PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY
City of Pittsburgh, Allegheny County, Pennsylvania

Trans Associates

Transportation Solutions for Today and Tomorrow

Prepared For:
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TABLE OF CONTENTS

1.0 INTRODUCTION AND SUMMARY

1.1 Purpose of Report and Study Objectives

This report provides the results of the analysis of the traffic and parking study for the proposed Pittsburgh First Master Plan (Master Plan), the composition and location of which are detailed below. The study, as documented in this report, was performed in order to meet the study requirements established by the City of Pittsburgh Department of City Planning (DCP).

The considerations studied in detail include the traffic, parking, site access, loading, pedestrian access and safety aspects of the proposed project.

The study objectives were to identify impacts upon the considerations listed above, and to develop appropriate mitigation strategies as necessary. These objectives were accomplished through performance of the following tasks:

- Performance of current (new) traffic, pedestrian and ATR counts, and analysis of traffic conditions to identify existing problems.
- Collection of existing year 2005 parking supply and accumulation counts to determine the numbers of parkers and spaces to be displaced by construction of the Master Plan project, and to determine the capacity of existing available fringe parking and event parking in the area.
- Assessment of current bus routes and bus stops within the study area.
- Projection of future 2008 background traffic volumes by projecting area-wide traffic growth.
- Assessment of traffic operations under 2008 base conditions.
- Projection of future 2008 combined traffic volumes, including the proposed Pittsburgh First Master Plan components and the reduction of trips due to the elimination of surface parking currently located on the Master Plan site.
- Assessment of traffic operations under 2008 combined conditions and determination of mitigating actions required to address the impacts of the proposed Pittsburgh First Master Plan.
- Assessment of pedestrian access and safety for both on-site and off-site locations.
- Assessment of parking supply and demand conditions and parking allocation under 2008 combined conditions with the proposed project in place, for a variety of peak periods.
- Development of a Truck Loading Management Plan.
- Performance of accident analysis at the study intersections.

1.2 Executive Summary

An overview of the project description, principal findings resulting from the analysis, and recommended mitigation strategies are presented in this summary.

1.2.1 Site Location and Study Area

The proposed project is located in the City of Pittsburgh, Pennsylvania. The site is located on the eastern edge of the Central Business District (CBD) of the City of Pittsburgh. The site location is shown in Figure S-1. Study intersections, representing the area of significant traffic impact, are also shown in Figure S-1.

1.2.2 Development Description

The proposed Pittsburgh First Master Plan development is shown in Figure S-2. The Master Plan includes a casino with 5,000 slots, associated restaurant and bar facilities and a 400 room hotel; an arena with a maximum of 18,200 seats; removal of an existing on-site arena with 17,000 seats; removal of on-site arena parking; removal of on-site buildings, including a former hospital and associated parking garage, as well as other buildings and surface parking; construction of 1,707 residential units, 71,200 SF of general and local retail space and 200,000 SF of office space; and construction of eight (8) parking garages with a total of 9,801 parking spaces on site.

Development components may change slightly as site plans are further refined.

1.2.3 Principal Findings

Traffic Analysis – Mitigation measures, presented in Tables S-1, S-2 and S-3, and in Figure S-3 and S-4, have been developed to mitigate traffic impacts of the project on the study area to the maximum extent possible. A transportation management plan has also been developed in order to optimize traffic and pedestrian conditions in the study area during the peak periods studied.

Parking Analysis – A detailed parking analysis of the parking conditions that are projected for weekday daytime, weekday evening with a peak arena event, Friday casino peak, and Saturday casino peak was conducted. A parking management plan for each period, including allocation of parking for each parker group, has been developed for implementation. In addition, alternative parking solutions for parkers displaced from the site for daytime and event parking have been identified and quantified.

1.2.4 Recommendations

The recommended parking management plan is detailed in later sections of this report. The program of recommended roadway improvements is presented in Figure S-3, with the corresponding opinion of probable cost for these improvements contained in Table S-2.

The program of recommended traffic signal and signal system improvements is presented in Figure S-4, with the corresponding opinion of probable costs for these improvements contained in Table S-3.

2.0 PROPOSED DEVELOPMENT

2.1 Summary of Development

Descriptions of the location, development components, size and development plan for the proposed Pittsburgh First Master Plan are presented in this section.

2.1.1 Location

The location of the proposed Master Plan is shown in Figure 1. The proposed project is located on the eastern edge of the Central Business District of the City of Pittsburgh, Pennsylvania.

2.1.2 Development Plan

The proposed Pittsburgh First Master Plan development is shown in Figure 2. The Master Plan includes a casino with 5,000 slots, associated restaurant and bar facilities and a 400 room hotel; an arena with a maximum of 18,200 seats; removal of an existing on-site arena with 17,000 seats; removal of on-site arena parking; removal of on-site buildings, including a former hospital and associated parking garage, other buildings and surface parking; construction of 1,707 residential units, 71,200 SF of general and local retail space and 200,000 SF of office space; and construction of eight (8) parking garages with a total of 9,801 parking spaces on site.

Development components may change slightly as site plans are further refined.

3.0 AREA CONDITIONS

3.1 Study Area

With reference to the proposed Master Plan development, the area of influence, as well as the area of significant traffic impact, have been determined.

3.1.1 Area of Influence

The area of influence for the proposed Master Plan is presented in Figure 1.

3.1.2 Area of Significant Traffic and Pedestrian Impacts

Based upon the size and location of the proposed Master Plan, the area of significant traffic impact was determined. This area, including the intersections selected and approved by DCP for detailed study, is shown in Figure 1. The study intersections selected for analysis of traffic conditions are indicated in Figure 1.

The principal pedestrian impacts and considerations related to the proposed Master Plan development were also determined. Based upon the size and location of the proposed development, the area of significant pedestrian impacts was also determined. The areas selected for consideration are also indicated on Figure 1.

3.2 Study Area Land Use

3.2.1 Existing Land Use

The existing land uses on the site include an existing arena and associated surface parking, a hospital building and associated parking garage, several buildings and surface parking lots.

3.2.2 Anticipated Future Development

The proposed development is described in Section 2.1.2 of this report.

3.3 Site Accessibility

3.3.1 Area Roadway System

3.3.1.1 Existing Area Roadway System

As shown in Figure 1, the Crosstown Expressway (I-579) is the major transportation artery in the study area. Extending from the Veterans Bridge to the Liberty Bridge, it provides connections to I-279 to the north, Route 28 to the Allegheny Valley, the Boulevard of the Allies, and US Route19. Ramps provide direct connections to the Crosstown Expressway from the study area.

The Crosstown Expressway divides the study area into two sections with very different roadway configurations and traffic patterns. East of the Expressway, the area surrounding the project site consists primarily of wide roads with the capacity to carry large volumes of traffic. These roads were constructed as part of an earlier redevelopment project to serve the traffic generated by the Civic (now Mellon) Arena. West of the Expressway, the study area includes a portion of downtown Pittsburgh. Roads in downtown Pittsburgh are generally narrow, with heavy pedestrian volumes, on-street parking, and a number of other elements that limit traffic capacity.

Individual roadways in the study area are described in further detail below.

Centre Avenue provides three 12-foot travel lanes in each direction between Washington Place and Crawford Street, separated by a median. Parking is permitted in the curb lanes between the hours of 6:00 A.M. and 6:00 P.M on weekdays. West of Washington Place, Centre Avenue provides two lanes in each direction connecting to downtown Pittsburgh. An exit ramp from the northbound Crosstown Expressway connects with Centre Avenue at the intersection with Washington Place. East of Crawford Street, provides one lane in each direction with parking on both sides, connecting with the Hill District and North Oakland.

Bedford Avenue provides an east/west connection along the northern edge of the study area from Washington Place extending east into the Hill District. Between Washington Place and Mario Lemieux Place, Bedford Avenue operates one-way eastbound, providing a connection to the I-279 HOV lanes as well as a connection to the ramps to Seventh Avenue downtown and to the southbound Crosstown Expressway. Between Mario Lemieux Place and Crawford Street, Bedford Avenue provides two lanes each way, divided by a center median. Bedford Avenue in the study area is classified as a minor arterial.

Washington Place provides three lanes in each direction between Webster Avenue/Bedford Avenue and Fifth Avenue. Washington Place is classified as a collector roadway, and provides connections in both directions from the study area to the Veterans Bridge and Bigelow Boulevard.

Chatham Square operates essentially as an extension of Washington Place, connecting Fifth and Forbes Avenues, but is much narrower, providing two travel lanes northbound and one southbound.

Crawford Street/Pride Street provides a north/south connection at the eastern edge of the study area between Bedford Avenue and Forbes Avenue, with the street name changing at the intersection with Reed Street. These streets provide one lane in each direction with parking permitted on both sides, and are classified as minor arterials.

Mario Lemieux Place extends through the project site from Centre Avenue to Bedford Avenue. It operates one lane in each direction, with parking permitted on both sides. It primarily provides local access to the Mellon Arena and adjacent parking facilities.

Forbes and Fifth Avenues are parallel streets classified as principal arterials, and operating as a one-way couplet, providing a major connection from downtown Pittsburgh to Oakland, passing through the southern portion of the study area. These streets also provide access to the Bluff/Uptown neighborhoods, and serve traffic to and from adjacent traffic generators including Duquesne University and Mercy Hospital. Forbes Avenue operates one-way eastbound, and provides two travel lanes with parking on both sides. Fifth Avenue operates one-way westbound, and provides two travel lanes with parking on both sides.

Colwell Street operates two way between Washington Place and Pride Street within the study area. It provides one lane in each direction, with parking permitted on both sides. Colwell Street primarily provides access to local properties, including a significant number of parking lots located on and adjacent to the project site.

Seventh Avenue provides an east/west connection between the project site and downtown Pittsburgh. It extends from Bedford Avenue across the Crosstown Expressway on split, directional ramps. It extends through downtown to Liberty Avenue,

Grant Street provides the major north/south connection in downtown Pittsburgh, extending from the I-376 ramps and Fort Pitt Boulevard at the south, to Liberty Avenue at the north end. Grant Street is two lanes in each direction, divided by a raised median. Left turn lanes are provided at key intersections. Grant Street is unique in the downtown area, as it has been reconstructed as a tree-lined street paved with bricks, while still carrying a high volume of traffic.

Taken together, this roadway network provides the site with regional and local roadway connections. The adjacent roadways have the ability to handle large volumes of traffic, and are connected to all major interstate highways and expressways serving the downtown area.

3.3.1.2 Future Area Roadway System

No known changes are planned for the study area or adjacent roadways at this time.

3.3.2 Traffic and Pedestrian Volumes and Conditions

Documentation of existing traffic and pedestrian volumes and conditions in the study area includes descriptions of the data collection effort, documentation of the existing traffic and pedestrian volumes and presentation of the capacity analysis results for the existing 2005 conditions.

3.3.2.1 Data Collection

A data collection effort was organized and conducted by Trans Associates (TA) during November and December of 2005. The data collection included the following items:

- Field reconnaissance of the study area, including observation of existing signal and intersection operations;
- Performance of vehicle turning movement counts at all of the existing study intersections for the following peak periods:
    - AM peak period – 7:00 AM to 9:00 AM, weekday
    - PM peak period – 4:00 PM to 6:00 PM, weekday
    - Arena peak period – 6:00 PM to 8:00 PM, weekday
    - Friday casino peak period – 6:00 PM to 10:00 PM
    - Saturday casino peak period –6:00 PM to 10:00 PM
- Performance of pedestrian movement counts at the intersections indicated in Figure 1 for the same peak periods as those described above for vehicle turning movement counts;
- Performance of sight distance measurements at the proposed site driveways;
- Performance of parking accumulation counts at the existing on-site parking lots and garage; and
- Performance of ATR counts at the locations indicated in Figure 1.

3.3.2.2 ATR Traffic Volumes

As described in Section 3.3.2.1, 48-hour ATR counts were performed at the locations indicated in Figure 1. The ATR count summary sheets are provided in Appendix A to this report.

3.3.2.3 Peak Periods

Based upon the vehicular turning movement counts, the traffic peak hours were determined to be as listed above in Section 3.3.2.1. In order to provide a conservative analysis, the peak hour for each location was selected for analysis.

In order to use conservative pedestrian volumes in the intersection capacity analysis, it was assumed that the peak hours of pedestrian activity would coincide with the traffic peak hours detailed above.

3.3.2.4 Peak Hour Traffic and Pedestrian Volumes

For the five peak hours specified in Section 3.3.2.3, the peak hour vehicular turning movement volumes were summarized, plotted and balanced on schematic diagrams of the study area. These volumes are presented in Figures 3-7 for the AM, PM, arena, Friday casino and Saturday casino peak hours, respectively. Peak hour turning movement count summaries are included in Appendix B to this report.

For the five peak hours specified in Section 3.3.2.3, the peak hour pedestrian movement volumes were plotted on a schematic diagram of the study intersection. The pedestrian volume figures and pedestrian movement count summaries are included in Appendix C to this report.

3.3.2.5 2005 Existing Conditions – Intersection Levels of Service

Levels of service at each of the study intersections have been determined for the two peak hours. These levels of service (LOS) were determined though implementation of the signalized and unsignalized intersection capacity analysis methodologies presented in the 2000 Highway Capacity Manual, published by the Transportation Research Board. A detailed description of LOS is provided in Appendix D. The results of the analysis are summarized in Figures 8-12 for the five peak hours studied. The detailed results are also summarized in Table 1. These results establish the current operating conditions of the study intersections. It should be noted that the pedestrian volumes described in Section 3.3.2.4 were used in the capacity analysis to incorporate pedestrian impacts within the study area.

Detailed capacity and level of service printouts for the study intersections analyzed for 2005 conditions are provided in Appendix E to this report.

3.3.3 Transit Routes and Services

The study area is well served by public transportation, as shown in Figure 13. Three routes, the 81A, 81B, and 81C provide service on Centre Avenue past the site between Downtown Pittsburgh and eastern neighborhoods.

Extensive transit service is also available on Forbes and Fifth Avenues. These streets are served by routes 61A, 61B, 61C, 71A, 71C, 71D, and 501, among others. These routes have a combined headway as short as two minutes during peak periods, and provide service to downtown Pittsburgh and neighborhoods to the east, including Oakland.

The site is served by the Steel Plaza station of the Port Authority's light rail system, with a station entrance located at the intersection of Centre and Sixth Avenues. The T provides service to the southern suburbs and the downtown area, and has planned extensions to the North Side and to the convention center.

The site is also within walking distance of downtown Pittsburgh, the hub of the regional transit system, with routes to most areas of Allegheny County.

3.3.4 Existing Relevant Transportation Systems Management (TSM) Programs

The study area is served by the I-279 high occupancy vehicle (HOV) lane via a ramp at the intersection of Bedford Avenue and Mario Lemieux Place. This facility is open to vehicles with two or more passengers during the peak hours, and is reversed to operate inbound during the morning and outbound during the evening. After certain sporting events, the HOV lane operates outbound without restriction.

A number of traffic signals in the study area are connected to the City of Pittsburgh's computerized traffic control system. This system provides the City with the ability to manage traffic flow by adjusting signal timings to traffic conditions.

3.3.5 Other Considerations

3.3.5.1 Background Data

Background information related to the existing conditions in the study area was obtained from the following agencies:

- The City of Pittsburgh Department of City Planning (DCP); and
- The City of Pittsburgh Department of Public Works (DPW).

In addition, accident data was requested from the Department of Public Safety, but as of the date of this report, the data has not yet been supplied. This data and the corresponding analysis will be provided in an addendum to this report following receipt of the data by this consultant.

3.4 Parking Analysis

Parking analysis conducted for the project address year 2008 future conditions with the proposed Master Plan development in place. Parking analyses were conducted by using City of Pittsburgh zoning ordinance requirements.

3.4.1 Parking Displacements

Construction of the Master Plan will necessarily involve removal of the existing structures and parking facilities on the site. In the initial phase of the parking study, the extent of the parking removals and parker displacements was determined.

In addition to the removal of parking on the Mellon Arena site (currently fully utilized as CBD fringe parking by commuters), parking will also be removed from the remainder of the study area, as shown in Figure 14. In addition to completion of an inventory of these parking spaces, counts of daytime utilization were also performed to determine the extent of daytime commuter parker displacement. This information is summarized in Table 2.

As shown in Table 2, 2,400 spaces will be removed from the Arena site, and another 1,558 spaces from the remainder of the site, for a total of 3,958 spaces. The number of daytime commuter parkers displaced from the Master Plan site is 3,866. These parkers are likely to seek other relatively low-cost parking nearby to the CBD. This parking would most likely be located at other fringe parking facilities surrounding the downtown area.

During evening arena peak events, the Mellon Arena parking is stack parked to accommodate 2,600 vehicles. All of the on-site lots and garage to be displaced are filled to capacity. As shown in Table 2, this results in an event parker displacement of 4,158 vehicles.

3.4.2 Available Fringe Parking

Counts of fringe parking availability during the weekday daytime period were performed during November 2005. The areas counted are shown in Figures 15 and 15A. The numbers of fringe parking spaces determined to be available are summarized in Table 3, and indicate that 6,761 fringe parking spaces are currently unused in the CBD area. This available fringe parking is more than adequate to meet the needs of the 3,866 daytime commuter parkers displaced from the Master Plan site.

3.4.3 Evening/Weekend Event Parking

There is a large reservoir of parking available within a 5, 10 or 15 minute walk of the site which would be available to displaced evening/event parkers. This potential parking is shown in Figure 16, and presented in Table 4. As shown, over 9,800 spaces are available within a 15 minute walk of the site.

3.4.4 Supply/Demand Comparison for Displaced Parkers

Table 5 presents the supply/demand comparison for displaced parkers. As shown in the table, after the Master Plan site is cleared of existing parking, surpluses of 2,895 daytime and 5,679 evening/event spaces will result.

3.4.5 Parking to be Provided in the Master Plan

A summary of this parking is contained in Table 6. Parking by block, as per Figure 2, is provided. A total of 9,801 spaces will be provided in structured parking on the Master Plan site. A summary of the parking to be provided by parking user type is presented in Table 7.

3.4.6 Projected 2008 Parking Demand

Parking demand for the casino, the arena and the other uses on the Master Plan site has been projected. For the casino, detailed data provided by the Isle of Capri was used to project parking demand, as detailed in Appendix F. Projected parking required for all of the on-site uses for each of the peak periods studied is presented in Table 8.

3.4.7 Projected 2008 On-Site Parking Supply/Demand Comparison

For each of the four parking peak periods (weekday covers AM and PM peak periods), a supply/demand comparison was performed, as presented in Table 9. As shown in Table 9, a parking surplus in the range of 561 – 3,724 spaces is demonstrated for each of the peak periods. This table presumes that 540 new arena patrons park off-site. This indicates that not only is enough parking available, but that the surplus of parking would be such that the new 540 arena patrons could be parked on-site as well.

3.4.8 Parking Allocations for 2008 Peak Periods

Parking allocations for all four parking peak periods for all of the on-site Master Plan parking facilities have been determined and are presented in Tables 10-13. Adequate parking is demonstrated in each one. These parking allocations demonstrate that adequate on-site parking will be provided in the Pittsburgh First Master Plan development.

4.0 PROJECTED TRAFFIC VOLUMES

4.1 Site-Generated Traffic

4.1.1 Trip Generation

Trip generation was estimated for the proposed land uses on the site, based upon a combination of Institute of Transportation Engineers data, field data collection, and data obtained from similar facilities.

Trip generation for the proposed casino was based upon data provided for a similar facility located in Kansas City, Missouri. This is an urban casino, located adjacent to downtown Kansas City, and adjacent to an interstate highway. This casino has a total of 1,555 slot machines, less than the 5,000 proposed for the Pittsburgh casino, and the data was factored accordingly.

Actual vehicular traffic counts were not available for this casino, and thus the trip generation was developed based upon patronage counts and the number of daily patron trips. Detailed calculations are presented in Appendix G, and projected trip generation for the five time periods studied is summarized in Table 14.

Trip generation for the proposed arena was not calculated directly, as trip generation for such facilities is dependent upon the parking supply. The on-site parking supply that would be available for arena events was used as the basis for this calculation, based upon the rates estimated from the existing parking supply and traffic counts conducted during a Mellon Arena event.

Trip generation for the proposed on-site hotel, residential development, office buildings, and retail space were developed based upon ITE data, as summarized in Table 14 and shown in Appendix H.

4.1.2 Trip Arrival and Departure Distributions

The City of Pittsburgh Department of City Planning provided data on anticipated regional trip distribution, as shown in Figure 17. Site access was analyzed, and the region was divided into 11 access corridors, as shown in Figure 18. The population of each of these sectors was calculated based upon U.S. Census data, and was used to determine the distribution of site-generated trips summarized in Table 15. This population-based distribution was used to distribute trips to and from the casino, hotel, and retail development.

A similar methodology, but based upon employment distribution, was used to develop the distribution of trips to and from the office development. This distribution is also summarized in Table 15.

Detailed calculations of the trip distribution are included in Appendix I.

4.1.3 Trip Assignment – Determination of Site-Generated Traffic

Based upon the distribution of trips to each access corridor, site-generated traffic was assigned to study area roadways. This assignment generally followed the most direct route possible, taking into account factors such site driveway locations, one-way streets, turn prohibitions, etc. The assignment also accounted for the ability of traffic in downtown Pittsburgh to make use of the many alternate routes to reach an equilibrium level of congestion.

4.2 Background Traffic (Base Traffic)

4.2.1 Background Traffic and Pedestrian Growth

The data collected by TA reflects conditions existing during the year these traffic counts were conducted (year 2005). In order to project year 2008 traffic volumes, an annual traffic growth factor was determined and applied to all the existing traffic volume data. An annual linear growth rate of 0.5 percent per year was used. This factor, obtained from the Southwestern Pennsylvania Commission (SPC), was applied to all turning movement counts used in this analysis except driveway volumes.

4.2.2 Projects to Be Added to Background Traffic

None applicable to year 2008.

4.2.3 2008 Base Traffic Volumes

As described in Section 4.2.1, a 0.5 percent per year linear growth factor was applied to the 2005 existing traffic volumes. The resultant volumes were then balanced to determine the 2008 base volumes as shown in Figures 19-23 for the five peak hours studied.

4.2.4 Design Year Base Conditions – Intersection Levels of Service

4.2.4.1 2008 Base Conditions

Using the analysis methodologies described in Section 3.3.2.5, intersection levels of service were determined at all of the study intersections under 2008 base conditions. It should be noted that signal timings optimized for 2008 base conditions and existing roadway configurations have been used for this analysis. The results of the analysis are presented in Figures 24 -28 for the five peak hours studied, as well as in Table 1.

Detailed capacity and level of service printouts are provided in Appendix J to this report.

4.3 Design Year Combined Traffic Volumes (Total Traffic) - 2008

4.3.1 Traffic To Be Removed from Base Traffic Volumes

For three of the time periods analyzed, it was necessary to adjust the base traffic volumes to account for the displacement of parking by the proposed development. Parking lots adjacent to the Mellon Arena have a capacity of 2,400 cars, while a number of smaller parking lots and garages south of Centre Avenue have a capacity of an additional 1,558 cars.

For the A.M. peak hour, the turning movement counts taken at intersections around the site were analyzed to estimate the number and distribution of the vehicles that were entering these facilities. These vehicular volumes were then subtracted from the 2008 base volumes. A similar process was followed for both the P.M. peak and the arena peak period. During the Friday and Saturday casino peak periods, the exiting utilization of these parking facilities is minimal, and no adjustment was made.

These calculations are included in Appendix K.

4.3.2 2008 Combined Traffic Volumes

The 2008 combined traffic volumes, showing projected conditions with the development, are shown in Figures 29-33 for the five analysis time periods. These combined volumes were developed based upon the 2008 base traffic volumes, adjusted to account for removal of existing parking as discussed in section 4.3.1, with site-generated traffic added. Detailed calculations of the 2008 combined traffic volumes are presented in Appendix K.

5.0 TRAFFIC VOLUMES

5.1 Site Access

Site access assumptions are shown for the Master Plan blocks in Figure 2 for all of the parking facilities on the site. Entry/exit points to the casino garage will be located on Fifth Avenue and Centre Avenue. A porte-cochere entrance on Centre Avenue will serve taxis, limousines and other drop-off activities. The separated entry and exit points on Centre Avenue will provide access to valet services as well as to self-parking in the casino garage.

Tour buses will provide their patrons with access via Fifth Avenue. Pedestrians will access the casino and the arena via Fifth and Centre Avenues.

5.2 Capacity and Levels of Service – 2008 Combined Traffic Volumes

Using the analysis methodologies described in Section 3.3.2.5, intersection levels of service were determined at all of the study intersection under 2008 combined conditions. It should be noted that 2008 base signal timings and existing roadway conditions were used for analysis purposes initially. In locations where trips generated by the proposed site resulted in degradations in levels of service, analyses were repeated using optimized conditions, when applicable. Mitigation strategies developed to address these conditions will be described in a later section of this report. The results of the analysis are presented in Figures 34-38 for the five peak hours studied.

Detailed capacity and level of service printouts are provided in Appendix L to this report.

Locations where low levels of service were identified include the following:

- Centre Avenue and Washington Place
- Grant Street and Sixth Avenue
- Washington Place and Bedford Avenue/Bigelow Boulevard
- Grant Street and Fort Pitt Boulevard/I-376 Ramps

These conditions were further investigated on the basis of traffic flow conditions and congestion using SYNCHRO software and the resultant queuing analysis.

5.3 Traffic Safety

All roadway and signal improvements for the project will be designed to provide a high degree of safety for motorists and pedestrians. To the extent possible within the constraints of the project, mitigation measures will address existing safety issues within the study area that are influenced by project-generated traffic.

5.4 Traffic Signals

With the exception of a few minor streets, nearly every intersection in the study area is signalized. This is reflective of the site's location adjacent to the central business district, and is typical of a densely-developed urban district. This extensive level of signalization provides for convenient pedestrian crossings throughout the study area, and allows for heavy traffic flows to disperse throughout the network rather than being concentrated on a few arterials.

The traffic signals in the study area include a wide range of equipment and standards. A few installations are relatively old, and have signals mounted on span wire or on poles at the side of the road. These installations generally do not include pedestrian signals. The newest signal installations in the study area are those located along Grant Street. These signals have been conducted to the City's CBD standards, which include special aesthetic mast arms, pedestrian signals, and have all wiring underground.

The City has extended the zone where the CBD standards apply to include the project site. Any new signal installations within this zone must follow these standards.

The City operates a central computerized traffic control system. This system currently includes all signals within the downtown area, and extends to a number of signals on the western edge of the project site. The City's goal is that all signals in the City will eventually be connected to the system, although no project is currently planned to incorporate the signals in the study area into the system. In line with this goal, the City generally requires than any new signals adjacent to the system be interconnected via fiber-optic cable and integrated into the system.

5.5 Site Circulation and Parking

5.5.1 Automobiles

See Section 4.1.2. It should be noted that the exact design of the proposed parking facilities and the site access points have not been finalized at the time of this report. However, Figure 39 presents a representation of the anticipated porte-cochere and garage/valet parking access points. The garage exit will provide one exclusive left turn lane and one shared left-right lane, and will be signal-controlled.

5.5.2 Loading Vehicles

In order to accommodate truck deliveries, a loading dock is proposed for the Fifth Avenue level of the facility. This loading dock will also accommodate trash services for the facility.

Access to the loading dock will be via a new driveway to be constructed on the north side of Fifth Avenue opposite Stevenson Street. As shown in Figure 40, the dock will include two separate loading areas. The first, which will serve the casino and all facilities within the casino, has twelve loading docks, with three designed to accommodate a maximum WB-40 vehicle, and nine designed to accommodate a maximum WB-50 vehicle. The second loading area will serve the arena. To provide the maximum flexibility in accommodating special events at the arena, this area has five docks designed to accommodate a maximum WB-67 vehicle. The loading dock area also includes circulation space adequate to permit vehicles to circulate and turn around within the facility.

Figure 40 demonstrates the ability of WB-67 vehicles to enter the loading area from Fifth Avenue, and to circulate within the facility. Figure 41 demonstrates the ability of WB-67 vehicles to exit the loading area onto Fifth Avenue.

The internal loading dock circulation area is approximately 700 feet in length. This will provide space to stage vehicles internally in the event that unanticipated vehicle arrivals exceed dock capacity.

5.5.3 Emergency Vehicles

Emergency (fire, paramedics, police, etc.) vehicles will have access to the site via the public roadways that completely surround and traverse the Master Plan Site. Emergency service facilities are located close by within several blocks of the site as follows:

- Zone 2 Police Station at 2000 Centre Avenue (at DeVilliers Street);
- Company No. 4 Fire Station at 1324 Forbes Avenue/Mercy Hospital;
- Medic 5 Paramedic/Ambulance Unit in the Upper Hill District;
- Medic 14 Unit in Downtown Pittsburgh; and
- Mercy Hospital of Pittsburgh at Stevenson and Locust Streets.

5.5.4 Other Specialized Vehicles

Shuttle buses, limousines, and taxis will access the casino site via the porte-cochere, as shown in Figure 42. Tour business will service the site via Fifth Avenue. Public bus service will be provided on Centre Avenue and Fifth Avenue.

5.6 Queuing Analysis

Queuing analysis was performed to determine queuing on roadways adjacent to the site, and was also performed to project queuing on the site driveways. SYNCHRO Version 6 was used to model traffic operations and queuing on the surrounding roadways, particularly on Centre Avenue, and the site driveway.

Upon reviewing the Synchro network analyses performed for the five studied peak periods, TA has determined that extensive queuing occurs during the P.M. peak hour, particularly on Centre Avenue eastbound. The results of the queuing analysis are presented in Table 16, with detailed calculations contained in Appendix M.

It should be noted that the queue lengths that are presented in Table 16 reflect the 50th percentile queue based on SYNCHRO analysis, multiplied by a factor of 2.0 and rounded up to the next increment of 20 feet.

5.7 Sight Distance Evaluation

All site driveways will be designed to provide adequate sight distance to ensure safe operation according to the provisions of Chapter 441 of the Pennsylvania Code.

5.8 Accident Analysis

Accident reports for the intersections required by DCP to be analyzed were requested from the City of Pittsburgh, Department of Public Safety (DPS) via DCP. Documentation of this request is contained in Appendix N. At the time of completion of this report, the data is not yet available. When the DPS data is supplied, it will be analyzed and an addendum to this report will be produced.

6.0 IMPROVEMENT ANALYSIS

6.1 Improvements to Accommodate Base Traffic and Site Traffic

Based on the results of the 2008 combined conditions traffic impact analysis, recommended roadway improvements were developed. As noted previously, the study area roadway network has the capacity to carry heavy traffic flows, having been designed to accommodate the traffic demands of the Mellon Arena and adjacent development. In particular, the site has excellent access to I-579 as well as to adjacent bridges and the entire regional highway system. Due to this high level of existing accessibility, no major improvements to the roadway network are proposed.

However, given the broad extent of the study area, a number of improvements are proposed. These are outlined in Table 17.

Traffic patterns and roadway improvements have been designed in order to minimize the traffic impact of the development on the adjacent residential neighborhoods. In particular, the signalization of the Centre Avenue site driveway, and the signalization and alignment of Lemieux Place will permit exiting traffic destined to the Crosstown Expressway to travel through the site. The anticipated lane configuration of adjacent roadways is shown in Figure 43.

The proposed improvements include the complete reconstruction of Centre Avenue and Washington Place adjacent to the site, in accordance with the City's CBD standards. This is shown in Figure 44.

A number of traffic signal improvements and upgrades are proposed, as shown in Figure 45. These improvements are designed to maximize traffic capacity, while providing operational flexibility and a safe, convenient pedestrian network.

7.0 FINDINGS

7.1 Site Accessibility

See Section 3.3. Site accessibility is adequate to provide for vehicular and pedestrian access.

7.2 Traffic Impacts

See Section 5.2.

7.3 Need For Any Pedestrian Improvements

Improvements required are described in detail in Table 17, 18, and 19 and presented in Figures 43, 44, and 45.

8.0 RECOMMENDATIONS

8.1 Site Access/Circulation Plan

See Section 5.5.1. It should be noted that the exact design of the proposed parking garages and the site access points have not been finalized at the time of this report.

8.2 Roadway Improvements

Based upon the results of the traffic impact analysis portion of the study, recommended roadway improvements have been determined, as summarized in Tables 17, 18 and 19 and shown graphically in Figure 43, 44, and 45. These improvements are discussed in Section 6.0.

8.3 Transportation Systems Management Actions

Transportation system management generally refers to ways to reduce traffic and parking demand. A recreational facility such as the proposed development generates a high proportion of discretionary trips, which are often the most likely to rely on the private automobile. No specific TSM steps are proposed to encourage the use of alternate modes, among site visitors. However, the urban characteristics of the site, and the close proximity to downtown, make transit and walking a realistic transportation alternative. Employees of the casino will be required to park at an off-site location to be identified later, and will be transported to the site via shuttle buses.

8.4 Traffic Operations Plan

The roadway network adjacent to the site has the capacity to carry heavy traffic flows. As demonstrated in our analysis of five peak periods, the traffic patterns in the study area are anticipated to vary significantly throughout the day and the week. In order to accommodate these flows, it is anticipated that the traffic signals adjacent to the site will be integrated into the City's computerized traffic control system, and that up to six different timing plans will be developed and implemented.

During peak periods of casino demand, some degree of traffic management may be required. Valet parking will assist in handling peak vehicular arrivals. During periods when congestion occurs at the site entrance, arriving visitors will be directed to parking facilities north of Centre Avenue. This may be accomplished by temporary signage, assisted as necessary by flaggers or by City police.

Based on the results of the queuing analysis, it has been determined that transportation management intervention will be necessary at the following locations/peak hours, in addition to the roadway and traffic signal improvements detailed later in this report:

- Washington Place/Bedford Avenue/Bigelow Boulevard – during the PM peak hour;
- Centre Avenue/Washington Place/I-579 northbound off ramp – during the arena event peak hour and Friday casino peak hour;
- Bedford Avenue/Mario Lemieux Place/Seventh Avenue on-ramp/HOV Lane – during the AM peak hour

In addition, the intervention may also be needed at Centre Avenue/Casino site driveway intersection during the PM peak hour, Friday casino peak hour and/or Saturday casino peak hour, subject to the final design of the driveway and internal site traffic flow.

The transportation management intervention will consist of the use of off-duty police officers to control traffic flow. This need for this intervention should be periodically reevaluated.

The City's Wayfinder signage system should be expanded and modified to direct visitors to the casino, the arena, and adjacent parking facilities. The signage system will also direct exiting visitors to the regional highway and bridge network, and can be designed to provide for a more even usage of alternate routes.

8.5 Truck Loading Management Plan

Truck access to the site will comply with the requirements of the City of Pittsburgh's Truck Route Ordinance, which requires that vehicles over 14,000 lbs gross weight follow a designated network of streets to reach their destination. Adjacent to the site, the legislated truck route network includes Washington Place, Forbes Avenue, and Fifth Avenue. The site loading dock driveway will connect directly with the truck route network on Fifth Avenue at Stevenson Street

The internal loading dock facility is anticipated to be large enough to accommodate all typical loading operations at the site. Internal staging can accommodate additional trucks to prevent staging from occurring on streets adjacent to the facility entrance. Should any special occurrence result in the need for more trucks than the loading docks can accommodate, the facility manager will schedule truck arrivals, including arranging an off-site staging facility if needed.

8.6 Construction Management Plan

A construction management plan (CMP) will be specifically formulated to minimize the impact of the project on the surrounding area. The following conditions are being set forth to be instituted as part of this plan:

- Noise and vibration from construction work will be minimized so as to not interfere with functions of the adjacent residential neighborhood;
- Fire lanes must not be interrupted during construction;
- The staging of trucks must not occur on adjacent neighborhood streets without an approved designated area;
- Truck routing patterns will utilize Washington Place, Forbes Avenue and Fifth Avenue as primary access routes; and
- The contractor shall be responsible for keeping streets along approved truck routes free of dirt, debris and/or mud from hauling.

8.7 Parking Management Plan (PMP)

The PMP is summarized in the terms of peak period allocation of parking spaces on the Master Plan Site, use of alternative fringe parking during the daytime by displaced commuter parkers, and use of alternative parking within 15 minutes' walking distance of the site for events.

These details are presented in Figures 15 and 16, and in Tables 10-13. Further details of the PMP will be determined as the Master Site Plan develops.

9.0 CONCLUSIONS

This study has been performed to determine the traffic and parking impacts of the proposed Pittsburgh First Master Plan. Based upon the analysis results, recommended mitigation strategies have been developed. These strategies include the recommended roadway improvements described in Table 17 and shown in Figures 44 and 45 and the Parking Management Plan detailed in Section 8.7.

Provided all recommendations are implemented, the impacts of the proposed Pittsburgh First Master Plan will be mitigated to the maximum extent possible, resulting in a functional and safe project area.

TABLE 1
LEVELS OF SERVICE SUMMARY
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

INTERSECTION/APPROACH/ MOVEMENT	LEVELS OF SERVICE (Delay in seconds) [1]														
	AM PEAK HOUR			PM PEAK HOUR			ARENA EVENT PEAK HOUR			FRIDAY CASINO PEAK HOUR			SATURDAY CASINO PEAK HOUR		
	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED
Liberty Avenue and Seventh Avenue															
Eastbound Liberty Avenue															
• Approach	B/12.0	B/12.3	B/12.7	B/16.0	B/16.2	B/19.4	B/11.8	B/11.8	B/14.0	B/11.4	B/11.4	B/12.1	B/10.4	B/10.5	B/10.9
Westbound Liberty Avenue															
• Approach	A/9.3	A/9.3	A/9.3	B/11.1	B/11.1	B/12.2	A/8.8	A/8.8	A/9.8	A/8.7	A/8.7	A/8.7	A/8.6	A/8.6	A/8.6
Northbound Seventh Avenue															
• Approach	C/29.7	C/30.0	D/35.0	C/26.9	C/27.2	C/27.4	C/22.8	C/22.9	C/22.0	B/17.8	B/17.9	B/19.1	B/17.5	B/17.5	B/18.7
OVERALL INTERSECTION	B/15.5	B/15.6	B/17.9	B/16.9	B/17.0	B/19.3	B/14.2	B/14.3	B/15.6	B/11.9	B/11.9	B/12.8	B/11.4	B/11.4	B/12.2
Liberty Avenue and Smithfield Street															
Eastbound Liberty Avenue															
• Approach	B/14.6	B/14.6	B/14.6	B/17.7	B/17.7	B/17.7	B/14.7	B/14.7	B/14.7	B/14.5	B/14.5	B/14.5	B/14.7	B/14.7	B/14.7
Westbound Liberty Avenue															
• Approach	A/7.8	A/7.8	A/7.8	A/9.2	A/9.2	A/9.2	A/8.7	A/8.7	A/8.7	A/8.6	A/8.6	A/8.6	A/8.5	A/8.5	A/8.5
Northbound Smithfield Street															
• Left Turns	C/25.9	C/25.9	C/25.9	C/24.3	C/24.4	C/24.4	B/16.5	B/16.5	B/16.5	B/16.2	B/16.2	B/16.2	B/16.1	B/16.1	B/16.1
• Right Turns	C/34.6	C/34.8	C/34.8	C/31.9	C/32.2	C/32.2	B/18.1	B/18.1	B/18.1	B/17.8	B/17.9	B/17.9	B/17.6	B/17.7	B/17.7
• Approach	C/31.8	C/32.0	C/32.0	C/29.2	C/29.4	C/29.4	B/17.5	B/17.5	B/17.5	B/17.3	B/17.3	B/17.3	B/17.1	B/17.2	B/17.2
OVERALL INTERSECTION	B/17.5	B/17.6	B/17.6	B/19.1	B/19.2	B/19.2	B/14.1	B/14.1	B/14.1	B/14.1	B/14.1	B/14.1	B/14.3	B/14.4	B/14.4
Seventh Avenue and Smithfield Street															
Eastbound Seventh Avenue															
• Approach	B/13.8	B/13.9	B/14.1	B/14.5	B/14.6	B/15.1	B/14.4	B/14.4	B/14.9	B/14.2	B/13.7	B/14.1	B/13.3	B/13.3	B/13.7
Westbound Seventh Avenue															
• Approach	B/17.2	B/17.3	B/19.2	B/17.7	B/17.8	B/19.4	B/18.1	B/18.2	B/19.5	B/13.8	B/14.1	B/14.8	B/14.0	B/14.1	B/14.9
Northbound Smithfield Street															
• Approach	B/13.3	B/13.3	B/13.3	B/15.2	B/15.2	B/15.2	B/13.2	B/13.3	B/13.3	B/12.9	B/13.3	B/13.3	B/12.5	B/12.5	B/12.5
Southbound Smithfield Street															
• Approach	B/12.8	B/12.8	B/12.8	B/13.1	B/13.1	B/13.1	B/12.2	B/12.2	B/12.2	B/11.8	B/12.0	B/12.0	B/11.8	B/11.8	B/11.8
OVERALL INTERSECTION	B/14.6	B/14.7	B/15.5	B/15.5	B/15.6	B/16.2	B/15.2	B/15.3	B/15.9	B/13.7	B/13.6	B/13.9	B/13.1	B/13.2	B/13.6

TABLE 1 (Cont'd)
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Grant Street and Liberty Avenue															
Eastbound Liberty Avenue															
• Left Turns	E/71.7	E/72.1	D/53.4	F/259.7	F/269.0	F/157.7	E/68.7	E/69.0	E/69.0	E/66.2	E/66.4	D/54.2	E/65.3	E/65.6	E/62.7
• Throughs, Right Turns	E/79.7	F/80.6	E/55.5	F/121.1	F/125.5	F/81.4	E/73.4	E/73.7	E/73.7	E/63.6	E/63.8	D/52.6	E/61.3	E/61.3	E/59.1
• Approach	E/74.4	E/75.0	D/54.1	F/222.9	F/230.9	F/137.4	E/70.2	E/70.5	E/70.5	E/65.6	E/65.8	D/53.8	E/64.6	E/64.8	E/62.1
Westbound Liberty Avenue															
• Left Turns	D/39.2	D/39.2	D/41.8	D/46.9	D/47.0	D/48.1	D/37.1	D/37.2	D/37.2	D/35.5	D/35.5	D/37.0	D/35.1	D/35.1	D/35.1
• Throughs, Right Turns	D/44.1	D/44.3	D/47.5	D/52.3	D/52.6	D/54.0	D/37.6	D/37.6	D/37.6	D/35.4	D/35.4	D/36.8	D/35.1	D/35.1	D/35.1
• Approach	D/42.7	D/42.8	D/45.8	D/50.3	D/50.5	D/51.8	D/37.4	D/37.4	D/37.4	D/35.5	D/35.5	D/36.9	D/35.1	D/35.1	D/35.1
Northbound Grant Street															
• Approach	C/31.1	C/31.2	D/39.5	D/37.0	D/37.2	D/43.3	C/29.0	C/29.1	C/29.1	C/28.3	C28.4	C/34.2	C/27.8	C/27.9	C/29.4
Southbound Grant Street															
• Approach	D/37.2	D/37.5	D/51.1	D/48.9	D/49.9	E/67.8	C/32.5	C/32.7	C/33.1	C/29.2	C/29.3	D/35.6	C/28.8	C/28.8	C/30.6
OVERALL INTERSECTION	D/40.3	D/40.6	D/46.6	F/91.7	F/94.3	E/76.9	D/38.7	D/38.9	D/38.9	D/36.9	D/37.0	D/38.8	D/36.2	D/36.3	D/36.6
Liberty Avenue and Eleventh Avenue															
Eastbound Eleventh Street															
• Left Turns	E/66.5	E/67.0	E/74.0	F/89.4	F/90.5	F/98.2	E/65.4	E65.9	E/65.9	E/56.1	E/56.2	E/58.2	E/56.8	E/56.9	E/56.9
• Right Turns	F/82.5	F/83.1	F/89.3	F/298.5	F/307.1	F/213.0	F/118.2	F/121.3	E/71.7	F/81.6	F/82.4	E/74.9	F/84.8	F/85.8	E/61.6
• Approach	E/74.4	E/74.9	F/81.5	F/240.3	F/246.9	F/181.1	F/98.0	F/100.0	E/69.5	E/75.3	E/76.0	E/70.8	E/77.4	F/78.1	E/60.3
Northbound Liberty Avenue															
• Left Turns	E/71.1	E/71.9	D/50.6	D/47.1	D/44.8	E/37.1	D/51.0	D/51.1	D/44.7	D/51.6	D/51.7	D/41.0	D/51.8	D/52.4	D/41.4
• Throughs, Right Turns	B/15.4	B/15.5	B/14.1	B/17.3	B/15.2	B/14.9	B/14.6	B/14.6	B/14.6	B/14.5	B/14.5	B/13.7	B/13.9	B/14.0	B/14.2
• Approach	C/30.5	C/30.7	C/23.8	C/21.8	B/19.7	B/18.2	C/20.4	C/20.5	B/19.5	C/21.0	C/21.1	B/18.4	C/22.0	C/22.3	B/19.8
Southbound Liberty Avenue															
• Approach	D/53.4	D/54.1	F/87.0	F/109.8	F/115.6	F/244.7	D/51.0	D/51.4	E/65.8	D/42.9	D/43.1	D/53.7	D/40.3	D/40.3	D/51.2
OVERALL INTERSECTION	D/45.6	D/46.0	E/56.9	F/94.7	F/104.8	F/132.9	D/48.2	D/48.8	D/48.3	D/36.9	D/37.1	D/38.1	D/38.6	D/38.6	D/35.8

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Grant Street and Seventh Avenue															
Eastbound Seventh Avenue															
• Approach	C/28.7	C/28.9	C/23.4	D/49.8	D/51.9	D/37.4	C/31.3	C/31.6	C/29.1	C/30.3	C/30.5	C/33.3	C/25.7	C/25.8	B/20.0
Westbound Seventh Avenue															
• Defacto Left Turns	--	--	--	--	--	--	E/58.6	E/62.8	D/53.3	--	--	--	--	--	--
• Left Turns, Throughs	F/82.3	F/89.3	D/47.9	E/101.1	F/109.6	E/72.3	C/28.5	C/28.6	C/27.0	C/25.2	C/25.3	C/26.2	C/25.5	C/25.6	B/19.8
• Right Turns	B/16.2	B/16.3	B/13.4	B/10.1	B/10.1	A/7.8	B/13.2	B/13.2	B/13.5	B/12.5	B/12.6	B/13.0	B/12.9	B/12.9	B/13.5
• Approach	E/58.5	E/63.0	D/35.9	E/70.6	E/76.4	D/50.9	C/29.1	C/30.1	C/27.0	B/19.5	B/19.6	C/20.4	B/19.5	B/19.6	B/16.9
Northbound Grant Street															
• Left Turns	B/12.0	B/12.1	B/16.7	B/10.3	B/10.4	B/13.1	A/8.6	A/8.7	B/10.1	A/8.2	A/8.2	A/8.2	A/8.4	A/8.4	B/12.4
• Throughs, Right Turns	C/25.8	C/26.1	C/31.7	D/36.5	D/37.2	E/68.2	C/22.1	C/22.2	C/22.2	B/19.8	B/19.9	B/19.9	B/19.7	B/19.8	B/19.8
• Approach	C/22.9	C/23.3	C/28.7	C/33.0	C/33.7	E/60.9	C/20.5	C/20.6	C/20.8	B/18.4	B/18.4	B/18.4	B/17.9	B/18.0	B/18.6
Southbound Grant Street															
• Left Turns	B/15.8	B/16.3	C/27.1	D/39.8	D/43.6	E/78.8	C/21.1	C/22.0	D/49.1	B/11.6	B/11.8	B/12.7	A/9.9	A/10.0	B/16.5
• Throughs, Right Turns	C/23.5	C/23.6	C/27.8	C/32.8	C/33.2	D/49.0	B/19.5	B/19.5	B/19.5	B/18.5	B/18.6	B/18.6	B/18.4	B/18.5	B/18.5
• Approach	C/21.1	C/21.4	C/27.5	D/35.6	D/37.4	E/61.3	C/20.3	C/20.8	D/35.4	B/15.1	B/15.2	B/15.4	B/15.0	B/15.0	B/17.6
OVERALL INTERSECTION	D/35.5	D/37.2	C/30.2	D/46.3	D/48.8	D/53.4	C/24.9	C/25.4	C/28.4	C/21.2	C/21.3	C/22.6	B/19.1	B/19.2	B/18.1
Grant Street and Sixth Avenue															
Eastbound Sixth Avenue															
• Approach	C/27.4	C/28.5	D/49.3	F/276.3	F/289.9	F/207.7	F/81.4	F/96.1	F/82.4	D/37.5	D/40.8	D/35.5	C/22.2	C/22.6	C/24.5
Westbound Sixth Avenue															
• Approach	C/32.7	C/33.5	D/46.2	D/37.6	D/38.6	C/30.8	C/27.3	C/27.8	C/26.7	C/26.4	C/26.6	C/25.7	C/25.8	C/25.9	C/26.4
Northbound Grant Street															
• Left Turns	C/20.5	C/20.8	B/17.9	C/29.3	C/30.5	D/36.3	B/14.3	B/14.3	B/19.6	B/13.8	B/13.9	B/16.3	B/13.5	B/13.5	B/13.5
• Throughs, Right Turns	D/37.5	D/35.9	D/50.0	C/33.4	C/34.0	F/202.3	C/26.9	C/27.1	E/65.0	C/22.2	C/22.3	D/39.9	C/21.8	C/21.8	C/27.2
• Approach	D/35.0	C/33.6	D/46.0	C/32.7	C/33.4	F/180.0	C/25.7	C/25.9	E/61.4	C/21.2	C/21.3	D/38.4	C/21.0	C/21.1	C/26.5
Southbound Grant Street															
• Left Turns	C/21.8	C/21.7	C/21.7	E/58.1	E/63.0	F/152.9	C/22.2	C/22.7	D/48.2	B/15.1	B/15.2	C/23.3	B/14.1	B/14.1	B/15.4
• Throughs, Right Turns	C/30.7	C/30.9	C/27.2	D/35.3	D/36.1	E/64.7	C/21.7	C/21.8	C/25.1	C/21.5	C/21.6	C/24.8	C/20.8	C/20.8	C/20.8
• Approach	C/29.2	C/29.4	C/26.2	D/40.4	D/42.2	F/84.7	C/21.9	C/22.1	C/32.9	B/19.9	C/20.0	C/24.4	B/19.6	C/19.6	B/19.8
OVERALL INTERSECTION	C/31.9	C/31.9	D/41.2	E/79.4	F/82.8	F/122.0	D/37.3	D/40.7	D/52.2	C/26.0	C/26.8	C/32.0	C/22.5	C/22.6	C/24.9

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Sixth Avenue and Ross Street/Bigelow Boulevard															
Eastbound Sixth Avenue															
• Defacto Left Turns	B/14.5	B/14.8	B/16.4	D/37.7	D/41.2	F/177.7	B/17.1	B/17.5	D/39.0	B/10.1	B/10.3	--	A/9.5	A/9.5	--
• Throughs, Right Turns	A/8.9	A/8.9	B/10.2	A/9.5	A/9.6	B/16.1	B/10.1	B/10.1	B/17.0	A/8.8	A/8.8	--	A/8.3	A/8.3	--
• Approach	B/10.8	B/10.9	B/11.7	C/21.8	C/23.4	E/63.4	B/12.5	B/12.6	C/22.3	A/9.2	A/9.3	B/17.5	A/8.8	A/8.8	B/13.3
Westbound Sixth Avenue															
• Approach	B/10.8	B/10.9	B/12.0	B/10.3	B/10.4	B/16.0	A/9.2	A/9.2	B/13.7	A/8.6	A/8.6	B/13.6	A/8.8	A/8.8	B/11.9
Northbound Ross Street															
• Defacto Left Turn	--	--	--	--	--	--	--	--	--	--	--	--	B/18.5	B/18.6	--
• Throughs, Right Turns	--	--	--	--	--	--	--	--	--	--	--	--	B/17.3	B/17.3	--
• Approach	C/21.1	C/21.3	C/25.9	C/26.2	C/26.9	C/32.0	B/19.0	B/19.0	B/18.1	B/18.6	B/18.3	B/18.7	B/17.9	B/18.0	B/17.5
Southbound Ross Street															
• Defacto Left Turn	--	--	--	F/99.3	F/107.6	F/178.4	C/35.0	D/36.4	D/37.1	--	--	--	--	--	--
• Throughs	--	--	--	C/24.8	C/25.0	B/18.7	C/20.9	C/21.1	B/16.4	--	--	--	--	--	--
• Approach	D/36.7	D/38.6	D/44.6	D/54.4	E/57.8	F/82.2	C/28.1	C/28.8	C/26.9	B/18.0	B/18.2	B/13.3	B/18.0	B/18.0	B/14.5
OVERALL INTERSECTION	C/20.6	C/21.3	C/23.5	C/27.3	C/28.7	D/48.5	B/16.2	B/16.5	C/20.6	B/12.2	B/12.2	B/16.8	B/11.8	B/11.9	B/14.3
Washington Place and Bedford Avenue/Bigelow Boulevard															
Eastbound Bigelow Boulevard															
• Left Turns	C/34.3	D/36.2	D/39.8	F/151.6	F/159.9	F/209.3	F/176.6	F/186.0	D/44.4	E/58.4	E/61.2	D/38.3	C/27.9	C/30.6	C/34.1
• Left Turns, Throughs, Right Turns	C/34.0	D/35.6	F/82.1	F/153.8	F/161.1	F/135.9	D/50.1	D/51.4	F/80.1	C/24.6	C/24.6	D/37.6	C/23.4	C/23.5	C/33.8
• Right Turns	E/67.4	E/74.5	C/31.0	C/26.9	C/26.9	C/25.7	F/112.0	F/117.7	C/22.9	C/25.3	C/25.4	C/25.7	C/23.9	C/24.0	C/27.5
• Approach	D/45.2	D/48.8	E/56.9	F/143.9	F/151.2	F/167.8	F/121.1	F/127.3	E/59.0	D/47.7	D/49.7	D/36.7	C/26.2	C/28.2	C/33.3
Northbound Washington Place															
• Throughs	C/35.0	D/35.6	F/90.2	F/122.4	F/129.5	F/124.9	C/28.8	C/29.2	E/67.7	C/22.0	C/22.1	C/34.5	C/22.1	C/22.1	D/53.1
• Right Turns	C/28.8	C/28.9	C/35.0	C/29.2	C/29.5	C/25.7	C/25.2	C/25.4	C/25.3	C/20.0	C/20.1	B/17.9	B/19.8	C/20.4	B/18.2
• Approach	C/34.3	C/34.8	F/84.0	F/106.7	F/112.7	F/109.9	C/28.0	C/28.3	E/61.7	C/21.7	C/21.8	C/33.3	C/21.7	C/21.8	D/50.4
Southbound Seventh Avenue Ramp															
• Left Turns	C/31.9	C/32.0	D/51.3	C/33.0	C/33.1	D/53.0	C/28.4	C/28.4	D/46.2	C/27.6	C/27.7	C/33.6	C/25.3	C/25.3	C/24.4
• Left Turns, Throughs	D/39.9	D/40.8	F/89.9	D/43.8	D/44.7	F/473.4	C/35.1	C/35.5	F/84.2	C/28.3	C/28.4	D/36.8	C/26.0	C/26.1	C/29.0
• Right Turns	--	--	D/54.0	--	--	E/60.2	---	--	D/42.7	---	--	C/30.2	--	--	C/25.8
• Approach	D/38.4	D/39.2	E/66.0	D/41.2	D/41.9	F/295.1	C/33.5	C/33.9	C/70.1	C/28.1	C/28.2	C/34.2	C/25.8	C/25.9	C/27.4
OVERALL INTERSECTION	D/41.4	D/43.7	E/66.3	F/107.3	F/112.7	F/163.6	E/68.9	E/71.7	E/62.2	C/33.3	C/34.1	C/34.4	C/23.8	C/24.6	D/43.8

TABLE 1 (Cont'd)
LEVELS OF SERVICE SUMMARY
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

INTERSECTION/ APPROACH/ MOVEMENT	LEVELS OF SERVICE (Delay in seconds) [1]														
	AM PEAK HOUR			PM PEAK HOUR			ARENA EVENT PEAK HOUR			FRIDAY CASINO PEAK HOUR			SATURDAY CASINO PEAK HOUR		
	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED
Bedford Avenue and Mario Lemieux Place/HOV Ramp															
Eastbound Bedford Avenue															
• Left Turns	--	--	--	--	--	C/33.8	--	--	--	--	--	--	--	--	B/19.7
• Left Turns, Throughs, Right Turns	--	--	--	--	--	C/32.8	--	--	--	--	--	--	--	--	C/21.5
• Approach	C/28.0	C/28.3	E/60.4	B/18.4	B/18.7	C/33.1	C/23.9	C/25.0	C/32.5	B/11.6	B/11.6	D/36.4	B/12.2	B/12.2	C/21.2
Westbound Bedford Avenue															
• Left Turns	--	--	--	--	--	C/25.0	--	--	--	--	--	--	--	--	C/26.1
• Throughs, Right Turns	--	--	--	--	--	D/48.3	--	--	--	--	--	--	--	--	C/31.8
• Approach	C/27.7	C/27.7	D/45.3	C/23.7	C/24.0	D/47.8	C/20.1	C/20.2	C/3.9	B/19.1	B/19.1	D/43.4	B/19.2	B/19.2	C/31.3
Northbound Mario Lemieux Place															
• Left Turns	--	--	D/48.0	--	--	D/48.3	--	--	C/32.9	--	--	--	--	--	C/25.2
• Left Turns, Throughs, Right Turns	--	--	D/48.1	--	--	D/47.9	--	--	C/32.5	--	--	--	--	--	C/25.1
• Approach	C/29.6	C/29.3	D/48.1	C/23.9	C/24.1	D/48.1	C/20.5	C/20.5	C/32.7	B/19.9	B/19.9	D/39.9	C/20.2	C/20.2	C/25.2
Southbound HOV Ramp															
• Left Turns, Throughs	D/44.1	D/47.1	D/54.0	--	--	--	--	--	--	--	--	--	--	--	--
• Right Turns	C/29.8	C/30.9	D/51.8	--	--	--	--	--	--	--	--	--	--	--	--
• Approach	D/38.0	D/40.2	D/53.0	--	--	--	--	--	--	--	--	--	--	--	--
OVERALL INTERSECTION	C/34.2	D/35.7	D/54.0	C/20.8	C/21.1	D/42.1	C/23.1	C/24.0	C/32.9	B/15.3	B/15.4	D/39.7	B/14.7	B/14.7	C/24.8
Bedford Avenue and Logan Street															
Westbound Bedford Avenue															
• Approach	--	--	A/8.0	--	--	A/7.7	--	--	A/7.9	--	--	A/7.5	--	--	A/7.7
Northbound Logan Street															
• Approach	--	--	B/10.9	--	--	B/10.8	--	--	B/10.9	--	--	A/9.4	--	--	A/9.8
Bedford Avenue and Fulton Street															
Westbound Bedford Avenue															
• Approach	--	--	A/7.9	--	--	A/7.6	--	--	A/7.8	--	--	A/7.4	--	--	A/7.6
Northbound Fulton Street															
• Approach	--	--	B/12.3	--	--	B/12.1	--	--	B/12.0	--	--	A/9.7	--	--	B/10.3

TABLE 1 (Cont'd)
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Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

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	AM PEAK HOUR			PM PEAK HOUR			ARENA EVENT PEAK HOUR			FRIDAY CASINO PEAK HOUR			SATURDAY CASINO PEAK HOUR		
	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED
Bedford Avenue and Crawford Street															
Eastbound Bedford Avenue															
• Left Turns, Throughs	--	--	A/9.9	--	--	B/13.2	--	--	--	--	--	A/9.5	--	--	--
• Right Turns	--	--	B/12.8	--	--	B/14.0	--	--	--	--	--	A/9.6	--	--	--
• Approach	C/26.1	C/26.8	B/12.0	B/14.8	B/14.9	B/13.7	B/17.8	B/18.0	B/17.6	B/13.4	B/13.8	A/9.6	B/14.7	B/14.8	B/14.8
Westbound Bedford Avenue															
• Approach	B/16.9	B/17.0	B/11.5	B/14.7	B/14.7	B/14.7	B/14.2	B/14.2	B/14.3	B/13.4	B/13.4	A/9.8	B/13.7	B/13.7	B/13.9
Northbound Crawford Street															
• Approach	A/7.3	A/7.3	B/10.5	B/10.9	B/11.0	A/9.8	A/8.6	A/8.7	A/8.6	A/7.1	A/7.1	B/10.3	A/7.2	A/7.2	A/7.2
Southbound Crawford Street															
• Approach	A/6.3	A/6.3	A/9.1	A/6.4	A/6.4	A/6.4	A/6.4	A/6.4	A/6.4	A/6.4	A/6.4	A/9.2	A/6.4	A/6.4	A/6.4
OVERALL INTERSECTION	C/20.6	C/21.1	B/11.5	B/12.4	B/12.5	B/11.7	B/13.4	B/13.5	B/13.3	B/10.6	B/10.7	A/9.9	B/11.9	B/11.9	B/12.0
Centre Avenue and Washington Place															
Eastbound Centre Avenue															
• Approach	D/35.0	D/35.5	E/65.5	D/46.4	D/48.1	F/149.4	F/81.3	F/87.3	F/87.7	C/22.7	C/22.8	F/202.1	C/22.2	C/22.2	E/78.5
Westbound Centre Avenue															
• Defacto Left Turn	--	--	--	--	--	--	--	--	F/155.8	--	--	--	--	--	--
• Left Turns, Throughs	C/30.8	C/31.1	E/72.9	C/29.5	C/29.6	E/65.8	C/24.0	C/24.1	B/18.3	C/21.3	C/21.3	F/95.3	C/22.2	C/22.2	C/30.2
• Right Turns	C/26.6	C/26.7	B/16.6	F/239.2	F/248.9	C/32.0	D/35.6	D/36.0	C/25.4	C/22.2	C/22.2	C/22.4	C/24.2	C/24.3	C/22.8
• Approach	C/30.0	C/30.3	C/34.9	F/137.4	F/142.6	D/37.3	C/29.5	C/29.7	D/48.6	C/21.7	C/21.7	C/32.4	C/23.0	C/23.1	C/23.7
Northbound Washington Place															
• Approach	C/27.1	C/27.3	D/44.0	D/40.2	D/41.6	F/144.4	C/27.9	C/28.1	F/188.8	C/22.7	C/22.7	E/56.1	C/22.4	C/22.4	D/46.1
Northeastbound Crosstown Boulevard Off Ramp															
• Approach	C/33.8	C/34.0	E/75.5	C/28.4	C/28.4	D/48.6	D/48.3	D/50.3	F/240.5	C/25.4	C/25.4	F/130.2	C/25.3	C/25.3	D/54.5
Southbound Washington Place															
• Defacto Left Turns	--	--	--	--	--	E/69.0	F/135.7	F/147.0	F/383.4	--	--	F/150.7	--	--	F/81.6
• Left Turns, Throughs	E/56.1	E/60.3	F/89.1	C/24.2	C/24.2	C/30.8	C/24.3	C/24.4	E/62.1	C/20.9	C/20.9	D/45.1	C/20.7	C/20.7	C/33.7
• Right Turns	C/21.5	C/21.5	C/29.0	C/22.7	C/22.7	C/29.0	C/20.1	C/20.1	D/52.8	B/19.8	B/19.8	D/43.8	B/19.9	B/19.9	C/33.1
• Approach	E/55.8	E/60.0	F/88.4	C/23.9	C/23.9	D/40.4	E/69.0	E/73.6	F/164.6	C/20.8	C/20.8	F/107.4	C/20.6	C/20.6	E/62.2
OVERALL INTERSECTION	D/38.8	D/40.4	E/59.7	E/70.6	E/73.2	F/109.5	D/53.0	E/55.9	F/106.4	C/22.3	C/22.3	F/134.3	C/22.3	C/22.4	D/54.9

TABLE 1 (Cont'd)
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City of Pittsburgh, Allegheny County, Pennsylvania

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	AM PEAK HOUR			PM PEAK HOUR			ARENA EVENT PEAK HOUR			FRIDAY CASINO PEAK HOUR			SATURDAY CASINO PEAK HOUR		
	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED
Centre Avenue and Mario Lemieux Place															
Eastbound Centre Avenue															
• Left Turns	--	--	C/30.5	--	--	D/41.1	--	--	F/117.1	--	--	E/71.0	--	--	B/18.5
• Throughs	--	--	A/9.4	--	--	B/18.3	--	--	A/9.9	--	--	A/8.8	--	--	B/13.0
• Approach	A/9.6	A/9.7	B/15.2	A/9.6	A/9.6	C/21.5	B/13.9	B/14.0	D/35.5	A/7.9	A/7.9	C/25.3	A/8.0	A/8.0	B/13.4
Westbound Centre Avenue															
• Approach	A/8.4	A/8.4	C/22.9	B/12.7	B/12.9	D/53.9	B/10.0	B/10.1	F/118.5	A/7.8	A/7.8	E/75.1	A/8.2	A/8.3	D/42.0
Southbound Mario Lemieux Place															
•	--	--	C/30.7	--	--	D/35.3	--	--	D/42.5	--	--	D/36.9	--	--	C/33.4
•	--	--	B/16.4	--	--	C/32.6	--	--	C/24.8	--	--	B/14.2	--	--	C/25.3
• Approach	D/42.4	D/43.9	B/19.5	C/21.2	C/21.3	C/33.6	B/18.4	B/18.4	C/28.6	B/17.5	B/17.5	B/17.5	B/18.0	B/18.0	C/27.5
OVERALL INTERSECTION	B/19.0	B/19.5	B/17.6	B/12.6	B/12.7	C/34.7	B/12.6	B/12.7	E/64.5	A/8.3	A/8.3	D/40.5	A/8.9	A/8.9	C/26.3
Centre Avenue and Logan Street															
Southbound Logan Street															
• Approach	--	--	B/10.7	--	--	B/13.1	--	--	B/13.4	--	--	B/12.6	--	--	B/14.3
Centre Avenue and Fulton Street															
Southbound Fulton Street															
• Approach	--	--	A/9.8	--	--	A/9.7	--	--	B/10.4	--	--	A/8.9	--	--	A/9.1
Centre Avenue and Site Exit															
Eastbound Centre Avenue															
• Approach	--	--	B/11.1	--	--	C/27.2	--	--	C/20.7	--	--	B/17.9	--	--	C/30.1
Westbound Centre Avenue															
• Approach	--	--	B/15.9	--	--	C/26.4	--	--	C/26.5	--	--	B/17.9	--	--	C/31.7
Southbound Site Exit															
• Left Turns	--	--	C/23.0	--	--	B/14.5	--	--	C/20.9	--	--	C/23.2	--	--	B/12.2
• Left Turns, Right Turns	--	--	C/26.0	--	--	C/29.3	--	--	C/21.6	--	--	C/23.1	--	--	D/53.3
• Approach	--	--	C/24.8	--	--	C/23.5	--	--	C/21.2	--	--	C/23.2	--	--	D/36.9
OVERALL INTERSECTION	--	--	B/17.2	--	--	C/24.9	--	--	C/22.9	--	--	C/22.1	--	--	D/35.8

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	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED
Centre Avenue and Crawford Street															
Eastbound Centre Avenue															
• Left Turns, Throughs	B/13.6	B/13.6	B/19.8	B/14.7	B/14.7	B/14.8	B/14.0	B/14.1	C/20.2	B/12.3	B/12.3	B/13.8	B/12.8	B/12.9	A/7.3
• Right Turns	B/13.8	B/13.8	C/24.7	B/16.7	B/16.8	E/78.8	B/13.5	B/13.5	D/48.2	B/12.2	B/12.2	C/21.0	B/12.6	B/12.6	C/32.8
• Approach	B/13.7	B/13.7	C/22.7	B/15.7	B/15.8	E/63.2	B/13.8	B/13.8	D/40.0	B/12.2	B/12.3	B/19.3	B/12.7	B/12.8	C/28.5
Westbound Centre Avenue															
• Left Turns	B/12.4	B/12.4	B/18.2	B/12.2	B/12.2	B/13.0	B/12.1	B/12.1	B/17.2	B/11.8	B/11.8	B/13.1	B/11.7	B/11.7	A/6.6
• Throughs, Right Turns	B/14.1	B/14.1	C/21.0	B/16.7	B/16.8	B/16.8	B/14.2	B/14.3	C/22.1	B/13.0	B/13.0	B/15.1	B/12.8	B/12.8	A/7.4
• Approach	B/13.7	B/13.8	C/20.5	B/16.2	B/16.3	B/16.4	B/13.9	B/13.9	C/21.6	B/12.8	B/12.8	B/14.8	B/12.6	B/12.7	A/7.3
Northbound Crawford Street															
• Approach	C/29.1	C/30.5	C/32.3	C/33.3	C/34.7	E/59.9	D/42.3	D/44.9	D/42.6	B/13.1	B/13.1	B/16.1	B/13.3	B/13.4	C/35.0
Southbound Crawford Street Place															
• Approach	B/18.4	B/18.6	B/18.4	B/13.9	B/14.0	C/20.3	B/14.7	B/14.7	B/15.4	B/12.2	B/12.2	B/14.3	B/12.8	B/12.8	C/30.3
OVERALL INTERSECTION	B/19.2	B/19.6	C/23.7	C/21.8	C/22.4	D/50.9	C/25.2	C/26.3	C/34.4	B/12.6	B/12.6	B/17.2	B/12.9	B/12.9	C/27.7
Centre Avenue and Devillers Street															
Eastbound Centre Avenue															
• Approach	A/6.6	A/6.6	A/5.6	A/7.3	A/7.3	A/7.3	A/7.1	A/7.2	A/7.4	A/6.0	A/6.0	A/6.1	A/6.0	A/6.0	A/6.2
Westbound Centre Avenue															
• Approach	C/29.1	C/29.4	C/29.6	D/40.8	D/41.5	C/34.4	C/34.8	D/35.4	C/29.0	C/26.3	C/26.5	C/26.5	C/24.5	C/24.6	C/27.0
Northbound Devillers Street															
• Approach	C/24.6	C/24.6	C/27.4	C/24.1	C/24.1	C/24.1	C/23.9	C23.9	C/23.9	C/23.5	C/23.5	C/23.5	C/23.7	C/23.7	C/23.7
Southbound Devillers Street Place															
• Approach	C/25.1	C/25.2	C/28.2	C/25.6	C/25.7	C/25.7	C/25.2	C/25.2	C/25.2	C/24.0	C/24.0	C/24.0	C/23.6	C/23.6	C/23.6
OVERALL INTERSECTION	B/17.7	B/17.8	B/18.2	C/23.2	C/23.5	C/21.1	B/20.0	C/20.2	B/17.2	B/17.0	B/17.1	B/17.1	B/15.4	B/15.5	B/16.7
Centre Avenue and Dinwiddle Street															
Eastbound Centre Avenue															
• Approach	C/25.3	C/25.4	C/26.8	C/27.4	C/27.6	C/22.9	C/26.2	C/26.4	C/24.0	C/22.2	C/22.3	C/22.3	C/22.9	C/22.9	C/23.9
Westbound Centre Avenue															
• Approach	A/6.7	A/6.8	A/7.4	A/7.5	A/7.6	A/7.8	A/7.3	A/7.4	A/7.4	A/6.1	A/6.2	A/6.2	A/5.8	A/5.8	A/6.0
Northbound Dinwiddle Street															
• Approach	C/25.6	C/25.7	C/25.7	C/28.2	C/28.3	C/28.3	C/28.0	C/28.1	C/28.1	C/25.3	C/25.4	C/25.4	C/24.1	C/24.1	C/24.1
OVERALL INTERSECTION	B/17.2	B/17.3	B/17.6	B/18.9	B/19.1	B/16.8	B/18.7	B/18.8	B/18.1	B/15.1	B/15.1	B/15.1	B/16.8	B/16.8	B/16.9

TABLE 1 (Cont'd)
LEVELS OF SERVICE SUMMARY
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

INTERSECTION/ APPROACH/ MOVEMENT	LEVELS OF SERVICE (Delay in seconds) [1]														
	AM PEAK HOUR			PM PEAK HOUR			ARENA EVENT PEAK HOUR			FRIDAY CASINO PEAK HOUR			SATURDAY CASINO PEAK HOUR		
	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED
Fifth Avenue and Washington Place/Chatham Square															
Westbound Fifth Avenue															
• Left Turns, Throughs	--	--	--	--	--	E/70.8	--	--	C/24.2	--	--	B/18.8	--	--	C/20.5
• Right Turns	--	--	--	--	--	C/24.2	--	--	C/20.3	--	--	B/12.8	--	--	B/12.8
• Approach	C/22.8	C/23.4	D/51.5	D/54.1	E/59.0	E/61.8	C/20.8	C/21.1	C/23.4	B/12.7	B/12.7	B/18.1	B/13.8	B/13.9	B/19.1
Northbound Chatham Square															
• Left Turns	C/24.8	C/25.2	C/24.7	C/21.5	C/21.8	C/28.4	B/19.6	B/19.6	C/20.5	B/16.1	B/16.1	B/16.1	B/16.4	B/16.4	C/21.5
• Throughs	C/31.4	C/32.1	C/31.4	C/33.0	C/33.9	E/73.7	C/29.9	C/30.5	C/34.4	C/22.9	C/23.1	C/26.4	B/18.8	B/18.9	C/27.2
• Approach	C/29.6	C/30.2	C/29.5	C/30.2	C/30.9	E/62.9	C/27.9	C/28.4	C/31.7	C/22.5	C/22.7	C/26.0	B/18.5	B/18.5	C/26.5
Southbound Washington Place															
• Throughs	C/20.2	C/20.3	C/20.1	B/18.9	B/19.0	C/23.4	B/17.9	B/17.9	B/18.3	B/16.6	B/16.6	B/17.3	B/17.0	B/17.0	C/22.4
• Right Turns	B/18.3	B/18.4	B/19.8	B/18.9	B/18.9	C/25.1	B/16.8	B/16.8	B/18.4	B/16.3	B/16.3	B/17.1	B/17.1	B/17.1	C/23.7
• Approach	B/19.2	B/19.3	B/19.9	B/18.9	B/18.9	C/24.6	B/17.4	B/17.4	B/18.4	B/16.4	B/16.4	B/17.2	B/17.0	B/17.1	C/23.3
OVERALL INTERSECTION	C/23.9	C/24.4	D/37.7	D/40.1	D/42.8	E/55.3	C/22.6	C/23.0	C/24.8	B/17.6	B/17.7	B/19.9	B/15.7	B/15.8	C/20.5
Forbes Avenue and Armstrong Tunnel															
Eastbound Forbes Avenue															
• Approach	C/21.4	C/21.9	C/26.4	C/31.7	C/33.8	C/34.6	B/16.5	B/16.7	C/21.2	B/12.0	B/12.0	B/14.9	B/11.9	B/11.9	B/14.1
Northbound Armstrong Tunnel															
• Left Turns, Right Turns	D/39.0	D/36.0	D/47.3	C/23.7	C/23.1	C/34.2	C/21.6	C/21.4	C/27.7	B/18.8	B/18.9	C/21.6	B/18.8	B/18.9	C/21.3
• Right Turns	C/22.0	C/21.3	C/22.8	B/19.2	B/18.9	C/24.2	C/20.4	C/20.3	C/20.0	B/17.8	B/17.8	B/18.5	B/17.8	B/17.9	B/18.3
• Approach	C/30.5	C/28.9	C/35.0	C/21.4	C/21.1	C/29.1	C/20.9	C/20.7	C/23.9	B/18.3	B/18.3	C/20.0	B/18.3	B/18.3	B/19.9
OVERALL INTERSECTION	C/25.4	C/24.8	C/30.1	C/28.6	C/30.2	C/33.1	B/18.2	B/18.2	C/22.2	B/14.5	B/14.5	B/16.7	B/14.5	B/14.5	B/16.2
Forbes Avenue and Chatham Square/McAnulty Street															
Eastbound Forbes Avenue															
• Left Turns	B/11.3	B/11.5	B/15.8	A/8.7	A/8.7	C/22.0	B/10.3	B/10.5	B/17.9	A/6.7	A/6.3	A/9.8	A/6.3	A/6.4	B/10.8
• Throughs, Right Turns	A/8.9	A/9.0	B/14.5	A/7.7	A/7.7	C/23.2	A/7.4	A/7.5	B/15.1	A/6.0	A/5.8	B/10.9	A/5.9	A/5.9	B/11.6
• Approach	A/9.8	A/9.9	B/14.9	A/8.0	A/8.1	C/22.9	A/8.6	A/8.7	B/16.1	A/6.3	A/6.0	B/10.7	A/6.1	A/6.1	B/11.4
Northbound McAnulty Street															
• Throughs	C/24.0	C/24.0	C/20.1	C/33.9	C/34.2	B/16.8	C/26.5	C/26.5	B/19.5	C/23.4	C/23.4	B/19.0	C/25.9	C/25.9	B/19.2
• Right Turns	C25.8	C/25.8	C/21.4	C/32.8	C/32.9	B/16.4	C/27.8	C/27.9	B/19.9	C/23.6	C/23.6	B/19.2	C/24.3	C/24.3	B/18.2
• Approach	C/25.3	C/25.3	C/21.0	C/33.4	C/33.7	B/16.6	C/27.1	C/27.2	B/19.7	C/23.6	C/23.6	B/19.1	C/25.5	C/25.5	B/18.9
Southbound Chatham Square															
• Approach	F/129.2	F/135.8	D/52.2	F/514.2	F/539.3	C/34.0	F/107.5	F/114.4	C/30.9	C/26.2	C/26.2	C/20.8	C/28.4	C/28.6	C/20.3
OVERALL INTERSECTION	C/30.1	C/31.3	C/20.6	F/86.4	F/89.9	C/23.0	C/23.0	C/23.9	B/17.8	A/9.0	A/9.6	B/11.5	B/12.7	B/12.7	B/12.9

TABLE 1 (Cont'd)
LEVELS OF SERVICE SUMMARY
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

INTERSECTION/ APPROACH/ MOVEMENT	LEVELS OF SERVICE (Delay in seconds) [1]														
	AM PEAK HOUR			PM PEAK HOUR			ARENA EVENT PEAK HOUR			FRIDAY CASINO PEAK HOUR			SATURDAY CASINO PEAK HOUR		
	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED
Grant Street and Boulevard of the Allies/Court Place															
Eastbound Boulevard of the Allies															
• Left Turns, Throughs	B/16.8	B/16.9	B/16.8	C/21.1	C/21.3	D/46.1	C/21.1	C/21.3	C/31.4	B/14.9	B/15.0	B/15.0	B/15.0	B/15.0	B/19.6
• Right Turns	C/22.3	C/21.3	C/22.2	C/26.0	C/26.1	F/97.5	C/21.7	C/21.9	C/31.4	B/15.2	B/15.3	B/15.3	B/15.4	B/15.5	C/20.4
• Approach	B/19.7	B/19.1	B/19.7	C/22.8	C/23.0	E/63.7	C/21.3	C/21.5	C/31.4	B/15.0	B/15.1	B/15.1	B/15.2	B/15.2	B/19.9
Westbound Boulevard of the Allies/Court Place															
• Approach	B/19.9	B/19.9	B/19.9	B/17.6	B/17.7	C/29.7	B/17.7	B/17.7	C/23.4	B/15.1	B/15.1	B/15.1	B/15.1	B/15.1	B/19.7
Northbound Grant Street															
• Approach	C/24.8	C/25.2	D/35.8	E/66.4	E/75.6	F/81.8	C/25.8	C/26.5	C/25.2	B/16.2	B/16.3	C/24.9	B/17.0	B/17.0	B/16.7
Southbound Grant Street															
• Approach	B/18.7	B/18.8	C/20.7	C/26.3	C/26.7	C/21.0	C/20.7	C/20.9	C/21.2	B/16.2	B/16.3	C/22.1	B/16.9	B/17.0	B/17.4
OVERALL INTERSECTION	C/21.1	C/21.2	C/25.5	C/34.2	D/36.8	D/50.8	C/21.8	C/22.1	C/25.4	B/15.7	B/15.7	C/21.7	B/16.2	B/16.3	B/17.7
Grant Street and First Avenue															
Westbound First Avenue															
• Approach	C/31.4	C/31.7	C/31.7	F/82.8	F/87.1	D/41.9	C/32.9	C/33.3	C/31.7	C/25.1	C/25.2	C/25.2	C/24.9	C/25.0	C/23.3
Northbound Grant Street															
• Throughs	B/18.0	B/18.2	C/27.3	B/17.0	B/17.1	C/29.1	B/16.8	B/17.0	C/20.5	B/11.7	B/11.7	B/15.4	B/12.1	B/12.2	B/16.3
• Right Turns	C/30.7	C/31.6	A/7.5	B/14.4	B/14.5	A/2.4	C/20.1	C/20.4	A/5.0	B/12.3	B/12.4	A/3.1	B/12.2	B/12.3	A/2.2
• Approach	C/22.1	C/22.5	B/19.8	B/16.6	B/16.7	C/21.0	B/17.8	B/18.0	B/14.0	B/11.9	B/11.9	A/9.8	B/12.2	B/12.2	B/10.5
Southbound Grant Street															
• Left Turns	B/19.6	C/20.4	C/32.2	B/14.7	B/14.9	D/41.5	B/13.5	B/13.8	B/19.4	A/8.4	A/8.4	A/9.9	A/8.7	A/8.7	B/11.0
• Throughs	A/9.3	A/9.3	B/10.2	B/11.8	B/11.8	C/21.8	A/9.9	A/9.9	B/12.8	A/8.6	A/8.6	B/11.1	A/9.3	A/9.4	B/15.3
• Approach	B/11.5	B/11.7	B/13.5	B/12.0	B/12.1	C/23.1	B/10.3	B/10.4	B/13.3	A/8.5	A/8.6	B/11.0	A/9.3	A/9.3	B/15.2
OVERALL INTERSECTION	C/20.9	C/21.3	B/19.4	C/29.4	C/30.4	C/25.0	B/18.0	B/18.2	B/15.5	B/13.8	B/13.9	B/11.2	B/12.8	B/12.9	B/13.4

TABLE 1 (Cont'd)
LEVELS OF SERVICE SUMMARY
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	AM PEAK HOUR			PM PEAK HOUR			ARENA EVENT PEAK HOUR			FRIDAY CASINO PEAK HOUR			SATURDAY CASINO PEAK HOUR		
	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED	2005 EXISTING	2008 BASE	2008 COMBINED
Grant Street and Fort Pitt Boulevard/I-376 Off Ramp															
Eastbound Fort Pitt Boulevard															
• Approach	E/63.1	E/64.5	F/127.3	C/30.1	C/30.3	F/84.6	D/39.9	D/40.5	F/186.5	C/25.8	C/25.8	D/38.5	C/26.8	C/26.9	E/60.4
Westbound Westbound I-376 Off Ramp															
• Throughs, Right Turns	C/29.7	C/30.2	D/45.8	D/53.5	E/55.4	F/113.2	D/41.2	D/42.0	E/59.3	C/28.7	C/28.8	C/29.6	C/27.0	C/27.1	C/31.6
• Right Turns	D/36.2	D/37.0	F/155.0	D/36.3	D/36.7	F/204.3	D/41.6	D/42.1	F/223.5	C/27.5	C/27.5	F/110.7	C/27.7	C/27.8	F/101.3
• Approach	C/33.0	C/33.6	F/106.4	D/47.2	D/48.4	F/158.6	D/41.4	D/42.0	F/151.3	C/28.2	C/28.3	F/86.5	C/27.3	C/27.4	F/82.7
Northbound Eastbound I-376 Off Ramp															
• Approach	E/69.9	E/74.1	F/126.8	D/39.8	D/40.4	C/33.7	D/39.9	D/40.7	D/40.8	C/24.9	C/25.0	C/29.4	C/26.8	C/26.9	C/22.9
Southbound Grant Street															
• Throughs	E/55.2	E/57.7	F/89.0	F/242.1	F/251.5	F/253.7	F/140.0	F/146.8	F/209.5	C/28.8	C/28.9	F/104.0	D/39.5	D/40.1	F/142.0
• Right Turns	C/32.1	C/32.3	C/27.6	F/255.6	F/264.2	E/79.7	C/31.6	C/31.9	C/23.5	C/26.3	C/26.4	C/24.0	C/27.5	C/27.5	B/18.7
• Approach	D/48.0	D/49.8	E/72.6	F/248.4	F/257.4	F/188.4	F/111.6	F/116.5	F/167.5	C/28.0	C/28.1	F/86.9	D/36.5	D/36.9	F/117.6
OVERALL INTERSECTION	D/52.3	D/54.5	F/107.9	F/129.8	F/134.2	F/131.9	E/63.3	E/65.4	F/126.4	C/27.3	C/27.4	E/65.3	C/31.2	C/31.4	E/76.7
Second Avenue/Court Place and Ross Street															
Eastbound Court Place															
• Approach	D/47.5	D/52.2	D/52.2	C/21.6	C/22.2	F/106.0	B/17.4	B/17.5	D/41.7	B/13.1	B/13.1	B/16.6	B/14.8	B/14.9	C/20.1
Westbound Second Avenue															
• Throughs	B/19.9	C/20.1	C/20.1	C/22.5	C/22.9	E/56.0	B/19.6	B/19.9	D/42.6	B/13.9	B/13.9	B/17.8	B/13.5	B/13.6	B/18.5
• Right Turns	C/32.7	C/33.9	D/42.5	B/16.8	B/16.9	C/28.3	B/17.8	B/18.0	D/44.2	B/13.6	B/13.6	C/20.2	B/13.3	B/13.3	B/19.6
• Approach	C/26.8	C/27.5	C/32.6	C/20.6	C/20.9	D/46.8	B/18.9	B/19.1	D/43.3	B/13.8	B/13.8	B/19.2	B/13.5	B/13.5	B/19.0
Northbound Ross Street															
• Approach	B/16.8	B/17.0	C/29.8	B/17.8	B/17.7	B/19.8	B/17.8	B/17.9	B/19.8	B/12.5	B/12.5	B/19.6	B/12.8	B/12.8	C/20.1
Southbound Ross Street															
• Left Turns	C/23.4	C/24.1	E/61.9	F/98.6	F/103.4	F/135.3	C/23.0	C/23.7	D/43.5	B/13.7	B/13.7	C/23.0	B/13.3	B/13.4	C/21.6
• Throughs, Right Turns	B/13.9	B/13.9	B/13.9	B/13.5	B/13.6	A/8.6	B/13.4	B/13.4	A/8.0	B/12.4	B/12.5	A/9.5	B/12.6	B/12.6	A/9.1
• Approach	B/19.1	B/19.5	D/40.7	E/74.5	E/78.1	F/99.5	B/19.1	B/19.6	C/31.9	B/13.1	B/13.2	B/19.2	B/12.9	B/13.0	B/17.7
OVERALL INTERSECTION	C/27.6	C/29.0	D/36.6	D/35.6	D/36.9	E/62.0	B/18.5	B/18.7	C/33.3	B/13.3	B/13.3	B/19.2	B/13.6	B/13.6	B/19.3

(1) Level of Service determined through the use of the methodologies presented in the "2000 Highway Capacity Manual" (HCM) published by the Transportation Research Board (TRB).

Source: Analysis by Trans Asso

Table 2
PARKING CAPACITIES AND DEMAND TO BE DISPLACED BY PROJECT
WASHINGTON - CENTRE - CRAWFORD - PRIDE - FIFTH AVENUE
Pittsburgh First Master Plan Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

Parking Lot (1)	Lot Description	Capacity	Displaced Parkers		Lot Notes
			Daytime	Evening/Event	
1	Front area of former hospital bldg on Centre Ave. Spaces include grass spaces and lined spaces in front of building.	39	26	39	
2	Side lot of former hospital building on Centre Avenue.	61	56	61	
3	Gravel lot on SW corner of Colwell St. & Pride St.	88	82	88	
4	Parking lot on NE corner of 5th Ave. & Stevenson St.	20	18	20	
5	Small lot on 5th Ave. between Stevenson St. and Pride St.	18	14	18	
6	Citizens bank rear parking lot	11	5	11	
7	Gravel lot on Colwell St. between Magee St. Stevenson St.	116	100	116	
8	Magee St. between Colwell St. & Our Way	56	56	56	Vehicles parked in a fashion that allows there were more parked vehicles than actual allocated parking spaces.
9	Gravel lot on 5th Ave. between Magee St. & Logan Dr.	78	78	78	Vehicles parked in a fashion that allows there were more parked vehicles than actual allocated parking spaces.
10	Magee St. between Our Way & 5th Ave.	17	17	17	
11	Lot on west side of Magee St. between Our Way & 5th Ave.	40	40	40	Vehicles parked in a fashion that allows there were more parked vehicles than actual allocated parking spaces.
12	Small lot west of Magee St. between Elm St. & 5th Ave.	54	49	54	
13	Lot on west side of Stevenson St. between Our Way & 5th Ave.	42	42	42	
14	Small private lot on the SE corner of Elm St. & Colwell St.	14	7	14	
15	Large lot on south side of Colwell St. between Washington Pl. & Elm St.	146	144	146	Out of 144 parked vehicles, 126 were parked in lined spaces and 18 were "stacked" in unmarked spaces.
16	Small lot and spaces on Congress St.	38	34	38	
17	Lot on the south side of the former hospital nuilding on Colwell St.	94	90	94	
18	Lot on the west side of the former hospital building garage lot.	57	51	57	
19	Small lot of private building.	14	14	14	
20	Garage lot of former hospital building	452	446	452	Approximately 15 additional spaces on the uppermost level of garage blocked off for special purposes as stated by garage attendant.
21	Colwell St. on street parking meters	103	97	103	
SUB TOTALS		1,558	1,466	1,558	
MELLON ARENA		2,400	2,400	2,600	
TOTALS		**3,958**	**3,866**	**4,158**	

(1) Refers to lots shown in Figure P - 14

TABLE 3
AVAILABLE DAYTIME FRINGE PARKING
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

LOT/GARAGE[1]	NAME	AVAILABLE SPACES[2]
1	Gateway Clipper Lot (Approx.)	154
2	Science Center	278
3	Gold Lot 1/1A	567
4	Gold Lot 2	1,046
5	Gold Lot 4	90
6	Red Lot 7A	98
7	Red Lot 7B	26
8	Red Lot Clark	11
9	Red Lot 7C	75
10	Red Lot Clark East	14
11	Red Lot 7D	208
12	Red Lot 6/6A	231
13	Allegheny Center Garage	1,000
14	Canal St. Lot	40
15	Blue Lot 7F	59
16	Blue Lot 7H	74
17	Blue Lot 10/7G	50
18	North Shore Garage	149
19	Blue Lot 7J	31
20	Red Lot 5	144
Subtotal, North Shore		**4,345**
21	Unknown	18
22	Heinz Lot	548
Subtotal, Strip District		**566**
23	Station Square West	179
24	Chevrolet Amphitheatre Parking Lot	180
25	Unknown	82
26	Station Square Garage	469
27	HOV Lot	24
28	Station Square Lot East	317
Subtotal, South Shore		**1,251**
29	Mon Wharf	254
30	1st Avenue Garage	343
31	Greyhound Park and Ride Lot	2
Subtotal, Second Avenue		**599**
TOTAL		**6,761**

(1) As shown in Figures 15 and 15A.
(2) Number of available spaces during the daytime, as field verified by Trans Associates on Thursday, November 03, 2005.

Source: Summary by Trans Associates

TABLE 4
EVENING/WEEKEND EVENT USAGE
PARKING FACILITIES WITHIN WALKING DISTANCE OF STUDY AREA
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

LOT/GARAGE[1]	PARKING AREA	CAPACITY, NUMBER OF SPACES
0-5 Minute Walking Time		
1	Chatham/Marriott Garage	2,400
2	Fisher Lots	37
3	Forbes Avenue Garage	708
4	Locust Street Garage	1,681
5	Forbes Avenue Lot (Lot 1)	42
6	1314 Fifth Avenue Lot	80
Subtotal		**4,948**
5-10 Minute Walking Time		
7	Ramada/Athletic Club	170
8	Mellon Client Svc. Center	630
9	Manor Building	700
10	Centre/Washington Lot[1]	149
11	Colwell & Stevenson Lot	90
12	1424 Fifth Avenue Lot	40
Subtotal		**1,779**
10-15 Minute Walking Time		
14	Mellon Square Garage	1,100
15	Kaufmann's Garage	834
16	Bakewell Corp. Lot	128
17	One Mellon Center Garage	220
19	Allegheny Co. Lot	72
20	Fourth & Ross St Lot	30
22	Zucla Lot	116+35 valet
23	USX Garage	575
Subtotal		**3,110**
TOTAL		**9,837**

(1) As shown on Figure 16.

Source: Summary by Trans Associates.

TABLE 5
COMPARISON OF NUMBERS OF DISPLACED PARKERS
TO AVAILABLE PARKING SPACES
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

PARKING TIME	NUMBER OF SPACES AVAILABLE					PARKING DEMAND[3]	PARKING SUPPLY AVAILABLE MINUS DEMAND, SURPLUS NUMBER OF SPACES
		Walking Time [2]					
	Fringe[1]	1-5 min	5-10 min	10-15 min	Total 0-15 min		
Daytime	6,761	N/A	N/A	N/A	N/A	3,866	2,895
Evening/Event	--	4,948	1,779	3,110	9,837	4,158	5,679

(1) From Table 3.
(2) From Table 4.
(3) From Table 2.

Source: Analysis by Trans Associates

TABLE 6
PARKING TO BE PROVIDED IN MASTER PLAN
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

DEVELOPMENT COMPONENT	SIZE	PARKING FACILITY/NUMBER OF SPACES PROVIDED
Arena	18,200 Seats	--
Casino	5,000 Slots plus ancillary uses(1)	Casino Garage – 4,301 spaces
Master Plan Blocks (from UDA Figure MP-1)		
▪ Block C	Residential – 275 Units Retail – TBD	450 space garage 37 spaces for public use
▪ Block D	Residential – 233 Units Retail – 20,000 S.F.	1,400 space garage 990 spaces for public use
▪ Block E	Office – 100,000 S.F. Retail – 20,000 S.F.	750 space garage 450 for public use
▪ Block F	Parking (with Block E)	--
▪ Block G	Entertainment, Retail, Residential, Office TBD	Parking to be supplied in Block H Garage
▪ Block H	Residential – 500 Units Office – 100,000 S.F.	1,850 space garage 750 spaces for public use
▪ Block I	Residential – 233 Units Local Retail – 10,400 S.F.	350 space garage, for residential use only
▪ Block J	Residential – 233 Units Local Retail – 10,400 S.F.	350 space garage, for residential use only
▪ Block K	Residential – 233 Units Local Retail – 10,400 S.F.	350 space garage, for residential use only
TOTALS	Residential – 1,707 Units Retail – 40,000 S.F. Office – 200,000 S.F. Local Retail – 31,200 S.F. Additional Uses TBD	Parking Spaces: Casino/Arena – 4,301 Residential Use Only – 2,563 Public Use – 2,167 Other (Office, Retail) -770 Total – 9,801

(1) Ancillary uses assumed to represent shared parking uses with the slots, no separate parking to be provided. Includes up to 750 restaurant seats and 105 seats in bars.

Source: Data supplied by UDA Architects and Cope-Linder Architects.

Summary by Trans Associates.

TABLE 7
SUMMARY OF PARKING SPACES TO BE PROVIDED
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

BLOCK	RESIDENTIAL	RETAIL	OFFICE	PUBLIC	CASINO/ARENA	TOTAL
B	--	--	--	--	4,301	4,301
C	413	--	--	37	--	450
D	350	60	--	990	--	1,400
E	--	60	300	390	--	750
F	--	--	--	--	--	--
G	--	--	--	--	--	--
H	750		350	750	--	1,850
I	350	--	--	--	--	350
J	350	--	--	--	--	350
K	350	--	--	--	--	350
TOTALS	2,563	120	650	2,167	4,301	9,801

TOTAL SPACES PROVIDED IN MASTER PLAN – 9,801

Source: Data provided by UDA Architects and Cope-Linder Architects

Summary by Trans Associates

TABLE 8
PARKING DEMAND
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

PARKERS	NUMBER OF INCREASED SPACES REQUIRED (BASED ON INPUT FROM USERS)		
	DAY	EVENING	WEEKEND
ARENA			
On-Site Parkers			
▪ Executive Staff and Key Personnel	175	175	175
▪ Premium Patrons	--	325	325[1]
▪ Immediately Adjacent Parking (Patrons)	--	2,000[1]	2,000[1]
▪ Maximum event increase in employees, vendors, concessionaires[2]	--	100	100
▪ Additional patrons[3]	--	540	540
CASINO			
▪ Patrons[4]	2,519	2,638	3,897 (Friday)
▪ Executive Staff[5]	100	100	3,789 (Saturday) 100
Hotel – 400 Rooms[6]	--	--	--
MASTER PLAN COMPONENTS			
Residential – 1,707 Units[7]	2,563	2,563	2,563
Retail – 40,000 S.F.[8]	120	120	120
Office - 200,000 S.F.[9]	650	60	60
Local Retail – 31,200 S.F.[10]	0	0	0
TOTALS, ALL	6,127	8,621 (of whom 100 must be off site and 540 may be on or off-site)	9,880 Friday (of whom 100 must be off site and 540 may be on or off site) 9,772 Saturday (of whom 100 must be off site and 540 may be on or off site)
TOTALS, ON-SITE ONLY	6,127	7,981	9,240 Friday 9,132 Saturday

(1) During maximum game
(2) Currently 600 park off-site, in the future 700 will park off-site.
(3) Based on 1,200 new (additional) seats with estimated auto occupancy of 2.0 and 90 percent arrivals by auto, resulting in need for 540 additional patron spaces. May park on or off-site.
(4) Based on detailed analysis contained in Appendix F for maximum usage.
(5) Assumes all other casino staff will park off-site, at remote parking with shuttle service.
(6) Included in casino parking demand.
(7) Assumes 1.5 spaces per unit.
(8) Assumes 3.0 spaces per 1,000 S.F.
(9) Assumes 3.0 spaces per 1,000 S.F. with 10 percent of spaces in use during evening and weekend.
(10) Assumes shared use, no new parking demand.

TABLE 9
ON-SITE PARKING SUPPLY/DEMAND COMPARISON
YEAR 2008 WITH MASTER PLAN IN PLACE
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

PARKING PEAK PERIOD	TOTAL PARKING SUPPLY[1]	PARKING DEMAND[2]	PARKING SURPLUS OR (DEFICIT)[3]
ON-SITE PARKERS			
Weekday Daytime	9,801	6,077	3,724
Weekday Evening with Maximum Arena Event	9,801	7,981	1,820
Friday Evening with Maximum Arena Event	9,801	9,240	561
Saturday Evening with Maximum Arena Event	9,801	9,132	669

(1) From Table 7.
(2) From Table 8, assuming the 540 new arena patrons park off-site.
(3) Parking Supply minus parking demand.

Source: Trans Associates

TABLE 10
PARKING ALLOCATIONS
WEEKDAY DAYTIME
Pittsburgh First Master Plan
Parking and Traffic Study
City of Pittsburgh, Allegheny County, Pennsylvania

PARKING FACILITY	CAPACITY	NUMBER OF SPACES ALLOCATED									
		CASINO		ARENA				OTHER MASTER PLAN PERSONNEL			
		EXECUTIVE STAFF	PATRONS	KEY PERSONNEL	EXECUTIVE STAFF	PREMIUM PATRONS	PATRONS	RESIDENTIAL	RETAIL	OFFICE	PUBLIC (OTHER)
Casino Garage[(1)]	4,301	100	2,519	40	135	0	0	0	0	0	1,507
Garage C	450	0	0	0	0	0	0	413	0	0	37
Garage D	1,400	0	0	0	0	0	0	350	60	0	990
Garage E	750	0	0	0	0	0	0	0	60	300	390
Garage H	1,850	0	0	0	0	0	0	750	0	350	750
Garage I	350	0	0	0	0	0	0	350	0	0	0
Garage J	350	0	0	0	0	0	0	350	0	0	0
Garage K	350	0	0	0	0	0	0	350	0	0	0
TOTALS	9,801	100	2,519	40	135	0	0	2,563	120	650	3,674

(1) Public spaces available are assigned first to casino patrons and the remainder are assigned as public spaces.

Source: Analysis by Trans Associates

TABLE 11
PARKING ALLOCATIONS
WEEKDAY EVENING WITH MAXIMUM ARENA EVENT
Pittsburgh First Master Plan
Parking and Traffic Study
City of Pittsburgh, Allegheny County, Pennsylvania

PARKING FACILITY	CAPACITY	NUMBER OF SPACES ALLOCATED									
		CASINO		ARENA				OTHER MASTER PLAN PERSONNEL			
		EXECUTIVE STAFF	PATRONS	KEY PERSONNEL	EXECUTIVE STAFF	PREMIUM PATRONS	PATRONS	RESIDENTIAL	RETAIL	OFFICE	PUBLIC (OTHER)
Casino Garage[1]	4,301	100	2,638	40	135	325	1,063	0	0	0	0
Garage C	450	0	0	0	0	0	0	413	0	0	37
Garage D	1,400	0	0	0	0	0	937	350	60	0	53
Garage E	750	0	0	0	0	0	0	0	60	30	660
Garage H	1,850	0	0	0	0	0	540[2]	750	0	30	530
Garage I	350	0	0	0	0	0	0	350	0	0	0
Garage J	350	0	0	0	0	0	0	350	0	0	0
Garage K	350	0	0	0	0	0	0	350	0	0	0
TOTAL	9,801	100	2,638	40	135	325	2,540	2,563	120	60	1,280

(1) Available public spaces assigned to casino patrons and arena patrons to the maximum extent possible. Overflow arena patrons (up to 2,000 total arena patrons) assigned to garages D and H.
(2) Additional patrons, up to 540 vehicles, due to enlarged arena seating. Since parking on-site is available, these patrons are assumed to park on-site.

TABLE 12
PARKING ALLOCATIONS
FRIDAY EVENING WITH MAXIMUM ARENA EVENT
Pittsburgh First Master Plan
Parking and Traffic Study
City of Pittsburgh, Allegheny County, Pennsylvania

PARKING FACILITY	CAPACITY	NUMBER OF SPACES ALLOCATED									
		CASINO		ARENA				OTHER MASTER PLAN PERSONNEL			
		EXECUTIVE STAFF	PATRONS	KEY PERSONNEL	EXECUTIVE STAFF	PREMIUM PATRONS	PATRONS	RESIDENTIAL	RETAIL	OFFICE	PUBLIC (OTHER)
Casino Garage[(1)]	4,301	100	3,701	40	135	325	0	0	0	0	0
Garage C	450	0	0	0	0	0	16	413	0	0	21
Garage D	1,400	0	196	0	0	0	794	350	60	0	0
Garage E	750	0	0	0	0	0	660	0	60	30	0
Garage H	1,850	0	0	0	0	0	1,070[(2)]	750	0	30	0
Garage I	350	0	0	0	0	0	0	350	0	0	0
Garage J	350	0	0	0	0	0	0	350	0	0	0
Garage K	350	0	0	0	0	0	0	350	0	0	0
TOTAL	9,801	100	3,897	40	135	325	2,540	2,563	120	60	21

(1) Available public spaces assigned to casino patrons and arena patrons to the maximum extent possible. Overflow arena patrons (up to 2,000 total arena patrons) assigned to garages D and H.
(2) Additional patrons, up to 540 vehicles, due to enlarged arena seating. Since parking on-site is available, these patrons are assumed to park on-site.

TABLE 13
PARKING ALLOCATIONS
SATURDAY EVENING WITH MAXIMUM ARENA EVENT
Pittsburgh First Master Plan
Parking and Traffic Study
City of Pittsburgh, Allegheny County, Pennsylvania

PARKING FACILITY	CAPACITY	NUMBER OF SPACES ALLOCATED									
		CASINO		ARENA				OTHER MASTER PLAN PERSONNEL			
		EXECUTIVE STAFF	PATRONS	KEY PERSONNEL	EXECUTIVE STAFF	PREMIUM PATRONS	PATRONS	RESIDENTIAL	RETAIL	OFFICE	PUBLIC (OTHER)
Casino Garage	4,301	100	3,701	40	135	325	0	0	0	0	0
Garage C	450	0	0	0	0	0	0	413	0	0	37
Garage D	1,400	0	88	0	0	0	902	350	60	0	0
Garage E	750	0	0	0	0	0	568	0	60	30	92
Garage H	1,850	0	0	0	0	0	1,070	750	0	30	0
Garage I	350	0	0	0	0	0	0	350	0	0	0
Garage J	350	0	0	0	0	0	0	350	0	0	0
Garage K	350	0	0	0	0	0	0	350	0	0	0
TOTAL	9,801	100	3,789	40	135	325	2,540	2,563	120	60	129

(1) Available public spaces assigned to casino patrons and arena patrons to the maximum extent possible. Overflow arena patrons (up to 2,000 total arena patrons) assigned to garages D and H.
(2) Additional patrons, up to 540 vehicles, due to enlarged arena seating. Since parking on-site is available, these patrons are assumed to park on-site.

TABLE 14
SUMMARY OF TRIP GENERATION
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

LAND USE	SIZE	ITE LAND USE	A.M. PEAK HOUR[1]			P.M. PEAK HOUR[2]			ARENA PEAK[3]			FRIDAY CASINO PEAK[4]			SATURDAY CASINO PEAK[4]		
			ENTERING	EXITING	TOTAL	ENTERING	EXITING	TOTAL	ENTERING	EXITING	TOTAL	ENTERING	EXITING	TOTAL	ENTERING	EXITING	TOTAL
Casino	5,000 slots	--[5]	784	372	1,096	1,176	1,280	2,456	1,238	1,094	2,332	2,103	1,748	3,851	1,652	1,906	3,558
Hotel	400 rooms	310	111	74	185	100	89	189	112	90	202	112	90	202	63	49	112
Residential	1,707 units	223	160	355	515	352	255	607	264	183	447	264	183	447	264	183	447
Retail	71,200 S.F.	820	59	38	97	85	92	177	113	127	240	29	28	57	36	59	95
Office	200,000 S.F.	710	107	15	122	23	111	134	Neg.	Neg.	0	Neg.	Neg.	0	Neg.	Neg.	0

(1) Peak hour of street traffic between 7:00 and 9:00 A.M.
(2) Peak hour of street traffic between 4:00 and 6:00 P.M.
(3) Peak hour of street traffic between 6:00 and 8:00 P.M.
(4) Calculated to be 10:00 to 11:00 P.M. based upon projected site traffic.
(5) No relevant ITE data available, calculations based upon data provided by Isle of Capri, Inc. for a comparable urban casino facility in the U.S.A.

Source: Calculations by Trans Associates.

TABLE 15
TRIP DISTRIBUTION
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

Corridor[(1)]	Sector	Casino/Hotel/Office Trip Distribution	Residential Trip Distribution
0	Downtown Pittsburgh	0.4%	25%
1	Fort Pitt Bridge	20.7%	15%
2A	Liberty Bridge	13.1%	32%
2B	Boulevard of Allies/I-376	27.3%	
3	Fort Duquesne Bridge	4.0%	3%
4	Veteran's Bridge/Bigelow Boulevard	26.7%	15%
5	Second Avenue/Tenth Street Bridge	4.8%	2%
6	$6^{th}/7^{th}/9^{th}$ Street Bridges	0.7%	4%
7	Centre Avenue	0.8%	3%
8	Liberty Avenue	1.2%	1%
9	Forbes/Fifth Avenues	0.3%	2%
		100%	100%

(1) Corresponds to Figure 18.

Source: Analysis of population and employment distribution by Trans Associates, based upon county-level trip distribution provided by City of Pittsburgh Department of City Planning.

TABLE 16
QUEUE LENGTH SUMMARY
2008 COMBINED CONDITIONS
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

DIRECTION	QUEUE LENGTH (Feet)[1]				
	A.M. PEAK HOUR	P.M. PEAK HOUR	ARENA EVENT PEAK HOUR	FRIDAY CASINO PEAK HOUR	SATURDAY CASINO PEAK HOUR
Washington Place and Bedford Avenue/Bigelow Boulevard					
Eastbound Seventh Avenue Ramp Left Turn	40	400	200	140	0
Eastbound Seventh Avenue Ramp Through, Right Turn	260	360	340	100	80
Eastbound Seventh Avenue Right Turn	140	180	80	100	60
Northbound Washington Place Through	180	1,220	680	520	620
Northbound Washington Place Right Turn	20	150	80	0	0
Northeastbound Bigelow Boulevard Left Turn	460	1,080	640	340	180
Northeastbound Bigelow Boulevard Left Turn, Through, Right Turn	480	1,160	680	360	180
Northeastbound Bigelow Boulevard Right Turn	340	60	160	80	40
Washington Place and Wylie Avenue					
Westbound Wylie Avenue Right Turn	20	100	20	40	20

TABLE 16 (cont'd)
QUEUE LENGTH SUMMARY
2008 COMBINED CONDITIONS
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

DIRECTION	QUEUE LENGTH (Feet)[1]				
	A.M. PEAK HOUR	P.M. PEAK HOUR	ARENA EVENT PEAK HOUR	FRIDAY CASINO PEAK HOUR	SATURDAY CASINO PEAK HOUR
Centre Avenue/I-579 Northbound Off Ramp and Washington Place					
Centre Avenue Eastbound Through, Right Turn	700	1,000	1,740	2,140	1,040
Centre Avenue Westbound Left Turn	120	140	220	180	260
Centre Avenue Westbound Through, Right Turn	140	420	380	440	440
Northbound Washington Place Left Turn, Through, Right Turn	220	520	520	360	320
Southbound Washington Place Left Turn, Through	300	80	220	140	80
Southbound Washington Place Right Turn	20	40	40	20	20
Northeastbound (I-579 Off Ramp Left Turn, Through	360	260	800	920	440
Northeastbound I-579 Off Ramp Through, Right Turn	300	220	660	920	440
Centre Avenue and Mario Lemieux Place					
Eastbound Centre Avenue Left Turn	220	180	680	600	40
Eastbound Centre Avenue Through	360	220	380	300	460
Westbound Centre Avenue, Through, Right Turn	20	380	840	440	340
Southbound Mario Lemieux Place Left Turn	40	260	40	40	40
Southbound Mario Lemieux Place Right Turn	0	340	0	180	120
Centre Avenue and Logan Street					
Southbound Logan Street Right Turn	20	20	20	20	20

TABLE 16 (cont'd)
QUEUE LENGTH SUMMARY
2008 COMBINED CONDITIONS
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

DIRECTION	QUEUE LENGTH (Feet)[1]				
	A.M. PEAK HOUR	P.M. PEAK HOUR	ARENA EVENT PEAK HOUR	FRIDAY CASINO PEAK HOUR	SATURDAY CASINO PEAK HOUR
Centre Avenue and Site Driveway					
Eastbound Centre Avenue Through	60	180	140	60	180
Westbound Centre Avenue Through	360	200	340	60	160
Northbound Site Exit Driveway Left Turn, Right Turn	100	400	320	440	440
Centre Avenue and Fulton Street					
Southbound Fulton Street Right Turn	20	20	20	20	20
Centre Avenue and Crawford Street					
Eastbound Centre Avenue Left Turn, Through	100	120	140	40	60
Eastbound Centre Avenue Right Turn	0	860	600	40	580
Westbound Centre Avenue Left Turn	40	20	20	20	20
Westbound Centre Avenue Through, Right Turn	120	140	160	40	40
Northbound Crawford Street Left Turn, Through, Right Turn	320	540	500	120	200
Southbound Crawford Street Left Turn, Through, Right Turn	400	140	120	60	140
Crawford Street and Wylie Street					
Eastbound Wylie Street Left Turn, Right Turn	20	20	20	20	20
Northbound Crawford Street Left Turn, Through	20	20	20	20	20

TABLE 16 (cont'd)
QUEUE LENGTH SUMMARY
2008 COMBINED CONDITIONS
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

DIRECTION	QUEUE LENGTH (Feet)[1]				
	A.M. PEAK HOUR	P.M. PEAK HOUR	ARENA EVENT PEAK HOUR	FRIDAY CASINO PEAK HOUR	SATURDAY CASINO PEAK HOUR
Bedford Avenue and Crawford Street					
Eastbound Bedford Avenue Left Turn, Through	40	40	40	20	40
Eastbound Bedford Avenue Right Turn	0	0	0	0	0
Westbound Bedford Avenue Left Turn, Through, Right Turn	80	60	40	20	40
Northbound Crawford Street Left Turn, Through, Right Turn	40	80	40	40	20
Southbound Crawford Street Left Turn, Through, Right Turn	20	20	20	20	20
Bedford Avenue and Fulton Street					
Northbound Fulton Street Left Turn, Right Turn	20	0	20	20	20
Bedford Avenue and Logan Street					
Northbound Logan Street Left Turn, Right Turn	0	0	0	0	20

TABLE 16 (cont'd)
QUEUE LENGTH SUMMARY
2008 COMBINED CONDITIONS
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

DIRECTION	QUEUE LENGTH (Feet)[1]				
	A.M. PEAK HOUR	P.M. PEAK HOUR	ARENA EVENT PEAK HOUR	FRIDAY CASINO PEAK HOUR	SATURDAY CASINO PEAK HOUR
Bedford Avenue and Mario Lemieux Place/Seventh Avenue On Ramp/HOV Lane					
Westbound Bedford Avenue Left Turn	20	20	20	20	20
Westbound Bedford Avenue Through, Right Turn	320	300	200	140	200
Northbound Mario Lemieux Place Left Turn	320	440	240	360	840
Northbound Mario Lemieux Place Left Turn, Through, Right Turn	120	460	220	160	780
Southbound HOV Lane Left Turn, Through	1,300	N/A	N/A	N/A	N/A
Southbound HOV Lane Right Turn	100	N/A	N/A	N/A	N/A
Northeastbound Bedford Avenue Left Turn	0	80	40	0	40
Northeastbound Bedford Avenue Left Turn, Through	N/A	300	340	100	220
Northeastbound Bedford Avenue Through, Right Turn	400	260	40	100	280

(1) Queues based on Synchro 50th percentile queues, multiplied by a factor of 2.0, and rounded to the next 20 feet.

TABLE 17
STUDY AREA ROADWAY AND SIGNAL IMPROVEMENTS
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

INTERSECTION	IMPROVEMENT
Centre Avenue – Washington Place to Crawford Street	▪ Reconstruct roadway, sidewalks and crosswalks to CBD standards. ▪ Provide two through lanes in each direction, with additional lanes as noted for individual intersections. ▪ Reconstruct median on roadway, with breaks at Lemieux Place and casino garage exit.
Washington Place – Centre Avenue to Fifth Avenue	▪ Reconstruct roadway, sidewalks and crosswalks to CBD standards. ▪ Provide three through lanes in each direction, with additional lanes as noted for individual intersections. ▪ Reconstruct median on roadway, with break at Chatham Center driveway.
Centre Avenue/Casino garage exit	▪ Signalize new intersection based upon CBD standards. ▪ Construct driveway to provide one exclusive left turn lane and one shared left/right turn lane.
Centre Avenue/Casino garage entrance	▪ Construct right turn lane into site driveway in addition to two through lanes.
Fifth Avenue & Magee Street/ Site Driveway	▪ Signalize driveway approach. ▪ Upgrade traffic signal to CBD standards
Fifth Avenue & Stevenson Street/Loading Dock Driveway	▪ Signalize driveway approach. ▪ Upgrade traffic signal to CBD standards.
Grant Street & First Avenue	▪ Add northbound right turn overlap phase.
Centre Avenue & Washington Place	▪ Prohibit left turns from eastbound Centre Avenue. ▪ Add westbound advance phase. ▪ Re-stripe eastbound approach to include a shared left/through and shared through/right lanes. ▪ Re-stripe westbound approach to include an exclusive left turn lane, through lane and shared through/right lane. ▪ Upgrade traffic signal equipment to CBD standards. ▪ Install detection equipment on all approaches to permit fully-actuated operation.
Bedford Avenue & Crawford Avenue	▪ Re-stripe eastbound approach to include a shared left/through lane and exclusive right turn lane.
Bedford Avenue & Lemieux Place/HOV Ramp	▪ Upgrade traffic signal to CBD standards. ▪ Construct northbound Lemieux Place approach as one exclusive left turn lane and one shared left/through/right turn lane.
Centre Avenue & Lemieux Place	▪ Construct eastbound left turn lane on Centre Avenue in addition to the two through lanes. ▪ Construct southbound approach as one left turn and one right turn lane. ▪ Upgrade existing traffic signal to CBD standards. ▪ Add eastbound advance phase. ▪ Add southbound right turn overlap phase. ▪ Install detection equipment on all approaches to permit actuated operation.

TABLE 17 (cont'd)
STUDY AREA ROADWAY AND SIGNAL IMPROVEMENTS
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

INTERSECTION	IMPROVEMENT
Fifth Avenue & Washington Place/Chatham Place	▪ Upgrade traffic signal to CBD standards. ▪ Prohibit parking for at least 150 feet along north curb line on westbound approach and install an exclusive right turn lane.
Forbes Avenue & Armstrong Tunnels Forbes Avenue & Chatham Place/McAnulty Drive Bedford Avenue & Washington Place Bedford Avenue & Crawford Street Centre Avenue & Dinwiddie Street/DeVilliers Street Centre Avenue & Crawford Street Second Avenue & Ross Street Seventh Avenue & Smithfield Street	▪ Upgrade existing traffic signal to provide pedestrian signals on all crossings.
Bedford Avenue & Crawford Street Centre Avenue & Site Driveway Centre Avenue & Crawford Street Fifth Avenue & Magee Street/ Site Driveway Fifth Avenue & Stevenson Street/ Site Driveway Fifth Avenue & Pride Street Forbes/Magee Street Forbes Avenue & Stevenson Street Forbes Avenue & Pride Street	▪ Install fiber-optic interconnect. ▪ Upgrade signal controller. ▪ Integrate into City's computerized traffic control system.
All Study Area Intersections	▪ Optimize traffic signal timings. ▪ Provide at least 6 timing plans compatible with City's control system.
General Study Area	▪ Extend City's wayfinder signage system to direct visitors to the casino and adjacent parking facilities and to direct exiting traffic to regional highways and bridges.

TABLE 18
CENTRE AVENUE AND WASHINGTON PLACE PUBLIC IMPROVEMENTS
OPINION OF PROBABLE COST
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

DESCRIPTION	QTY.	UNIT	UNIT PRICE	COST
CLASS I, EXCAVATION	10,565	CY	$10.00	$105,700.00
8" SUBBASE (NO. 2A)	17,432	SY	$7.50	$130,700.00
10" REINFORCED CEMENT CONCRETE PAVEMENT	17,432	SY	$55.00	$958,800.00
BRICK CROSSWALK	1,496	SY	$200.00	$299,200.00
GRANITE CURB	4,570	LF	$40.00	$182,800.00
GRANITE MOUNTABLE CURB	3,645	LF	$50.00	$182,300.00
CLASS 1 GEOTEXTILE	4,570	LF	$1.25	$5,700.00
15" REINFORCED CONCRETE PIPE	3,650	LF	$65.00	$237,300.00
MANHOLE	27	EA	$3,200.00	$86,400.00
TYPE C INLET, BICYCLE SAFE GRATE, SPECIAL	42	EA	$4,000.00	$168,000.00
PAVEMENT BASE DRAIN	4,570	LF	$6.00	$27,400.00
24" EXTRA STRENGTH VITRIFIED CLAY PIPE	1,560	LF	$288.00	$449,300.00
36" EXTRA STRENGTH VITRIFIED CLAY PIPE	641	LF	$432.00	$276,900.00
4" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	2,908	LF	$0.75	$2,200.00
8" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	1,883	LF	$1.50	$2,800.00
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	200	LF	$8.50	$1,700.00
WHITE HOT THERMOPLASTIC LEGEND, "ONLY", 8' - 0"	9	EA	$200.00	$1,800.00
WHITE HOT THERMOPLASTIC LEGEND, "LEFT ARROW", 12' - 0" X 3' - 0"	7	EA	$125.00	$900.00

Table 18 (cont'd)
CENTRE AVENUE AND WASHINGTON PLACE PUBLIC IMPROVEMENTS
OPINION OF PROBABLE COST
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

DESCRIPTION	QTY.	UNIT	UNIT PRICE	COST
WHITE HOT THERMOPLASTIC LEGEND, "RIGHT ARROW", 12' - 0" X 3' - 0"	2	EA	$125.00	$300.00
REPLACEMENT OF EXISTING 8" WATER LINE	2200	LF	$125.00	$275,000.00
CONSTRUCTION SURVEYING (1%)	1	LS	$34,000.00	$34,000.00
MAINTENANCE & PROTECTION OF TRAFFIC DURING CONSTRUCTION (12%)	1	LS	$407,400.00	$407,400.00
MOBILIZATION (5%)	1	LS	$169,800.00	$169,800.00

SUBTOTAL	$4,006,400.00
30% CONTIGENCY	$1,201,900.00
TOTAL CONSTRUCTION COST	**$5,208,300.00 ***
20% ENGINEERING/DESIGN	$1,041,700.00
GRAND TOTAL CONSTRUCTION COST	**$6,250,000.00 ***

*Does not include any private utility relocation or right-of-way acquisition.

*Does not include any construction items beyond the roadway curb.

Source: Trans Associates

TABLE 19
PROGRAM OF TRAFFIC SIGNAL IMPROVEMENTS
OPINION OF PROBABLE COST
Pittsburgh First Master Plan
Traffic and Parking Study
City of Pittsburgh, Allegheny County, Pennsylvania

IMPROVEMENT	OPINION OF PROBABLE COST
PEDESTRIAN UPGRADES AT EXISTING TRAFFIC SIGNALS	$75,000.00
GRANT STREET/FIRST AVE TRAFFIC SIGNAL UPGRADE	$15,000.00
BEDFORD AVENUE/LEMIEUX PLACE/H.O.V. LANE SIGNAL REPLACEMENT	$200,000.00
CENTRE AVENUE/LEMIEUX PLACE SIGNAL REPLACEMENT	$150,000.00
CENTRE AVENUE/PARCEL B SITE DRIVEWAY SIGNAL REPLACEMENT	$175,000.00
CENTRE AVENUE/WASHINGTON PLACE SIGNAL REPLACMEMENT	$175,000.00
FIFTH AVENUE/MAGEE STREET/PARCEL B SITE DRIVEWAY SIGNAL REPLACEMENT	$150,000.00
FIFTH AVENUE/STEVENSON STREET/PARKING GARAGE DRIVEWAY SIGNAL REPLACEMENT	$150,000.00
FIFTH AVENUE/WASHINGTON PLACE/CHATHAM PLACE SIGNAL REPLACEMENT	$150,000.00
FORBES AVENUE/MAGEE STREET SIGNAL REPLACEMENT	$150,000.00
FORBES AVENUE/STEVENSON STREET SIGNAL REPLACEMENT	$150,000.00
FORBES AVENUE/PRIDE STREET SIGNAL REPLACEMENT	$150,000.00
EXTEND FIBER-OPTIC INTERCONNECT ALONG 5TH AVE FROM WASHINGTON PLACE TO PRIDE STREET	$30,000.00
EXTEND FIBER-OPTIC INTERCONNECT ALONG CENTRE AVE FROM WASHINGTON PLACE TO PRIDE STREET	$30,000.00
EXTEND FIBER-OPTIC INTERCONNECT ALONG FORBES AVE FROM CHATHAM PLACE TO PRIDE STREET	$50,000.00
EXTEND FIBER-OPTIC INTERCONNECT ALONG BEDFORD AVE FROM MARIO LEMIEUX PLACE TO CRAWFORD STREET	$20,000.00
6TH AVENUE/CENTRE AVENUE TRAFFIC SIGNAL UPGRADE	$50,000.00
6TH AVENUE/ROSS STREET TRAFFIC SIGNAL UPGRADE	$50,000.00
TOTAL SIGNAL IMPROVEMENTS	**$1,920,000.00**

PLOTTED: 12/12/2005

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LEGEND

- SIGNALIZED STUDY INTERSECTION
- UNSIGNALIZED STUDY INTERSECTION
- PEDESTRIANS
- ATR LOCATIONS

SCALE: N.T.S.

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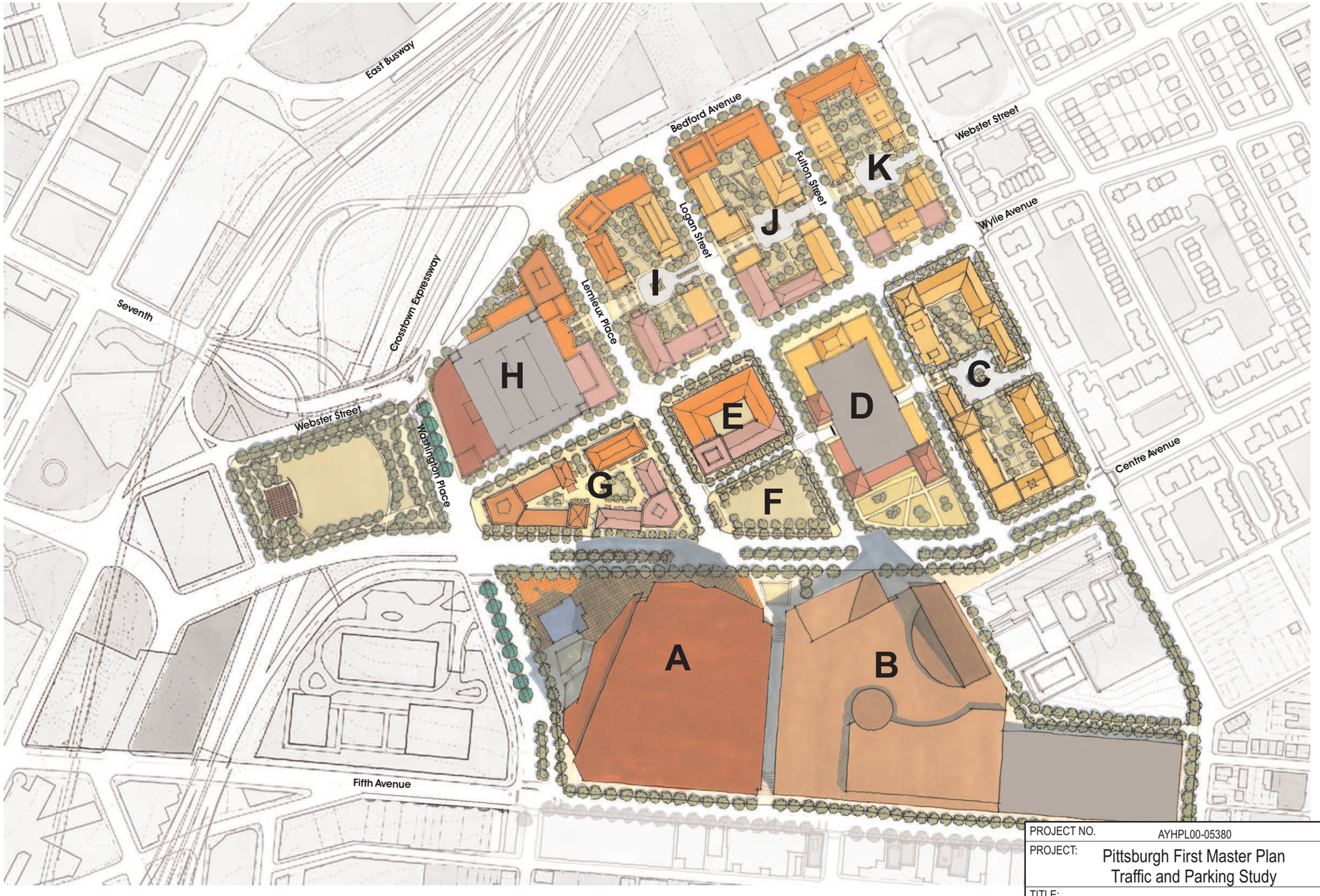
PROJECT NO.	AYHPL00 - 05380
PROJECT:	IOC - PITTSBURGH
TITLE:	STUDY INTERSECTIONS AND ATR LOCATIONS
FIGURE	1
D.B.	
C.B.	
REV.	

Site Plan

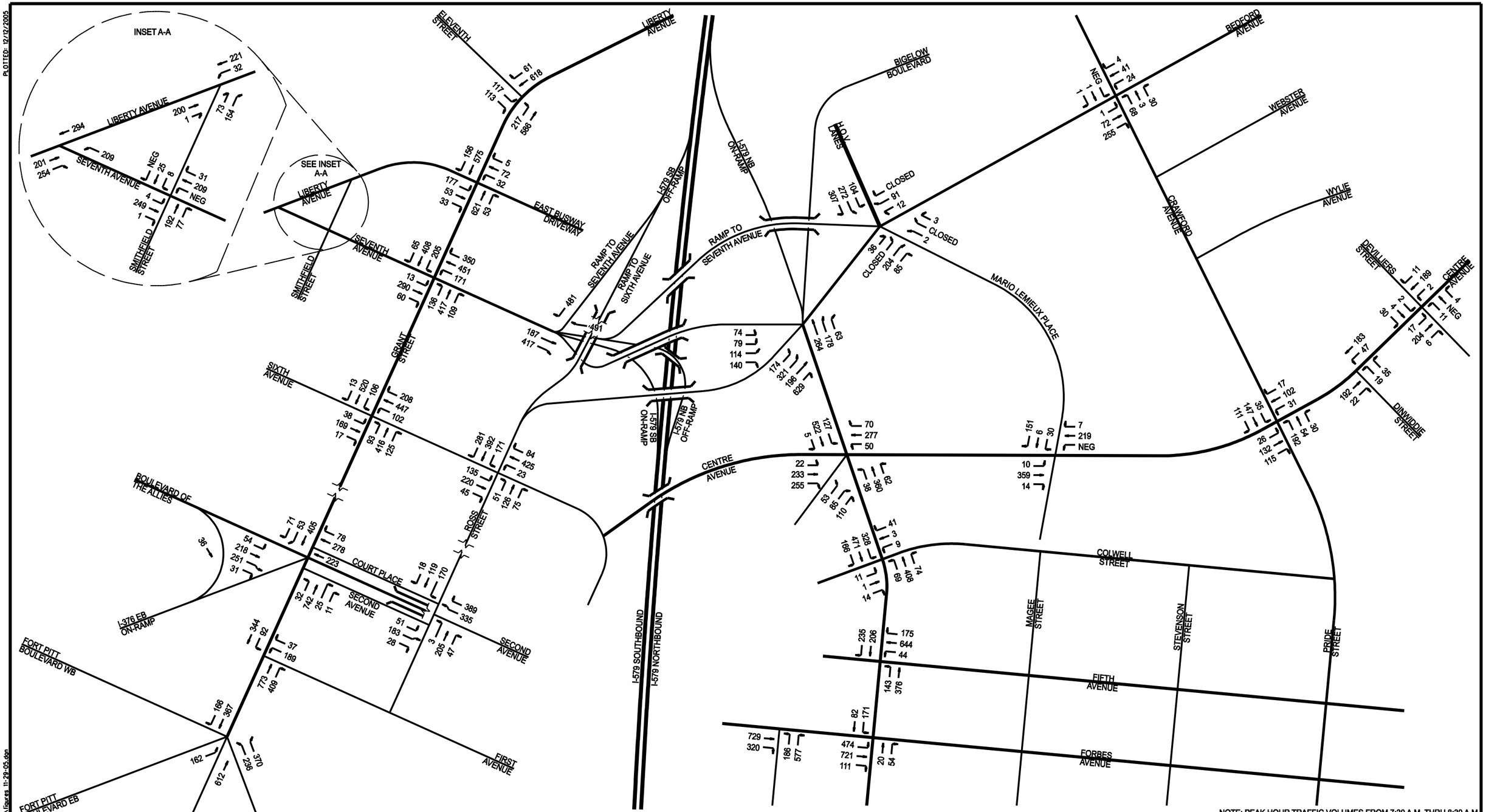


MASTER SITE PLAN

The consultant team working with the advisory committee and the steering committee developed urban design and development principles to guide the plan.

PROJECT NO.	AYHPL00-05380
PROJECT:	Pittsburgh First Master Plan Traffic and Parking Study
TITLE:	Site Plan
FIGURE	2

PLOTTED: 12/12/2005



NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 7:30 A.M. THRU 8:30 A.M.

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TRAFFIC AND PARKING STUDY

TITLE: EXISTING TRAFFIC VOLUMES
WEEKDAY A.M. PEAK HOUR

FIGURE 3

D.B. M.A.P.
C.B. C.D.
REV. ____

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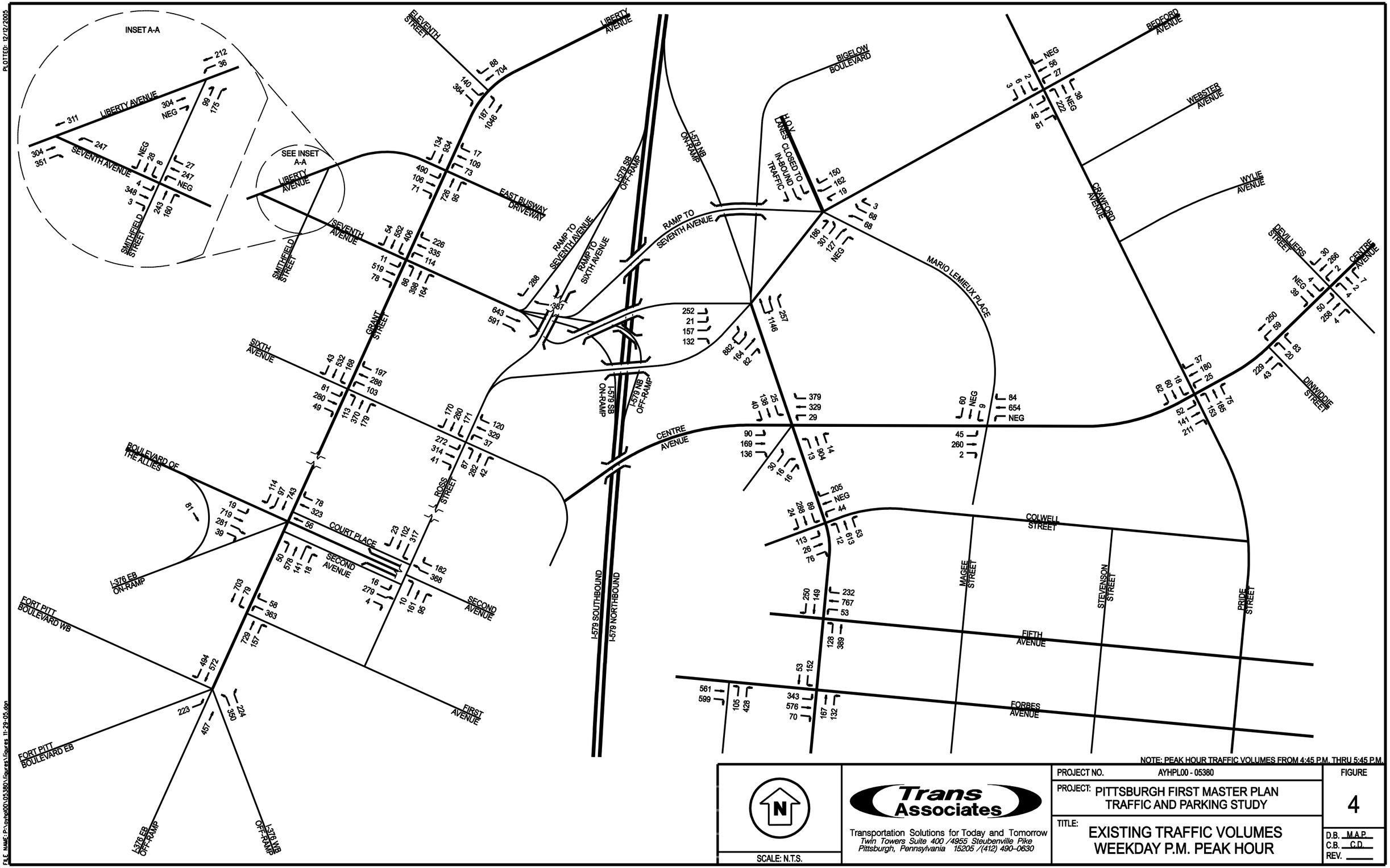

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 4:45 P.M. THRU 5:45 P.M.

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TRAFFIC AND PARKING STUDY

TITLE: EXISTING TRAFFIC VOLUMES
WEEKDAY P.M. PEAK HOUR

FIGURE 4

D.B. M.A.P.
C.B. C.D.
REV.

File NAME: P:\symp\00\05380\figures\figure4 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

SEE INSET A-A

LIBERTY AVENUE

SEVENTH AVENUE

SMITHFIELD STREET

ELEVENTH STREET

FAST BUSWAY DRIVEWAY

GRANT STREET

SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

BIGELOW BOULEVARD

H.O.V. LANES CLOSED TO IN-BOUND TRAFFIC

MARIO LEMIEUX PLACE

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

DINWIDDIE STREET

CENTRE AVENUE

ROSS STREET

COURT PLACE

SECOND AVENUE

BOULEVARD OF THE ALLIES

I-376 EB ON-RAMP

FORT PITT BOULEVARD WB

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

FIRST AVENUE

I-579 SOUTHBOUND

I-579 NORTHBOUND

COLWELL STREET

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIFTH AVENUE

FORBES AVENUE

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 6:00 P.M. THRU 7:00 P.M.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

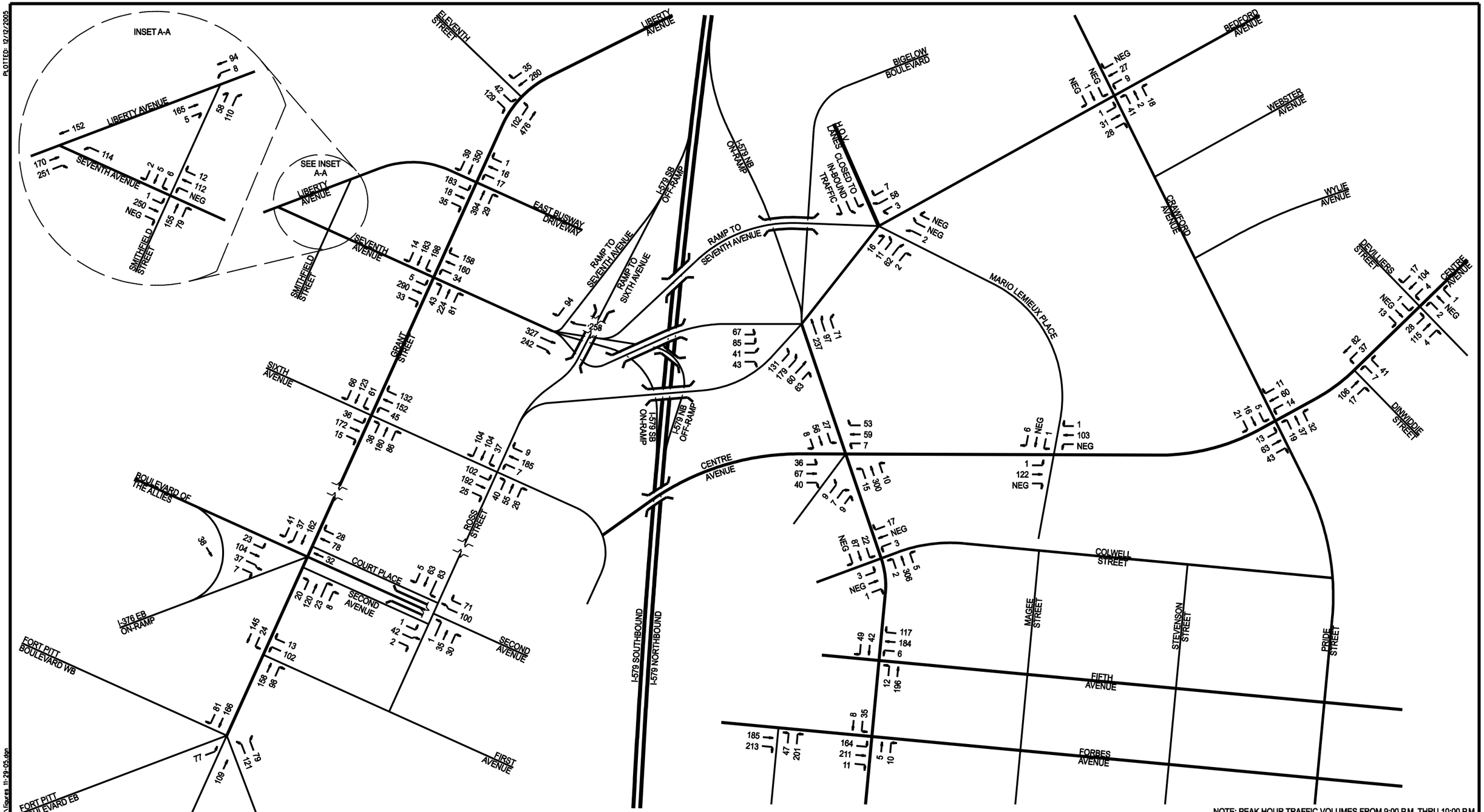
TITLE: EXISTING TRAFFIC VOLUMES
ARENA PEAK HOUR

FIGURE 5

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\symp\00\05380\Figures\Figure5 11-29-05.dgn

PLOTTED: 12/12/2005



NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 9:00 P.M. THRU 10:00 P.M.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: EXISTING TRAFFIC VOLUMES
FRIDAY CASINO PEAK HOUR

FIGURE 6

D.B. M.A.P.
C.B. C.D.
REV.

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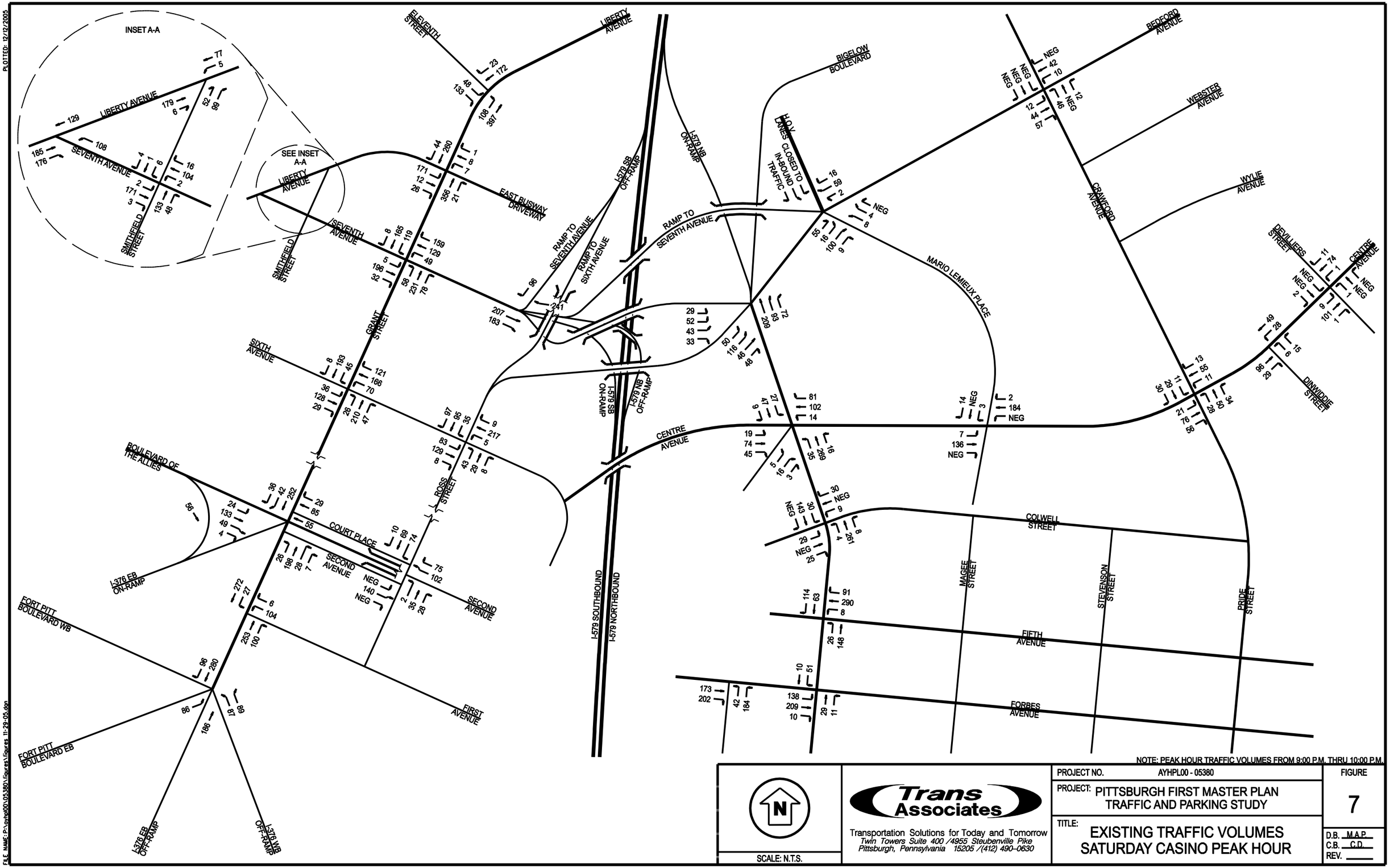
PLOTTED: 12/12/2005



NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 9:00 P.M. THRU 10:00 P.M.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: EXISTING TRAFFIC VOLUMES
SATURDAY CASINO PEAK HOUR

FIGURE 7

D.B. M.A.P.
C.B. C.D.
REV. ____

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INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=D

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=C

ROSS STREET

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=C

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=C

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=D

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

I-579 NB ON-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

RAMP TO SEVENTH AVENUE

BIGELOW BOULEVARD

HOV LANES

OVERALL INT. LOS=C

OVERALL INT. LOS=C

MARIO LEMIEUX PLACE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

OVERALL INT. LOS=B

CENTRE AVENUE

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

DINWIDDIE STREET

OVERALL INT. LOS=B

COLWELL STREET

MAGEE STREET

STEVENSON STREET

PRIDE STREET

OVERALL INT. LOS=C

FIFTH AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=C

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 7:30 A.M. THRU 8:30 A.M.

N

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TRAFFIC AND PARKING STUDY

TITLE: EXISTING LEVELS OF SERVICE
WEEKDAY A.M. PEAK HOUR

FIGURE 8

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\projects\05\05380\figures\figures 11-29-05.dgn

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INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

GRANT STREET

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=F

OVERALL INT. LOS=F

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

BIGELOW BOULEVARD

H.O.V. LANES

OVERALL INT. LOS=C

RAMP TO SEVENTH AVENUE

MARIO LEMIEUX PLACE

OVERALL INT. LOS=B

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=B

DINWIDDIE STREET

OVERALL INT. LOS=C

SIXTH AVENUE

OVERALL INT. LOS=E

OVERALL INT. LOS=C

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

OVERALL INT. LOS=F

OVERALL INT. LOS=E

OVERALL INT. LOS=B

CENTRE AVENUE

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=C

ROSS STREET

OVERALL INT. LOS=D

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=C

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=F

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

COLWELL STREET

OVERALL INT. LOS=D

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIFTH AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=F

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 4:45 P.M. THRU 5:45 P.M.

N

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TRAFFIC AND PARKING STUDY

TITLE: EXISTING LEVELS OF SERVICE
WEEKDAY P.M. PEAK HOUR

FIGURE 9

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\ongoing\00\05380\Figures\Figures 11-29-05.dgn

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INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=C

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=B

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

BIGELOW BOULEVARD

H.O.V. LANES

OVERALL INT. LOS=C

RAMP TO SEVENTH AVENUE

MARIO LEMIEUX PLACE

OVERALL INT. LOS=E

OVERALL INT. LOS=D

OVERALL INT. LOS=B

CENTRE AVENUE

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=C

OVERALL INT. LOS=B

ROSS STREET

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=B

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=E

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

OVERALL INT. LOS=B

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

OVERALL INT. LOS=C

DEVILLIERS STREET

OVERALL INT. LOS=B

OVERALL INT. LOS=B

CENTRE AVENUE

DINWIDDIE STREET

COLWELL STREET

MAGEE STREET

STEVENSON STREET

PRIDE STREET

OVERALL INT. LOS=C

FIFTH AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=C

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 6:00 P.M. THRU 7:00 P.M.

SCALE: N.T.S.

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: EXISTING LEVELS OF SERVICE
ARENA PEAK HOUR

FIGURE 10

D.B. M.A.P.
C.B. C.D.
REV. ____

FILE NAME: P:\ynda\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=C

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=B

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=B

COURT PLACE

ROSS STREET

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=B

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=C

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

I-579 NB ON-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

RAMP TO SEVENTH AVENUE

H.O.V. LANES

BIGELOW BOULEVARD

OVERALL INT. LOS=B

OVERALL INT. LOS=C

MARIO LEMIEUX PLACE

OVERALL INT. LOS=C

OVERALL INT. LOS=A

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

COLWELL STREET

OVERALL INT. LOS=B

OVERALL INT. LOS=B

OVERALL INT. LOS=A

FORBES AVENUE

FIFTH AVENUE

MAGEE STREET

STEVENSON STREET

PRIDE STREET

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

DINWIDDIE STREET

OVERALL INT. LOS=B

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 9:00 P.M. THRU 10:00 P.M.

FILE NAME: P:\projects\00\05380\figures\figures 11-29-05.dgn

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: EXISTING LEVELS OF SERVICE
FRIDAY CASINO PEAK HOUR

FIGURE 11

D.B. M.A.P.
C.B. C.D.
REV. ____

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INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

SEVENTH AVENUE

OVERALL INT. LOS=B

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=B

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=B

COURT PLACE

ROSS STREET

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=B

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=C

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

I-579 NB ON-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

CENTRE AVENUE

BIGELOW BOULEVARD

H.O.V. LANES

OVERALL INT. LOS=B

RAMP TO SEVENTH AVENUE

MARIO LEMIEUX PLACE

OVERALL INT. LOS=C

OVERALL INT. LOS=C

OVERALL INT. LOS=A

OVERALL INT. LOS=B

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

DINWIDDIE STREET

COLWELL STREET

OVERALL INT. LOS=B

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIFTH AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 9:00 P.M. THRU 10:00 P.M.

SCALE: N.T.S.

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: EXISTING LEVELS OF SERVICE
SATURDAY CASINO PEAK HOUR

FIGURE 12

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\ongoing\00\05380\figures\figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

LIBERTY AVENUE

SEVENTH AVENUE

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SEVENTH AVENUE

SMITHFIELD STREET

ELEVENTH STREET

LIBERTY AVENUE

EAST BUSWAY DRIVEWAY

GRANT STREET

SIXTH AVENUE

RAMP TO SEVENTH AVENUE

I-579 SB OFF-RAMP

RAMP TO SIXTH AVENUE

I-579 NB ON-RAMP

RAMP TO SEVENTH AVENUE

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

BIGELOW BOULEVARD

H.O.V. LANES

MARIO LEMIEUX PLACE

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

DINWIDDIE STREET

CENTRE AVENUE

81B/ 81A/ 81C

BOULEVARD OF THE ALLIES

ROSS STREET

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

SECOND AVENUE

FORT PITT BOULEVARD WB

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

COLWELL STREET

MAGEE STREET

67A/ 67C/ 67E/ 67H

STEVENSON STREET

PRIDE STREET

61A/ 61B/ 61C/ 61D/ 61F/ 501/ 71A/ 71C/ 71D/ 500

FIFTH AVENUE

FORBES AVENUE

61A/ 61B/ 61C/ 61D/ 61F/ 501/ 71A/ 71C/ 71D/ 500

LEGEND

- BUS ROUTES
- BUS STOPS
- LIGHT RAIL LINE AND STATION

N

SCALE: N.T.S.

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PROJECT: PITTSBURGH FIRST MASTER PLAN TRAFFIC AND PARKING STUDY

TITLE: BUS ROUTES AND BUS STOPS

FIGURE 13

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\oyhpl00\05380\figures\figure 13 11-29-05.dgn

PLOTTED: 12/12/2005

BEDFORD

WASHINGTON

ARIO LEMIEUX PL

CRAWFORD

ECTORY PL

PROTECTORY

CT

MILL

CENTRE AVE

NTHAM

PL

18

20

1

2

19

FORSIDE PL

VINE

COLWELL

17

21

CONGRESS

ELM

14

8

7

OUR WAY

3

15

16

12

11

10

9

13

4

5

6

COL

WATSON

FIFTH AVE

FORBES AVE

BOYD

BLVD

LEGEND

- STUDY AREA
- PARKING LOTS
- ON-STREET PARKING METERS

N

SCALE: N.T.S.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: ON-SITE PARKING
DISPLACED BY PROJECT

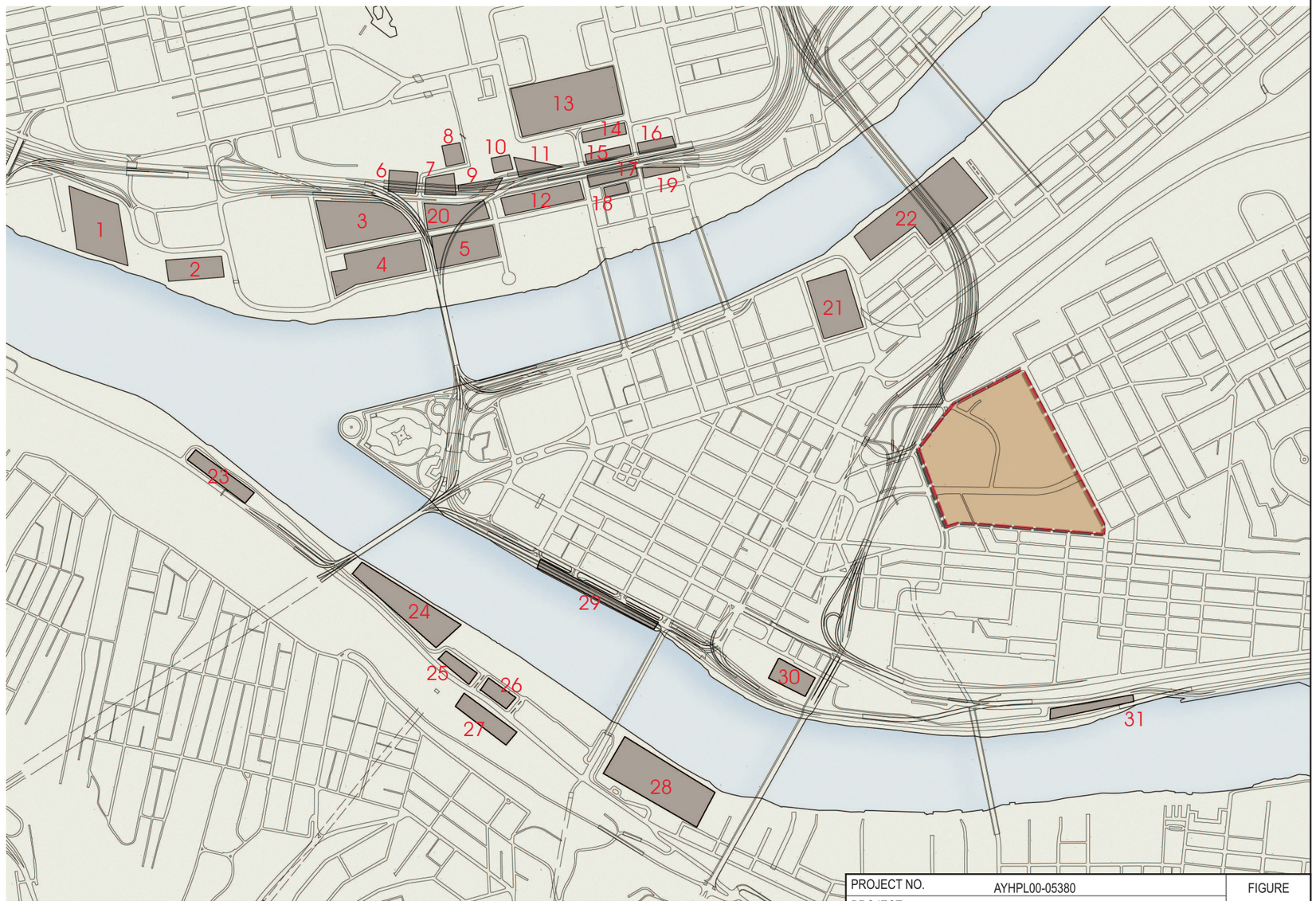
FIGURE 14

D.B. JB
C.B. XX
REV. ____

FILE NAME: P:\ayhpl00\05380\Figures\Garage and Parking lot numbers 12-09-05.dgn

Available Fringe Parking

	Location Name	Available Spaces
1	Gateway Clipper Lot (Approx.)	154
2	Science Center	278
3	Gold Lot 1/1A	567
4	Gold Lot 2	1,046
5	Gold Lot 4	90
6	Red Lot 7A	98
7	Red Lot 7B	26
8	Red Lot Clark	11
9	Red Lot 7C	75
10	Red Lot Clark East	14
11	Red Lot 7D	208
12	Red Lot 6/6A	231
13	Allegheny Center Garage	1,000
14	Canal Street Lot	40
15	Blue Lot 7F	59
16	Blue Lot 7H	74
17	Blue Lot 10/7G	50
18	North Shore Garage	149
19	Blue Lot 7J	31
20	Red Lot 5	144
	Subtotal North Side	**4,345**
21	Convention Center Parking	18?
22	Heinz History Center Lot	548
	Subtotal Strip District	**566**
23	Station Square Lot West	179
24	Amphitheatre Parking	180
25	Station Square Lot	82
26	Station Square Garage	469
27	HOV Lot	24
28	Station Square Lot East	317
	Subtotal South Shore	**1,251**
29	Mon Wharf	254
30	1st Avenue Garage	343
31	Greyhound Park & Ride Lot	2
	Subtotal Second Avenue	**599**
	TOTAL	**6,761**



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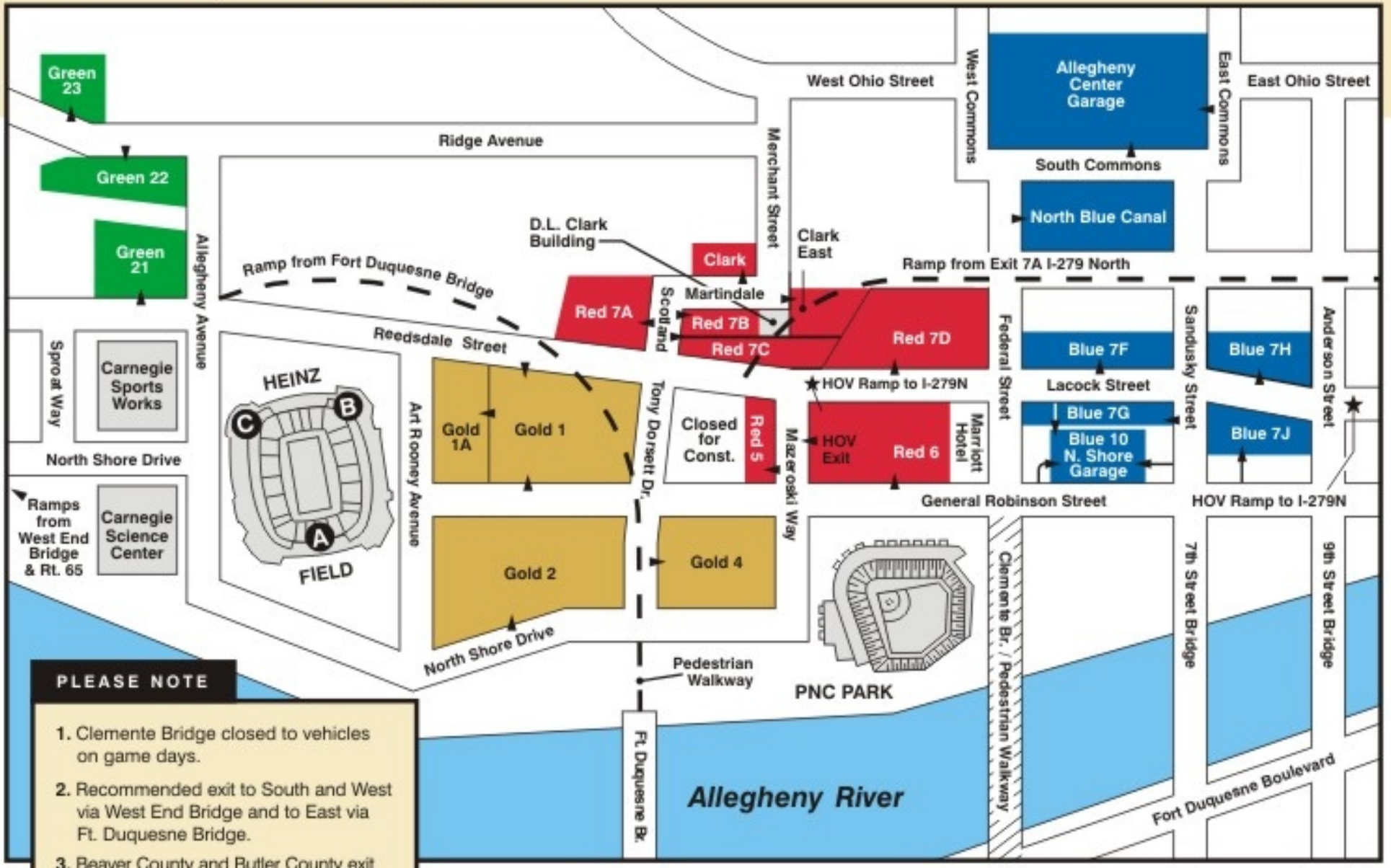
Information is subject to modification

PROJECT NO.	AYHPL00-05380
PROJECT:	Pittsburgh First Master Plan Traffic and Parking Study
TITLE:	Available Fringe Parking
FIGURE	15

Game Day Parking Guide



PLEASE NOTE

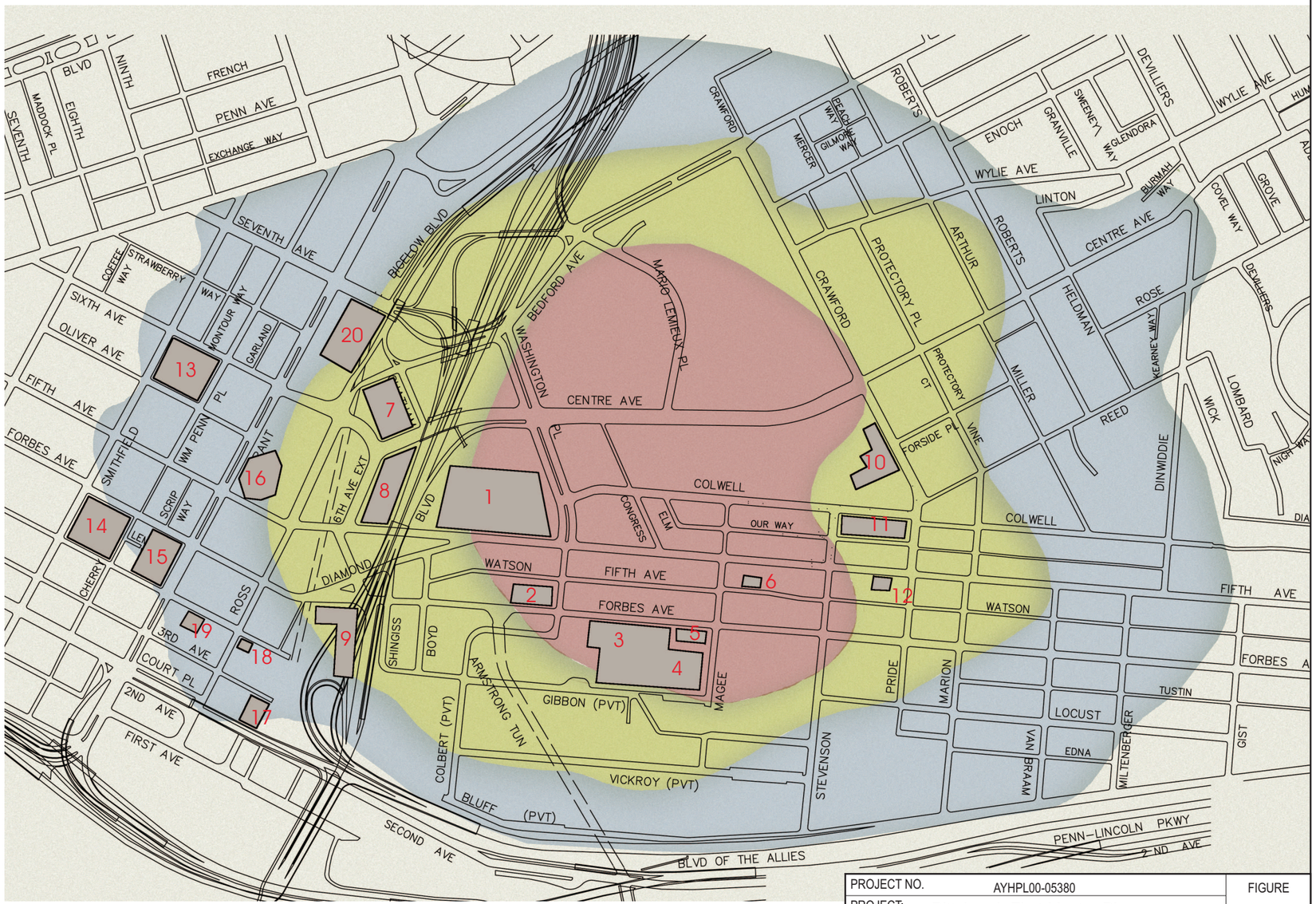
1. Clemente Bridge closed to vehicles on game days.
2. Recommended exit to South and West via West End Bridge and to East via Ft. Duquesne Bridge.
3. Beaver County and Butler County exit via HOV to I-279 N.
4. For current parking rates charged at Pirates, Steelers and Panthers games, visit **www.alcoparking.com**.

FIGURE 15A

SOURCE: www.alcoparking.com

Adjacent Event Parking

	Parking Area	Capacity – Number of Spaces
	0–5 MINUTE WALKING TIME	
1	Chatham/Marriott Garage	2,400
2	Fisher Lots	37
3	Forbes Avenue Garage	708
4	Locust Street Garage	1,681
5	Forbes Avenue Lot (Lot 1)	42
6	1314 Fifth Avenue Lot	80
	Subtotal	**4,948**
	5–10 MINUTE WALKING TIME	
7	Ramada/Athletic Club	170
8	Mellon Client Service Center	630
9	Manor Building	700
10	Center Washington Lot	149
11	Colwell & Stevenson Lot	90
12	1424 Fifth Avenue Lot	40
	Subtotal	**1,779**
	10–15 MINUTE WALKING TIME	
13	Mellon Square Garage	1,100
14	Kaufmann's Garage	834
15	Bakewell Corporation Lot	128
16	One Mellon Center Garage	220
17	Allegheny County Lot	72
18	Fourth & Ross Streets Lot	30
19	Zucia Lot	116+35 valet
20	USX Garage	575
	Subtotal	**3,110**
	TOTAL	**9,837**



0–5 Minute Walking Distance
5–10 Minute Walking Distance
10–15 Minute Walking Distance

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Information is subject to modification

PROJECT NO.	AYHPL00-05380
PROJECT:	Pittsburgh First Master Plan Traffic and Parking Study
TITLE:	Event Parking within Walking Distance
FIGURE	16

Butler County: 1.82%

Armstrong County: 0.58%

Beaver County: 1.36%

External Counties: 1.30%

Allegheny County: 89.73%

Westmoreland County: 2.96%

Washington County: 2.24%

Source: City of Pittsburgh, Department of City Planning

N

SCALE: NTS

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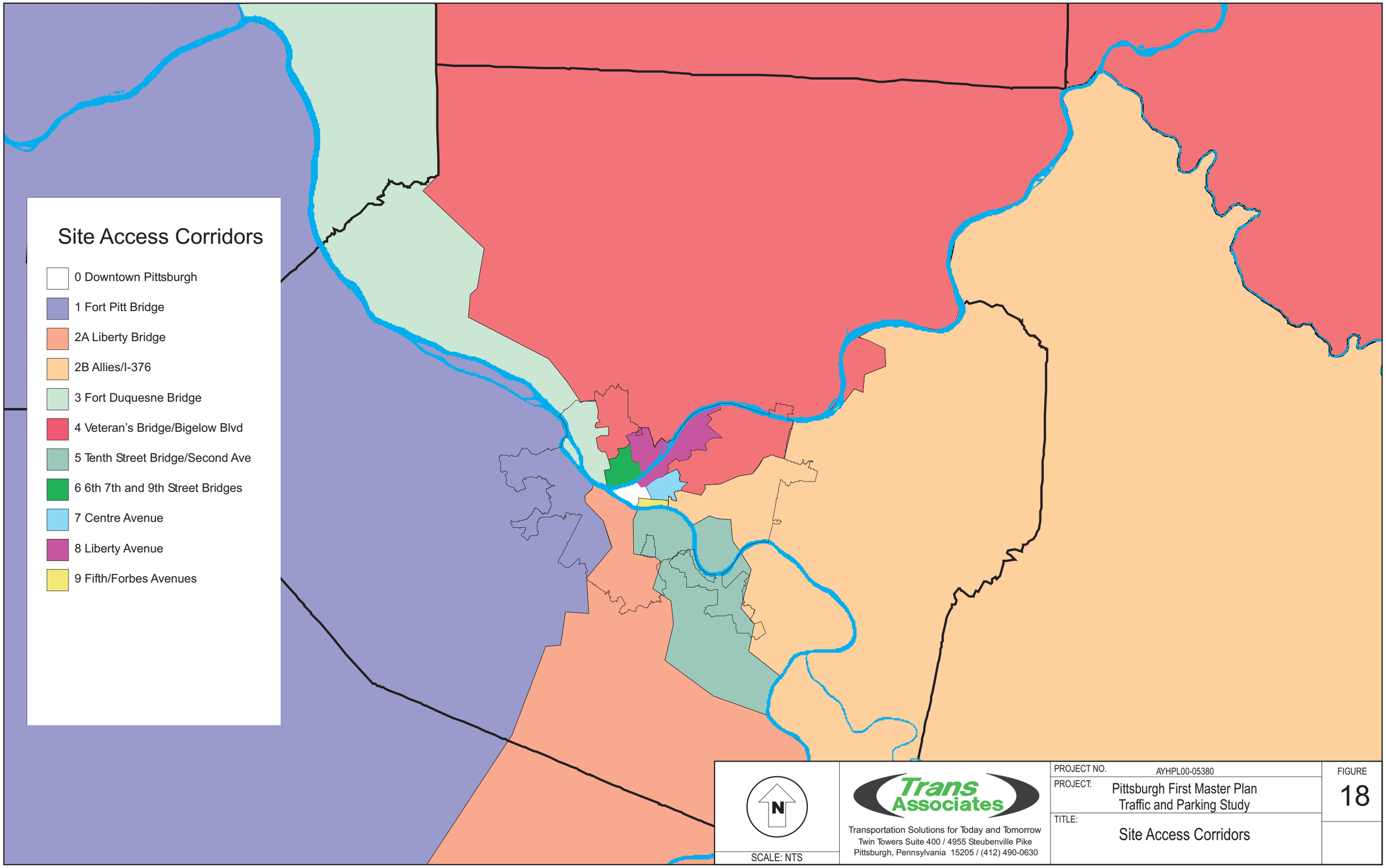
PROJECT NO. AYHPL00-05380

PROJECT: Pittsburgh First Master Plan
Traffic and Parking Study

TITLE: Regional Trip Distribution

FIGURE 17



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SCALE: NTS

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PROJECT NO. AYHPL00-05380

PROJECT: Pittsburgh First Master Plan
Traffic and Parking Study

TITLE: Site Access Corridors

FIGURE 18

PLOTTED: 12/12/2005

INSET A-A

LIBERTY AVENUE
SEVENTH AVENUE
SMITHFIELD STREET
SEE INSET A-A
ELEVENTH STREET
FAST BUSWAY DRIVEWAY
GRANT STREET
SIXTH AVENUE
RAMP TO SEVENTH AVENUE
RAMP TO SIXTH AVENUE
I-579 SB OFF-RAMP
I-579 NB ON-RAMP
I-579 SB ON-RAMP
I-579 NB OFF-RAMP
BIGELOW BOULEVARD
H.O.V. LANES
CLOSED
RAMP TO SEVENTH AVENUE
MARIO LEMIEUX PLACE
CRAWFORD AVENUE
BEDFORD AVENUE
WEBSTER AVENUE
WYLIE AVENUE
DEVILLIERS STREET
CENTRE AVENUE
DINWIDDIE STREET
CENTRE AVENUE
BOULEVARD OF THE ALLIES
ROSS STREET
COURT PLACE
SECOND AVENUE
I-376 EB ON-RAMP
I-376 EB OFF-RAMP
I-376 WB OFF-RAMP
FORT PITT BOULEVARD WB
FORT PITT BOULEVARD EB
FIRST AVENUE
SECOND AVENUE
I-579 SOUTHBOUND
I-579 NORTHBOUND
COLWELL STREET
MAGEE STREET
STEVENSON STREET
PRIDE STREET
FIFTH AVENUE
FORBES AVENUE

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 7:30 A.M. THRU 8:30 A.M.

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE TRAFFIC VOLUMES
WEEKDAY A.M. PEAK HOUR

FIGURE 19

D.B. M.A.P.
C.B. C.D.
REV.

File NAME: P:\symp\00\05380\Figures\figure1 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

SEE INSET A-A

LIBERTY AVENUE

ELEVENTH STREET

SEVENTH AVENUE

SMITHFIELD STREET

GRANT STREET

SIXTH AVENUE

FORBES AVENUE

FIFTH AVENUE

COLWELL STREET

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIRST AVENUE

SECOND AVENUE

COURT PLACE

ROSS STREET

FORT PITT BOULEVARD WB

FORT PITT BOULEVARD EB

BOULEVARD OF THE ALLIES

I-376 EB ON-RAMP

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

I-579 SB OFF-RAMP

I-579 SB ON-RAMP

I-579 NB ON-RAMP

I-579 NB OFF-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

FAST BUSWAY DRIVEWAY

BIGELOW BOULEVARD

H.O.V. LANES CLOSED TO IN-BOUND TRAFFIC

MARIO LEMIEUX PLACE

CENTRE AVENUE

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

DINWIDDIE STREET

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 4:45 P.M. THRU 5:45 P.M.

SCALE: N.T.S.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE TRAFFIC VOLUMES
WEEKDAY P.M. PEAK HOUR

FIGURE 20

D.B. M.A.P.
C.B. C.D.
REV.

File NAME: P:\oyhpl00\05380\figures\figure20_11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

SEE INSET A-A

LIBERTY AVENUE

SEVENTH AVENUE

SMITHFIELD STREET

ELEVENTH STREET

FAST BUSWAY DRIVEWAY

GRANT STREET

SIXTH AVENUE

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

BIGELOW BOULEVARD

H.O.V. LANES CLOSED TO IN-BOUND TRAFFIC

RAMP TO SEVENTH AVENUE

MARIO LEMIEUX PLACE

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

DINWIDDIE STREET

CENTRE AVENUE

BOULEVARD OF THE ALLIES

ROSS STREET

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

FORT PITT BOULEVARD WB

FORT PITT BOULEVARD EB

FIRST AVENUE

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

COLWELL STREET

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIFTH AVENUE

FORBES AVENUE

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 6:00 P.M. THRU 7:00 P.M.

SCALE: N.T.S.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE TRAFFIC VOLUMES
ARENA PEAK HOUR

FIGURE 21

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\symp\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

LIBERTY AVENUE
SEVENTH AVENUE
SMITHFIELD STREET
SEE INSET A-A
ELEVENTH STREET
FAST BUSWAY DRIVEWAY
GRANT STREET
SIXTH AVENUE
RAMP TO SEVENTH AVENUE
RAMP TO SIXTH AVENUE
I-579 SB OFF-RAMP
I-579 NB ON-RAMP
I-579 SB ON-RAMP
I-579 NB OFF-RAMP
I-579 SOUTHBOUND
I-579 NORTHBOUND
BIGELOW BOULEVARD
H.O.V. LANES CLOSED TO IN-BOUND TRAFFIC
MARIO LEMIEUX PLACE
CENTRE AVENUE
BEDFORD AVENUE
WEBSTER AVENUE
CRAWFORD AVENUE
WYLIE AVENUE
DEVILLIERS STREET
DINWIDDIE STREET
BOULEVARD OF THE ALLIES
ROSS STREET
COURT PLACE
SECOND AVENUE
FIRST AVENUE
I-376 EB ON-RAMP
I-376 EB OFF-RAMP
I-376 WB OFF-RAMP
FORT PITT BOULEVARD WB
FORT PITT BOULEVARD EB
COLWELL STREET
MAGEE STREET
STEVENSON STREET
PRIDE STREET
FIFTH AVENUE
FORBES AVENUE

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 9:00 P.M. THRU 10:00 P.M.

SCALE: N.T.S.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

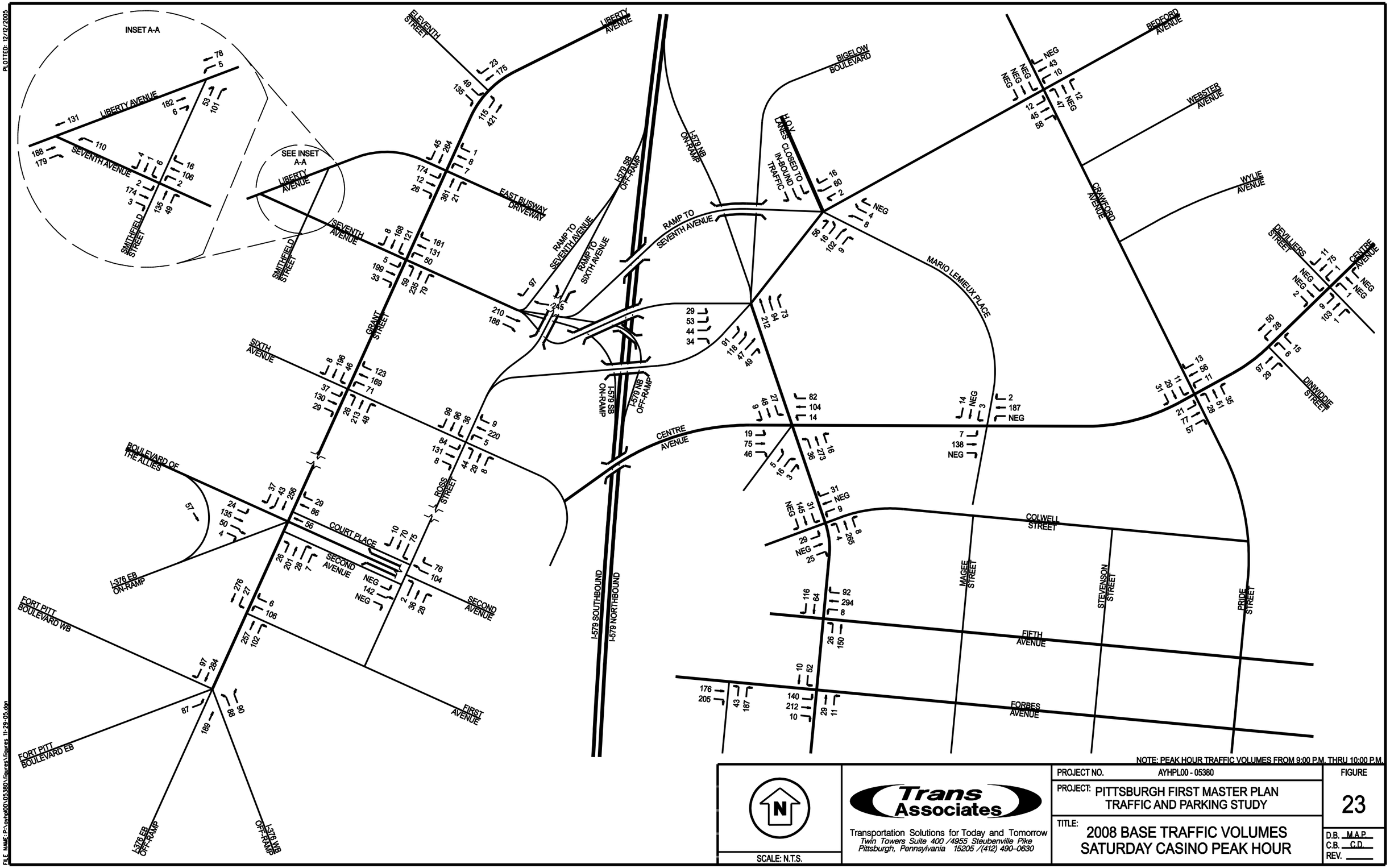
TITLE: 2008 BASE TRAFFIC VOLUMES
FRIDAY CASINO PEAK HOUR

FIGURE 22

D.B. M.A.P.
C.B. C.D.
REV.

File NAME: P:\symp\00\05380\figures\figure22.dgn 11-29-05

PLOTTED: 12/12/2005



NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 9:00 P.M. THRU 10:00 P.M.

SCALE: N.T.S.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE TRAFFIC VOLUMES
SATURDAY CASINO PEAK HOUR

FIGURE 23

D.B. M.A.P.
C.B. C.D.
REV. ____

FILE NAME: P:\symp\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A
OVERALL INT. LOS=B
OVERALL INT. LOS=B
LIBERTY AVENUE
SEVENTH AVENUE
OVERALL INT. LOS=B
SMITHFIELD STREET
SEE INSET A-A
LIBERTY AVENUE
SMITHFIELD STREET
SEVENTH AVENUE
ELEVENTH STREET
LIBERTY AVENUE
OVERALL INT. LOS=D
OVERALL INT. LOS=D
OVERALL INT. LOS=D
FAST BUSWAY DRIVEWAY
GRANT STREET
SIXTH AVENUE
OVERALL INT. LOS=C
OVERALL INT. LOS=C
BOULEVARD OF THE ALLIES
OVERALL INT. LOS=C
OVERALL INT. LOS=C
COURT PLACE
ROSS STREET
SECOND AVENUE
SECOND AVENUE
I-376 EB ON-RAMP
OVERALL INT. LOS=C
FORT PITT BOULEVARD WB
OVERALL INT. LOS=D
FIRST AVENUE
FORT PITT BOULEVARD EB
I-376 EB OFF-RAMP
I-376 WB OFF-RAMP
I-579 SB OFF-RAMP
RAMP TO SEVENTH AVENUE
RAMP TO SIXTH AVENUE
I-579 NB ON-RAMP
I-579 SB ON-RAMP
I-579 NB OFF-RAMP
I-579 SOUTHBOUND
I-579 NORTHBOUND
I-579 NB ON-RAMP
RAMP TO SEVENTH AVENUE
BIGELOW BOULEVARD
HOV LANES
OVERALL INT. LOS=D
OVERALL INT. LOS=D
OVERALL INT. LOS=D
MARIO LEMIEUX PLACE
CENTRE AVENUE
OVERALL INT. LOS=B
OVERALL INT. LOS=C
BEDFORD AVENUE
WEBSTER AVENUE
CRAWFORD AVENUE
WYLIE AVENUE
DEVILLIERS STREET
CENTRE AVENUE
OVERALL INT. LOS=B
OVERALL INT. LOS=B
DINWIDDIE STREET
OVERALL INT. LOS=B
COLWELL STREET
OVERALL INT. LOS=C
MAGEE STREET
STEVENSON STREET
PRIDE STREET
FIFTH AVENUE
OVERALL INT. LOS=C
OVERALL INT. LOS=C
FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 7:30 A.M. THRU 8:30 A.M.

SCALE: N.T.S.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE LEVELS OF SERVICE
WEEKDAY A.M. PEAK HOUR

FIGURE 24

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\projects\00\05380\figures\figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=F

OVERALL INT. LOS=F

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=D

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=F

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

OVERALL INT. LOS=C

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=D

OVERALL INT. LOS=D

ROSS STREET

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=C

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=F

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

BIGELOW BOULEVARD

H.O.V. LANES

OVERALL INT. LOS=C

RAMP TO SEVENTH AVENUE

MARIO LEMIEUX PLACE

OVERALL INT. LOS=F

OVERALL INT. LOS=E

OVERALL INT. LOS=B

CENTRE AVENUE

OVERALL INT. LOS=B

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

OVERALL INT. LOS=C

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=B

DINWIDDIE STREET

COLWELL STREET

OVERALL INT. LOS=D

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIFTH AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=F

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 4:45 P.M. THRU 5:45 P.M.

SCALE: N.T.S.

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE LEVELS OF SERVICE
WEEKDAY P.M. PEAK HOUR

FIGURE 25

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\projects\05380\figures\figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=C

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=B

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

BIGELOW BOULEVARD

H.O.V. LANES

OVERALL INT. LOS=C

RAMP TO SEVENTH AVENUE

MARIO LEMIEUX PLACE

OVERALL INT. LOS=E

OVERALL INT. LOS=E

OVERALL INT. LOS=B

CENTRE AVENUE

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=C

OVERALL INT. LOS=B

COURT PLACE

ROSS STREET

SECOND AVENUE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=B

FORT PITT BOULEVARD WB

OVERALL INT. LOS=E

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

OVERALL INT. LOS=B

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=B

OVERALL INT. LOS=C

DINWIDDIE STREET

COLWELL STREET

OVERALL INT. LOS=C

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIFTH AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=C

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 6:00 P.M. THRU 7:00 P.M.

N

SCALE: N.T.S.

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PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE LEVELS OF SERVICE
ARENA PEAK HOUR

FIGURE 26

D.B. M.A.P.
C.B. C.D.
REV. ____

FILE NAME: P:\projects\00\05380\figures\figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

SEVENTH AVENUE

OVERALL INT. LOS=C

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=B

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=B

COURT PLACE

ROSS STREET

SECOND AVENUE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=B

FORT PITT BOULEVARD WB

OVERALL INT. LOS=C

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

I-579 NB ON-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

BIGELOW BOULEVARD

H.O.V. LANES

OVERALL INT. LOS=B

RAMP TO SEVENTH AVENUE

OVERALL INT. LOS=C

MARIO LEMIEUX PLACE

OVERALL INT. LOS=C

OVERALL INT. LOS=A

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

DINWIDDIE STREET

COLWELL STREET

OVERALL INT. LOS=B

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIFTH AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=A

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 9:00 P.M. THRU 10:00 P.M.

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE LEVELS OF SERVICE
FRIDAY CASINO PEAK HOUR

FIGURE 27

D.B. M.A.P.
C.B. C.D.
REV. ____

FILE NAME: P:\ongoing\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

SEVENTH AVENUE

OVERALL INT. LOS=B

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=C

OVERALL INT. LOS=B

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=B

COURT PLACE

ROSS STREET

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=B

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=C

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

I-579 NB ON-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

BIGELOW BOULEVARD

H.O.V. LANES

OVERALL INT. LOS=C

RAMP TO SEVENTH AVENUE

MARIO LEMIEUX PLACE

OVERALL INT. LOS=C

OVERALL INT. LOS=C

OVERALL INT. LOS=A

CENTRE AVENUE

OVERALL INT. LOS=B

COLWELL STREET

OVERALL INT. LOS=B

MAGEE STREET

STEVENSON STREET

PRIDE STREET

FIFTH AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

FORBES AVENUE

OVERALL INT. LOS=B

BEDFORD AVENUE

WEBSTER AVENUE

CRAWFORD AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

DINWIDDIE STREET

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 9:00 P.M. THRU 10:00 P.M.

N

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE: 2008 BASE LEVELS OF SERVICE
SATURDAY CASINO PEAK HOUR

FIGURE 28

D.B. M.A.P.
C.B. C.D.
REV. ____

FILE NAME: P:\ongoing\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

SEE INSET A-A

SEE INSET B-B

LIBERTY AVENUE

SEVENTH AVENUE

SMITHFIELD STREET

ELEVENTH STREET

GRANT STREET

SIXTH AVENUE

BOULEVARD OF THE ALLIES

FORT PITT BOULEVARD WB

FORT PITT BOULEVARD EB

I-376 EB ON-RAMP

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

COURT PLACE

SECOND AVENUE

FIRST AVENUE

ROSS STREET

FAST BUSWAY DRIVEWAY

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

BIGELOW BOULEVARD

HOV LANES

CLOSED

LEMIEUX PLACE

LOGAN STREET

FULTON STREET

WYLIE AVENUE

CRAWFORD AVENUE

BEDFORD AVENUE

WEBSTER AVENUE

DEVILLIERS STREET

CENTRE AVENUE

DINWIDDIE STREET

CENTRE AVENUE

CASINO ENTRANCE

CASINO EXIT

FIFTH AVENUE

FORBES AVENUE

MAGEE STREET

STEVENSON STREET

PRIDE STREET

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 7:30 A.M. THRU 8:30 A.M.

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE: 2008 COMBINED TRAFFIC VOLUMES
WEEKDAY A.M. PEAK HOUR

FIGURE 29

D.B. M.A.P.
C.B. C.D.
REV.

F:\E_NAME_P:\sync\00\05380\Figures\Figure 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

LIBERTY AVENUE

SEVENTH AVENUE

SMITHFIELD STREET

SEE INSET A-A

ELEVENTH STREET

FAST BUSWAY DRIVEWAY

GRANT STREET

SIXTH AVENUE

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 NB OFF-RAMP

I-579 SB ON-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

BIGELOW BOULEVARD

H.O.V. LANES CLOSED TO IN-BOUND TRAFFIC

RAMP TO SEVENTH AVENUE

LEMIEUX PLACE

LOGAN STREET

FULTON STREET

CRAWFORD AVENUE

BEDFORD AVENUE

WEBSTER AVENUE

WYLIE AVENUE

DEVILLIERS STREET

CENTRE AVENUE

DINWIDDIE STREET

CENTRE AVENUE

SEE INSET B-B

CASINO ENTRANCE

CASINO EXIT

INSET B-B

LOGAN STREET

FULTON STREET

CASINO ENTRANCE

CASINO EXIT

PRIDE STREET

FIFTH AVENUE

FORBES AVENUE

MAGEE STREET

STEVENSON STREET

BOULEVARD OF THE ALLIES

ROSS STREET

COURT PLACE

SECOND AVENUE

FIRST AVENUE

I-376 EB ON-RAMP

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

FORT PITT BOULEVARD WB

FORT PITT BOULEVARD EB

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 4:45 P.M. THRU 5:45 P.M.

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TRAFFIC AND PARKING STUDY

TITLE: 2008 COMBINED TRAFFIC VOLUMES
WEEKDAY P.M. PEAK HOUR

FIGURE 30

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\ayhpl00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

LIBERTY AVENUE
SEVENTH AVENUE
SMITHFIELD STREET
ELEVENTH STREET
SEE INSET A-A
GRANT STREET
SIXTH AVENUE
FAST BUSWAY DRIVEWAY
L-579 SB OFF-RAMP
L-579 NB ON-RAMP
RAMP TO SEVENTH AVENUE
RAMP TO SIXTH AVENUE
BIGELOW BOULEVARD
H.O.V. LANES CLOSED TO IN-BOUND TRAFFIC
CRAWFORD AVENUE
BEDFORD AVENUE
WEBSTER AVENUE
WYLIE AVENUE
FULTON STREET
LOGAN STREET
LEMIEUX PLACE
DEVILLIERS STREET
CENTRE AVENUE
DINWIDDIE STREET
BOULEVARD OF THE ALLIES
COURT PLACE
ROSS STREET
SECOND AVENUE
FIRST AVENUE
FORT PITT BOULEVARD WB
FORT PITT BOULEVARD EB
I-376 EB ON-RAMP
I-376 EB OFF-RAMP
I-376 WB OFF-RAMP
I-579 SOUTHBOUND
I-579 NORTHBOUND
CENTRE AVENUE
SEE INSET B-B
CASINO ENTRANCE
CASINO EXIT
INSET B-B
PRIDE STREET
FIFTH AVENUE
FORBES AVENUE
MAGEE STREET
STEVENSON STREET

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 6:00 P.M. THRU 7:00 P.M.

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE: 2008 COMBINED TRAFFIC VOLUMES
ARENA PEAK HOUR

FIGURE 31

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\symp\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

SEE INSET A-A

SEE INSET B-B

INSET B-B

LIBERTY AVENUE

SEVENTH AVENUE

SMITHFIELD STREET

ELEVENTH STREET

FAST BUSWAY DRIVEWAY

GRANT STREET

SIXTH AVENUE

BOULEVARD OF THE ALLIES

COURT PLACE

SECOND AVENUE

ROSS STREET

FIRST AVENUE

FORT PITT BOULEVARD WB

FORT PITT BOULEVARD EB

I-376 EB ON-RAMP

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 NB OFF-RAMP

I-579 SB ON-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SOUTHBOUND

I-579 NORTHBOUND

BIGELOW BOULEVARD

H.O.V. LANES CLOSED TO IN-BOUND TRAFFIC

LEMIEUX PLACE

LOGAN STREET

FULTON STREET

WYLIE AVENUE

CRAWFORD AVENUE

BEDFORD AVENUE

WEBSTER AVENUE

DEVILLIERS STREET

CENTRE AVENUE

DINWIDDIE STREET

CENTRE AVENUE

CASINO ENTRANCE

CASINO EXIT

FIFTH AVENUE

FORBES AVENUE

MAGEE STREET

STEVENSON STREET

PRIDE STREET

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 9:00 P.M. THRU 10:00 P.M.

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE: 2008 COMBINED TRAFFIC VOLUMES
FRIDAY CASINO PEAK HOUR

FIGURE 32

D.B. M.A.P.
C.B. C.D.
REV.

F:\E_NAME_P:\cyngn\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

SEE INSET A-A

SEE INSET B-B

INSET B-B

NOTE: PEAK HOUR TRAFFIC VOLUMES FROM 9:00 P.M. THRU 10:00 P.M.

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TRAFFIC AND PARKING STUDY

TITLE: 2008 COMBINED TRAFFIC VOLUMES
SATURDAY CASINO PEAK HOUR

FIGURE 33

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\ayhpl00\05380\Figures\figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=E

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=C

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=C

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

BIGELOW BOULEVARD

HOV LANES

OVERALL INT. LOS=D

RAMP TO SEVENTH AVENUE

LEMIEUX PLACE

OVERALL INT. LOS=E

OVERALL INT. LOS=A

OVERALL INT. LOS=E

OVERALL INT. LOS=B

CENTRE AVENUE

CRAWFORD AVENUE

OVERALL INT. LOS=B

BEDFORD AVENUE

WEBSTER AVENUE

FULTON STREET

LOGAN STREET

WYLIE AVENUE

OVERALL INT. LOS=A

WYLIE AVENUE

CRAWFORD AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

OVERALL INT. LOS=C

DINWIDDIE STREET

SEE INSET B-B

CASINO ENTRANCE

CASINO EXIT

INSET B-B

LOGAN STREET

OVERALL INT. LOS=B

FULTON STREET

CASINO ENTRANCE

CASINO EXIT

PRIDE STREET

OVERALL INT. LOS=A

OVERALL INT. LOS=D

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=C

OVERALL INT. LOS=D

ROSS STREET

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=B

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=F

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

OVERALL INT. LOS=C

OVERALL INT. LOS=C

FIFTH AVENUE

MAGEE STREET

STEVENSON STREET

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 7:30 A.M. THRU 8:30 A.M.

F:\E_NAME_P\Layout\00\05380\Figures\Figure 11-29-05.dgn

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE:
2008 COMBINED LEVELS OF SERVICE WEEKDAY A.M. PEAK HOUR

FIGURE
34

D.B. M.A.P.
C.B. C.D.
REV.

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=F

OVERALL INT. LOS=E

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=D

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=F

OVERALL INT. LOS=D

ROSS STREET

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=D

OVERALL INT. LOS=E

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=C

FORT PITT BOULEVARD WB

OVERALL INT. LOS=F

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

SECOND AVENUE

FIRST AVENUE

I-579 SB OFF-RAMP

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

RAMP TO SEVENTH AVENUE

I-579 SOUTHBOUND

I-579 NORTHBOUND

CENTRE AVENUE

BIGELOW BOULEVARD

HOV LANES

OVERALL INT. LOS=D

OVERALL INT. LOS=F

OVERALL INT. LOS=B

OVERALL INT. LOS=F

OVERALL INT. LOS=C

OVERALL INT. LOS=A

OVERALL INT. LOS=E

OVERALL INT. LOS=C

OVERALL INT. LOS=C

LEMIEUX PLACE

LOGAN STREET

FULTON STREET

WYLIE AVENUE

CRAWFORD AVENUE

BEDFORD AVENUE

WEBSTER AVENUE

WYLIE AVENUE

OVERALL INT. LOS=A

OVERALL INT. LOS=B

OVERALL INT. LOS=D

OVERALL INT. LOS=C

OVERALL INT. LOS=B

DEVILLIERS STREET

CENTRE AVENUE

DINWIDDIE STREET

SEE INSET B-B

CASINO ENTRANCE

CASINO EXIT

INSET B-B

LOGAN STREET

FULTON STREET

OVERALL INT. LOS=C

CASINO ENTRANCE

CASINO EXIT

PRIDE STREET

FIFTH AVENUE

FORBES AVENUE

MAGEE STREET

STEVENSON STREET

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 4:45 P.M. THRU 5:45 P.M.

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE:
2008 COMBINED LEVELS OF SERVICE
WEEKDAY P.M. PEAK HOUR

FIGURE
35

D.B. M.A.P.
C.B. C.D.
REV.

F.I.E. NAME: P:\sync\00\05380\Figures\Figure 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=C

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=D

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

OVERALL INT. LOS=C

BIGELOW BOULEVARD

HOV LANES

OVERALL INT. LOS=C

RAMP TO SEVENTH AVENUE

LEMIEUX PLACE

OVERALL INT. LOS=E

OVERALL INT. LOS=A

OVERALL INT. LOS=F

OVERALL INT. LOS=E

CENTRE AVENUE

OVERALL INT. LOS=A

OVERALL INT. LOS=C

OVERALL INT. LOS=F

OVERALL INT. LOS=C

OVERALL INT. LOS=B

COURT PLACE

SECOND AVENUE

ROSS STREET

I-376 EB ON-RAMP

OVERALL INT. LOS=B

FORT PITT BOULEVARD WB

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

SECOND AVENUE

FIRST AVENUE

I-579 SOUTHBOUND

I-579 NORTHBOUND

CRAWFORD AVENUE

BEDFORD AVENUE

OVERALL INT. LOS=B

WEBSTER AVENUE

FULTON STREET

LOGAN STREET

WYLIE AVENUE

OVERALL INT. LOS=A

WYLIE AVENUE

CRAWFORD AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

OVERALL INT. LOS=C

DINWIDDIE STREET

SEE INSET B-B

CASINO ENTRANCE

CASINO EXIT

INSET B-B

LOGAN STREET

OVERALL INT. LOS=C

FULTON STREET

CASINO ENTRANCE

CASINO EXIT

PRIDE STREET

OVERALL INT. LOS=A

OVERALL INT. LOS=C

OVERALL INT. LOS=B

FIFTH AVENUE

MAGEE STREET

STEVENSON STREET

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 6:00 P.M. THRU 7:00 P.M.

SCALE: N.T.S.

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TRAFFIC AND PARKING STUDY

TITLE:
2008 COMBINED LEVELS OF SERVICE
ARENA PEAK HOUR

FIGURE
36

D.B. M.A.P.
C.B. C.D.
REV.

F.L.E. NAME: P:\sync\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=C

GRANT STREET

OVERALL INT. LOS=C

SIXTH AVENUE

OVERALL INT. LOS=B

ROSS STREET

COURT PLACE

SECOND AVENUE

SECOND AVENUE

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=C

OVERALL INT. LOS=B

I-376 EB ON-RAMP

OVERALL INT. LOS=B

FORT PITT BOULEVARD WB

OVERALL INT. LOS=E

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

FIRST AVENUE

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 NB OFF-RAMP

I-579 SB ON-RAMP

RAMP TO SEVENTH AVENUE

OVERALL INT. LOS=B

CENTRE AVENUE

I-579 SOUTHBOUND

I-579 NORTHBOUND

BIGELOW BOULEVARD

HOV LANES

OVERALL INT. LOS=D

LEMIEUX PLACE

OVERALL INT. LOS=C

OVERALL INT. LOS=A

OVERALL INT. LOS=F

OVERALL INT. LOS=D

OVERALL INT. LOS=A

OVERALL INT. LOS=B

FIFTH AVENUE

FORBES AVENUE

MAGEE STREET

STEVENSON STREET

PRIDE STREET

CRAWFORD AVENUE

BEDFORD AVENUE

WEBSTER AVENUE

WYLIE AVENUE

FULTON STREET

LOGAN STREET

WYLIE AVENUE

CRAWFORD AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

OVERALL INT. LOS=B

DINWIDDIE STREET

SEE INSET B-B

CASINO ENTRANCE

CASINO EXIT

INSET B-B

LOGAN STREET

OVERALL INT. LOS=C

FULTON STREET

CASINO ENTRANCE

CASINO EXIT

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 9:00 P.M. THRU 10:00 P.M.

N

SCALE: N.T.S.

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Transportation Solutions for Today and Tomorrow
Twin Towers Suite 400 /4955 Steubenville Pike
Pittsburgh, Pennsylvania 15205 /(412) 490-0630

PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE:
2008 COMBINED LEVELS OF SERVICE
FRIDAY CASINO PEAK HOUR

FIGURE
37

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\sync\00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005

INSET A-A

OVERALL INT. LOS=B

OVERALL INT. LOS=B

LIBERTY AVENUE

SEVENTH AVENUE

OVERALL INT. LOS=B

SMITHFIELD STREET

SEE INSET A-A

LIBERTY AVENUE

SMITHFIELD STREET

SEVENTH AVENUE

ELEVENTH STREET

LIBERTY AVENUE

OVERALL INT. LOS=D

OVERALL INT. LOS=D

FAST BUSWAY DRIVEWAY

OVERALL INT. LOS=B

GRANT STREET

SIXTH AVENUE

OVERALL INT. LOS=C

RAMP TO SEVENTH AVENUE

RAMP TO SIXTH AVENUE

I-579 SB OFF-RAMP

I-579 NB ON-RAMP

I-579 SB ON-RAMP

I-579 NB OFF-RAMP

RAMP TO SEVENTH AVENUE

OVERALL INT. LOS=B

BIGELOW BOULEVARD

HOV LANES

OVERALL INT. LOS=C

OVERALL INT. LOS=B

CRAWFORD AVENUE

BEDFORD AVENUE

WEBSTER AVENUE

WYLIE AVENUE

FULTON STREET

LOGAN STREET

OVERALL INT. LOS=A

LEMIEUX PLACE

OVERALL INT. LOS=D

WYLIE AVENUE

CRAWFORD AVENUE

DEVILLIERS STREET

CENTRE AVENUE

OVERALL INT. LOS=B

OVERALL INT. LOS=B

DINWIDDIE STREET

OVERALL INT. LOS=C

OVERALL INT. LOS=A

OVERALL INT. LOS=D

OVERALL INT. LOS=C

SEE INSET B-B

CENTRE AVENUE

BOULEVARD OF THE ALLIES

OVERALL INT. LOS=B

OVERALL INT. LOS=B

ROSS STREET

COURT PLACE

SECOND AVENUE

I-376 EB ON-RAMP

OVERALL INT. LOS=B

SECOND AVENUE

FORT PITT BOULEVARD WB

OVERALL INT. LOS=E

FIRST AVENUE

FORT PITT BOULEVARD EB

I-376 EB OFF-RAMP

I-376 WB OFF-RAMP

I-579 SOUTHBOUND

I-579 NORTHBOUND

INSET B-B

CASINO ENTRANCE

CASINO EXIT

LOGAN STREET

OVERALL INT. LOS=D

FULTON STREET

CASINO ENTRANCE

CASINO EXIT

PRIDE STREET

OVERALL INT. LOS=A

OVERALL INT. LOS=C

OVERALL INT. LOS=B

OVERALL INT. LOS=B

FIFTH AVENUE

MAGEE STREET

STEVENSON STREET

FORBES AVENUE

NOTE: PEAK HOUR LEVELS OF SERVICE FROM 9:00 P.M. THRU 10:00 P.M.

N

SCALE: N.T.S.

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

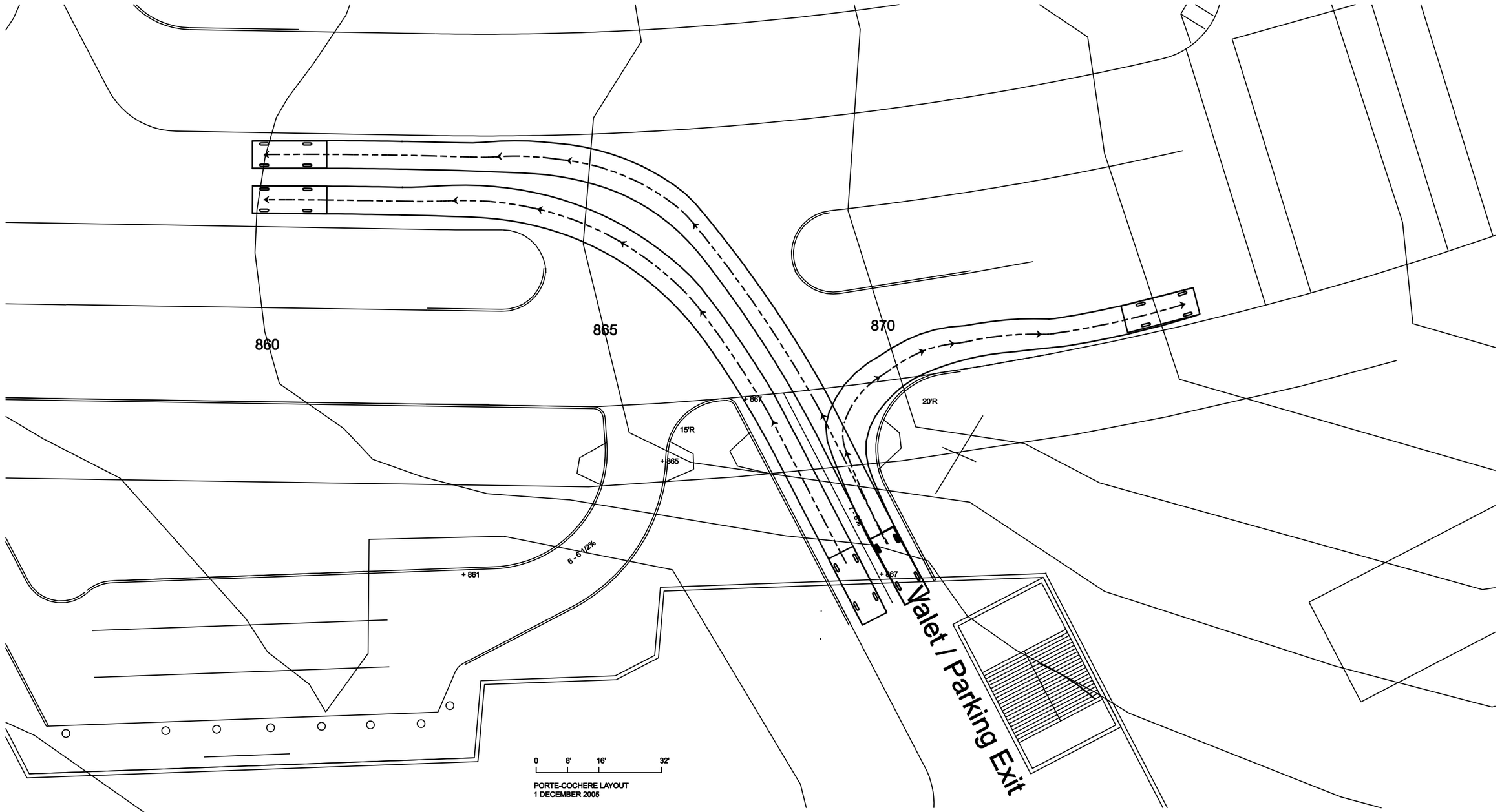
TITLE:
2008 COMBINED LEVELS OF SERVICE
SATURDAY CASINO PEAK HOUR

FIGURE
38

D.B. M.A.P.
C.B. C.D.
REV.

FILE NAME: P:\synpl00\05380\Figures\Figures 11-29-05.dgn

PLOTTED: 12/12/2005



PORTE-COCHERE LAYOUT
1 DECEMBER 2005

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: PORTE-COCHERE
SHUTTLE BUS CIRCULATION CENTRE
AVENUE EXIT VEHICULAR CIRCULATION

FIGURE 39

D.B. A.F.I.
C.B. J.B.
REV. ____

FILE NAME: P:\cyhpl00\05380\Figures\PorteCo 12-7-05.dgn

PLOTTED: 12/12/2005

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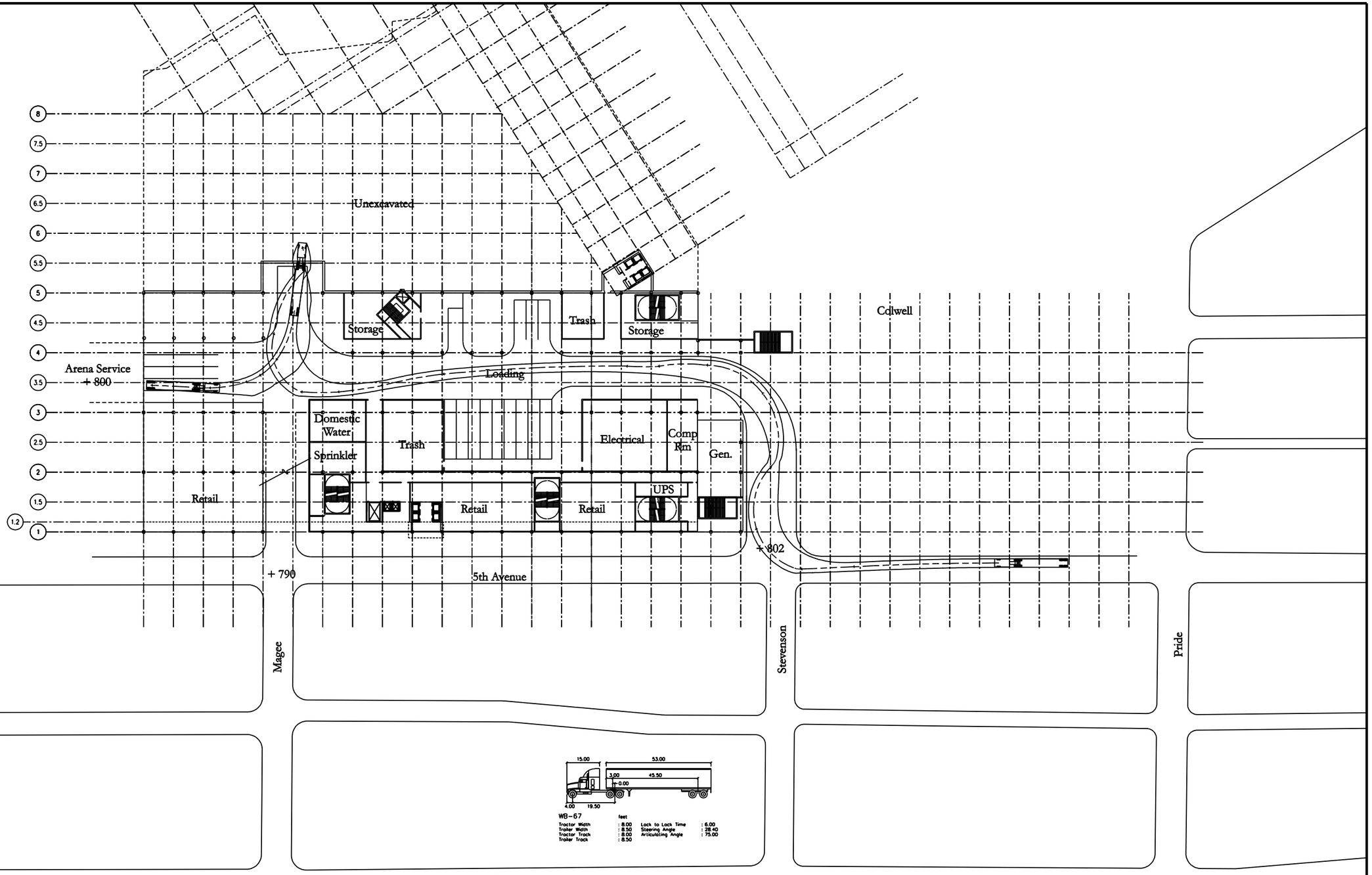

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE:
LOADING DOCK
WB-67 ENTERING VIA FIFTH AVENUE

FIGURE
40

D.B. A.E.I.
C.B. J.B.
REV.

FILE NAME: P:\oryhpl00\05380\figures\Loading 12-7-05.dgn

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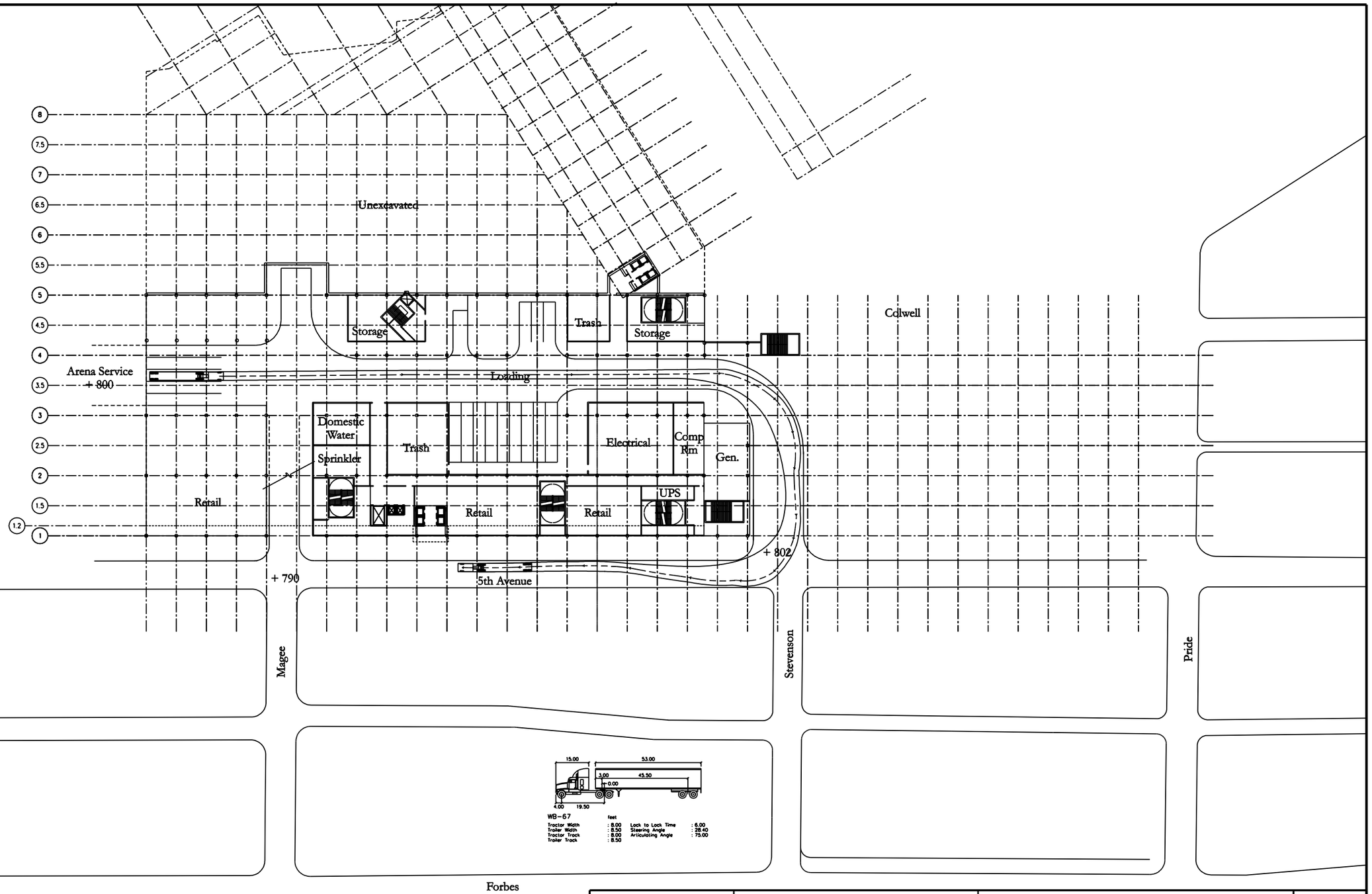
Level 1



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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE:
LOADING DOCK
WB-67 EXITING VIA FIFTH AVENUE

FIGURE
41

D.B. A.F.I.
C.B. J.B.
REV. ____

FILE NAME: P:\ayhpl00\05380\figures\Loading 12-7-05.dgn

PLOTTED: 12/12/2005

860

865

870

+ 867

20'R

15'R

+ 865

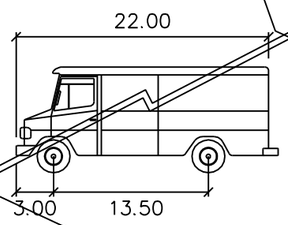
7 - 8%

6 - 8 1/2%

+ 861

+ 867

Valet / Parking Exit



SHUTTLE BUS feet

Width	: 6.83
Track	: 6.83
Lock to Lock Time	: 6.00
Steering Angle	: 25.20

0 8' 16' 32'

PORTE-COCHERE LAYOUT
1 DECEMBER 2005

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE:
PORTE COCHERE
SHUTTLE BUS CIRCULATION

FIGURE
42

D.B. A.E.I.
C.B. J.B.
REV. ____

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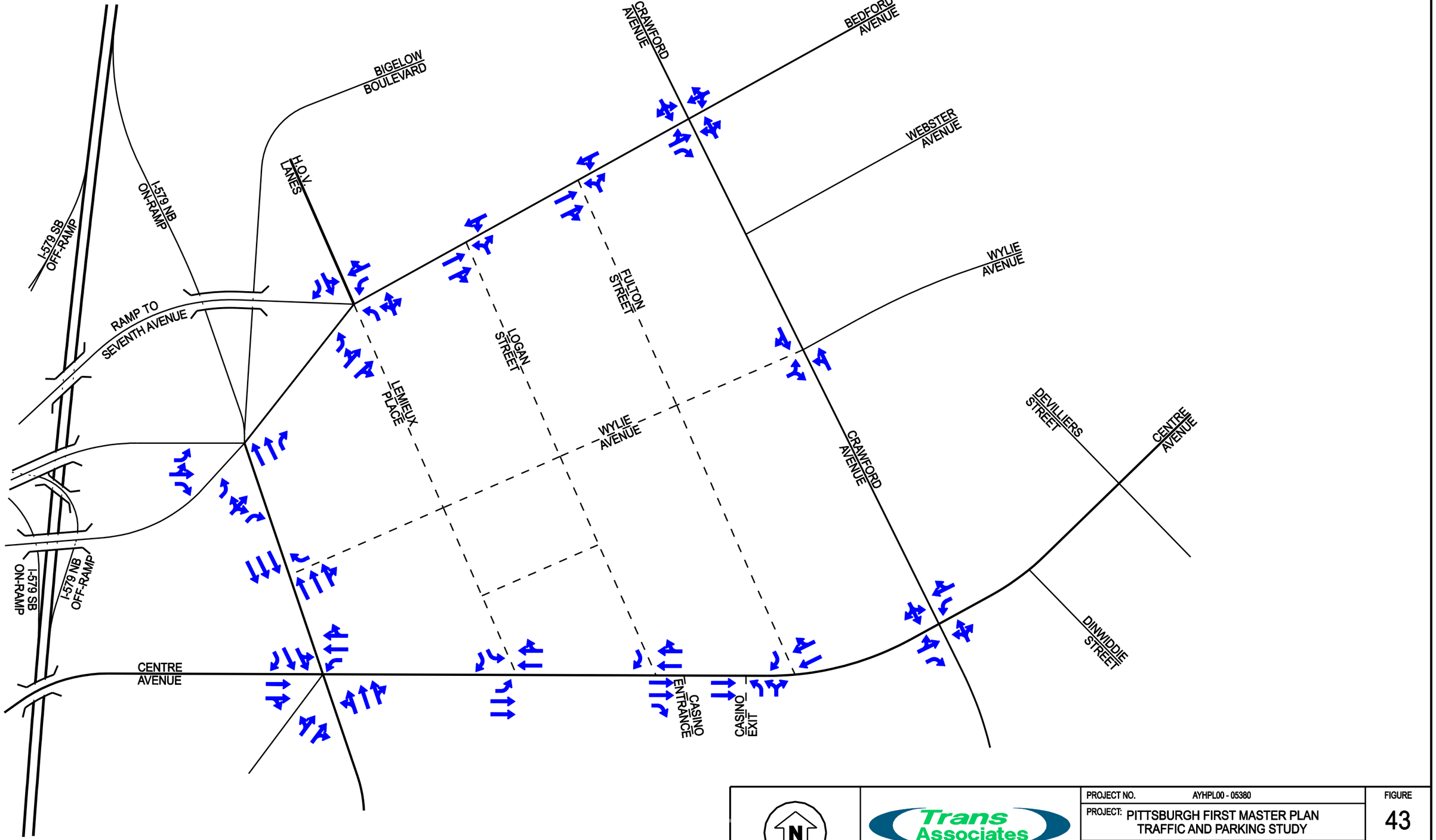
PLOTTED: 12/12/2005



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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE:
RECOMMENDED LANE CONFIGURATIONS

FIGURE
43

D.B. M.A.P.
C.B. C.D.
REV. ____

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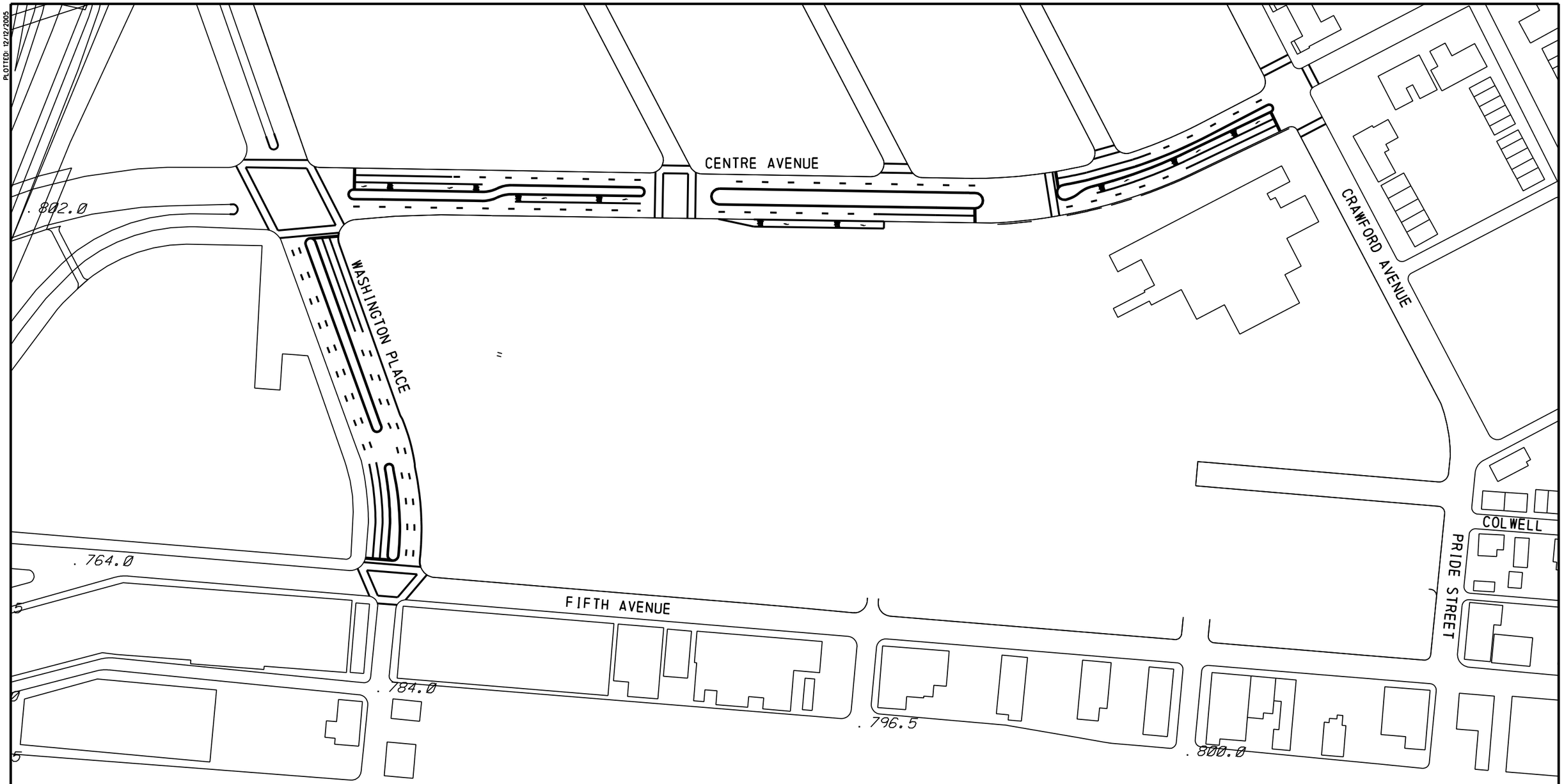

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FILE NAME: P:\oyhpl00\05380\PAVEMENT MARKINGS.dgn

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: CONCEPTUAL ROADWAY IMPROVEMENT PROGRAM

FIGURE 44

D.B. XX
C.B. XX
REV. ____

PLOTTED: 12/12/2005

SITE EXIT

LEGEND

- SIGNAL REPLACEMENT
- SIGNAL INSTALLATION
- EXTEND FIBER-OPTIC INTERCONNECT
- TRAFFIC SIGNAL UPGRADE
- PEDESTRIAN UPGRADE

FILE NAME: P:\oyhpl00\05380\45 S-4 traffic signal improvements.dgn

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PROJECT NO. AYHPL00 - 05380

PROJECT: PITTSBURGH FIRST MASTER PLAN
TRAFFIC AND PARKING STUDY

TITLE: PROGRAM OF TRAFFIC SIGNAL IMPROVEMENTS FOR PITTSBURGH FIRST DEVELOPMENT

FIGURE 45

D.B. A.E.I.
C.B. M.C.S.
REV. ____