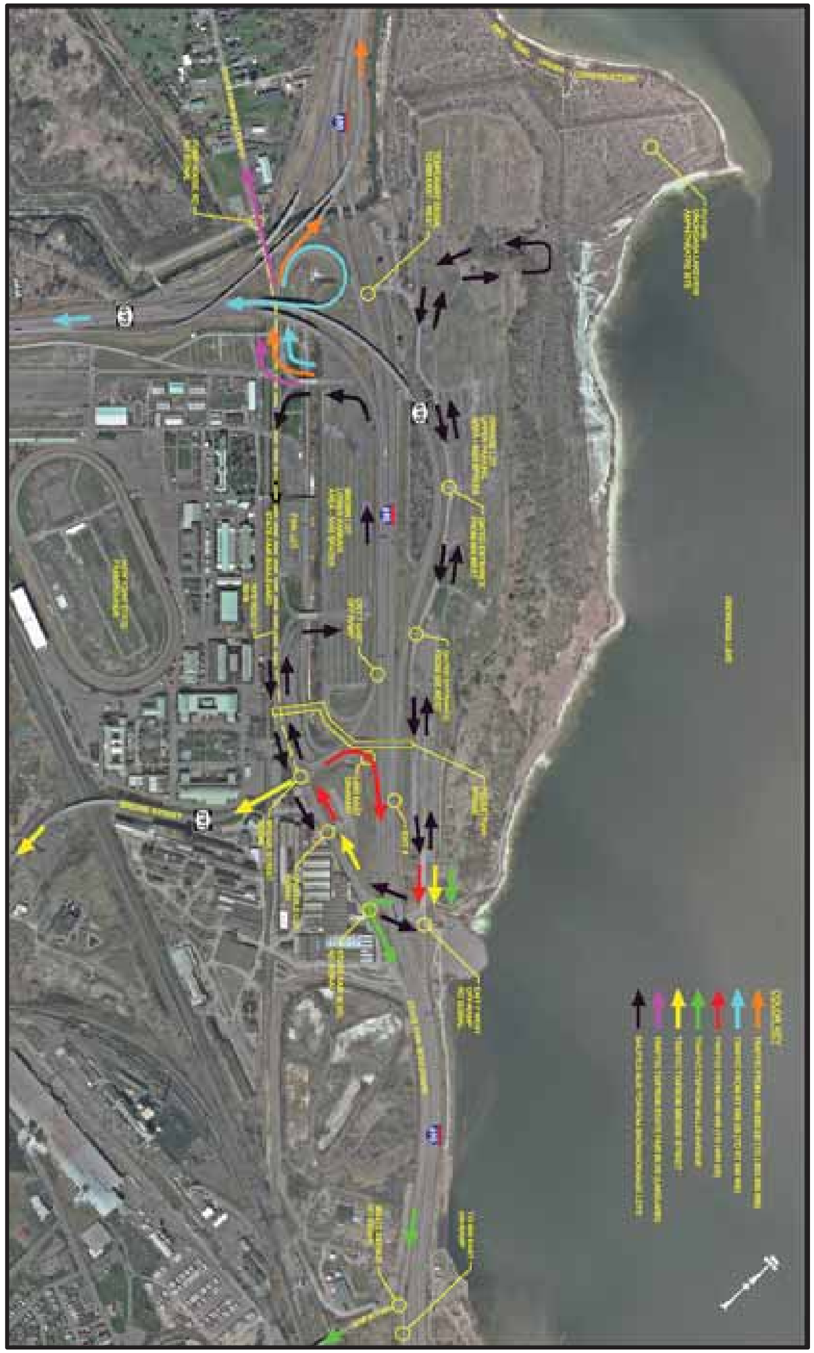
TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – LOCAL ARRIVAL DISTRIBUTION

C&S COMPANIES®

NOT TO SCALE

FIGURE 3-5



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

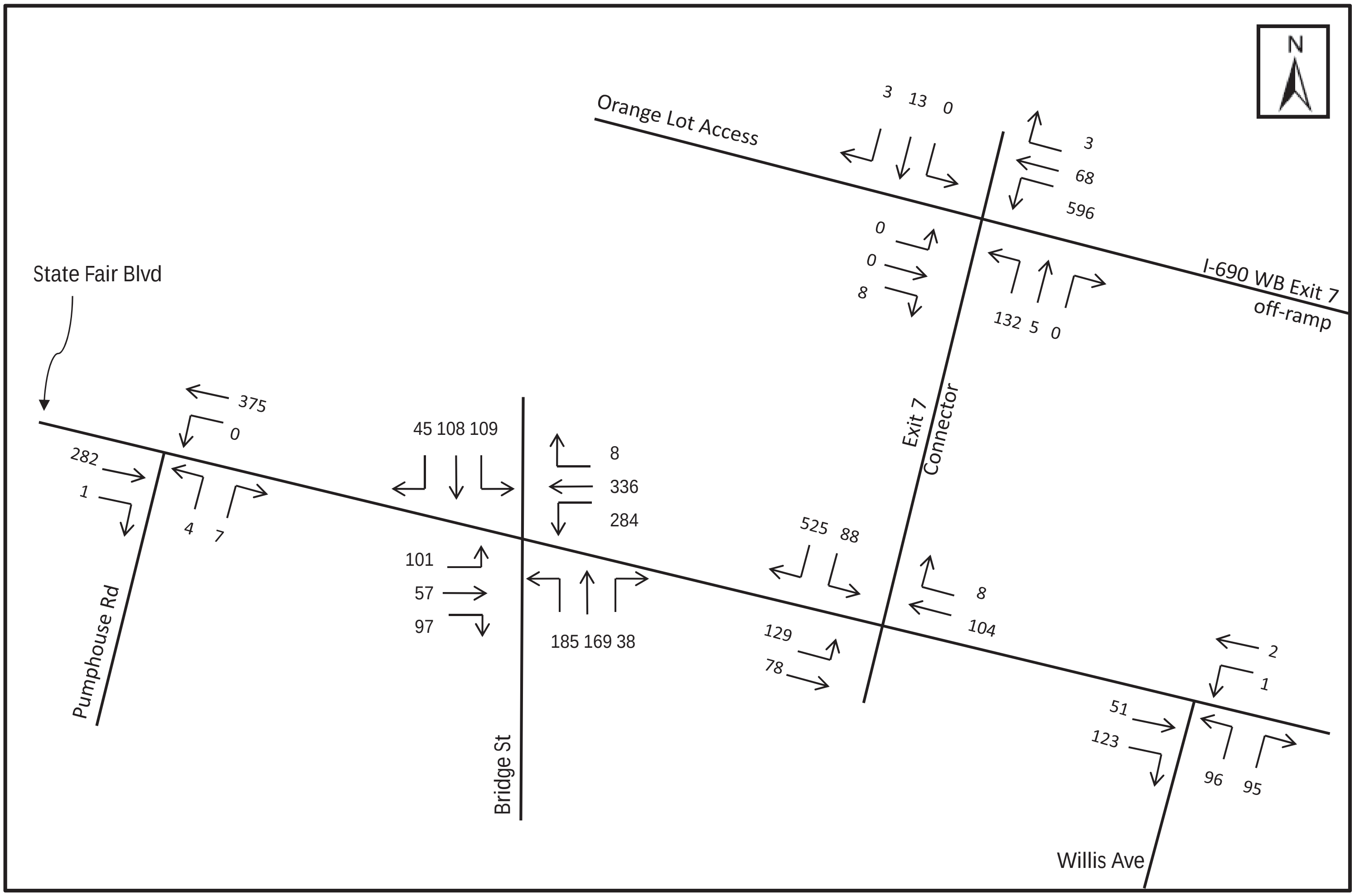
SOLD-OUT EVENT – LOCAL DEPARTURE DISTRIBUTION

C&S COMPANIES®

NOT TO SCALE

FIGURE

3-6



LAKEVIEW AMPHITHEATER

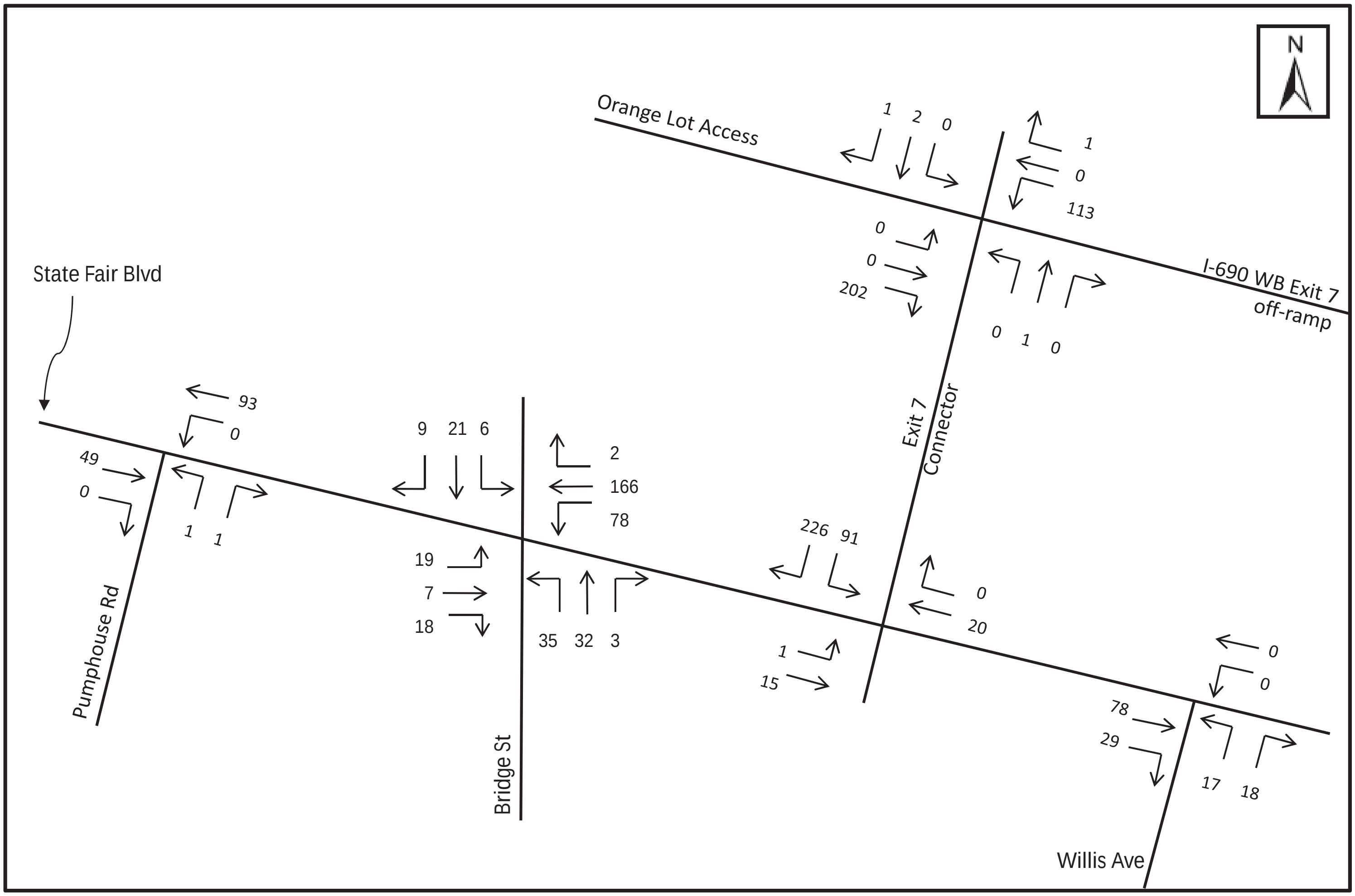
TRAFFIC IMPACT STUDY

SMALL EVENT – ARRIVAL VOLUMES

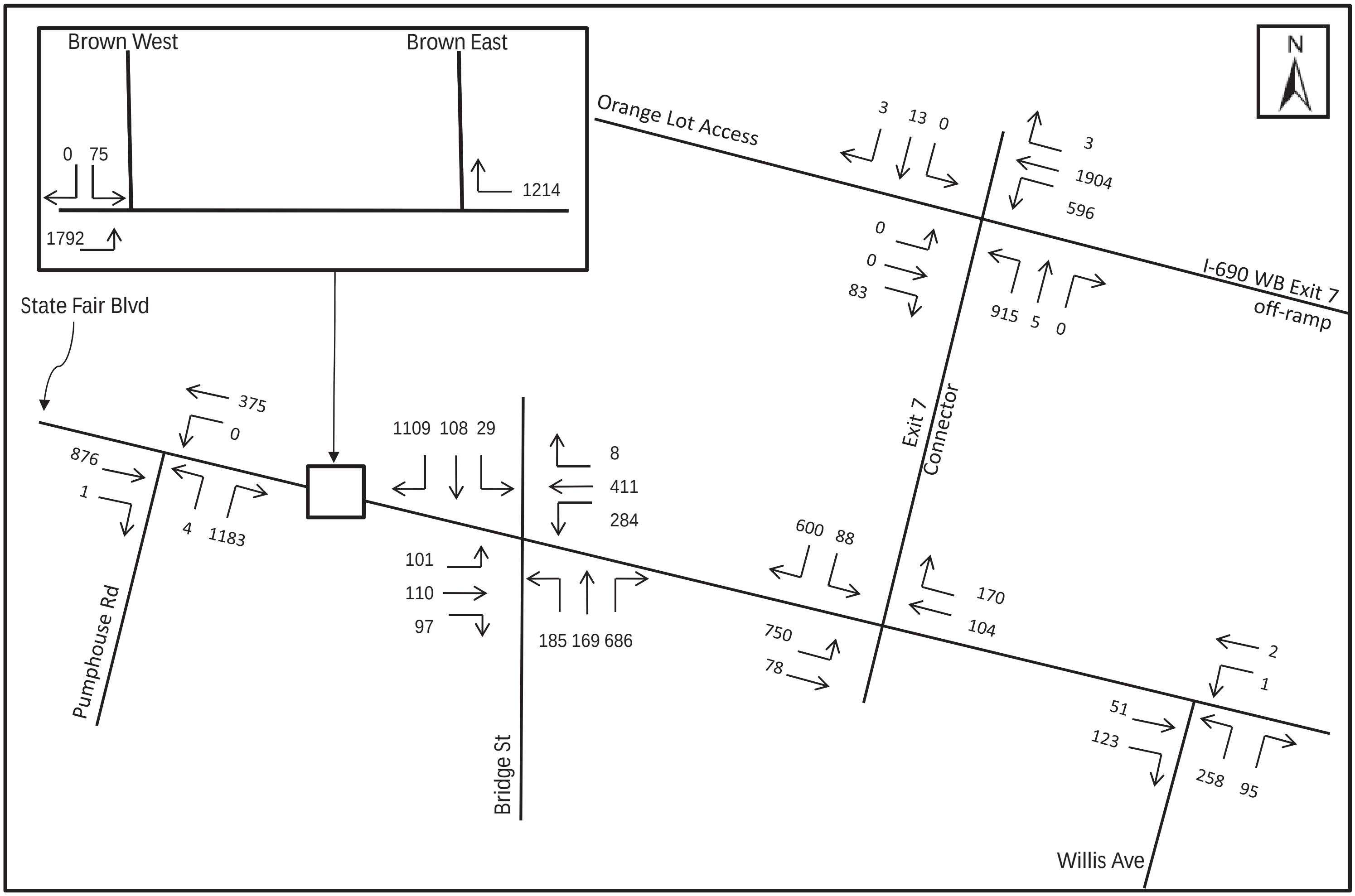
NOT TO SCALE

FIGURE

3-7



LAKEVIEW AMPHITHEATER TRAFFIC IMPACT STUDY	SMALL EVENT – DEPARTURE VOLUMES	C&S COMPANIES® NOT TO SCALE	FIGURE 3-8



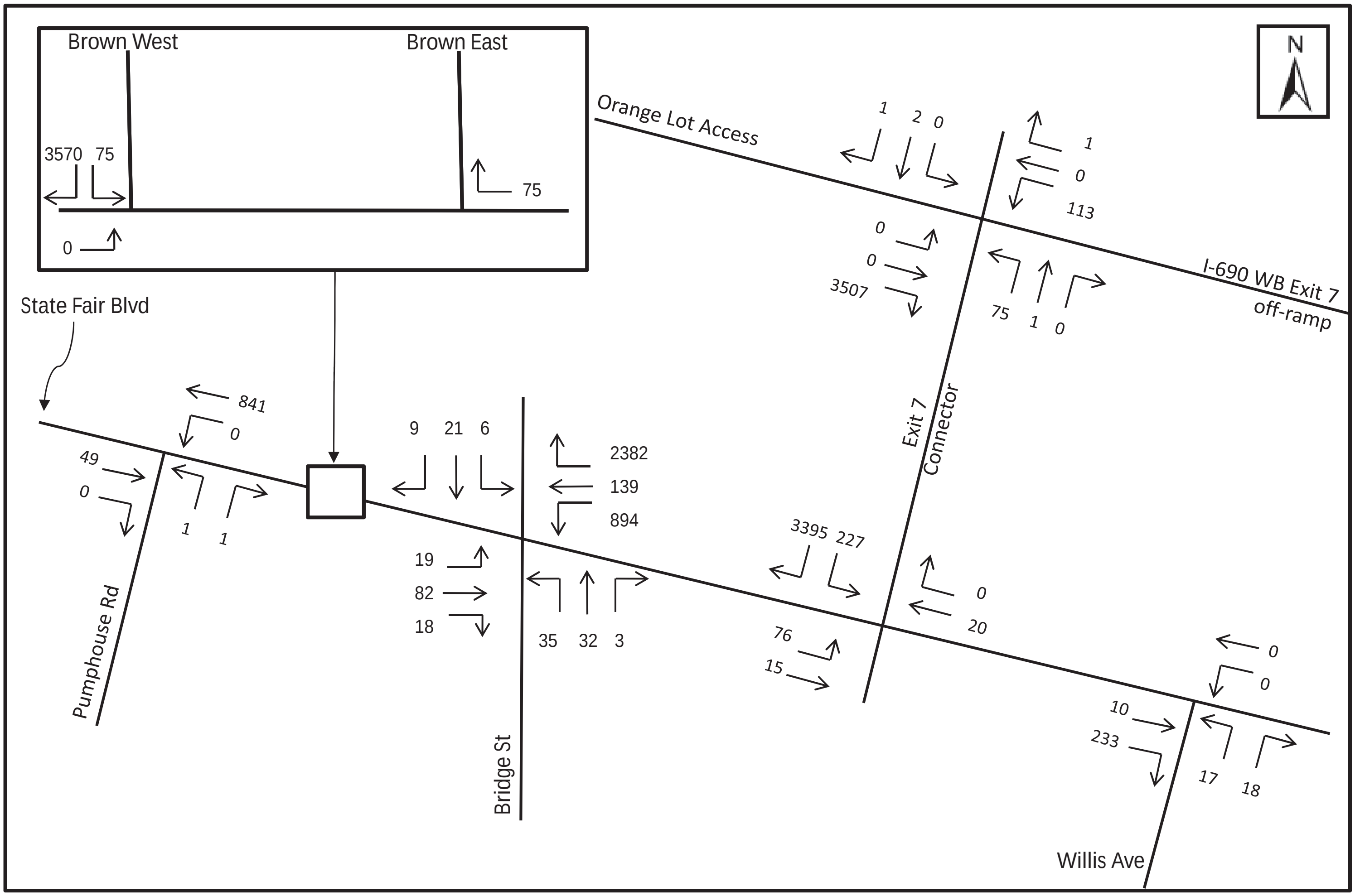
LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – ARRIVAL VOLUMES

NOT TO SCALE

FIGURE 3-9



LAKEVIEW AMPHITHEATER

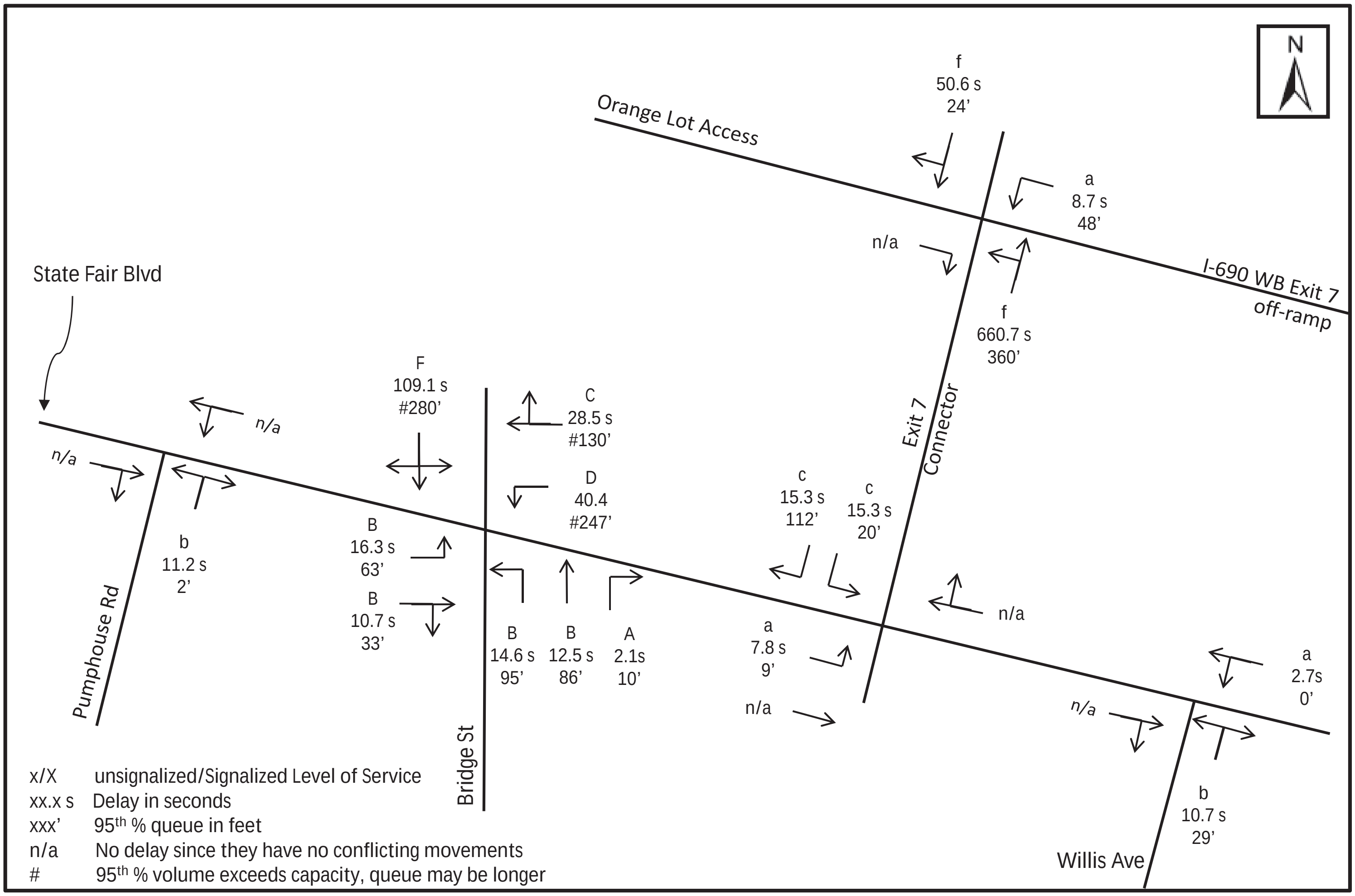
TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – DEPARTURE VOLUMES

NOT TO SCALE

FIGURE

3-10



LAKEVIEW AMPHITHEATER

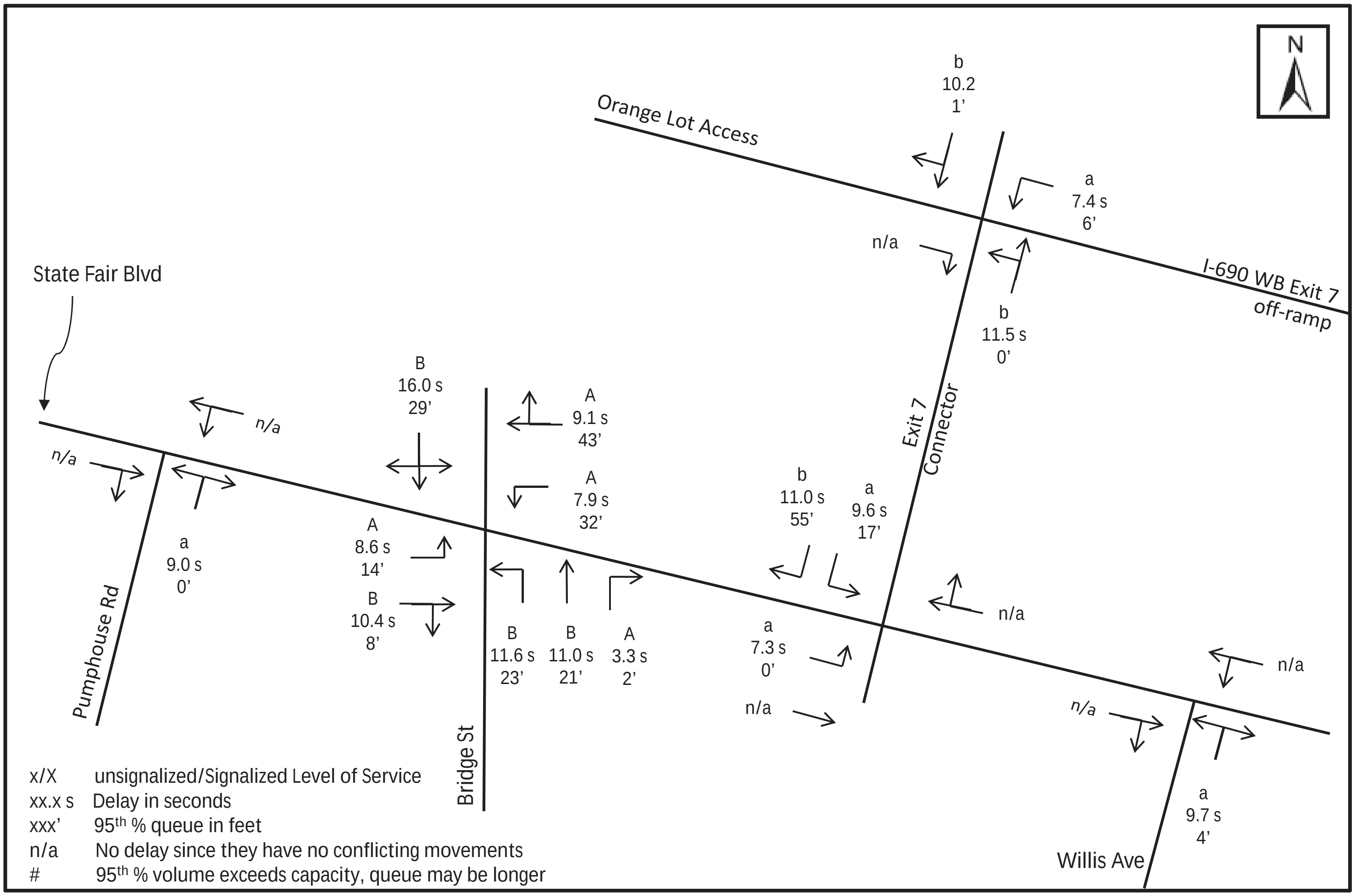
TRAFFIC IMPACT STUDY

SMALL EVENT – ARRIVAL OPERATIONS SUMMARY

C&S COMPANIES®

NOT TO SCALE

FIGURE 3-11



x/X unsignalized/Signalized Level of Service
xx.x s Delay in seconds
xxx’ 95th % queue in feet
n/a No delay since they have no conflicting movements
\# 95th % volume exceeds capacity, queue may be longer

LAKEVIEW AMPHITHEATER

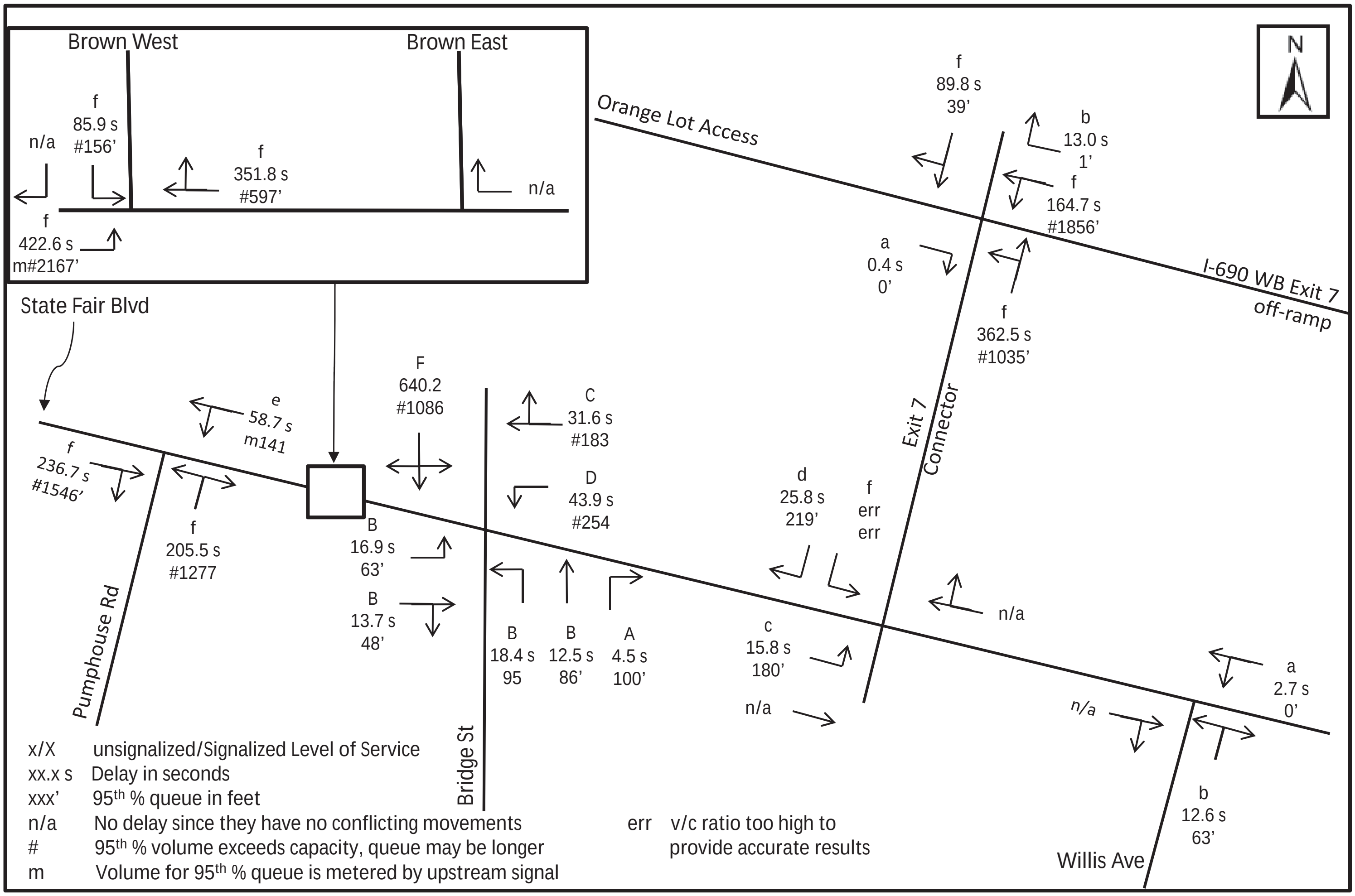
TRAFFIC IMPACT STUDY

SMALL EVENT – DEPARTURE OPERATIONS SUMMARY

NOT TO SCALE

FIGURE

3-12



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – ARRIVAL OPERATIONS SUMMARY – MANNED CONTROL

C&S COMPANIES®

NOT TO SCALE

FIGURE

3-13

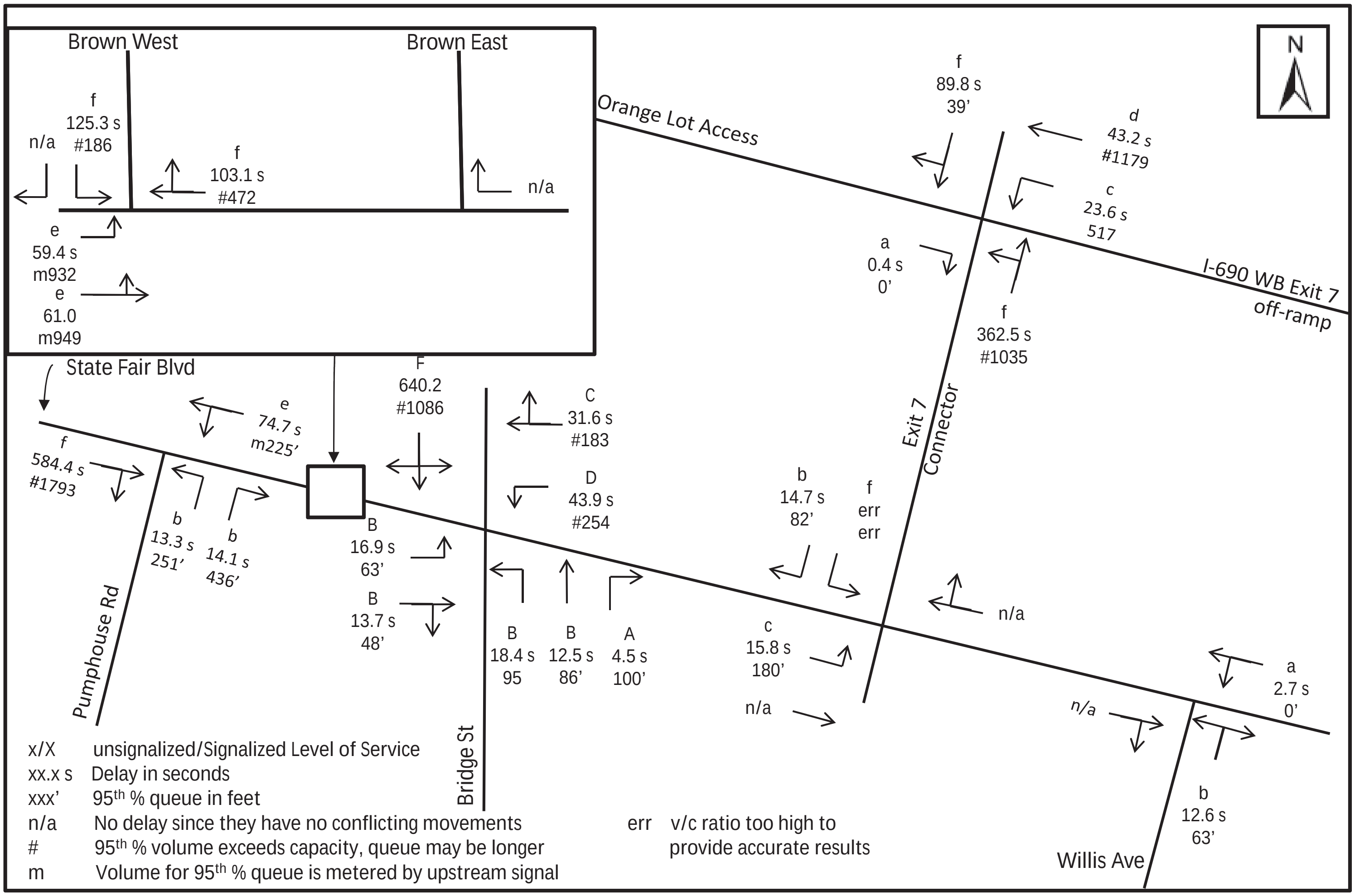
LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

PROPOSED MITIGATION MEASURES

NOT TO SCALE

FIGURE 3-14



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

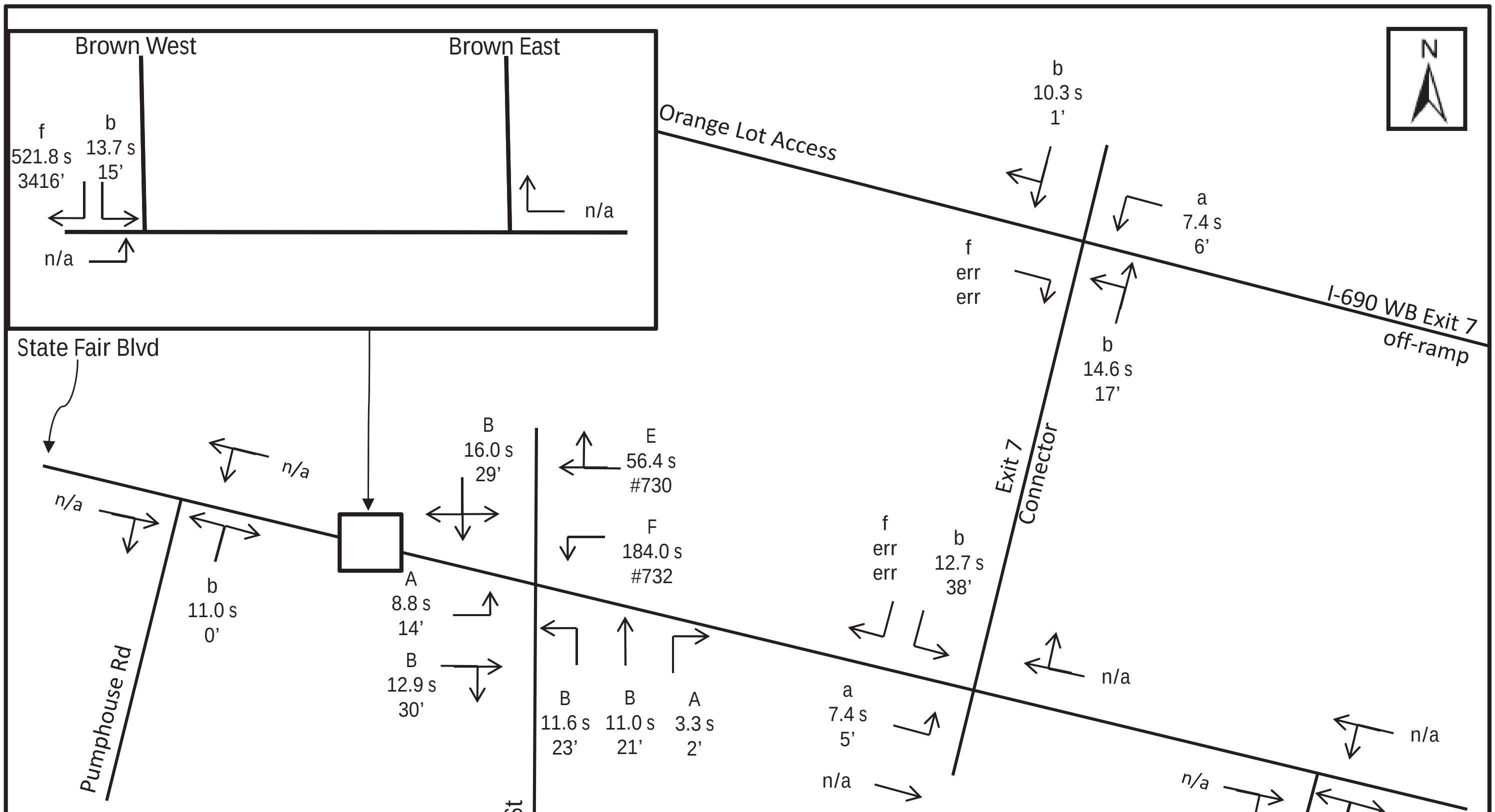
SOLD-OUT EVENT – ARRIVAL OPERATIONS SUMMARY – MANNED CONTROL/MITIGATION

C&S COMPANIES®

NOT TO SCALE

FIGURE

3-15



x/X unsignalized/Signalized Level of Service
xx.x s Delay in seconds
xxx' 95th % queue in feet
n/a No delay since they have no conflicting movements
\# 95th % volume exceeds capacity, queue may be longer
m Volume for 95th % queue is metered by upstream signal
err v/c ratio too high to provide accurate results

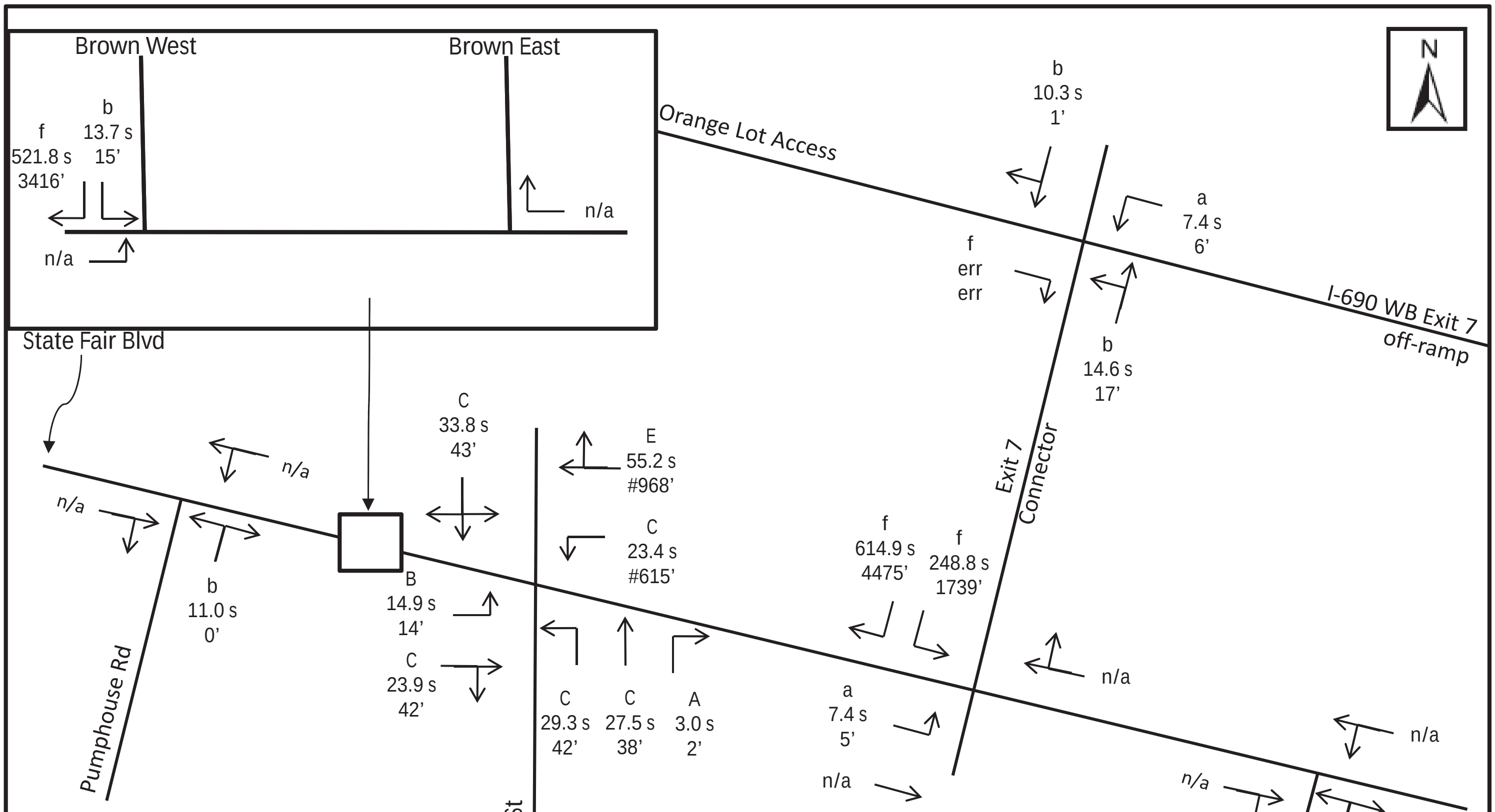
LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – DEPARTURE OPERATIONS SUMMARY

NOT TO SCALE

FIGURE 3-16



x/X	unsignalized/Signalized Level of Service
xx.x s	Delay in seconds
xxx'	95th % queue in feet
n/a	No delay since they have no conflicting movements
#	95th % volume exceeds capacity, queue may be longer
m	Volume for 95th % queue is metered by upstream signal
err	v/c ratio too high to provide accurate results

LAKEVIEW AMPHITHEATER

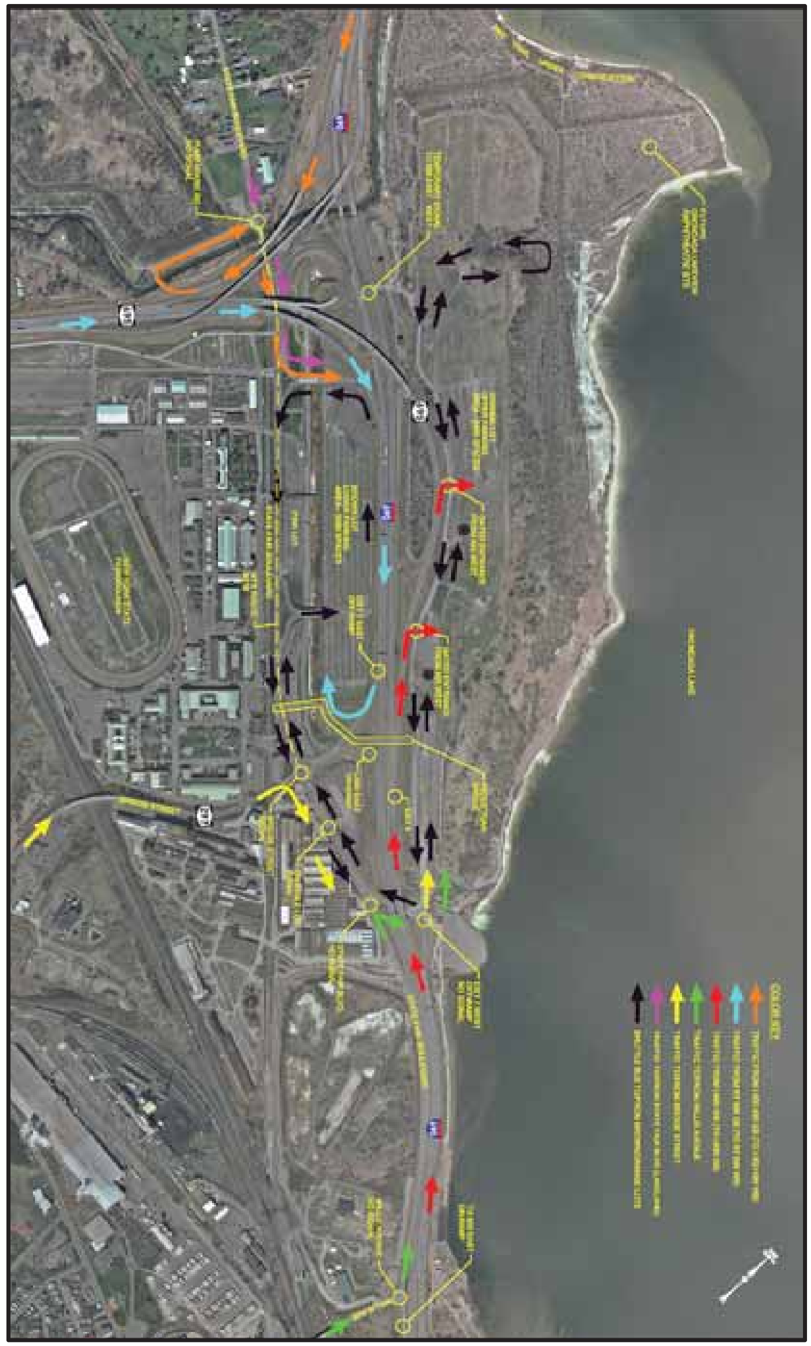
TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – DEPARTURE OPERATIONS SUMMARY WITH MITIGATION

NOT TO SCALE

FIGURE

3-17



LAKEVIEW AMPHITHEATER

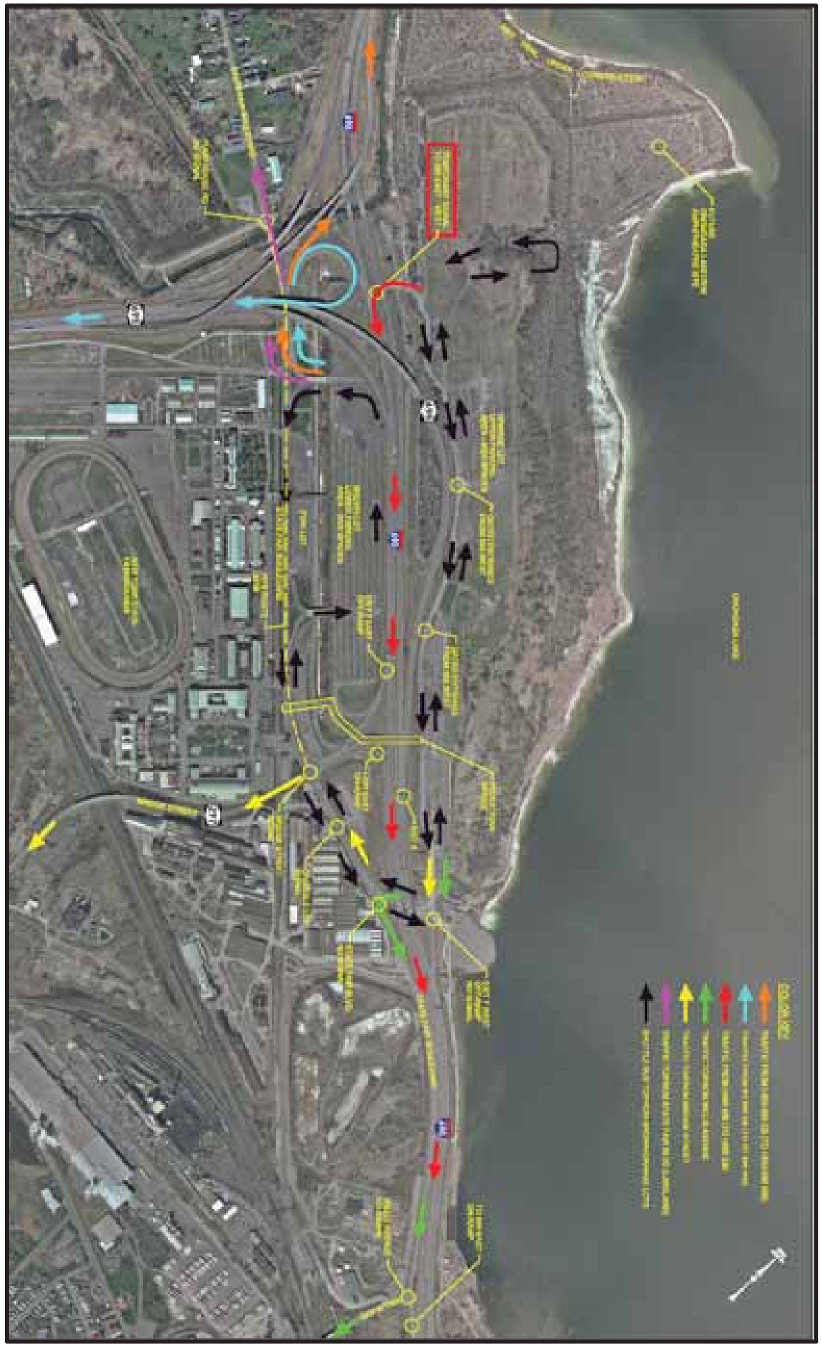
TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – LOCAL ARRIVAL DISTRIBUTION USING STATE FAIR ACCESS

C&S COMPANIES®

NOT TO SCALE

FIGURE 3-18



LAKEVIEW AMPHITHEATER

TRAFFIC IMPACT STUDY

SOLD-OUT EVENT – LOCAL DEPARTURE DISTRIBUTION USING I-690 SIGNAL

NOT TO SCALE

FIGURE 3-19

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				
Start Time	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Int. Total
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

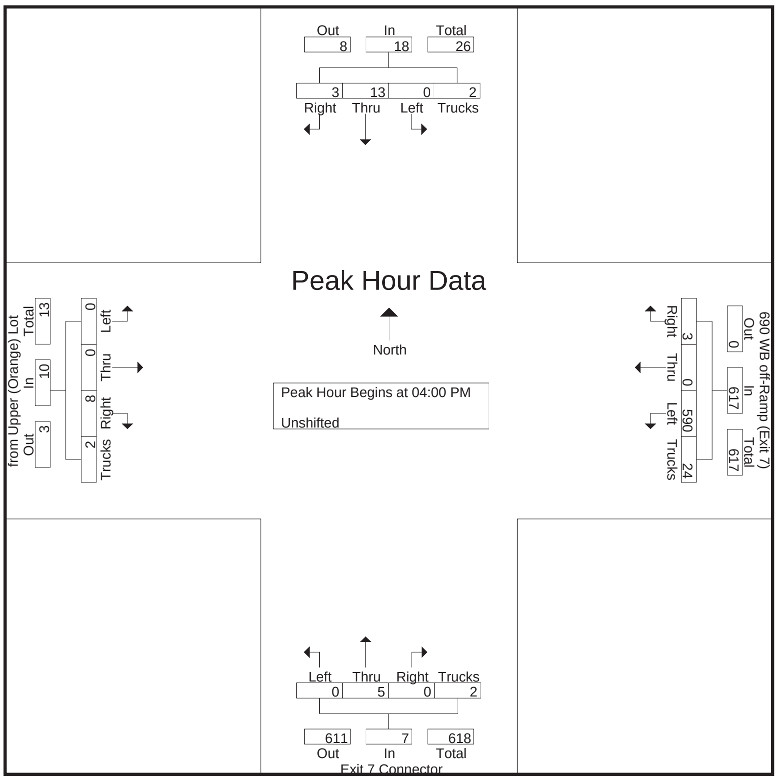
File Name : 3641 Mike 690 WB Off
Site Code : 00000000
Start Date : 5/2/2014
Page No : 2

	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				
Start Time	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Int. Total
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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Syracuse, NY 13212

File Name : 3638 SF-Connector
Site Code : 00000000
Start Date : 5/2/2014
Page No : 2

	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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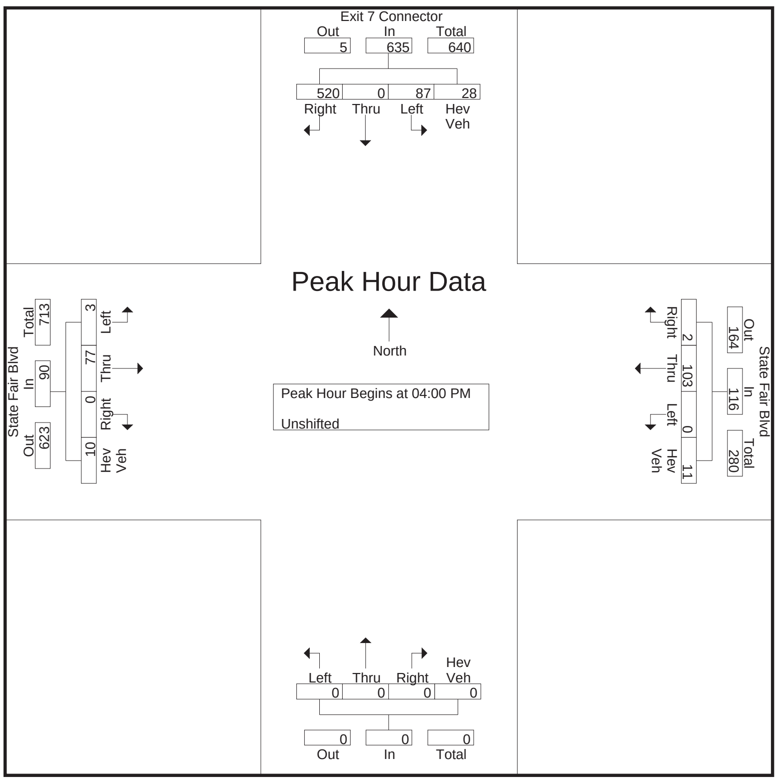

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Syracuse, NY 13212

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				
Start Time	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Int. Total
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	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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499 Col Eileen Collins Blvd

Syracuse, NY 13212

File Name : 1387 PTT SF-Pumphouse

Site Code : 00000000

Start Date : 5/2/2014

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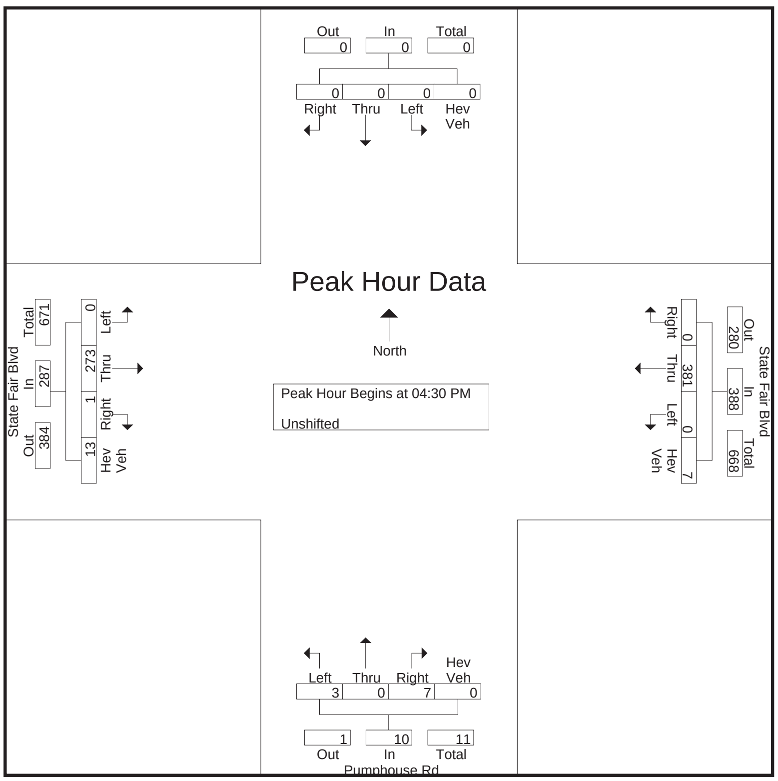

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499 Col Eileen Collins Blvd
Syracuse, NY 13212

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				
Start Time	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Int. Total
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	

C&S Engineers, Inc

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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File Name : 3639-3640 K-J SF-Ramps Bridge St
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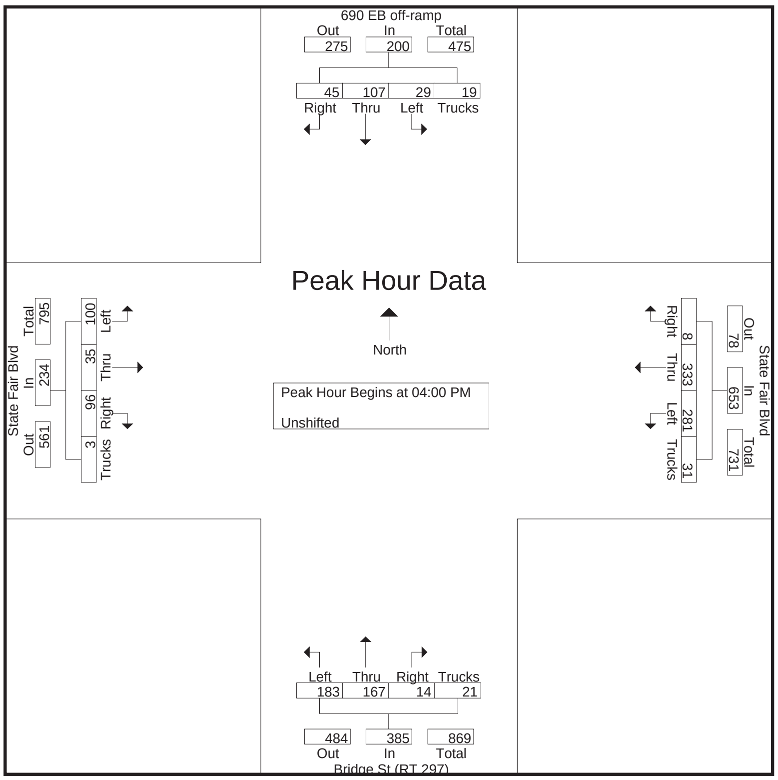

C&S Engineers, Inc

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				
Start Time	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Right	Thru	Left	Hev Veh	Int. Total
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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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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File Name : 1388 April SF-Willis
Site Code : 00000000
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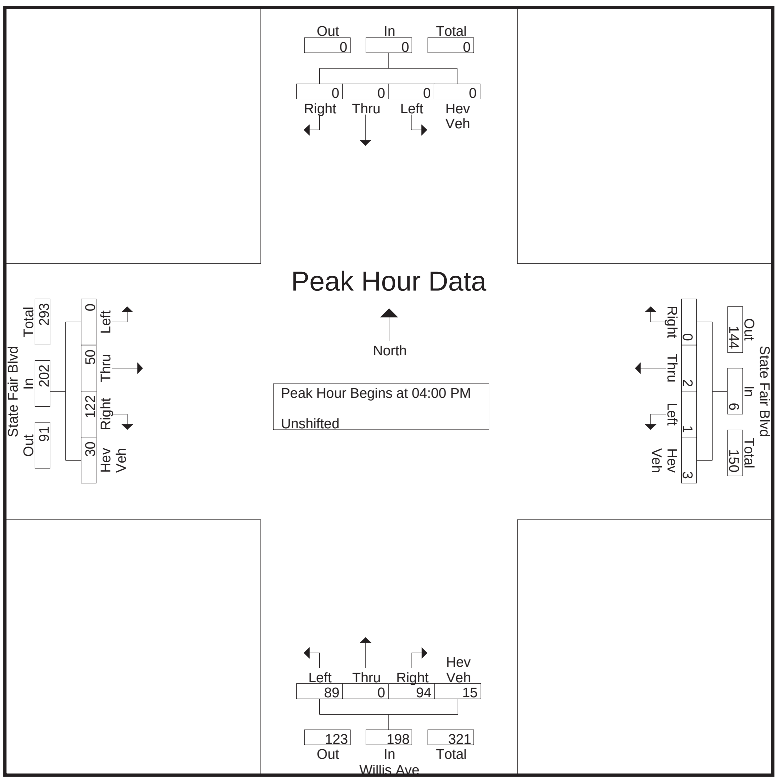


Onondaga County
Lakeview Amphitheater
Traffic Analysis
May 12, 2014

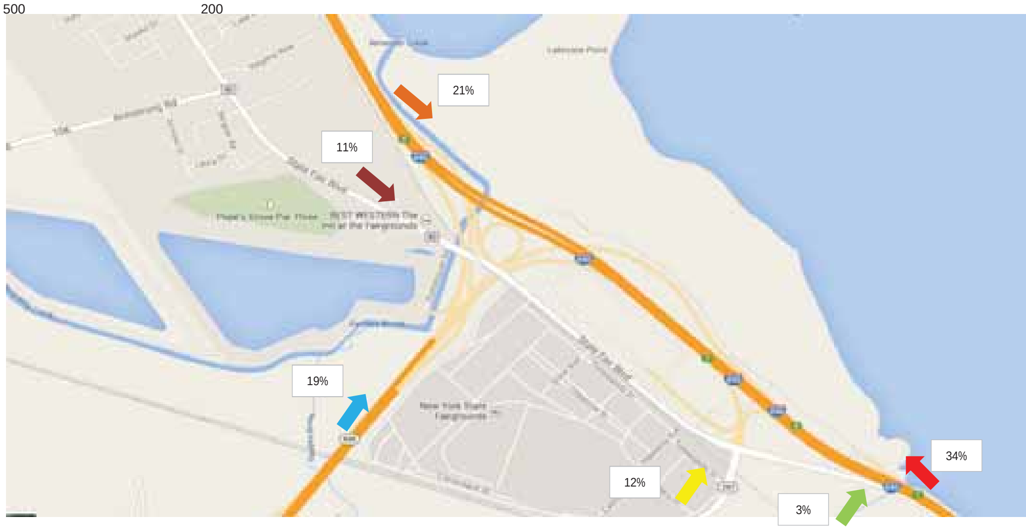
Amphitheater Data

Number of attendees	17,500	
Number of events	15-20	
Date of completion	2016	with a possible event in Fall 2015

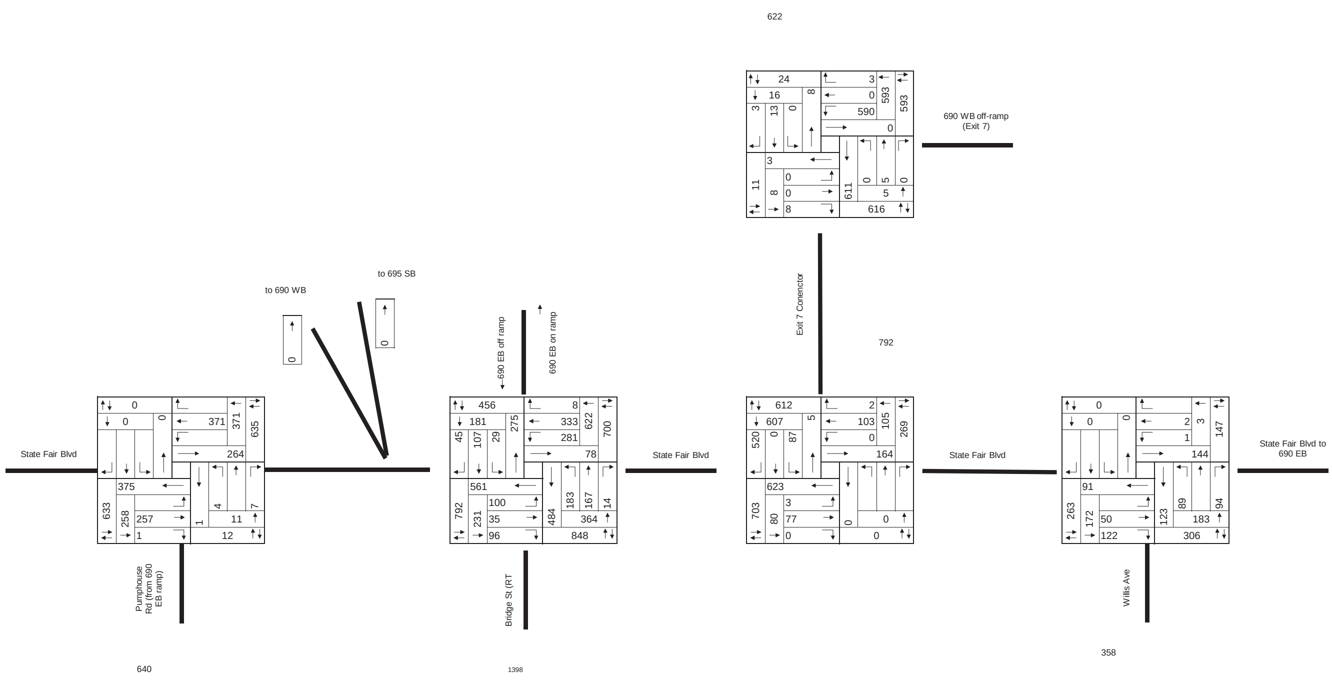
Assumptions

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	Vehicle Trips	80%
17,500	7000	5600
500	200	



Existing PM Peak Hour
2014 Volumes



Background Volume Estimation

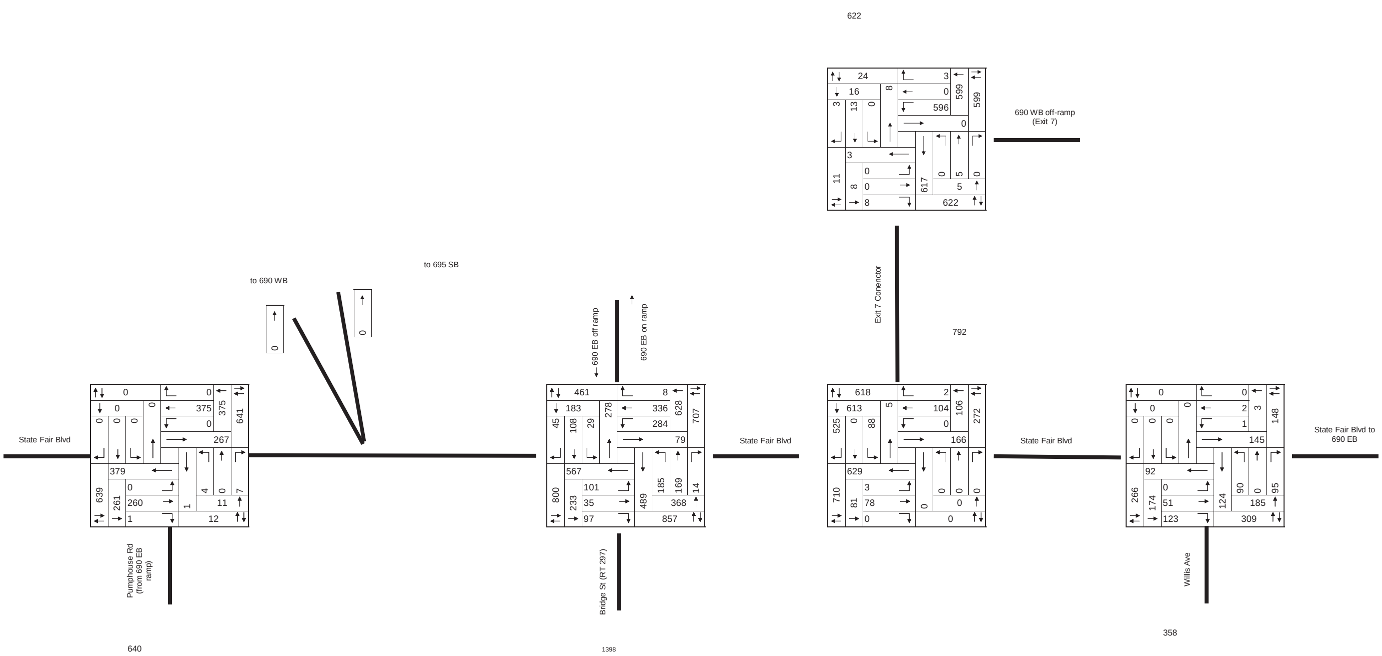
Typical weeknight counts from NYSDOT Traffic Data Viewer

NYSDOT Station	336077	330906	330019	333004	
Location	SFB (just E of Pumphouse)	SFB (931B)	RT 297	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

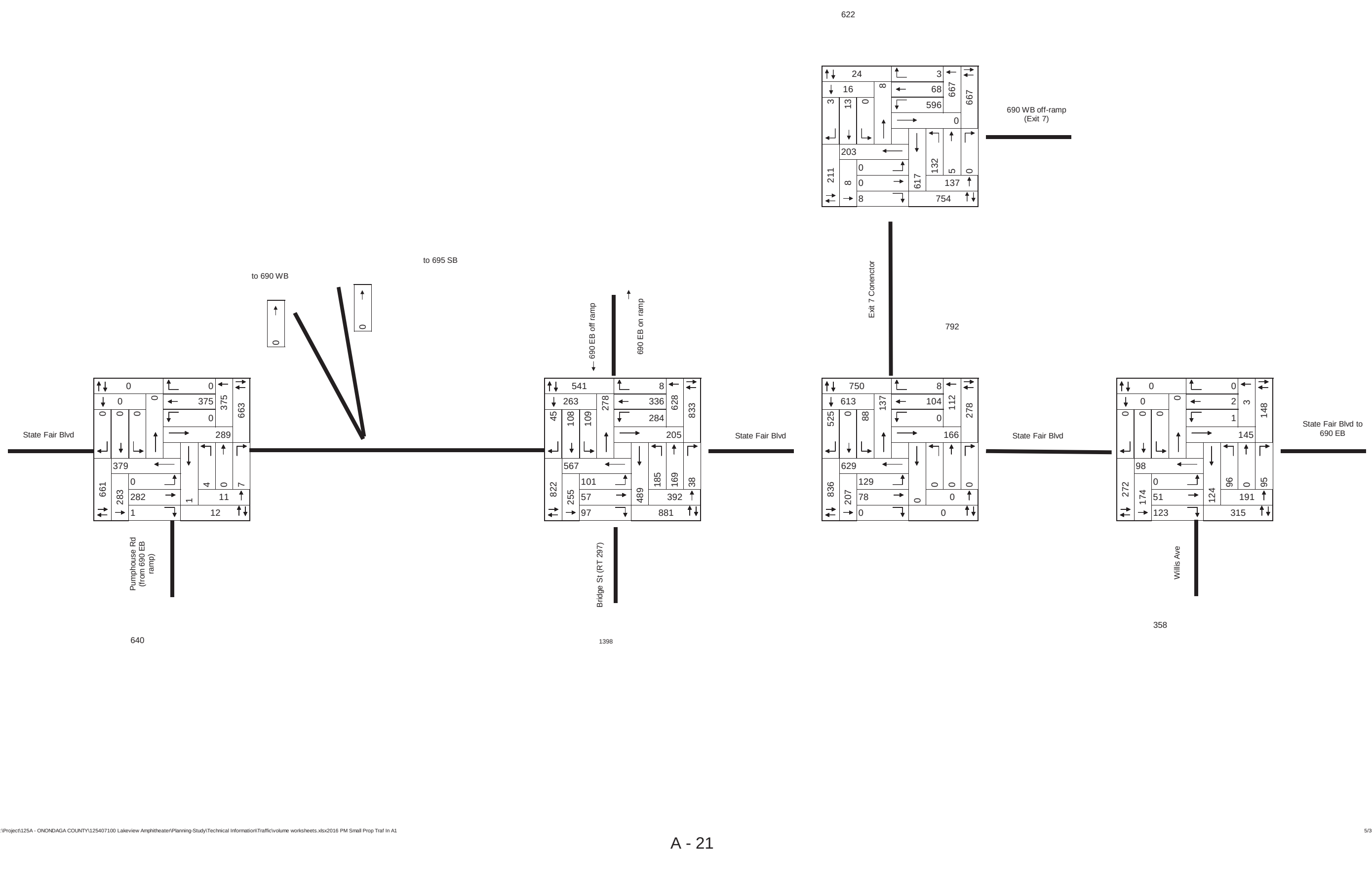
Distribution Estimation

Map Key	1	2	3	4	7	8	30	30					Total	Total
NYSDOT Station	330246	330246	330545	330545	330135	330135	9324	9324	2007	2007	6157	6157	Inbound	Outbound
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	1,4,8, 30NB, 2007S/EB, Willis NB	2,3,7, 30SB, 2007N/WB
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%**			

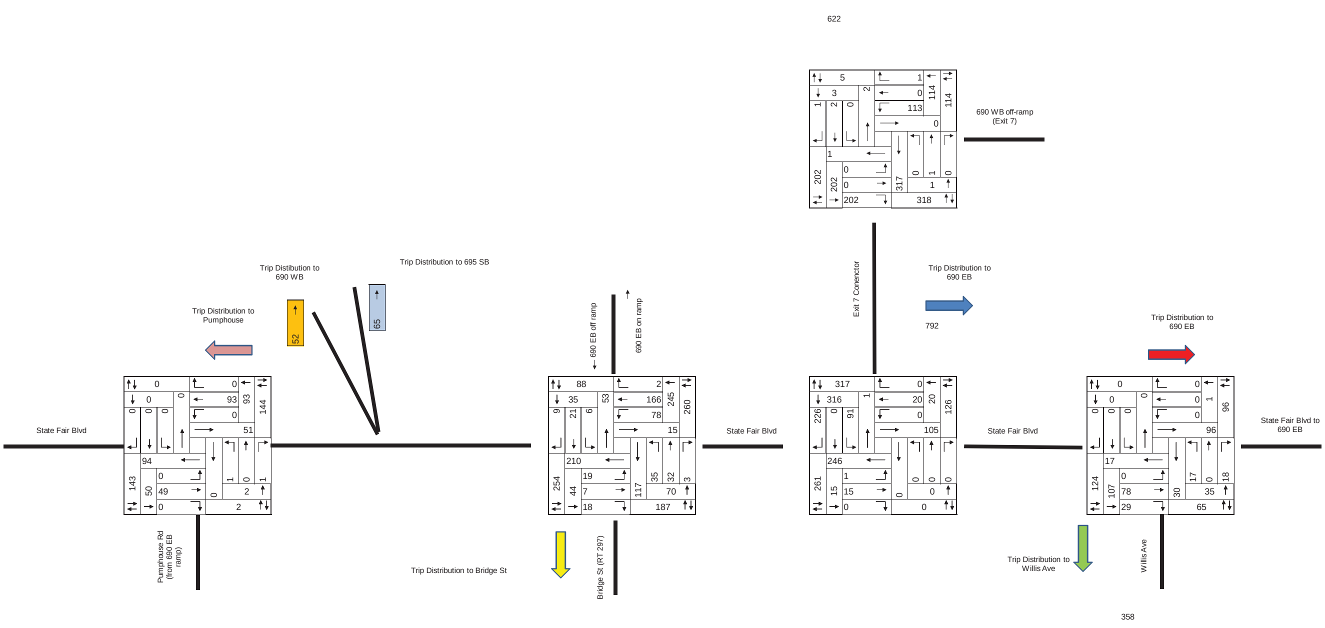
* - Based on existing traffic, 49% of NB traffic turn left onto State Fair Blvd.

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 Small Event = 500 attendees
2016 Small Event Volumes - Project Trips Total Project Trips 200
Outbound



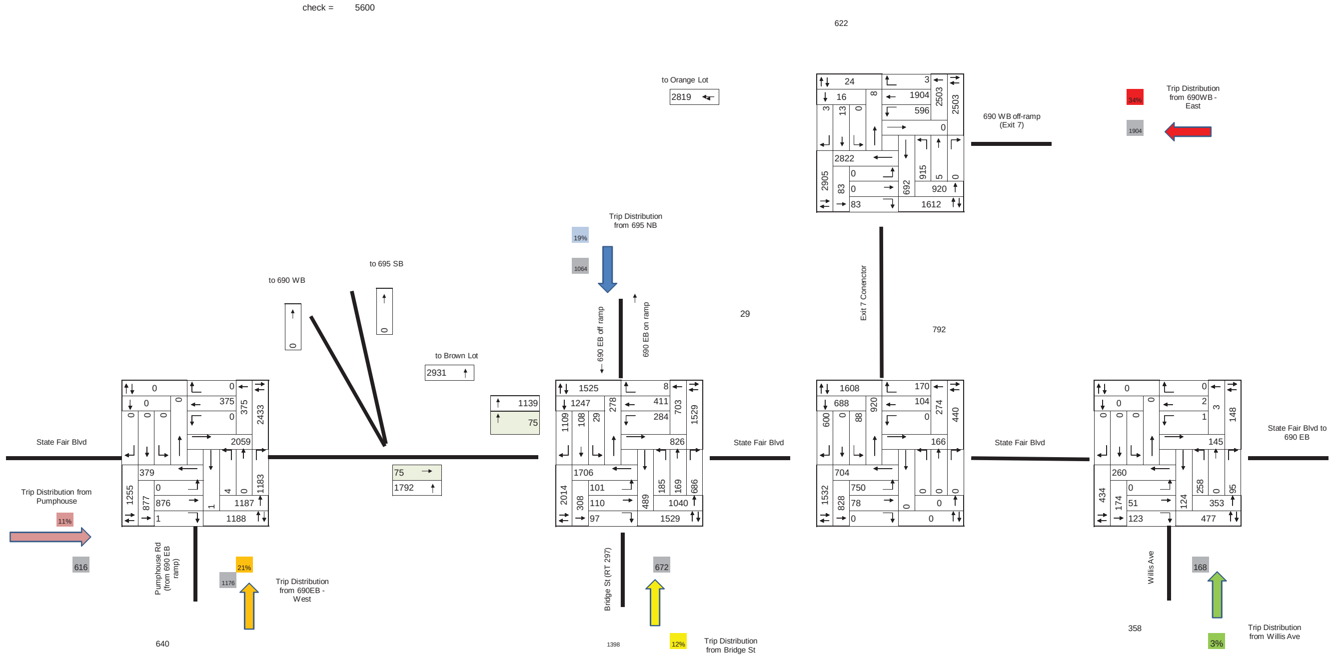
Shuttle Estimates/Assumptions

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

PM Peak Hour Project Traffic
2016 Large Event Volumes - All Trips
Inbound
A1

Large event - 17,500 attendees
Total Project Trips 5600

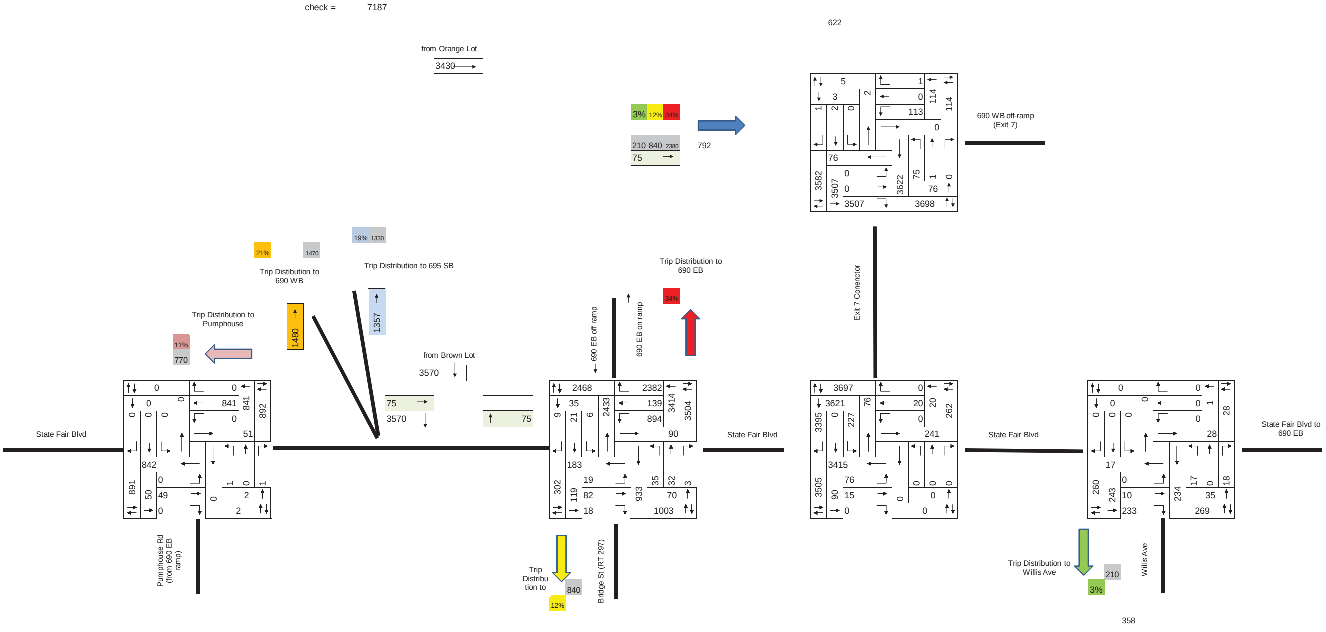
shuttle trips = 75
check = 5600



PM Peak Hour Project Traffic
2016 Large Event Volumes - All Trips
Outbound

Major Event = 17,500 attendees
Total Project Trips 7000

shuttle trips = 75
check = 7187



Appendix B:

Analysis Reports

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		

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

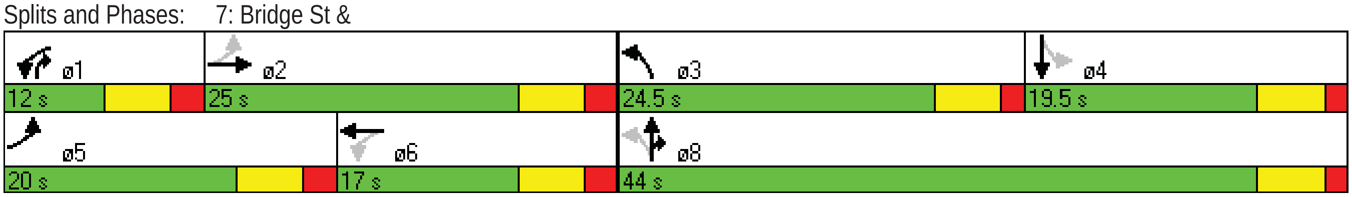
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

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		

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 Effct 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 &



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.

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%	ICU Level of Service A
Analysis Period (min) 15	

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		

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	

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		

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

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		

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	

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		

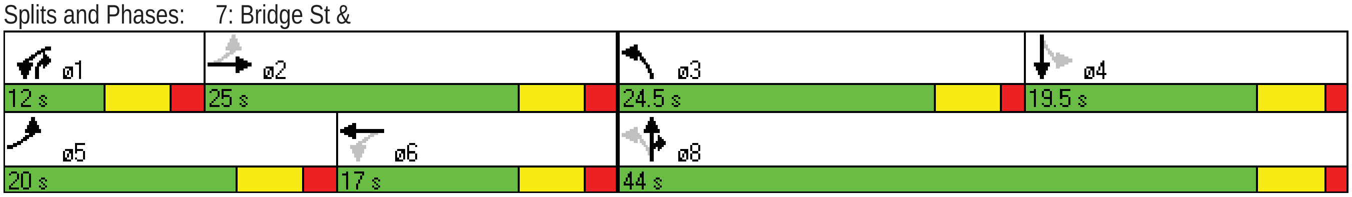
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	57	97	284	336	8	185	169	38	109	108	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	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		

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 Effct 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 &



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.

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		

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	

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		

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	

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

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	

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		

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

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		

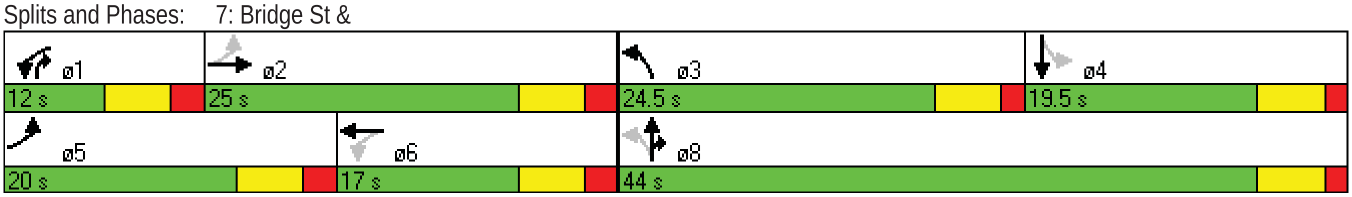
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	7	18	78	166	2	35	32	3	6	21	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	100		20	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper 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		

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 Effct 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 &



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

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%	ICU Level of Service A
Analysis Period (min) 15	

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		

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	

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		

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

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		

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	

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		

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	

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				

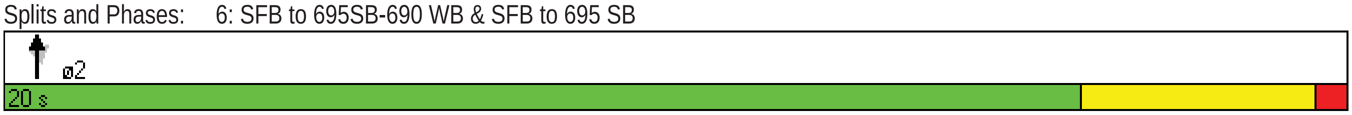
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	130.8%	ICU Level of Service	H
Analysis Period (min)	15		

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 Effct 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



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

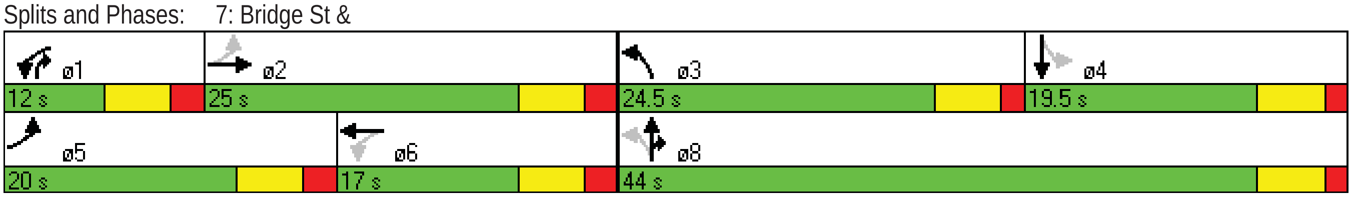
Intersection Summary

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		

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 Effct 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 &



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.

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	

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		

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	

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		

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	

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		

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%	ICU Level of Service H
Analysis Period (min) 15	

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		

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	

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		

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	

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		

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	

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				

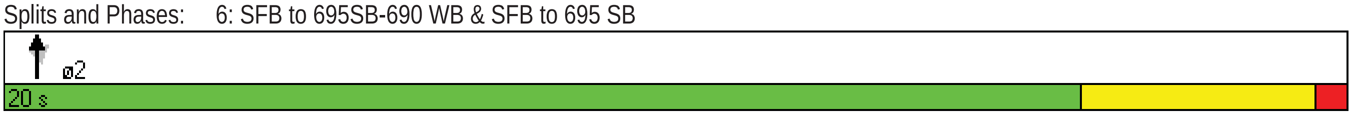
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		

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				

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



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

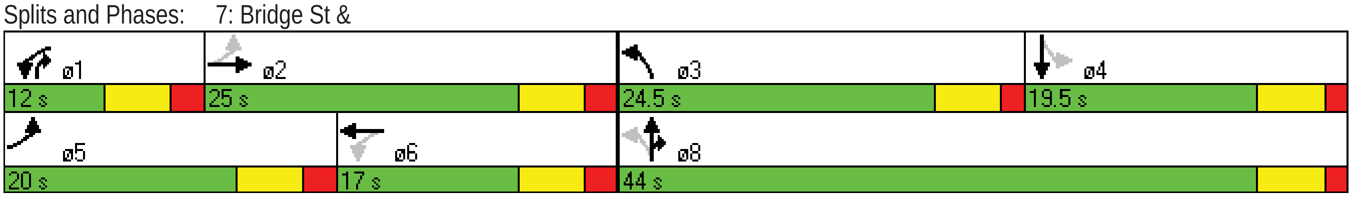
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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		

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 Effct 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 &



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.

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%	ICU Level of Service H
Analysis Period (min) 15	

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		

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		

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		

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	

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		

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		

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		

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	

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

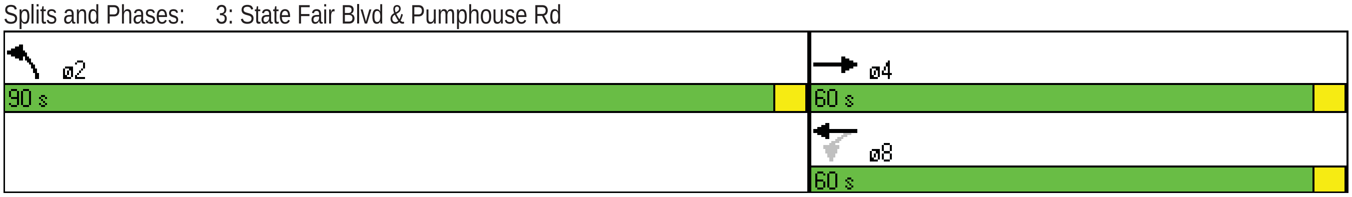
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	10.8%	ICU Level of Service	A
Analysis Period (min)	15		

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 Effct 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	

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



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.

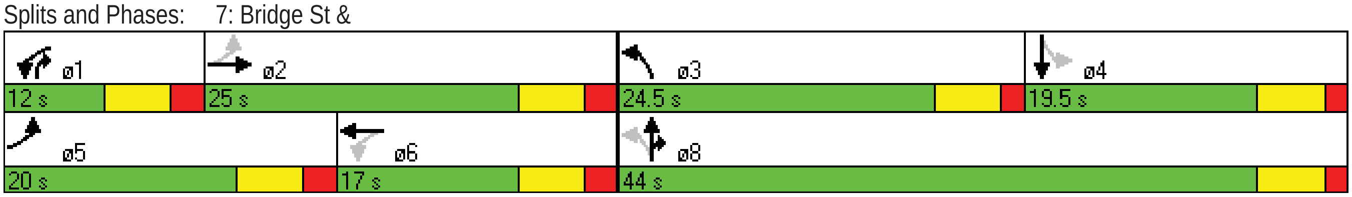
m Volume for 95th percentile queue is metered by upstream signal.

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		

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 Effct 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 &



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.

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	

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		

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 Effct 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

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

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.

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	

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	

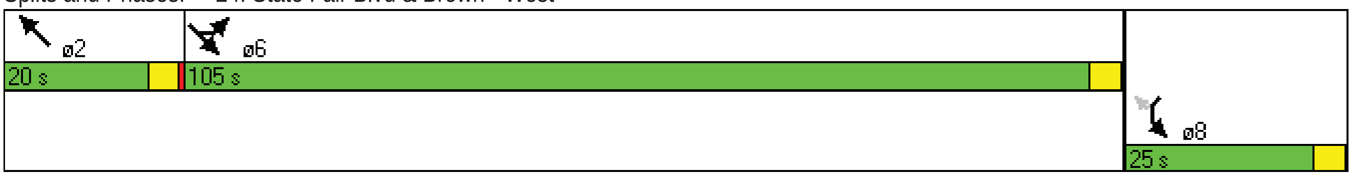
Direction, Lane #	NB 1	SE 1	NW 1
Volume Total	410	193	4
Volume Left	287	0	1
Volume Right	123	137	0
cSH	878	1700	1138
Volume to Capacity	0.47	0.11	0.00
Queue Length 95th (ft)	63	0	0
Control Delay (s)	12.6	0.0	2.7
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	2.7
Approach LOS	B		

Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

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



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.

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	

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

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)

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	

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

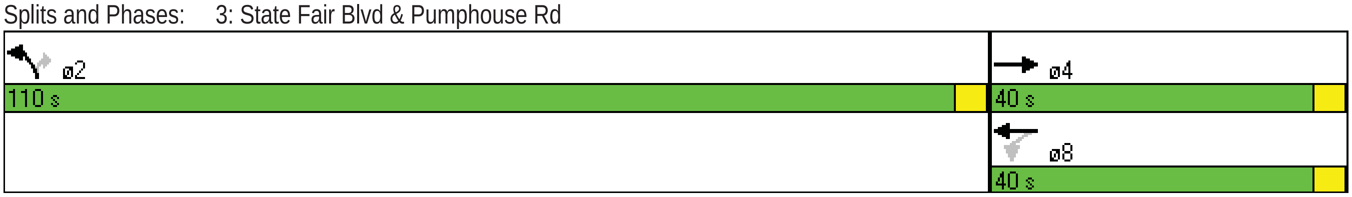
Network wide Queuing Penalty: 2146

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 Effct 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

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



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.

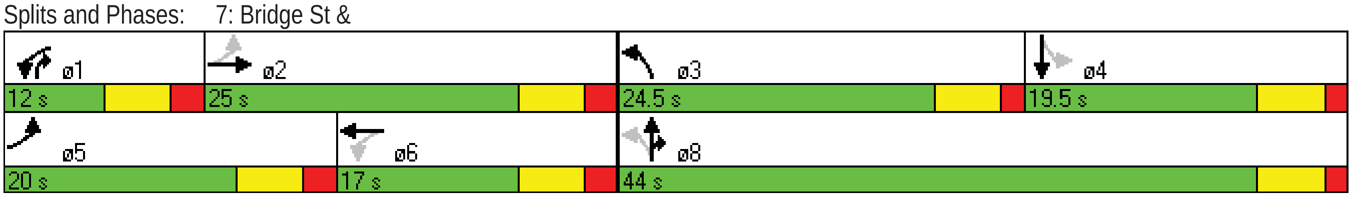
m Volume for 95th percentile queue is metered by upstream signal.

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		

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 Effct 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 &



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.

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	

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		

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 Effct 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	

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

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.

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

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	

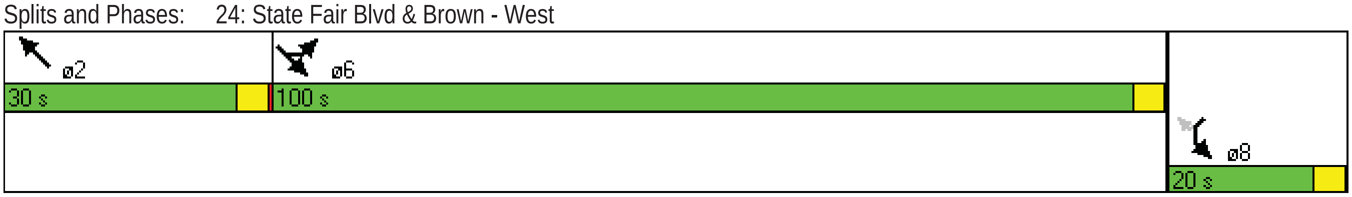
Direction, Lane #	NB 1	SE 1	NW 1
Volume Total	410	193	4
Volume Left	287	0	1
Volume Right	123	137	0
cSH	878	1700	1138
Volume to Capacity	0.47	0.11	0.00
Queue Length 95th (ft)	63	0	0
Control Delay (s)	12.6	0.0	2.7
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	2.7
Approach LOS	B		

Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

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



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.

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	

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

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)

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	

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

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	

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		

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	

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				

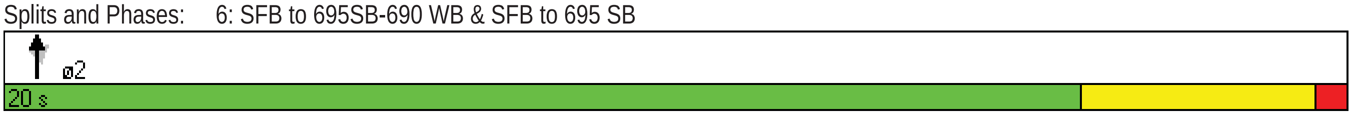
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		

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				

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



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

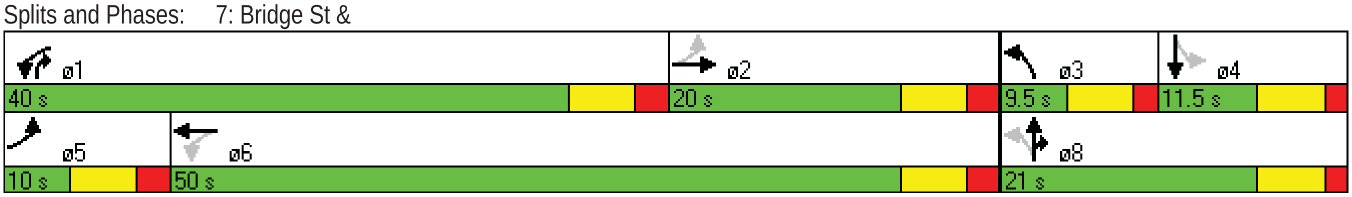
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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		

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 Effct 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 &



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.

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	

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		

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	

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		

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		

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		

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	

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		

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		

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

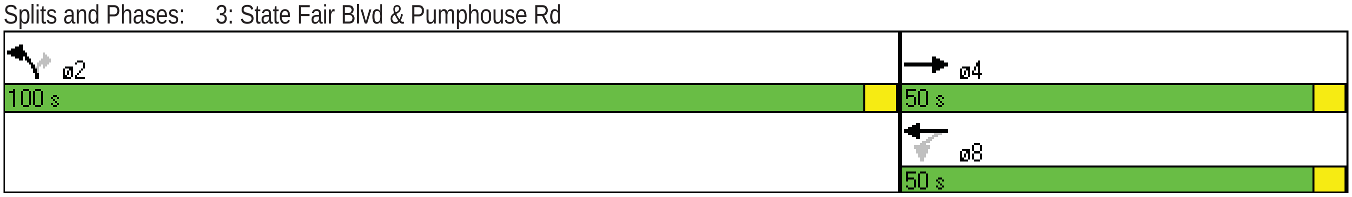
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	10.8%	ICU Level of Service	A
Analysis Period (min)	15		

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)					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 Effct 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



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.

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

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					

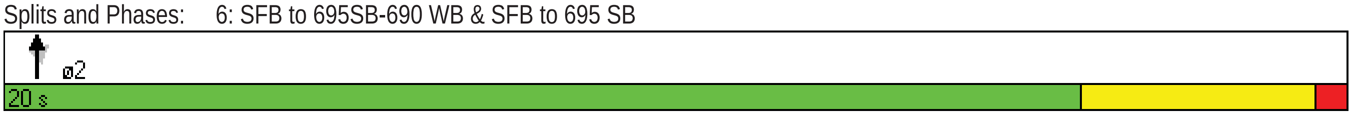
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

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 Effct 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



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

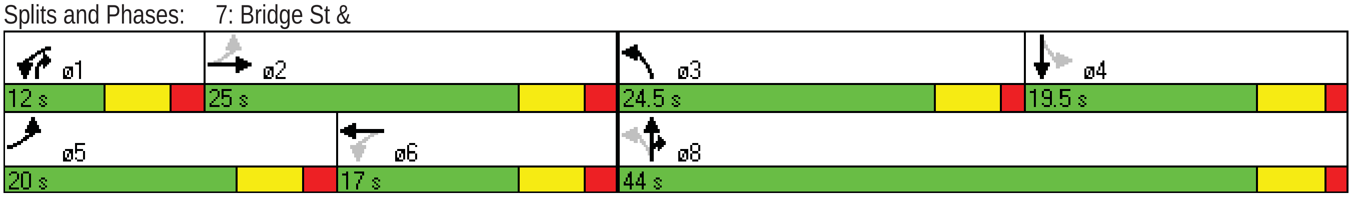
Intersection Summary

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		

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 Effct 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 &



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.

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	

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		

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	

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		

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 Effct 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

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

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.

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

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	

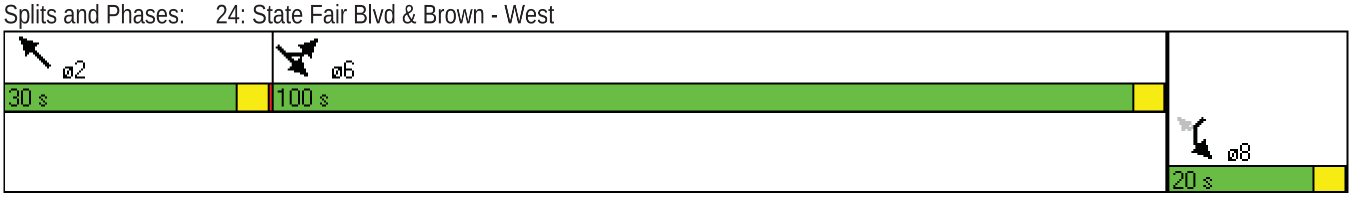
Direction, Lane #	NB 1	SE 1	NW 1
Volume Total	410	193	4
Volume Left	287	0	1
Volume Right	123	137	0
cSH	878	1700	1138
Volume to Capacity	0.47	0.11	0.00
Queue Length 95th (ft)	63	0	0
Control Delay (s)	12.6	0.0	2.7
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	2.7
Approach LOS	B		

Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

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
Frt						
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 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



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.

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%	ICU Level of Service A
Analysis Period (min) 15	

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		

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.

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.

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

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		

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	

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		

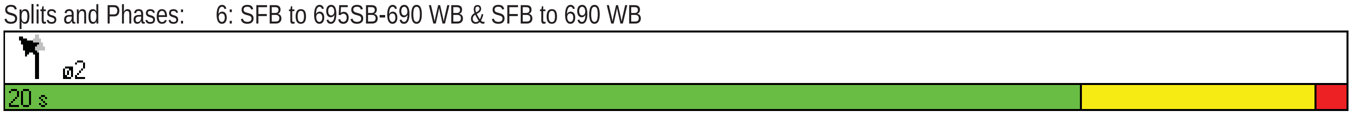
Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	1480	1357	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	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				

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



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

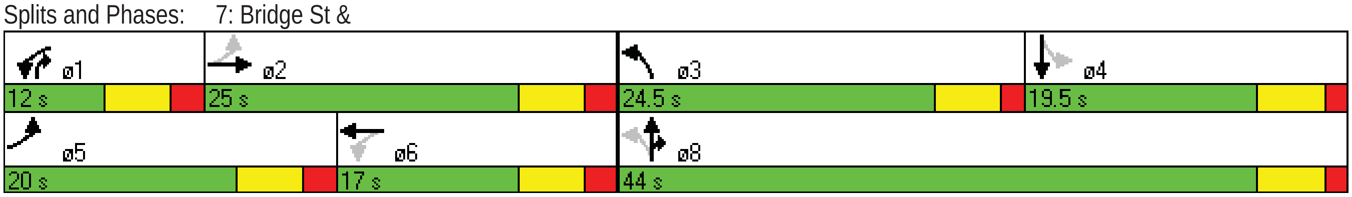
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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		

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 Effct 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 &



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.

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	

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		

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	

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		

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	

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		

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	

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		

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	

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		

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
Frt						
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
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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

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   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: 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)

Date: 5/19/2014
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Accident Verbal Description

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)

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: 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-WRKING, 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: 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)

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: 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

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
Weather: CLEAR
Road Surface Condition: WET
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: 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)

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: 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**
Accident Class: NON-REPORTABLE Police Agency: ONONDAGA CO SHERIFF DEPT 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

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**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: ONONDAGA CO SHERIFF DEPT Num of Veh: 1
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

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
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

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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 Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: PED/BICYCLIST NOT AT INTERSECTION 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)

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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

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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

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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**

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

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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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

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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

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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

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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

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

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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

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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

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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)

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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: 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

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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

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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

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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

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 Citation Issued: N
Direction of Travel: NORTH-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: 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

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 Citation Issued: Y
Direction of Travel: SOUTH-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

Veh :2 CAR/VAN/PICKUP Registered Weight: 3844 State of Registration: NY
Num of Occupants: 3 Driver's Age: 41 Sex: F Citation Issued: Y
Direction of Travel: EAST 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:
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 | 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: | 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**
Accident Class: PROPERTY DAMAGE AND INJURY | Police Agency: GEDDES TOWN PD | Num of Veh: 4
Type Of Accident: COLLISION WITH MOTOR VEHICLE | Traffic Control: NONE
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**

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 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

Veh :1 TRUCK Registered Weight: 150000 State of Registration: NY
Num of Occupants: 1 Driver's Age: 38 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: 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**
Accident Class: NON-REPORTABLE Police Agency: WATERTOWN SP Num of Veh: 1
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

County: Onondaga Muni: Geddes(T) Ref. Marker: Street: HIAWATHA AVE
***** CONTINUED
Veh :1 CAR/VAN/PICKUP 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: 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**
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: 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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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 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
***** CONTINUED

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

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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: 3 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

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

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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 Road Char.: STRAIGHT/ GRADE 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 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 :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**
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 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

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**

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/ GRADE 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

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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**
Accident Class: NON-REPORTABLE Police Agency: NYSP NORTH SYRACUSE Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: YIELD SIGN
Manner of Collision: REAR END Weather: CLOUDY
Road Surface Condition: DRY Road Char.: CURVE AND GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

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**
Accident Class: PROPERTY DAMAGE Police Agency: SP BALDWINSVILLE SATELLITE Num of Veh: 1
Type Of Accident: COLL. W/LIGHT SUPPORT/UTILITY POLE Traffic Control: NO PASSING ZONE
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

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

Accident Location Information System(ALIS)

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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 Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: ILLNESS, GLARE

Veh :2 CAR/VAN/PICKUP Registered Weight: 6069 State of Registration: NY
Num of Occupants: 1 Driver's Age: 47 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

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: 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

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

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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**
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: LEFT TURN (AGAINST 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 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**
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: 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

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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

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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

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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

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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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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
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) 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: 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

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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

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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

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)

Date: 5/19/2014
4:36:41 PM

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: 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)

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: 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
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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: 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)

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: 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
	State Fair	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
		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
		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
	State Fair	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
		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
		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
		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
	State Fair	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
		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
		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
		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
		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
		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
		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
		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
		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
		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
		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	Overturned	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		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
	State Fair	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	I 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
	State Fair	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		
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	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
4LEGGED&>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 URBAN FUNCTION CLASS	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
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/0 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/0 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 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
	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**

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 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				**Total Acc Rate (MVM)**		
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				**Total Acc Rate (MEV)**		
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				**Total Acc Rate (MVM)**		
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

Exhibit 5-1 Design Hourly Volume as a Function of AADT

DHV as a Percentage of AADT	Primary Function of Route
30%	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. 60, Figure 2-16.

COLLISION DIAGRAM

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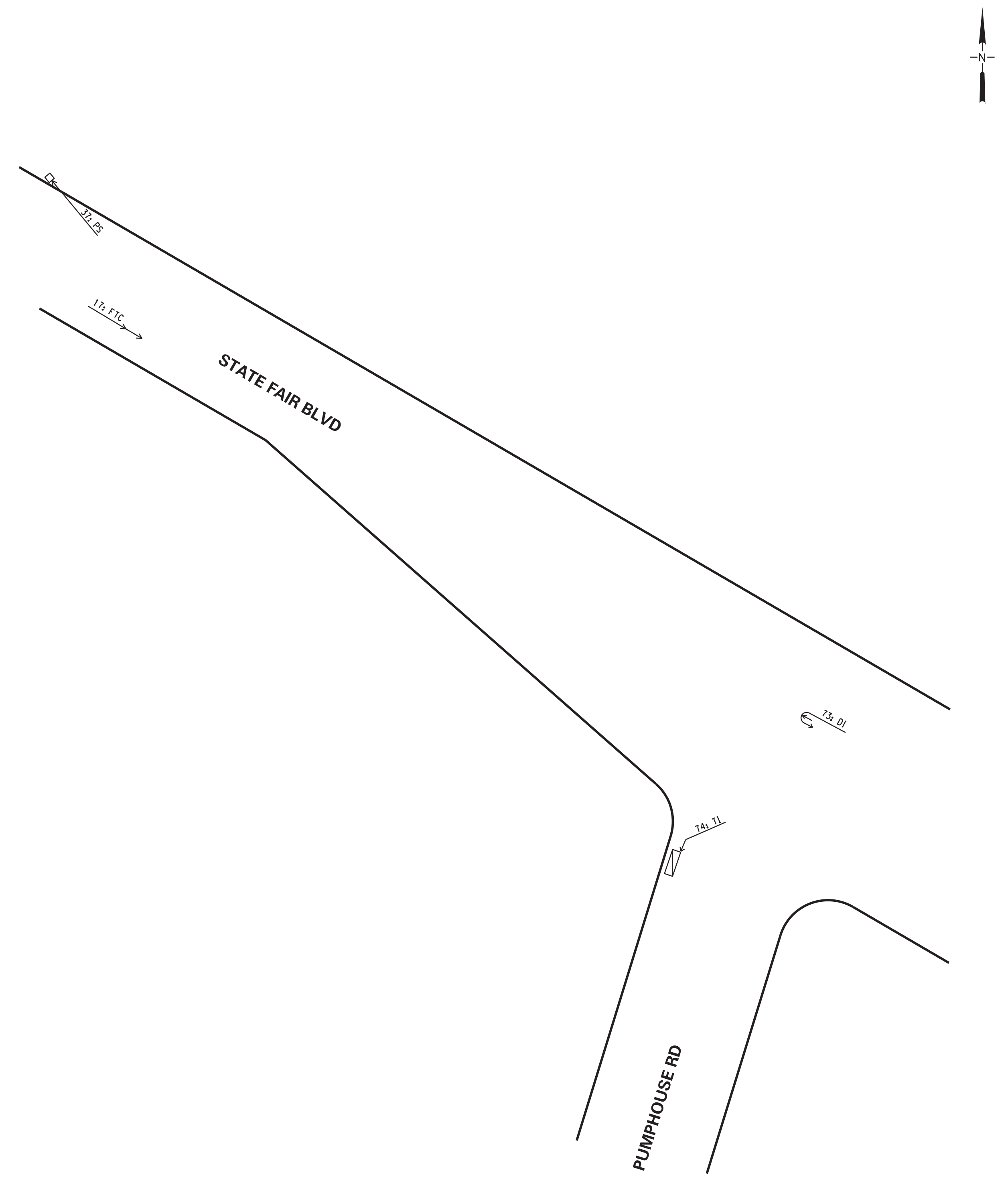
MUNICIPALITY TOWN OF GEDDES COUNTY ONONDAGA
INTERSECTION OR SEGMENT STATE FAIR BLVD: PUMPHOUSE RD INTERSECTION AND WEST
PERIOD 3 YRS 0 MOS FROM OCT 1/10 TO SEPT 30/13

FILE 125.407.100
FIGURE NO. 1
BY M. ARNER DATE 5/27/14

LAKEVIEW AMPHITHEATER TRAFFIC IMPACT STUDY



KEY TO ACCIDENT DESCRIPTION: *REFERENCE NUMBER: CONTRIBUTING FACTOR*

SYMBOLS	MANNER OF COLLISION
MOVING VEHICLE	HEAD-ON
BACKING VEHICLE	LEFT-TURN
STOPPED VEHICLE	OUT OF CONTROL
PARKED VEHICLE	OVERTAKING
FIXED OBJECT	OVERTURNED
PERSONAL INJURY	REAR-END
FATAL INJURY	RIGHT-ANGLE
P — PEDESTRIAN	RIGHT TURN
B — BICYCLE	SIDE IMPACT
A — ANIMAL	SIDE-SWIPE
	SKIDDING

KEY TO CONTRIBUTING FACTORS

AD -	AGGRESSIVE DRIVING	I -	ILLNESS
AL -	ALCOHOL INVOLVEMENT	OD -	OBSTRUCTION/DEBRIS
ANM -	ANIMAL'S ACTION	OED -	OTHER ELECTRONIC DEVICE
ASL -	DRIVER FELL ASLEEP	PASS -	PASSING OR LANE USAGE IMPROPER
BD -	BRAKES DEFECTIVE	PD -	PASSENGER DISTRACTION
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

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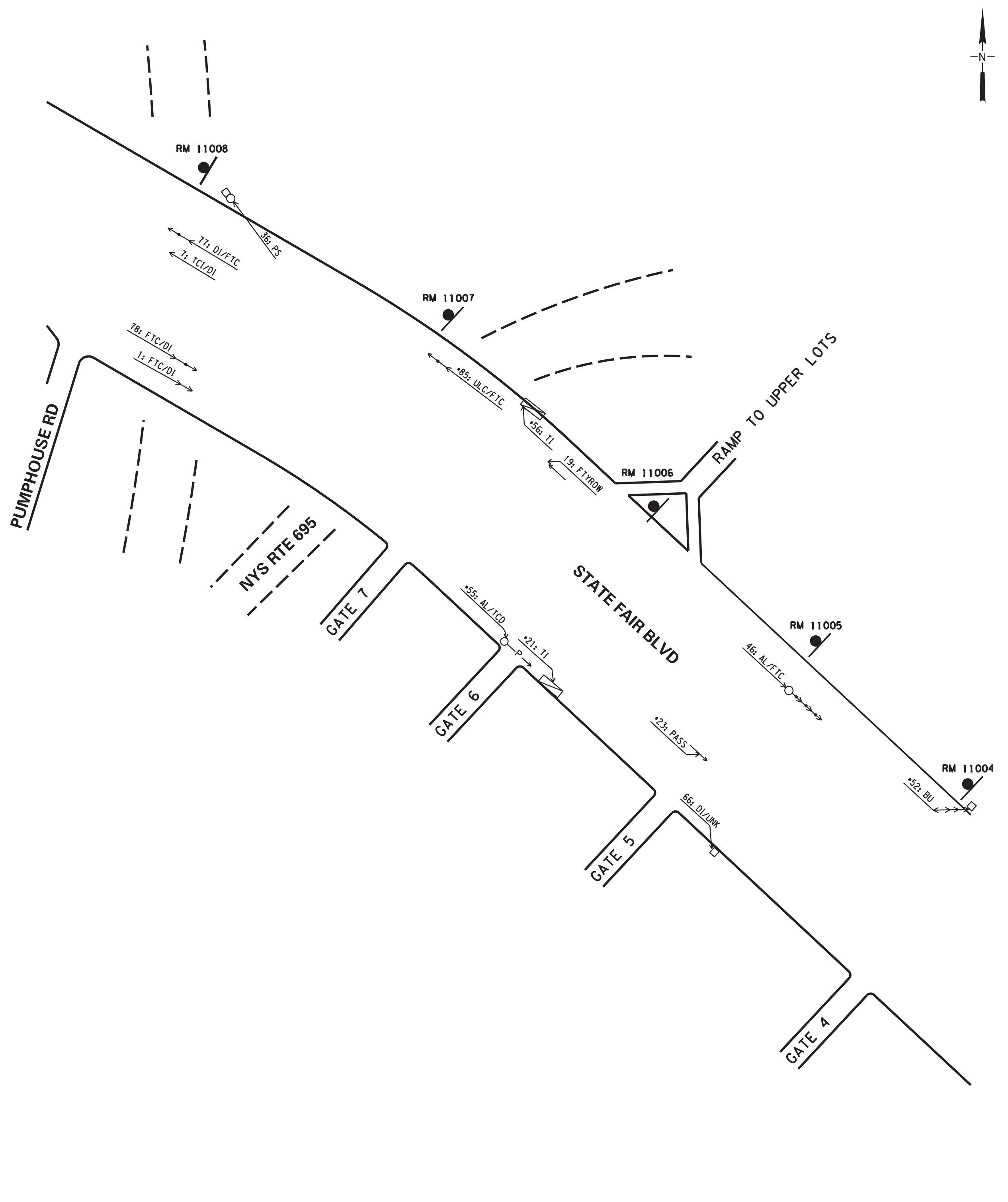
MUNICIPALITY TOWN OF GEDDES COUNTY ONONDAGA
INTERSECTION OR SEGMENT STATE FAIR BLVD: PUMPHOUSE RD TO GATE 4
PERIOD 3 YRS 0 MOS FROM OCT 1/10 TO SEPT 30/13

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
MOVING VEHICLE	HEAD-ON
BACKING VEHICLE	LEFT-TURN
STOPPED VEHICLE	OUT OF CONTROL
PARKED VEHICLE	OVERTAKING
FIXED OBJECT	OVERTURNED
PERSONAL INJURY	REAR-END
FATAL INJURY	RIGHT-ANGLE
—P— PEDESTRIAN	RIGHT TURN
—B— BICYCLE	SIDE IMPACT
—A— ANIMAL	SIDE-SWIPE
	SKIDDING

KEY TO CONTRIBUTING FACTORS

AD -	AGGRESSIVE DRIVING	I -	ILLNESS
AL -	ALCOHOL INVOLVEMENT	OD -	OBSTRUCTION/DEBRIS
ANM -	ANIMAL'S ACTION	OED -	OTHER ELECTRONIC DEVICE
ASL -	DRIVER FELL ASLEEP	PASS -	PASSING OR LANE USAGE IMPROPER
BD -	BRAKES DEFECTIVE	PD -	PASSENGER DISTRACTION
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

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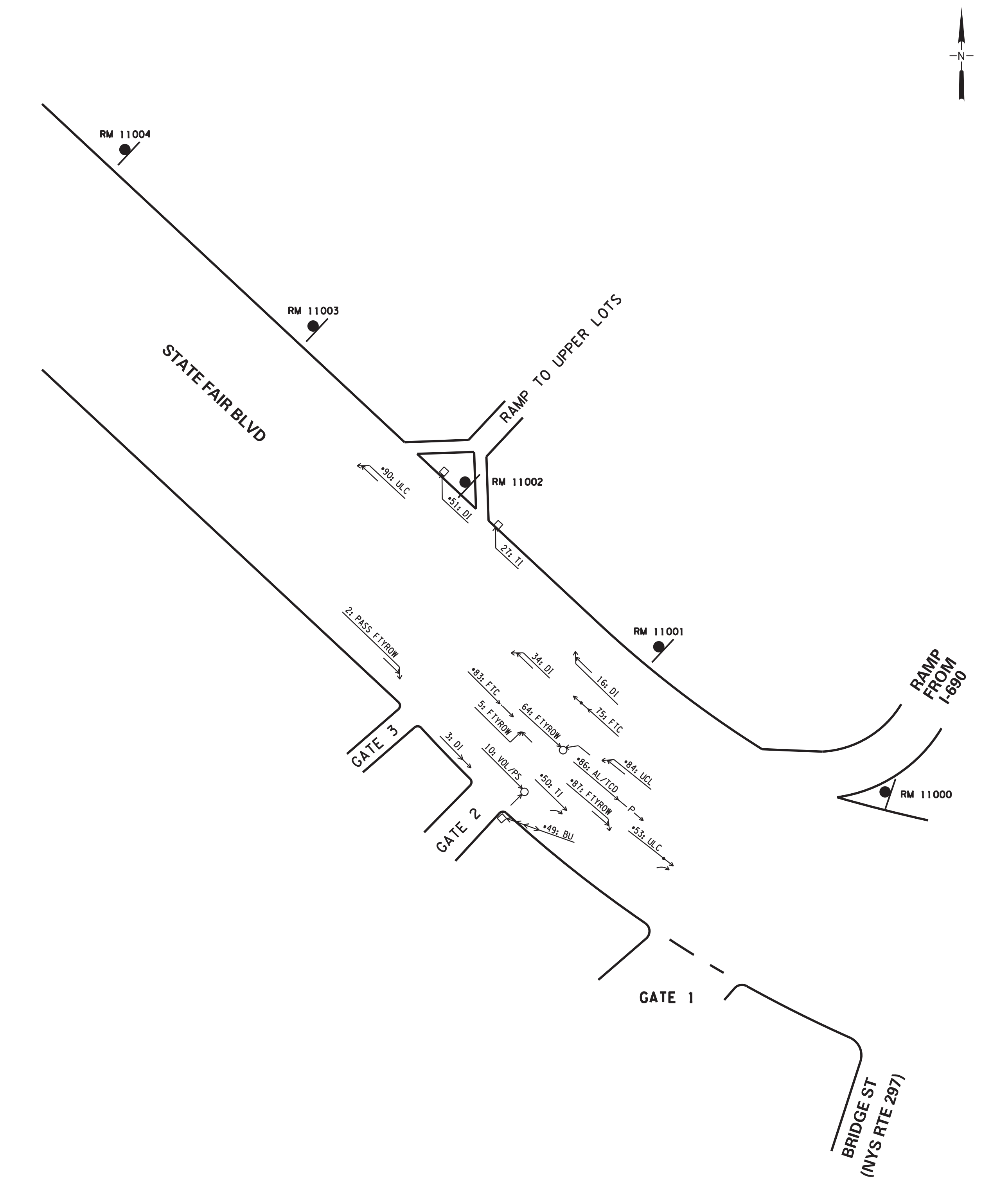
MUNICIPALITY TOWN OF GEDDES COUNTY ONONDAGA
INTERSECTION OR SEGMENT STATE FAIR BLVD: GATE 4 TO BRIDGE ST
PERIOD 3 YRS 0 MOS FROM OCT 1/10 TO SEPT 30/13

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
MOVING VEHICLE	HEAD-ON
BACKING VEHICLE	LEFT-TURN
STOPPED VEHICLE	OUT OF CONTROL
PARKED VEHICLE	OVERTAKING
FIXED OBJECT	OVERTURNED
PERSONAL INJURY	REAR-END
FATAL INJURY	RIGHT-ANGLE
P PEDESTRIAN	RIGHT TURN
B BICYCLE	SIDE IMPACT
A ANIMAL	SIDE-SWIPE
	SKIDDING

KEY TO CONTRIBUTING FACTORS

AD -	AGGRESSIVE DRIVING	I -	ILLNESS
AL -	ALCOHOL INVOLVEMENT	OD -	OBSTRUCTION/DEBRIS
ANM -	ANIMAL'S ACTION	OED -	OTHER ELECTRONIC DEVICE
ASL -	DRIVER FELL ASLEEP	PASS -	PASSING OR LANE USAGE IMPROPER
BD -	BRAKES DEFECTIVE	PD -	PASSENGER DISTRACTION
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

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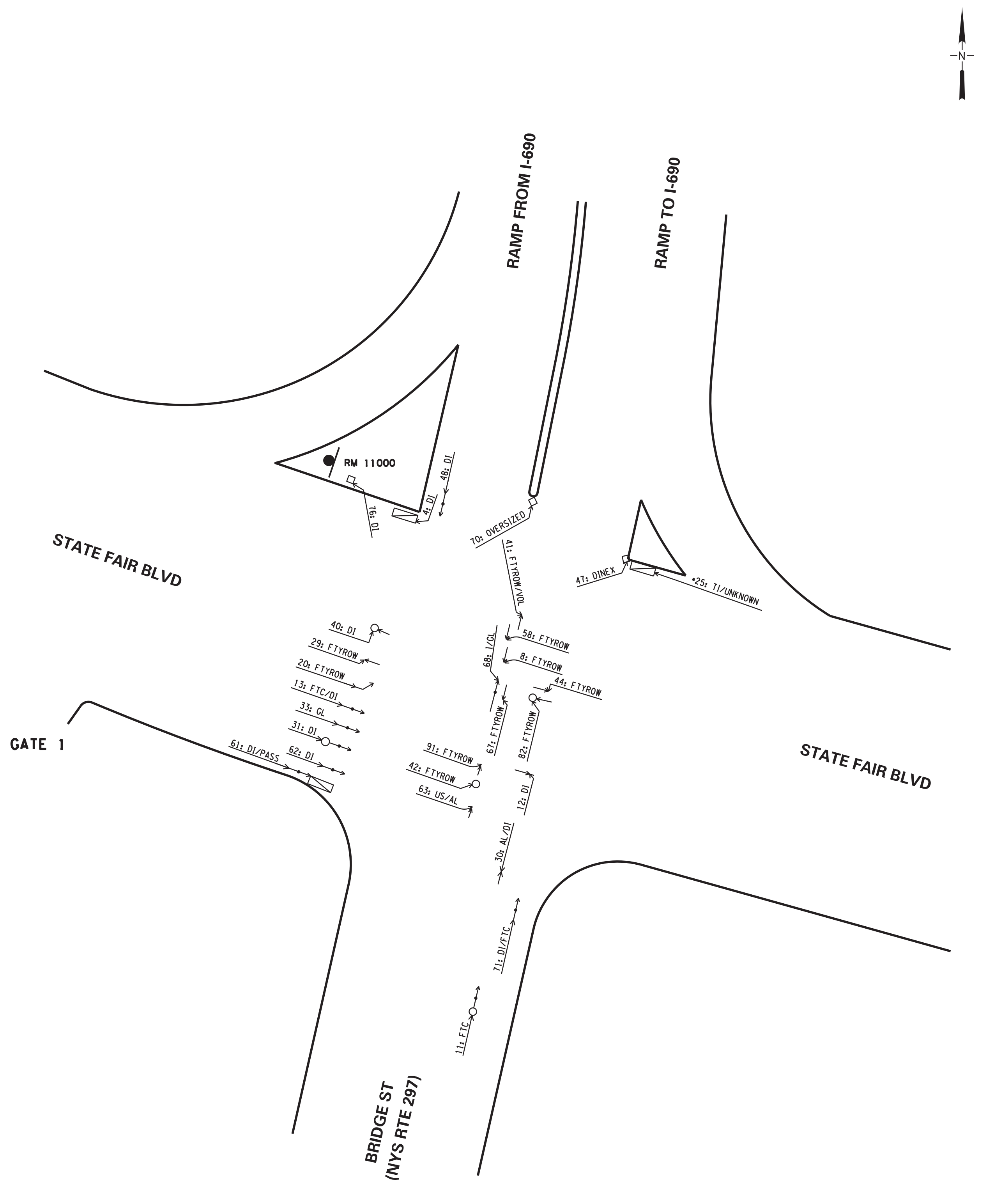
MUNICIPALITY TOWN OF GEDDES   COUNTY ONONDAGA
INTERSECTION OR SEGMENT STATE FAIR BLVD: BRIDGE ST INTERSECTION
PERIOD 3 YRS 0 MOS   FROM OCT 1/10 TO SEPT 30/13

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
MOVING VEHICLE	HEAD-ON
BACKING VEHICLE	LEFT-TURN
STOPPED VEHICLE	OUT OF CONTROL
PARKED VEHICLE	OVERTAKING
FIXED OBJECT	OVERTURNED
PERSONAL INJURY	REAR-END
FATAL INJURY	RIGHT-ANGLE
PEDESTRIAN	RIGHT TURN
BICYCLE	SIDE IMPACT
ANIMAL	SIDE-SWIPE
	SKIDDING

KEY TO CONTRIBUTING FACTORS

AD -	AGGRESSIVE DRIVING	I -	ILLNESS
AL -	ALCOHOL INVOLVEMENT	OD -	OBSTRUCTION/DEBRIS
ANM -	ANIMAL'S ACTION	OED -	OTHER ELECTRONIC DEVICE
ASL -	DRIVER FELL ASLEEP	PASS -	PASSING OR LANE USAGE IMPROPER
BD -	BRAKES DEFECTIVE	PD -	PASSENGER DISTRACTION
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

C&S ENGINEERS, INC.
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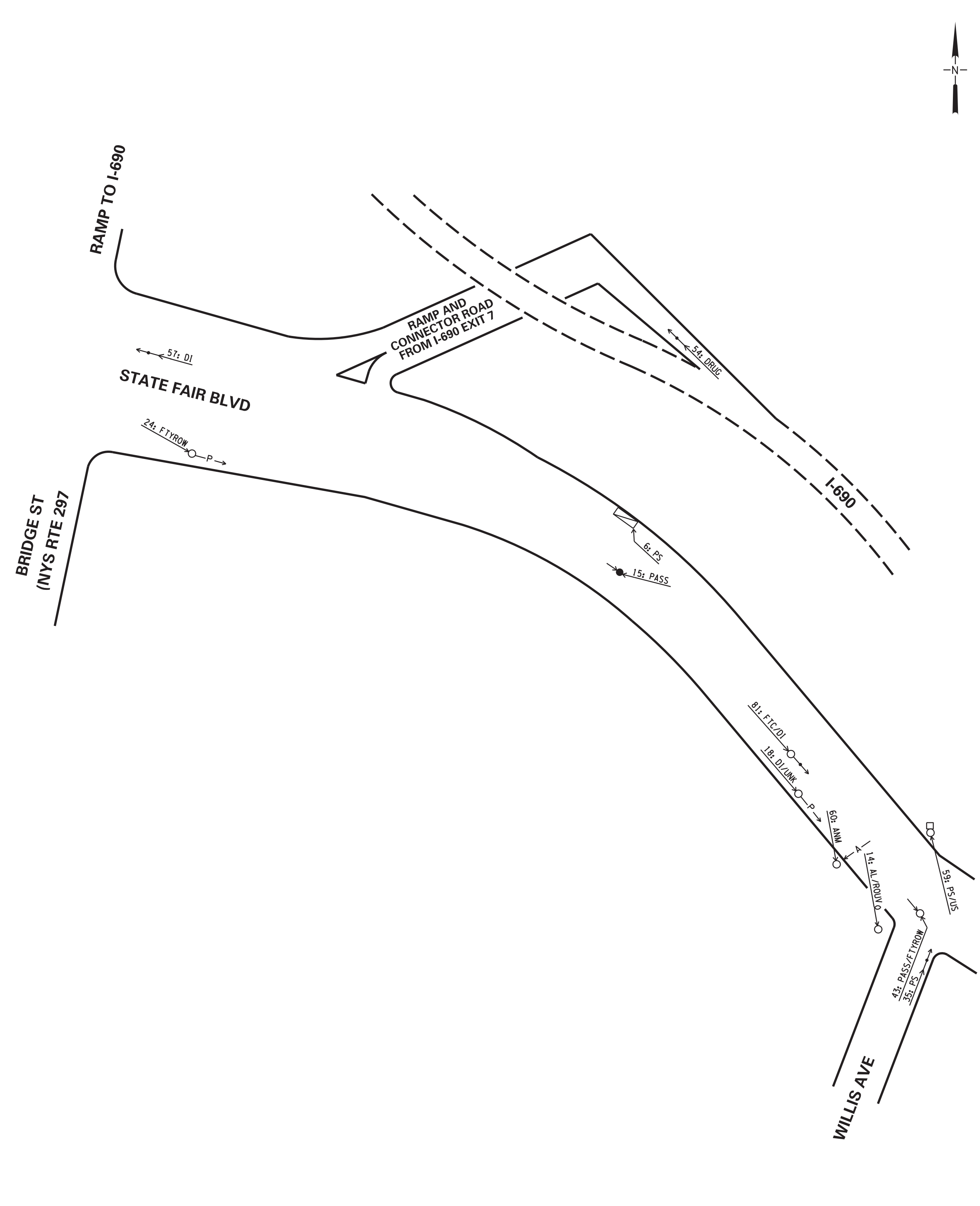
MUNICIPALITY TOWN OF GEDDES COUNTY ONONDAGA
INTERSECTION OR SEGMENT STATE FAIR BLVD: BRIDGE ST TO WILLIS AVE
PERIOD 3 YRS 0 MOS FROM OCT 1/10 TO SEPT 30/13

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	HEAD-ON	AD -	AGGRESSIVE DRIVING	I -	ILLNESS
BACKING VEHICLE	LEFT-TURN	AL -	ALCOHOL INVOLVEMENT	OD -	OBSTRUCTION/DEBRIS
STOPPED VEHICLE	OUT OF CONTROL	ANM -	ANIMAL'S ACTION	OED -	OTHER ELECTRONIC DEVICE
PARKED VEHICLE	OVERTAKING	ASL -	DRIVER FELL ASLEEP	PASS -	PASSING OR LANE USAGE IMPROPER
FIXED OBJECT	OVERTURNED	BD -	BRAKES DEFECTIVE	PD -	PASSENGER DISTRACTION
PERSONAL INJURY	REAR-END	BU -	BACKING UNSAFELY	PED -	PEDESTRIAN CONFUSION/ERROR
FATAL INJURY	RIGHT-ANGLE	CP -	CELL PHONE	PS -	PAVEMENT SLIPPERY
←P— PEDESTRIAN	RIGHT TURN	DI -	DRIVER INATTENTION	ROUV -	REACTION TO UNINVOLVED VEHICLE
←B— BICYCLE	SIDE IMPACT	DINEX -	DRIVER INEXPERIENCE	TCD -	TRAFFIC CONTROL DISREGARD
←A— ANIMAL	SIDE-SWIPE	DRUG -	DRUGS (ILLEGAL)	TCI -	TRAFFIC CONTROL DEVICE IMPROPER/NOT WORKING
	SKIDDING	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 G

LEED CHECKLIST

LEED 2009 for New Construction and Major Renovations

Project Checklist - Onondaga Lake Amphitheater Building

Sustainable Sites — Possible Points: 26

Y	?	N	d/C			Points
15	0	11				
Y			C	Prereq 1	Construction Activity Pollution Prevention	
1			d	Credit 1	Site Selection	1
		5	d	Credit 2	Development Density and Community Connectivity	5
1			d	Credit 3	Brownfield Redevelopment	1
		6	d	Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			d	Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			d	Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			d	Credit 4.4	Alternative Transportation—Parking Capacity	2
1			C	Credit 5.1	Site Development—Protect or Restore Habitat	1
1			d	Credit 5.2	Site Development—Maximize Open Space	1
1			d	Credit 6.1	Stormwater Design—Quantity Control	1
1			d	Credit 6.2	Stormwater Design—Quality Control	1
1			C	Credit 7.1	Heat Island Effect—Non-roof	1
1			d	Credit 7.2	Heat Island Effect—Roof	1
1			d	Credit 8	Light Pollution Reduction	1

Water Efficiency — Possible Points: 10

Y	?	N	d/C			Points
8	0	2				
Y			d	Prereq 1	Water Use Reduction—20% Reduction	
4			d	Credit 1	Water Efficient Landscaping	2 to 4
					[ ] Reduce by 50%	2
					[X] No Potable Water Use or Irrigation	4
2			d	Credit 2	Innovative Wastewater Technologies	2
2		2	d	Credit 3	Water Use Reduction	2 to 4
					[X] Reduce by 30%	2
					[ ] Reduce by 35%	3
					[ ] Reduce by 40%	4

Y	?	N			Energy and Atmosphere	Possible Points: 35
26	0	9				
Y			C	Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			d	Prereq 2	Minimum Energy Performance	
Y			d	Prereq 3	Fundamental Refrigerant Management	
10		9	d	Credit 1	Optimize Energy Performance	1 to 19
					Improve by 12% for New Buildings or 8% for Existing Building Renovations	1
					Improve by 14% for New Buildings or 10% for Existing Building Renovations	2
					Improve by 16% for New Buildings or 12% for Existing Building Renovations	3
					Improve by 18% for New Buildings or 14% for Existing Building Renovations	4
					Improve by 20% for New Buildings or 16% for Existing Building Renovations	5
					Improve by 22% for New Buildings or 18% for Existing Building Renovations	6
					Improve by 24% for New Buildings or 20% for Existing Building Renovations	7
					Improve by 26% for New Buildings or 22% for Existing Building Renovations	8
					Improve by 28% for New Buildings or 24% for Existing Building Renovations	9
				X	Improve by 30% for New Buildings or 26% for Existing Building Renovations	10
					Improve by 32% for New Buildings or 28% for Existing Building Renovations	11
					Improve by 34% for New Buildings or 30% for Existing Building Renovations	12
					Improve by 36% for New Buildings or 32% for Existing Building Renovations	13
					Improve by 38% for New Buildings or 34% for Existing Building Renovations	14
					Improve by 40% for New Buildings or 36% for Existing Building Renovations	15
					Improve by 42% for New Buildings or 38% for Existing Building Renovations	16
					Improve by 44% for New Buildings or 40% for Existing Building Renovations	17
					Improve by 46% for New Buildings or 42% for Existing Building Renovations	18
					Improve by 48%+ for New Buildings or 44%+ for Existing Building Renovations	19
7			d	Credit 2	On-Site Renewable Energy	1 to 7
					1% Renewable Energy	1
					3% Renewable Energy	2
					5% Renewable Energy	3
					7% Renewable Energy	4
					9% Renewable Energy	5
					11% Renewable Energy	6
				X	13% Renewable Energy	7
2			C	Credit 3	Enhanced Commissioning	2
2			d	Credit 4	Enhanced Refrigerant Management	2
3			C	Credit 5	Measurement and Verification	3
2			C	Credit 6	Green Power	2

Y	?	N				
6	0	8		**Materials and Resources**		Possible Points: 14
Y			d	Prereq 1	Storage and Collection of Recyclables	
		3	C	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
					Reuse 55%	1
					Reuse 75%	2
					Reuse 95%	3
		1	C	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
1		1	C	Credit 2	Construction Waste Management	1 to 2
					X 50% Recycled or Salvaged	1
					75% Recycled or Salvaged	2
		2	C	Credit 3	Materials Reuse	1 to 2
					Reuse 5%	1
					Reuse 10%	2
2			C	Credit 4	Recycled Content	1 to 2
					10% of Content	1
					X 20% of Content	2
2			C	Credit 5	Regional Materials	1 to 2
					10% of Materials	1
					X 20% of Materials	2
		1	C	Credit 6	Rapidly Renewable Materials	1
1			C	Credit 7	Certified Wood	1

Y	?	N				
10	0	5			**Indoor Environmental Quality**	Possible Points: 15
Y			d	Prereq 1	Minimum Indoor Air Quality Performance	
Y			d	Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			d	Credit 1	Outdoor Air Delivery Monitoring	1
1			d	Credit 2	Increased Ventilation	1
1			C	Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			C	Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			C	Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			C	Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			C	Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			C	Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			d	Credit 5	Indoor Chemical and Pollutant Source Control	1
		1	d	Credit 6.1	Controllability of Systems—Lighting	1
		1	d	Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			d	Credit 7.1	Thermal Comfort—Design	1
		1	d	Credit 7.2	Thermal Comfort—Verification	1
		1	d	Credit 8.1	Daylight and Views—Daylight	1
		1	d	Credit 8.2	Daylight and Views—Views	1

Y	?	N				
1	0	5			**Innovation and Design Process**	Possible Points: 6
		1	d/C	Credit 1.1	Innovation in Design: Specific Title	1
		1	d/C	Credit 1.2	Innovation in Design: Specific Title	1
		1	d/C	Credit 1.3	Innovation in Design: Specific Title	1
		1	d/C	Credit 1.4	Innovation in Design: Specific Title	1
		1	d/C	Credit 1.5	Innovation in Design: Specific Title	1
1			d/C	Credit 2	LEED Accredited Professional	1

Y	?	N				
0	4	0			**Regional Priority Credits**	Possible Points: 4
	1		d/C	Credit 1.1	Regional Priority: Specific Credit	1
	1		d/C	Credit 1.2	Regional Priority: Specific Credit	1
	1		d/C	Credit 1.3	Regional Priority: Specific Credit	1
	1		d/C	Credit 1.4	Regional Priority: Specific Credit	1

66	4	40	**Total**	Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

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13212

On-site renewable energy
EAc2 | Up to 7 points
Threshold/Path: 1

Building reuse - maintain existing walls, floors and roof
MRc1.1 | Up to 3 points
Threshold/Path: Buiding Reuse: 75%

Brownfield redevelopment
SSc3 | 1 point

Stormwater design - quantity control
SSc6.1 | 1 point

Heat island effect - nonroof
SSc7.1 | 1 point

Heat island effect - roof
SSc7.2 | 1 point

APPENDIX H

SEWAGE GENERATION ESTIMATES

Subject LAKEVIEW AMPHITHEATER
Sanitary Sewer Load Calculations
Date March 18, 2014

BASED ON QUANTITIES of SEWAGE FLOW

from ASPE DATA Book Table 8-9

THEATER (Per Auditorium Seat)

→ 5 gallons per day x 17500 Persons
= 87500 gallons per day
TOTAL

→ 5 gallons per day x 15000 Persons
= 75000 gallons per day TOTAL

→ 5 gallons per day x 10000 Persons
= 50000 gallons per day TOTAL

→ 5 gallons per day x 5000 Persons
= 25000 gallons per day TOTAL

Table 8-9 Quantities of Sewage Flows

Type of Establishment	GPD/Person (L/D/Person)[a]
Airports (per passenger)	5 (20)
Apartments—multifamily (per resident)	60 (225)
Bathhouses and swimming pools	10 (40)
Camps	
Campground with central comfort stations	35 (130)
With flush toilets, no showers	25 (95)
Construction camps (semipermanent)	50 (190)
Day camps (no meals served)	15 (60)
Resort camps (night and day) with limited plumbing	50 (190)
Luxury camps	100 (380)
Cottages and small dwellings with seasonal occupancy	50 (190)
Country clubs (per resident member)	100 (380)
Country clubs (per nonresident member present)	25 (95)
Dwellings	
Boarding houses	50 (190)
additional for nonresident boarders	10 (40)
Luxury residences and estates	150 (570)
Multifamily dwellings (apartments)	60 (225)
Rooming houses	40 (150)
Single-family dwellings	75 (285)
Factories (gal [L] per person, per shift, exclusive of industrial wastes)	35 (130)
Hospitals (per bed space)	250 (945)[b]
Hotels with private baths (2 persons per room)	60 (225)
Hotels without private baths	50 (190)
Institutions other than hospitals (per bed space)	125 (475)
Laundries, self-service (gal [L] per wash, i.e., per customer)	50 (190)
Mobile home parks (per space)	250 (945)
Motels with bath, toilet, and kitchen wastes (per bed space)	50 (190)
Motels (per bed space)	40 (150)
Picnic parks (toilet wastes only) (per picnicker)	5 (20)
Picnic parks with bathhouses, showers, and flush toilets	10 (40)
Restaurants (toilet and kitchen wastes per patron)	10 (40)
Restaurants (kitchen wastes per meal served)	3 (10)
Restaurants, additional for bars and cocktail lounges	2 (8)
Schools	
Boarding	100 (380)
Day, without gyms, cafeterias, or showers	15 (60)
Day, with gyms, cafeteria, and showers	25 (95)
Day, with cafeteria, but without gyms or showers	20 (80)
Service stations (per vehicle served)	10 (40)
Swimming pools and bathhouses	10 (40)
Theaters	
Movie (per auditorium seat)	5 (20)
Drive-in (per car space)	5 (20)
Travel trailer parks without individual water and sewer hookups (per space)	50 (190)
Travel trailer parks with individual water and sewer hookups (per space)	100 (380)
Workers	
Construction (at semipermanent camps)	50 (190)
Day, at schools and offices (per shift)	15 (60)

[a]Unless otherwise noted.

[b]Includes cafeteria.

Subject LAKEVIEW AMPHITHEATER

Sanitary Sewer Load Calculations

Date March 18, 2014

BASED on New York State Plumbing Code (2010 Version)

CLASSIFICATION is Assembly A-1 (Theaters and Performing Arts)

OCCUPANCY 17500 Persons 50% Male 50% Female

17500 ÷ 2 = 8750 Male 8750 Female

Waterclosets (Male) 1 per 125 8750 ÷ 125 = 70

Urinals (Note: Shall not be substituted for more than 67 percent of required waterclosets) 70 x 0.67 = 46 Maximum

SAY 30 WaterClosets (Male)

40 Urinals (Male)

Total 70

WaterClosets (Female) 1 per 65 8750 ÷ 65 = 135

Lavatories (Male 1 per 200, female 1 per 200)

8750 ÷ 200 = 44 (Male)

8750 ÷ 200 = 44 (Female)

Drinking Fountain 1 per 500 17500 ÷ 500 = 35

Service Sink Minimum of one

C&S COMPANIES®

Subject

Date

FU = FIXTURE UNIT

Waterclosets 30 Male + 135 Female = 165 Total

165 x 4 FU = 660 FU

Urinals 40 Male TOTAL

40 x 2 FU = 80 FU

Lavatories 44 Male + 44 Female = 88 Total

Say 90 x 1 FU = 90 FU

Drinking Fountain 35 TOTAL

35 x 0.5 FU = 20 FU

Service Sink Say 5 x 2 FU = 10 FU

FLOOR Drains Say 25 x 2 FU = 50 FU

CONCESSION AREAS SINKS Say 20 x 2 FU = 40 FU

TOTAL 950 FU

$\boxed{\text{SAY 1000 FU}}$

NOTE:
Per Figure 10-17 in ASPE Data Book 1000 Fixture Units = 200 GPM Peak Discharge

AN 8 inch gravity sanitary sewer @ 1/8"/Ft Slope can handle up to 1600 FU.

CHAPTER 4
FIXTURES

SECTION 401 GENERAL

401.1 Scope. This chapter shall govern the materials, design and installation of plumbing fixtures, faucets and fixture fittings in accordance with the type of occupancy, and shall provide for the minimum number of fixtures for various types of occupancies.

401.2 Prohibited fixtures and connections. Water closets having a concealed trap seal or an unventilated space or having walls that are not thoroughly washed at each discharge in accordance with ASME A112.19.2M shall be prohibited. Any water closet that permits siphonage of the contents of the bowl back into the tank shall be prohibited. Trough urinals shall be prohibited.

401.3 Water conservation. The maximum water flow rates and flush volume for plumbing fixtures and fixture fittings shall comply with Section 604.4.

SECTION 402 FIXTURE MATERIALS

402.1 Quality of fixtures. Plumbing fixtures shall be constructed of approved materials, with smooth, impervious surfaces, free from defects and concealed fouling surfaces, and shall conform to standards cited in this code. All porcelain enameled surfaces on plumbing fixtures shall be acid resistant.

402.2 Materials for specialty fixtures. Materials for specialty fixtures not otherwise covered in this code shall be of stainless steel, soapstone, chemical stoneware or plastic, or shall be lined with lead, copper-base alloy, nickel-copper alloy, corrosion-resistant steel or other material especially suited to the application for which the fixture is intended.

402.3 Sheet copper. Sheet copper for general applications shall conform to ASTM B 152 and shall not weigh less than 12 ounces per square foot (3.7 kg/m^2).

402.4 Sheet lead. Sheet lead for pans shall not weigh less than 4 pounds per square foot (19.5 kg/m^2) coated with an asphalt paint or other approved coating.

SECTION 403 MINIMUM PLUMBING FACILITIES

403.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Table 403.1. Types of occupancies not shown in Table 403.1 shall be considered individually by the code official. The number of occupants shall be determined by the *Building Code of New York State*. Occupancy classification shall be determined in accordance with the *Building Code of New York State*

[B] 403.1.1 Unisex toilet and bath fixtures. Fixtures located within unisex toilet and bathing rooms complying with Section 404 are permitted to be included in determining the minimum required number of fixtures for assembly and mercantile occupancies.

403.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or less.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 50 or less.

403.3 Number of occupants of each sex. The occupant load shall be composed of 50 percent of each sex.

403.4 Required public toilet facilities. Customers, patrons and visitors shall be provided with public toilet facilities in structures and tenant spaces intended for public utilization. The accessible route to public facilities shall not pass through kitchens, storage rooms, closets or similar spaces. Employees shall be provided with toilet facilities in all occupancies. Employee toilet facilities shall be either separate or combined employee and public toilet facilities.

403.4.1 Location of toilet facilities in occupancies other than covered malls. In occupancies other than covered malls, the required public and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).

Exception: The location and maximum travel distances to required employee facilities in factory and industrial occupancies are permitted to exceed that required by this section, provided that the location and maximum travel distance are approved.

403.4.2 Location of toilet facilities in covered malls. In covered mall buildings, the required public and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 300 feet (91 440 mm). In covered mall buildings, the required facilities shall be based on total square footage, and facilities shall be installed in each individual store or in a central toilet area located in accordance with this section. The maximum travel distance to central toilet facilities in covered mall buildings shall be measured from the main entrance of any store or tenant space. In covered mall buildings, where employees' toilet facilities are not provided in the individual store, the maximum travel distance shall be measured from the employee's work area of the store or tenant space.

403.4.3 Pay facilities. Where pay facilities are installed, such facilities shall be in excess of the required minimum facilities. Required facilities shall be free of charge.

403.5 Signage. Required public facilities shall be designated by a legible sign for each sex. Signs shall be readily visible and located near the entrance to each toilet facility. Signs for accessible toilet facilities shall comply with ICC/ANSI A117.1.

SECTION 404 ACCESSIBLE PLUMBING FACILITIES

404.1 Where required. Accessible plumbing facilities and fixtures shall be provided in accordance with the Chapter 11 of the *Building Code of New York State.*

SECTION 405 INSTALLATION OF FIXTURES

405.1 Water supply protection. The supply lines and fittings for every plumbing fixture shall be installed so as to prevent backflow.

TABLE 403.1
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a] (See Sections 403.2 and 403.3)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 410.1)	OTHER[f]
				MALE	FEMALE	MALE	FEMALE			
1	Assembly (see Sections 403.2, 403.4 and 403.4.1)	A-1[d]	Theaters and other buildings for the performing arts and motion pictures	1 per 125	1 per 65	1 per 200	1 per 200	—	1 per 500	1 service sink
		A-2[d]	Nightclubs, bars, taverns, dance halls and buildings for similar purposes	1 per 40	1 per 40	1 per 75	1 per 75	—	1 per 500	1 service sink
			Restaurants, banquet halls and food courts	1 per 75	1 per 75	1 per 200	1 per 200	—	1 per 500	1 service sink
		A-3[d]	Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums	1 per 125	1 per 65	1 per 200	1 per 200	—	1 per 500	1 service sink
			Passenger terminals and transportation facilities	1 per 500	1 per 500	1 per 750	1 per 750	—	1 per 1,000	1 service sink
			Places of worship and other religious services[e].	1 per 150	1 per 75	1 per 200	1 per 200	—	1 per 1,000	1 service sink
		A-4	Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,500 and 1 per 60 for the remainder exceeding 1,500	1 per 200	1 per 150	—	1 per 1,000	1 service sink
		A-5	Stadiums, amusement parks, bleachers and grandstands for outdoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,500 and 1 per 60 for the remainder exceeding 1,500	1 per 200	1 per 150	—	1 per 1,000	1 service sink
2	Business (see Sections 403.2, 403.4 and 403.4.1)	B	Buildings for the transaction of business, professionalservices, other services involving merchandise, office buildings, banks, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	—	1 per 100	1 service sink
3	Educational	E	Educational facilities	1 per 50	1 per 50	1 per 50	1 per 50	—	1 per 100	1 service sink
4	Factory and industrial	F-1 and F-2	Structures in which occupants are engaged in work fabricating, assembling or processing of products or materials	1 per 100	1 per 100	1 per 100	1 per 100	(see Section 411)	1 per 400	1 service sink

(continued)

SECTION 419
URINALS

419.1 Approval. Urinals shall conform to ANSI Z124.9, ASME A112.19.2M, CSA B45.1 or CSA B45.5. Urinals shall conform to the water consumption requirements of Section 604.4. Water supplied urinals shall conform to the hydraulic performance requirements of ASME A112.19.6, CSA B45.1 or CSA B45.5. Urinals shall conform to the requirements of Section 404.1.1.

419.2 Substitution for water closets. In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets in assembly and educational occupancies. Urinals shall not be substituted for more than 50 percent of the required water closets in all other occupancies, and shall conform to the requirements of Section 404.1.1.

[B] 419.3 Surrounding material. Wall and floor space to a point 2 feet (610 mm) in front of a urinal lip and 4 feet (1219 mm) above the floor and at least 2 feet (610 mm) to each side of the urinal shall be waterproofed with a smooth, readily cleanable, nonabsorbent material.

SECTION 420
WATER CLOSETS

420.1 Approval. Water closets shall conform to the water consumption requirements of Section 604.4 and shall conform to ANSI Z124.4, ASME A112.19.2M, CSA B45.1, CSA B45.4 or CSA B45.5. Water closets shall conform to the hydraulic performance requirements of ASME A112.19.6. Water closet tanks shall conform to ANSI Z124.4, ASME A112.19.2, ASME A112.19.9M, CSA B45.1, CSA B45.4 or CSA B45.5. Electro-hydraulic water closets shall comply with ASME A112.19.13.

420.2 Water closets for public or employee toilet facilities. Water closet bowls for public or employee toilet facilities shall be of the elongated type.

420.3 Water closet seats. Water closets shall be equipped with seats of smooth, nonabsorbent material. All seats of water closets provided for public or employee toilet facilities shall be of the hinged open-front type. Integral water closet seats shall be of the same material as the fixture. Water closet seats shall be sized for the water closet bowl type.

420.4 Water closet connections. A 4-inch by 3-inch (102 mm by 76 mm) closet bend shall be acceptable. Where a 3-inch (76 mm) bend is utilized on water closets, a 4-inch by 3-inch (102 mm by 76 mm) flange shall be installed to receive the fixture horn.

SECTION 421
WHIRLPOOL BATHTUBS

421.1 Approval. Whirlpool bathtubs shall comply with ASME A112.19.7M or with CSA B45.5 and CSA B45 (Supplement 1).

421.2 Installation. Whirlpool bathtubs shall be installed and tested in accordance with the manufacturer's installation instructions. The pump shall be located above the weir of the fixture trap.

421.3 Drain. The pump drain and circulation piping shall be sloped to drain the water in the volute and the circulation piping when the whirlpool bathtub is empty.

421.4 Suction fittings. Suction fittings for whirlpool bathtubs shall comply with APSP 7.

421.5 Access to pump. Access shall be provided to circulation pumps in accordance with the fixture or pump manufacturer's installation instructions. Where the manufacturer's instructions do not specify the location and minimum size of field-fabricated access openings, a 12-inch by 12-inch (305 mm by 305 mm) minimum sized opening shall be installed to provide access to the circulation pump. Where pumps are located more than 2 feet (609 mm) from the access opening, an 18-inch by 18-inch (457 mm by 457 mm) minimum sized opening shall be installed. A door or panel shall be permitted to close the opening. In all cases, the access opening shall be unobstructed and of the size necessary to permit the removal and replacement of the circulation pump.

421.6 Whirlpool enclosure. Doors within a whirlpool enclosure shall conform to ASME A112.19.15.

SECTION 422
HEALTH CARE FIXTURES AND EQUIPMENT

422.1 Scope. This section shall govern those aspects of health care plumbing systems that differ from plumbing systems in other structures. Health care plumbing systems shall conform to the requirements of this section in addition to the other requirements of this code. The provisions of this section shall apply to the special devices and equipment installed and maintained in the following occupancies: nursing homes, homes for the aged, orphanages, infirmaries, first aid stations, psychiatric facilities, clinics, professional offices of dentists and doctors, mortuaries, educational facilities, surgery, dentistry, research and testing laboratories, establishments manufacturing pharmaceutical drugs and medicines, and other structures with similar apparatus and equipment classified as plumbing.

422.2 Approval. All special plumbing fixtures, equipment, devices and apparatus shall be of an approved type.

422.3 Protection. All devices, appurtenances, appliances and apparatus intended to serve some special function, such as sterilization, distillation, processing, cooling, or storage of ice or foods, and that connect to either the water supply or drainage system, shall be provided with protection against backflow, flooding, fouling, contamination of the water supply system and stoppage of the drain.

422.4 Materials. Fixtures designed for therapy, special cleansing or disposal of waste materials, combinations of such purposes, or any other special purpose, shall be of smooth, impervious, corrosion-resistant materials and, where subjected to temperatures in excess of 180°F (82°C), shall be capable of withstanding, without damage, higher temperatures.

422.5 Access. Access shall be provided to concealed piping in connection with special fixtures where such piping con-

TABLE 709.1
DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS

FIXTURE TYPE	DRAINAGE FIXTURE UNIT VALUE AS LOAD FACTORS	MINIMUM SIZE OF TRAP (inches)
Automatic clothes washers, commercial[a,g]	3	2
Automatic clothes washers, residential[g]	2	2
Bathroom group as defined in Section 202 (1.6 gpf water closet)[f]	5	—
Bathroom group as defined in Section 202 (water closet flushing greater than 1.6 gpf)[f]	6	—
Bathtub[b] (with or without overhead shower or whirpool attachments)	2	$1^1/_2$
Bidet	1	$1^1/_4$
Combination sink and tray	2	$1^1/_2$
Dental lavatory	1	$1^1/_4$
Dental unit or cuspidor	1	$1^1/_4$
Dishwashing machine,[c] domestic	2	$1^1/_2$
Drinking fountain	$^1/_2$	$1^1/_4$
Emergency floor drain	0	2
Floor drains	2	2
Kitchen sink, domestic	2	$1^1/_2$
Kitchen sink, domestic with food waste grinder and/or dishwasher	2	$1^1/_2$
Laundry tray (1 or 2 compartments)	2	$1^1/_2$
Lavatory	1	$1^1/_4$
Shower	2	$1^1/_2$
Service sink	2	$1^1/_2$
Sink	2	$1^1/_2$
Urinal	4	Note d
Urinal, 1 gallon per flush or less	2[e]	Note d
Urinal, nonwater supplied	0.5	Note d
Wash sink (circular or multiple) each set of faucets	2	$1^1/_2$
Water closet, flushometer tank, public or private	4[e]	Note d
Water closet, private (1.6 gpf)	3[e]	Note d
Water closet, private (flushing greater than 1.6 gpf)	4[e]	Note d
Water closet, public (1.6 gpf)	4[e]	Note d
Water closet, public (flushing greater than 1.6 gpf)	6[e]	Note d

For SI: 1 inch = 25.4 mm, 1 gallon = 3.785 L
(gpf = gallon per flushing cycle).

a. For traps larger than 3 inches, use Table 709.2.
b. A showerhead over a bathtub or whirlpool bathtub attachment does not increase the drainage fixture unit value.
c. See Sections 709.2 through 709.4 for methods of computing unit value of fixtures not listed in this table or for rating of devices with intermittent flows.
d. Trap size shall be consistent with the fixture outlet size.
e. For the purpose of computing loads on building drains and sewers, water closets and urinals shall not be rated at a lower drainage fixture unit unless the lower values are confirmed by testing.
f. For fixtures added to a dwelling unit bathroom group, add the dfu value of those additional fixtures to the bathroom group fixture count.
g. See Section 406.3 for sizing requirements for fixture drain, branch drain, and drainage stack for an automatic clothes washer standpipe.

TABLE 710.1(1)
BUILDING DRAINS AND SEWERS

DIAMETER OF PIPE (inches)	MAXIMUM NUMBER OF DRAINAGE FIXTURE UNITS CONNECTED TO ANY PORTION OF THE BUILDING DRAIN OR THE BUILDING SEWER, INCLUDING BRANCHES OF THE BUILDING DRAIN[a]			
	Slope per foot			
	$^1/_{16}$ inch	$^1/_8$ inch	$^1/_4$ inch	$^1/_2$ inch
$1^1/_4$	—	—	1	1
$1^1/_2$	—	—	3	3
2	—	—	21	26
$2^1/_2$	—	—	24	31
3	—	36	42	50
4	—	180	216	250
5	—	390	480	575
6	—	700	840	1,000
8	1,400	1,600	1,920	2,300
10	2,500	2,900	3,500	4,200
12	3,900	4,600	5,600	6,700
15	7,000	8,300	10,000	12,000

For SI: 1 inch = 25.4 mm, 1 inch per foot = 83.3 mm/m.

a. The minimum size of any building drain serving a water closet shall be 3 inches.

TABLE 710.1(2)
HORIZONTAL FIXTURE BRANCHES AND STACKS[a]

DIAMETER OF PIPE (inches)	MAXIMUM NUMBER OF DRAINAGE FIXTURE UNITS (dfu)			
		Stacks[b]		
	Total for horizontal branch	Total discharge into one branch interval	Total for stack of three branch intervals or less	Total for stack greater than three branch intervals
$1^1/_2$	3	2	4	8
2	6	6	10	24
$2^1/_2$	12	9	20	42
3	20	20	48	72
4	160	90	240	500
5	360	200	540	1,100
6	620	350	960	1,900
8	1,400	600	2,200	3,600
10	2,500	1,000	3,800	5,600
12	2,900	1,500	6,000	8,400
15	7,000	Note c	Note c	Note c

For SI: 1 inch = 25.4 mm.

a. Does not include branches of the building drain. Refer to Table 710.1(1).

b. Stacks shall be sized based on the total accumulated connected load at each story or branch interval. As the total accumulated connected load decreases, stacks are permitted to be reduced in size. Stack diameters shall not be reduced to less than one-half of the diameter of the largest stack size required.

c. Sizing load based on design criteria.

American Society of Plumbing Engineers

Data Book

A Plumbing Engineer's Guide to System Design and Specifications

Special Plumbing Systems

10 Site Utility Systems

INTRODUCTION

This chapter discusses the components and design of building services for all plumbing systems and their installation from the building wall to their connection to a source. Such connections could be to a public water supply or main, or with regard to drainage, to any ultimate point of disposal, which could include a public sewer, retention basin, or other method, as appropriate. Systems discussed include:

1. Potable water supply.
2. Fire protection water supply.
3. Sanitary sewer.
4. Storm water sewer.
5. Natural gas service.

Other methods of supply, such as wells and surface water, are outside the scope of this chapter.

PRELIMINARY INFORMATION FOR ALL SYSTEMS

The following general information shall be obtained for all systems on each project. Information for specific items are discussed under the individual systems.

1. Obtain an architectural site plan showing the location of the building on the site. Part of the site plan should be a location plan of the surrounding area. Also included should be the block and lot number, building address, building classification, and building height. There is a big difference between the actual height and the legal height. Both dimensions are necessary to determine fire protection requirements. Other information includes the location of existing buildings and any natural interferences, such as boulders and trees not being removed.
2. Obtain an existing utility site plan from the various purveyors or suppliers if the utilities are not shown on the architectural site plan. An investigation should be conducted to ensure availability of all of the services that are required.
3. For your reference create a contact sheet showing all of the building and plumbing subcode officials, fire marshal, fire subcode officials, and every other person or department necessary for development, design, and approval of plumbing systems. One of the most important items for the record is the utility information, such as water pressure, gas information, sanitary sewer disposal information, and storm water sewer and disposal information.
4. Make certain that north is clearly and consistently indicated on all drawings.
5. If the project is an alteration, obtain all available existing plans.
6. Conduct a through code search to find all codes applicable to the project, including the requirements for grease traps and storm water management systems.
7. Obtain from the plumbing and other subcode officials all of the submittal and approval requirements for plans and other contract documents prepared for the project.

5. The hose demand shall be increased by 25% for the following conditions:
   A. Combustible construction.
   B. Possible delay in response by public fire department.
   C. Minimum protection less than recommended by insurance company requirements.
   D. Limited access to remote interior sections.
6. Additional requirements for monitors. Allow 500 gpm for each monitor.

For the design of a larger site consisting of multiple buildings, typical fire protection flow rate requirements are given in Table 10-4.

Table 10-4 Typical Fire Protection Flow Rate Requirements

Land Use	GPM range	Average GPM
Single-family residential	500 – 2000	750
Multifamily residential	1500 – 3000	2000
Commercial	2500 – 5000	3000
Industrial	3500 – 10,000	
Central building district	2500 – 15,000	3000

Tank capacity If the gravity tank is the sole source of water, the tank should be capable of being filled in 8 hours. In evaluation of the total capacity consideration should be given to the following storage capacities, based on the categories appearing in NFPA 13, *Design of Sprinkler Systems*:

1. Light and ordinary hazard occupancies, Group 1—2 hours.
2. Ordinary hazard occupancies, Groups 2 and 3—3 hours.
3. Extra hazard occupancies—4 hours.

SANITARY SEWER

Introduction

The purpose of the sanitary house sewer is to convey all sanitary waste from a facility to a point of disposal, which is usually a public sewer.

General

The first step is to find the department or jurisdiction responsible for the approval, design, and installation of sanitary and storm water sewers. Once this is established, a formal letter should be written to obtain the following information for your files. A typical sewer letter is given in Appendix 10-B. In addition, the following information shall be obtained and the following questions asked:

1. The size, location and invert of all available sewers fronting the property.
2. Are the sewers sanitary, storm, or combined?
3. What is the material of these sewers?
4. If there are no available sewers, who is the authority having jurisdiction (AHJ) for a private disposal system (septic tank and field)? What codes and standards regulate the design and installation of the septic system?
5. Are street sewer connections preferred at spurs between manholes or shall a manhole be used for the connection? Are there standard details? Will these manholes be constructed by the plumbing contractor or the AHJ?

When the utility company has answered your letter and provided most of the information requested, the following work can be accomplished:

1. The run from the building to the sewer can be selected. If the invert elevations are not suitable, determine if a force main will be necessary.
2. The house sewer can be sized based on the fixture count and the slope of the sewer.

Sizing the Sanitary Sewer

The size of the sewer from the building to the property line is based on the applicable plumbing code requirements. If the house sewer extends beyond the property line in order to connect to a pubic sewer, the plumbing code may not apply. However, there may be other applicable codes in your area. A self-scouring velocity must be maintained in order to avoid the settling out of solids and the stopping of the pipe. Table 10-5 is provided to allow sizing at a minimum slope to maintain 2 to 2½ fps velocity. Figure 10-17 can be used to convert the sanitary drainage fixture units to gpm.

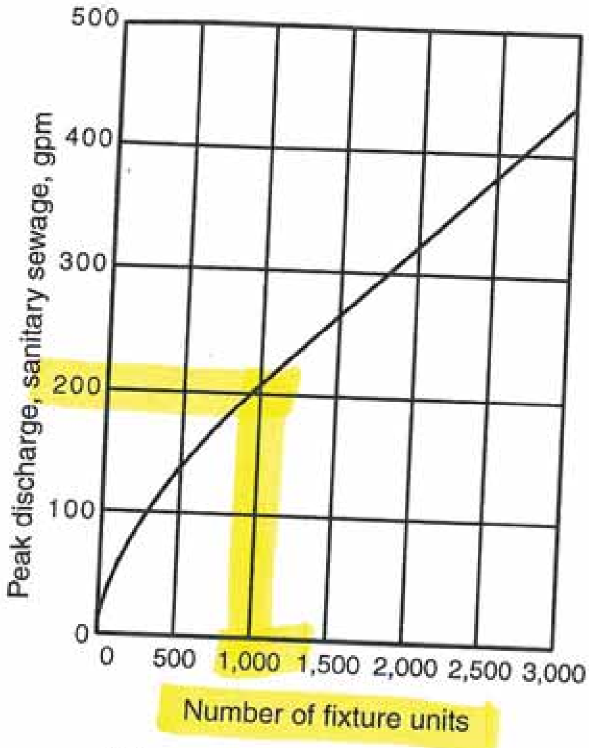

Figure 10-17 Fixture Unit Conversion to GPM

Sewer Components and Design Criteria

Public sewer availability The question of availability is a concern. It is up to the AHJ to determine whether the project shall connect to any particular sewer. This is a potential problem in rural areas, where considerable distances are necessary to connect to a sewer. A run by gravity is the preferred method, but this is costly for a long run and a larger size. A force main may be desirable, which is discussed later.

Trenching and bedding Bedding is the point of contact between the pipe and the earth. The type of bedding has an important influence on the load the pipe can support.

There is a difference between bedding for metallic pipe and that for plastic pipe because the trench walls help support the plastic pipe. A typical trench for plastic pipe is shown in Figure 10-18, and one for metallic pipe in Figure 10-19. The methods shown are for class "B" bedding, as is suitable for the majority of piping buried underground. If there is a concern about the weight placed upon the buried pipe, other bedding methods that will increase the resistance of the pipe to be crushed can be used.

Typical sewer house connection A typical small house or building will connect to the sewer in a manner similar to that illustrated in Figure 10-20, where a spur is provided. A "spur" is a preinstalled fitting located at fixed distances along the length of a sewer line.

Drainage structures A drainage structure is any appurtenance built into a sewer run, including manholes, storm water inlets, and catch basins.

Manholes (MH) Manholes can be made of poured concrete, bricks, blocks, or precast sections. Precast manholes are the most widely used type. Manholes are installed for the following reasons:

1. At changes of direction of the sewer.
2. For inspection and cleaning purposes.
3. At substantial changes of grade.
4. At changes of pipe size.
5. To make a connection to a public sewer for larger sewers.

The primary purpose of a manhole is to provide a smooth invert to allow pipes that join the main sewer to have an unimpeded entry to that sewer and to provide a smooth invert when pipes change size and pitch. In order to accomplish this, the bottom of the manhole is channeled smooth from the invert of all of the pipes entering the manhole. It is accepted practice to have the tops of the joining sewer pipes even, with the invert of the larger pipe lower than the smaller pipe. A detail of a typical precast manhole is given in Figure 10-21. Manhole construction requirements should be verified with the authority having jurisdiction.

If the depth from finished grade to the invert of the sewer is 3 ft 0 in. or less, a shallow manhole should be used. A shallow manhole is illustrated in Figure 10-22.

When there is a difference of more than approximately 2 in. to 2 ft 0 in., the falling water will cause the lower pipe to erode. When this is the case, a chute shall be created at the manhole bottom. If the difference in the inverts of the pipes is greater than 2 ft 0 in., a drop manhole should be installed, as shown in Figure 10-23.

Subject LAKEVIEW AMPHITHEATER
Sanitary Sewer Load Calculations
Date March 19, 2014

15,000 PEOPLE

BASED on New York State Plumbing Code (2010 Version)

CLASSIFICATION IS Assembly A-1 (Theaters and Performing Arts)

OCCUPANCY 15000 Persons 50% Male 50% Female
15000 ÷ 2 = 7500 Male 7500 Female

Waterclosets (Male) 1 per 125 7500 ÷ 125 = 60
Urinals (Note: Shall not be substituted for more than 67 percent of required waterclosets) 60 x 0.67 = 40 Maximum

SAY 25 Waterclosets (Male)
35 Urinals (Male)

TOTAL 60

Waterclosets (Female) 1 per 65 7500 ÷ 65 = 116

Lavatories (Male 1 per 200, Female 1 per 200)
7500 ÷ 200 = 38 (Male)
7500 ÷ 200 = 38 (Female)

Drinking Fountain 1 per 500 15000 ÷ 500 = 30

Service Sink Minimum of one

C&S COMPANIES®

Subject

Date

15,000 People

FU = Fixture Unit

Waterclosets 25 Male + 116 Female = 141 TOTAL

141 x 4 FU = 564 FU

Urinals 35 Male Total

35 x 2 FU = 70 FU

Lavatories 38 Male + 38 Female = 76 TOTAL

Say 80 x 1 FU = 80 FU

Drinking Fountain 30 TOTAL

30 x 0.5 FU = 15 FU

Service Sink Say 4 x 2 FU = 8 FU

Floor Drains Say 20 x 2 FU = 40 FU

Concession Areas Sinks Say 15 x 2 FU = 30 FU

Note: Per Figure 10-17 in ASPE Data Book 810 Fixture Units = 180 GPM Peak Discharge

TOTAL 807 FU

SAY 810 FU

- An 8 inch gravity sanitary sewer @ 1/8"/Ft Slope Can handle Up to 1600 FU
- A 6 inch gravity sanitary sewer @ 1/4"/Ft slope Can handle up to 840 FU.

C&S COMPANIES®

Subject LAKEVIEW AMPHITHEATER
Sanitary Sewer Load Calculations
Date March 19, 2014

10,000 PEOPLE

BASED on New York State Plumbing Code (2010 Version)

CLASSIFICATION IS Assembly A-1 (Theaters and Performing Arts)

OCCUPANCY 10000 Persons 50% Male 50% Female
10000 ÷ 2 = 5000 Male 5000 Female

Waterclosets (Male) 1 per 125 5000 ÷ 125 = 40
Urinals (Note: Shall not be substituted for more than 67 percent of required waterclosets) 40 x 0.67 =
27 Maximum

SAY 15 Waterclosets (Male)
25 Urinals (Male)

TOTAL 40

Waterclosets (Female) 1 per 65 5000 ÷ 65 = 77

Lavatories (Male 1 per 200, Female 1 per 200)
5000 ÷ 200 = 25 (Male)
5000 ÷ 200 = 25 (Female)

Drinking Fountain 1 per 500 10000 ÷ 500 = 20

Service Sink Minimum of one

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Subject

Date

10,000 People

FU = Fixture Unit

Waterclosets 15 Male + 77 Female = 92 TOTAL

92 x 4 FU = 368 FU

Urinals 25 Male Total

25 x 2 FU = 50 FU

Lavatories 25 Male + 25 Female = 50 TOTAL

50 x 1 FU = 50 FU

Drinking Fountain 20 TOTAL

20 x 0.5 FU = 10 FU

Service Sink Say 3 x 2 FU = 6 FU

Floor Drains Say 15 x 2 FU = 30 FU

Concession Areas Sinks Say 12 x 2 FU = 24 FU

Note:
Per Figure 10-17 in ASPE Data Book 550 Fixture Units = 130 GPM Peak Discharge

TOTAL 538 FU

SAY 550 FU

A 6 inch gravity sanitary sewer @ 1/8"/Ft Slope Can handle Up to 700 FU

Subject LAKEVIEW AMPHITHEATER
Sanitary Sewer Load Calculations
Date March 19, 2014

5000 PEOPLE

BASED on New York State Plumbing Code (2010 Version)

CLASSIFICATION is Assembly A-1 (Theaters and Performing Arts)

OCCUPANCY 5000 Persons 50% Male 50% Female
5000 ÷ 2 = 2500 Male 2500 Female

Waterclosets (Male) 1 per 125 2500 ÷ 125 = 20
Urinals (Note: Shall not be substituted for more than 67 percent of required waterclosets) 20 x 0.67 = 13 Maximum

SAY 8 Waterclosets (Male)
12 Urinals (Male)

TOTAL 20

Waterclosets (Female) 1 per 65 2500 ÷ 65 = 39

Lavatories (Male 1 per 200, Female 1 per 200)
2500 ÷ 200 = 13 (Male)
2500 ÷ 200 = 13 (Female)

Drinking Fountain 1 per 500 5000 ÷ 500 = 10

Service Sink Minimum of one

C&S COMPANIES®

Subject

Date

5000 People

FU = Fixture Unit

Waterclosets 8 Male + Say 40 Female = 48 TOTAL

48 x 4 FU = 192 FU

Urinals 12 Male Total

12 x 2 FU = 24 FU

Lavatories 13 Male + 13 Female = 26 TOTAL

26 x 1 FU = 26 FU

Drinking Fountain 10 TOTAL

10 x 0.5 FU = 5 FU

Service Sink Say 2 x 2 FU = 4 FU

Floor Drains Say 10 x 2 FU = 20 FU

Concession Areas
Sinks Say 10 x 2 FU = 20 FU

Note:
Per Figure 10-17 in ASPE
Data Book 300 Fixture Units
= 100 GPM Peak Discharge

TOTAL 291 FU

SAY 300 FU

A 6 inch gravity sanitary sewer @ 1/8"/Ft slope
Can handle up to 700 FU