ENVIRONMENTAL ASSESSMENT

17TH STREET EXTENSION
[GDOT PROJECT NH-7141-00 (900) P.I. NUMBER 714190]
and
ATLANTIC STEEL REDEVELOPMENT PROJECT
FULTON COUNTY, GEORGIA

LEAD AGENCY:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

COOPERATING AGENCIES:

Federal Highway Administration
Federal Transit Administration
Georgia Department of Transportation
Georgia Regional Transportation Authority
Metropolitan Atlanta Rapid Transit Authority
Atlanta Regional Commission
City of Atlanta

August 2000

ENVIRONMENTAL ASSESSMENT

17TH STREET EXTENSION
[GDOT PROJECT NH-7141-00(900), P.I. NUMBER 714190]
and
ATLANTIC STEEL REDEVELOPMENT PROJECT
FULTON COUNTY, GEORGIA

LEAD AGENCY:

U.S. Environmental Protection Agency

FEDERAL COOPERATING AGENCIES:

U.S. Department of Transportation
Federal Highway Administration

and

U.S. Department of Transportation
Federal Transit Administration

APPROVAL FOR ADVANCEMENT TO AVAILABILITY/PUBLIC HEARING PHASE:

8/2/00 — Michael C. Tayler / for
DATE — JOHN H. HANKINSON, JR.

8-2-00 — for RW Chapel
DATE — LARRY R. DREIHAUP, P.E.

8-2-00 — Jerry Franklin
DATE — JERRY FRANKLIN

APPROVAL OF ENVIRONMENTAL ASSESSMENT

DATE — JOHN H. HANKINSON, JR.
REGIONAL ADMINISTRATOR
ENVIRONMENTAL PROTECTION AGENCY

DATE — LARRY R. DREIHAUP, P.E.
DIVISION ADMINISTRATOR
FEDERAL HIGHWAY ADMINISTRATION

DATE — JERRY FRANKLIN
REGIONAL ADMINISTRATOR
FEDERAL TRANSIT ADMINISTRATION

EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA), in cooperation with the Federal Highway Administration, the Federal Transit Administration, Georgia Department of Transportation (GDOT), Georgia Regional Transportation Authority (GRTA), Metropolitan Atlanta Rapid Transit Authority (MARTA), Atlanta Regional Commission and the City of Atlanta, has prepared an Environmental Assessment (EA) for the 17th Street Extension [GDOT Project NH-7141-00(900)] and Atlantic Steel Redevelopment Project, Fulton County, Georgia. The EA is a summary of the development of concept alternatives, design traffic studies, preliminary engineering analyses, and environmental impact assessments, all of which have been completed with opportunities for public comment and agency coordination.

Jacoby Atlantic Redevelopment, L.L.C. (JAR), a developer in the City of Atlanta, has proposed the remediation and redevelopment of approximately 135 acres near Atlanta's central business district. The property to be redeveloped is the site of the former steel mill owned by Atlantic Steel Industries, Inc. The planned redevelopment is expected to include two million square feet of general office space, one and a half million square feet of retail and entertainment uses, two million square feet of high tech offices, 2,400 residential units, and 1,000 hotel rooms. In addition to the site redevelopment, project plans include construction of a multi-modal (cars, pedestrians, bicycles, transit) bridge and interchange at 17th Street that would cross Interstate 75/85 (I-75/85) and provide access to the site as well as a connection to Midtown Atlanta and the nearby MARTA Arts Center Station. Roadway improvements would include extension of the existing 17th Street from West Peachtree Street (U.S. 19/S.R. 9) in Midtown Atlanta, heading west on new alignment over I-75/85, through the development, and connecting with Northside Drive (U.S. 41/S.R. 3) at Bishop Street. The project also would include operation of a transit shuttle system that would circulate between the MARTA Arts Center Station and the Atlantic Steel site.

The proposed 17th Street Extension and Atlantic Steel Redevelopment Project is composed of several components. Specific alternatives, including the no action alternative, were developed to address the different components and included: 1) alternate site locations for the development in the Atlanta metropolitan region; 2) alternate site designs for the Atlantic Steel Redevelopment; 3) alternate locations for the 17th Street Bridge placement; 4) Interstate access alternates; 5) alternate intersection improvements; 6) high occupancy vehicle access alternates; and 7) alternate connections to transit at the MARTA Arts Center Station. The alternatives were developed based upon an in-depth evaluation of comments received throughout the planning and public involvement process. After analysis of the individual alternative project components, an overall preferred alternative was developed. The preferred alternative is reflective of issues raised by public and agency personnel and has been designed to minimize adverse effects on potentially affected resource categories, as well as health and safety concerns.

The following is a summary of the environmental impacts, both beneficial and adverse, of the 17th Street Extension and Atlantic Steel Redevelopment Project:

Groundwater & Hazardous Materials

- The Georgia Department of Natural Resources (DNR) approved a remediation plan for the Atlantic Steel site that requires a groundwater interception system to collect and contain groundwater on-site. The intercepted groundwater would be monitored and treated, if required, prior to discharge to the City of Atlanta sewer system.
- Future occupants and users of the redeveloped site would not be exposed to existing soils or groundwater on-site. Redevelopment and construction would, by design, provide permanent engineered barriers to exposure in the form of new structures, pavement, concrete and/or soil cover.
- The City of Atlanta and Georgia DNR approved a conservation easement holding JAR responsible for implementing the approved remediation plan. The easement has been prepared in order to assure that the necessary engineering and institutional controls are maintained in-perpetuity.

Water Quality & Wetlands

- The City of Atlanta has confirmed that the existing City of Atlanta sewer lines and treatment facilities have adequate capacity to convey and treat the estimated wastewater flows from the proposed development.
- The proposed project would comply with all federal, state, and local stormwater design standards. The proposed development would be required to provide detention facilities to reduce the peak runoff from the post-development condition to less than or equal to the pre-development conditions. An additional stormwater detention capacity of approximately 20% would be provided by JAR as part of its stormwater design to assist the City in the management of flows to the Tanyard Creek Combined Sewer Overflow Treatment Facility.
- Remediation of the Atlantic Steel site would impact approximately 3.75 acres of wetlands. Mitigation for these impacts would include off-site stream restoration in the City of Atlanta/Fulton County. Off-site roadway improvements would not impact any wetlands.

Protected Species

- The proposed project would not affect any threatened or endangered species.

Transportation Features

- Traffic conditions in the design year for this project (Year 2025) on the majority of surface roadways and intersections in the study area are predicted to stay the same or improve (i.e., traffic volumes are predicted to decrease and traffic is predicted to move more efficiently) with the construction of the 17th Street Bridge and Extension, as compared to not implementing the project. Traffic conditions on some roadways and intersections in the study area are predicted to worsen with implementation of the project, as compared to the no action alternative. These increases in traffic volumes and decreases in levels of service would occur over an approximate twenty-year time frame and should not adversely affect the overall traffic patterns in these areas.

- Several communities in the project area expressed concerns about the cumulative traffic increases resulting not only from this project, but from other new development in the area that is already occurring, or that would occur in the future. Based on these concerns, a Memorandum of Understanding between EPA, GDOT, GRTA, the City of Atlanta, JAR, and the affected communities is being developed that would establish conditions to be met and procedures to be followed for continued study of traffic impacts to neighborhoods associated with new development in Midtown Atlanta.
- The proposed project would provide new bicycle and pedestrian access throughout the study area, including new sidewalks and bicycle lanes throughout the Atlantic Steel site and on the 17th Street Bridge.

Air Quality

- No significant short-term construction air quality impacts or long-term traffic-related air quality impacts are anticipated. Redevelopment of the Atlantic Steel site will include a monitoring program, consisting of site design criteria and transportation performance targets, to ensure that the redevelopment is designed and built with elements that encourage alternatives to single occupancy vehicle trips, and that the project would perform in ways to lower vehicle miles traveled and associated emissions.

Noise

- No significant short-term construction noise and vibration impacts or long-term traffic noise impacts are anticipated.
- To minimize construction noise impacts, construction equipment would be required to have factory-installed mufflers or their equivalents in good working order during the life of the construction contracts. Construction, where feasible, would take place primarily, during the less noise sensitive daylight hours to avoid impacts during the hours associated with sleep

Cultural Resources

- The proposed project would not impact any known prehistoric or historic archeological resources. The roadbed of Hemphill Avenue may contain buried trolley tracks, and the area beneath or alongside Hemphill Avenue may contain original water pipes associated with the National Register-listed Atlanta Waterworks Hemphill Avenue Station. During project construction, it is recommended that a qualified archaeological consultant monitor any construction and subsurface activities that are to occur along Northside Drive in the vicinity of Hemphill Avenue.
- The Atlantic Steel site has been identified as eligible for listing in the National Register of Historic Properties. Cleanup and redevelopment of the site would have an adverse effect on this resource. Mitigation for impacts to this resource includes: 1) development of large-format black-and-white photographs of the site as it existed prior to redevelopment, and 2) development and implementation of a public education and outreach plan. Components of this education and outreach plan will include compilation of an oral history of Atlantic Steel

Industries, Inc., development of educational materials, and the potential creation of a permanent exhibition space celebrating and incorporating the history of Atlantic Steel in the redevelopment plan.

- Off-site roadway improvements would not have any adverse effects on any listed or eligible National Register properties.

Section 4(f)

- No Section 4(f) sites would be impacted by the transportation project.

Land Use/Community Resources

- The redevelopment would cleanup a large industrial site and replace it with a more homogeneous type mixed-land use that would complement established neighborhoods. Additional positive impacts of the redevelopment project include more commercial/retail opportunities to be provided within walking or biking distance to many existing residences.
- The new 17th Street should result in improved response time for emergency vehicles along the project corridor. One additional City of Atlanta police station with emergency medical technicians is anticipated to be added by JAR in conjunction with the project.
- The development of the Atlantic Steel site into mixed-use land proposed under the preferred alternative conforms to the recommendations of the Adopted Atlanta 2001 Comprehensive Development Plan.

Socioeconomics

- The project would have significant positive effects to the local economy, including the creation of new jobs, added population, increases in payroll, and new retail spending.
- Eight residences would be displaced by the Atlantic Steel Redevelopment Project and nineteen commercial businesses would be displaced by the proposed 17th Street Extension and associated off-site roadway improvements.

Environmental Justice

- The proposed project would not have any disproportionate adverse impacts to low-income or minority populations.

Aesthetics

- There are a number of specific zoning conditions for the Atlantic Steel site that address aesthetic, architectural, and landscaping requirements. In general, design and placement of specific buildings would be completed in a manner so as to create transitions from, and compatibility with, surrounding uses.

TABLE OF CONTENTS

TABLE OF CONTENTS
(CONTINUED)

Page

TABLE OF CONTENTS (CONTINUED)

Page

TABLE OF CONTENTS
(CONTINUED)

Page

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

SECTION 1
NEED AND PURPOSE FOR ACTION

1.1 PROJECT OVERVIEW

Jacoby Atlantic Redevelopment, L.L.C. (hereafter referred to as JAR), a developer in Atlanta, Georgia, has proposed remediation and redevelopment of approximately 135 acres near Atlanta's central business district (CBD) in Fulton County (Figure 1-1). The property to be redeveloped is the site of the former steel mill owned by Atlantic Steel Industries, Inc. (Atlantic Steel). In 1998, the property was rezoned by the City of Atlanta from Heavy Industrial to Central Area Commercial/Residential-Conditional (mixed use, with conditions). JAR purchased the property from Atlantic Steel in December 1999. The proposed redevelopment would include a mix of residential and business uses. The ultimate size of a development of this nature will depend, in a large measure, upon future market conditions. Because of the unpredictability of these future market conditions, it is difficult to predict the final design of the planned redevelopment. For the purposes of this Environmental Assessment (EA), however, JAR identified the most likely amount of development that would occur at the site. Based on an analysis of current market conditions and a reasonable projection of future market conditions, the planned redevelopment is expected to include two million square feet of general office space, one and a half million square feet of retail and entertainment uses, two million square feet of high tech offices, 2,400 residential units, and 1,000 hotel rooms.

In addition to the site redevelopment, project plans include construction of a multi-modal (cars, pedestrians, bicycles, transit) bridge and interchange at 17th Street that would cross Interstate 75/85 (I-75/85) and provide access to the site as well as a connection to Midtown Atlanta and the nearby Metropolitan Atlanta Rapid Transit Authority (MARTA) Arts Center Station. Roadway improvements would include extension of the existing 17th Street from West Peachtree Street (U.S. 19/S.R. 9) in Midtown Atlanta, heading west on new alignment over I-75/85, through the development, and connecting with Northside Drive (U.S. 41/S.R. 3) at Bishop Street. Additional improvements include modifications to the existing I-75 and I-85 southbound ramps to 14th Street (U.S. 19/S.R. 9) and Techwood Drive to provide access to the new bridge and the site; construction of a new northbound off-ramp from I-75/85 to 17th Street; reconstruction of the 14th Street Bridge and Williams Street to accommodate the new northbound off-ramp; and intersection improvements along 17th Street, 16th Street, 14th Street, and Northside Drive. The entire project study area is approximately bounded by Peachtree Circle and Peachtree Street to the east, 14th Street to the south, Trabert Avenue and the I-75/85 Brookwood Interchange to the north, and Northside Drive to the west (Figure 1-1). The study area includes the residential neighborhoods of Ansley Park, Home Park, and Loring Heights, as well as the predominantly commercial districts east of I-75/85 and along Northside Drive.

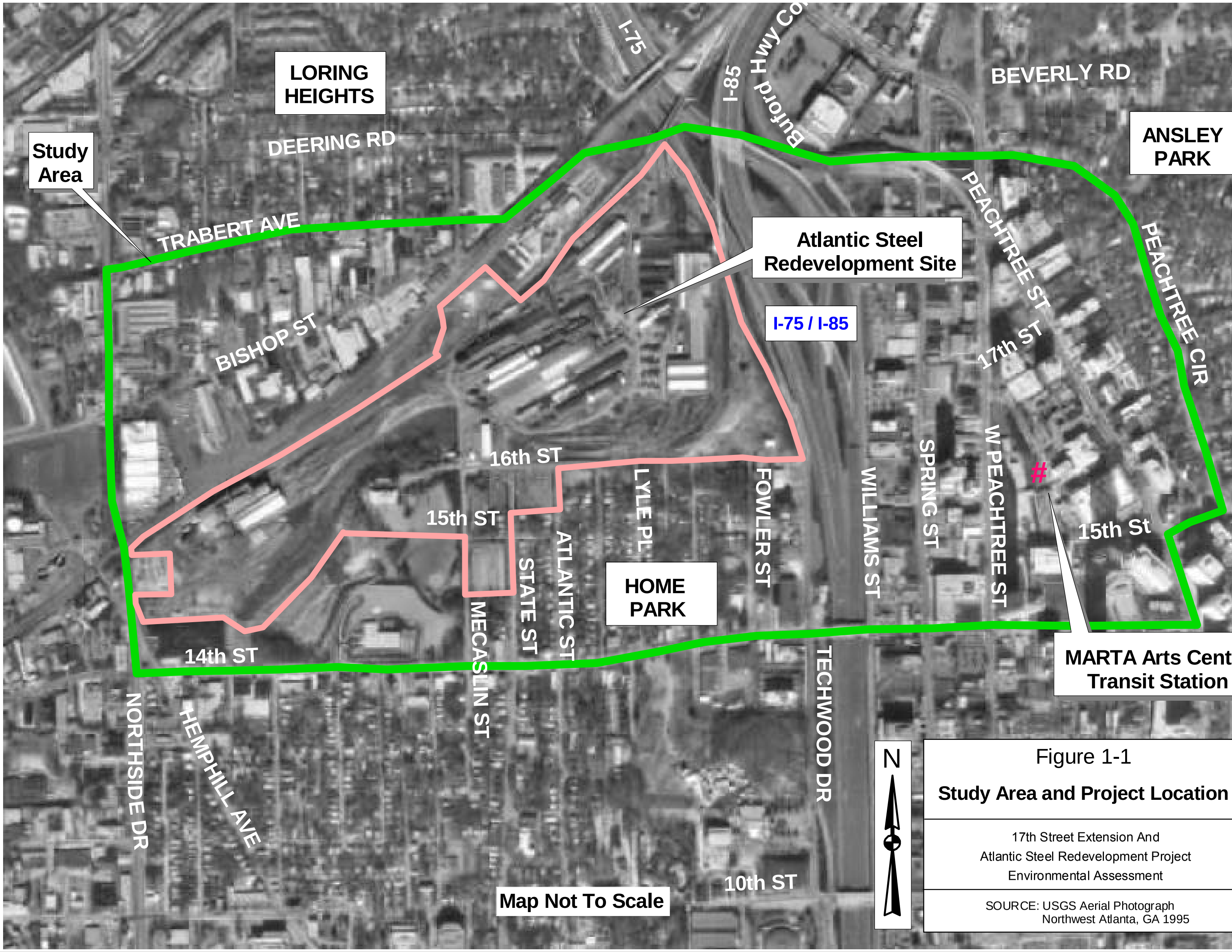


Figure 1-1

Study Area and Project Location

17th Street Extension And
Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: USGS Aerial Photograph
Northwest Atlanta, GA 1995

J:\gis\735996\HomePark\EJ_Catherine\data_check.apr

The project also would include operation of a transit shuttle system that would circulate between the MARTA Arts Center Station and the Atlantic Steel site via exclusive bus lanes that would cross the proposed 17th Street Bridge and continue along 17th Street through the Atlantic Steel development. Transit stops would be located throughout the Atlantic Steel site, providing service within a quarter mile of the highest employment, retail, and residential concentrations. It is anticipated that a dedicated shuttle bus pull-off would be provided on West Peachtree Street, to allow passengers access to the MARTA Arts Center Station.

1.2 AGENCY INVOLVEMENT

The U.S. Environmental Protection Agency (EPA) became involved with this project through its Project XL Program. Project XL, which stands for "eXcellence and Leadership," encourages companies and communities to come forward with new approaches that have the potential to advance environmental goals more effectively and efficiently than have been achieved using traditional regulatory tools. Project XL is required for the Atlantic Steel redevelopment because neither the 17th Street Extension nor the associated I-75/85 access ramps would be able to proceed without the regulatory flexibility being allowed by EPA under its XL Program. The specific regulatory flexibility includes the consideration of the entire redevelopment project, including the 17th Street Extension, as a Transportation Control Measure (TCM) - (see Section 1.3 for more detail).

EPA, in cooperation with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), Georgia Department of Transportation (GDOT), Georgia Regional Transportation Authority (GRTA), MARTA, Atlanta Regional Commission (ARC) and the City of Atlanta has prepared this EA as part of EPA’s regulatory decision on approval of this redevelopment project as a TCM. The EA is also intended to fulfill applicable National Environmental Policy Act of 1969 (NEPA) requirements associated with other federal actions on the Project, specifically in order that the transportation components of the project may become eligible for federal funding. The EA has been prepared in accordance with NEPA, as amended; EPA’s “Policy and Procedures for Voluntary Preparation of NEPA Documents” (63 FR 58045), generally following the procedures set out at 40 Code of Federal Regulations (CFR) Part 6, Subparts A through D; and the U.S. Department of Transportation’s (DOT) “Environmental Impact and Related Procedures” (23 CFR 771). In addition, the EA has been prepared in accordance with provisions of the Council on Environmental Quality (CEQ) regulations, other NEPA requirements and policies, and any applicable state and local laws, regulations, and ordinances.

The EA is a summary and culmination of planning efforts associated with the development of concept alternatives, design traffic study, preliminary engineering analysis, and environmental impacts assessment, all of which have been completed with opportunities for public comment and agency coordination, as part of the NEPA process as well as EPA’s Project XL.

1.3 REGULATORY FRAMEWORK

Thirteen counties surrounding and including the City of Atlanta and Fulton County are currently out of compliance with federal air quality conformity requirements because this region has failed to demonstrate that the transportation activities will not exacerbate existing air quality problems or create new air quality problems in the region. The Clean Air Act (CAA) generally prohibits construction of new capacity-enhancing transportation projects that use federal funds or require federal approval in areas where compliance with conformity requirements has lapsed. However, the CAA includes provisions for the creation of TCMs in non-attainment areas, such as Atlanta. TCMs are defined as "...measures with the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions." TCMs are specific strategies that, by their design, have an air quality benefit. Projects which are approved as TCMs can proceed even during a conformity lapse. Examples of typical TCMs include: projects that improve public transit; employer-based transportation management plans; projects that limit certain metropolitan areas to non-motorized and pedestrian use; programs to provide both travel and storage facilities for bicycles; and others.

The proposed 17th Street Extension and Atlantic Steel Redevelopment Project, including the associated transit connection to the MARTA Arts Center station, are being proposed as a TCM. This TCM is experimental in nature and is unlike any other TCM previously proposed. To be considered as a TCM, the site's location, infrastructure and site design in combination with transit and other transportation elements, (e.g. bicycle lanes) must demonstrate an air quality benefit. This benefit must be an enforceable measure proven through specific activities. The enforceability of the specific measures of the TCM must be demonstrated in order to be included as a revision to the Georgia State Implementation Plan (SIP).

1.4 PROJECT NEED AND PURPOSE

The proposed redevelopment of the Atlantic Steel site would reduce overall emissions associated with new development in the Atlanta region by promoting smart growth principles, including site cleanup and redevelopment, certain on-site design elements, and the development of transportation infrastructure that encourages the use of transit and non-motorized modes of travel. The 17th Street Extension and Bridge are a part of the transportation infrastructure that is necessary to support the redevelopment of the Atlantic Steel site and maintain acceptable overall mobility in Midtown Atlanta.

The project as proposed would accomplish the following:

- Transform a former industrial site, environmentally impacted by its past use, into a mixed use community of retail, residential, and commercial uses that would be more compatible with surrounding land uses;
- Incorporate certain site design elements (e.g., higher residential and employment density, mixed use, on-site transit proximity, and street connectivity) and transportation infrastructure (e.g., sidewalks, bike paths, transit stops) that encourage the use of transit and non-motorized modes of travel that serve to reduce overall emissions;
- Provide a new multi-modal bridge to reconnect the Atlantic Steel site with Midtown Atlanta and serve as a new "Gateway" into the heart of Downtown Atlanta;
- Reduce congestion and improve traffic flow along 10th and 14th Streets by providing a new east-west connection across the Downtown Connector;
- Provide new mass transit linkage to MARTA Arts Center Station to allow for a high transit ridership; and

- Provide internal trip capture on-site that would be unattainable in single land use developments of the size of Atlantic Steel.

The proposed redevelopment plan for the Atlantic Steel site incorporates many elements that could be TCMs by themselves, for example, the linkage to transit, the requirement that employers at the site will join or form a Transportation Management Association (TMA), restricted access of certain areas of the site for pedestrian use, and paths for bicyclists and pedestrians. EPA anticipates that the combination of these elements would have a positive effect on reducing emissions. In addition, the site has a regionally central, urban location. EPA supports the planning approach that it is environmentally beneficial for development to occur where infrastructure and transportation alternatives exist to support it (see Section 2.3). It is anticipated that redeveloping this property would result in a shift of growth to Midtown Atlanta from the outer reaches of the metropolitan area. The combination of the site's location in a central urban area, connection to the existing transit system, design that promotes pedestrian access, participation in a TMA, and provision of bicycle and pedestrian conveniences are expected to work together to reduce growth in auto traffic in the Atlanta region. It is for these reasons that EPA is considering this project as a TCM.

1.5 SUPPORTING TRANSPORTATION FEATURES

As described above, the 17th Street Extension and Bridge are a part of the transportation infrastructure that is necessary to support the redevelopment of the Atlantic Steel site and maintain acceptable overall mobility in Midtown Atlanta. The following sections describe the specific needs for the development of roadway and transit solutions that provide the desired mobility options of a multi-modal transportation system in this area. The roadway improvements described are needed to serve the Atlantic Steel site and to meet travel demands resulting from growth in population and employment in the Midtown area. Improvements, current and future, to the highway and surface street system cannot alone accommodate projected demand, nor will these improvements provide the multi-modal system desired for Midtown Atlanta. However, by integrating transit improvements as part of the redevelopment of the Atlantic Steel site, in combination with the planned highway improvements on I-75/85 and other closely coordinated programs, the capacity and mobility options necessary to accommodate future growth can be achieved more effectively.

1.5.1 Roadway Improvements

When this segment of I-75/85 was first built in the early sixties, full diamond interchanges were provided at both 10th and 14th Streets. Some years later when the freeway was widened, the northbound ramps at 10th Street and the southbound ramps at 14th Street were eliminated, leaving a single split diamond interchange to serve the entire Midtown area. With traffic concentrated at only two exits, the ramps have become very congested, especially at 14th Street with traffic often experiencing long queues and backup onto the interstate highway. East-west traffic flow across the freeway is also severely restricted. Grade separations were provided at 10th and 14th Streets, while 16th Street was severed by the initial freeway project. Traffic using 16th Street was redistributed mainly to 14th Street. The reduced freeway access to and from 10th and 14th Streets has greatly increased the volume and turning demand along each roadway.

There are currently a number of Midtown developments proposed or underway along the east side corridor, as well as the expansion of the Turner Broadcasting Systems (TBS) Techwood campus and the Atlantic Steel redevelopment on the west side. Approximately 7,800,000 square feet of commercial and residential development is proposed or under construction on the east side of I-75/85 and approximately 8,400,000 square feet of new development on the west side, including the Atlantic Steel redevelopment. This new development would increase east-west trip demand over I-75/85. All proposed development in the Midtown area would impact the traffic conditions in the project area and intensify the need for improved access. There is substantial need to restore continuity for east-west traffic across the Interstate and to help alleviate congested conditions at the 10^{th} and 14^{th} Street interchanges and along Techwood Drive and Williams Street.

The proposed 17^{th} Street Extension and Bridge, though certainly needed to ease Midtown traffic congestion, is also proposed to serve the Atlantic Steel redevelopment site. The ability to develop this mixed-use project is enhanced through the connectivity provided by the extension of 17^{th} Street through the site and by providing new access from I-75/85. Accessibility to this site is a critical issue to ensure the proposed mixed development of residential, commercial, and retail land uses on-site.

1.5.2 Transit Improvements

One of the most important aspects of the 17^{th} Street Extension and Bridge is the linkage it would provide for mass transit. An integral part of this project's transit orientation is the linkage from the Atlantic Steel site to nearby mass transit at MARTA's Arts Center Station and the MARTA system. The dedicated transit service throughout the site with a connection across the 17^{th} Street Bridge to the Arts Center Station would allow for a high transit ridership.

In addition to serving the on-site redevelopment, a number of regional mass transit needs are being studied or are proposed for additional study that would be served by this transit link through the Atlantic Steel site. Specifically, the ARC has developed a 2025 Regional Transportation Plan (RTP) that includes a proposed light rail project from Town Center Mall in Cobb County connecting to the Arts Center Station via the Atlantic Steel site and the proposed 17^{th} Street Bridge. In addition, the RTP includes a study to create a transit corridor on the west side of Downtown Atlanta that could connect through the Atlantic Steel site.

Recognizing that the development of both the Town Center to Arts Center project and the west side transit link would take years, the short-term development of a rubber tire transit system proposed for the Atlantic Steel redevelopment project is crucial for establishing a new link to the MARTA Arts Center Station. That system could be modified and adapted as other transit facilities come on line. Regardless, the 17^{th} Street Bridge and the Atlantic Steel site would be designed to accommodate future rail, potentially connecting to the MARTA Arts Center Station.

SECTION 2
ALTERNATIVES CONSIDERED

2.1 OVERVIEW

This section provides an overview of the alternatives development process, describes the features of the site, bridge, and roadway alternatives considered, and identifies alternatives considered, including the no build (hereafter referred to as the no action alternative), but eliminated from further analysis in the EA. As described in Section 1, the proposed 17th Street Extension and Atlantic Steel Redevelopment project is composed of several components which qualify the project for consideration as a TCM and as a viable candidate for Project XL. The specific alternatives developed address the different components and include: 1) alternate site locations for the development in the Atlanta metropolitan region; 2) alternate site designs for the Atlantic Steel Redevelopment; 3) alternate locations for the 17th Street Bridge placement; 4) Interstate access alternates; 5) alternate intersection improvements; 6) high occupancy vehicle (HOV) access alternates; and 7) alternate connections to transit at the MARTA Arts Center Station. Analyzing the above mentioned alternative project components resulted in the identification of an overall preferred (build) alternative (detailed in Section 2.8).

2.2 PUBLIC AND AGENCY INVOLVEMENT

The alternatives were developed based upon an in-depth evaluation of comments received throughout the scoping and planning process. Multiple public meetings and discussion groups have been held and individual contacts and public notices have occurred relative to this project, including activities relating to the rezoning of the property, Project XL, Site Remediation and the development of the EA. Over 300 public and agency meetings were held from 1997 through 2000, involving: City of Atlanta Neighborhood Planning Unit E, Arthritis Foundation, Georgia Institute of Technology, TBS, Coca-Cola, Midtown Alliance, Woodruff Arts Center, Loring Heights residents, Home Park Neighborhood Association, Ansley Park residents, the Georgia Conservancy, Georgians for Transportation Alternatives, Atlanta Bicycle Campaign, PATH Foundation, Pedestrians Educating Drivers on Safety, and individual property owners. In addition to EPA, other agencies involved in coordination, scoping and planning included: ARC, City of Atlanta, GDOT, GRTA, Georgia Department of Natural Resources, FHWA, MARTA, FTA, U.S. Army Corps of Engineers (COE), U.S. Fish and Wildlife Service (USFWS), State Historic Preservation Office (SHPO), Atlanta History Center, Advisory Council for Historic Preservation, and others. Reflective of the comments received, Georgia Governor Roy Barnes established a Green Light Committee chaired by GRTA to help facilitate public and private sector coordination for this project. Members of the Green Light Committee include: EPA, FHWA, FTA, GDOT, EPD, MARTA, City of Atlanta, ARC, and JAR. Each of the alternatives considered reflect potentially significant issues raised by public and agency personnel and were designed to minimize adverse effects on potentially affected resource categories, as well as health and safety concerns.

2.3 SITE LOCATION ALTERNATIVES

As stated previously, in order for a project to be considered a TCM, it must demonstrate an air quality benefit. The entire Atlantic Steel redevelopment would attract new automobile trips and result in new emissions. Therefore, redevelopment of the site when considered in isolation would not qualify as a TCM in the traditional sense. However, the overall assumption of the air quality benefit for this project is that emissions generated from the Atlantic Steel project compare favorably with emissions generated by an equivalent amount of development at other likely sites in the region. Transportation literature suggests travel emissions resulting from a developed Atlantic Steel site might be lower than emissions resulting from another site because:

- the proposed development would include high densities, a mix of uses, and would be located near transit, and would therefore generate fewer total auto trips than comparable amounts of development placed in locations without these features; and
- the proposed development would be regionally central to more activities, so auto trips to and from the site would on average be shorter (Hagler Bailly 1999).

Based on these considerations, EPA evaluated the performance of the Atlantic Steel site relative to three other likely regional growth locations. This analysis is described in the *Transportation and Environmental Analysis of the Atlantic Steel Development Proposal* (Hagler Bailly 1999) and summarized in this section of the EA.

To reduce the potential number of locations where a mixed-use development of the magnitude of the Atlantic Steel Redevelopment could occur, land with the following characteristics was eliminated: surface water, extensive wetlands, protected groundwater, constrained water supply, constrained highway, municipal boundaries, restrictive county land-use plan and committed lands. The land screening process produced eight contiguous parcels that were large enough to absorb the proposed development at suburban densities. Three of the eight sites were then selected based on recommendations from a panel of regional project stakeholders. These three sites are as follows: 1) Cobb/Fulton County; 2) south Henry County; and 3) Perimeter Center/Sandy Springs (Figure 2-1). These three sites, along with the Atlantic Steel Site, represent a range of possible locations and types of development most likely to occur in the Atlanta region.

2.3.1 Cobb/Fulton County Site

The Cobb/Fulton County site is located in South Fulton County, near the intersection of Interstate 20 (I-20) and Interstate 285 (I-285) (Figure 2-1). The existing land-use is primarily light industrial and warehouse facilities. The area is served by bus service connecting to the downtown Five Points MARTA rail station. The area is economically depressed and has been targeted by the "Empowerment Zone" program as an area in need of economic development assistance as well as increased mobility options for low-income residents.

2.3.2 South Henry County Site

The Henry County site is located in the southern portion of the County (Figure 2-1). Henry County maintains a rural character despite significant development pressures. This site is located at the greatest distance from regional activity centers and transit service in comparison with the other

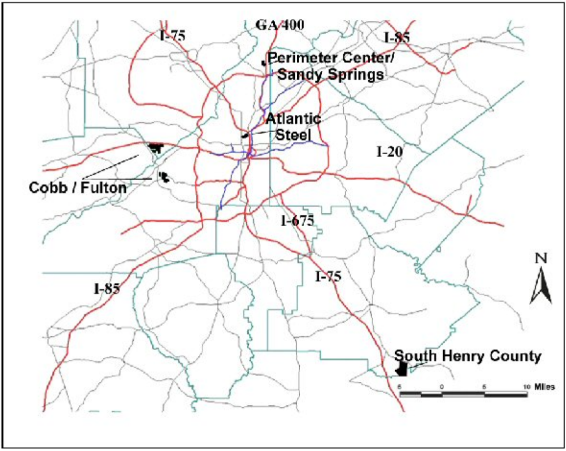


Figure 2-1

Site Location Alternatives

17th Street Extension and Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: Hagler Bailly 1999

J:\735996\fig2-1.cdr

alternatives. Henry County's proximity to Hartsfield International Airport has raised its attractiveness as a site for freight and warehousing companies.

2.3.3 Perimeter Center / Sandy Springs Site

The Perimeter Center / Sandy Springs site is located in north Atlanta in the Perimeter Center area, which is the location of one of metropolitan Atlanta's largest employment concentrations. Despite its suburban location, the area is considered urban by development density standards. The proposed site is scattered on parcels north and south of I-285 (Figure 2-1). All parcels are located within two miles of existing or proposed MARTA heavy rail stations.

2.3.4 Comparison of the Site Alternatives

The primary site comparison included a quantification of the transportation impacts and air quality benefits of locating development on the Atlantic Steel site relative to the other possible locations. Selecting distinct types of locations for analysis - infill in an urban activity center (Atlantic Steel), suburban greenfield with bus transit (Cobb/Fulton County), a relatively isolated greenfield site in a community with rural character (South Henry County), and infill in a suburban activity center (Perimeter Center/Sandy Springs) - provided EPA with a better understanding of the sensitivity of any emissions reductions to these different locations.

A regional transportation and air emissions analysis was performed for each site. Since Project XL identifies flexibility with the CAA requirements which are triggered by Atlanta's violation of the ground level ozone standard, emissions of the ozone precursors volatile organic compounds (VOCs) and nitrogen oxides (NO_x) were modeled. The analysis of regional VOC and NO_x emissions was conducted using TRANPLAN, Atlanta's regional travel model, and MOBILE 5a, EPA's emissions model. The results of the regional location analysis are depicted in Figure 2-2 and summarized in Table 2-1.

Analysis of regional transportation and air emissions produced by the proposed Atlantic Steel development showed that the project would create less travel and fewer emissions than developing available alternative sites (Hagler Bailly 1999). For this reason, it was agreed that redevelopment of the Atlantic Steel site could be pursued further as a TCM.

2.4 SITE DESIGN ALTERNATIVES

Location affects environmental performance, but site design is also another important factor that could affect travel behavior. Consequently, this EA also considers alternative site designs. EPA was most interested in design differences affecting travel choices and subsequent auto emissions. Many urban land use and transportation planning issues that affect transportation behavior and subsequently environmental performance, are captured by what planners refer to as the "three D's": diversity, design, and density (Hagler Bailly 1999). Diversity means mixing land uses. Mixing uses has been observed to reduce auto trips by allowing trips to be made, chained, or combined without the use of an automobile. The different uses, however, must be within easy walking distances from each other. Design includes a range of choices that affect the physical and aesthetic experience of being in an area. Specific design examples include distance most people are located from a transit stop and store/office-front continuity along a sidewalk. Density refers to the concentration of housing, shops, and offices. The arrangement of density on the site is

Figure 2-2. Vehicle Miles Traveled (VMT) Associated with Each Site

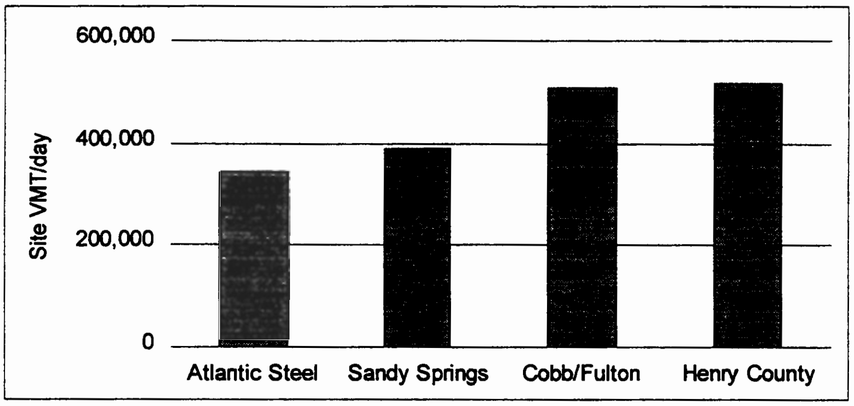


Table 2-1. Travel and Emissions Modeling of Site Location Alternatives

Regional Vehicle Miles Traveled			
Site	Regional Total (VMT*/day)	Associated with site (VMT/day)	Site VMT difference from Atlantic Steel
Atlantic Steel	139,172,200	340,300	
Perimeter Center / Sandy Springs	139,221,572	389,672	14.5%
Cobb/Fulton County	139,339,398	507,498	49.1%
South Henry County	139,350,097	518,197	52.3%

Regional Emissions						
	NOx			VOC		
Site	Regional total (tons/day)	Associated with site (tons/day)	Site NOx difference from Atlantic Steel	Regional total (tons/day)	Associated with site (tons/day)	Site VOC difference from Atlantic Steel
Atlantic Steel	191.95	0.400		153.230	-0.390	
Sandy Springs	192.10	0.548	37.00%	154.374	0.754	293.33%
Cobb/Fulton	192.24	0.690	72.50%	154.312	0.692	277.44%
Henry County	192.27	0.724	81.00%	154.464	0.844	316.41%

Source: Hagler Bailly 1999

* VMT = Vehicle Miles Traveled

important. For example, concentrating density around transit stops can increase ridership. Improvements in each category were considered to reduce auto travel and emissions.

2.4.1 Three Design Alternatives Considered

Three site designs were developed by the project team for purposes of comparison (Figure 2-3). The original Atlantic Steel site design developed by JAR was the first site design considered. It was determined that the original design could be improved to reduce driving and levels of emissions. EPA hired planners Duany Plater-Zyberk (DPZ) to help develop a site design that took advantage of those opportunities. A site design that accomplished these goals while maintaining the project's marketability was then created by DPZ. In addition, a design charette was held December 7-9, 1998, in which government agencies, prospective developers, the community (including representatives of the adjacent Home Park neighborhood), and other Atlanta stakeholders, voiced concerns about the design of the project. The DPZ site design reflects much of this input. JAR incorporated many of the DPZ design elements and submitted a revised site design to EPA in May 1999.

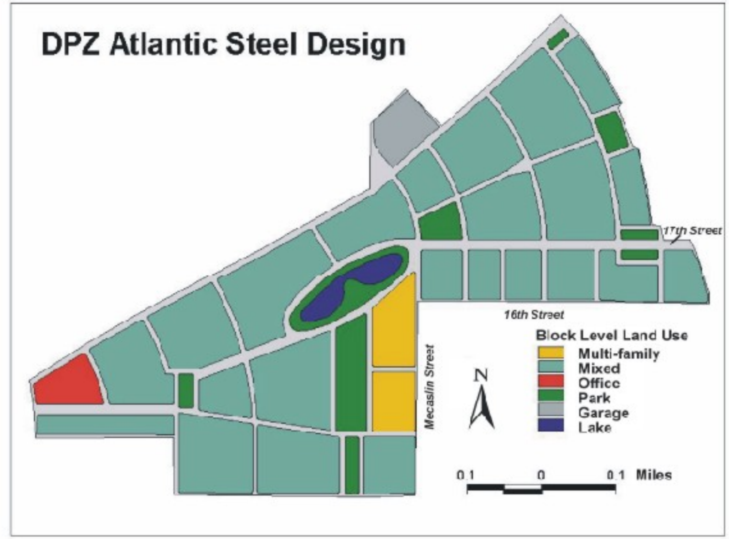
2.4.2 Evaluation of Site Designs

Each of the three Atlantic Steel site designs differs in important ways that affect travel and therefore emissions. Compared to the original design, the DPZ design and redesign excel in three areas. First, they improve the mix of uses on-site by integrating them more closely. Second, they provide better connectivity within the development as well as to the neighborhoods (primarily Home Park) surrounding the development, an important consideration expressed by Home Park. Third, the pedestrian environment was improved through street design and improved connectivity.

As with the regional location analysis, a quantitative analysis of the differences between all three site designs in terms of travel and emissions was conducted (Hagler Bailly 1999). The analysis required a two-step process. First, site design alternatives were analyzed using INDEX®, a geographical information system (GIS)-based tool that measures land use and site design characteristics. INDEX® measured spatial characteristics such as residential or employment density. These measures allowed a quantitative comparison of design differences. Measures of site design included, for example, the number of residential dwellings within 1/4 mile of a transit stop.

The second step involved developing predictions of travel choices for each of the three Atlantic Steel site designs. As a starting point, ARC's travel model, TRANPLAN, was used to develop baseline travel patterns to and from the Atlantic Steel site, as if it would be developed like a typical Atlanta area project. Next, using data on travelers' responses to site design, as derived from INDEX®, adjustments were made to TRANPLAN to reflect the site design variables which include the dynamic interaction of employment, commercial use and housing within concentrated mixed-use developments, as well as the effects of urban design characteristics and the degree of pedestrian friendliness.

Together, these design variables affected both the selection of travel mode and total vehicle miles traveled (VMT). The results of the comparison of the three site designs are reported in Table 2-2.



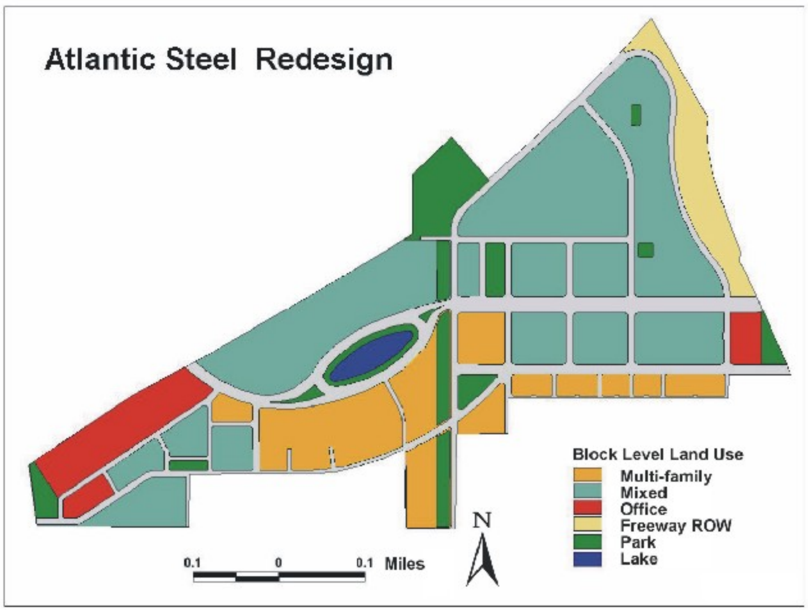


Figure 2-3

Comparison of Site Design Alternatives

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: Hagler Bailly 1999

J:\735996\fig2-3a.cdr

Table 2-2. Travel and Emissions Modeling of Atlantic Steel Site Designs

Regional Vehicle Miles Traveled			
Site, Design	**Regional Total (VMT*/day)**	**Associated with site (VMT/day)**	**Site VMT difference from generic development**
Atlantic Steel, Not Design-adjusted	139,172,200	340,300	
Original Atlantic Steel Design	139,159,289	327,389	-3.8%
DPZ Atlantic Steel Design	139,152,340	320,440	-5.8%
Atlantic Steel Redesign	139,154,690	322,790	-5.1%

Regional Emissions						
	NOx			**VOC**		
Site	**Regional total (tons/day)**	**Associated with site (tons/day)**	**Site NOx from generic development**	**Regional total (tons/day)**	**Associated with site (tons/day)**	**Site VOC from generic development**
Atlantic Steel, Not Design-adjusted	191.95	0.400		153.230	-0.390	
Original Atlantic Steel Design	191.94	0.386	-3.5%	153.216	-0.404	-3.6%
DPZ Atlantic Steel Design	191.93	0.376	-6.0%	153.206	-0.414	-6.2%
Atlantic Steel Redesign	191.93	0.381	-4.7%	153.208	-0.412	-5.8%

Source: Hagler Bailly 1999

* VMT = Vehicle Miles Traveled

The original Atlantic Steel site design was improved by incorporating key site design elements, such as residential and employment density, mixed use, on-site transit proximity, and street connectivity, that are expected to work together to reduce driving and level of emissions associated with the site. For this reason, it was agreed that redevelopment of the Atlantic Steel site could be pursued further as a TCM. The proposed JAR Atlantic Steel redesign is depicted in greater detail in Figure 2-4. This design constitutes the redevelopment component of the preferred alternative.

2.5 ROADWAY ALTERNATIVES

This section presents the roadway alternatives, including a new bridge across the Downtown Connector and improvements to I-75/85 and surface streets in Midtown Atlanta, that were considered. These alternatives were developed to provide access to the Atlantic Steel site, improve east-west connections across the Downtown Connector, and alleviate operational and safety problems on certain existing surface streets. These alternatives are summarized from the 17^{th} Street Extension and Interchange Concept Report, including revisions, hereafter referred to as the "Concept Report" (MAAI 2000a). An Interchange Modification Report (IMR) is also being completed that addresses more detailed operational analysis and possible impacts to the Interstate system in compliance with State and Federal requirements. The Concept Report and updates are available from GDOT upon request.

In order to assess the effectiveness of the various roadway alternatives developed for this project, a thorough operational analysis was conducted on the roadway network in the project study area. The following tasks were performed for this analysis:

- Existing traffic and turning movement counts were collected;
- Future traffic assignments were estimated;
- Qualitative-type analysis using Highway Capacity Software was conducted; and
- Quantitative-type analysis of critical intersections and freeway/ramp segments using TRAF-CORSIM traffic modeling software was conducted.

Traffic operations of the study area roadway network were analyzed. Existing traffic counts were collected in 1998 and 2000 to represent existing traffic conditions in the study area. Future traffic (Year 2025 Background Traffic) was predicted by increasing the existing traffic volumes by a growth factor. Volumes on the Interstate segments were compounded by 1.5% per year, and volumes on the surface streets were compounded by 2% per year to represent future growth in the project study area. Traffic attributable to the Atlantic Steel redevelopment was determined by using Institute of Transportation Engineers (ITE) trip generation factors for the various proposed on-site future land uses (e.g., commercial, retail, residential), reduced by a 10% internal capture (trips that are captured on-site) and a 15% transit share (ITE 1997). The internal capture rate was based on the results of studies, which analyzed trip making behavior in mixed-use developments similar to Atlantic Steel. The transit share reduction was based on results of studies of the performance of other transit-oriented developments and was also calculated by ARC's travel demand model, which is calibrated to travel behavior in the Atlanta region based on travel surveys, for this project. The final step included distribution and assignment of trips generated by the proposed redevelopment onto the surface streets and Interstate system. Trip distribution was determined using the ARC

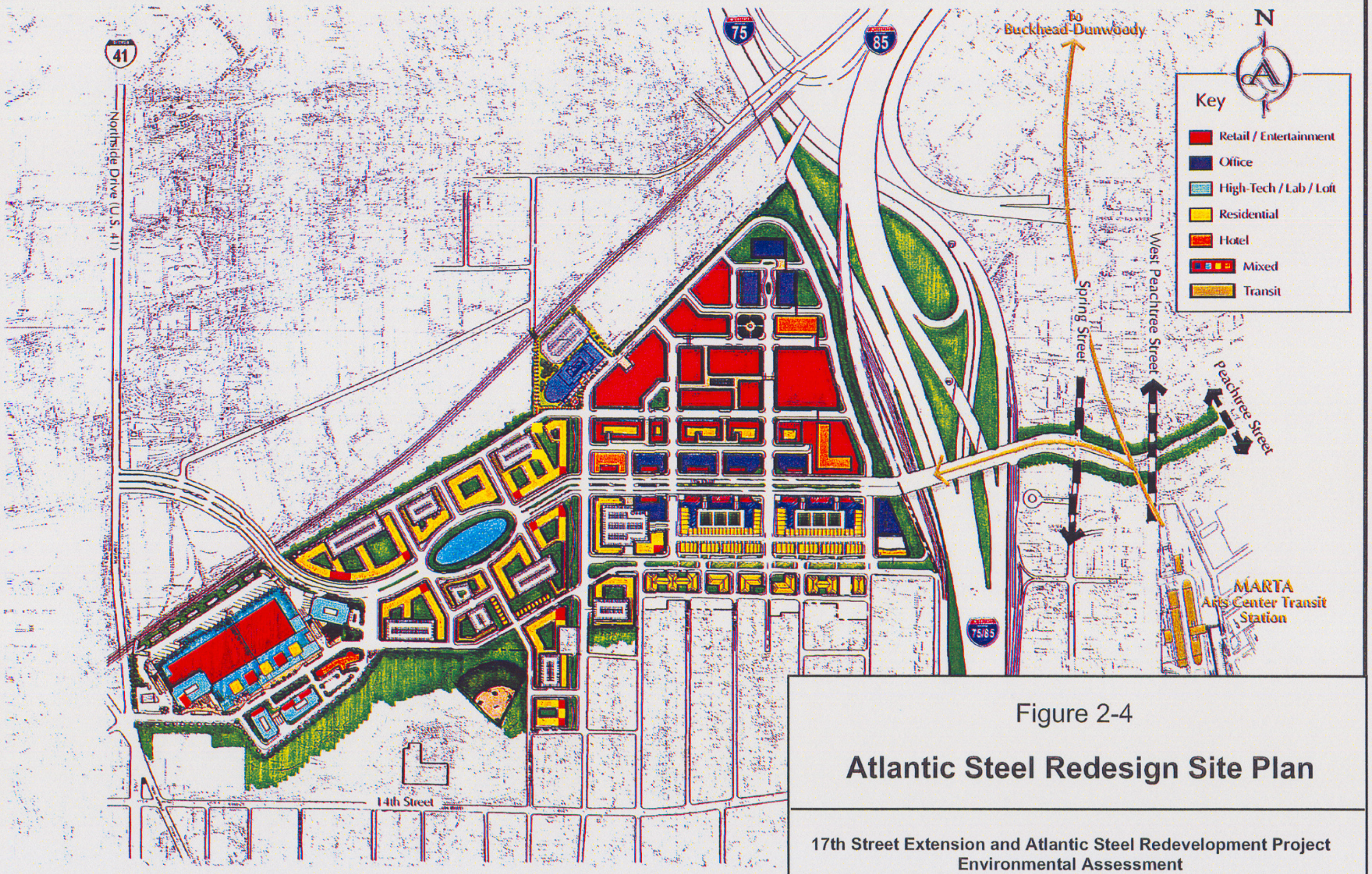


Figure 2-4

Atlantic Steel Redesign Site Plan

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: JAR 2000

J:\735996\redesign.cdr

regional model, and individual trips were assigned throughout the network according to this direction distribution.

This section describes the decision making process concerning the development and evaluation of roadway alternatives. Various Interstate and surface street improvements were modeled in order to assess their ability to accommodate traffic flow in the year 2025. Several major roadway alternative conceptual designs were considered. Design elements were modified under each alternative to reflect public, community, and agency concerns. This evaluation process led to the selection of the preferred roadway improvement components of the project. All other alternatives were considered, but are not further evaluated in this EA. A more detailed description of all roadway alternatives considered is provided in the Concept Report. The roadway improvements proposed as part of the preferred alternative are discussed in detail in Section 2.8, and the impacts associated with this alternative are addressed in Section 4.

2.5.1 Bridge Location Alternatives

The first set of alternatives developed identified potential locations and alignments for providing an improved east-west connection across the Downtown Connector. Potential bridge locations were developed from 14th Street north to the I-75/I-85 Brookwood Interchange.

2.5.1.1 Widening 14th Street

This alternative included widening 14th Street and associated intersections between Techwood Drive and West Peachtree Street to the maximum feasible width, but did not include building a new bridge. Results of the Year 2025 traffic modeling did not show appreciable improvements in traffic and ramp operations even with significant widening of 14th Street. In addition, this alternative did not provide direct access to the Atlantic Steel site. Therefore, this alternative was not considered further, and it was determined that a new bridge would be required to provide direct access to the Atlantic Steel site and another east-west connection into Midtown.

2.5.1.2 16th Street Bridge

A possible bridge location at 16th Street was considered. This alternative would have provided direct access to the Atlantic Steel site and the MARTA Arts Center Station. However, this bridge location alternative was not considered further due to the inability to construct an at-grade intersection at Spring Street, which was preferred by the City of Atlanta and the local property owners in Midtown. At-grade intersections are preferred in order to enhance pedestrian and bicycle mobility, and maintain City of Atlanta street continuity and connectivity. In addition, the potential impacts to high rise developments and historic resources along 16th Street, as well as topography constraints, provided additional rationale for identification of another bridge location.

2.5.1.3 17th Street Bridge

Two possible bridge locations along 17th Street were considered. The first 17th Street alignment would have provided direct access to the Atlantic Steel site and the MARTA Arts Center Station at Lombardy Way. However, this bridge location did not provide the opportunity for an at-grade intersection at Spring Street due to grade problems. In addition, the local property owners expressed concerns about the bridge location and suggested a 17th Street alignment to the north to minimize impacts to existing properties.

Based on these concerns, a 17th Street Bridge location/alignment was identified that met the concerns of the local community and provided at-grade intersections at Spring and West Peachtree Streets. The preferred bridge alignment includes the extension of existing 17th Street at West Peachtree Street over the Interstate, through the Atlantic Steel property to Northside Drive. This alternative was determined to be the preferred bridge alignment and is described in Section 2.8. The proposed 17th Street Bridge would be approximately 130 feet wide and would contain two general purpose travel lanes and one dedicated transit/bike lane in each direction with sidewalks on both sides.

2.5.2 17th Street Bridge - Alternatives Addressing Interstate Access

After identification of a preferred bridge location, alternatives for access from I-75/I-85 were considered. These alternatives addressed alterations of existing ramps and provision of new Interstate access to the 17th Street Bridge.

2.5.2.1 No Access Ramps

This alternative included the 17th Street Bridge with no direct Interstate access to and from the bridge. This alternative provided some relief to traffic on 14th Street, because it provided a new east-west connection. However, it did not provide relief to the existing north and southbound exit ramps. Traffic on Techwood Drive and Williams Street would backup when trying to access 10th and 14th Streets. In addition, without additional access to the Atlantic Steel site, traffic would utilize existing surface streets in the Home Park community and have much greater impacts on this community. For these reasons, this alternative was not considered further. It was determined that some additional access from I-75/I-85 should be provided to the 17th Street Bridge.

2.5.2.2 Reconfiguration of Existing 14th Street Southbound Off-Ramps from I-75 and I-85

The purpose of this alternative was to reconfigure the existing southbound 14th Street off-ramps from I-75 and I-85 to provide access to the 17th Street Bridge. This alternative provided direct access from I-75 to the 17th Street Bridge and improved access from I-85 to 16th Street. Traffic accessing Atlantic Steel would utilize these new connections. Techwood Drive would be widened as it approaches 14th Street. The improvements described above would provide traffic relief on the existing southbound ramps, especially on Techwood Drive as it approaches 14th Street. However, with no additional northbound access or improvements, backups and delays on the existing northbound exit at 10th Street would be unacceptable. Therefore, this alternative was not considered further.

2.5.2.3 Addition of Northbound Off-Ramp from I-75/I-85

This alternative included the same improvements as described in Section 2.5.2.2 and also included a new northbound off-ramp from I-75/I-85 to the 17th Street Bridge. The new northbound off-ramp would be located just north of 14th Street and would involve relocation of Williams Street to the east. This alternative would also involve improvements to the existing intersection of 16th Street and Williams Street. However, this alternative was dismissed from further consideration based on safety concerns related to the proximity of the 17th Street northbound off-ramp to the I-75/I-85 diverge.

Due to the safety concerns, another northbound off-ramp alternative was developed that was located south of 14th Street, further from the I-75/I-85 diverge. The off-ramp would exit the Interstate and become elevated, built on a structure to fly-over 14th Street. The ramp would remain elevated over existing Williams Street and connect with the 17th Street Bridge. However, this alternative was dismissed from further consideration based on property owner concerns and aesthetic impacts related to the elevated structure, as well as additional cost involved.

2.5.2.4 Reconfiguration of Southbound and Northbound Off-Ramps

This Interstate access alternative included the same improvements as described in Section 2.5.2.3, but with slight reconfiguration of both the southbound and northbound off-ramps. Due to safety considerations, the northbound off-ramp was lengthened to a diverge point south of 14th Street, further away from the I-75/I-85 diverge. The off-ramp would travel under 14th Street, parallel the Interstate, and rise up to connect with the 17th Street Bridge. Since the northbound off-ramp would pass underneath the 14th Street Bridge, this would require reconstruction of the 14th Street Bridge.

In addition, since a greater portion of traffic accessing the Atlantic Steel site and Midtown are predicted to come from I-85 and GA400, the southbound off-ramps were reversed from the original concept as described in Section 2.5.2.2. The southbound off-ramp from I-85 would have direct access to the 17th Street Bridge, and the I-75 southbound off-ramp would have direct access to 16th Street. Techwood Drive would still be improved at 14th Street. Both of these changes constitute the preferred alternative for Interstate access and are described in greater detail in Section 2.8.

2.5.3 17th Street Bridge - Surface Street and Intersection Alternatives

The 17th Street Bridge would include a transition into Midtown to connect with the existing surface streets in the area. This would require improvements to several surface streets and intersections in the surrounding project area (e.g., Spring Street, West Peachtree Street, Peachtree Street, Williams Street, 14th Street, 16th Street, Techwood Drive). The original design for 17th Street and its connection with existing surface streets and intersections was based primarily on capacity criteria related to accommodating future traffic volumes. However, the City of Atlanta and a number of public, community, and business leaders expressed significant concerns about the scope and extent of the proposed improvements.

As a response to these concerns, several key intersections and surface streets were redesigned. Additional urban design criteria were considered such as pedestrian safety and aesthetics, with less emphasis on accommodating future traffic volumes. The focus of the changes was to reduce: driving speeds, lane widths, the number of through and turning lanes, and turning radii of intersections. The ultimate objective was to balance the needs of cars, buses, bicycles, and pedestrians to better integrate 17th Street with the urban fabric of Midtown Atlanta and coordinate more closely with the vision for Midtown provided by the Midtown Alliance and "Blueprint Midtown." A description of the preferred design for 17th Street and the associated surface streets and intersections, reflective of these changes, is provided in Section 2.8.

2.5.4 High Occupancy Vehicle (HOV) Access Alternatives

Several alternatives were considered that would provide HOV access as part of this project. The first alternative considered direct HOV access to and from the 17th Street Bridge. However, due to engineering and site constraints, it was determined that HOV access could be provided to the bridge, but no return access to the Interstate could be provided. In addition, provision of HOV access from the Interstate would significantly impact the future ability to redesign the I-75 southbound to I-85 northbound loop. Therefore, direct HOV access to the 17th Street Bridge was not considered further.

Several additional HOV access alternatives were considered: 1) access at 5th Street and a new 12th Street HOV-only bridge; 2) HOV-only bridge at 15th Street; and 3) reconfiguration of the 14th Street Bridge to accommodate HOV access. However, due to the scope of these alternatives and based on concerns raised by the public and other agencies, it was decided to separate out HOV access from this project. A future regional study examining the optimal location of HOV access into Midtown and potentially Atlantic Steel would be conducted as a separate project. This HOV-only project would be identified through the ARC regional planning process at a future date and would be subject to separate analysis under NEPA. Design of the 17th Street Bridge would not preclude the ability to accommodate any possible HOV access alternative that was identified in this study.

2.6 TRANSIT ALTERNATIVES

A transit system concept was identified that would provide a connection across the 17th Street Bridge, connecting Midtown to the neighborhoods and to the proposed Atlantic Steel redevelopment project on the west side of the Interstate. This concept addresses transit service connections between the site and the existing MARTA Arts Center Station. Alternatives considered for the project included a transit only alternative for 17th Street Bridge (no single occupancy vehicle lanes), as well as a shuttle bus system for the short-term and a potential upgrade of the system to light rail transit (LRT) technology in the future.

2.6.1 Transit Only Alternative

In response to public concerns that the 17th Street Bridge contained too many single-occupancy vehicle (SOV) travel lanes and was not transit-oriented, a specific alternative was developed that included transit-only for the 17th Street Bridge, including bike and pedestrian facilities, with no SOV lanes. This alternative consisted of one dedicated transit lane in each direction on the bridge and along 17th Street from West Peachtree Street to Northside Drive. No new Interstate access would be provided. A shuttle bus system connecting the Atlantic Steel site with the MARTA Arts Center Station would be provided by JAR.

The transit-only alternative was modeled to determine the potential impacts of this alternative. Background traffic volumes were developed for Year 2025 using the same growth factors as described in Section 2.5 (1.5% for the Interstate and 2% for surface streets in the study area), and vehicle trips for the Atlantic Steel site were generated using the ITE trip generation factors. Additionally, since a dedicated transit-only link would be provided, the proposed transit share of trips was increased from 15% to 25%. Thus, the total site generated vehicle trips were reduced by an additional 10%. Internal capture of on-site trips remained constant.

The benefits of the transit-only alternative include no direct impacts associated with construction of the proposed roadway improvements, with the exception of the 17th Street Bridge, which would be more narrow, with less direct impacts to commercial properties in Midtown Atlanta. In addition, there would be lower predicted traffic volumes, as compared to the preferred alternative, in the areas east of I-75/85 adjacent to the proposed 17th Street Bridge. However, even with the additional reduction in vehicle trips associated with increased transit ridership, there are a number of significant traffic impacts of the transit-only alternative, specifically in the southern and western portions of the study area. Without the provision of an east-west general traffic connection, including SOV lanes, across I-75/85 and new Interstate access, traffic volumes would be significantly greater on the existing Interstate exits at 10th and 14th Streets. Certain sections of 10th Street, 14th Street, Techwood Drive, and Williams Street would experience large increases in average daily traffic (ADT) volumes in the project area. Several intersections would have a higher level of congestion in the Year 2025 as compared to the preferred alternative. Furthermore, without the provision of direct access to the Atlantic Steel site, traffic would utilize existing surface streets in the Home Park neighborhood to access the redevelopment and have much greater impacts on this community.

Because of the significant impacts associated with not providing additional SOV lanes on the 17th Street Bridge or direct access to the site, the transit only alternative for the 17th Street Bridge was not considered further.

2.6.2 Shuttle System Alternatives

Several alternative shuttle bus route options were evaluated, including four different circulation patterns throughout the redevelopment. The alternatives were evaluated based on several criteria, summarized below:

- Maximizing coverage of the Atlantic Steel site, providing service within a ¼ mile of the highest employment, retail, and residential concentrations;
- Minimizing travel time to MARTA;
- Ease of route understanding;
- Door-to-door service to office centers;
- Ease of implementation;
- Maximizing benefit of exclusive transit right-of-way; and
- Minimizing capital and operating costs.

Based upon the evaluation conducted, a preferred alternative shuttle route was identified. The proposed shuttle bus route, along with the associated station and stop locations, are illustrated in Figure 2-5, and described in detail in the Technical Memorandum, Transit Connection Atlantic Steel Redevelopment Project to MARTA Arts Center Station (Dames & Moore 1999), referred to throughout as the Transit Study. This alternative included routing the shuttle buses through the MARTA Arts Center Station. However, in subsequent discussions with MARTA, it was determined that private shuttle buses could not be routed through the Arts Center Station. Therefore, a final shuttle route was selected that incorporated a dedicated pull-out lane with a Insert

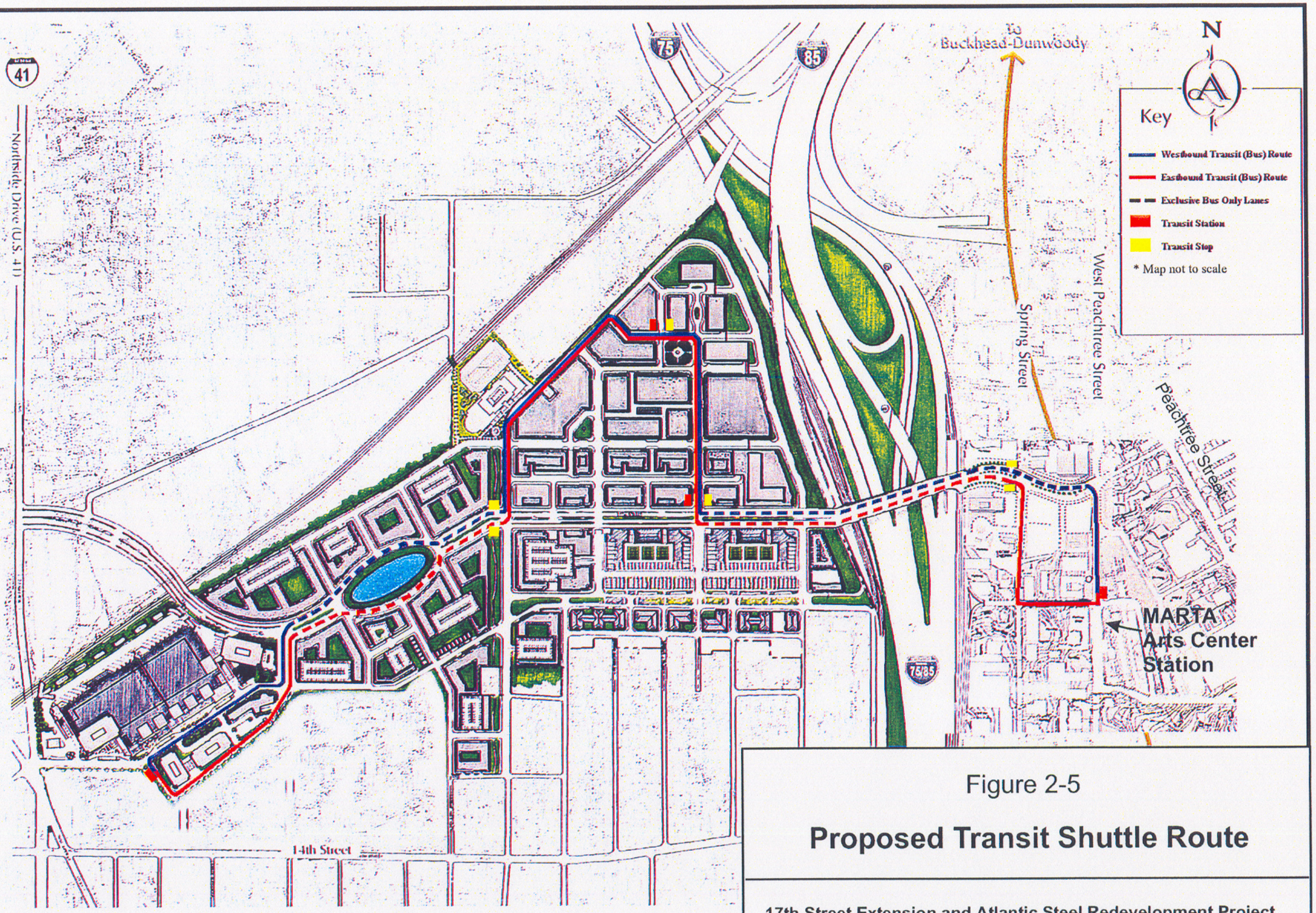


Figure 2-5

Proposed Transit Shuttle Route

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: JAR 2000

J:\735996\figure.cdr

separate covered station located on West Peachtree Street just north of the existing MARTA Arts Center Station, connected by a covered walkway to the main station entrance.

The proposed route would begin along the east side of West Peachtree Street, adjacent to the MARTA Arts Center Bus Transfer facility. From the dedicated pull-out lane at this point, a bus would travel north on West Peachtree Street to 17th Street. The shuttle bus would turn west over the proposed 17th Street Bridge and circulate through the proposed Atlantic Steel development. The shuttle bus would utilize special reserved transit-only lanes along 17th Street from West Peachtree Street through the development. Returning from Atlantic Steel, the shuttle bus would travel east over the 17th Street Bridge and turn south on Spring Street. The shuttle bus would turn east on 16th Street and end up at the dedicated pull-out on West Peachtree Street.

Capital costs for initial start-up and annual operating costs for the shuttle bus system would be borne by JAR. A total of four shuttle stations and six shuttle stops, as well as six buses (five regular buses and one spare bus) have been identified for the preferred shuttle system. JAR anticipates charging no fare to ride the shuttle.

Buses would have a signal priority at certain signalized intersections. During peak hours (6:00 to 9:00 AM and 3:30 to 6:00 PM) the buses would operate on a four minute frequency and an eight minute frequency at off-peak hours, thereby matching the existing MARTA train schedule. Stations and stops would be located along West Peachtree Street adjacent to the MARTA Arts Center Bus Transfer Facility, at the intersection of 17th and Spring Streets, 17th Street between Fowler Street and Lyle Place, 17th Street and State Street, 17th Street and Center Street, and at 16th Street where the route loops around (Figure 2-5). Stations would include the following elements:

- Large shelters to accommodate waiting passengers;
- Signage, lighting, and seating;
- Electronic kiosks providing real-time shuttle service information;
- Security including video monitoring and emergency intercom;
- Advertising space as appropriate; and
- Other supporting items (i.e. trash receptacles, newspaper vending machines).

In addition to operation of a shuttle bus system, dedicated transit-only lanes will be provided on 17th Street from West Peachtree Street to Northside Drive.

2.6.3 Long-Term Transit Options

As ridership increases and more development occurs on the west side of I-75/I-85, and as Atlanta's transit system matures, it may become feasible to modify the proposed shuttle bus system and switch to a fixed transit system (e.g. light rail). In order to recognize its maximum benefits, this system should not only serve the Atlantic Steel site, but should connect with a more extensive transit network that could serve much of the area west of I-75/I-85 and possibly provide a connection to Cobb County. The alignment for a fixed system is still conceptual; however, the 17th Street Bridge would be designed such that it can accommodate future rail, potentially connecting to the MARTA Arts Center Station.

2.7 NO ACTION (NO BUILD) ALTERNATIVE

The no action alternative is one in which state and federal agencies would take no action to construct any of the transportation improvements for the proposed project. Under this alternative, the 17th Street Extension and Bridge would not be built and the transit connection to the MARTA Arts Center Station would not be implemented. In addition, the Atlantic Steel site would not be developed in accordance with the JAR redevelopment plan.

The Atlantic Steel property was rezoned from Heavy Industrial District (I-2) to Central Area Commercial Residential-Conditional District (C-4-C) in April 1998 (see Appendix A). One of the conditions on redevelopment of the site is that the City of Atlanta will not issue permits for buildings or structures until a contract is approved for construction of the 17th Street Bridge. The practical effect of this zoning condition is that if there is no bridge, no development can occur on the site without going through the formal rezoning process. Similarly, under the City of Atlanta's zoning policies, Atlantic Steel could not reestablish steel milling industrial operations without having the property rezoned. Since JAR purchased the property from Atlantic Steel Industries, Inc. in December 1999, and they are in the process of demolishing the on-site buildings and cleaning up the site, it is not likely that they would pursue rezoning of the property for industrial use. However, some redevelopment of this property will occur, even without the transportation improvements.

Therefore, EPA, in combination with the City of Atlanta and JAR, developed a reasonable redevelopment scenario for the Atlantic Steel property in the event the 17th Street Bridge is not constructed. This scenario represents the best judgement of the City and JAR for what could likely occur without access improvements and based on current trends of development activity and City land use and zoning policies. Table 2-3 illustrates the categories of development likely to occur, the approximate square footages of each, and estimated required parking.

Table 2-3. Atlantic Steel Property Development Likely to Occur Under the No Action (No Build) Alternative

No Action Scenario Land Use Type	Estimated Square Feet	Estimated Parking Spaces
High-Tech Office	2,500,000	10,000
High-Tech Lab	1,000,000	3,000
Retail	1,500,000	7,500
Residential	2,400,000	3,120
Hotel	600,000	720
Total:	8,000,000	24,340

The development pattern, in terms of the land use type and allowable square footage, is not significantly different from the current JAR redevelopment plan. However, there would be significant differences in the quality and timing of the development, as well as transportation implications without the additional transit and roadway improvements. The City of Atlanta provided a letter to EPA that describes in greater detail some of the potential impacts of selecting the no action alternative (see Appendix B).

Major land use impacts of the no action alternative include the likelihood that the development would be built as a series of single-use developments, with limited opportunities for intermixing uses and no single vision for the property. Pedestrian continuity or provision of continuous streetscapes and useable green space would be problematic. Bicycle paths would not likely be provided in a continuous pattern. Adjacent land uses would likely be less compatible and not as mutually supportive. Parking would be built on a per-site, as-needed basis with less opportunity for shared or coordinated parking strategies, resulting in an increased number of parking spaces. Lastly, transit linkages, and therefore ridership, would be minimal due to the nature of the development, relying solely on existing bus coverage on Northside Drive and 14th Street. The rezoned property would not contain any of the site design or transportation performance measures that are currently required as part of the TCM.

The no action alternative was modeled to determine the potential traffic impacts of this alternative. Background traffic volumes were developed for Year 2025 using the same growth factors as described in Section 2.5 (1.5% for the Interstate and 2% for surface streets in the study area). Vehicle trips for the Atlantic Steel site were generated using the ITE trip generation factors based on the site build-out assumptions shown in Table 2-3. Additionally, since a dedicated transit service to the MARTA Arts Center Station would not be provided, the proposed transit share of trips was reduced from 15% to 2%. Internal capture of on-site trips was reduced slightly from 10% to 8%, given the likelihood for reduced pedestrian connectivity at site build-out. Thus, the total site generated vehicle trips were increased by 15%. Without the 17th Street Bridge, primary access to the site would be a new access road from Northside Drive, near Bishop Street, from State Street, and other surface streets in Home Park.

The benefits of the no action alternative include no direct impacts associated with construction of the proposed roadway improvements. In addition, lower traffic volumes are predicted for several surface streets, as compared to the preferred alternative, in the areas east of I-75/85 adjacent to where the proposed 17th Street Bridge would have landed. However, similar to the transit-only alternative, there are even greater predicted traffic impacts of the no action alternative, specifically in the southern and western portions of the study area. Without the additional east-west connection across I-75/85 and new Interstate access, traffic volumes would be significantly greater on the existing Interstate exits at 10th and 14th Streets. In addition, certain sections of 10th Street, 14th Street, Techwood Drive, and Williams Street would experience from 14% up to 80% increases in ADT volumes in the project area as compared to the preferred alternative. Sixteen intersections would have a higher level of congestion in the Year 2025 as compared to the preferred alternative. Furthermore, without the provision of direct access to the Atlantic Steel site, traffic would utilize existing surface streets in the Home Park neighborhood to access the redevelopment and have much greater impacts on this community.

Because of the significant land use and traffic impacts associated with not developing the site as currently proposed and not providing the 17th Street Extension or a transit link to the MARTA Arts Center Station, the no action alternative was not considered further.

2.8 PREFERRED (BUILD) ALTERNATIVE

The overall preferred alternative for this project includes the JAR redesign of the Atlantic Steel site, extension of 17th Street from West Peachtree Street to Northside Drive, and operation of a transit shuttle system that would circulate between the MARTA Arts Center Station and the Atlantic Steel site. A graphical representation of the preferred alternative is provided in Figure 2-6. The following paragraphs present a detailed description of the roadway improvements associated with the preferred alternative. Proposed roadway improvements are depicted in greater detail in Figures 2-7 and 2-8 and summarized in Table 2-4.

17th Street Bridge. This multi-modal bridge is proposed to be approximately 130 feet wide and would include automobile, transit, pedestrian, and bicycle elements. The bridge would contain two general-purpose travel lanes and one dedicated transit/bike lane in each direction with sidewalks on both sides. A diagram of a typical section for the proposed 17th Street Bridge is provided in Figure 2-9. The bridge would descend to grade on the west side of I-75/I-85 in the Atlantic Steel redevelopment and on the east side at Spring Street (Figure 2-7). The portion of the road from Spring Street to West Peachtree Street would be on new alignment and would connect with existing 17th Street at West Peachtree Street. 17th Street between West Peachtree Street and Peachtree Street would not be widened; however, on-street parking would likely be removed at the intersection of 17th Street and Peachtree Street to accommodate an additional turning lane. Intersection improvements would be required at Spring Street and West Peachtree Street.

I-85 Southbound Exit Ramp. The existing I-85 southbound ramp would be reconstructed to allow vehicles to access the new 17th Street Bridge, 14th Street, and 10th Street. The existing I-85 southbound ramp to 14th Street would continue to follow its current alignment, but vehicles would no longer have access to 16th Street (Figure 2-7).

I-75 Southbound Exit Ramp. The existing I-75 southbound ramp would be reconstructed to allow vehicles to access 16th Street, 14th Street, and 10th Street. The purpose of this realignment is to locate this ramp to the west of the reconfigured I-85 off-ramp to 17th Street and to provide exiting traffic access to 16th Street. Techwood Drive would be widened up to 14th Street to accommodate the reconstructed I-85 and I-75 southbound exit ramps (Figure 2-7).

I-75/I-85 17th Street Northbound Exit Ramp. This new exit ramp would depart from the freeway just south of the 14th Street Bridge. The ramp would cross under 14th Street and quickly climb on structure until 16th Street. At this point, Williams Street would cross under the exit ramp to reach the I-75 northbound on-ramp. The exit ramp would double-deck the lower level entrance ramp and connect directly with the 17th Street Bridge. Williams Street would be relocated to the east to accommodate this new exit ramp. Improvements would occur at the intersection of 16th Street and Williams Street to improve operations of this intersection (Figure 2-7).

14th Street Bridge. The 14th Street Bridge must be lengthened and reconstructed to accommodate the underpassing northbound exit ramp. It would also be widened so that traffic could continue to use the bridge during reconstruction, while maintaining the same number of through lanes. Dedicated turning lanes would be added on the bridge. 14th Street would return to its original width at Spring Street on the east side, and near Fowler Street on the west side of the Downtown Connector (Figure 2-7).

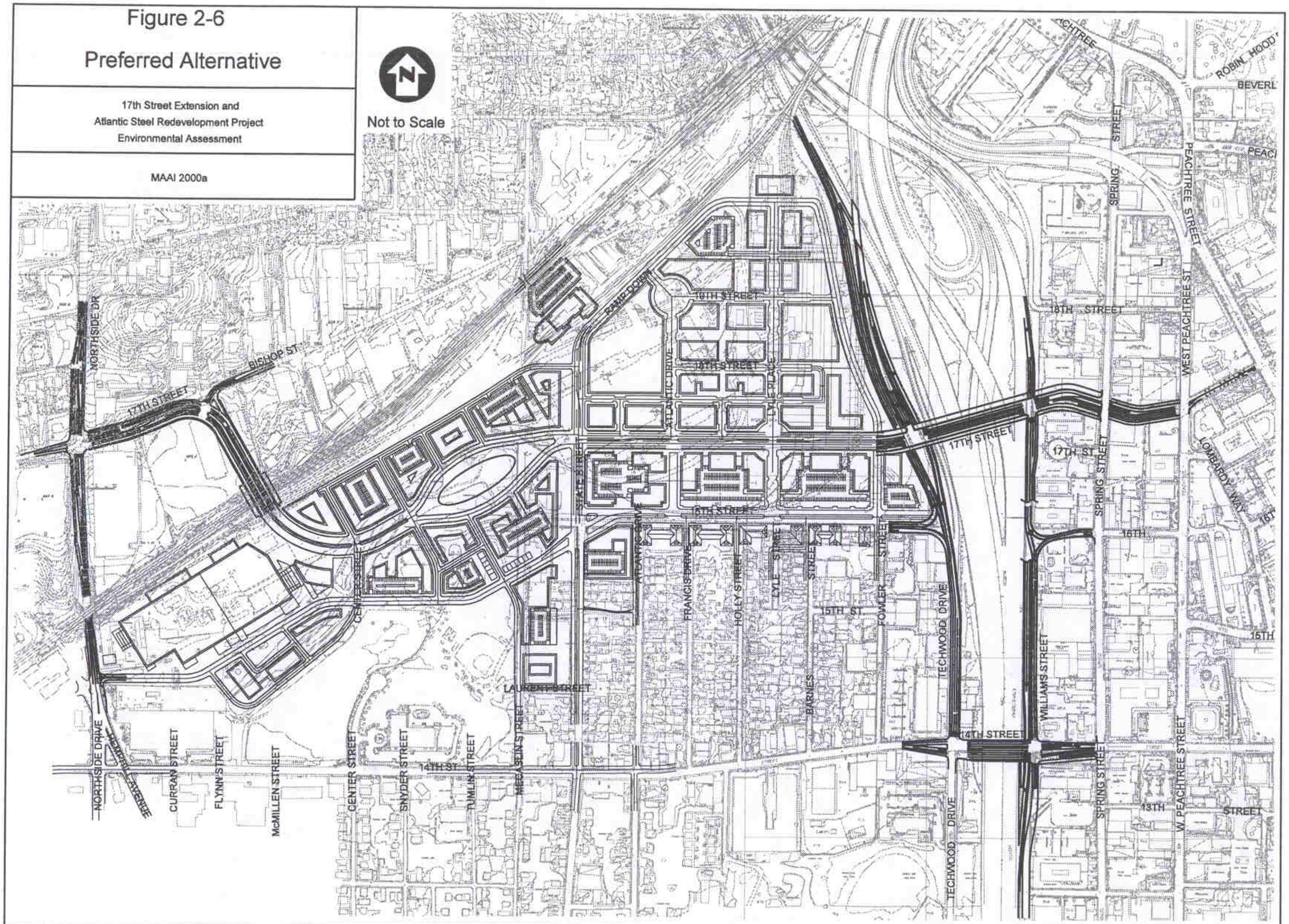
Figure 2-6

Preferred Alternative

17th Street Extension and
Atlantic Steel Redevelopment Project
Environmental Assessment

MAAI 2000a

Not to Scale



J:/735996/7-18-00/fig2-6.dgn 08/01/00 04:10:00 PM

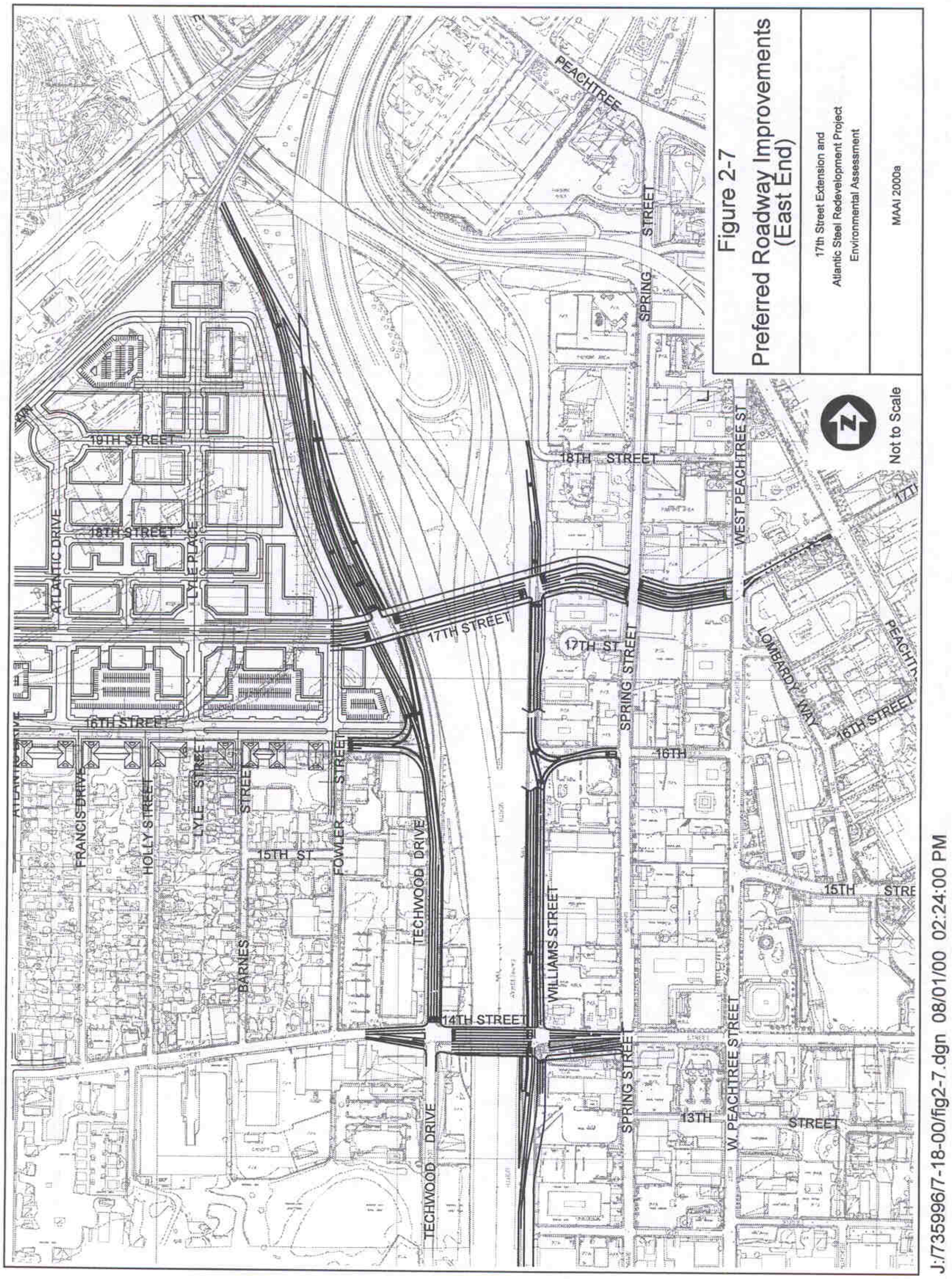


Figure 2-7
Preferred Roadway Improvements
(East End)

17th Street Extension and
Atlantic Steel Redevelopment Project
Environmental Assessment

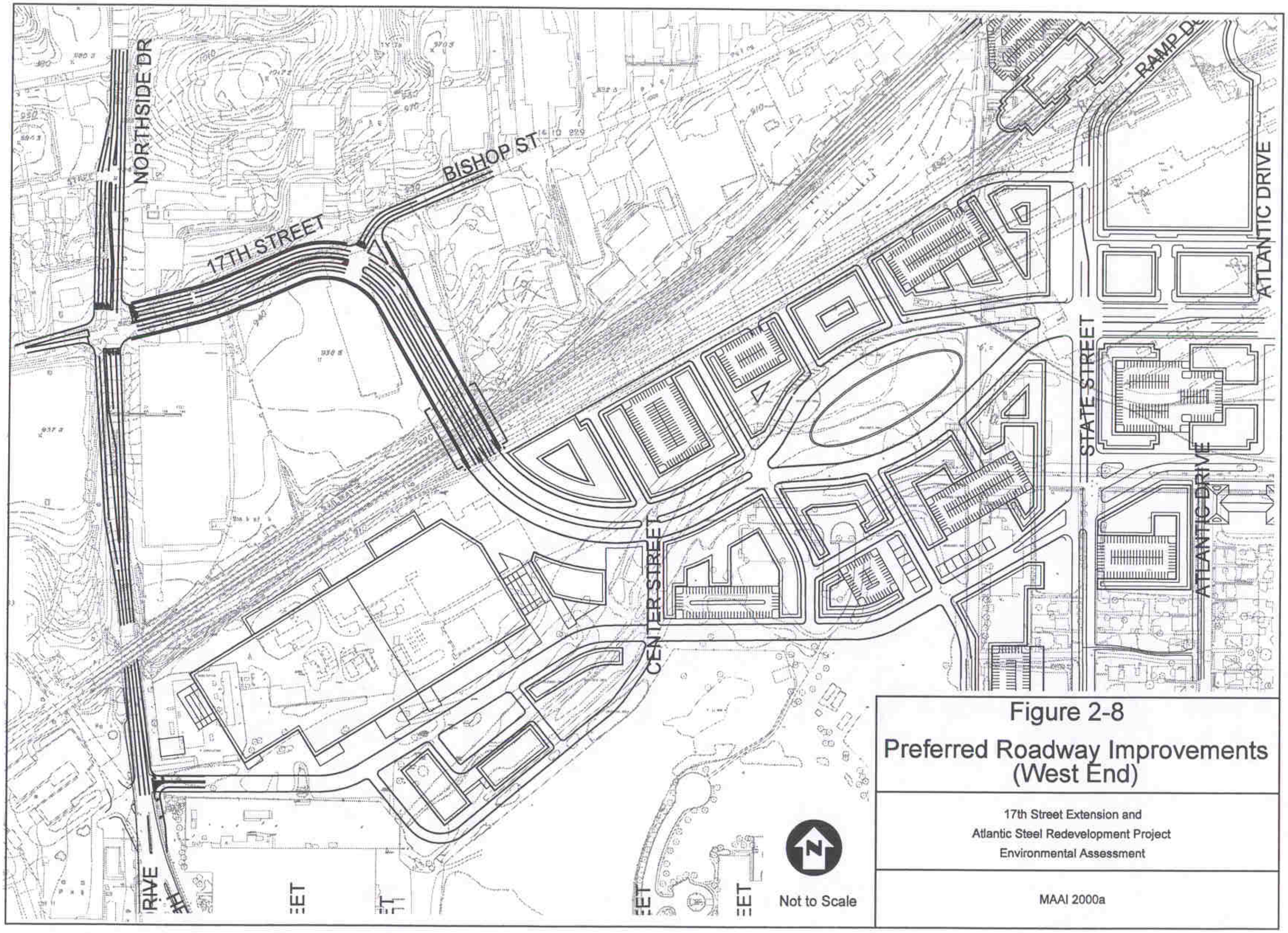


Figure 2-8
Preferred Roadway Improvements (West End)

17th Street Extension and
Atlantic Steel Redevelopment Project
Environmental Assessment

MAAI 2000a

J:/735996/7-18-00/fig2-8.dgn 08/01/00 02:49:00 PM

Table 2-4. Proposed Roadway Improvements for the Preferred Alternative

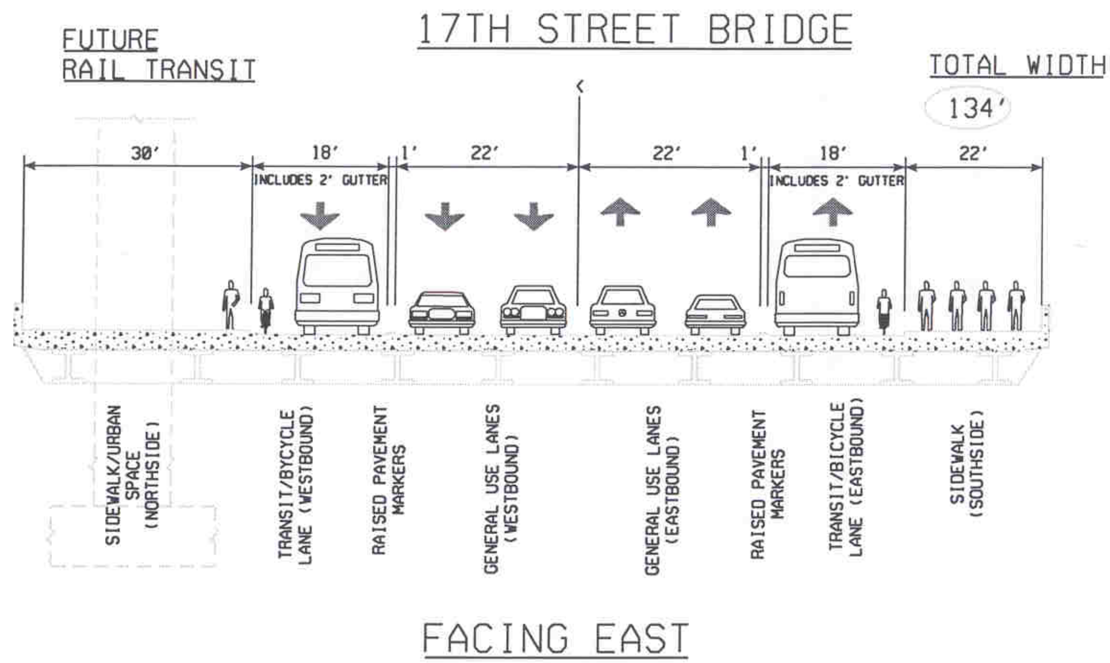
Roadway Section	Existing Roadway Width	Proposed Roadway Width
I-75 (S.R. 401) Northside Drive to Brookwood Interchange	Eight 11' interstate lanes; two 12' HOV lanes; 10-16' width shoulders	Unchanged through lanes, revised 14th Street exit ramp
I-85 (S.R. 403) Peachtree Street to Brookwood Interchange	Eight 11' interstate lanes; two 12' HOV lanes; 10-16' width shoulders	Unchanged through lanes, revised 14th Street exit ramp
I-75/85 (Downtown Connector) Brookwood Interchange to 10th Street	Twelve 11' interstate lanes; two 12' HOV lanes; 10-16' shoulders	Unchanged through lanes, new 17th Street northbound exit ramp
14th Street (U.S. 19/S.R. 9) Spring Street to Fowler Street	Four 10' urban lanes; 6-14' sidewalks on both sides	Unchanged through lanes. Four 11' turn lanes with adequate storage added on bridge
Northside Drive (U.S. 41/S.R. 3) Deering Road to Norfolk Southern Railroad Bridge	Four 10' urban lanes; 6-10' sidewalks on both sides	11' turn lanes with adequate storage added at 17th Street Intersection
West Peachtree Street (S.R. 9) 14th Street to 18th Street	Five 10' urban lanes; 6-14' sidewalks on both sides	Unchanged
Spring Street (S.R. 9) 14th Street to 18th Street	Four 10' urban lanes; 6-14' sidewalks on both sides	Unchanged
16th Street East of Interstate to Spring Street	Three 10' urban lanes; 6-10' sidewalks on both sides	Unchanged through lanes, redesign of Williams Street Intersection
16th Street West of Interstate to State Street	Two 11' urban lanes	Widened to four 11' lanes, divided by medians; 10' sidewalks on both sides of roadway
Williams Street 12th Street to 14th Street	Three 10' urban lanes; 6-10' sidewalks on both sides	Unchanged, relocated to the east to accommodate new exit ramp
Williams Street 14th Street to 16th Street	Two 11' urban lanes; 6-10' sidewalks on both sides	Two 11' urban lanes; 6-10' sidewalks on both sides
Williams Street 16th Street to I-75 Northbound	One 11' urban lane; 6-10' sidewalks on both sides	Two 11' urban lanes; 6-10' sidewalks on both sides
17th Street Bridge	Does not exist	Four 11' through lanes with two 1' double raised pavement marking rows; two 16' bus/transit/bicycle lanes with 2' gutter; 22' raised sidewalk (southside) and 30' raised sidewalk (northside).
17th Street East of Interstate to West Peachtree	Does not exist	Same as bridge with 8' raised median for improved pedestrian safety
17th Street West Peachtree Street to Peachtree Street	Two 11' urban lanes with on-street parking on both sides	Unchanged through lanes, 11' turn lane added at Peachtree Street Intersection
17th Street West of Interstate to Northside Drive	Does not exist	Same as bridge with 16' raised median and 15' sidewalks on both sides of roadway
Bishop Street Deering Road to Northside Drive	Two 14' lanes, 6-10' sidewalks on both sides	Unchanged through lanes, 11' turn lane added at 17th Street Intersection
Techwood Drive 16th Street to 14th Street	Three 11' urban lanes; 0-10' sidewalks on both sides	Widened at 14th Street intersection to four 11' urban lanes with 8' raised sidewalk on both sides

Source: (MAAI 2000).

17th Street (West End Improvements). 17th Street would be extended through the Atlantic Steel redevelopment and connect with Northside Drive. It is anticipated that 17th Street would bridge over the Norfolk Southern railroad on the western portion of the site. Intersection improvements would be required at Bishop Street and Northside Drive (Figure 2-8).

Pedestrian and Bicycle Improvements. Sidewalks would be provided on all new surface streets in the Atlantic Steel redevelopment and as part of all off-site roadway improvements. It is anticipated that sidewalk widths would be approximately 15 feet on all street improvements except for the 17th Street Bridge where they would be 22 feet on the south side and 30 feet on the north side.

Bicycle lanes would be provided on 17th Street as part of the wide transit-only lane. As part of the zoning conditions for the site, bicycle lanes would also be included on State Street (including the loop north of 17th Street) and Center Street. In addition, JAR would utilize the existing at-grade crossing over the railroad at Mecaslin Street to provide a signalized bike/pedestrian crossing into the Loring Heights community. JAR would provide a grade separated (elevated) bike/pedestrian crossing at the location, depending on negotiations with Norfolk Southern Railroad.



NOT TO SCALE

Figure: 2-9

17th Street Bridge Typical Cross Section

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: MAAI 2000a

.../735996/dgnfiles/TYPICAL.DGN 07/28/00 10:54:40 AM

SECTION 3
AFFECTED ENVIRONMENT

3.1 OVERVIEW

This section describes existing environmental conditions within the project study area. The project study area is located north of the CBD of downtown Atlanta and is approximately bounded by 14th Street to the south, Northside Drive to the west, Trabert Avenue and the I-75/85 Brookwood Interchange to the north, and Peachtree Circle and Peachtree Street to the east (Figure 1-1). However, given the potential influence of this redevelopment project, land use (Section 3.3.8), socioeconomic conditions (Section 3.3.9), and potential environmental justice (EJ) areas (Section 3.3.10) were characterized out to a mile from the study area boundary listed above. Similarly, traffic conditions were characterized in some areas beyond the immediate study area given the potential traffic impacts of this project. The information presented in this section serves as a baseline from which changes in conditions can be compared. The description of existing conditions focuses on the resource categories most likely to be affected by the proposed redevelopment project.

3.2 NATURAL ENVIRONMENT

The existing natural environment at the Atlantic Steel site is changing daily because of site cleanup activities. Past and current soil removal activities by Atlantic Steel have removed the natural vegetation on-site and altered site drainage patterns and aquatic habitat. This section describes the natural environment of the site prior to initiation of site cleanup activities and the rest of the study area. Section 4 describes the impacts of these cleanup activities in combination with redevelopment of the site.

3.2.1 Earth Resources

The study area is located in the southern section of the Piedmont Physiographic Province. The study area is located in the Gainesville Ridges District of the Upland Georgia Subsection of the Piedmont. The Gainesville Ridges occur along the border of the Upland Georgia Subsection and the Midland Georgia Subsection of the Piedmont, and consist of a series of northeast-trending, low, linear, parallel ridges separated by narrow valleys (Clark and Zisa 1976; Law 1999a).

The site occupies a narrow, west to east-sloping valley. The valley turns abruptly to the north at the eastern property boundary, near I-75/85. The valley floor ranges in elevation from approximately 915 feet above mean sea level (MSL) at the western end to about 865 feet at the eastern end. Surrounding ridge tops reach off-site elevations of approximately 1,000 feet MSL. As a result of the natural valley setting, drainage from the surrounding area converges onto the site.

Natural soils typically found in the study area are brownish red in color, consisting of silts, sands, and silty clays. The soil originated from weathered granitic and gneissic rock and contains micaceous and quartzic materials. The Atlantic Steel site also contains fill material which is reported to contain a mixture of soil and slag (a byproduct from melting scrap metal in the steel production process).

3.2.2 Groundwater

Groundwater in the study area occurs in the overburden soil and bedrock. On the Atlantic Steel site, groundwater generally flows towards the northeastern and southeastern areas of the site (Law 1999d). Depth to groundwater ranges from approximately 10 to 40 feet across the Atlantic Steel site (Law 1999a).

Groundwater in the greater Atlanta region occupies joints, fractures and other secondary openings in bedrock, and pore spaces in the overlying mantle of residual material (Cressler, Thurmond and Hester 1983). Fractures and joints extend through the bedrock in intersecting patterns. At depth, these structures are mineralized and closed. However, at more shallow levels, they may act as conduits for groundwater flow beneath the mantle of residual material (Law 1999a).

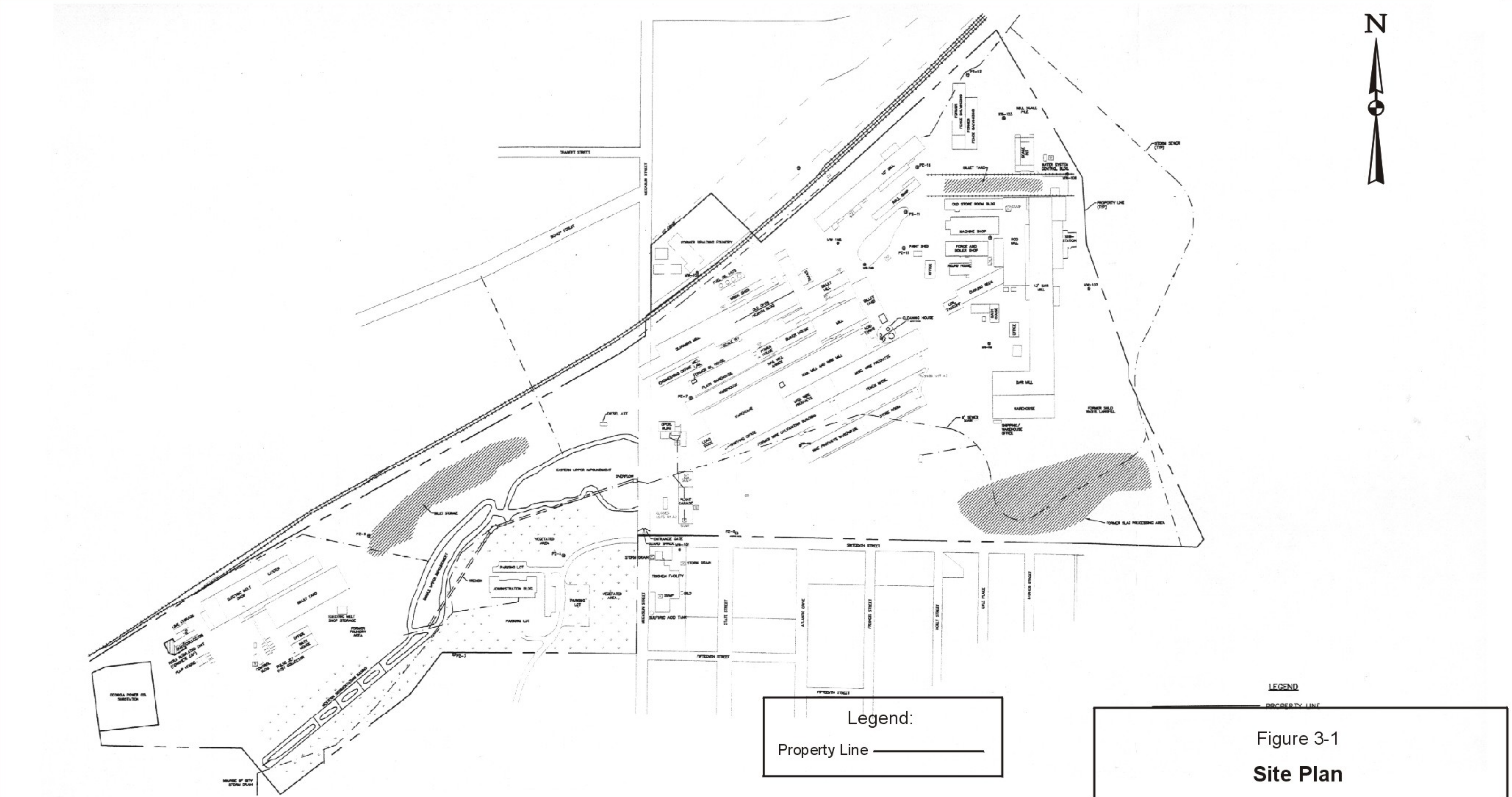
Groundwater recharge to the fractured bedrock occurs through seepage of precipitation through the overlying mantle of residual material, or by flowing directly into openings in the exposed rock (outcrops). Depth to bedrock and thickness of the overlying residual material varies in the area, and ranges from exposed rock outcrops to 30 to 80 feet of saprolite (Law 1999a).

Limited groundwater contamination has been detected beneath the Atlantic Steel site (Section 3.3.2). The Georgia Environmental Protection Division (EPD) has prohibited the use of groundwater at the site and requires that groundwater discharge be intercepted before it exits the eastern site boundary at the I-75/85 boundary (Law 1999a).

3.2.3 Surface Water Resources/Hydrology

Surface water features present in the study area are limited to the Atlantic Steel site. The nearest surface water features outside the study area, include Tanyard Creek to the north and the Atlanta Reservoir, which lies to the west of Northside Drive at the Hemphill Water Treatment Plant.

The Atlantic Steel site is located within a narrow, west-to-east sloping valley. Surface drainage generally flows to the north and east and converges into a municipal sewer main that follows along the original drainage features of the valley floor (Law 1999d). The surface water features of the site consist of a channel and two surface water impoundments that convey stormwater to the municipal sewer main. Off-site drainage enters the site from a storm sewer outfall near the southwest property boundary, from a 36-inch storm sewer running from Bishop Street, north of the property, and from a 30-inch diameter storm sewer that runs parallel to the railroad tracks. The storm sewer from Bishop Street historically discharged to the eastern upper impoundment, and the storm sewer parallel to the railroad tracks historically drained to the middle upper impoundment (Figure 3-1).



Legend:

Property Line

Figure 3-1

Site Plan

17th Street Extension and Atlantic Steel Redevelopment Project
Draft Environmental Assessment

SOURCE: Law 1999

J:\735996\fig3-1.cdr

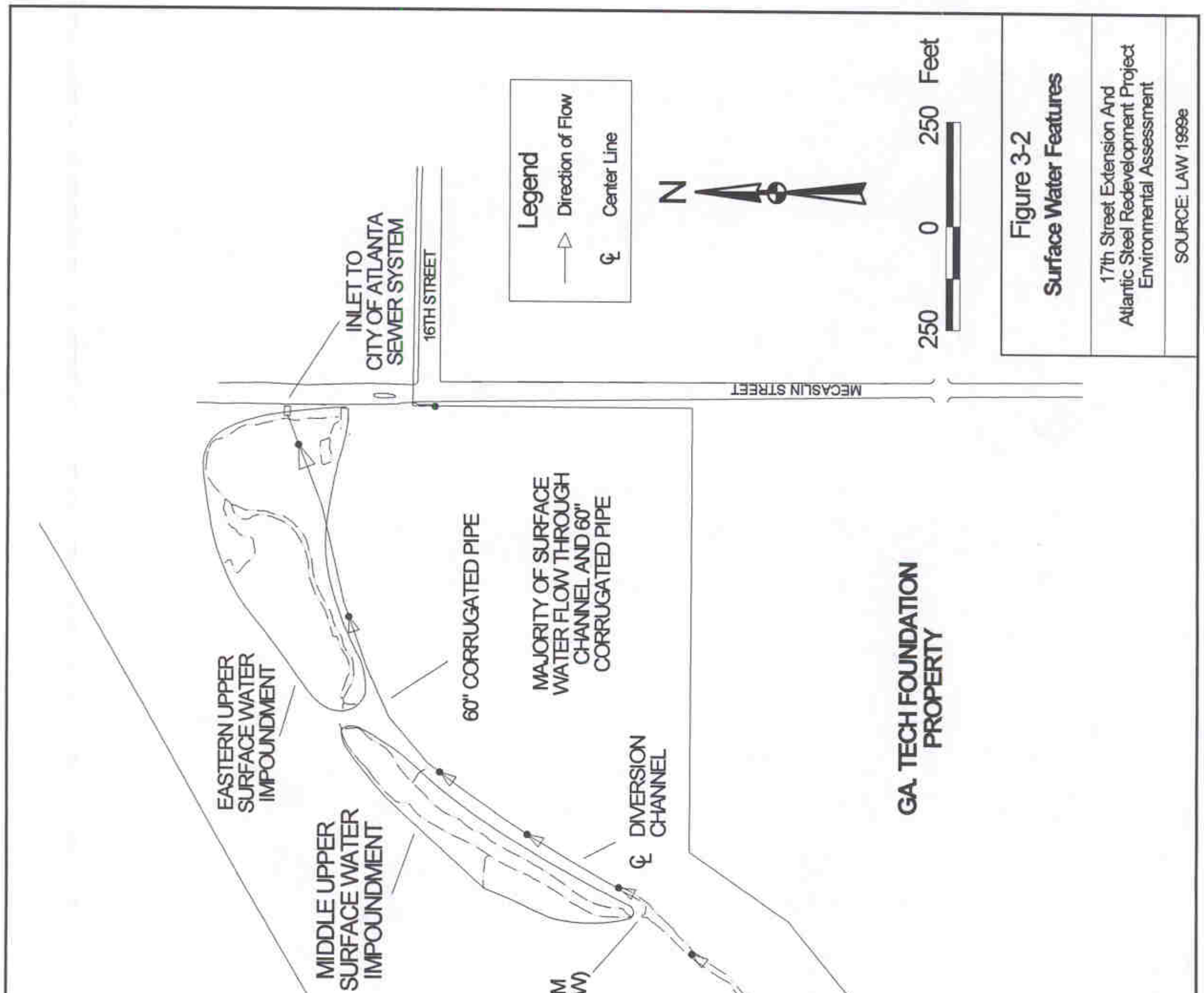
Current surface water conditions at the site are changing due to the clean-up activities in progress. Stormwater from the southwest combined sewer outfall discharged to a channel and historically flowed to the northeast, discharging to two surface water impoundments (Figure 3-2). Flows from the surface water impoundments discharged to a sewer inlet structure. This sewer inlet is connected with a City of Atlanta combined sewer main that enters the property from 14th Street, near the southwest boundary, and runs east, connecting with the Orme Street Combined Sewer near the southeastern property boundary. Stormwater and surface water from the site is received by the Orme Street Combined Sewer. This combined sewage system also collects stormwater from the surrounding areas. Sewage from the Orme Street Combined Sewer is treated at the R. M. Clayton Water Reclamation Plant, except when rain events exceed conveyance capacity, in which case flows are directed to the Tanyard Creek Combined Sewer Overflow (CSO) Treatment Facility.

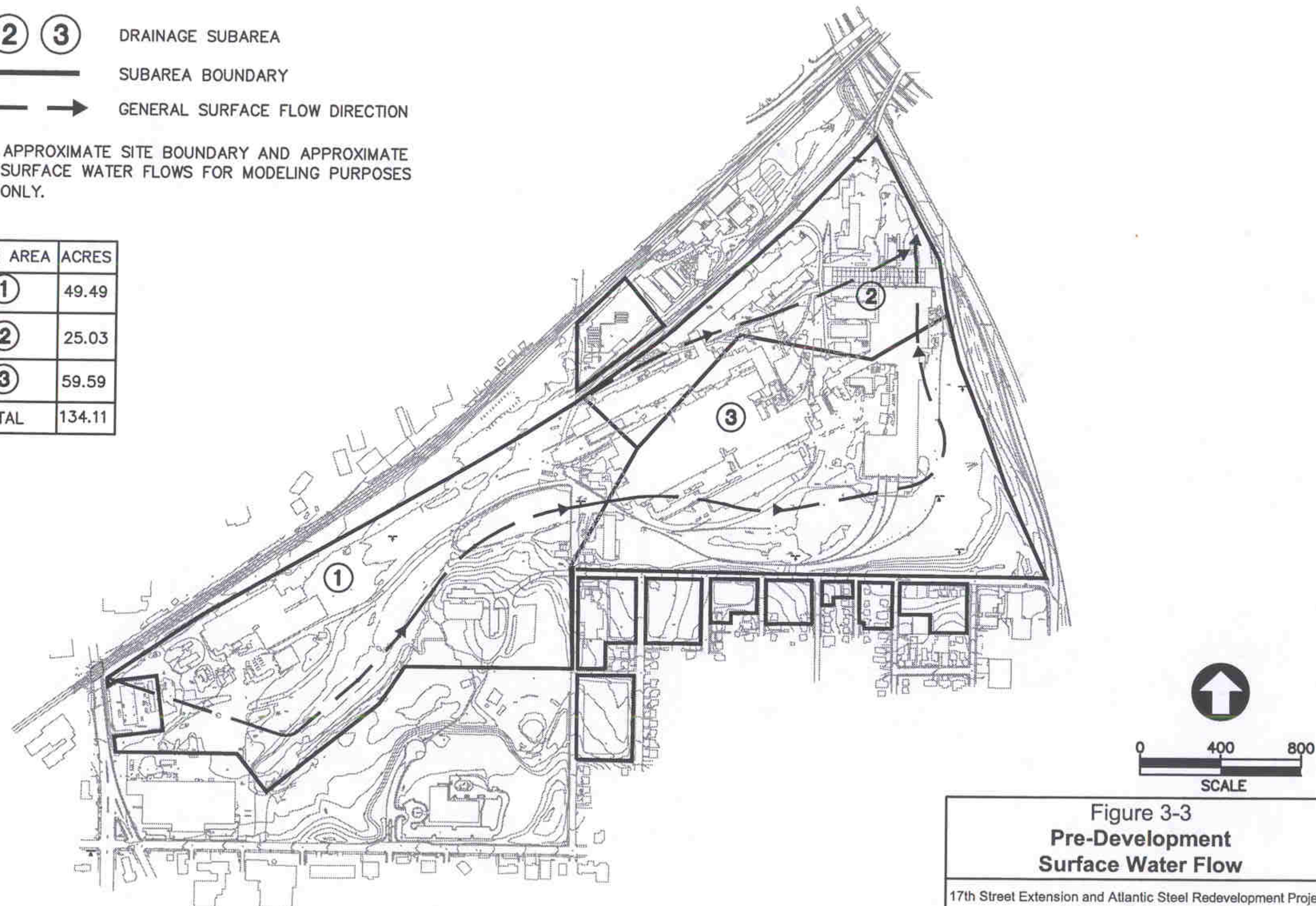
Flows from the southwest storm sewer averaged 2.72 million gallons per day (MGD) from August 12, 1999 to August 23, 1999 (Law 1999e). In June 2000, the City of Atlanta took action to address sanitary discharges into Atlantic Steel ponds. The Hemphill Water Treatment Plant historically contributed to surface water flows via this combined sewer under an agreement with Atlantic Steel for the City of Atlanta to provide flows periodically for reuse as process water. The Hemphill Water Treatment Plant periodically discharged filter backwash waters to the surface waters of the site as late as January 1998 (Richards 1998). Filter backwash waters are produced when the flow to the water treatment plant's filters is reversed for the purpose of cleaning the filters. The magnitude of these discharges ranged from 69,000 gallons to 272,000 gallons (Richards 1997).

Surface water runoff calculations were prepared for the site under the present conditions using the TR-55 Model (Law 1999g). The site was divided into three basins for modeling purposes (Figure 3-3). For the present condition, the following assumptions were made during the calculation of peak stormwater discharges from the site:

- Rainfall amount for the 25-year, 24-hour storm event: 6.8 inches.
- Type II rainfall distribution.
- Hydrologic Soil Group D (fill material).
- Predevelopment acreage: 134 acres.
- Cover types for pre-development scenario were estimated from aerial photographs.
- Composite Manning's "n" coefficients were developed from weighted averages of each land cover type.

Peak stormwater discharge from the site under the pre-development condition was calculated as 538 cubic feet per second (cfs). The peak discharge occurred at 12.3 hours into the storm event. A complete list of the stormwater modeling assumptions and results is presented in Appendix C.


INLET TO
CITY OF ATLANTA
SEWER SYSTEM
16TH STREET
MECASLIN STREET
Legend
Direction of Flow
Center Line
N
250 0 250 Feet
Figure 3-2
Surface Water Features
17th Street Extension And
Atlantic Steel Redevelopment Project
Environmental Assessment
SOURCE: LAW 1999e
EASTERN UPPER
SURFACE WATER
IMPOUNDMENT
60" CORRUGATED PIPE
MAJORITY OF SURFACE
WATER FLOW THROUGH
CHANNEL AND 60"
CORRUGATED PIPE
MIDDLE UPPER
SURFACE WATER
IMPOUNDMENT
DIVERSION
CHANNEL
GA. TECH FOUNDATION
PROPERTY
EARTHEN DAM
(DIVERTS FLOW)
ATLANTIC STEEL
PROPERTY
APPROXIMATE PROPERTY
BOUNDARY
OUTLET FROM
CITY OF ATLANTA
STORM SEWER
J:\gis\735996\wwater\surfwater.apr



LEGEND

(1) (2) (3) DRAINAGE SUBAREA

SUBAREA BOUNDARY

GENERAL SURFACE FLOW DIRECTION

NOTE: APPROXIMATE SITE BOUNDARY AND APPROXIMATE SURFACE WATER FLOWS FOR MODELING PURPOSES ONLY.

SUB AREA	ACRES
1	49.49
2	25.03
3	59.59
TOTAL	134.11

Figure 3-3
Pre-Development Surface Water Flow

17th Street Extension and Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: LAW 1999g

3.2.4 Terrestrial Habitat

The study area is characterized as an industrial and urban environment. It includes typical urban features like railroads, roads, highways, parking lots, sidewalks, residential neighborhoods, commercial buildings, industrial buildings, and some low-quality natural areas. The majority of terrestrial habitat in the study area includes some areas on the Atlantic Steel site, old field/scrub areas along the south side of 16th Street adjacent to the Atlantic Steel property boundary, and residential yards that occur in the adjacent neighborhoods. The yards contain older trees and appear to be regularly maintained by landowners. The study area to the east of I-75/85 is almost entirely developed with very little natural habitat. All the pre-existing natural areas appear to have been altered to some degree by development.

A survey of the Atlantic Steel site was completed in July 1999. Typical tree species present at the time of the field survey included hackberry (*Celtis occidentalis*), water oak (*Quercus nigra*), sweet gum (*Liquidambar styraciflua*), and red cedar (*Juniperous siliciola*). Dominant tree species along the surface water drainage feature included water oak, eastern cottonwood (*Populus deltoides*), empress tree (*Paulownia tomentosa*) boxelder (*Acer negundo*), black willow (*Salix nigra*), silk tree (*Albizia julibrissin*), and sycamore (*Platanus occidentalis*). Old field/scrub area vegetation cover included goldenrod (*Solidago fistulosa*), Japanese honeysuckle (*Lonicera japonica*), sweet gum and oak saplings, and various grass species. The site also includes an upland portion that was partially forested with shrubs and grass.

Terrestrial species that are typical for these areas include small mammals (i.e., squirrels, mice, and voles), various birds (i.e., song-birds, doves, and raptors), and many species of reptiles and amphibians (i.e., bull frog, garter snake, black racers, bull snake, and painted turtle). During the site survey, fauna species observed included a mallard duck (*Anas platyrhynchos*), a red-tailed hawk (*Buteo jamaicenis*), American crows (*Corvus brachyrhnchos*), an array of pigeons (*Columba spp*), and mourning doves (*Zenaida macroura*).

3.2.5 Aquatic Habitat

Aquatic habitat located within the study area is confined to the Atlantic Steel site and consists of the two impoundments. The status of these impoundments is changing due to clean-up activities. The upper middle impoundment (Figure 3-2) was approximately eight feet deep (Law 1999e) and dominated by cattail (*Typha angustifolia*), while the eastern upper impoundment was dominated by smartweed (*Polygonum setaceum*). The eastern upper impoundment was approximately five feet deep (Law 1997). The edge communities of both impoundments were dominated by eastern cottonwood (*Populus deltoides*), boxelder (*Acer negundo*), black willow (*Salix nigra*), and sycamore (*Platanus occidentalis*). Off-site and on-site stormwater drainage was the primary source of water for the impoundments. A dense canopy of riparian forest vegetation covered the channel that runs northeast through the site.

The impoundments were historically used for storage of process water for the steel mills. Annual dredging and maintenance was conducted to keep the impoundments clear of debris and siltation. Chlorine was added to the water to control bacteria. Maintenance to both impoundments was discontinued more than 15 years ago and maintenance to the streambed/riparian area was ceased over 25 years ago (Harmon 1999a). The water in the stream and impoundments was murky and stagnant, and a very distinguishable septic smell was apparent in both areas.

3.2.6 Wetlands

According to the U.S. Army COE and the EPA, wetlands are defined as follows:

> Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (Environmental Laboratory 1987).

Wetlands located within the study area are confined to the Atlantic Steel site and consist of the two impoundments. The impoundments located within the Atlantic Steel site total 3.75 acres and are classified as palustrine wetlands. A palustrine system typically includes all nontidal wetlands dominated by trees, shrubs, persistent, and emergent plants (Cowardin 1979). The wetlands displayed the characteristics required for a jurisdictional determination by standards set forth in the 1987 Corp of Engineers Wetlands Delineation Manual (i.e., prevalence of hydrophytic vegetation, hydric soils, and permanent or periodic inundation or saturation).

During rain events, the impoundments on site typically receive surrounding area stormwater drainage. The impoundments receive ample water to be flooded more than 14 consecutive days during the growing season. Standing water was present during the 1999 survey. The wetlands appear to support few species, which include the mallard duck, as well as other more common urban birds such as the crow and pigeon. The majority of flora are those that typically prosper in disturbed urban areas, including black willow, sycamore (Niering 1985), cattail, and smartweed (Tiner 1988). Over the years, the wetlands have received large amounts of stormwater and process water that was also reported to contain sewage (Richards 1998). The wetlands do not appear to have been able to process the contamination, and therefore, the overall quality of habitat is degraded. The wetlands function, to some extent, as a treatment for the inflow of stormwater. In summary, the wetlands are characterized by low species diversity, have been historically maintained, have been severely affected by wastewater discharges, and do not qualify as unique habitats.

3.2.7 Endangered and Threatened Species

Consultation with the USFWS and the Georgia Natural Heritage Program (GNHP) regarding the potential occurrence of threatened or endangered species within the study area was completed in September 1999 (Appendix D). A list of the potential species of concern based on information received from both agencies is provided in Table 3-1. According to GNHP records, no federal threatened or endangered species occur within a three-mile radius of the Atlantic Steel property. Based on correspondence with the two agencies and findings of the site survey, it was concluded that no federally threatened or endangered species occur in the study area. The only species of concern noted by the GNHP (Krakow 1999) is the state threatened Bay star-vine (*Schisandra glabra*), which is found in the understory of richly forested bottomland hardwoods and adjacent lower slopes. No suitable habitat for this species was identified in the study area. According to the USFWS, "there is little likelihood for the presence of natural wildlife or any federally- and state-listed species to occur within the project study area" (Tucker 1999).

Table 3-1. Listed Species Known to Potentially Occur in Fulton County, Georgia[1]

Common Name	Scientific Name	Listing	Suitable Habitat	Survey Findings
Bald Eagle	*Haliaeetus leucocephalus*	T, SE	Inland waterway and estuarine areas in Georgia.	No individuals or suitable habitat was observed during the site reconnaissance.
Red-cockaded woodpecker	*Picoides borealis*	E. SE	Nest in mature pine with low understory vegetation (<1,5m) forage in pine hardwoods stands >30 years of age, preferable >10" dbh.	No individuals or suitable habitat was observed during the site reconnaissance.
Gulf moccasinshell mussel	*Medionidus pencillatus*	E, SE	Medium streams to large rivers with slight to moderate current over sand and gravel substrate, may be associated with muddy sand substrate around tree roots.	No individuals or suitable habitat were observed during the site reconnaissance.
Bachman=s sparrow	*Aimophila aestivalis*	SR	Abandoned field with scattered shrubs, pines, or oaks.	No individuals or suitable habitat were observed during the site reconnaissance.
Appalachin Bewick=s wren	*Thyromanes bewickialtua*	SR	Dense undergrowth, overgrown fields, thickets, and brush in open or semi-open habitat, feed primarily on insects.	No individuals or suitable habitat were observed during the site reconnaissance.
Blue stripe shiner	*Cyprinella callitaenia*	ST	Brownwater streams.	No individuals or suitable habitat were observed during the site reconnaissance.
Peregrine Falcon	*Falco peregrine*	SE	Nest on high cliffs, high hills, or tall buildings.	No individuals or suitable habitat were observed during the site reconnaissance.
Bay star-vine	*Schisandra glabra*	ST	Twining on subcanopy and understory trees/shrubs in rich alluvial woods.	No individuals or suitable habitat were observed during the site reconnaissance.
Piedmont barren strawberry	*Waldsteinia lobata*	ST	Rocky acidic woods along streams with mountain laurel; rarely in drier upland oak-hickory-pine woods.	No individuals or suitable habitat were observed during the site reconnaissance.

Key to Listings:

E	Endangered (Federal)	SE	State Endangered	SR	State Rare
T	Threatened (Federal)	ST	State Threatened		

[1] — Threatened and endangered species information was received from the United States Fish and Wildlife Service Athens, Georgia Field Office in letter correspondence dated September 22, 1999. Species information was also received from the Georgia Natural Heritage Program at the World Wide Web Site (http://www.dnr.state.ga.us/dnr/wild/gnhpds.htm) and in letter correspondence dated September 8, 1999.

3.3 MAN MADE ENVIRONMENT

3.3.1 Utilities

This section primarily describes existing utilities and historic usage on the Atlantic Steel site. Future impacts to these utilities, related to predicted usage, is presented in Section 4. Other utilities in the study area that may be affected during roadway construction would be identified during the roadway design phase (see Section 4.3.1).

3.3.1.1 Water Supply

The City of Atlanta provides potable water to the site and surrounding area. A 12-inch main entering the site from Mecaslin Street to the south provides the current potable water supply to the existing facilities. Water consumption in 1999 was estimated at approximately 6,900 cubic feet per month (Harmon 1999b). Water distribution lines in proximity to the site include two 8-inch lines, two 16-inch lines, and two 36-inch lines (Law 1999f).

3.3.1.2 Wastewater Disposal

During operation, Atlantic Steel discharged sanitary wastewater to the City of Atlanta sewer system. One 6-foot sewer main and one 3-foot sewer main service the Atlantic Steel property. The 6-foot sewer main runs west to east, entering the property from 14th Street and connecting with the Orme Street Combined Sewer, which runs south to north along the eastern property boundary (Harmon 1999b; Law 1999d). The 6-foot main is maintained by the City of Atlanta. The 3-foot sewer main originating on site runs to the northeast, discharging to the Orme Street Combined Sewer (Figure 3-1). The 3-foot main is maintained by Atlantic Steel. Sewage from the Orme Street Combined Sewer is treated at the City of Atlanta's R.M. Clayton Water Reclamation Plant, except when rain events exceed conveyance capacity and flows are directed to the Tanyard Creek CSO Treatment Facility and.

3.3.1.3 Solid Waste Disposal

Solid waste disposal needs at the site were minimal during Atlantic Steel operations (Harmon 1999b). The City of Atlanta provides routine, municipal waste pick-up services for the study area.

3.3.1.4 Electrical Power

Electrical power in the study area is provided by Georgia Power. Electrical power consumption at the Atlantic Steel Facility in 1999 was estimated at 214,400 kiloWatt hour (kWh) per month (Harmon 1999b). Electrical power lines that service the site enter from the Georgia Power electrical substation located adjacent to the western boundary of the property.

3.3.1.5 Natural Gas

Natural gas is provided for the Atlantic Steel facility by the Atlanta Gas Light Company. The site is currently served by a 16-inch natural gas main that enters near the Mecaslin Street gate to the site (Law 1999b). Natural gas consumption was estimated in 1999 at 690 cubic feet per month (Harmon 1999b). Existing natural gas mains in proximity to the site include three 16-inch mains and one 20-inch main (Law 1999b).

3.3.2 Hazardous Substances

A comprehensive search for potentially hazardous substances was conducted within the study area. Most of the areas identified were on the Atlantic Steel site; however, several potential off-site areas were identified (Section 3.3.2.5).

3.3.2.1 Atlantic Steel Property Conditions

The Atlantic Steel site has been used for steel-making and steel product finishing operations for nearly 100 years. Steel-making operations were discontinued in 1991. Wire drawing operations, galvanizing and rod cleaning operations ceased in the mid-1990s, and all other operations ceased in December 1998. During its operation, the plant made finished steel from scrap that was melted. Selected product runs of wire rod were acid-pickled in sulfuric acid (rod cleaning) and lime-coated in preparation for wire drawing. Hazardous materials were used, and hazardous wastes were generated during all operating periods.

Since June 1987, Atlantic Steel Industries, Inc. has held a hazardous waste facility permit (HWFP) issued by EPD under authority of the Georgia Hazardous Waste Management Act. During its routine maintenance operations, Atlantic Steel conducted groundwater monitoring activities, solid waste management unit investigations, held financial assurance for post-closure care, and completed other actions associated with the requirements of the permit.

A Phase II Investigation Report was submitted as a Final Report to the Georgia EPD in October 1999 (Law 1999a). This report documents the past uses of hazardous materials at the Atlantic Steel site as well as the locations of potential hazardous waste contaminated areas.

3.3.2.2 Potentially Contaminated Areas

Twenty-nine Potentially Impacted Areas (PIAs) were identified where past operations on the Atlantic Steel site may have impacted soil or groundwater (Law 1999a). Subsurface sampling was conducted in each PIA; fifteen of the PIAs were identified for remediation because they contained chemical constituents at levels greater than acceptable limits.

Groundwater investigations, baseline assessments, profiling of materials, and a PIA assessment were performed at the site from August through November 1998. Laboratory results for groundwater samples analyzed indicated the presence of barium, lead (Pb), zinc, beryllium, and cadmium, trichloroethylene (TCE), 1,1-dichloroethane, cis-1, 2-dichloroethylene, and vinyl chloride. The constituents which exceed EPA Region III Tap Water Values (TWVs) for drinking water were TCE, cis-1,2-dichloroethylene, vinyl chloride, benzo(a)anthracene, cadmium, and zinc.

Soil samples were taken in the first residual soil layer encountered beneath surface fill soil. Results of the "first soil" baseline sample analyses indicated the presence of metals in all samples. Polycyclic aromatic hydrocarbons (PAHs) were detected in two samples. PAHs were not detected in the other eight samples analyzed. VOCs, pesticides, polychlorinated biphenyls (PCBs), cyanide, herbicides, and semi-volatile organic compounds (SVOCs) (other than PAHs) were not detected above their respective detection limits. The only constituents which exceeded criteria used for residential land uses, or Residential Risk Based Criteria (RBCs), were vanadium, arsenic, and benzo(b)fluoranthene.

3.3.2.3 Risk Assessment Findings

A risk assessment was conducted to evaluate the potential risks to human health and the environment in accordance with direction provided by EPD and other federal guidance. The risk assessment (Law 1999a) addressed pathways where exposure could occur. Since the site development would provide for the removal of or cover over contaminated areas, any exposure pathways would be eliminated. Potential future human receptors would not be exposed to existing site soils or groundwater because the new construction would include permanent exposure barriers in the form of structures, pavement, and clean soil cover with institutional controls for future use and maintenance activities at the redeveloped property. In addition, following redevelopment of the property, wildlife and vegetation would not be exposed to contaminated soils since they would be covered with new structures, pavement and clean soil. Therefore, the ecological exposure pathways were eliminated (Law 1999a).

A risk assessment was performed to determine the risk to construction workers posed by contaminants identified at the proposed facility. It was assumed that the complete exposure pathways for construction workers are listed as follows:

1. Incidental ingestion of soil;
2. Inhalation of fugitive dust;
3. Dermal contact with soil;
4. Incidental ingestion of groundwater and;
5. Dermal contact with groundwater.

Several SVOCs, primarily PAHs, were detected in soil samples from various PIAs within the Atlantic Steel site. Organic constituents detected included trichloroethene and PCBs (PCB-1248, PCB-1254, and PCB-1260) in soil samples from PIAs where these constituents were used. In addition, elevated levels of arsenic, cadmium, and Pb were also detected at the Atlantic Steel site (Law 1999a).

The maximum detected concentrations of arsenic, cadmium, Pb, mercury, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, PCB-1248, PCB-1254, PCB-1260, and trichloroethene exceeded the risk-based residential screening criteria, and were therefore selected as constituents of potential concern (COPCs).

Analytical results for the eight groundwater monitoring wells installed during the Phase II Investigation were used to select COPCs. Results of analyses from these eight wells indicated that five metals (barium, beryllium, cadmium, Pb, and zinc), four volatiles (1,1-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and vinyl chloride), and seven PAHs were detected in groundwater on the site. The maximum detected concentrations of cadmium, Pb, zinc, benzo(a)anthracene, cis-1,2-dichloroethene, trichloroethene, and vinyl chloride in ground-water exceed the risk-based screening criteria for tap water and were selected as COPCs (Law 1999a).

The risk assessment was first conducted for future construction workers exposed to all potential impacted areas on the site, and the Hazard Index (noncarcinogenic) and Lifetime Cancer Risks were then calculated. The cumulative Hazard Index was calculated to be 0.1. A Hazard Index of less than

1.0 indicates adverse health effects are not expected to occur as a result of exposure to contaminant levels at the site. The Lifetime Cancer Risk was calculated to be $3x10^{-6}$ (three-in-one million). The EPD "trigger" level for further assessment and potential action due to an unacceptable increased Lifetime Cancer risk, is $1x10^{-6}$ (one-in-one million). The EPA Region 4 Lifetime Cancer Risk "trigger" level is $1x10^{-4}$ (one-in-ten thousand). The calculated Lifetime Cancer Risk of $3x10^{-6}$, is significantly less than the EPA "trigger" level of $1x10^{-4}$, but greater than the EPD "trigger" level of $1x10^{-6}$.

Potential "hot spots" (areas containing high levels of contamination) were then identified for excavation and off-site disposal. The Hazard Index and the Lifetime Cancer Risk were recalculated based on the remaining area. The Hazard Index was calculated to be 0.07 and the Lifetime Cancer Risk was $4x10^{-7}$. Both of these levels are below the EPD and the EPA "trigger levels" for further assessment and potential action due to an unacceptable increased risk.

3.3.2.4 Asbestos Containing Materials

Several buildings that were demolished on the Atlantic Steel site contained asbestos-containing fireproofing materials (Harmon 1999a). Asbestos is a known carcinogenic material whose primary exposure route is through inhalation. When disturbed, asbestos-containing materials release fibers into the air (i.e., become "friable"), and thereby create a risk to construction workers. In order to protect individual health and the environment, demolition of these structures occurred in accordance with state and federal standards. The materials were disposed of in a manner acceptable under the state and federal requirements.

3.3.2.5 Off-Site Concerns

A search of environmental databases was conducted for environmental regulatory information. This regulatory records search was based on information published by state and federal regulatory agencies and is used to determine if the site or nearby properties are listed as having a past or present record of actual or potential environmental impacts. It was determined that there are six underground storage tanks (UST) sites within approximately 0.25 miles of the Atlantic Steel site and seven leaking underground storage tank (LUST) sites within 0.5 miles of the site. There are also 3 sites within 0.25 miles of Atlantic Steel that generate small quantities of hazardous waste.

The National Smelting and Refining Company formerly owned and operated a facility located across the railroad tracks, north of the Atlantic Steel site. In the early 1990's, EPA and several companies conducted a removal action at the National Smelting and Refining Company property under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The site is continuing to undergo investigation under the direction of EPA.

Three other sites were identified that contain either USTs or previously identified LUSTs. These three sites have the potential to impact or be impacted by the proposed roadway improvements. Westinghouse Electric Corporation owns property on the corner of Bishop Street and Northside Drive, and a previous LUST was identified on the property. The extension of 17th Street to Northside Drive would occur in the vicinity of this property. In addition two gasoline stations, with USTs and previously identified LUSTs on-site, are located on the north side of 14th Street between Williams Street and Spring Street. Widening of 14th Street would occur in this area.

3.3.3 Transportation Features

3.3.3.1 Existing Street System

The City of Atlanta Department of Public Works (DPW) and GDOT share the responsibility for maintaining the existing street system in the study area. Generally, DPW maintains the local streets, and GDOT maintains the state routes (SR). State routes in the study area include: Interstate 75 (SR 401), Interstate 85 (SR 403), Northside Drive (US 41/SR 3), 14th Street (US 19/SR 9), Spring Street (US 19/SR 9), and West Peachtree Street (US 19/SR 9). All traffic signals, landscaping, and street lighting on both local streets and state routes are maintained by DPW.

The Atlantic Steel site and the Midtown area are accessed via exits at 10th and 14th Streets from I-75/85. Due to the existing ramp configurations at 10th and 14th Streets, this area can only be accessed in certain directions. Traffic from the north on I-75 and I-85 can only exit at 14th Street. Traffic from the south on I-75/85 can only exit at 10th Street.

Existing traffic volumes on roadways in the study area were collected in December 1998 and May 2000 at all signalized intersections and at major unsignalized intersections in the study area. Freeway and ramp traffic volumes were obtained from GDOT. The average annual daily traffic volumes (AADT) for the study area are presented in Figure 3-4. AADT represents the average traffic volume on a roadway segment on any given day of the year (MAAI 2000a). Additional information on existing A.M. and P.M. peak hour traffic volumes on specific roadways is not presented in this EA, but is contained in the latest version of the GDOT Concept Report and is available from GDOT upon request.

Due to the limited access into Midtown Atlanta, a tremendous amount of traffic utilizes the two above-mentioned interchanges, especially at 14th Street. Due to traffic congestion at these interchanges, the east-west movement of traffic is also severely limited. Roadways such as those included in the study area are rated for operational effectiveness using a Level of Service (LOS) scale. LOS is a standardized means of classifying traffic conditions associated with various traffic volume levels. LOS ranges from “A” through “F.”

Table 3-2 presents general definitions for each LOS. Figures 3-5 and 3-6 show the LOS and existing areas of congestion on the interstates, ramps, and at key intersections and surface streets, in the A.M. and P.M. peak hours, respectively. Non-colored surface streets represent a LOS of C or better while green, yellow, and red colored streets and intersections represent LOS of D, E, and F respectively.

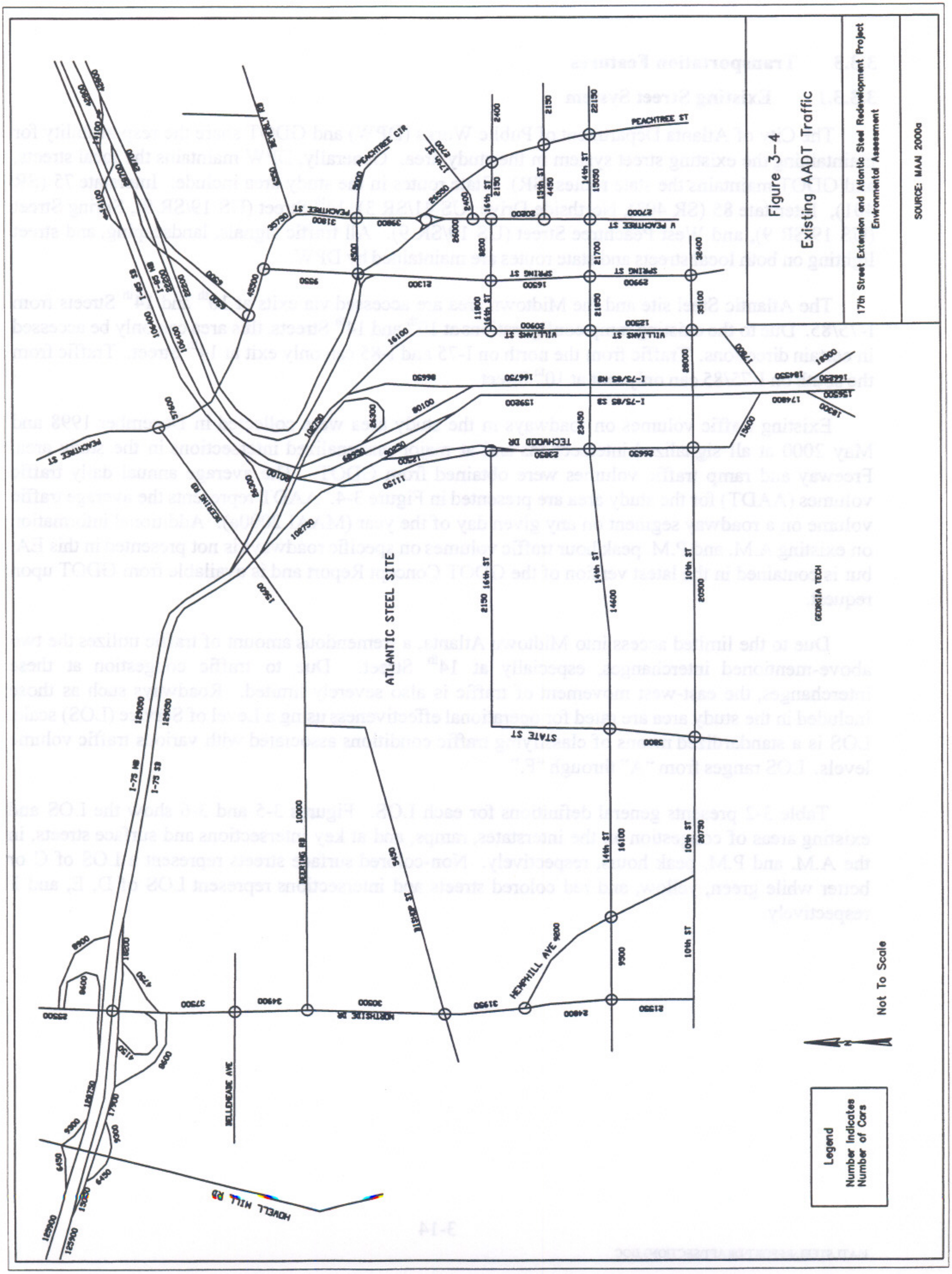


Figure 3–4
Existing AADT Traffic

Table 3-2. Level of Service Definitions

Level of Service	Definition
A	Represents free flow traffic.
B	In the range of stable flow, but the presence of other users in the traffic flow begins to be noticeable.
C	In the range of stable flow, but marks the beginning of traffic flow in which the operation of individual users becomes significantly affected by interactions with others in traffic.
D	Represents high-density, but stable, traffic flow. Driver or pedestrian experiences a general poor level of comfort.
E	Represents operating conditions nearing capacity level. All speeds are reduced to a low, but uniform value. Traffic operating at this level is unstable and small increases in traffic flow can cause system breakdown.
F	Represents transportation system breakdown. Stop and go situations occur for long stretches of the roadway.
Source: Highway Capacity Manual, Special Report 209, Transportation Research Board 1997	

3.3.3.2 Modal Interrelationships

Transit. The majority of the transit service for the Atlanta area is provided by MARTA. MARTA currently operates a 46-mile rapid rail system as well as a fleet of 700 buses. The bus transportation network is organized to feed the surrounding areas to the rapid rail system. MARTA also operates 36 rapid rail stations in its network. The closest of these, the Arts Center Station, is located in proximity to the Atlantic Steel site, on the east side of I-75/85. Existing MARTA buses provide service in the study area and interface with the Arts Center Station. Bus service from the Atlantic Steel site will have access to the MARTA Arts Center Station. Cobb County operates Cobb Community Transit (CCT) which provides bus service that connects with the MARTA system at the Arts Center Station. Currently, CCT buses exit at 14th Street for access to the Arts Center Station.

Bicycle. Atlanta estimates that currently less than one percent of the population uses bikes to get to and from work, shopping, or school (City of Atlanta 2000). Atlanta hopes that by providing safe and convenient bike facilities, it can increase ridership and decrease automobile dependency. Currently, the City of Atlanta has three programs to initiate this process: the Greenway Trail Corridor Plan, the Atlanta Commuter On-Street Bike Plan, and the Bicycling Parking Plan. There is one major bike trail that is under design/construction that is in the study area, the Arts District Trail. This trail is part of the aforementioned Greenway Trail Corridor Plan. When completed, this trail will stretch from downtown Atlanta, north to Atlanta Memorial Park (ARC 1995).

Pedestrian. In most areas of downtown Atlanta, it is often unsafe or uncomfortable for people to walk across the street or along a street. This is due to lack of adequate sidewalks, crosswalks, and pedestrian signals. Pedestrian access in the Atlantic Steel immediate vicinity is especially a problem. However, in 1997 the City of Atlanta constructed sidewalks on both sides of 14th Street, south of the Atlantic Steel site. This was done to link the Georgia Tech campus with the Midtown area. As part of

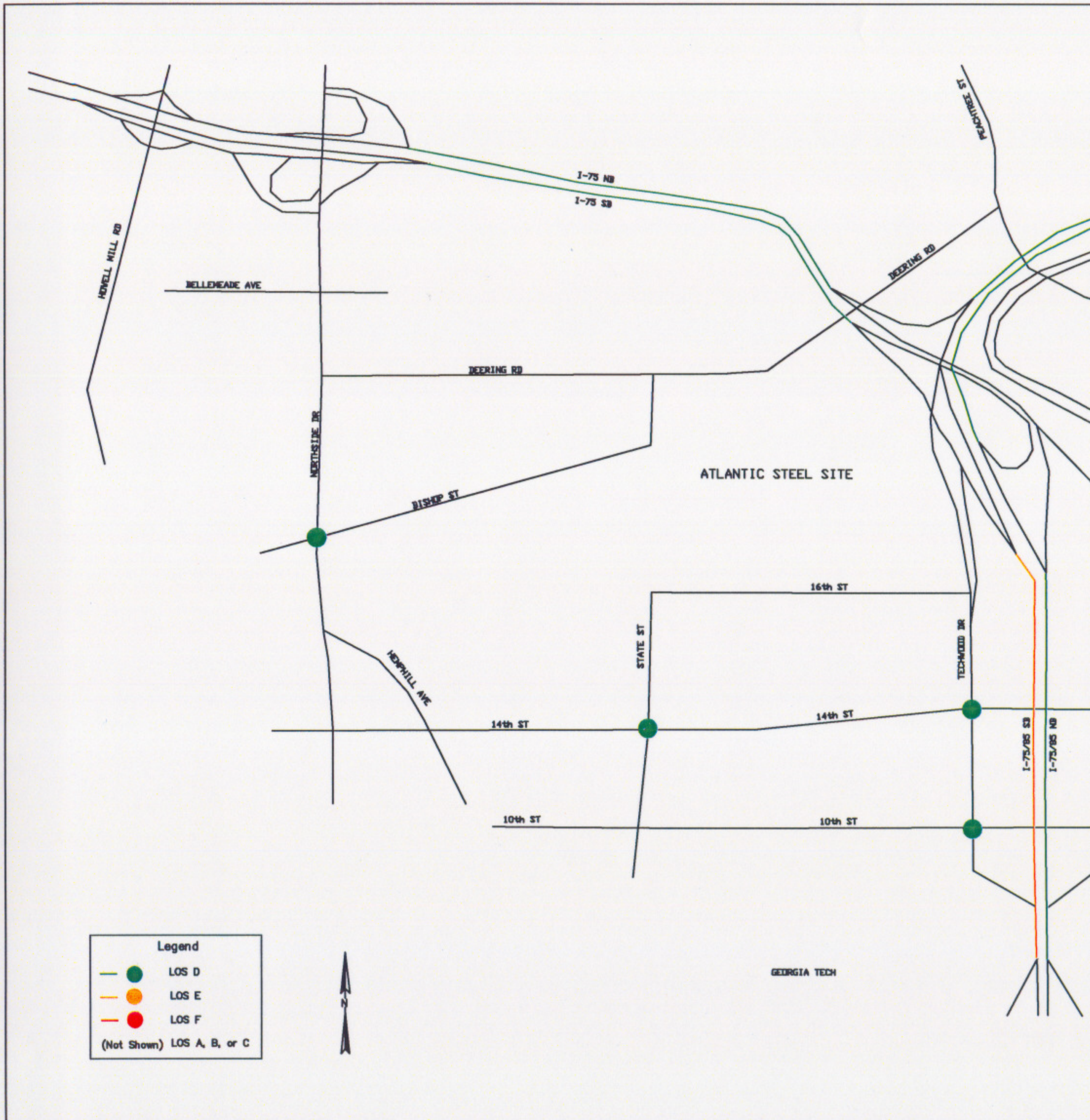


Figure 3–5

Existing AM Peak Hour LOS

17th Street Extension and Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: MAAI 2000a

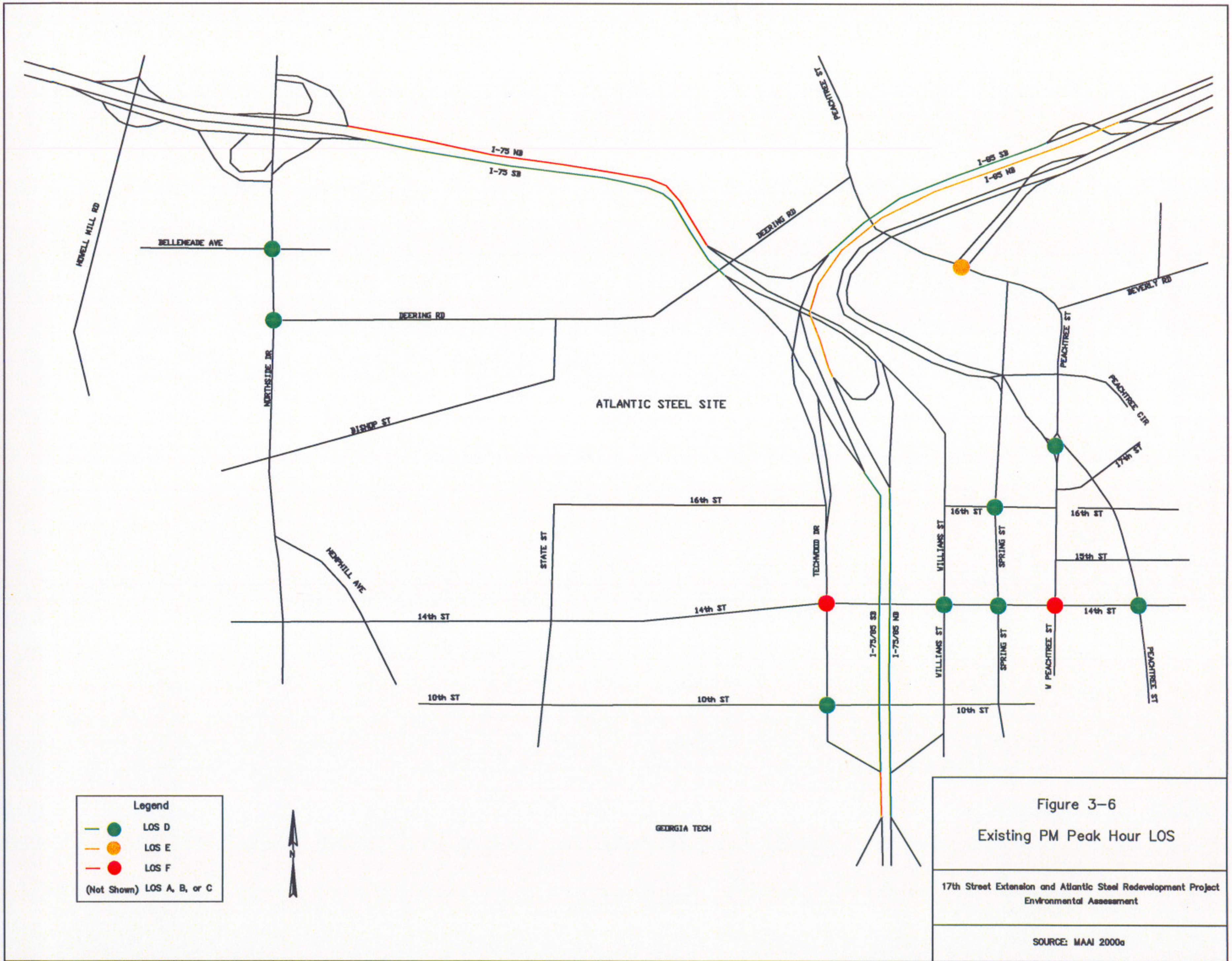


Figure 3-6

Existing PM Peak Hour LOS

17th Street Extension and Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: MAAI 2000a

a process to improve pedestrian awareness, the City of Atlanta started a sidewalk construction program in 1996 to increase safety and connectivity to major destination points. Currently Atlanta has several plans to increase pedestrian awareness: Operation Crosswalk, the Pedestrian Master Plan, and the Atlanta-Fulton Pedestrian Safety Task Force.

3.3.4 Air Quality

This section describes the regulatory context and current air quality status for the study area. The EPA has established primary and secondary National Ambient Air Quality Standards (NAAQS) for criteria pollutants under the provisions of the CAA. Primary NAAQS are established at levels necessary, with an adequate margin of safety, to protect the public health. Similarly, secondary NAAQS specify the levels of air pollution determined appropriate to protect the public welfare from any known or anticipated adverse effects associated with air contaminants. Federal ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter smaller than 10 microns (PM_{10}), and Pb are summarized in Table 3-3. Areas not in compliance with the NAAQS are termed "non-attainment" areas. Attainment of the NAAQS is determined through continuous ambient monitoring. Thirteen counties surrounding and including the City of Atlanta and Fulton County are currently designated as “non-attainment" area due to ozone violations of the NAAQS.

Table 3-3. National Ambient Air Quality Standards

Pollutant	Averaging Time	Primary Standard
Ozone	1 Hour	0.12 ppm
Carbon Monoxide (CO)	1 Hour	35 ppm
	8 Hour	9 ppm
Nitrogen Dioxide (NO_2)	Annual Average	0.053 ppm
Sulfur Dioxide (SO_2)	3 Hour	0.5 ppm (a)
	24 Hour	0.14 ppm
	Annual Average	0.03 ppm
PM_{10}	24 Hour	150 ug/m3
	Annual Geometric Mean	50 ug/m3
Lead (Pb)	Calendar Quarter	1.5 ug/m3

Secondary Standard

Source: US EPA National Primary and Secondary Ambient Air Quality Standards (40 CFR 50)

Ozone is of particular concern in the Atlanta Metropolitan area. Ozone is a highly reactive compound formed by a series of complex photochemical reactions involving VOCs and NOx. These photochemical reactions require the presence of intense sunlight. The NAAQS for ozone is based on the expected number of days per year with a one hour concentration of 0.12 ppm or greater. The severity or magnitude of the exceedance is determined by the amount the measurement is above the standard. Five (5) classifications of non-attainment for the one-hour ozone standard are specified in the 1990 CAA Amendments (CAAA) as marginal, moderate, serious, severe and extreme. With respect to ozone, the area has not met the NAAQS for this criteria pollutant since monitoring began in

1980. In 1992, a 13-county region encompassing the Atlanta metropolitan area was designated as a "serious" non-attainment area under Section 181 of the CAA.

Current air quality in the vicinity of the study area is monitored by EPD's Air Protection Branch through a network of fourteen monitoring sites, including seven sites monitoring for ozone. The maximum monitored ambient concentrations for all six criteria pollutants and ozone precursors for the City of Atlanta between 1995 and 1999 are summarized in Table 3-4. As reported in this table, the Atlanta area continues to achieve compliance with the NAAQS for all pollutants with the exception of ozone.

3.3.5 Noise

Noise is often defined as unwanted sound. Sound is easily measured with instruments, but the human variability is subjective and physical responses to sound complicates the understanding of its impact on people. People judge the relative magnitude of sound by subjective terms such as "loudness" or "noisiness."

Sound-pressure level (L_p) is measured and quantified in terms of a logarithmic scale in decibels (dB). Research on human hearing sensitivity has shown that a 3 dB increase in the sound is barely noticeable and a 10 dB increase would be perceived as twice as loud. The human hearing system; however, is not equally sensitive to sound at all frequencies. Therefore, a frequency-dependent adjustment called "A-weighting" has been devised so that sound may be measured in a manner similar to the way the human hearing system responds. The A-weighted sound level is often abbreviated "dBA" or "dB(A)."

The hourly contributions of highway noise are examined using primarily L_{eq} (average hourly equivalent sound level) and statistical values such as L_{10} (the sound level exceeded 10 percent of a specific time period). While both are accepted by FHWA and GDOT, the L_{10} is used to analyze this traffic noise study.

The proposed mixed-use development and 17th Street Bridge/Interchange is within a major urban area that is bisected by the I-75/85 connector. Existing noise measurements were taken at representative locations that were expected to receive the largest impact, where there was insufficient traffic data, and in areas where there exists a unique physical situation. The L_{10} noise levels were measured using the Bruel & Kjaer Type 2231 Modular Precision Sound Level Meter system. Appendix E presents noise measurement locations and monitoring results.

Existing traffic noise levels along the Interstate and the associated roadways were calculated using the FHWA Highway Traffic Noise Prediction Model (FHWA 1982). This model is based on the highway traffic noise prediction method specified in FHWA-RD-77-108. Calculated future noise levels, L_{10}, across the entire study area ranged from 58 to 79 dBA (MAAI 2000b). The existing calculated noise levels are shown in Appendix E.

Table 3-4. Maximum Monitored Ambient Concentrations in Atlanta for 1995-1999 (a)

Pollutant	Averaging Time	Concentration (b)	Year of Occurrence	Exceeds Standard?
CO	1-hour	5.1 ppm	1999	No
		5.1 ppm	1998	No
		6.4 ppm	1997	No
		7.8 ppm	1996	No
		28.9 ppm	1995	No
	8-hour	3.2 ppm	1999	No
		3.1 ppm	1998	No
		4.3 ppm	1997	No
		3.9 ppm	1996	No
		7.1 ppm	1995	No
NO_2	1-year	.022 ppm	1999	No
		.024 ppm	1998	No
		.025 ppm	1997	No
		.027 ppm	1996	No
		.019 ppm	1995	No
SO_2	3-hour	.061 ppm	1999	No
		.118 ppm	1998	No
		.095 ppm	1997	No
		.062 ppm	1996	No
		.083 ppm	1995	No
	24-hour	.024 ppm	1999	No
		.033 ppm	1998	No
		.028 ppm	1997	No
		.027 ppm	1996	No
		.024 ppm	1995	No
	1-year	.004 ppm	1999	No
		.004 ppm	1998	No
		.004 ppm	1997	No
		.004 ppm	1996	No
		.004 ppm	1995	No

Table 3-4 (Concluded). Maximum Monitored Ambient Concentrations in Atlanta for 1995-1999 (a)

Pollutant	Averaging Time	Concentration (b)	Year of Occurrence	Exceeds Standard?
O_3	1-hour	.157 ppm	1999	Yes
		.158 ppm	1998	Yes
		.135 ppm	1997	Yes
		.142 ppm	1996	Yes
		.166 ppm	1995	Yes
PM_{10}	24-hour	55 ug/m^3	1999	No
		62 ug/m^3	1998	No
		72 ug/m^3	1997	No
		61 ug/m^3	1996	No
		62 ug/m^3	1995	No
	1-year	27.4 ug/m^3	1999	No
		27.6 ug/m^3	1998	No
		30.2 ug/m^3	1997	No
		27.4 ug/m^3	1996	No
		30.1 ug/m^3	1995	No

a. Source: EPA 1999
b. First highest maximum concentration at monitoring sites in Atlanta, Georgia.
ug/m^3 - micrograms per cubic meter.

3.3.6 Archaeological/Historic Resources

3.3.6.1 Regulatory Environment and Terminology

NEPA, as amended (42USC 4371 et seq), the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470), Section 4(f) of the US DOT Act, as amended (49 USC 303(c)), and other applicable federal, state, and local legislation govern the identification and treatment of historic properties that are affected by a proposed federal action. Sections 106 and 110 of the NHPA require the evaluation of effects of federal actions on historic properties. Implementing guidelines for the NHPA also encourage coordinated compliance among Section 110, Section 106, and NEPA. Coordination with the Georgia SHPO is being conducted as part of this EA process, as well as coordination with other agencies and interested parties, including the Advisory Council on Historic Preservation, Atlanta Urban Design Commission, Atlanta History Center, and Georgia Trust for Historic Preservation. The existing EA process is being used to fulfill the coordination requirements of Section 106, as encouraged by 36 CFR 800.2(a)(4).

An initial step in the Section 106 identification process is to determine the area within which historic properties will be affected or are likely to be affected. The "Area of Potential Effects" (APE) is defined in 36 CFR 800.16(d) as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." In accordance with 36 CFR 800.4(a), the EPA consulted with the Georgia SHPO to determine the boundaries of the APE. Boundary delineation also relied on physical examination of the project site and its vicinity, public comments received at public meetings during the NEPA process, and known concerns of parties interested in historic properties, such as the Atlanta Urban Design Commission, the Ansley Park community, and the Home Park neighborhood. In addition to considering potential physical effects (e.g., ground disturbance at the project site and related road construction), the APE includes a physical "buffer" area that considers visual impacts to the surrounding area. The APE is bounded roughly by 14th Street on the south, Northside Drive on the west, Trabert Avenue and the I-75/85/Brookwood Interchange on the north, and Peachtree Circle/Peachtree Street on the east (see Figure 1-1). For the purposes of this project, the study area and APE are the same.

Two major transportation corridors pass through the APE: the Norfolk Southern Railroad and I-75/85. The proposed redevelopment site occupied by the former steel mill is the primary feature in the western portion of the APE. The APE contains a variety of other building types, including light industrial and railroad-related properties adjacent to Northside Drive to the west, and Norfolk Southern Railroad to the north, a portion of the early-20th century residential neighborhood of Home Park south of the Atlantic Steel site, and a combination of commercial and residential development east of I-75/85, including a portion of the Ansley Park neighborhood east of Peachtree Street.

"Archaeological and historic resources," as used in this EA, are synonymous with "historic properties," defined broadly by 36 CFR 800 as "any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in, the National Register of Historic Places." Historic properties are "significant" in American history or prehistory, and include archaeological and man-made resources. Properties that qualify for inclusion in the National Register must meet at least one of the following four criteria:

Criterion A: Association with events that have made a significant contribution to the broad patterns of our history;

Criterion B: Association with the lives of persons of significance in our past;

Criterion C: Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose component may lack individual distinction; or,

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Properties that qualify for the National Register also must possess integrity, defined by the following seven aspects: location, design, setting, materials, workmanship, feeling, and association. The term "eligible for inclusion in the National Register" includes both properties formally designated as eligible and all other properties determined to meet National Register criteria. In keeping with NHPA regulations (36 CFR 800), "historic property" refers only to resources which are 50 years of age or greater and are listed in, or eligible for listing in, the National Register. In order for buildings and structures less than 50 years of age to be eligible for the National Register, these resources must meet "special criteria considerations" as outlined in 36 CFR 60.4. National Historic Landmarks are defined as historic properties of outstanding national significance that have been specially designated by the Secretary of the Interior, in accordance with 36 CFR 65. For purposes of this discussion, the term "archaeological resources" refers to cemeteries and prehistoric or historical subsurface sites. "Historic resources" refers to buildings, structures, or objects, including historic districts. More detailed assessments of the identification and evaluation effort for archaeological and historic resources are contained in separate reports (Parsons ES 2000a; 2000b) conducted for this project.

3.3.6.2 Archaeological Resources

The archaeological assessment conducted as a result of consultation with the SHPO consisted of a literature and records search, and a windshield-level field reconnaissance. The literature and records search covered the entire APE for the project, while the field reconnaissance focused on areas that would experience direct physical impacts.

With the exception of the railroad tracks constructed from 1869-1873, the majority of the project area was undeveloped prior to erection of the Atlantic Steel Mill in the early twentieth century. As the steel mill expanded during the twentieth century, the original landform changed considerably. Most notably, the intermittent drainage which ran through the property was filled in on its eastern end, and buildings were constructed over top of it. Part of the drainage was turned into a pond. Portions of the site also were filled, to create a level building surface for the steel mill. Finally, a prominent hill originally situated at the eastern end of the Atlantic Steel site was reduced by approximately 25 feet so that additional buildings could be constructed there. The soil that was removed from the hill was used to fill in areas to the north and south of the hill (Harmon 1999c).

The remainder of the study area saw building construction beginning in the early-twentieth century and continuing through the late-twentieth century. A more complete description of the historic land use in these areas is presented in the Archaeological Assessment Report (Parsons ES 2000a).

No archaeological sites previously had been recorded in the APE, and none were observed during the field survey. Much of the APE area has been disturbed from development and associated grading. The only portion of the project area that appears to have the potential to yield archaeological resources is the intersection of Hemphill Avenue and Northside Drive north of 14th Street. The roadbed of Hemphill Avenue may contain buried trolley tracks, and the area beneath or alongside Hemphill Avenue could contain original water pipes associated with the National Register-listed Atlanta Waterworks Hemphill Avenue Station. Both of these resources would be potentially eligible for listing in the National Register.

3.3.6.3 Historic Resources

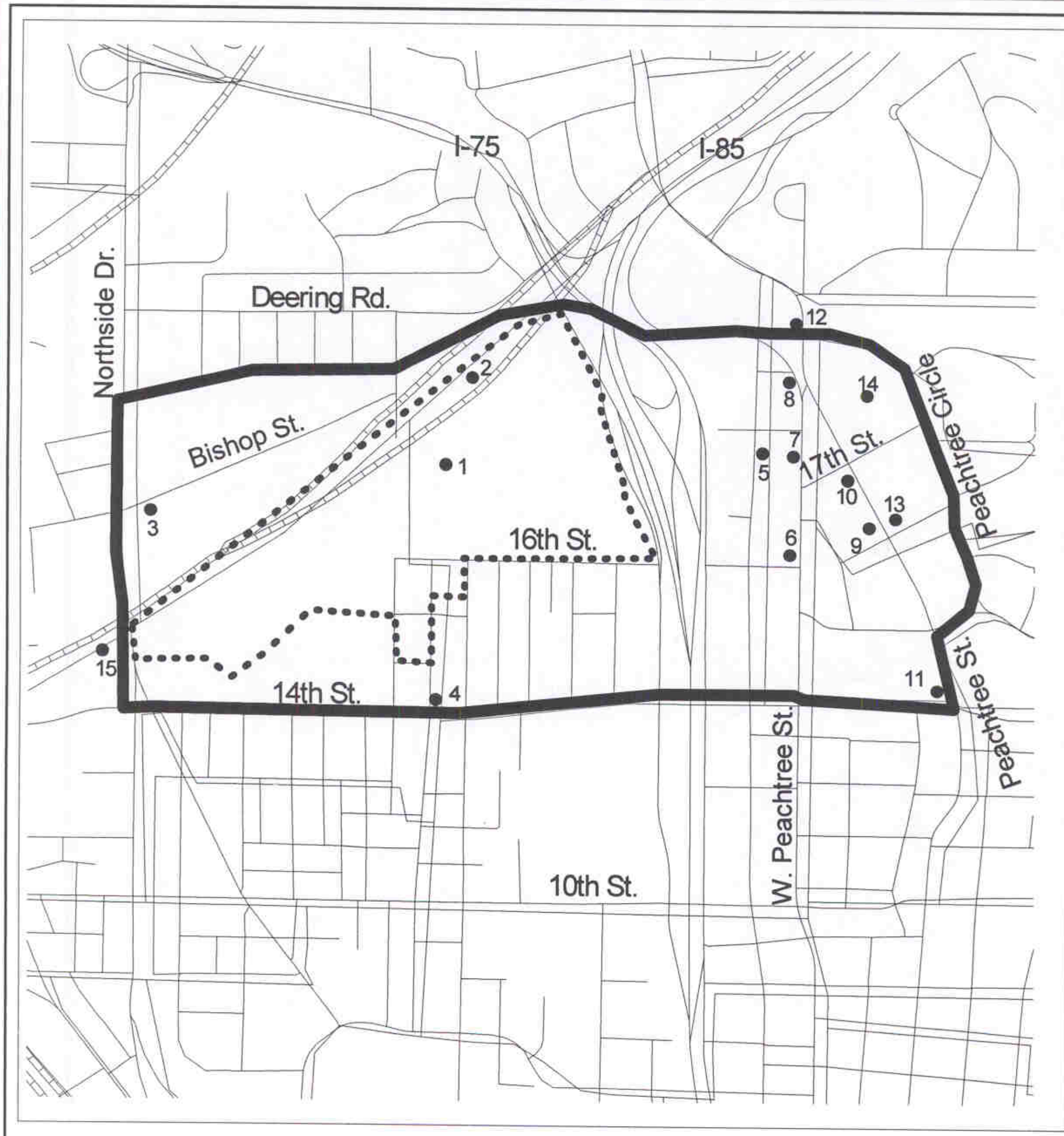
This section summarizes the findings of the Historic Architectural Properties Identification and Evaluation Report (Parsons ES 2000b). The historic resources evaluation was conducted as a result of consultation with the SHPO and consisted of several tasks:

- Historic literature/map research at such repositories as the: Georgia Department of Natural Resources, Historic Preservation Division; Atlanta History Center archives; Atlanta Urban Design Commission; Fulton County Central Library; Georgia Archives; and the Georgia Trust for Historic Preservation at Rhodes Hall;
- Review of key materials such as:
  - National Register/National Historic Landmark nomination forms;
  - Files and inventories for locally significant properties housed at the Atlanta Urban Design Commission; and
  - Previous investigations (e.g., surveys and compliance-related reports);
- Consultation with local agencies and individuals, including the Georgia SHPO, Atlanta Urban Design Commission, Atlanta History Center, Neil Harmon (Principal Environmental Engineer and long-time employee of Atlantic Steel Industries); Ruth Dusseault (an independent photographer and artist who conducted a photographic documentary of the mill site); and Dominique Bohnamour-Lloyd (a Professor at Georgia Institute of Technology who directed a class project that involved documentation of the Atlantic Steel Mill); and
- Architectural survey of the APE, with particular focus on those areas that would experience direct physical impacts due to redevelopment of the Atlantic Steel site and the related off-site roadway improvements.

There are eleven known historic architectural properties within the APE: four properties are listed in the National Register (Rhodes Hall, Garrison Apartments, the Ansley Park Historic District, and the Atlanta Waterworks Hemphill Avenue Station), and seven properties were previously identified as being eligible for the National Register by the Atlanta Urban Design Commission (Ewell Jett House, The Granada, The Belvedere, Winwood Apartments, First Presbyterian Church, Mitchell King House, and the Castle). Four additional properties were identified as eligible as a result of the identification/evaluation effort for this project (Atlantic Steel Industries, Norfolk Southern Railroad, Siemens, and Kool Korner Grocery). These properties are presented in Table 3-5, shown in Figure 3-7, and described briefly in Appendix F.

Table 3-5. Historic Properties in the APE

Resource #	Resource Name/Address	Date	Current Use	NR Eligibility
1	Atlantic Steel Industries	1901 and after	Demolished	Yes (Identified Eligible)
2	Norfolk Southern Railroad	1869-1873	Railroad	Yes (Identified Eligible)
3	Siemens 1299 Northside Drive	1941	Commercial	Yes (Identified Eligible)
4	Kool Korner Grocery 349 14th Street	Circa 1935	Commercial	Yes (Identified Eligible)
5	Ewell Jett House 1385 Spring Street NE	1916	Commercial	Yes (Previously Identified)
6	The Granada 1302 W Peachtree Street	1924	Granada Best Western Suite Hotel	Yes (Previously Identified)
7	The Belvedere 1384 W Peachtree Street	1922	Apartments	Yes (Previously Identified)
8	Winwood Apartments 1460 W Peachtree Street	1931	Apartments	Yes (Previously Identified)
9	First Presbyterian Church 1328 Peachtree Street NW	1919	Church	Yes (Previously Identified)
10	Mitchell King House 1382 Peachtree Street NW	1912	Commercial (Nix, Mann & Associates)	Yes (Previously Identified)
11	The Castle(Fort Peace) 87 15th Street, NW	1910	Commercial	Yes (Previously Identified)
12	Rhodes Hall 1516 Peachtree Street, NW	1904	Commercial	Listed 1974
13	Garrison Apartments 1325-1327 Peachtree Street NE	1924	Reid House (Apartments)	Listed 1979
14	Ansley Park Historic District (including First Church of Christ Scientist)	Early 20th c	Residential Neighborhood	Listed 1979
15	Atlanta Waterworks Hemphill Avenue Station	1892-1893	Water Treatment Plant	Listed 1978



LEGEND

- Area of Potential Effect
- Atlantic Steel Redevelopment Site
- Railroad
- Historic Sites

1 Atlantic Steel Industries
2 Norfolk Southern Railroad
3 Siemens
4 Kool Corner Grocer
5 Ewell Jett House
6 The Granada
7 The Belvedere
8 Winwood Apartments
9 First Presbyterian Church
10 Mitchell King House
11 The Castle (Fort Peace)
12 Rhodes Hall
13 Garrison Apartments
14 Ansley Park Historic District
15 Atlanta Waterworks Hemphill Avenue Station

Figure 3-7
Historic Properties in the Area of Potential Effects

17th Street Extension And Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: Parsons ES 2000b

J:\gis\735996\Homepark\EJ_Catherine\data_check

3.3.7 Section 4(f) Applicability

Section 4(f) of the DOT Act of 1966 applies to all Federal-Highway programs, including Federal-Aid Highway subsidies. The purpose of Section 4(f) is to protect parks, recreation areas, wildlife/waterfowl refuges, and historic sites, by requiring transportation projects to provide additional examination of these resources before approval can be granted. Section 4(f) applies to all historic sites, but only publicly owned parks, recreational areas, and wildlife and waterfowl refuges. Section 4(f) stipulates that the FHWA and FTA can only approve a project that uses land from identified Section (4f) resources if:

- There is no feasible and prudent alternatives to the use of these resources; and
- All possible planning has been taken to minimize harm to the resources.

The potential for Section 4(f) resources was researched and surveyed in the study area. These efforts resulted in the identification of fifteen potential Section 4(f) resources, consisting of the fifteen historic properties that are listed or eligible for listing in the National Register of Historic Places. These properties are discussed in Section 3.3.6.3 and Appendix F, as well as detailed in the Historic Architectural Properties Identification and Evaluation Report (Parsons ES 2000b).

FHWA and GDOT are responsible for determining the applicability of Section 4(f) for this project. As described previously, the Atlantic Steel site was identified as a potential Section 4(f) resource because it has been identified as eligible for listing in the National Register. However, as described in Section 2.7, under the no action alternative, the Atlantic Steel Site would be cleaned up and redeveloped regardless of whether or not the 17th Street Extension occurs. Demolition of all on-site buildings has occurred and cleanup of the site is currently underway as part of the private redevelopment action. Therefore, there is no Section 4(f) applicability to the Atlantic Steel Site since the buildings have been demolished as part of the environmental remediation and proposed redevelopment. As part of EPA's decision to approve this project as a TCM, compliance with Section 106 of the NHPA was required for adverse effects to the Atlantic Steel Site (see Section 4.3.6).

3.3.8 Land Use

For purposes of defining existing land use, socioeconomic conditions (Section 3.3.9), and potential environmental justice (EJ) areas (Section 3.3.10), an area of influence for these categories was identified based on a broader, one-mile buffer surrounding the previous defined study area (Peachtree Circle/Peachtree Street on the east, 14th Street to the south, Trabert Avenue/Brookwood Interchange to the north, and Northside Drive to the west). This broader area of influence was identified because of the potential social and economic impacts that are likely to occur as a result of this redevelopment project.

3.3.8.1 Existing Land Use

Land use in this one-mile area of influence includes the residential neighborhoods of Home Park, Loring Heights, and Ansley Park; the Midtown commercial district; Georgia Institute of Technology campus and all its related facilities; and heavy and light industrial complexes, primarily to the west. This entire area is a major employment center in the Atlanta metropolitan region.

The one-mile buffer contains approximately 4,852 acres of land. The largest land use within the one-mile buffer is associated with the Industrial/Commercial Complexes, at 21 percent. This is followed closely by the Medium Density Residential land use category, at 19 percent. The smallest land uses in the study area are associated with the Urban-Other and Deciduous Forest categories, both at one percent. Table 3-6 shows a breakdown of land uses in this area. Existing land uses are shown in Figure 3-8.

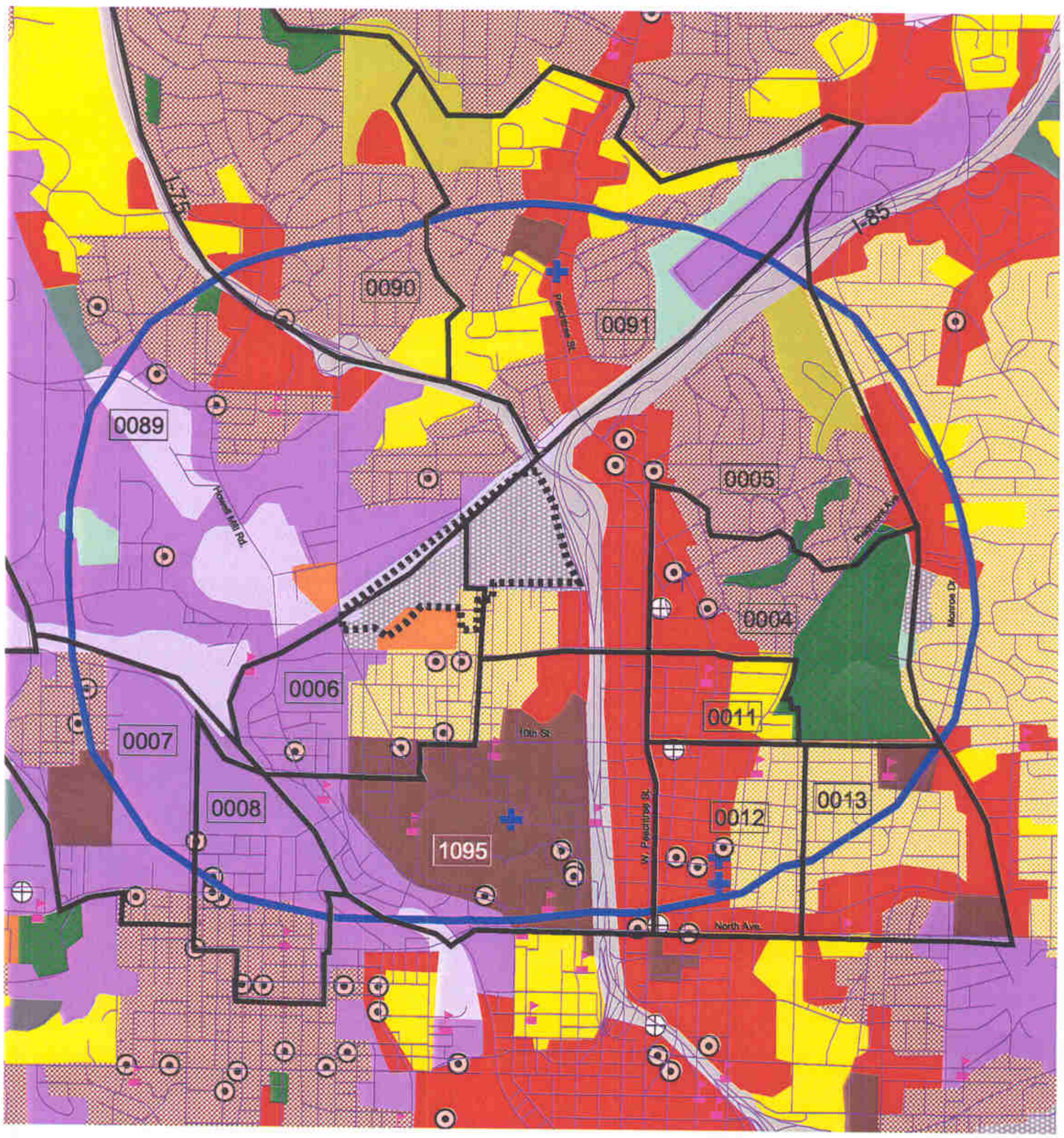
Table 3 - 6. Existing Land Use in the Vicinity of Atlantic Steel

Type of Land Use	Acres in Study Area	Percentage of Total
Residential-Medium Density	930	19
Residential-High Density	454	9
Residential-Multi-Family	176	4
Commercial	804	17
Industrial	151	3
Institutional	399	8
Golf Courses	69	2
Forest-Deciduous	55	1
Parks	207	4
Trans/Comm/Utilities	266	6
Ind/Comm Complexes	1,036	21
Urban-Other	44	1
Highways	261	5
Total	**4,852**	**100**

This project conforms to several of the goals and objectives of the adopted *City of Atlanta 2001 Comprehensive Development Plan* (City of Atlanta 2000) which projects the kinds of future development that may occur in the City in the foreseeable future. The City of Atlanta predicts residential land use patterns to increase in the study area in terms of higher density and in-fill development similar to Atlantic Steel. Residential land uses should become more prominent as the City attempts to discourage sprawl.

3.3.8.2 Neighborhoods and Community Facilities

Neighborhoods. The organized neighborhoods within the area of influence are: Home Park, located immediately south of the Atlantic Steel site; Ansley Park, which is located east of I-75/85; and Loring Heights, which is located north of the Atlantic Steel site. Home Park and Loring Heights are single-family residential areas containing mostly bungalow-style housing units built in early to mid-1900s and are established neighborhoods with a mixture of rental and owner-occupied residences. Ansley Park was constructed in the early twentieth century and encompasses an area of approximately 275 acres. It includes approximately 600 single-family homes and several apartment buildings.



LEGEND

Atlantic Steel Site	
1 Mile Buffer	
Tract Boundary and Tract Number	
Hospital	
Library	
Cemetery	
Religious Center	
School	
Transit Station	

Landuse

- Commercial
- Industrial
- Trans/Comm/Utilities
- Ind/Comm Complexes
- Urban-other
- Res-med density
- Res-high density
- Res-multi-family
- Institutional - Intensive
- Golf Courses
- Forest deciduous
- Ltd Access Highways
- Parks

1000 0 1000 2000 Feet

N

Figure 3-8
Land Use in the Vicinity of Atlantic Steel

17th Street Extension And Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: Atlanta Regional Commission, 1997

J:\gis\735996\Homepark\big map1

Schools. Schools are a strong indicator of community values. The Atlanta Public School System provides public education in the City of Atlanta. There are ten school properties and one four-year university located within the one-mile area of influence. There are three other schools and the Georgia Institute of Technology academic center located just south of the Atlantic Steel site.

Parks, Recreation Areas, and Open Space. There are no parks located within the immediate study area. There are four regional/neighborhood parks that are located within the one-mile area of influence: Piedmont Park, Eubanks Park, Winn Park, and Underwood Hills Park. The Ansley Park Golf Course is located within the one-mile area of influence and situated east of I-75/85 and north of Piedmont Park. The YMCA recreational facility center is located within the study area, south of the Atlantic Steel site. A private recreational ball field owned by Georgia Tech also is located south of the Atlantic Steel property, west of Mecaslin Street. The former Home Park Neighborhood Recreational Facility is also located within the study area and south of Atlantic Steel. However, it has been converted into a day care facility. The adjacent park land area is used by the day care center during the day and is open to the public in the evenings and on the weekends.

There are a few parcels of land within the one-mile area of influence that are considered to be open or vacant. At the time of this report, no development of these parcels is anticipated.

Places of Worship and Cemeteries. There are three religious institutions located in the immediate study area. The First Presbyterian Church is located near the Peachtree Branch library and on the east side of I-75/85. The other two facilities, Atlanta Mosque and Mission Church of God, are located southwest of the Atlantic Steel site, in the Home Park Neighborhood. There are 21 other places of worship located within the one-mile area of influence. Most of these religious institutions are located south and west of the Atlantic Steel site. There are no known cemeteries within the immediate study area or the one-mile area of influence.

Hospitals and Health Centers. There are four medical facilities located within the one-mile area of influence. The Piedmont Hospital complex is located just to the north of the I-75/85 split. The Georgia Tech University Infirmary is located south of the Atlantic Steel site, in the heart of campus. The remaining two facilities are located southeast of the Atlantic Steel site and east of I-75/85. They are the Atlanta Hospital and the Psychiatric Institute of Atlanta.

Libraries and Museums. The Atlanta-Fulton County Public Library system operates one library within the one-mile area of influence, Peachtree Branch. The Robert W. Woodruff Arts Center is located within the study area. It is located across I-75/85, adjacent to the Arts Center MARTA Station. The Woodruff Arts Center is dedicated to excellence in the performing and visual arts. It is home to the Alliance Theatre Company, Atlanta College of Art, Atlanta Symphony Orchestra, 14^{th} Street Playhouse, and the High Museum of Art. The Woodruff Arts Center offers its patrons a unique, multi-faceted experience of many distinctive arts institutions all located on a single campus.

Emergency Services - Fire and Rescue. Fire protection in the area is provided by the City of Atlanta. The city is broken into five districts, and each district has several fire stations to cover the sub-areas of that district. The Atlantic Steel site is located in District Three and the closest fire station is located east of I-75/85 and south of the project study area.

Emergency Services - Police. Police protection is also provided by the City of Atlanta. Atlanta is broken into six precincts. The Atlantic Steel site is in the same precinct as the downtown CBD, Precinct Five. Several mini-precinct offices are located in each of the six major precincts. The closest mini-precinct is located east of I-75/85 and south of the project study area.

3.3.9 Socioeconomics/Demography/Economic Conditions

3.3.9.1 Population

Population and employment estimates for the one-mile area of influence are presented in Table 3-7 and are based on 1990 US Census data. Updates to these statistics are provided in the text where available. Other characteristics including population by age group, race, income, and percentage of households with income below poverty levels are presented by census tract. The twelve census tracts listed in Table 3-7 are shown on Figure 3-8. Some of these census tracts extend beyond the one-mile buffer of the site and encompass the Midtown business district, the Georgia Institute of Technology campus, and the industrial/commercial areas along the I-75/85 corridor. Although the study area is heavily urbanized and the predominant land uses are office, commercial and industrial, several residential communities are scattered throughout the project vicinity. Most of the resident population is located within the neighborhoods of Home Park, Loring Heights, and Ansley Park as shown in census tracts 4, 5, 6, 89, 90, and 91.

The age profile indicates that the residential population is largely comprised of persons within the range of 15-34 years old, reflecting a fairly young age group living within the area.

The predominant racial group of the study area is white, although some concentrations of other racial groups are present in areas west of the project site in the vicinity of Northside Drive, and south of the site in the vicinity of Georgia Institute of Technology. Based on a GIS analysis of 1990 US Census data for the project area, the percent minority population within the one-mile area of influence is estimated to be 18.2%; the percent of households below poverty levels is approximately 24.2% for this same area.

The median household income levels for the project area range from approximately $15,000 to the mid-$40,000 range, indicating a wide range of income levels among various neighborhoods within a one-mile buffer. Some of the lower income levels may be associated with the student population of the nearby colleges and younger age groups living in the study area. This information is from the 1990 census and more recent data indicates that the median household income level is on the rise. According to the Midtown Alliance (1999), the average household income reported within a one-mile, three-mile and five-mile buffers of 10th Street and Peachtree Street is approximately $55,781, $58,856 and $61,011, respectively.

3.3.9.2 Employment

As listed in Table 3-7, the employment population within the study area far exceeds the residential population which indicates that the area is a strong employment center. The majority of these jobs are in the service and commercial sectors. Based on information provided by the Midtown Alliance, a non-profit business development organization in the area, the top ten employers within the study area are: Alston and Bird, AT&T, Bank of America, BellSouth Corporation, The Coca-Cola

Table 3-7. Summary of 1990 Population and Employment Characteristics of the Study Area

Characteristics	Census Tracts											
Tract	**89**	**90**	**91**	**5**	**4**	**6**	**7**	**1095**	**11**	**8**	**12**	**13**
Population	9791	3472	6176	2564	1545	1335	3487	6460	1427	1516	3137	3391
Age												
0-4 years	437	280	164	101	50	18	40	77	11	120	54	100
5-14 years	576	189	258	186	96	17	96	34	12	183	52	128
15-19 years	437	109	167	64	51	76	310	2233	33	88	77	72
20-34 years	4789	1416	2767	800	475	948	1922	3661	812	319	1664	1816
35-59 years	2681	1003	1879	961	614	166	948	396	432	466	864	974
60+ years	871	475	941	452	259	110	171	59	127	340	426	301
Race												
White	7586	3192	5307	2336	1391	1070	630	5018	988	27	2278	2401
Non-white	2205	280	869	228	154	265	2857	1442	439	1489	859	990
Hispanic	394	86	122	31	34	35	79	216	30	3	79	77
Asian	212	23	88	43	13	164	8	636	32	2	49	17
Median HH Income	$32,202	$45,691	$31,007	$45,300	$40,417	$21,827	$20,000	$14,929	$20,824	$10,318	$20,979	$26,939
Employment	16328	1127	11809	8033	13149	3741	2459	11198	3574	994	13845	2655

Source: US Census Data 1990

Company, Crawford Long Hospital, Federal Deposit Insurance Corporation, Georgia Institute of Technology, Georgia Power, and Turner Broadcasting.

3.3.9.3 Relocations

The 17th Street Extension and Atlantic Steel Redevelopment project will require houses, businesses, and/or industry located within the study area to be relocated. Those property owners subject to relocation are addressed in Section 4.3.9.3.

3.3.10 Environmental Justice

Executive Order 12898 on *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (Executive Order 12898 1994)requires all federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal programs on minority and low-income populations. The general purpose is to foster non-discrimination in federal programs and to provide minority and low-income communities greater opportunities for public participation in, and access to public information regarding human health and environmental issues. As part of the NEPA process, potential EJ areas (areas that have high levels of minority and/or low income populations relative to a reference area) are identified in the screening process to ensure that these communities have access to both concise and clear information sufficient to effectively participate in the public involvement process; and to ensure that these communities are not disproportionately impacted by this project.

A general approach for identifying potential EJ areas involves the use of comprehensive demographic information. Once identified, the locations of these geographic areas are then compared to areas in which environmental and socioeconomic impacts are predicted to occur to determine if these communities will be affected, and also to determine whether or not these impacts will be disproportionate (significantly greater) than those experienced from the nearby non-EJ areas. If disproportionate impacts are identified in this process, mitigation to alleviate those impacts to those communities should occur.

3.3.10.1 Demographic Characterizations

General screening to identify potential EJ areas for this project involved comparing the minority and low-income characteristics of a smaller geographic area (project area) with those of a larger geographic area (reference area). In this project, U.S. Census data for 1990 were used for the minority and low-income analysis. Data were collected at the block group level for the project area and the Atlanta metropolitan statistical area (MSA) for the reference area. Similar to Section 3.3.9, for the purposes of the EJ analysis, the area of influence for this project or the "project area" was approximated based on a one mile buffer surrounding the study area for the project (Figure 3-9). The Atlanta MSA is comprised of twenty counties surrounding the City of Atlanta. The block group data level, instead of the tract level, was used because it provides the best combination of demographic accuracy and data accessibility. The Atlanta MSA was selected as the appropriate reference area because of the potential regional influence of this project, and the MSA best represents a regional project area.

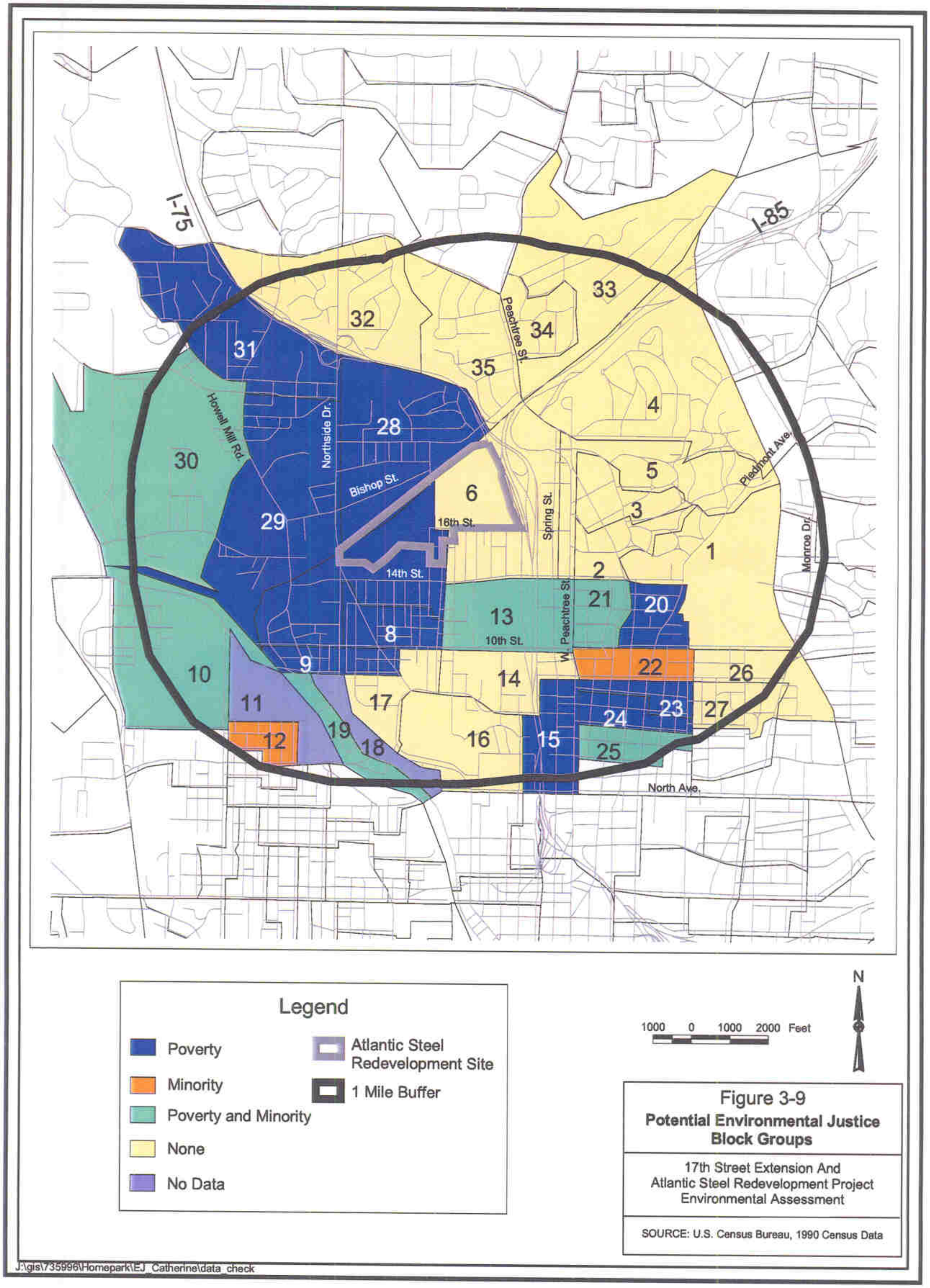


Figure 3-9
Potential Environmental Justice Block Groups

17th Street Extension And Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: U.S. Census Bureau, 1990 Census Data

According to the U.S. Bureau of Census, minority populations are those groups that include African Americans, American Indians, Asians, Pacific Islander, Hispanics, Eskimos, Aleuts and other races. These population categories were used in this study to determine the minority percentage for each block group in the project area and Atlanta MSA.

There are two options for defining low-income populations in EJ analyses. An absolute income level (e.g., $15,000) or poverty status may be used to determine significant low-income populations. Poverty data were used in this analysis as an indication for low-income status because it is adjusted for family size and number of dependents. Specifically, two-times the national poverty level was used to reflect the higher cost of living in the Atlanta MSA and project area.

3.3.10.2 Potential Environmental Justice Areas

In order for an area to be considered a potential EJ area of concern, either the minority or low-income population of the project area must be "meaningfully greater" than that of the reference area (EPA 1998). The *Draft Guidance for Conducting Environmental Analyses* (EPA 1998a) suggests the use of a multiplier of 1.2 times the calculated percent of both the minority and low-income populations for the reference area. Multiplying the calculated percentage of the reference area by 1.2 establishes a threshold level at which the project area would contain a significantly higher minority or low-income resident percentage of its population. Any block group with a percentage of residents above the minority or low-income thresholds established for the Atlanta MSA are identified as potential EJ areas of concern.

As a result of our analysis, several communities in the project area were determined to contain minority and/or low-income populations at levels that are significantly higher than that of the Atlanta MSA. The thresholds established for the Atlanta MSA are as follows: Minority: 35.71% and Low-Income: 28.40%. The threshold levels for the Atlanta MSA and the block groups exceeding these thresholds are presented in Table 3-8. These block groups are depicted in Figure 3-9. Based on the low-income and minority population percentages, eighteen of thirty-five block groups within the project area exceeded or equaled the MSA thresholds and are therefore considered potential EJ areas of concern. Of these block groups, two are minority, ten are low-income, and six are a combination of minority and low-income (see Table 3-8). The majority of these block groups appear to be distributed in clusters west and southeast of the site (see Figure 3-9). Block group 13 includes the Georgia Institute of Technology.

3.3.11 Aesthetic Resources

The Atlantic Steel project site occupies approximately 135 acres and has been in heavy industrial use since the early 1900s. The original mill buildings and associated structures remained on-site and until the summer of 2000, were in some degree of neglect. The visual appearance of the site has changed dramatically because of site cleanup activities, including demolition and removal of all on-site buildings. However, the appearance of the site is still relatively poor and undesirable from the viewpoint of residential neighbors and employees/customers of the commercial developments in the study area.

Table 3-8. Potential Environmental Justice Block Groups

THRESHOLD LEVEL FOR POPULATION WITH MINORITY STATUS: 35.71% THRESHOLD LEVEL FOR POPULATION WITH LOW-INCOME STATUS*: 28.40%			
Block Group Number	**Total Population**	**Percent of Population with Minority Status****	**Percent of Population with Low-Income Status****
1	915	16.28%	24.70%
2	123	14.63%	26.83%
3	496	2.22%	9.88%
4	977	1.64%	3.99%
5	1,216	16.78%	16.02%
6	431	14.39%	19.72%
7	303	13.53%	***79.87%***
8	875	23.54%	***69.37%***
9	108	22.22%	***79.63%***
10	3,051	***85.19%***	***55.30%***
11	NO DATA		
12	22	***59.09%***	0.00%
13	826	***45.40%***	***63.20%***
14	372	0.00%	17.74%
15	2,571	24.70%	***78.26%***
16	727	16.51%	0.00%
17	1,655	17.04%	0.00%
18	NO DATA		
19	413	***59.32%***	***70.22%***
20	1,232	34.09%	***35.06%***
21	324	***40.12%***	***53.67%***
22	433	***41.80%***	15.24%
23	628	21.34%	***38.30%***
24	287	6.97%	***29.62%***
25	961	***36.84%***	***51.65%***
26	535	9.35%	16.45%
27	960	16.04%	25.63%
28	1,491	25.22%	***46.88%***
29	455	7.47%	***51.65%***
30	110	***55.45%***	***85.45%***
31	1,302	15.98%	***36.48%***
32	1,529	21.58%	26.49%
33	2,172	20.63%	22.50%
34	355	0.00%	5.63%
35	1,657	13.76%	11.41%

*Low-Income Status is determined by income levels up to two times the National Poverty Threshold.

** ***Bold numbers*** indicate that the block group exceeds the threshold and is identified as a potential Environmental Justice area.

The Atlantic Steel site is located immediately west of the Brookwood Interchange of I-75/85 which is a dominant visual element within the study area. I-75 and I-85 serve as a major transportation facility in the region, with a total of 10 north and southbound lanes adjacent to the eastern boundary of the project site. At this location, the freeway is mostly below-grade and can only be seen from the easternmost portion of the project site, or from structures such as medium-to-high-rise buildings in the Midtown area or from the bridges and ramps in the study area.

Other significant visual elements within the study area include the Norfolk Southern Railroad corridor and the Midtown business district of Atlanta. The rail line is located immediately adjacent to the north of the project site. The Midtown business area is located west, east, and north of I-75/85 and contains medium-to-high-rise office buildings and apartments/condominiums. The Midtown area is a defined portion of the city located just north of the downtown CBD. The Midtown area is a major employment center for the Atlanta metropolitan region. Views of the site from this vantage point would be unlimited (see photographs, Appendix G).

The residential areas adjacent to Atlantic Steel include the communities of Home Park and Loring Heights. These neighborhoods are characterized by medium-density, single-family residences, most of which were built during the 1930-50s. Most of the housing stock is in fair to good condition; a few of the residences are substandard and in poor condition. Generally, the residential neighborhoods bordering the project site are shielded from views of the site by mature vegetation/trees, other structures, or minimized by distance or angle of view. The Ansley Park neighborhood is listed in the National Register of Historic Places. The rolling terrain, open parks, and curvilinear streets provide the setting for this planned suburban community. Houses display a range of architectural styles, including Colonial revival, Neoclassical, and Victorian, among others.

The non-residential areas north and south of the project site are generally low-rise buildings constructed in early to mid-twentieth century. These buildings are used for light to heavy industrial and commercial purposes and many have limited views of the Atlantic Steel site.

SECTION 4
IMPACTS

4.1 OVERVIEW

This section describes potential impacts to the existing environmental conditions as a result of the proposed 17th Street Extension and Atlantic Steel Redevelopment Project (Preferred Alternative, as described in Section 2.8). The description of impacts focuses on the resource categories most affected by the proposed action and mitigative measures proposed where appropriate. Mitigation is defined as measures taken to avoid, reduce, or minimize potentially adverse impacts.

4.2 NATURAL ENVIRONMENT

4.2.1 Earth Resources

Topography would be altered from existing conditions due to grading associated with the clean-up activities, redevelopment, and roadway construction activities. Soils would be excavated from each PIA at the Atlantic Steel site, and properly disposed of off-site. Remediation of the site would also occur under any of the alternatives, including the no action scenario in accordance with EPD requirements. The amount of soil to be removed during clean up is presented in Section 4.3.2. The transportation improvements associated with this project are located in a small area of urban Atlanta and would not significantly change or impact any existing soils or geology.

4.2.2 Groundwater

As part of the Atlantic Steel site remediation (Law 1999c), a groundwater interception system would be installed to collect and contain groundwater on the Atlantic Steel site. Groundwater would also be monitored and treated, if required, prior to discharge to the City of Atlanta sanitary sewer system. The City of Atlanta and the Georgia Department of Natural Resources approved a conservation easement holding JAR responsible for implementing the approved remediation plan. The easement has been prepared in order to assure that the necessary engineering and institutional controls are maintained in-perpetuity. The operation of the groundwater extraction system would prevent groundwater from migrating off-site.

Based on the identified directions of groundwater flow and the configuration of the bedrock, the proposed groundwater interception system has been designed in two sub-systems located in the southeastern and northeastern corners of the site. Groundwater flow presently leaving the site through the southeastern corner flow path would be intercepted with four vertical extraction wells, each pumping one gallon per minute (gpm) or less. Spacing between the wells would be approximately 150 feet, and their individual depths would range from 30 to 40 feet below ground surface. Groundwater flow presently leaving the site through the northeastern corner flow path would be intercepted with four vertical extraction wells each pumping 3.5 gpm. Spacing between the wells would be approximately 150 feet, and their individual depths would range from 30 to 40 feet below ground surface.

If groundwater treatment is required for extracted groundwater, the treatment would consist of two systems, each associated with the groundwater extraction subsystems described previously. The design and operation of the groundwater interception systems is largely dependent on two criteria: 1) the anticipated groundwater quality entering the system; and 2) treatment criteria that must be met prior to discharge.

The anticipated organic loading to the treatment systems is reported to be low based on existing groundwater quality data (Law 1999a). Based on an assessment of the analytical results, total suspended solid (TSS) and vinyl chloride content would primarily direct the selection of treatment technologies to be used. Discharge of the treated effluent to the local sanitary sewer system was determined to be the most feasible discharge option. Treatment criteria would meet the City of Atlanta's ordinance discharge criteria and would be conducted in accordance with state and federal requirements (Law 1999c). All groundwater remediation activities associated with the Atlantic Steel site would occur in accordance with the EPD approved Remediation Plan (Law 1999c).

Site grading and roadway construction activities associated with the project's roadway improvements would not impact groundwater. No aspect of the proposed action would alter groundwater direction of flow.

4.2.3 Surface Water Resources/Hydrology

The proposed development would include the construction of a new storm sewer bypass system that would convey off-site wastewater and stormwater, including that from the southwest outfall, around the redevelopment to the Orme Street Combined Sewer (Appendix H). A new 8-foot by 8-foot storm sewer bypass system would originate near the southwest corner of the property and would flow northeast along the northern boundary of the current property line. The new storm sewer bypass system would tie into the Orme Street Combined Sewer just north of the property boundary and prior to the Tanyard Creek CSO Treatment Facility. The existing 36-inch diameter storm drain originating from Bishop Street would tie into the new storm sewer bypass system along the northern property boundary. Other existing storm drains on the site would be plugged and abandoned in place (Law 2000i). The proposed storm sewer bypass system connection to the Orme Street Combined Sewer would meet the City's requirements under the condition that the proposed storm sewer bypass system be properly designed by JAR, to allow for a future extension by others to a connection point downstream of the Tanyard Creek CSO Treatment Facility after all off-site wastewater sources have been disconnected. The alignment and connection point of the future extension would have to be approved by the City of Atlanta (Appendix H).

The remediation will necessitate the excavation and filling of the ponds or impoundments located on the Atlantic Steel site (see also Section 4.2.5). Dewatering of the existing impoundments will be coordinated with the City of Atlanta to prevent overburdening of the Orme Street Combined Sewer and the Tanyard Creek CSO Treatment Facility (Law 2000i). The Remediation Permit from the EPD requires the placement of a liner or other hydraulic control to separate surface waters from groundwater in these areas.

The City of Atlanta requires that the proposed development meet all of the City's codes, ordinances, and regulations related to on-site stormwater systems. The proposed development would be required to provide detention facilities to reduce the peak runoff from the post-development condition to less than or equal to the pre-development conditions (Appendix H). An additional stormwater detention capacity of approximately 20% would be provided by JAR as part of its stormwater design to assist the City in the management of flows to the Tanyard Creek CSO Treatment Facility.

Preliminary surface water runoff calculations were developed for the site under the post-development conditions using the TR-55 Model (Law 1999g). The site was divided into three basins for modeling purposes using the same configuration as the predevelopment conditions (see Figure 3-3); and cover types were estimated from the project conceptual plans. Peak stormwater discharge from the site under the post-development condition was calculated as 1,140 cfs, compared to 538 cfs for the pre-development scenario. This represents an increase in the peak discharge of 110%. A complete list of the TR-55 model assumptions and results are presented in Appendix C.

As a result of the filling of the channel and Atlantic Steel impoundments, stormwater storage capacity on the site would be significantly reduced. To offset the removal of the surface water features and provide adequate stormwater storage capacity, two stormwater detention structures would be constructed on the site. A large detention structure in the center of the redevelopment would provide approximately 12.8 acre-feet of stormwater storage above the normal pond elevation. An underground detention structure would be constructed in the northeast corner of the redevelopment and would provide approximately 4 acre-feet of stormwater storage. Stormwater from both detention structures would discharge to the new storm sewer bypass system.

Coverage under a National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities would be required for redevelopment of the site. Construction activities that disturb at least five acres of land and that discharge stormwater runoff to waters of the United States are covered under this permit (40 CFR 122.26). Requirements of the permit include the submission of a Notice of Intent (NOI) and development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The City of Atlanta also requires the development and implementation of an Erosion and Sediment Control Plan (Atlanta Code Sec. 74-43) and a Grading and Stormwater Management Plan (Atlanta Code Sec. 74-105). Best Management Practices are required for all land disturbing activities and shall be designed to control soil erosion and sediments for all rainfall events up to and including a 25-year, 24-hour rainfall event.

Stormwater control measures for all transportation improvements associated with the project would be developed in the latter phases of the design. All road construction activities would comply with City of Atlanta and GDOT stormwater design standards.

4.2.4 Terrestrial Habitat

Impacts to the terrestrial habitat (upland forest, mesic forest, riparian habitat, old field/scrub-shrub lands, and open grassy areas) would result from the construction, redevelopment and remediation of the Atlantic Steel site. These impacts would be permanent and are attributed to the requirements outlined for the clean-up of the site (Law 1999c). The EPD has approved the

Remediation Plan, which is necessary to protect future individuals from exposure to contaminated soil and groundwater on-site. The Plan's measures include the following:

- A groundwater extraction system that would prevent migration of groundwater off site (see Section 4.2.2);
- Excavation of contaminated soil; and
- Removal of vegetation in association with soil excavation and installation of the groundwater extraction system.

On-site impacts from the clean-up process include vegetation clearing and removal of the PIAs. Cumulative effects of construction would be limited, as most of the areas are characterized as highly disturbed. The conceptual design depicts an addition of "greenspace" or planted areas (see Figure 2-4). However, according to requirements of the clean-up, restrictions would be placed on landscaping of the site.

Construction of the project would also result in permanent alteration of wildlife habitat. Clearing of the vegetation would reduce cover, nesting, and foraging habitat for some urban wildlife. The conceptual design proposes to impact approximately 42 acres of pre-existing vegetated land (Law 1999g). Construction would likely displace animals due to habitat loss. During surveys, the only observed species present were some bird species, which should be able to adapt to adjacent habitats. Based on the conceptual site design, it is estimated that 10 acres of public greenspace would be created.

Construction activities associated with the project's roadway improvements off-site would not impact terrestrial habitat.

4.2.5 Wetlands and Aquatic Habitat

Impacts to the wetlands and aquatic habitat would result from the construction, redevelopment, and remediation of the Atlantic Steel site. Likely environmental consequences include the following:

- Excavation and fill of 3.75 acres of jurisdictional wetlands (upper middle impoundment and eastern upper impoundment (Figure 3-2);
- Removal of vegetation within the aquatic and wetland habitats; and
- Excavation and fill of the channel and associated vegetation.

Based on the wetland delineation completed at the Atlantic Steel site, it was calculated that 3.75 acres of palustrine unconsolidated wetlands would be impacted by the clean-up and redevelopment. Construction activities associated with the project's roadway improvements off-site would not impact wetlands or aquatic habitat. As described in Section 4.2.3, a new stormwater detention structure is proposed in the center of the redevelopment. The 3.75 acres of wetlands under the Remediation Plan guidelines would be excavated, filled, and covered with a liner.

4.2.6 Wetland Mitigation Plan

A Nationwide Permit (NWP) 38 was applied for and authorized by the Savannah District, COE (Johnson 2000; see Appendix D). The NWP 38 allows activities to be completed in wetlands that are required to effect the containment, stabilization, or removal of hazardous or toxic wastes that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. The authorization of NWP 38 was due to the approval of the Remediation Plan by the EPD. It was calculated that 20 mitigation credits were required. Based on the Standard Operating Procedures for Compensatory Mitigation, the credits were applied to an "in-lieu of fee" Mitigation Plan. Approval of the Mitigation Plan was coordinated with the EPA, USFWS, and the EPD (Johnson 2000).

Southeast Waters, a non-profit organization, in conjunction with AmeriCorps was authorized to implement the mitigation plan. An escrow account was created and will be managed by Southeast Waters to enhance and improve stream areas in the City of Atlanta/Fulton County. The Mitigation Plan designated three stream areas to be studied for potential upgrade, which include Proctor Creek at Grove Park, Proctor Creek at Carver Hills, and North Utoy Creek at Ben Mays Drive. The total amount of mitigation was approximately $100,000, based on $5,000 per mitigation credit. The sum of credits will remain the same and may be applied to one area or a combination of areas depending on final determination.

4.2.7 Endangered and Threatened Species

No adverse impacts on rare, threatened, or endangered species are anticipated due to the redevelopment or roadway improvements.

4.3 MAN MADE ENVIRONMENT

4.3.1 Utilities

Off-site utilities that may be affected during roadway construction would be identified during the roadway design phase. GDOT would coordinate any pipeline or electrical line relocation or reconfiguration associated with the 17th Street Extension, outside the development, with Fulton County and/or the City of Atlanta. Existing on-site above ground and below ground utilities would be identified by the remediation contractor prior to any excavation or remediation. Pursuant to the City of Atlanta zoning conditions, all utilities for the redevelopment are to be located underground.

During redevelopment, JAR would work with the builders and users of the property to encourage their participation in the Green Building Council's "Leadership in Energy and Environmental Design" (LEED) program (EPA 1999b). The LEED Green Building rating system is a voluntary rating system that evaluates environmental performance from a whole-building perspective. The rating system addresses site selection and sustainability, water efficiency, energy and atmosphere, materials and resources and indoor environmental quality (Green Building Council 2000). Utilities on the Atlantic Steel site are addressed in the following paragraphs.

4.3.1.1 Water Supply

Potable water supply would be more than adequate to support the proposed action since the Hemphill Water Treatment plant is located close to the site. Water usage at the site for the last full year of steel production (1990) was 36 million cubic feet. The estimated usage under the redevelopment scenario is 73 million cubic feet, an increase of 100%. Estimates for peak water flowrates range from 3,500 to 5,000 gpm (gallons per minute) for domestic use and 3,000 to 10,000 gpm for fire use (Porterfield 2000). The City of Atlanta has confirmed that sufficient water treatment capacity exists for the estimated water flows based on a hydraulic model of the City's water distribution system (Appendix H).

Current distribution lines in the vicinity of the site include two 16-inch lines and two 36-inch lines. The two 16-inch lines are located north of the site. One 36-inch line is located to the west, and one to the south. Water distribution improvements to the site would consist of a network of pipes paralleling the proposed roadways. Pipes would be sized based on customer demand and adequate fire flow requirements (Law 1999f).

JAR would promote water conservation measures such as water flow restrictors, the use of on-site recycling systems for landscape irrigation, and the use of drought-tolerant indigenous plant species for landscaping to minimize irrigation requirements (EPA 1999b).

4.3.1.2 Wastewater Disposal

Under the proposed development of the site, separate sanitary sewers and storm sewers would be constructed. New dedicated sanitary sewer lines would be installed to service the redevelopment. The main sanitary sewer trunk would originate near the southwest corner of the property and would flow northeast along the northern boundary of the current property line. The existing 24-inch diameter sanitary sewer line entering the site from 14th Street would tie into the new sanitary main line. The main sanitary sewer trunk from the redevelopment would be connected to an existing 54-inch diameter sanitary sewer line located on the west side of the Tanyard Creek CSO Treatment Facility (Law 2000h). The City of Atlanta is requiring that the proposed sanitary sewer extension be connected directly to the Tanyard Creek Interceptor Sewer downstream of the Tanyard Creek CSO Treatment Facility (Appendix H). This tie in would complete the separation of sanitary and stormwater flows after additional off-site sources are disconnected and would help to alleviate capacity issues at the Tanyard Creek CSO Treatment Facility. Other existing sanitary sewer lines on the site would be plugged and abandoned in place (Law 2000i).

The estimated sewage flows from the proposed redevelopment are as follows (Appendix H):

- Year 2002 0.6 MGD
- Year 2006 1.4 MGD
- Year 2012 1.8 MGD

The First Amended Consent Decree requires certification by the City of Atlanta that adequate treatment, transmission, and collection capacity exists to handle new sewer services or increases in flow from existing sewer services (United States District Court 1999). The City of Atlanta has confirmed that the existing City of Atlanta sewer lines and treatment facilities (R.M. Clayton Water Reclamation Plant) have adequate capacity to convey and treat the estimated 1.8 MGD of wastewater from the proposed development. A copy of the Certification of Adequate Capacity from the City of Atlanta is provided in Appendix H.

The two proposed groundwater extraction systems are expected to contribute approximately 26,000 gallons per day of flow to the City of Atlanta Sanitary Sewer System based on the proposed remediation design pumping rates. This volume is negligible compared to the estimated sanitary flows for the proposed development. The precise location of the connection point would be established when the development plans for the site have been finalized (Law 1999c).

Stormwater from the off-site roadway construction improvements would discharge to the existing outfalls. All road construction activities would comply with City of Atlanta and GDOT stormwater design standards.

4.3.1.3 Solid Waste Disposal

Demolition and removal of buildings on the site were carried out as part of the remediation activities required by EPD. The remediation plan requires that the structures on the property are removed. The site previously contained approximately 15,000 tons of ferrous metal buildings that were located on the site during the operation of Atlantic Steel. Ten buildings were disassembled and sold for reuse. Forty buildings and structures were scrapped for recycling of the metal. Approximately one dozen buildings on the site had asbestos coatings on the metal siding or the roof. Asbestos materials were removed and disposed of in a landfill in accordance with state and federal requirements. The main office and a small building near the front gate were removed in June 2000. The eastern smokestack would be retained for possible reuse in the redevelopment.

Approximately 153,000 cubic yards of concrete and asphalt was crushed and recycled on-site and used as fill material instead of being disposed of off-site in a landfill. In addition, asphalt and pavement removal as a result of road construction would be recycled. The use of other recycled asphalt as part of roadway construction would be encouraged.

Participation in the Green Building Council's LEED program requires the implementation of a recycling program that serves all future buildings (EPA 1999b). JAR would work with the builders to determine which solid waste management measures to apply for the LEED program.

4.3.1.4 Electrical Power

Electrical power consumption rates for the proposed development were estimated based on the square footage of the proposed development. Electrical power consumption for the proposed redevelopment is estimated at 2.6×10^8 kWh per year (Porterfield 2000). During the last full year of steel production at the site, electrical consumption was 3.0×10^8 kWh per year and was provided by the Georgia Power substation located adjacent to the site's western boundary. The Georgia Power substation appears to have adequate capacity to supply the electrical power needs of the proposed redevelopment. Any increases in proposed electrical consumption would be addressed in the final design phase of the redevelopment project.

Off-site utilities associated with the proposed development would include lighting for bike paths, pedestrian walkways, and upgrades to the MARTA station. The electrical requirements for these improvements would be negligible compared with the electrical usage of the proposed development.

JAR proposes to work with the Georgia Institute of Technology and the Southface Energy Institute, a national leader in sustainable building technology, to develop strategies that would minimize energy usage. These strategies would include the selection of energy efficient construction materials and building technologies and the siting and orientation of buildings and landscaping so as to maximize solar gain during the winter and minimize solar gain during the summer.

4.3.1.5 Natural Gas

The natural gas lines are assumed to be capable of providing adequate pressure for the post-development condition. During the last full year of steel production at the site, natural gas consumption was 1.05 x 10^6 Mcf (thousand cubic feet) per year (Harmon 1999a). Preliminary estimates of natural gas consumption based on the square footage of the proposed development range from 219,000 to 307,000 cubic feet per year (Porterfield 2000). This represents a significant reduction in natural gas usage.

4.3.2 Hazardous Substances

4.3.2.1 Atlantic Steel Property

PIAs identified for remediation would be excavated, and associated media would be removed from the site. The horizontal and vertical extents of the media to be removed at each PIA were evaluated previously, and the associated excavation volumes were estimated. Individual PIA volumes ranged from 3 to 29,000 cubic yards. The total volume of soil to be removed is estimated at 80,000 cubic yards. Soil sampling with field screening would be used to further establish and delineate the areas requiring excavation at the PIAs. In addition, soils beneath concrete slabs that are located within or adjacent to PIAs selected for removal would be sampled. Remediation of these areas would be conducted in accordance with the methodology outlined in the Remediation Plan approved by EPD (Law 1999c).

Materials would be excavated or accumulated, staged in short-term roll-off boxes or on concrete slabs with appropriate runoff control, sampled, properly characterized, and disposed based on the results of the characterization. This process would ensure proper characterization, disposal, and documentation of all excavated materials. Excavated materials and associated wastes would be transported off-site for disposal in accordance with state and federal requirements.

Once remediation is implemented, future occupants and users of the redeveloped site would not be exposed to existing site soils or groundwater. Redevelopment and construction would, by design, provide permanent engineered barriers to exposure in the form of new structures, pavement, concrete and/or soil cover, which would be maintained through institutional controls for future use (Law 1999c).

Hazardous substances are not expected to be generated as a result of the preferred alternative. No USTs storing hazardous substances would be installed during construction of any components of the proposed action. Any future changes to the property, such as the repair of the infrastructure or construction, would be required by EPD to be done in accordance with the terms of the remediation plan and conservation easement. Adherence to these requirements would ensure that human health and the environment are protected in the future.

Land uses associated with the proposed action are primarily residential and commercial. Hazardous wastes that potentially could be generated from proposed technology buildings would be minimal in volume. Disposal of these wastes would be the responsibility of the building occupants and would comply with all state and federal requirements.

4.3.2.2 National Lead Smelting Site

As part of ongoing investigations at the National Lead Smelting site, EPA will determine if any aspects of the site present an unacceptable risk to human health and welfare or the environment. At this time, impacts to human health and welfare, or the environment have not been identified. If unacceptable risks are identified, EPA will develop options for reducing or eliminating those risks and coordinate those with JAR and EPD. As part of this process, the public would have an opportunity to submit comments to EPA at major decision points.

4.3.2.3 Other Concerns

During the proposed roadway design phase, GDOT would further investigate the exact location of all USTs and LUSTs in the vicinity of the proposed roadway improvements prior to beginning construction. If GDOT determines that these USTs or LUSTs would be impacted by roadway improvements, tank closure, removal, clean-up, and disposal would occur in accordance with state and federal regulations.

4.3.3 Transportation Features

During the course of the planning efforts for this project, several transportation alternatives were developed to address public concerns, traffic congestion problems, and any additional traffic problems anticipated with the extension of 17th Street and the redevelopment of Atlantic Steel. Several of the specific roadway alternatives recommended improving both the city streets and the state highway system. The preferred alternative is a hybrid of improvements to the transportation system as a whole. By improving the city streets, the state highway system, and providing transit access, the Midtown Atlanta driver should notice a slight improvement in traffic operations on most major roads in the study area as compared to not implementing the project. More detailed information concerning the justification and implementation of city street, state highway, and transit improvements for this project is included in the Concept Report (MAAI 2000a). The Concept Report and updates are available for public review at GDOT offices in Atlanta.

4.3.3.1 Changes to Existing Roadway System

As described in Section 2.5.3, in response to public concerns about the original design of some of the proposed roadway improvements, several key intersections and roadways were redesigned. Some of the important aspects of the redesign included: 1) an opportunity by the City of Atlanta to post a 25 miles per hour (mph) speed limit on 17th Street; 2) removal of through lanes and turning lanes on 17th Street, 16th Street, Spring Street, Williams Street, and Techwood Drive; 3) narrowing of through lanes and turning radii; and 4) inclusion of wide sidewalks, landscaping, and lighting throughout the project area as part of the roadway improvements. In making these changes, additional urban design criteria were considered such as pedestrian safety and context sensitive design, creating a more acceptable urban corridor, with less emphasis on accommodating future traffic volumes alone.

However, in considering these additional design criteria, it was agreed that a certain amount of predicted additional congestion would be acceptable (see Section 4.3.3.3). In designing the project with fewer lanes, maintenance of minimally acceptable levels of service throughout the project area was balanced with maximizing benefits for pedestrians and transit. A decreased level of service was determined to be permissible in order to accommodate the other design criteria. The primary design concern was that traffic would not backup on the Interstate exit ramps and affect the operations and safety of the Interstate system. Traffic and pedestrian signal timing and operations would be controlled by the City of Atlanta to prevent backup on the Interstate, and maximize benefits for pedestrians and transit.

The following is a brief description of the specific roadway improvements associated with the overall preferred alternative for the project.

Changes in City Streets. The most significant change in the city street system would be the Extension of 17th Street on a new alignment from West Peachtree Street, across I-75/85 on the new bridge structure, and through the Atlantic Steel site to Northside Drive. From Northside Drive to Spring Street on the east, 17th Street would have two through lanes and a dedicated transit lane in each direction, totaling six lanes of traffic. Pedestrian and bicycle access would also be incorporated into the 17th Street design. Bishop Street would remain as it is today except for the addition of turning lanes at its intersection with the new 17th Street. This is designed to assist with overall traffic flow at this intersection. South of Atlantic Steel, 16th Street would be widened between Techwood Drive and Mecaslin Street as part of the new development. The 16th Street/Techwood Drive intersection would be realigned to improve traffic flow. The 16th Street/Williams Street intersection on the east side of the Interstate would be realigned to improve traffic flow. Techwood Drive would be widened at the 14th Street intersection to four, 11-foot urban lanes. Williams Street would not be widened, but would be relocated to the east to accommodate the new northbound Interstate exit ramp to the 17th Street Bridge. All proposed roadway widenings are summarized in Table 2-4.

Changes in State Route System. The most significant change to the State Route system would be the change in access from I-75 and I-85 proposed as part of the project. Drivers traveling southbound on I-75 would have direct access to 16th Street and 14th Street. Drivers traveling southbound on I-85 would have direct access to 17th Street and 14th Street. Drivers traveling northbound on I-75/85 would have direct access to 17th Street from the new proposed exit ramp. The northbound and southbound through lanes on the interstates would remain unchanged. The 14th Street Bridge crossing I-75/85 would be widened to accommodate dual left turning lanes in each direction. Northside Drive would have additional turning lanes added at the new intersection with 17th Street. Spring Street and West Peachtree Street laneage would remain unchanged. More detailed information concerning the justification and implementation of all improvements to city streets and the State Route system in the project area is included in the Concept Report (MAAI 2000a).

4.3.3.2 Forecasted Traffic Impacts

Potential impacts to roadways are addressed in terms of forecasted traffic estimates and predicted congestion in the area. As described in Sections 2.5 and 2.7, existing traffic volumes and background Year 2025 AADT volumes were developed for roads in the study area. Year 2025 traffic volumes for the preferred alternative and for the no action alternative were developed to determine future traffic conditions whether or not the project is implemented. This information formed the basis for comparison of the preferred alternative and the no action alternative so that project impacts could be determined. Additional information on Year 2025 A.M. and P.M. peak hour traffic volumes for the no action and preferred alternatives on specific roadways is not presented in this EA, but is contained in the latest version of the Concept Report (MAAI 2000a).

Future AADT forecasts for the no action and preferred alternatives were analyzed and compared against the existing AADT's in the study area. Figures 4-1 and 4-2 present AADT volumes in the study area for the no action alternative and the preferred alternative, respectively. When comparing roadways in the study area from 1998 to 2025, the traffic numbers increase over the entire area for either the no action or the preferred alternative. This is due to the expected in-fill development in the Midtown area and some level of development occurring at the Atlantic Steel site. The largest single increase in traffic over existing conditions attributable to the project (other than on the new 17th Street) was observed on 16th Street immediately south of the Atlantic Steel site. This increase is primarily due to the change in adjacent land use on the Atlantic Steel site and new function of the road.

When comparing the 2025 no action alternative and the 2025 preferred alternative, the future distribution of traffic in the study area would be different, primarily due to the construction of the 17th Street Bridge and Extension (as part of the preferred alternative). Of the 61 surface roadway segments analyzed for this project, traffic conditions on 29 road segments in the study area are predicted to improve (i.e., traffic volumes are predicted to decrease), 14 are not expected to change, and 18 are predicted to experience increases in traffic volumes with the construction of the 17th Street Bridge and Extension (in comparison with the no action alternative) (see Tables 4-1 and 4-2). Traffic on the Interstates, however, is predicted to remain virtually the same with or without the 17th Street Extension (Table 4-3).

Predicted decreases in traffic volumes on the 29 roadway segments, comparing the preferred versus no action alternatives, range from 2% to 81%. The median percent decrease in traffic volumes on these 29 segments is estimated to be 23%. The roadway segments in the study area that would experience the greatest decreases in traffic volumes include: State Street in Home Park, Williams Street, 14th Street, 10th Street, and West Peachtree Street (see Tables 4-1 and 4-2). These predicted decreases in traffic volumes are directly related to providing new and improved access from the Interstate and a new east-west minor arterial in the Midtown area at 17th Street across I-75/I-85.

Predicted increases in traffic volumes on the 18 roadway segments, comparing the preferred versus no action alternatives, range from 1% to 104%. The median percent increase in traffic volumes on these 18 segments is estimated to be 9.5%. The roadway segments in the study area that would experience the greatest increases in traffic volumes include 17th Street, 16th Street, and 15th Street (see Tables 4-1 and 4-2). The 104% predicted increase in traffic volumes would occur on the new 17th Street within the development, between State Street and Bishop Street, where it does not currently exist. The predicted increases in traffic volumes are attributable to the attraction of the Atlantic Steel Redevelopment and provision of a new east-west connection from West Peachtree Street to Northside Drive. These increases would occur over an approximate twenty-year time frame and should not adversely affect the overall traffic patterns in these areas. More detailed information concerning the traffic numbers for individual roadways in the study area for the existing conditions, 2025 no action alternative, and the 2025 preferred alternative is summarized in Tables 4-1, 4-2, and 4-3.

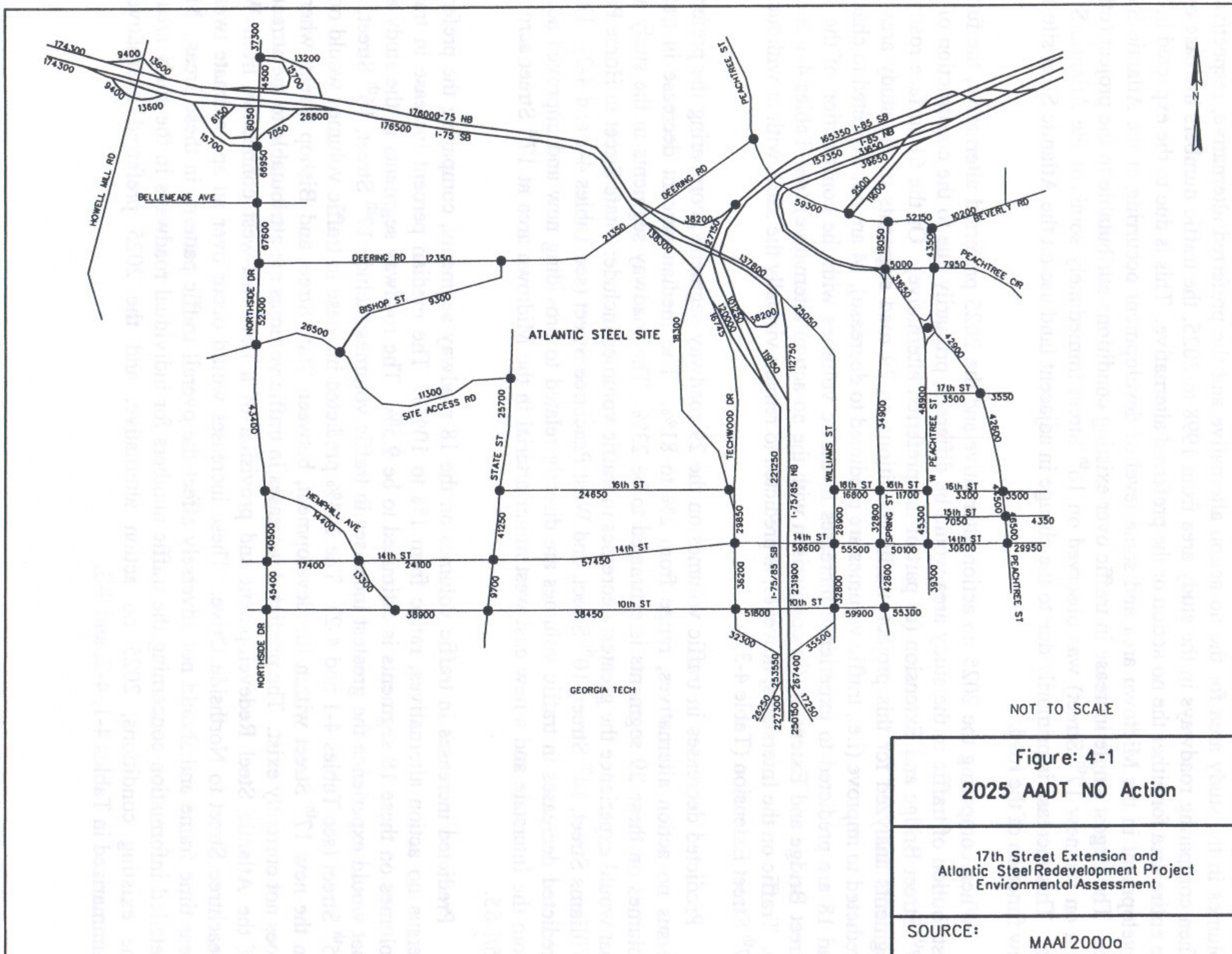


Figure: 4-1

2025 AADT NO Action

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: MAAI 2000a

J:/735996/6-28-00/j15.dgn 08/01/00 12:13:54 PM

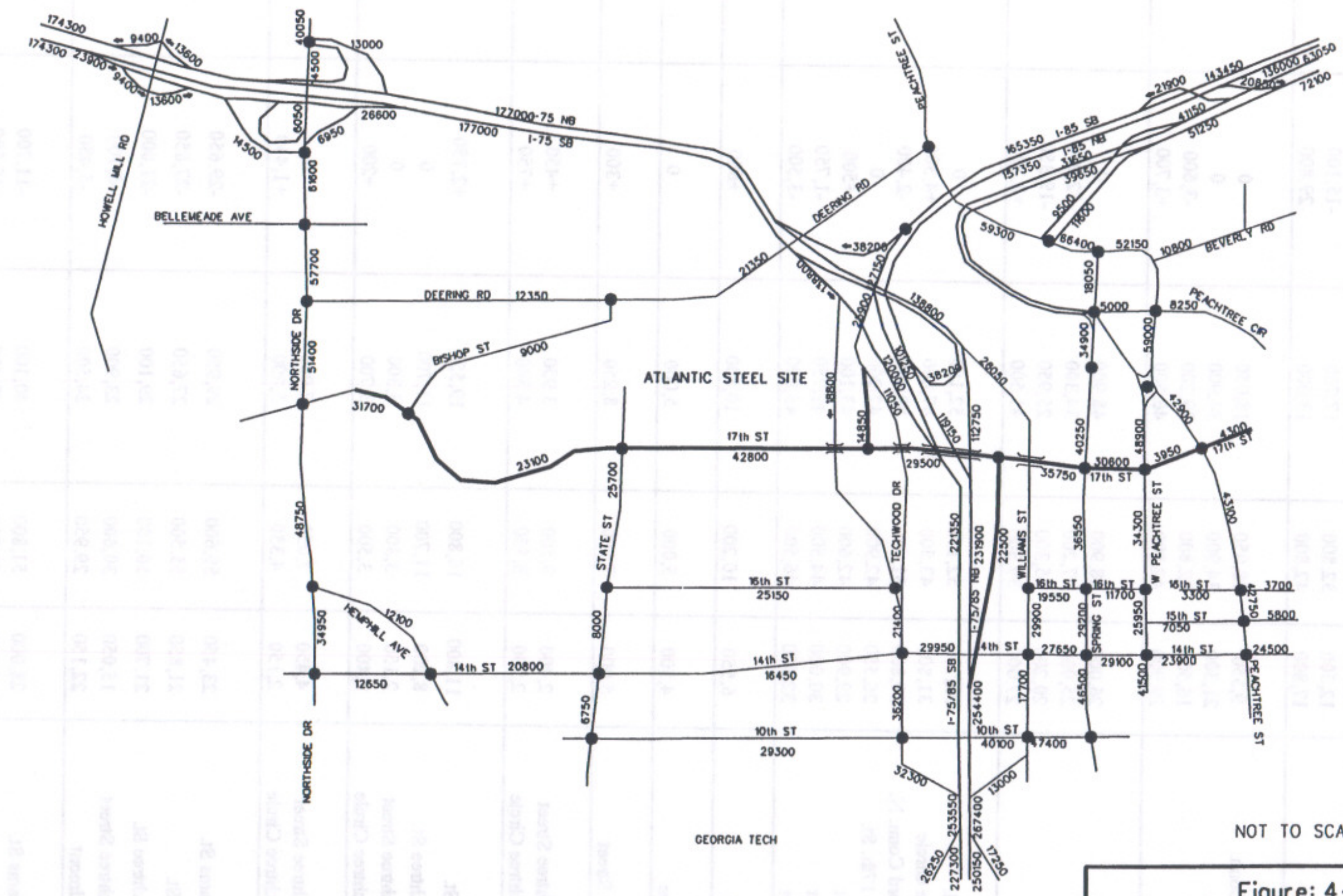


Figure: 4-2

2025 AADT Preferred Alternative

17th Street Extension and
Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: MAAI 2000a

J:/735996/6-28-00/J9.dgn 07/27/00 02:45:35 PM

Table 4-1. Roadways in the Eastern Portion of the Study Area
Average Annual Daily Traffic

Roadway	Existing	2025 No Action	2025 Preferred Alternative	Change from No Action to Preferred Alternative	% Change from No Action to Preferred Alternative
Williams Street					
I-75 Entrance to 16th St.	16,100	25,050	26,050	+1,000	+4%
16th St. to 14th St.	20,900	28,900	29,900	+1,000	+3%
14th St. to 10th St.	12,500	32,800	17,700	-15,100	-46%
10th St. to I-75/I-85 Exit	17,800	42,800	13,000	-29,800	-70%
Spring Street					
Peachtree St. to Buford Conn.	9,550	18,050	18,050	0	0%
Buford Conn. to 16th St.	21,300	34,900	34,900	0	0%
16th St. to 14th St.	16,500	32,800	29,200	-3,600	-11%
14th St. to 10th St.	29,900	42,800	46,500	+3,700	+9%
West Peachtree Street					
Buford Conn. to 17th St.	26,000	48,900	48,900	0	0%
17th St. to 16th St.	25,000	47,200	34,300	-12,900	-27%
16th St. to 14th St.	20,200	45,300	25,950	-19,350	-43%
14th St. to 10th St.	27,000	39,300	41,500	+2,200	+6%
Peachtree Street					
Spring St. to Beverly Rd.	35,750	52,150	52,150	0	0%
Beverly Rd. to Peachtree Circle	31,800	43,500	47,800	+4,300	+10%
Peachtree Circle to Buford Conn. N.	39,800	61,400	59,000	-2,400	-4%
Buford Connector N. to 17th. St.	26,550	42,900	42,900	0	0%
17th Street to 16th Street	29,900	42,600	43,100	+500	+1%
16th Street to 15th Street	30,000	44,500	42,750	-1,750	-4%
15th Street to 14th Street	32,600	46,500	43,000	-3,500	-8%
Beverly Road					
East of Peachtree Street	6,550	10,200	10,800	+600	+6%
Rhodes Drive					
Spring to West Peachtree	4,500	5,000	5,000	0	0%
Peachtree Circle					
Peachtree Street to 17th Street	5,000	7,950	8,250	+300	+4%
17th Street					
West Peachtree to Peachtree Street	2,400	3,500	3,950	+450	+13%
Peachtree Street to Peachtree Circle	2,700	3,550	4,300	+750	+21%
16th Street					
Williams St. to Spring St.	11,800	16,800	19,550	+2,750	+16%
Spring St. to West Peachtree St.	8,200	11,700	11,700	0	0%
Lombardy Way to Peachtree Street	2,150	3,300	3,300	0	0%
Peachtree Street to Peachtree Circle	2,400	3,500	3,700	+200	+6%
15th Street					
West Peachtree to Peachtree Street	4,450	7,050	7,050	0	0%
Peachtree Street to Peachtree Circle	2,150	4,350	5,800	+1,450	+33%
14th Street					
Techwood Dr. to Williams St.	23,450	59,600	29,950	-29,650	-50%
Williams St. to Spring St.	21,850	55,500	27,650	-27,850	-50%
Spring St. to West Peachtree St.	21,700	50,100	29,100	-21,000	-42%
West Peachtree to Peachtree Street	15,050	30,600	23,900	-6,700	-22%
Peachtree Street to Piedmont	22,150	29,950	24,500	-5,450	-18%
10th Street					
Techwood Dr. to Williams St.	28,000	51,800	40,100	-11,700	-23%
Williams St. to Spring St.	35,100	59,900	47,400	-12,500	-21%
Spring St. to West Peachtree St.	32,400	55,300	48,750	-6,550	-12%

Source: MAAI 2000a

Table 4-2. Roadways in the Western Portion of the Study Area
Average Annual Daily Traffic

Roadway	Existing	2025 No Action	2025 Preferred Alternative	Change from No Action to Preferred Alternative	% Change from No Action to Preferred Alternative
Northside Drive					
Deering Rd. to Bishop St.	30,500	52,300	51,400	-900	-2%
Bishop St. to Hemphill Dr.	31,950	43,400	48,750	+5,350	+12%
Hemphill Dr. to 14th St.	24,800	40,500	34,950	-5,550	-14%
14th St. to 10th St.	21,550	45,400	40,700	-4,700	-10%
Deering Road					
Northside Dr. to State St.	10,000	12,350	12,350	0	0%
State St. to Peachtree St.	15,600	21,350	21,350	0	0%
Bishop Street					
Northside Dr. to Deering Road	5,450	9,300	9,000	-300	-3%
Hemphill Drive					
Northside Dr. to 14th St.	9,200	14,400	12,100	-2,300	-16%
17th Street					
State St. to Bishop St.	DNE	11,300	23,100	+11,800	+104%
Bishop St. to Northside Dr.	DNE	26,500	31,700	+5,200	+20%
16th Street					
State St. to Techwood Dr.	2,150	24,650	25,150	+500	+2%
14th Street					
Northside Dr. to Hemphill Dr.	9,500	17,400	12,650	-4,750	-27%
Hemphill Dr. to State St.	16,100	24,100	20,800	-3,300	-14%
State St. to Techwood Dr.	14,600	57,450	16,450	-41,000	-71%
10th Street					
Hemphill Dr. to State St.	20,750	38,900	27,100	-11,800	-30%
State St. to Techwood Dr.	20,500	38,450	29,300	-9,150	-24%
State Street					
Atlantic Steel to 16th St.	DNE	25,700	25,700	0	0%
16th St. to 14th St.	2,450	41,250	8,000	-33,250	-81%
Techwood Drive					
I-85 Exit to 16th St.	11,150	18,300	11,050	-7,250	-40%
I-75 Exit to 16th St.	12,500	16,745	18,800	2,055	+12%
16th St. to 14th St.	23,850	29,850	21,400	-8,450	-28%
14th St. to 10th St.	26,650	36,200	36,200	+0,000	+0%
10th St. to I-75/I-85 Entrance	15,600	32,300	32,300	+0,000	+0%

Source: MAAI 2000a
DNE Does Not Exist
NA Not Applicable

Table 4-3. Interstate Roadways in the Study Area
Average Annual Daily Traffic

Roadway	Existing	2025 No Action	2025 Preferred Alternative	Change from No Action to Preferred Alternative	% Change from No Action to Preferred Alternative
I-75 Southbound					
Northside Dr. to I-85 NB Exit	129,050	176,500	177,000	+500	+0.28%
I-85 NB Exit to 14th St. Exit	102,750	138,300	138,800	+500	+0.36%
14th St. Exit to Downtown Connector	90,250	120,000	120,000	0	0%
I-75 Northbound					
Dtwn Connector to Williams St. Entrance	86,650	112,750	112,750	0	0%
Williams St. Entrance to I-85 SB Entrance	102,750	137,800	138,800		
I-85 SB Entrance to Northside Dr.	129,050	176,000	177,000	+1,000	+0.57%
I-85 Southbound					
Monroe Entrance to I-75 NB Exit	106,400	165,350	165,350	0	0%
I-75 NB Exit to 14th St. Exit	80,100	127,150	127,150	0	0%
14th St. Exit to Downtown Connector	68,950	101,250	101,250	0	0%
I-85 Northbound					
Downtown Connector to I-75 SB Entrance	80,100	119,150	119,150	0	0%
I-75 SB Entrance to Monroe Exit	106,400	157,350	157,350	0	0%
Downtown Connector Southbound					
I-75/I-85 Merge to 10th St. Entrance	159,200	221,250	221,250	0	0%
10th St. Entrance to North Ave. Exit	174,800	253,550	253,550	0	0%
Downtown Connector Northbound					
North Ave. Entrance to 10th St. Exit	184,550	267,400	267,400	0	0%
10th St. Exit to I-75/I-85 Split	166,750	231,900	231,900	0	0%

Source: MAAI 2000a

4.3.3.3 Forecasted Traffic Operations/Congestion

The degree of congestion that is experienced by the user of the road system in Midtown Atlanta depends upon the relationship between traffic volumes and the capacity of the road or intersection. Many factors contribute to the capacity of a specific section of road or intersection. These factors include number of lanes, lane widths, shoulder widths, speed, grades, percent trucks, directional distribution of traffic, and intersection location. Road capacity is often controlled by the signalized or stop controlled intersections on roadways with closely spaced side streets.

The standard volume to capacity (v/c) ratio analysis was utilized to produce LOS on area roadways, and average vehicle delay on area intersections. The procedures used were those contained in the 1997 update to the *1994 Highway Capacity Manual, Special Report 209*, published by the Transportation Research Board (Transportation Research Board 1997). A computer software package was used to determine these values. Traffic congestion was ranked from LOS A to LOS F for the A.M. and P.M. peak hour. LOS A is the best operating condition, where traffic has no conflicts and complete freedom of movement. LOS F is the worst operating condition, with traffic demand being greater than the capacity of a facility. For LOS F, stop and go conditions occur on road segments and long backups exist at all approaches to signalized or unsignalized intersections.

This information is presented graphically in Figures 4-3 and 4-4 for the no action alternative and Figures 4-5 and 4-6 for the preferred alternative. Intersections and roads that experience LOS A through LOS C are not shown as those intersections and roads manage the traffic successfully. Intersections and roads that experience a LOS D rating are correlated with intersections and roads near capacity (becoming congested but still operating effectively--shown in green). Intersections and roads that experience a LOS E rating are correlated with intersections and roads at capacity (serious congestion, but fully utilizing the facility--shown in yellow). Intersections and roads that experience a LOS F rating are correlated with intersections and roads over capacity (extremely congested with traffic moving in a start-stop mode or long traffic back-ups at intersections--shown in red).

When comparing traffic LOS for roadways and intersections in the study area from 1998 to 2025, the LOS decreases over the entire area for either the no action or the preferred alternative. The majority of roads and intersections in the study area would experience a decrease in operating capacity over the 25-year planning horizon. This is due to the expected in-fill development in the Midtown area and some level of development occurring at the Atlantic Steel site. The interstates are currently at or over capacity and will continue to be for the foreseeable future.

When comparing the 2025 no action alternative and the 2025 preferred alternative, traffic congestion in the study area would be different, primarily due to the construction of the 17th Street Bridge and Extension (as part of the preferred alternative). Of the 26 surface roadway intersections analyzed for this project, LOS in the A.M. and P.M. peak hours at 21 intersections in the study area is predicted to stay the same or improve (i.e., traffic is predicted to move more efficiently), and five intersections are predicted to experienced decreases in LOS with the construction of the 17th Bridge and Extension (in comparison with the no action alternative) (see Tables 4-4 and 4-5). Traffic congestion on the Interstates, however, is predicted to remain virtually the same with or without the 17th Street Extension (Table 4-6).

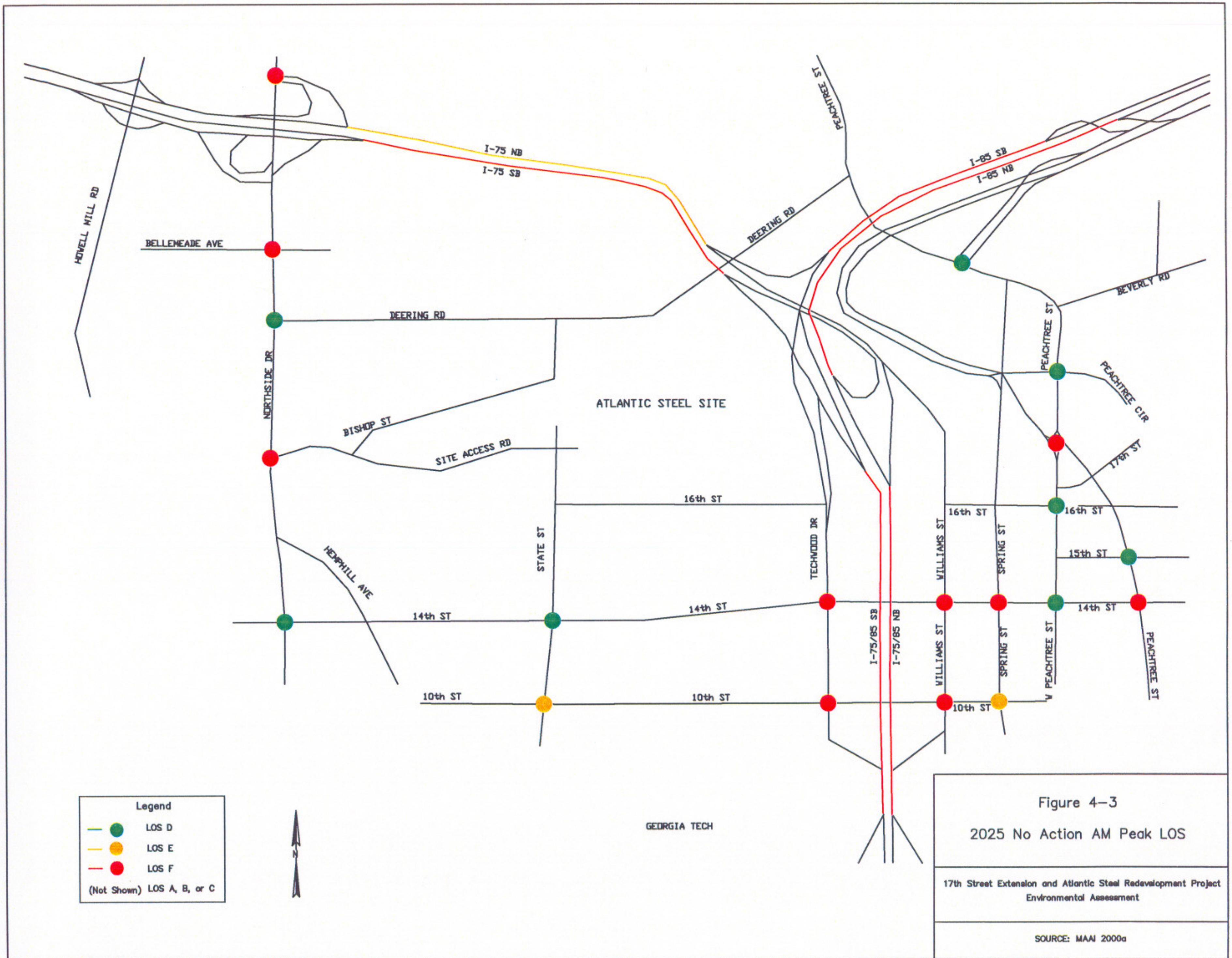


Figure 4–3
2025 No Action AM Peak LOS

17th Street Extension and Atlantic Steel Redevelopment Project
Environmental Assessment

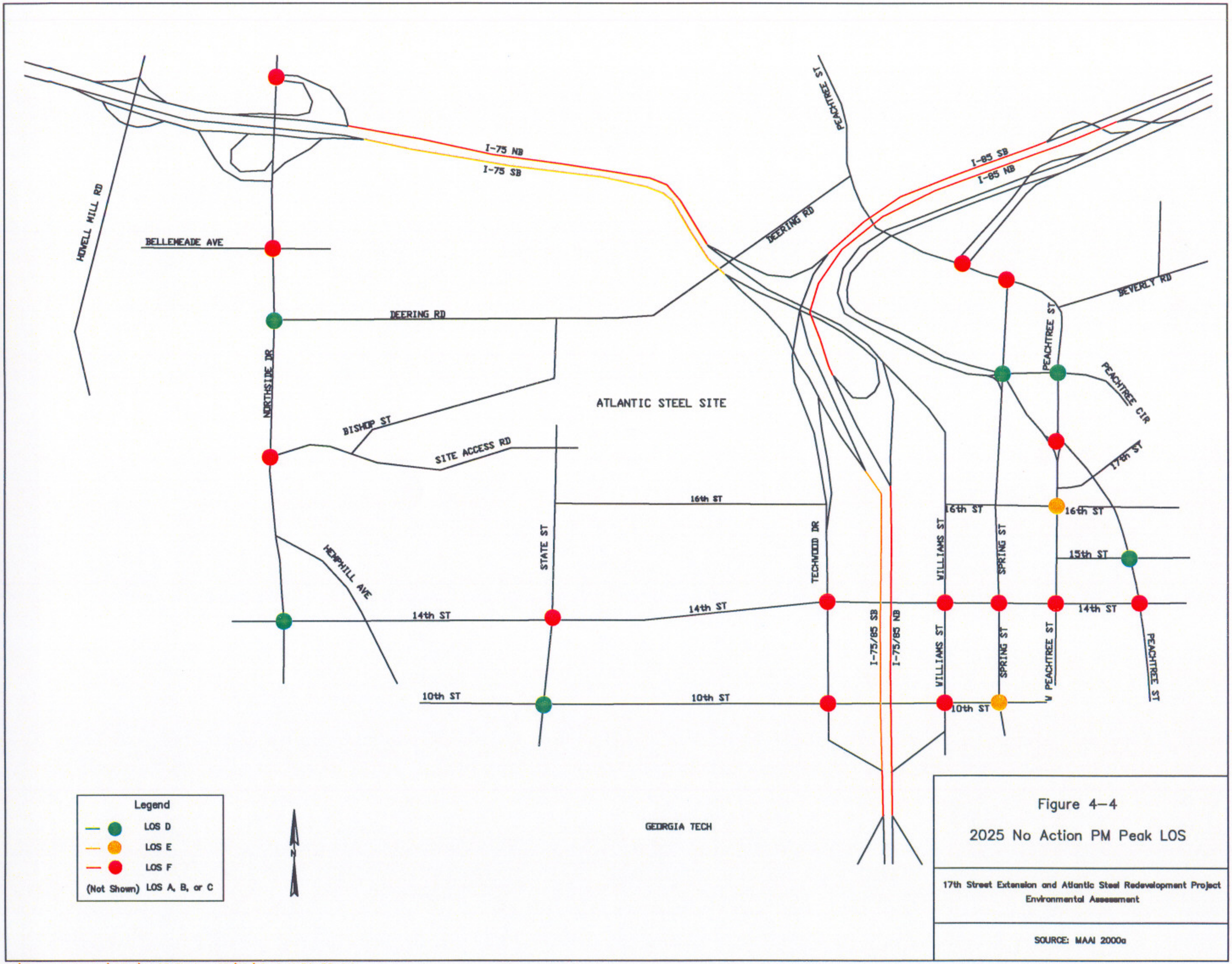


Figure 4–4

2025 No Action PM Peak LOS

17th Street Extension and Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: MAAI 2000a

J:\Small_Cadd_pro\Atlstl\los25nPM.dwg, 06/30/00 at 11:54, SG, 1:1
XREFs: BORDER.DWG

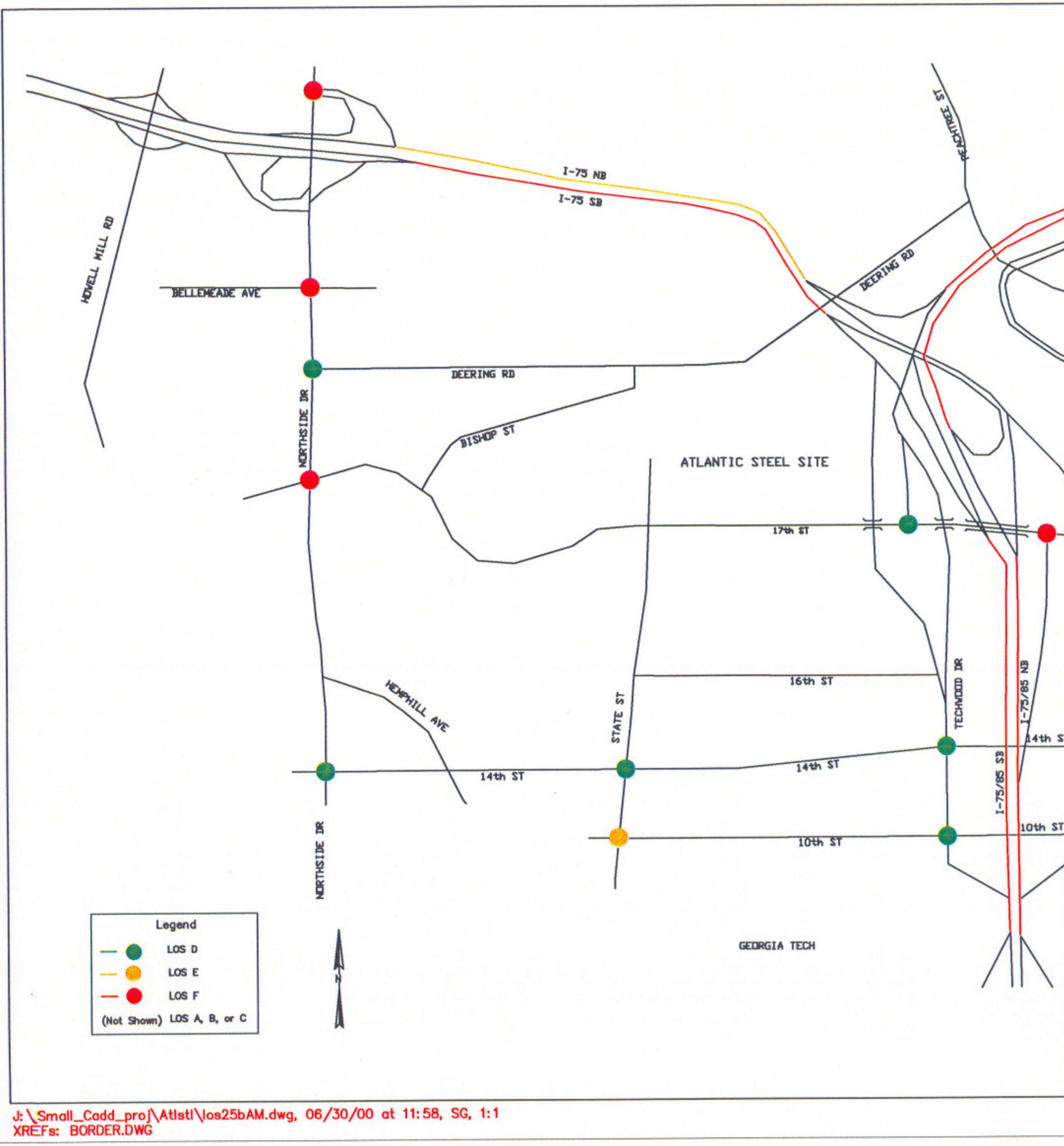


Figure 4–5

2025 Preferred Alternative AM LOS

17th Street Extension and Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: MAAI 2000a

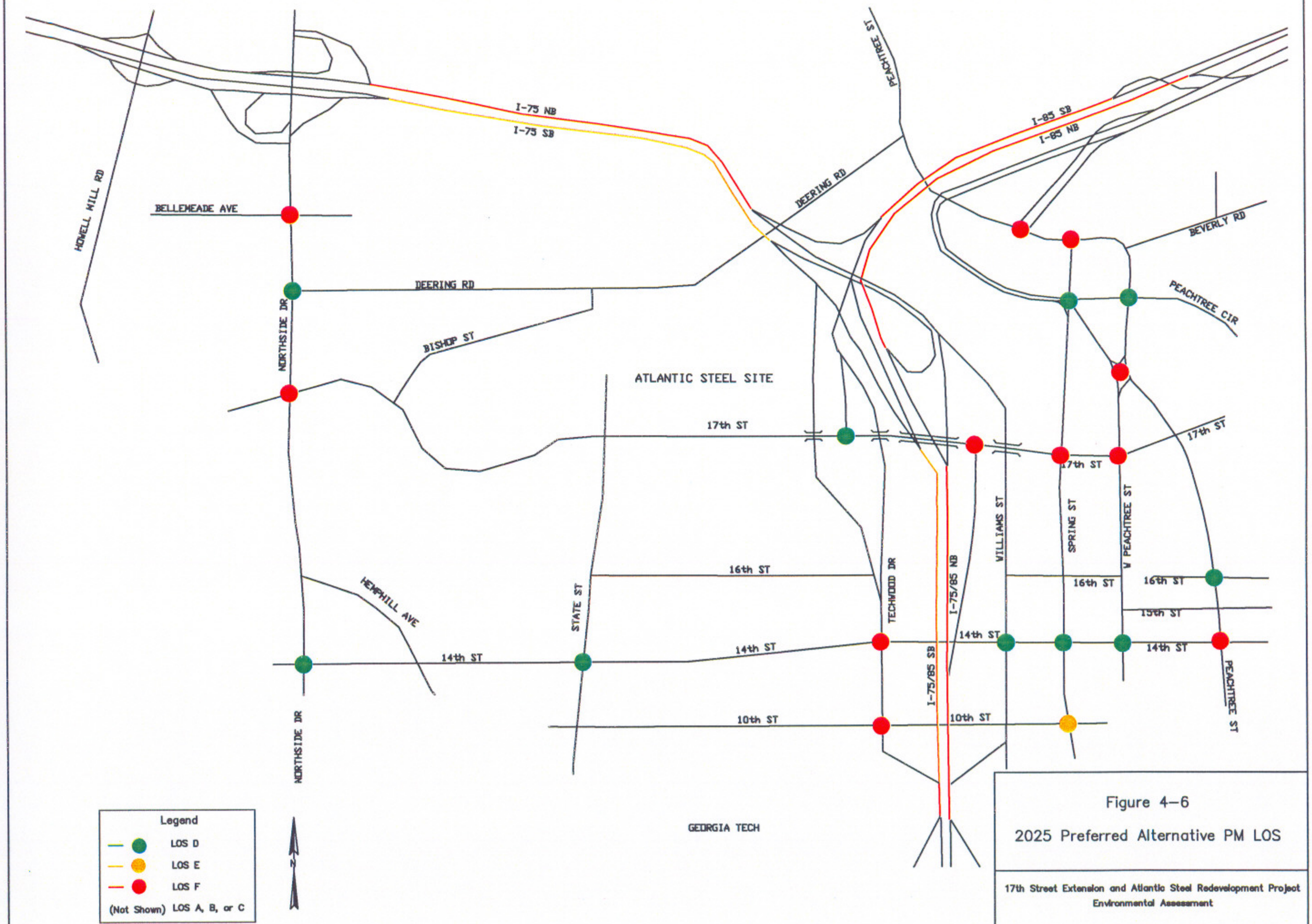


Figure 4–6

2025 Preferred Alternative PM LOS

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

SOURCE: MAAI 2000a

J:\Small_Cadd_proj\Atlstl\los25bPM.dwg, 06/29/00 at 10:36, SG, 1:1
No XREFs

Table 4-4. Roadways in the Eastern Portion of the Study Area Level of Service

Intersection	Existing	2025 No Action	2025 Preferred Alternative
Williams St. & 16th St.			
AM	B	B	B
PM	C	C	B
Williams St. & 14th St.			
AM	E	F	F
PM	D	F	D
Williams St. & 10th St.			
AM	C	F	F
PM	C	F	C
Spring St. & Buford Conn.			
AM	C	C	D
PM	C	D	D
Spring St. & 16th St.			
AM	C	C	C
PM	D	B	C
Spring St. & 14th St.			
AM	E	F	E
PM	D	F	D
Spring St. & 10th St.			
AM	D	E	D
PM	C	E	E
W. Peachtree St. & 16th St.			
AM	B	D	C
PM	C	E	C
W. Peachtree St. & 14th St.			
AM	D	D	D
PM	F	F	D
Peachtree St. & Spring St.			
AM	B	C	B
PM	C	F	F
Peachtree St. & Beverly Rd.			
AM	B	B	B
PM	B	B	C
Peachtree St. & Peachtree Cir.			
AM	B	D	D
PM	B	D	D
Peachtree St. & W. Peachtree St.			
AM	C	F	D
PM	D	F	F
Peachtree St. & 17th St.			
AM	B	B	C
PM	B	C	C
Peachtree St. & 16th St.			
AM	B	B	B
PM	C	C	D
Peachtree St. & 15th St.			
AM	C	D	D
PM	C	D	C
Peachtree St. & 14th St.			
AM	E	F	F
PM	D	F	F

Source: MAAI 2000a

Table 4-5. Roadways in the Western Portion of the Study Area
Level of Service

Intersection	Existing	2025 No Action	2025 Preferred Alternative
Northside Dr. & Deering Rd.			
AM	C	D	D
PM	D	D	D
Northside Dr. & Bishop St.			
AM	D	F	F
PM	C	F	F
Northside Dr. & Hemphill Dr.			
AM	B	C	C
PM	B	B	B
Northside Dr. & 14th St.			
AM	C	D	D
PM	C	D	D
14th St. & Hemphill Dr.			
AM	B	B	B
PM	B	C	C
14th St. & State St.			
AM	D	D	D
PM	C	F	D
14th St. & Techwood Dr.			
AM	D	F	D
PM	F	F	F
10th St. & State St.			
AM	C	E	E
PM	C	D	C
10th St. & Techwood Dr.			
AM	D	F	D
PM	D	F	F

Source: MAAI 2000a

Table 4-6. Interstate Roadway Segments in the Study Area
Level of Service

Interstate Section	Existing	2025 No Action	2025 Preferred Alternative
A.M.			
I-75 Southbound			
Northside Dr. to Brookwood Interchange	D	F	F
I-75 Northbound			
Brookwood Interchange to Northside Dr.	D	E	E
I-85 Southbound			
Monroe Entrance to Brookwood Interchange	D	F	F
I-85 Northbound			
Brookwood Interchange to Monroe Exit	D	F	F
Downtown Connector Southbound			
Brookwood Interchange to 10th St. Entrance	E	F	F
10th St. Entrance to North Ave. Exit	E	F	F
Downtown Connector Northbound			
North Ave. Entrance to 10th St. Exit	D	F	F
10th St. Exit to Brookwood Interchange	D	F	F
P.M.			
I-75 Southbound			
Northside Dr. to Brookwood Interchange	D	E	E
I-75 Northbound			
Brookwood Interchange to Northside Dr.	F	F	F
I-85 Southbound			
Monroe Entrance to Brookwood Interchange	D	F	F
I-85 Northbound			
Brookwood Interchange to Monroe Exit	E	F	F
Downtown Connector Southbound			
Brookwood Interchange to 10th St. Entrance	D	E	E
10th St. Entrance to North Ave. Exit	E	F	F
Downtown Connector Northbound			
North Ave. Entrance to 10th St. Exit	D	F	F
10th St. Exit to Brookwood Interchange	D	F	F

Source: MAAI 2000a

The intersections in the study area that are estimated to experience the greatest increase in LOS (improvement in traffic flow) are: Williams Street and 10th Street (P.M.); Spring Street and 14th Street (P.M.); West Peachtree Street and 16th Street (P.M.); West Peachtree Street and 14th Street (P.M.); Peachtree Street and West Peachtree Street (A.M.); 14th Street and State Street (P.M.); 14th Street and Techwood Drive (A.M.); and 10th Street and Techwood Drive (A.M.) (see Tables 4-4 and 4-5). As described in the previous section, these predicted increases in LOS are directly related to providing new and improved access from the Interstate and a new east-west minor arterial in the Midtown area at 17th Street across I-75/I-85.

The intersections in the study area that are estimated to experience a decrease in LOS are: Spring Street and Buford Highway Connector, Spring Street and 16th Street, Peachtree Street and Beverly Road, Peachtree Street and 17th Street, and Peachtree Street and 16th Street (see Tables 4-4 and 4-5). These decreases in LOS would occur over an approximate twenty-year time frame and are viewed as minor decreases (going from LOS B to LOS C and LOS C to LOS D) that should not adversely affect the overall traffic patterns in these areas. More detailed information concerning the traffic LOS for individual roadways and intersections in the study area for the existing conditions, 2025 no action alternative, and the 2025 preferred alternative is summarized in Tables 4-4, 4-5, and 4-6.

4.3.3.4 Transit Impacts

The closest transit station to Atlantic Steel is the MARTA Arts Center Station. It was recognized in the early stages of alternatives development that a transit linkage to MARTA was desirable and necessary for the project to be considered a TCM. The preferred roadway improvements, specifically the 17th Street Bridge with dedicated transit lanes, provide a range of potential transit services between the Atlantic Steel site and the nearby MARTA Arts Center Station. Initial transit service would be via shuttle bus between Atlantic Steel and the MARTA Arts Center Station. This initial service would be integrated with existing MARTA schedules to ensure efficient operation. Transit riders would access the MARTA Arts Center Station via a dedicated pull-out lane and covered walkway to the station along West Peachtree Street. Shuttle buses would traverse 17th Street and the 17th Street Bridge on dedicated transit lanes, circulate throughout the development, and return (see Figure 2-5). It is anticipated that there would be as many as fifteen bus trips during the peak hours and approximately seven bus trips during the non-peak hours making the round trip circulation. Impacts of these bus trips during the day are not considered significant given the volumes associated with roadways in this area. A positive impact of this connection would include increased ridership and fare revenues for MARTA. In addition, the retail portion of the redevelopment would contribute a one cent sales tax revenue source dedicated to MARTA.

The new 17th Street Bridge would be designed to provide for other transit options when conditions warrant and future technologies such as light rail are identified for implementation. More detailed information concerning the justification and implementation of transit services to the Atlantic Steel site is included as an appendix in the Concept Report (Dames & Moore 2000).

4.3.3.5 Non-Motorized Travel Impacts

The Arts District Bicycle Trail is located within one-mile of the project area. The ability to link any future bike routes including the Arts District Trail is another form of a TCM. The exact square footage addition of bike lanes in conjunction with the road improvements is difficult to estimate at this time, due to lack of final engineering design data. The preferred roadway improvements provide bicycle access and dedicated bicycle lanes on 17th Street on the Atlantic Steel site and the 17th Street Bridge. All bicycle route improvements to be added would be inconsistent with the City of Atlanta/ARC Bike Plan (ARC 1995). More detailed information concerning the justification and implementation of bike lanes on the 17th Street Bridge is included in the Concept Report (MAAI 2000a). As part of the zoning conditions for the site, bicycle lanes would also be included on State Street (including the loop north of 17th Street) and Center Street. In addition, JAR would utilize the existing at-grade crossing over the railroad at Mecaslin Street to provide a signalized bike/pedestrian crossing into the Loring Heights community. JAR would provide a grade separated (elevated) bike/pedestrian crossing at the location, depending on negotiations with Norfolk Southern Railroad.

The preferred roadway improvements provide new pedestrian access throughout the study area, including new sidewalks throughout the Atlantic Steel site and on the 17th Street Bridge. The exact square footage addition of pedestrian walkways in conjunction with the road improvements is difficult to estimate at this time, due to lack of final engineering design data. The pedestrian access with the preferred alternative would occur via dedicated walkways within the public right-of-way. Pedestrian walkways would also be constructed throughout the redevelopment project. More detailed information concerning the justification and implementation of pedestrian walkways throughout the study area is included in the Concept Report (MAAI 2000a).

4.3.3.6 Roadway Construction Impacts

Construction would create some unavoidable inconveniences to motorists, but construction activities would be conducted in a manner that would maintain access to existing roadways and minimize conflict with traffic. The safety of the general public and residents of the area would be considered at all times. All construction functions would be accomplished in a timely and orderly fashion so as to keep disruptions minimal, for short duration and so as not to compromise safety.

The transportation improvements are listed in the 2001-2003 Atlanta Transportation Improvement Program for right of way acquisition to begin in Fiscal Year 2002 (July 1, 2001 to June 30, 2002) and construction to begin in Fiscal Year 2003 (July 1, 2002 to June 30, 2003). Due to the magnitude and complexity of the proposed improvements to the roads and bridges in the area, the project is envisioned to be constructed in three primary phases.

Phase 1 would consist of the reconstruction of the I-75 southbound ramps to 16th and 14th Streets and widening of Techwood Drive. The I-85 southbound exit to 14th Street would be realigned and the new direct ramp from I-85 southbound to 17th Street would be constructed. The section of the 17th Street Extension from West Peachtree Street to the Atlantic Steel property including the new bridge over I-75/I-85 would also be constructed during this first phase. Phase 2 would consist of the continued construction of 17th Street from the Atlantic Steel property over the Norfolk Southern Railroad west to Northside Drive. It is anticipated that roadway construction of 17th Street would be coordinated with the Atlantic Steel redevelopment. Improvements would be required along Northside Drive, Bishop Street at Northside Drive, and along relocated Bishop Street at 17th Street. Phase 3 would consist of the relocation of Williams Street to the east, construction of a new northbound off ramp from I-75/I-85 to 17th Street, and reconstruction of the

14th Street Bridge over the freeway. Improvements would be required along 16th Street between Williams Street and Spring Street.

It is anticipated that Phase 1 would require 24-30 months for construction, Phase 2 would require 18-24 months for construction, and Phase 3 would require 30-36 months for construction. It is also envisioned that construction of Phases 1 and 2 would overlap in time thereby reducing the total construction time period in the area. Phase 3 construction is not scheduled to occur until completion of Phases 1 and 2. The number and types of construction equipment that would be used in conjunction with the various roadway improvements would vary according to each phase of construction. Some examples of heavy equipment to be used include front-end loaders, dump trucks, bulldozers, and cranes. At this time, it is not known what the individual use of each piece of equipment or the duration of use would be. Specific construction staging areas have not yet been identified; however, every effort would be made to locate construction staging areas as far away from residential areas as possible.

Delays and inconveniences to motorists and area residents would be minimized wherever possible. Night work would be specified and conducted to meet contractors and the public's needs. However, citizens would be advised in advance of all major construction activities such as lane closures and detours. GDOT would utilize a variety of methods to convey construction information to the public, including: 1) utilizing portable and/or permanent variable message boards along the roadsides in the work zones; 2) maintaining direct and constant contact with area news media, including print, television, and radio, and distributing information to these organizations well in advance of major construction events; 3) providing up-to-date information on the world wide web internet site, www.Georgia-Navigator.com; and 4) maintaining accurate, convenient information for cellular phone customers at the *DOT number.

4.3.3.7 Measures for Addressing Community Traffic Concerns

As part of the rezoning process for the Atlantic Steel site and additional public involvement for this project, a number of citizens from the neighborhoods in the study area (Ansley Park, Home Park, and Loring Heights) raised concerns about potential traffic impacts to their communities resulting from the 17th Street Extension and Atlantic Steel redevelopment. Through subsequent meetings with the City of Atlanta Neighborhood Planning Unit (NPU-E) for this area, as well as individual meetings with the neighborhood civic associations, a number of measures were developed to address these community concerns. These measures are summarized below:

Design Modifications. Several design modifications were developed for the original 17th Street Concept based on direct input from the neighborhoods. The major design modifications to the 17th Street Bridge and its transition into Midtown Atlanta, both east and west of I-75/I-85, were discussed in Section 4.3.3.1. In addition, design modifications were developed with input from Loring Heights and Ansley Park as summarized in the following paragraphs.

Three alternatives were presented to the Loring Heights Neighborhood Association related to the design of the intersection of Bishop Street and the proposed 17th Street. The neighborhood discussed these alternatives with the adjacent commercial district along Bishop Street and identified a preferred alternative. This design alternative was incorporated into the latest design of this intersection.

Five design alternatives for 17^{th} Street, east of Peachtree Street, were presented to representatives of the Ansley Park Civic Association as measures to discourage cut-through traffic on 17^{th} Street into this neighborhood. The representatives agreed to discuss these alternatives with the rest of the neighborhood and the adjacent commercial district to identify which of the alternatives would be preferred. However, a final decision on a preferred alternative would be reached after a comprehensive study of traffic in this area is completed (see Memorandum of Understanding (MOU) section below, as well as Appendix I).

Other General Measures. When the Atlantic Steel property was rezoned in 1998, specific zoning conditions were included to address the surrounding neighborhood's concerns related to future traffic impacts. Condition 4 of the current zoning requires JAR to work with the City of Atlanta and Home Park to limit cut-through traffic on residential streets perpendicular to and south of 16^{th} Street by means of cul-de-sacs, speed humps, gates, control arms, and other traffic calming devices. JAR is also required to work with the City of Atlanta and the Loring Heights neighborhood to limit cut-through traffic on Bishop Street. In addition, Condition #23 of the current zoning requires JAR to develop a transportation management plan that will attempt to reduce single occupancy vehicle (SOV) trips to and from the site. Both of these conditions represent enforceable measures on behalf of the City of Atlanta and JAR to work with these adjacent neighborhoods to minimize traffic impacts in the future.

In addition, the Atlantic Steel TCM requires annual monitoring of the build-out and performance of the Atlantic Steel site relative to certain site design and transportation performance measures. The TCM contains four site design criteria and four performance targets which will collectively ensure that the redevelopment is designed and built with elements that encourage alternatives to SOV trips, and also that the project will perform in ways to lower VMT and associated emissions (see Section 4.3.4.4).

Memorandum of Understanding. While the predicted traffic increases due to the 17^{th} Street Extension and Atlantic Steel Redevelopment project alone would not adversely affect the overall traffic patterns in the study area, the neighborhoods have raised concerns about the cumulative increase in traffic in their communities. The communities are concerned about the cumulative traffic increases resulting not only from this project, but from other new development in the area that is already occurring, or that would occur in the future.

Based on these concerns, a MOU between EPA, GDOT, GRTA, City of Atlanta, JAR, Ansley Park, Home Park, Loring Heights, and the Midtown Alliance is being developed that establishes an agreement between the parties on conditions to be met and procedures to be followed for continued study of traffic impacts to neighborhoods associated with new development in Midtown Atlanta. All parties are concerned about the localized impacts of smart growth and urban revitalization projects and seek to conserve the integrity and stability of existing neighborhoods and support overall community improvement goals.

The primary purpose of the MOU is to establish a community-based planning process that would provide a future mechanism, outside the scope of this project alone, for the collection of specific data on future trips associated with the redevelopment of the Atlantic Steel site and other development projects in Midtown Atlanta. The purpose of this process would be to study the magnitude and cumulative effects of traffic in the neighborhoods and develop and implement means of minimizing these impacts. Commitments in the MOU consist of: 1) existing commitments in the City of Atlanta zoning for the Atlantic Steel site; 2) proposed commitments in the TCM included in the Georgia SIP; and 3) other new commitments. Funding for any traffic improvements identified by this process is anticipated to come from a variety of public and private sources. The Draft MOU is included as Appendix I.

4.3.4 Air Quality

This section summarizes the air quality impacts of the preferred alternative. In order for the 17th Street Extension and Atlantic Steel Redevelopment project to proceed, the project must comply with federal requirements as defined under the CAA of 1990. Also, as described in Section 1 and 2, the project is being considered as a TCM. The following sections present the approach used to show that the project would not produce new violations of the NAAQS and that the project has the characteristics to qualify as a TCM. To demonstrate that the project would not produce new violations of the NAAQS, the emissions from the project were examined at the regional and local level.

4.3.4.1 Regional Impacts

Because the Atlanta region is designated nonattainment for ozone, a quantitative analysis of transportation-related emissions of NOx and VOC (precursors to ground-level ozone formation) was performed on a regional scale as part of the process to determine if the project could qualify as a TCM. This analysis was discussed previously in Sections 2.3 and 2.4. The study concluded that by the year 2015, the Atlantic Steel Redevelopment project has the potential to reduce regional VMT by 50,000 to 200,000 VMT/day, and to reduce associated emissions of NOx and VOC by 0.2 to 0.3 tons/day and 1.1 to 1.2 tons/day, respectively. Therefore, the Atlantic Steel Redevelopment project is expected to help improve future air quality in the Atlanta region with respect to ozone. By considering the impacts of development location and design on regional VMT and air emissions, study results indicate that the most regionally central, most transit-accessible, and most pedestrian-friendly location and site design combinations -- those at the Atlantic Steel site -- produced the least VMT and air emissions. For these reasons, the project qualifies as a TCM and would not produce new violations of the NAAQS.

4.3.4.2 Localized Impacts

In addition to regional emissions, a voluntary analysis of the potential impacts of the Atlantic Steel Redevelopment project on localized CO concentrations was conducted to ascertain if the NAAQS for CO would be exceeded with the project. This CO analysis is recorded in the *MicroScale Carbon Monoxide Impact Assessment for the Atlantic Steel Development Project* (Appendix J). At the local level, the pollutant of most concern is CO emissions from automobiles. Roads in the study area for the preferred alternative were examined, including new roads, ramps and the bus transit system. The CALINE4 line source dispersion model was used to predict CO concentrations in the study area for project years 1998, 2005, and 2025. This model used traffic data input including roadway geometry and widths, traffic volumes, average vehicle speeds, and lane capacities. CALINE4 also requires emission factors which are produced using MOBILE5a. The mean coldest January day was used for MOBILE5a and CALINE4 as a worst case temperature. Also, other worst case meteorological data (including wind speed and direction) were assumed for CALINE4 modeling. The CO concentrations predicted by CALINE4 were added to the background concentration to generate a predicted total CO concentration. The background concentration was based on measurements taken at the Georgia Tech Campus in the summer during the Georgia Tech/EPA U.S. Olympic Measurement program and scaled for winter conditions. The background CO concentration derived for study area was 2.0 ppm for a 1-hour average.

The CO concentrations in the study area were predicted based on worst case A.M. and P.M. conditions using the methodology outlined above. Based on the CALINE4 prediction, background concentration, and accuracy of the data, the maximum, worst case CO concentrations would be less than 17 ppm for the 1-hour standard in the years 2005 and 2025 (Appendix J). This is under the federal one-hour average CO standard of 35 ppm. The project is not expected to exceed the federal eight-hour average CO standard of 9 ppm (Georgia Tech 1999). Between the A.M. and P.M. peak hours, traffic volumes decrease and travel speeds increase. In addition, favorable meteorological conditions during this period result in lower emission rates and increased pollutant dispersion. Thus, it is extremely unlikely that the Atlantic Steel Redevelopment project would exceed the eight-hour standards (Georgia Tech 1999).

The above results were based on the original JAR design for the Atlantic Steel site. As discussed in Section 2.4, a new redesigned Atlantic Steel development has been developed, and, as a result, regional VMT is expected to decrease by two percent with the redesign compared to the original design. Therefore, the redesign may result in lower localized CO concentrations at various intersections. At the same time, some intersections are expected to carry larger traffic volumes, which may result in higher CO concentrations than predicted in the above study. However, given the large margin between the federal one-hour CO standard and the ambient concentrations predicted in the study, the potential increases in CO are not expected to result in exceedences of the NAAQS. Furthermore, the localized CO analysis was completed before EPA finalized more stringent tailpipe emissions and gasoline sulfur standards, which should serve to further reduce future motor vehicle CO emission rates below those assumed in the analysis.

4.3.4.3 Construction Related Impacts

All phases of construction operations associated with site redevelopment and roadway construction would temporarily contribute to air pollution. The two main regional pollutants of concern during the construction phase of the project are PM_{10} (fugitive dust and combustion by-products) and NO_2 (from diesel fueled truck exhaust and diesel power generators). Particulates would increase slightly in the study area as dust from construction collects in the air surrounding the project. The construction equipment would also produce slight amounts of exhaust emissions. Construction emissions should be slight and of short duration; therefore, construction related emissions during construction would not likely result in new violations of the federal standards for NO_2 and PM_{10}.

4.3.4.4 Mitigative Measures

TCM Mitigation/Monitoring. The implementation and performance of the Atlantic Steel TCM will include a monitoring program to assess the project's effectiveness and to allow for necessary in-place corrections or alterations. The two primary components of the monitoring plan include the establishment of certain site design criteria and travel performance measures. The site design criteria are presented in Table 4-7 and help ensure that the redevelopment would contain the high density, mixed use, transit- and pedestrian-friendly components studied.

Table 4-7. Atlantic Steel TCM Site Design Criteria

Criterion	Description	Target Value
Overall Density	Total number of residents + employees on site	≥12,000
Transit-Oriented Density [1]	Total number of residents + employees per net acre within ¼-mile of an on-site transit stop	≥ 180
Activity Diversity	Percent of blocks with mixed uses [2]	≥ 33
External Street Connectivity	Average distance (in feet) between site ingress/egress streets	≤ 1,000 -- unless the City of Atlanta specifies otherwise [3]

[1] Transit-oriented density around any individual transit stop may vary significantly, but the average density around all transit stops must be equal to or greater than 180 people per net acre within mile of the stop. This measure only includes on-site acreage.

[2] Percent of blocks with mixed uses. A block is defined traditionally by the area contained within streets. Classification of uses will be according to major Standard Industrial Classification codes.

[3] This is calculated by dividing the length of the site's perimeter in feet by the number of ingress/egress streets. It is possible that the City of Atlanta would prevent connectivity of some streets or close access to some streets after they are built at the request of adjacent neighborhoods. Because this would be beyond the control of JAR, if such an event occurs, the target value is no longer effective

The travel performance measures are presented in Table 4-8 and set travel standards to ensure VMT and mode split for the project. The fourth travel performance measure was developed by the City of Atlanta and EPA, specifically in response to public comments, as a way to better balance the regional air quality benefits with the localized impacts of additional traffic created by this project. This performance measure was added to provide a mechanism to minimize future traffic impacts associated with build-out of the Atlantic Steel site. This measure identifies an upper limit for the average daily total number of vehicle trips, other than transit, that would be generated by the project. The benefits of this additional performance measure are: 1) it does not constrain the amount of development that could occur on-site, but rather places more emphasis on restricting vehicle trips; 2) it encompasses the impacts of ALL trips to and from the site (not just those made by residents and employees); and 3) it places more emphasis on making the Atlantic Steel redevelopment a transit and pedestrian-oriented development.

It is anticipated that the four site design criteria and four performance targets would collectively ensure that the redevelopment is designed and built with elements that encourage alternatives to SOV trips, and that the project would perform in ways to lower VMT and associated emissions.

Table 4-8. Atlantic Steel TCM Travel Performance Measures

Performance Measure	Description	Target Value
VMT Per Resident	Average daily VMT for all trips made by residents of the site	≤ 27
VMT Per Employee	Average daily VMT for trips to and from work for employees working on site	≤ 11
Mode Split	Percent of all trips to, from and on the site made by residents and employees combined, using non-SOV modes	≥ 25
Total Vehicle Trips	Average daily total vehicle trips to and from the site [1], other than transit	≤ 72,000

[1] Daily total vehicle trips include those trips that have an on-site origin and an off-site destination, and trips that have an off-site origin and an on-site destination. It does not include trips that pass through the site but do not have an on-site origin or destination, and it does not include trips that have both an on-site origin and an on-site destination (i.e., internal capture).

The TCM also contains contingency measures that encourage more travelers to use alternatives to SOVs, should the monitoring program conclude that the project is not meeting the performance targets. If the site is not meeting or exceeding the applicable performance targets contained in Table 4-8, JAR would identify funding or fund the creation of a TMA, if employers and property managers are not participating in a TMA already. The TMA would consult with the City of Atlanta concerning implementation of additional alternative transportation programs that achieve the performance standards stipulated in Table 4-8. The City of Atlanta and JAR would ensure that these programs would be developed and implemented, as appropriate, by the TMA. Examples of suggested programs are:

1. Transit discounts for on-site employees.
2. Increased provision of shuttle bus service or other transit service.
3. Increased parking rates, by time-of-day, by facility, and by parking type.
4. Reduction of available parking facilities or spaces.
5. Carpool/vanpool matching services.
6. Providing free or highly discounted annual regional transit passes with each residential unit (included in leases and property covenants).
7. Addition of traffic calming measures, such as raised pedestrian crosswalks, sidewalk bump-outs, diagonal on-street parking, or pedestrian islands.
8. Provisions and support for neighborhood car rental, car sharing systems, and real-time ridesharing services for residents and visitors.

9. Provision of additional facilities and amenities for non-SOV users such as bus shelters, bike racks and lockers, sidewalks, bike paths, park-and-ride facilities, telephones at shelters, newsstands, convenience retail, and daycare facilities.
10. Provision of guidance for telecommuting and alternative work schedules.
11. Employee Commuter Choice incentives--employees would be given the opportunity to purchase employer-discounted transit passes and vanpool benefits.

Construction Mitigation. To further ensure construction emissions are minimized, JAR and GDOT are responsible for compliance by all workers, including subcontractors operating at the site, with EPD rules. The following provision of the EPD rules is expected to be applicable to the construction activities:

The 391-3-1-02.(2)(n) Provisions – Fugitive Dust rule requires that all persons responsible for any operation, handling, transportation or storage facility that may result in fugitive dust shall take all reasonable precautions to prevent such dust from becoming airborne. This includes the use of water or chemicals for the control of dust during construction operations; the grading of roads or the clearing of land; and the covering, at all times when in motion, of open bodied trucks and transporting materials likely to give rise to airborne dusts.

Compliance with fugitive dust regulations would be achieved through the implementation of comprehensive construction management practices.

4.3.5 Noise and Vibration

Short term construction noise and vibration impacts as well as long term noise impacts associated with the future traffic for the proposed Atlantic Steel Redevelopment and the 17th Street Extension is presented in this Section. The Noise Impact Analysis Report (MAAI 2000b)for this project is included in Appendix E. For the purposes of this analysis, the study area was divided into five groups: Area A (Northside Drive/14th Street/Bishop Street), Area B (14th Street/Techwood Drive and Home Park), Area C (Midtown Atlanta/East of the I-75/85 Connector), Area D (Ansley Park), and Area E (Redeveloped Atlantic Steel Property) (see Figure A1 in Appendix E).

4.3.5.1 Short Term Construction Impacts

Construction Noise Impacts. Noise impacts from construction activities of the proposed project are a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Normally, construction activities are carried out in phases, and each phase has its own noise characteristics based on the mix of construction equipment in use. Overall, construction noise levels are governed by the noisiest pieces of equipment (i.e. pile driver). The anticipated construction activities are demolition, earthwork, new building construction on the Atlantic Steel site, and bridge and roadway construction. These activities would occur adjacent to Areas A, B, C and D. Area E is the Atlantic Steel redevelopment site. The impact assessment due to construction noise at Areas A, B, C, and D is summarized below:

- Area A: The main construction activity along Northside Drive and 17th Street is earthwork, bridge foundations, and roadway works. The land usage along these roads is commercial; no significant construction noise impacts are anticipated.

- Area B: There are mixed land uses in this area. The main land usage along Techwood Drive is commercial. Some residential areas are located in the vicinity of 16th Street which would experience short term construction noise impacts.
- Area C: During the earthwork, pile driving operations are expected. The land usage in the vicinity of the proposed 17th Street Bridge is commercial. There would be roadway improvements along Williams Street, but the land usage along the road is commercial; therefore, no significant construction noise impacts are anticipated.
- Area D: Ansley Park is located at least 800 feet away from the closest proposed improvements; therefore, no significant construction noise impacts are anticipated.

Construction Vibration Impacts. Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels and slight damage at the highest levels. The vibratory pile driver would be the most dominant source of vibration. Other heavy equipment such as bulldozers, drill rigs, and vibratory compactors are major sources of vibration.

The following activities would likely cause short term vibration impacts:

- Foundation Work for Bridge Construction: The major vibration source of this activity is the pile driver. Midtown Heights North Building may receive some cosmetic damage. Workers in the commercial areas within 300 feet from the geometric center of the pile driving operations would likely be annoyed.
- Other Roadway Construction: Heavy construction equipment such as pavement vibratory roller and bulldozer are the main sources of vibration. This operation is not likely to cause any structural damage, but it would annoy nearby receptors within 100 feet from the edge of the activity. The impacted receptors would be residential or commercial areas adjacent to the proposed roadway improvement sites located west of Northside Drive, north of 17th Street, west of Techwood Drive, and east of Williams Street.
- Earthwork/Building Construction: These activities would occur mainly on the Atlantic Steel Site. This operation would not be expected to cause any structure damage. Residential or commercial areas in the vicinity of 16th Street, which directly face the construction boundaries of the redevelopment, would likely be annoyed during this operation.

4.3.5.2 Long Term Traffic Noise Impacts

This project would impact the future noise levels in the study area due to additional traffic and changes in traffic patterns. This analysis is summarized from the *Traffic Noise Study, Proposed Redevelopment of the Former Atlantic Steel Site* (MAAI 2000b; see Appendix E).

Two methods were used for predicting a noise impact. The first method involved an evaluation of the predicted noise increases from the proposed project to determine if the noise levels approach or exceed GDOT Noise Abatement Criterion (NAC). This would be considered an impact. GDOT has defined approach to mean within one decibel of the NAC. A 69 dBA of L_{10} is approach level for schools, libraries, residences, churches, playgrounds, and recreational areas, and 74 dBA of L_{10} for commercial activities. The second method to determine noise impacts involved an analysis of the amount of increase from existing to future noise levels. Impacts were identified where there was a "substantial increase" from existing levels. GDOT considers a substantial increase to be 10 dBA or more.

Noise levels (L_{10}) associated with traffic across the entire study area were developed for the A.M. and P.M. peak hours. Noise levels would range from 58 to 79 dBA L_{10} for the preferred alternative conditions in 2025, with decreases and increases ranging from -7 to +12 dBA L_{10} compared to the no action alternative conditions in 2025.

Noise levels were predicted at 100 representative receiver locations (Appendix E). Modeling results for the preferred alternative indicate that 24 locations would be impacted: 23 locations would approach or exceed the GDOT NAC, and one location would experience a substantial increase in noise from existing to future levels. These impacted sites are depicted graphically in Appendix E. Of those impacted sites, 14 locations are existing commercial, four are existing residential, and six are future residential on the Atlantic Steel site (Area E). The future predicted traffic noise levels associated with the no action alternative were shown to impact 31 locations in the project area. All 31 approach or exceed the GDOT NAC, and two of these also experience a substantial increase in noise from existing to future conditions. Of those impacted sites, 19 are existing commercial and 12 are existing residential. These impacted sites are depicted graphically in Appendix E.

Of the 24 impacted locations associated with the preferred alternative, noise levels are predicted to increase for six, stay the same for nine, and decrease for three as compared to the no action alternative. A comparison of noise levels at the six impacted future residential locations on the Atlantic Steel Site (Area E) with the no action alternative was not possible (see below). The following bullets describe the distribution and impact of traffic generated noise throughout the study area. For specific receptors identified, refer to Appendix E.

- Area A: The future noise levels for the preferred alternative at commercial areas along 16th Street and 17th Street represented by Receptors A1 through A7 would increase slightly or remain the same as compared to the future no action. The L_{10} at the northeastern corner of a commercial building adjacent to the proposed 16th Street Extension (Receptors A8 and A9) is predicted to increase from 6 to 10 dBA. However, under the preferred alternative, the L_{10} at the west, or south of this building, is predicted to be lower than the no action scenario.
- Area B: In general, the project would reduce the future traffic noise levels in Area B as compared to the no action alternative. The predicted noise levels at 27 of 28 representative locations in this area would be the same or lower than the future no action. Commercial areas south of 14th Street, represented by Receptors B20, B21a, and B21b, would be impacted. However, the future noise levels at these receptors would be identical or higher by only 1 dBA than the future no action. Residential areas along 14th Street, represented by receptors B24 through B26, are currently impacted by existing noise levels, and would continue to be impacted under the future no action scenario, as well as the preferred alternative conditions. The predicted P.M. peak hour noise levels at receptors B24 through

B26 are 71 to 73 dBA for the preferred alternative, which are 1 to 3 dBA less than the future no action conditions.

- Area C: The future preferred alternative noise levels in Area C would impact eight commercial locations in this area, however, the no action alternative would impact nine. Commercial areas along Williams Street, such as a hotel (C1), a funeral home (C4), and office buildings (C6 and C8), would be impacted. The future noise level increases at these impacted buildings as compared to the no action alternative range from 0 to 3 dBA. Commercial areas along Peachtree Street and West Peachtree Street represented by receptors C17, C19, and C20 would be also impacted.

- Area D: The future traffic noise levels at residential or commercial areas in Ansley Park would remain virtually identical between the future no action and future preferred alternative conditions. The future preferred alternative noise levels at one commercial area (D2) and one residence (D7) would remain the same as the future no action, but would still experience an impact (L_{10} of 75 dBA and 69 dBA, respectively). The residence is located at the corner of 15th Street and Peachtree Street; thus, these two streets contribute high traffic noise levels to the residence.

- Area E: This area is within the proposed Atlantic Steel Redevelopment site. Future noise levels at specific receptor locations for the preferred alternative were developed using the latest site design; however, this was not possible for the no action alternative because a specific site design is not available. Therefore, a comparison of future noise levels on-site between the preferred and no action alternatives was not completed. The future noise levels at the designated multi-family residential areas represented by receptors E5, E6, E22, and E24 would be 69 or 70 dBA; therefore, there would be impacts. The noise levels at residential areas along 16th Street represented by receptors E11 and E12 would also exceed GDOT NAC.

4.3.5.3 Mitigative Measures

Construction. The temporary construction activities at the noise sensitive receptors adjacent to the proposed development and bridge would increase the ambient noise levels. Vibration due to the activities such as earthwork and roadway works would also cause adverse impacts. The following are the mitigative measures that would be considered and implemented to minimize the impacts of construction noise:

- Nearby residents and the traveling public on Bishop Street to the north, 16th Street, Atlantic Street, and other streets on the south will be informed of upcoming construction activities by signage (see Section 4.3.3.6).

- Construction equipment would be required to have factory-installed mufflers or their equivalents in good working order during the life of the construction contracts.

- Construction, where feasible, would take place primarily, during the less noise sensitive daylight hours to avoid impacts during the hours associated with sleep.

- A 15 foot earth berm has been constructed adjacent to 16th Street and has been tied into an existing embankment across Atlantic Street. Earth berms attenuate construction noise more effectively than wood. This should minimize construction noise impacts to the adjacent Home Park residences.

- GDOT would conduct case-by-case discussions with individual property owners and studies may be conducted to minimize construction related noise impacts.

Based on implementation of these mitigative measures and the fact that construction noise and vibration impacts are short-term and temporary, no significant noise and vibration construction impacts are anticipated.

Long Term Traffic Noise. Noise abatement was considered for the 24 sites (six within the proposed redevelopment) predicted to be impacted. A number of conditions were taken into account at impacted sites to determine the feasibility of abatement. Abatement measures considered included barriers, traffic management, alteration of horizontal and vertical alignments, and acquisition of right-of-way to serve as buffer zones. The effectiveness of a noise barrier or cost per benefited unit make traffic noise mitigation measures infeasible or unreasonable for most of the areas impacted. For a wall to be effective, it should be continuous and without any openings. However, a continuous wall would block residential access to the local roadways. A noise barrier, approximately 500 feet long and 7 to 10 feet high beginning just south of the 14th Street bridge extending south, mounted on top of the existing retaining wall/Jersey barrier adjacent to I-75/85, was identified as feasible and would possibly reduce noise levels at a hotel, identified as receptors B20a, B21a and B21b. However, the barrier would block the hotel view and sign; therefore, it may not be desirable for its business operation. Abatement measures other than barriers were found to be infeasible or ineffective or would not meet abatement conditions. JAR will work with, and encourage builders at the site to use noise reducing construction materials and/or orient buildings in a manner that would reduce noise levels at the site.

Throughout the study area, the large majority of noise levels stay the same or improve by implementing the project as compared to not implementing the project. Based on this and the consideration and implementation of mitigative measures, no significant long team noise impacts are anticipated.

4.3.6 Cultural Resources

The criteria for determining effects as presented in this EA conform to criteria established in the Section 106 regulations (36CFR800.5), which consider direct, indirect, and cumulative impacts. An "adverse effect" is found when an undertaking may alter, directly or indirectly, the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative (36CFR800.5(a)(1). Adverse effects on historic properties include, but are not limited to:

- Physical destruction of or damage to all or part of the property;
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36CFR68) and applicable guidelines;
- Removal of the property from its historic location;

- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restriction or conditions to ensure long-term preservation of the property's historic significance.

4.3.6.1 Historic Resources

The following section summarizes potential impacts on identified historic resources located within the APE. There will be no atmospheric effects to these resources as a result of project implementation. The project is consistent with the State Implementation Plan for air quality in the region.

Atlantic Steel Industries, Inc., is located in the northwestern section of the City of Atlanta immediately west of Interstates 75 and 85. The property extends roughly from the Norfolk Southern Railroad line paralleling Bishop Street south to approximately 14th Street. The eligible National Register boundary includes the current legal property boundary, or approximately 135 acres (Figure 4-7). This proposed boundary contains all National Register qualifying characteristics and features of the property and includes the locations of all of the former mills, warehouses, other associated buildings and machinery, and their immediate surroundings. The potential eligibility of Atlantic Steel Industries, Inc., has been recognized by consulting parties from the initial stages of the proposed project, as the Atlantic Steel facility is well known locally for its significance to the City of Atlanta, as well as to the southeastern United States. The resource is considered eligible under National Register Criterion A for its contributions to the development of the steel industry in Atlanta and the Southeast region, as well as National Register Criterion C for its architectural and engineering significance throughout a century of continuous operation.

Environmental remediation and proposed redevelopment would have an **adverse effect** on Atlantic Steel Industries, Inc., related to the demolition of this historic steel mill. These actions would result in physical destruction, damage, and alteration to the resource. As previously noted, the Atlantic Steel site would be cleaned up and redeveloped regardless of whether or not the 17th Street Extension occurs.

The character of the setting of Atlantic Steel Industries, Inc., outside the eligible National Register boundary consists of a mixture of land uses that have remained constant throughout the operation of the steel mill. The southern boundary of the parcel abuts the northern and western edges of the early-20th century residential subdivision of Home Park. The remainder of the surrounding area is largely industrial and commercial due to the proximity of the railroad, and features various early- to mid-20th century commercial office buildings and industrial warehouses. However, project implementation would result in maintaining residential and commercial uses in this area and therefore would not adversely affect this neighboring setting.

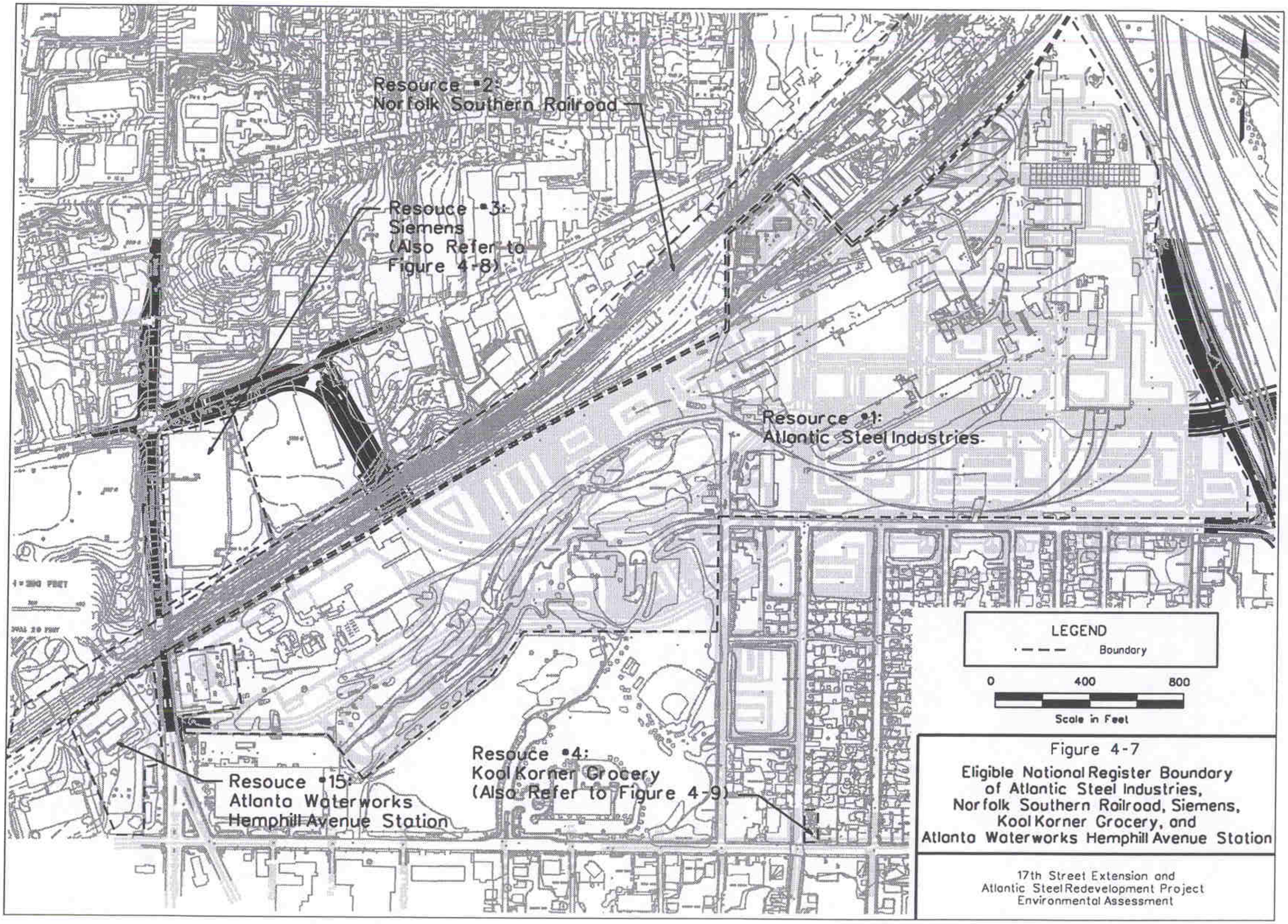


Figure 4-7
Eligible National Register Boundary of Atlantic Steel Industries, Norfolk Southern Railroad, Siemens, Kool Korner Grocery, and Atlanta Waterworks Hemphill Avenue Station

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

J:/735996/6-28-00/fig9.dgn 07/27/00 03:21:45 PM

Specific mitigation measures discussed during consultation with the SHPO, the City of Atlanta Urban Design Commission (AUDC), and the Atlanta History Center (AHC) include comprehensive, Historic American Buildings Survey–Historic American Engineering Record (HABS-HAER)-quality, large-format black-and-white photographs of the site as it exists prior to redevelopment. The requirements and responsibilities for this mitigation are contained in a Programmatic Agreement for the project initiated during consultation between the EPA and SHPO. The JAR, AUDC, and AHC were concurring parties for this agreement (see Appendix F).

Other preservation efforts regarding Atlantic Steel Industries, Inc., have occurred within the last ten years. Efforts to preserve the facility's heritage at various off-site locations include the preservation of selected structures, machinery, and buildings by transfer or sale to various museums throughout Georgia, including the Atlanta History Center, the Railroad Museum in Savannah, the Southeastern Railway Museum in Duluth, and the Carter Machine Company in Toccoa. The preservation of many company records has occurred through transfer to the Atlanta History Center. JAR has committed to the implementation of a Public Education and Outreach Plan to be coordinated with the SHPO, the AUDC, and the AHC. Components of this Education and Outreach Plan will include compilation of an oral history of Atlantic Steel Industries, Inc., development of educational materials, and the potential creation of a permanent exhibition space celebrating and incorporating the history of Atlantic Steel in the redevelopment plan.

The effects of visual impacts, noise, and vibration for the Atlantic Steel Industries, Inc., property are not applicable since remediation of the site would require the demolition of all existing historic resources.

The **Norfolk Southern Railroad** borders the northern portion of the Atlantic Steel site and extends east and west to provide service from Atlanta northeastward to Washington, D.C. (Figure 4-7). The eligible National Register boundary corresponds with the legal property boundary of the railroad line that abuts the current property boundary of the neighboring Atlantic Steel site. This proposed boundary contains all National Register qualifying characteristics and features of the resource, including its track beds and a spur line located south of the main Norfolk Southern line and immediately adjacent to the northern edge of the Atlantic Steel parcel. The resource is considered eligible under National Register Criterion A for its contributions to the development of the economic and transportation history of the state, region, and local community. The resource is also significant under National Register Criterion C as an example of rail transportation engineering in Georgia.

The preferred alternative would have **no adverse effect** on the Norfolk Southern Railroad. Physical destruction, damage, or alteration of the property would not occur with implementation of the preferred alternative. Physical taking of the railroad right-of-way is not part of the proposed project. Construction of a new elevated crossing over the railroad as part of the 17th Street Extension and a potential elevated bike/pedestrian bridge at Mecaslin Street would not adversely affect the railroad. These road improvements would not substantially change the character of the historic resource, nor would they change its eligibility under National Register Criteria A or C.

The character of the setting of the Norfolk Southern Railroad outside the eligible National Register boundary consists of a mixture of land uses that have remained constant throughout the existence of the rail line. The railroad parallels the former Atlantic Steel Industries, Inc., site. The remainder of the surrounding area is largely industrial and commercial due to the presence of the railroad, and features various early- to mid-20th century commercial office buildings and industrial warehouses. Project implementation would not affect commercial uses in this area and therefore would not adversely affect this neighboring setting.

The Norfolk Southern Railroad would be visually affected by implementation of the preferred alternative. However, this impact would not be an adverse effect since the adjacent commercial and residential development would not compromise the National Register eligibility of the resource. The effects of noise and vibration for the Norfolk Southern Railroad are not applicable since this resource is not a noise-sensitive receptor.

Siemens (1299 Northside Drive) is situated at the southeastern corner of Bishop Street and Northside Drive in the northwestern section of the APE adjacent to the proposed roadway improvements along Northside Drive and Bishop Street. The eligible National Register boundary corresponds with the legal property boundary and extends along the edge of pavement along both Northside Drive and Bishop Street (Figure 4-7 and 4-8). This proposed boundary contains all National Register qualifying characteristics and features of the resource, including all of the commercial and warehouse space, driveways, and parking and loading areas.

The potential eligibility of this resource has been recognized by the Georgia SHPO, as the resource is a notable example of modern architecture in Atlanta designed by the well-known local firm of Robert & Co., Inc. Furthermore, since the building was originally constructed for the Westinghouse Electric Company, the resource represents the steady growth of the company as a regional corporate center. Despite the replacement of its original glass-block windows, the exterior remains largely intact and continues to convey the character-defining features of the Art Moderne style. The resource is considered eligible under National Register Criterion A for its contributions to the development of the Westinghouse Electric Company as a regional corporate center in Atlanta. The resource is also significant under National Register Criterion C as a notable example of the Art Moderne style both designed and located in Atlanta.

The preferred alternative would have **no adverse effect** on the Siemens property. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. The roadway improvements on Northside Drive would occur within the existing right-of-way and sidewalks would align with existing sidewalks. The construction of 17th Street at Northside Drive, requiring realignment of Bishop Street, would occur within the existing right-of-way at bishop Street and on the north side of Bishop Street. Roadway improvements would not change the overall character of the resource or its historical and architectural significance under National Register Criteria A or C.

The character of the setting of Siemens outside the eligible National Register boundary consists of a mixture of land uses that have remained constant throughout the development of this portion of the APE. The southern boundary of the parcel parallels the Norfolk Southern railroad. The remainder of the surrounding area to the west, north, and east is largely industrial and commercial due to the presence of the railroad, and features various early- to mid-20th century commercial office buildings and industrial warehouses. However, project implementation would result in maintaining commercial uses in this area and therefore would not adversely affect this neighboring setting. Furthermore, the resource would not be isolated from the character of its

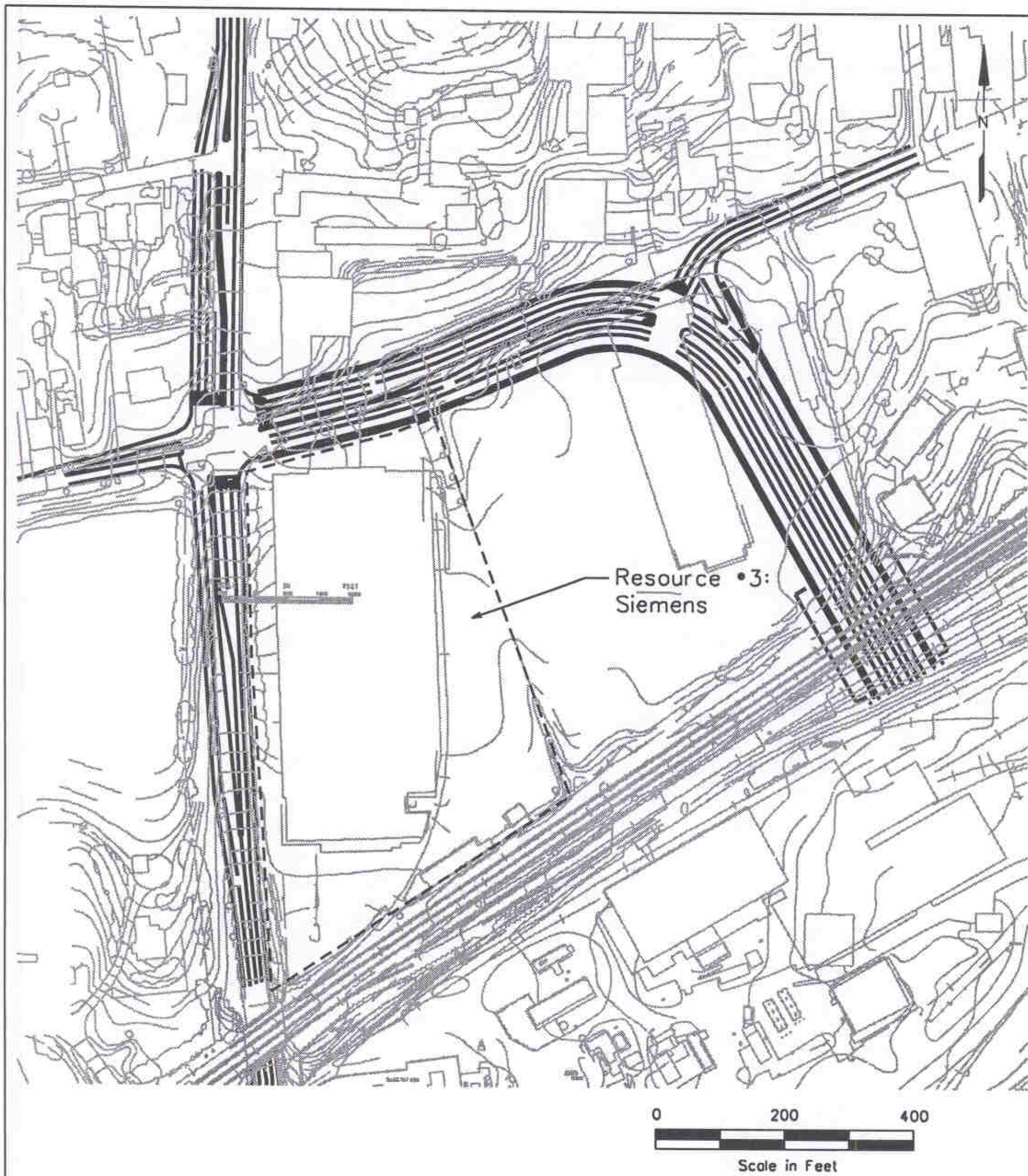


Figure 4-8
Eligible National Register Boundary of Siemens

17th Street Extension and
Atlantic Steel Redevelopment Project
Environmental Assessment

J:/735996/6-28-00/fig7.dgn 08/01/00 12:20:32 PM

setting since existing access along the northern boundary would be maintained (via the new 17th Street Extension).

Siemens would be visually affected by implementation of the preferred alternative. However, this impact would not be an adverse effect since the adjacent commercial and residential development and roadway improvements would not compromise the National Register eligibility of the resource.

The existing noise level near Siemens is 72 dBA L_{10} (A.M.) and 73 dBA L_{10} (P.M.). While the preferred alternative noise level for the year 2025 would be 74 dBA L_{10} (A.M. and P.M.), the noise level for the no action alternative would also be 74 dBA L_{10} (A.M. and P.M.). The two-decibel increase between the existing and preferred alternative conditions would occur over an approximate twenty-year time frame and would not be perceptible to the human ear. In addition, the resource is expected to receive a noise increase whether or not the proposed project is implemented. The noise level "approaches" but does not exceed the FHWA noise abatement criterion of 75 dBA L_{10} for commercial land use. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The **Kool Korner Grocery** (349 14th Street) is situated at the northeastern corner of 14th and State Streets (Figures 4-7 and 4-9). The eligible National Register boundary corresponds with the legal property boundary of the resource. This proposed boundary contains all National Register qualifying characteristics and features of the resource, including the commercial space fronting 14th Street and the residential space to the rear.

The potential eligibility of this resource has been recognized by the Georgia SHPO. The resource is considered eligible under National Register Criterion A for its role as a local community landmark historically significant for its commercial and social functions within the surrounding community. The resource is also significant under National Register Criterion C as an example of an historic corner store building. Although the building has undergone some minor alterations, the resource retains its essential character-defining features, as well as some intact interior elements.

The preferred alternative would have **no adverse effect** on the Kool Korner Grocery. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the eligible National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of the Kool Korner Grocery outside the eligible National Register boundary consists of a mixture of land uses that likely have remained constant throughout the development of this portion of the APE. The southern boundary of the parcel abuts 14th Street, a highly traveled 4-lane State Route that extends to the east and west and provides Interstate access. The western and northern boundaries of the parcel along State Street are situated at the edge of Home Park, an early-20th century residential subdivision. However, project implementation would

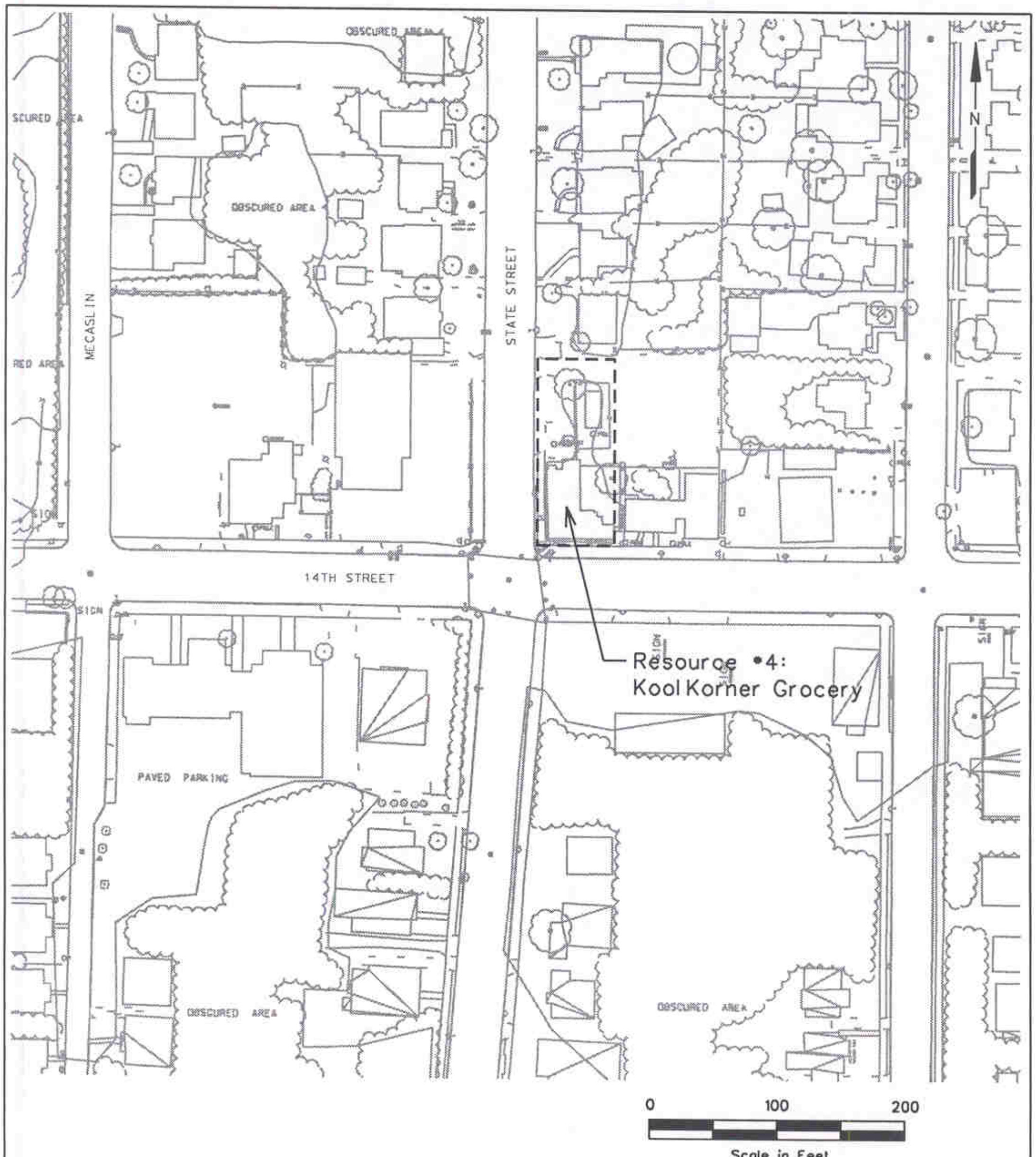


Figure 4-9
Eligible National Register Boundary of Kool Korner Grocery

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

J:/735996/6-28-00/fig5.dgn 07/27/00 02:08:44 PM

not affect these current land uses and therefore would not adversely affect this neighboring setting, nor change the overall character of the resource or its historical and architectural significance under National Register Criteria A or C.

The Kool Korner Grocery would not be visually affected by implementation of the preferred alternative. Currently fronting 14th Street, the proposed redevelopment and roadway improvements would occur approximately 1,000 feet to the north. Therefore, there would be no visual adverse effects to this resource.

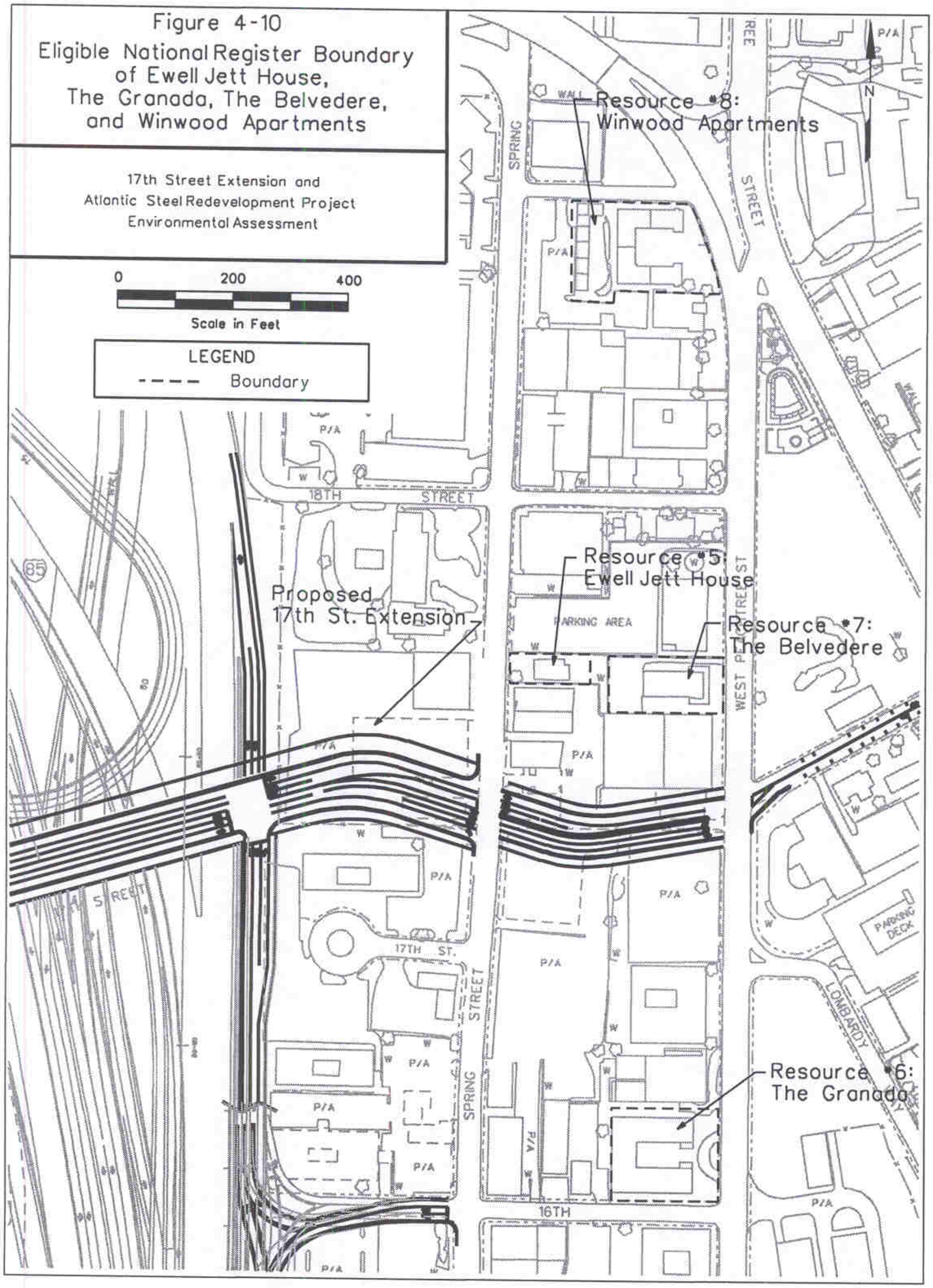
The existing noise level at the Kool Korner Grocery is 66 dBA L_{10}. The no action noise level for the year 2025 would be 72 dBA L_{10} (A.M.) and 74dBA L_{10} (P.M.). The noise level for the preferred alternative would be 68 dBA L_{10} (A.M. and P.M.). The two-decibel increase between the existing and preferred alternative conditions would occur over an approximate twenty-year time frame and would not be perceptible to the human ear. Also, the resource is expected to receive a noise increase whether or not the proposed project is implemented. In addition, the noise level would not approach or exceed the FHWA noise abatement criterion of 75 dBA L_{10} established for commercial land use, and is predicted to be lower than if the project is not implemented. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The **Ewell Jett House** (1385 Spring Street NE) is situated on the eastern side of Spring Street, approximately 200 feet north of the alignment for the proposed 17th Street improvements (Figure 4-10). The eligible National Register boundary corresponds with the legal property boundary and contains all National Register qualifying characteristics and features of the resource. The property is considered eligible under National Register Criterion C as a notable early-20th century example of a residential American four-square. Current use of this property is commercial.

The preferred alternative would have **no adverse effect** on the Ewell Jett House. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the eligible National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of the Ewell Jett House outside the eligible National Register boundary consists primarily of commercial land uses. The western boundary of the parcel abuts Spring Street, a highly traveled one-way State Route that extends south. Therefore, project implementation would not adversely affect this neighboring setting nor change the overall character of the resource or its architectural significance under National Register Criterion C. The Ewell Jett House would be visually affected by implementation of the preferred alternative, especially along the western and southern boundaries of the parcel. However, this impact would not be an adverse effect due to the existing urban visual setting of this area nor would it compromise the National Register eligibility of the resource.

The existing noise level in the vicinity of the Ewell Jett House is 72 dBA L_{10} (A.M.) and 70 dBA L_{10} (P.M.). While the no action noise level for the year 2025 will be 73 dBA L_{10} (A.M.) and 72 dBA L_{10} (P.M.), the noise level for the preferred alternative would be 73 dBA L_{10} (A.M.) and



J:/735996/6-28-00/fig6.dgn 07/28/00 02:46:33 PM

71 dBA L_{10} (P.M.). The one to two decibel increase between the existing and preferred alternative conditions would not be perceptible to the human ear. Also, the resource is expected to receive a noise increase whether or not the proposed project is implemented. In addition, the noise level would not approach or exceed the FHWA noise abatement criterion of 75 dBA L_{10} established for commercial land use, and is predicted to be slightly lower than if the project is not implemented. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The Granada (1302 W. Peachtree Street) is situated at the northwestern corner of 16th and W. Peachtree Streets, approximately 600 feet south of the proposed 17th Street improvements and approximately 300 feet east of the proposed improvements to 16th Street (Figure 4-10). The eligible National Register boundary corresponds with the legal property boundary and contains all National Register qualifying characteristics and features of the resource. The property is considered eligible under National Register Criterion A for its contributions to the development of middle class multi-family housing in Midtown Atlanta in the early-20th century. The resource is also significant under National Register Criterion C as an outstanding example of the Spanish Revival style. Current use of this property is as a commercial hotel.

The preferred alternative would have **no adverse effect** on The Granada. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the eligible National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of The Granada outside the eligible National Register boundary consists primarily of commercial land uses. The eastern boundary of the parcel fronts W. Peachtree Street, a highly traveled one-way State Route that extends to the north and provides access to the Interstate. With the exception of the indirect effect of increased traffic on W. Peachtree Street, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical or architectural significance under National Register Criteria A and C.

The Granada would be visually affected by implementation of the preferred alternative, especially along the northern and western boundaries of the parcel. However, this impact would not be an adverse effect due to the existing urban visual setting of this area, nor would it compromise the National Register eligibility of the resource.

The existing noise level in the vicinity of The Granada is 69 dBA L_{10} (A.M.) and 71 dBA L_{10} (P.M.). The no action noise level for the year 2025 would be 71 dBA L_{10} (A.M.) and 74dBA L_{10} (P.M.). The noise level for the preferred alternative would be 71 dBA L_{10} (A.M.) and 72 dBA L_{10} (P.M.). The one to two decibel increase between the existing and preferred alternative conditions would not be perceptible to the human ear. Also, the resource is expected to receive a noise increase whether or not the proposed project is implemented. In addition, the noise level of the preferred alternative would not approach or exceed the FHWA noise abatement criterion of 75 dBA L_{10} established for commercial land use, and is predicted to be slightly lower than if the project is not implemented. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The Belvedere (1384 W. Peachtree Street) is situated on the western side of W. Peachtree Street, approximately 150 feet north of the proposed 17th Street improvements (Figure 4-10). The eligible National Register boundary corresponds with the legal property boundary and contains all National Register qualifying characteristics and features of the resource. The property is considered eligible under National Register Criterion A for its contributions to the development of middle class multi-family housing in Midtown Atlanta in the early-20th century. The resource is also significant under National Register Criterion C as a notable example of the Chicago-influenced Commercial style. Current use of this property is residential apartments.

The preferred alternative would have **no adverse effect** on The Belvedere. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the eligible National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of The Belvedere outside the eligible National Register boundary consists primarily of commercial land uses. The eastern boundary of the parcel fronts W. Peachtree Street, a highly traveled one-way State Route that extends to the north and provides access to the Interstate. With the exception of the indirect effect of increased traffic on W. Peachtree Street, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical or architectural significance under National Register Criteria A and C.

The Belvedere would be visually affected by implementation of the preferred alternative, especially along the southern and western boundaries of the parcel. However, this impact would not be an adverse effect due to the existing urban visual setting of this area, nor would it compromise the National Register eligibility of the resource.

The existing noise level in the vicinity of The Belvedere is 72 dBA L_{10} (A.M.) and 74 dBA L_{10} (P.M.). The no action noise level for the year 2025 would be 74 dBA L_{10} (A.M.) and 76 dBA L_{10} (P.M.). The noise level for the preferred alternative would be 75 dBA L_{10} (A.M.) and 76 dBA L_{10} (P.M.). The two to three decibel increase between the existing and preferred alternative conditions would occur over an approximate twenty-year time frame and would not be perceptible to the human ear. Also, the resource is expected to receive a noise increase whether or not the proposed project is implemented. Although the noise level of the preferred alternative exceeds the FHWA noise abatement criterion of 70 dBA L_{10} for residential land use, current levels already exceed this limit. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The **Winwood Apartments** (1460 W. Peachtree Street) are situated on the western side of W. Peachtree Street near the intersection of Peachtree Street, approximately 800 feet north of the proposed 17th Street improvements (Figure 4-10). The eligible National Register boundary corresponds with the legal property boundary and contains all National Register qualifying characteristics and features of the resource. The property is considered eligible under National Register Criterion A for its contributions to the development of middle class multi-family housing in Midtown Atlanta in the early-20th century. The resource is also significant under National

Register Criterion C as a good example of the Neoclassical style. Current use of this property is residential apartments.

The preferred alternative would have **no adverse effect** on the Winwood Apartments. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the eligible National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of the Winwood Apartments outside the eligible National Register boundary consists primarily of commercial land uses. The eastern boundary of the parcel fronts W. Peachtree Street, a highly traveled one-way State Route that extends to the north and intersects the on-ramp to the interstate. With the exception of the indirect effect of increased traffic on W. Peachtree Street, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical or architectural significance under National Register Criteria A and C. The larger setting of the resource has already been affected by the extension of the Buford Highway Connector to I-85 northbound.

The Winwood Apartments would be visually affected by implementation of the preferred alternative, especially along the southern and western boundaries of the parcel. However, this impact would not be an adverse effect due to the existing urban visual setting of this area, nor would it compromise the National Register eligibility of the resource.

The existing noise level in the vicinity of the Winwood Apartments is 68 dBA L_{10} (A.M.) and 70 dBA L_{10} (P.M.). The no action noise level for the year 2025 would be 74 dBA L_{10} (A.M.) and 77 dBA L_{10} (P.M.). The noise level for the preferred alternative would be 75 dBA L_{10} (A.M.) and 76 dBA L_{10} (P.M.). There would be a six to seven decibel increase between the existing and preferred alternative conditions. However, the resource is expected to receive a noise increase whether or not the proposed project is implemented. Predicted noise levels for the preferred alternative would be virtually identical to the no action alternative. Although the noise level of the preferred alternative exceeds the FHWA noise abatement criterion of 70 dBA L_{10} established for residential land use, current levels already approach or exceed this limit. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The **First Presbyterian Church** (1328 Peachtree Street NW) is situated at the northwest corner of 16th Street and Peachtree Street NE, approximately 600 feet southeast of the proposed 17th Street improvements (Figure 4-11). The eligible National Register boundary corresponds with the legal property boundary and contains all National Register qualifying characteristics and features of the resource. The property is considered eligible under National Register Criterion A for its contributions to the broadcasting of services throughout the Southeast in the early-20th century. The resource is also significant under National Register Criterion C as a notable example of the Gothic style. Current use of this property is as a church.

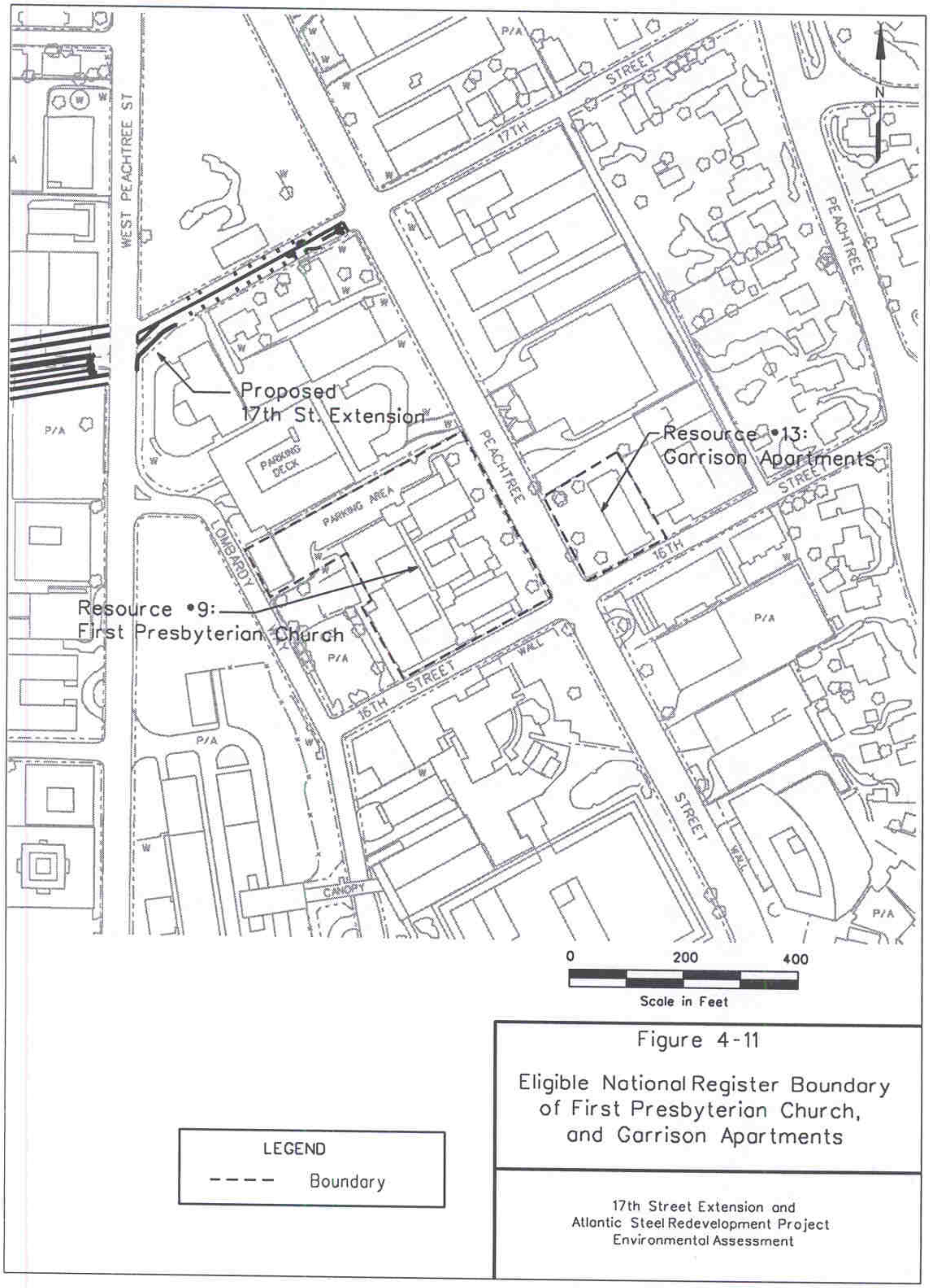


Figure 4-11

Eligible National Register Boundary of First Presbyterian Church, and Garrison Apartments

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

J:/735996/6-28-00/fig8.dgn 07/28/00 02:47:33 PM

The preferred alternative would have **no adverse effect** on the First Presbyterian Church. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the eligible National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of the First Presbyterian Church outside the eligible National Register boundary consists primarily of commercial land uses. The eastern boundary of the parcel fronts Peachtree Street, a highly traveled urban thoroughfare that extends to the northwest and southeast. With the exception of the indirect effect of increased traffic on Peachtree Street, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical or architectural significance under National Register Criteria A and C.

The First Presbyterian Church would be visually affected by implementation of the preferred alternative, especially along the northern and western boundaries of the parcel. However, this impact would not be an adverse effect due to the existing urban visual setting of this area, nor would it compromise the National Register eligibility of the resource.

The existing noise level at the First Presbyterian Church is 68 dBA L_{10} (A.M.) and 68 dBA L_{10} (P.M.). The no action noise level for the year 2025 will be 70 dBA L_{10} (A.M.) and 70 dBA L_{10} (P.M.). The noise level for the preferred alternative would be 69 dBA L_{10} (A.M.) and 69 dBA L_{10} (P.M.). The one to two decibel increase between the existing and preferred alternative conditions would occur over an approximate twenty-year time frame and would not be perceptible to the human ear. Also, the resource is expected to receive a noise increase whether or not the proposed project is implemented. Although the noise level for the preferred alternative "approaches" the FHWA noise abatement criterion of 70 dBA L_{10} established for residential land uses, including churches, the predicted noise levels would be slightly lower than if the project is not implemented. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The **Mitchell King House** (1382 Peachtree Street NW) is situated at the southwest corner of 17th Street and Peachtree Street NE, adjacent to the proposed intersection improvement at 17th Street and Peachtree Street (Figure 4-12). The eligible National Register boundary corresponds with the legal property boundary and contains all National Register qualifying characteristics and features of the resource. The property is considered eligible under National Register Criterion C as a notable example of an early-20th century Craftsman- and Tudor Revival-inspired residence. Current use of this property is commercial.

The preferred alternative would have **no adverse effect** on the Mitchell King House. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Intersection improvements would occur within the existing right-of-way on 17th Street and Peachtree Street. Project implementation would not alter the character of the setting of this resource within the eligible National Register boundary since the proposed roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

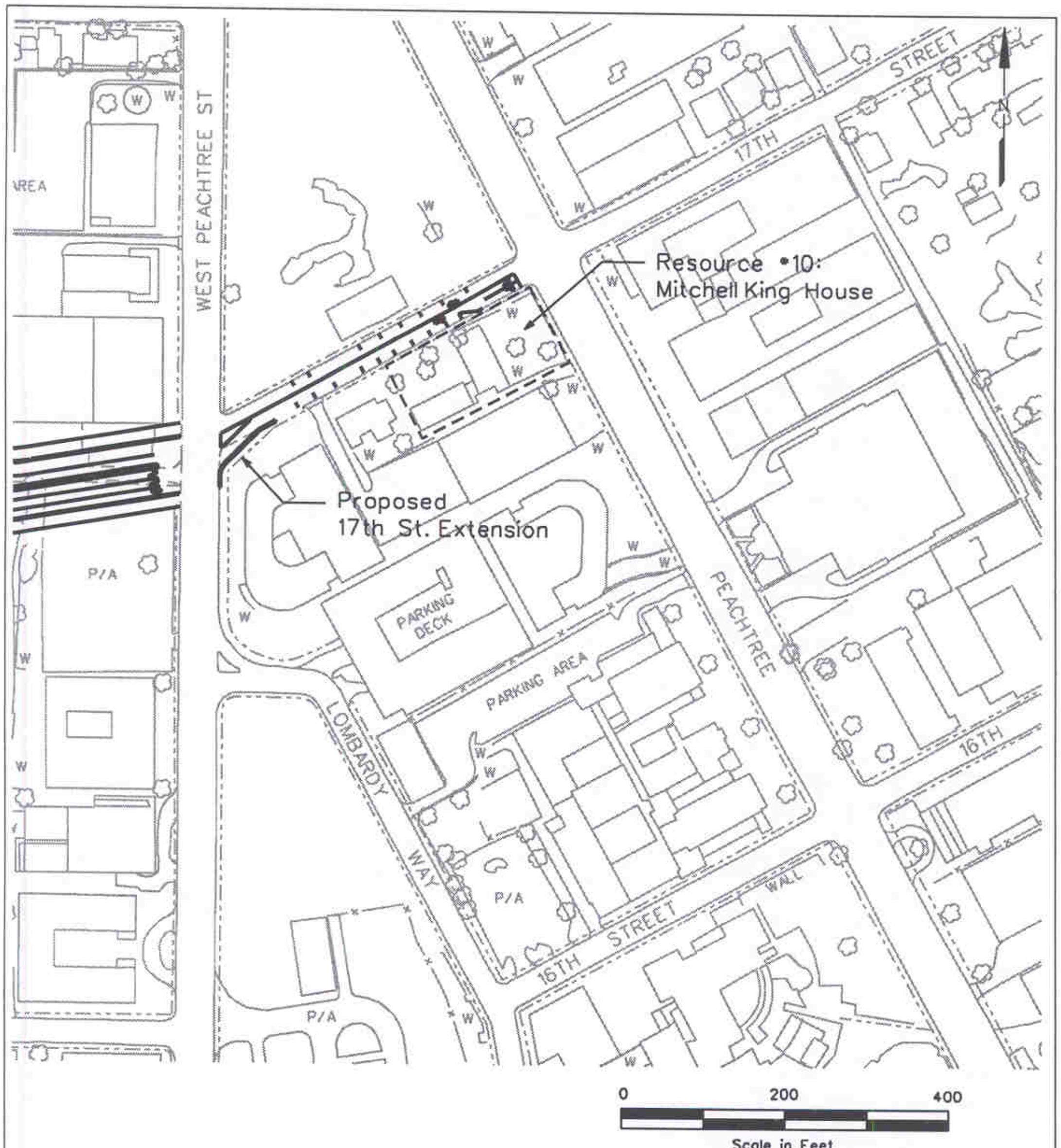


Figure 4-12

Eligible National Register Boundary of Mitchell King House

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

J:/735996/6-28-00/fig10A.dgn 08/01/00 12:23:35 PM

The character of the setting of the Mitchell King House outside the eligible National Register boundary consists primarily of commercial land uses. The eastern boundary of the parcel fronts Peachtree Street, a highly traveled urban thoroughfare that extends to the northwest and southeast. With the exception of the indirect effect of increased traffic on Peachtree and 17th Streets, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its architectural significance under National Register Criterion C.

The Mitchell King House would be visually affected by implementation of the preferred alternative, especially along the northern and western boundaries of the parcel. However, this impact would not be an adverse effect due to the existing urban visual setting of this area, nor would it compromise the National Register eligibility of the resource.

The existing noise level at the Mitchell King House is 66 dBA L_{10} (A.M.) and 67 dBA L_{10} (P.M.). The no action noise level for the year 2025 would be 69 dBA L_{10} (A.M.) and 68 dBA L_{10} (P.M.). The noise level for the preferred alternative would be 70 dBA L_{10} (A.M.) and 72 dBA L_{10} (P.M.). The four to five decibel increase between the existing and preferred alternative conditions would occur over an approximate twenty-year time frame, and the resource is expected to receive a noise increase whether or not the proposed project is implemented. In addition, the noise level would not exceed the FHWA noise abatement criterion of 75 dBA L_{10} for commercial land uses. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The Castle (Fort Peace) (87 15th Street NW) is situated at the southwest corner of Peachtree Street and 15th Street, approximately 1,500 feet south of the proposed roadway improvements to 17th Street and approximately 1,700 feet northeast of the proposed roadway improvements along the 14th Street overpass (Figure 4-13). The eligible National Register boundary corresponds with the legal property boundary and contains all National Register qualifying characteristics and features of the resource. The property is considered eligible under National Register Criterion A for its cultural contributions to the Atlanta arts community. The resource is also significant under National Register Criterion C as an unusual example of various architectural styles. Current use of this property is commercial.

The preferred alternative would have **no adverse effect** on The Castle. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the eligible National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of The Castle outside the eligible National Register boundary consists primarily of commercial land uses. The northern boundary of the parcel fronts 15th Street, a commercial thoroughfare that extends to the east and west. With the exception of the indirect effect of increased traffic on both W. Peachtree and 15th Streets, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical and architectural significance under National Register Criteria A or C.

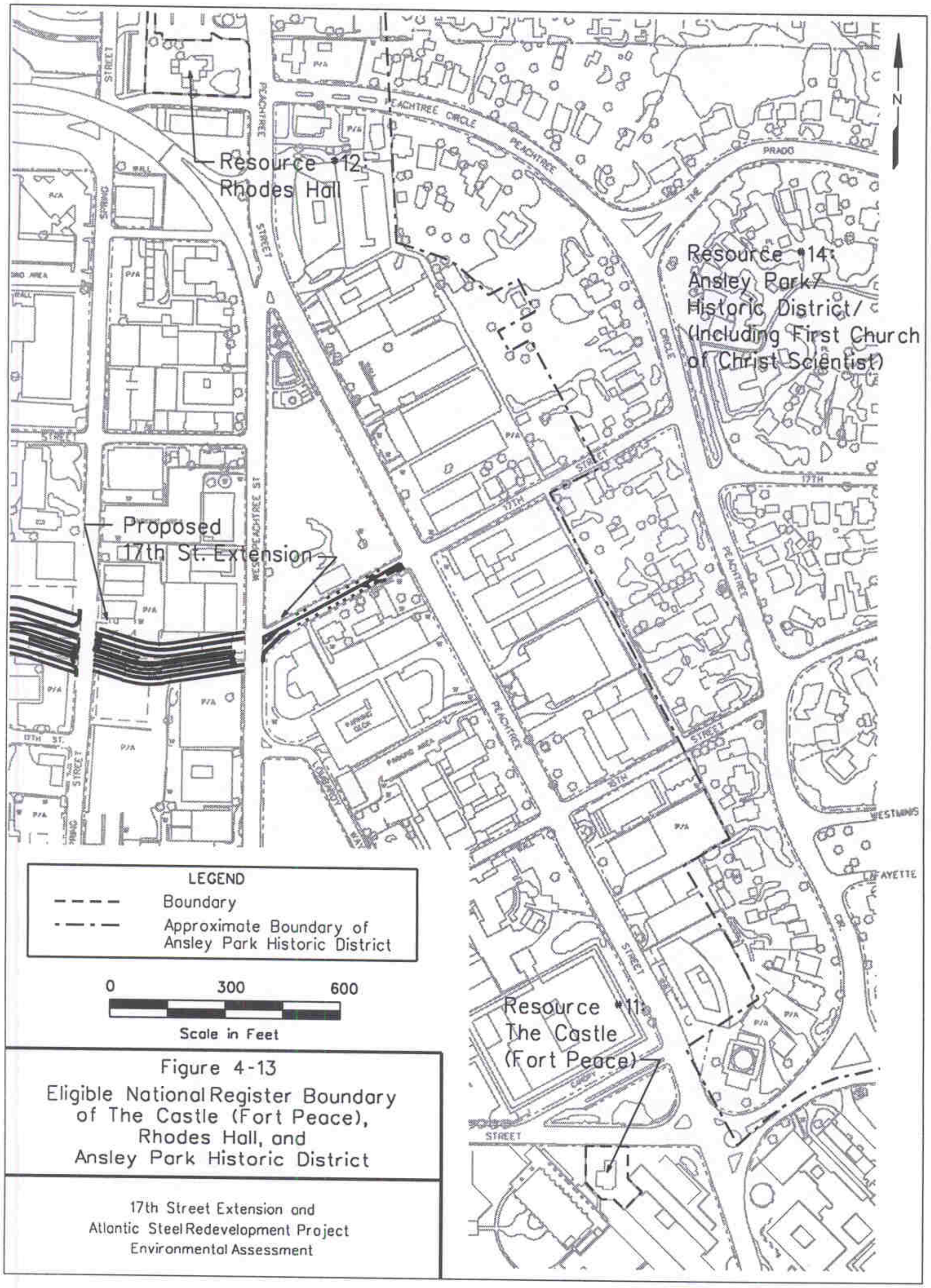


Figure 4-13
Eligible National Register Boundary of The Castle (Fort Peace), Rhodes Hall, and Ansley Park Historic District

17th Street Extension and Atlantic Steel Redevelopment Project Environmental Assessment

J:/735996/6-28-00/fig10b.dgn 08/02/00 10:07:44 AM

The Castle would not be visually affected by implementation of the preferred alternative. Currently fronting 15th Street, the proposed redevelopment and roadway improvements would occur at significant distances to the northwest and southwest. The only potential for indirect visual impacts would occur along the northern and western boundaries of the property. However, this impact likely would be concealed by the existing urban density of Midtown and therefore would neither be an adverse effect nor compromise the National Register eligibility of the resource.

The existing noise level at The Castle is 66 dBA L_{10} (A.M.) and 67 dBA L_{10} (P.M.). The no action noise level for the year 2025 would be 68 dBA L_{10} (A.M.) and 69 dBA L_{10} (P.M.). The noise level for the preferred alternative would be 70 dBA L_{10} (A.M.) and 72 dBA L_{10} (P.M.). The four to five decibel increase between the existing and preferred alternative conditions would occur over a approximate twenty-year time frame. The preferred alternative would not exceed the FHWA noise abatement criterion of 75 dBA L_{10} established for commercial land uses. In addition, the resource is expected to receive a noise increase whether or not the proposed project is implemented. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

Rhodes Hall (1516 Peachtree Street NW) is situated on the western side of Peachtree Street north of South Rhodes Drive, approximately 1,500 feet north of the proposed roadway improvements to 17th Street (Figure 4-13). The boundary of the resource corresponds with its established National Register boundary that contains all National Register qualifying characteristics and features of the property. Current use of this property is commercial and home to the Georgia Trust for Historic Preservation.

The preferred alternative would have **no adverse effect** on Rhodes Hall. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of Rhodes Hall outside its National Register boundary consists primarily of commercial land uses. The eastern boundary of the parcel fronts Peachtree Street, a highly traveled urban thoroughfare that extends to the north and south. With the exception of the indirect effect of increased traffic on Peachtree Street, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical and architectural significance.

Rhodes Hall would not be visually affected by implementation of the preferred alternative. Currently fronting Peachtree Street, the proposed redevelopment and roadway improvements would occur at significant distances to the south and southwest. The only potential for indirect visual impacts would occur along the southern and western boundaries of the property. However, this impact likely would be concealed by the existing urban density of Midtown and therefore would neither be an adverse effect nor compromise the historic integrity or significance of the resource.

The existing noise level at Rhodes Hall is 72 dBA L_{10} (A.M.) and 73 dBA L_{10} (P.M.). The no action noise level for the year 2025 would be 73 dBA L_{10} (A.M.) and 75 dBA L_{10} (P.M.). The noise level for the preferred alternative would be 73 dBA L_{10} (A.M.) and 75 dBA L_{10} (P.M.). The one to two decibel increase between the existing and preferred alternative conditions would occur over an approximate twenty-year time frame and would not be perceptible to the human ear. The noise level equals the FHWA noise abatement criterion of 75 dBA L_{10} established for commercial land uses. Although the noise level equals the FHWA noise abatement criterion for the preferred alternative, the resource is expected to receive the same increase in noise whether or not the proposed project is implemented. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The **Garrison Apartments** (1325 Peachtree Street NE) are situated on the eastern side of Peachtree Street, approximately 400 feet southeast of the proposed intersection improvement at 17th Street and Peachtree Street (Figure 4-11). The boundary of the resource corresponds with its established National Register boundary that contains all National Register qualifying characteristics and features of the property. Current use of this property is residential apartments.

The preferred alternative would have **no adverse effect** on the Garrison Apartments. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of the Garrison Apartments outside its National Register boundary consists primarily of commercial land uses. The western boundary of the parcel fronts Peachtree Street, a highly traveled urban thoroughfare that extends to the north and south. With the exception of the indirect effect of increased traffic on Peachtree Street, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical and architectural significance.

The Garrison Apartments would not be visually affected by implementation of the preferred alternative. Currently fronting Peachtree Street, the proposed redevelopment and roadway improvements would occur at significant distances to the north and west. The only potential for indirect visual impacts would occur along the northern and western boundaries of the property. However, this impact likely would be concealed by the existing urban density of Midtown and therefore would neither be an adverse effect nor compromise the historic integrity or significance of the resource.

The existing noise level at the Garrison Apartments is 68 dBA L_{10} (A.M.) and 68 dBA L_{10} (P.M.). The no action noise level for the year 2025 would be 70 dBA L_{10} (A.M.) and 70 dBA L_{10} (P.M.). The noise level for the preferred alternative would be 69 dBA L_{10} (A.M.) and 69 dBA L_{10} (P.M.). The one decibel increase between the existing and preferred alternative conditions would not be perceptible to the human ear. The resource is expected to receive a noise increase whether or not the proposed project is implemented. Although the noise level for the preferred alternative "approaches" the FHWA noise abatement criterion of 70 dBA L_{10} established for residential uses, the predicted noise levels would be slightly lower than if the project is not implemented. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The **Ansley Park Historic District** is situated east of Peachtree Street NE, roughly between 14th and Beverly Streets. The boundary of the resource corresponds with its established National Register boundary that contains all National Register qualifying characteristics and features of the district (Figure 4-13).

The preferred alternative would have **no adverse effect** on the Ansley Park Historic District. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained.

The character of the setting of the Ansley Park Historic District outside its National Register boundary to the west consists primarily of commercial land uses. The western boundary of the District abuts the commercial district along Peachtree Street, a relatively highly-traveled urban thoroughfare that extends to the north and south. Although implementation of the proposed project would increase the amount of traffic on most of the entrances into Ansley Park and Peachtree Street, the preferred alternative would not adversely affect this neighboring setting. This increase in traffic should not adversely effect overall traffic patterns in this area. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical and architectural significance.

As a whole, the Ansley Park Historic District would not be visually affected by implementation of the preferred alternative. However, since some of the residences in the western portion of the district are located on a high bluff, the tallest buildings within the proposed redevelopment project to the west may be visible from these selected homes. Yet for the most part, this impact likely would be concealed by the existing urban density of Midtown and therefore would neither be an adverse effect nor compromise the historic integrity or significance of the district.

Representative worst-case existing noise levels for Ansley Park are 66 dBA L_{10} (residential) and 72 dBA L_{10} (commercial) during the daytime and 67 dBA L_{10} (residential) and 73 dBA L_{10} (commercial) in the evening. The no action noise level for the year 2025 would be 68 dBA L_{10} (residential) and 73 dBA L_{10} (commercial) during the daytime and 69 dBA L_{10} (residential) and 75 dBA L_{10} (commercial) in the evening. The noise level for the preferred alternative would be 68 dBA L_{10} (residential) and 73 dBA L_{10} (commercial) during the daytime and 69 dBA L_{10} (residential) and 75 dBA L_{10} (commercial) in the evening. The three decibel increase between the existing and preferred alternative conditions would occur over an approximate twenty-year time frame and would not be perceptible to the human ear. Although, the noise level for the preferred alternative "approaches" the FHWA noise abatement criterion of 70 dBA L_{10} established for residential land uses and equals the 75 dBA L_{10} established for commercial land uses, these resources are expected to receive the same increase in noise whether or not the proposed project is implemented. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

The **Atlanta Waterworks Hemphill Avenue Station** (1210 Hemphill Avenue NW) is situated at the southwestern corner of Hemphill Avenue and Northside Drive adjacent to the proposed improvements on Northside Drive and across the Street from the other new entrance into the Atlantic Steel Property. The boundary of the resource corresponds with its established National Register boundary that contains all National Register qualifying characteristics and features of the property (Figure 4-7). Current use of this property is commercial.

The preferred alternative would have **no adverse effect** on the Atlanta Waterworks Hemphill Avenue Station. Physical destruction, damage, or alteration of all or part of the property would not occur with implementation of the preferred alternative. Project implementation would not alter the character of the setting of this resource within the National Register boundary since the proposed development and roadway improvements would occur outside of this boundary. Improvements to Northside Drive would occur within existing right-of-way. Furthermore, the resource would not be isolated from the character of its setting since existing access would be maintained. However, construction at the new entrance north of the intersection of Hemphill Avenue and Northside Drive may impact potential archaeological resources that could be associated with the station and located in this area of the APE. The potential impacts to these archaeological resources are addressed in Sections 4.3.6.2 and 4.3.6.3.

The character of the setting of the Atlanta Waterworks Hemphill Avenue Station outside its National Register boundary consists primarily of commercial land uses. The eastern boundary of the parcel fronts Northside Drive, a highly traveled State Route that extends to the north and south. With the exception of the indirect effect of increased traffic at the Hemphill Avenue intersection due to the proposed road improvements, implementation of the project would not adversely affect this neighboring setting. Furthermore, the preferred alternative would not alter the overall character of the resource or its historical and architectural significance.

The Atlanta Waterworks Hemphill Avenue Station would be visually affected by implementation of the preferred alternative, especially along the southern and eastern boundaries of the parcel. However, this impact would not be an adverse effect due to the existing urban visual setting of this area, nor would it compromise the historic integrity or significance of the resource.

The existing noise level in the vicinity of the Atlanta Waterworks Hemphill Avenue Station is 69 dBA L_{10} (A.M.) and 70 dBA L_{10} (P.M.). The no action noise level for the year 2025 would be 72 dBA L_{10} (A.M.) and 72 dBA L_{10} (P.M.). The noise level for the preferred alternative would be 70 dBA L_{10} (A.M.) and 71 dBA L_{10} (P.M.). The one decibel increase between the existing and preferred alternative conditions would not be perceptible to the human ear. The resource is expected to receive a noise increase whether or not the proposed project is implemented and the increase would be less under the preferred alternative. The noise level for the preferred alternative does not exceed the FHWA noise abatement criterion of 75 dBA L_{10} established for commercial land uses. For these reasons, implementation of the preferred alternative would not audibly affect the resource.

4.3.6.2 Archaeological Resources

There are no known prehistoric or historic archaeological resources that would experience physical impacts from the proposed project. The only portion of the project area that appears to have the potential to yield significant archaeological resources is the intersection of Hemphill Avenue with Northside Drive. The roadbed of Hemphill Avenue may contain buried trolley tracks, and the area beneath or alongside Hemphill Avenue may contain original water pipes associated with the National Register-listed Atlanta Waterworks Hemphill Avenue Station. A short turn-lane is proposed on the east side of Northside Drive, north of the Hemphill Avenue intersection that has the potential to affect these resources.

4.3.6.3 Measures Proposed to Address Cultural Resource Concerns

During project construction, it is recommended that a qualified archaeological consultant monitor any construction and subsurface activities that are to occur along Northside Drive in the vicinity of Hemphill Avenue. Should the remains of either trolley tracks or water pipes be located, the archaeological consultant should notify the SHPO about the nature of the findings. Consultation with the SHPO and/or other interested parties would occur to discuss further treatment measures. Documentation of these resources would follow Georgia Historic Preservation Division and GDOT guidelines.

Cumulative impacts to historic properties in the study area associated with future transportation improvements that could be proposed outside the scope of this project, but as part of the MOU discussed in Section 4.3.3.5, are impossible to predict at this time. Agency and public concerns have been raised by the SHPO, the Georgia Trust for Historic Preservation, the Atlanta Preservation Center, and citizens of Ansley Park about the potential for impacts to historic properties. As stated in the MOU (Appendix I), the City of Atlanta, in consultation with the Atlanta Urban Design Commission, will take appropriate steps to insure that historic properties that could potentially be affected by any proposed future transportation improvements are taken into account at the earliest possible opportunity. This will include coordination with the SHPO, the Georgia Trust for Historic Preservation, the Atlanta Preservation Center, and the Ansley Park neighborhood.

4.3.7 Section 4(f) Evaluation

No recreation areas, or wildlife/waterfowl refuges were identified in the study area; however, four publicly owned parks were identified within a one-mile radius of the Atlantic Steel site. These parks include Piedmont Park, Eubanks Park, Winn Park, and Underwood Hills Park. It was determined that the 17th Street Extension and its associated roadway improvements would have no adverse effect on these parks.

Investigations of historic properties within the study area are summarized in Section 4.3.6 and provided in the Historic Architectural Properties Identification and Evaluation Report (Parsons 2000b). The evaluation identified fifteen properties listed in the National Register, previously identified as eligible, or identified as eligible from the resulting field surveys. As described in Section 3.3.7, Section 4(f) applies only to fourteen of these properties (excluding the Atlantic Steel Site). These fourteen sites include: Norfolk Southern Railroad, Siemens (1299 Northside Drive), Kool Korner Grocery (349 14th Street), Ewell Jett House (1385 Spring Street), Granada Apartments (1302 W. Peachtree St.), The Belvedere (1384 W. Peachtree St.), Winwood Apartments (1460 W. Peachtree St.), First Presbyterian Church (1328 Peachtree St.), Mitchell King House (1382 Peachtree St. NE), the Castle (Fort Peace) (87 15th Street NW), Rhodes Hall (1516 W. Peachtree Street NW), Garrison Apartments (1325 Peachtree Street NE), Ansley Park Historic District, and the Atlanta Waterworks Hemphill Avenue Station (1210 Hemphill Avenue NW). According to the evaluation, the 17th Street Extension would have no use of, or adverse effect on, any of these resources. Therefore, no Section 4(f) sites are impacted by the transportation project, and no further Section 4(f) evaluation is required.

4.3.8 Land Use

Evaluation of land use as it relates to this redevelopment project refers to the determination of impacts to land use planning and regional development. This analysis involves the identification of potential impacts to local and regional economic planning, existing transportation systems, public community services, and environmental issues.

4.3.8.1 Existing Land Use

Impacts to existing land uses would result from the redevelopment of the Atlantic Steel site and acquisition of right-of-way for transportation related improvements. Within the study area, industrial type land use is by far the most affected by the preferred alternative. This is due to the redevelopment of the Atlantic Steel site into an urban mixed-use development. Of the approximate 135 acres that would be converted, approximately 14 acres would become roadways that would provide access into and out of the Atlantic Steel site. Approximately 20 acres of existing commercial land within the study area would be converted into roadways as part of the 17th Street Extension and other improvements. Approximately two acres of residentially zoned land within the study area would be taken for site development purposes, as part of the redevelopment project. This would likely include rebuilding residential units in the same area. The remaining existing land uses would not be altered, and therefore, no adverse impacts are anticipated.

4.3.8.2 Neighborhoods and Community Facilities

As stated in Section 3.3.8.2, the neighborhoods in the vicinity of the Atlantic Steel Redevelopment project are Home Park, Loring Heights, and Ansley Park. The redevelopment of Atlantic Steel would not alter the existing land uses of these neighborhoods. No large tracts of land in any of these neighborhoods would be required for this redevelopment project to occur. The redevelopment would, however, remove a large industrial land use and replace it with a more homogeneous type mixed-land use that would complement these established neighborhoods. Additional positive impacts of the redevelopment project include more commercial/retail opportunities to be provided within walking or biking distance to many existing residences. The following information provides impacts to known community facilities within the study area surrounding the Atlantic Steel redevelopment project.

Schools. There would be no direct impacts to any school-related property in the study area. Minor short-term impacts to schools in the area would be limited to possible delays during road and redevelopment construction. The only foreseeable impact to Atlanta public schools is the anticipated additional student population due to the residential development portion of Atlantic Steel. It is not known at this time how many additional students or the age of the students that would attend Atlanta public schools in the future. The retail portion of the redevelopment would contribute a Special Purpose Local Option Sales Tax revenue source that would be allocated to the City of Atlanta School System.

Parks, Recreation Areas, and Open Space. There would be no direct impacts to any of the parks, recreation areas, or significant open space areas in the study area. Minor short-term impacts to parks, recreation areas, and significant open space in the study area would be limited to possible delays during road and redevelopment construction. No other impacts to parks, recreation areas, or significant open space areas are anticipated with this project.

Places of Worship and Cemeteries. There are no cemeteries located inside the study area. There would be no direct impacts to any place of worship in the study area. Minor short-term impacts to places of worship and cemeteries in the area would be limited to possible delays to members or visitors during construction. The only foreseeable impact to places of worship is the anticipated additional memberships due to the residential development portion of Atlantic Steel. It is not known at this time how many additional people would attend local places of worship in the future.

Hospitals and Health Centers. There would be no direct impacts to any hospital or health center property in the study area. Minor short-term impacts to hospitals and health centers in the area would be limited to possible delays during road and redevelopment construction. No other impacts to hospitals or health centers are anticipated with this project.

Libraries and Museums. There would be no direct impacts to any library or museum property in the study area. Minor short-term impacts to libraries and museums in the area would be limited to possible delays during road and redevelopment construction. No other impacts to libraries or museums are anticipated with this project.

Emergency Services – Police, Fire and Rescue. There would be no direct impacts to any police, fire or rescue property in the study area. Minor short-term impacts to police, fire and rescue response capabilities in the area would be limited to possible delays during road and redevelopment construction. In the long-term, the additional crossing of the Interstate should result in improved response time for emergency vehicles. One foreseeable impact to police, fire and rescue service is the capacity of the Atlanta Police Department and the Atlanta Fire Department to adequately serve this area. Resources of the Departments could be strained due to the magnitude of the development.

No additional fire stations were anticipated to be added in conjunction with the Atlantic Steel redevelopment project. However, one additional City of Atlanta police satellite station with emergency medical technicians (EMT) is anticipated to be added by JAR in conjunction with the Atlantic Steel redevelopment project. All other existing emergency services would be expected to provide support and/or protection for the Atlantic Steel site. It is feasible that funds from a Tax Allocation District (TAD) could be used to fund future improvements to public service including emergency services.

4.3.8.3 Consistency With Local Comprehensive Plan

The development of the Atlantic Steel site into mixed-use land proposed under the preferred alternative conforms to the recommendations of the Adopted Atlanta 2001 Comprehensive Development Plan (City of Atlanta 2000). The adopted Comprehensive Plan contains policies on future land use development within the city. These policies encourage mixed-used development; emphasize medium and high-density residential uses; encourage minimizing sprawl; and promote the reuse or redevelopment of vacant, under-utilized, or structurally deteriorated industrial and commercial properties.

4.3.9 Socioeconomics/Demography/Economic Conditions

An analysis of both positive and negative impacts of socioeconomic concerns that are attributed to the 17th Street Extension and Atlantic Steel Redevelopment project are presented in this section. The primary impacts on existing socioeconomic conditions from this project are from residential and commercial displacements, changes in employment in this area of Midtown Atlanta, and changes in tax revenue to service provider and local governments.

Economics Research Associates (ERA) conducted an analysis of economic and fiscal benefits of the proposed Atlantic Steel redevelopment (ERA 1999). The economic benefits include the effects of a new development on the local economy. Effects to the local economy include the creation of new jobs, added population, increases in payroll, and new retail spending. The fiscal benefits are the effects of new development on the local budgets. A number of short-term and/or one-time benefits have been excluded from analysis, as they would have no long- term effects on the local economy or local budgets. In addition to the positive economic and fiscal benefits on the City of Atlanta itself, the Atlantic Steel redevelopment project would also produce substantial indirect benefits to the Atlanta region as a whole (ERA 1999). The findings of the ERA study are summarized in the subsections that follow.

4.3.9.1 Population and Demographics

As presented in Section 3.3.9.1, population and demographic data within the study area is based on the 1990 US Census data. The proposed Atlantic Steel redevelopment is expected to add 4,200 full time residents to the Midtown area. Those new residents to the Atlantic Steel area would reside in the proposed 2,400 housing units. The ERA analysis report uses an average household size of 1.75 persons per household for the Atlantic Steel project area. Occupancy rates within the City of Atlanta have averaged greater than 85 percent since 1990. A similar occupancy rate was therefore assumed to occur for the new housing that is anticipated at Atlantic Steel. At this time it is not known whether a majority of residents in the Atlantic Steel area would be owner-occupants or renters. It is also not known what the specific gender, age, and racial breakdowns as well as median household income and employment data of the population would be that would inhabit this development.

4.3.9.2 Employment and Economic Characteristics

There are currently a number of Midtown developments proposed or underway along the east side corridor, as well as the expansion of the TBS Techwood Campus and the Atlantic Steel Redevelopment on the west side. Approximately 7,800,000 square feet of commercial and residential development is proposed or under construction on the east side of I-75/85 and approximately 8,400,000 square feet of new development on the west side.

The Atlantic Steel redevelopment project is being financed with the help of a TAD. This process was used to provide front-end funding for the large-scale redevelopment project. The tax revenues paid to taxing units (City of Atlanta, Atlanta Schools, and Fulton County) are computed on the initially established tax base during the redevelopment period. The Atlantic Steel project would then be redeveloped using funds provided by the sale of tax allocation bonds. The City or a specially created taxing district for specific site improvements would sell these bonds. Due to the now higher value of the Atlantic Steel site, more tax revenue is collected and the tax difference between the initially established level goes into a fund to retire the bonds.

The proposed Atlantic Steel redevelopment project is expected to add significant retail, office, and hotel space as well as to increase the employment base and tax base in the Midtown Atlanta area. Future commercial space for Atlantic Steel is anticipated to include:

- 1,500,000 square feet of total build out retail space;
- 2,000,000 square feet of total build out office space; and
- 2,000,000 square feet of total build out high-tech office space.

This would result in a gain of 5,500,000 square feet of total build out commercial space to the Midtown Atlanta area. At the time of this report, it was not known the specific types of businesses that would inhabit these spaces.

To help service this area's business travel as well as tourist travel needs, it is anticipated that the Atlantic Steel site would contain 1,000 hotel rooms when the site is completely built-out. No specific information regarding type and quality of hotels was available at the time of this report.

According to the ERA analysis report, retail sales and hotel sales are anticipated to generate approximately $480,000,000 and $41,600,000, respectively, in sales revenue. This would result in total retail sales tax revenue of approximately $3,500,000 and total hotel sales tax revenue of approximately $1,700,000. The annual property taxes from the office spaces and hotel rooms are anticipated to generate $11,900,000 for the City of Atlanta, $17,600,000 for Atlanta public schools, and $9,700,000 for Fulton County.

According to the ERA analysis report, new employment information for Atlantic Steel was based on the following information:

- 2 employees per 1,000 square feet of retail space, which would equal 3,000 workers.
- 4 employees per 1,000 square feet of office space, which would equal 8,000 workers.
- 3.33 employees per 1,000 feet of high-tech office space, which would equal 6,660 workers.
- 0.4 employees per hotel room, which would equal 400 workers.

This results in a potential gain of approximately 18,060 total jobs related to the Atlantic Steel redevelopment when it is completed. Some of these jobs could be shifted from other areas in the Atlanta region to Atlantic Steel, or within the Midtown area itself.

In order to calculate specific wage information, an average wage was assumed for each type of job created. The following information was developed as part of the ERA analysis report:

- Retail services average annual wage is $16,200, which equals $48,600,000 in total income.
- Office services average annual wage is $35,200, which equals $281,600,000 in total income.
- High-tech office services average annual wage is $42,300, which equals $281,718,000 in total income.
- Hotel services average annual wage is $19,300, which equals $7,720,000 in total income.

This results in a potential gain of $619,638,000 total salaries paid to the new jobs related to the Atlantic Steel redevelopment when it is completed.

4.3.9.3 Relocations

The 17th Street Extension and Atlantic Steel redevelopment project would require the relocation of houses, businesses, and/or industry located within the study area. The number of displacements for this project was determined by reviewing current Fulton County tax mapping, aerial mapping, and conducting site visits. For the purposes of this EA, property that would be taken for the implementation of the redevelopment project has been divided into two categories. The first category is property required for transportation improvements, while the second category is property required by the developer for site improvements.

Transportation Improvements. Roadway improvements associated with the preferred alternative would displace 19 commercial businesses, which currently occupy approximately 20 acres of land. No other type of structure would be displaced as a result of the proposed transportation improvements. Based on the results of a field survey, there appears to be no elderly, handicapped persons, or large families affected by this proposed project. It is estimated that approximately 200 employees from these businesses would be affected. The 19 business displacements consist of eight office/warehouse spaces, eight retail businesses, two restaurants, and one gas station/convenience store. These 19 businesses have an approximate fair market value of $10,625,000 (MAAI 2000c). These businesses are listed in Table 4-9. A copy of the Conceptual Stage Study, Relocation Report and updates are available from GDOT upon request.

The Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended, requires that property owners are offered fair market value for property being acquired as a result of roadway improvements. Actual acquisition costs for those properties acquired for roadway improvements would be determined by GDOT and would be based on standards and procedures adopted by GDOT.

Site Redevelopment. The Atlantic Steel redevelopment project would displace eight (8) residential buildings, seven of which are owned by JAR. No other type of structure would be displaced as a result of site redevelopment improvements. Based on the results of a field survey, there appears to be no elderly, handicapped persons, or large families affected by this portion of the project. The residential property has an estimated fair market value between $150,000 and $170,000 (MAAI 2000c). These residences are listed in Table 4-10. Nearby, available housing for similar, single-family homes appears to be in adequate supply.

4.3.9.4 Community Cohesion

Community cohesion is defined by the FHWA as “perceptual relationships that are shared among residents of a community that cause the community to be identifiable as a discrete, distinctive geographic entity”. The neighborhoods of Home Park, Ansley Park, and Loring Heights as well as the Atlantic Steel site, are easily distinguishable and contain elements that establish them as independent communities. The Atlantic Steel site is situated in the midst of these independent communities. The former Atlantic Steel Mill site and other properties along Northside Drive and Bishop Street were part of an area that was dominated by heavy industry in the early to mid 1900’s. The communities of Home Park and Loring Heights were largely connected to this industry through employment. However, this relationship no longer exists due to a gradual transition from heavy industry to more compatible land uses for downtown Atlanta. The proposed redevelopment

Table 4-9. Inventory of Business Displacements

Parcel	Owner/ Tenant	Type Displacement/ Square Feet	FMV in $	Type Neighborhood	Age	Type Business	No. of Employees
Restaurant 80 14th Street 17-107-04-046	Tenant	1,600 SF	$650 K	Commercial	35 +/-	The Red Basil Restaurant	15 +/-
Office 74 14th Street 17-107-04-004	Tenant	1,800 SF	$400 K	Commercial	40 +/-	Offices	10 +/-
Retail 1160 Spring Street 17-107-04-005	Tenant	2,000 SF	$500 K	Commercial	30 +/-	Retail, Video Solutions	5 +/-
Utility Site Atlanta Gas 17-107-04-053	Tenant	800 SF	$200 K	Commercial	20 +/-	Utility, Atlanta Gas	N/A
Office/Warehouse 1360 Spring Street, NW 17-108-01-033	Tenant	4,200 SF	$275 K	Commercial	40 +/-	Office/Warehouse, Home Mission Board	15 +/-
Office 1362 Spring Street, NW 17-108-04-012	Tenant	4,350 SF	$300 K	Commercial	35 +/-	Office, Georgia Nurses Association	15 +/-
Multi-tenant retail 1341 Spring Street, NW 17-108-04-022	Tenant	15,000 SF	$500 K	Commercial	50 +/-	Retail, Kwik Copy	20 +/-
Office 1359 Spring Street, NW 17-108-04-031	Tenant	4,000 SF	$250 K	Commercial	50 +/-	Office, Vacant	10 +/-
Retail 1205 Techwood Drive, NW 17-108-07-099	Tenant	2,500 SF	$150 K	Commercial	40 +/-	Retail, Dog Grooming	5 +/-
Retail 1203 Techwood Drive, NW 17-108-07-100	Tenant	2,700 SF	$150 K	Commercial	40 +/-	Retail/Office	8 +/-

Table 4-9. Inventory of Business Displacements

Parcel	Owner/ Tenant	Type Displacement/ Square Feet	FMV in $	Type Neighborhood	Age	Type Business	No. of Employees
Retail/Warehouse 1195 Techwood Drive, NW 17-108-07-101	Tenant	5,000 SF	$250 K	Commercial	40 +/-	Retail, Office Furniture Sales	10 +/-
Office Warehouse 1370 Spring Street 17-108-01-032	Tenant	20,000 SF	$750 K	Commercial	40 +/-	Office/Warehouse	30 +/-
Restaurant 144 14th Street 17-107-03-024	Owner	4,000 SF	$275 K	Commercial	20 +/-	Chinese Restaurant	15 +/-
Retail/Fuel Station 77 14th Street 17-108-08-066	Tenant	1,000 SF	$1.1 M	Commercial	10 +/-	Amoco fuel station/convenience store	10 +/-
Trucking/Distribution 490 Bishop Street 17-148-LL-03	Tenant	50,000 SF	$2.2 M	Commercial	30 +/-	Warehouse, distribution facility	10 +/-
Hair/Spa Salon 494 Bishop Street 17-148-LL-026	Owner	2,125 SF	$1.2 M	Commercial	50 +/-	Hair Salon	10 +/-
Retail 1345 Northside Drive 17-148-04-016	Tenant	9,800 SF	$1.0 M	Commercial	40+/-	Northside Drive Liquor Store	15 +/-
Auto Body Shop Bishop Street 17-108-07-026	Tenant	2,750 SF	$200 K	Commercial	20 +/-	Auto Body Shop	6 +/-
Office 204 16th Street 17-108-07-003	Tenant	1,700 SF	$275 K	Commercial	30 +/-	Realty Company	10 +/-

Source: MAAI 2000c

Table 4-10. Inventory of Residential Displacements

Parcel	Owner/ Tenant	Type Displacement/ Square Feet	Estimated Rent/FMV in $	Estimated Household Income in $	Age	Family Size/ Minors	Rooms/ Bedrooms	Housing Available
1282 Lyle Place, NW	Tenant	Frame / 598 SF	$850 per month $165,000	$30,000	60+	2/0	5/2	Yes
1276 Lyle Place, NW	Owner	Frame / 766 SF	$170,000	$40,000	60+	3/0	6/2	Yes
1275 Lyle Place, NW	Tenant	Frame / 598 SF	$850 per month $150,000	$30,000	65+	2/0	5/2	Yes
1281 Lyle Place, NW	Tenant	Frame / 598 SF	$850 per month $150,000	$30,000	65+	2/0	5/2	Yes
1278 Barnes Street	Tenant	Frame / 916 SF	$900 per month $165,000	$40,000	65+	3/0	5/2	Yes
188 16th Street, NW	Tenant	Frame / 746 SF	$900 per month $150,000	$30,000	65+	2/0	5/2	Yes
194 16th Street, NW	Tenant	Frame / 598 SF	$850 per month $150,000	$30,000	65+	2/0	5/2	Yes
200 16th Street, NW	Tenant	Frame / 804 SF	$900 per month $150,000	$30,000	65+	3/0	5/2	Yes

Source: MAAI 2000c

of this site into mixed-use residential and commercial land uses continues this transition and provides opportunities for reconnection with the surrounding communities. By removing the existing industrial land use that is Atlantic Steel and replacing it with a more homogeneous type mixed-land use, the overall community feeling between the established neighborhoods is no longer broken. In addition, when the Interstate was initially constructed in the 1960's, access and community dynamics in Midtown Atlanta completely changed. Several existing roadways were severed by the initial freeway project. Construction of the 17th Street Bridge and Extension provides another opportunity to reconnect the east and west sides of Midtown Atlanta and restore continuity for communities in this area.

4.3.10 Environmental Justice

As discussed in Section 3.3.10, several communities in the project area were determined to contain minority and/or low-income populations at levels that are significantly higher than that of the Atlanta MSA. The majority of these areas appear to be distributed in clusters west and southeast of the site (see Figure 3-11). Since the preferred alternative was found to have some potential for EJ concerns, various potential environmental impacts to low-income and minority populations were considered. The 17th Street Extension project and transformation of the Atlantic Steel site into a mixed-use development would include both positive and negative impacts to low-income and minority communities in the area; however, it was determined that the overall quality of life for nearby minority and low-income communities would be improved. Specific issues considered are described in greater detail below.

Community/Neighborhood Impacts. Using 1990 U.S. Census Data, the majority of the block groups that comprise two of the three neighborhoods in the immediate study area (Home Park and Loring Heights) are identified as potential EJ areas. However, similar to other neighborhoods in the City of Atlanta, demographics in these areas are changing rapidly. The Home Park Civic Association identifies the Home Park community as "one of the most diverse and dynamic neighborhoods in Atlanta." Huge changes are occurring in these neighborhoods related to the increased popularity of in-town living in Atlanta. This is evident by increased property values, rental prices, and property improvements throughout the neighborhoods. The transformation of these neighborhoods has been occurring for some time and would likely continue with or without the Atlantic Steel redevelopment project and 17th Street Extension. The goals of both neighborhoods is to guide this transformation with the objective of maximizing the beneficial impacts, while minimizing the negatives.

EPA, GDOT, the City of Atlanta, and JAR recognized these goals and placed strong emphasis on community involvement in the development of this project. Public outreach activities and meetings with affected neighborhoods have been a major component of this effort. The City of Atlanta, JAR, EPA, and GDOT gave presentations and participated in several monthly neighborhood meetings related to development of the project and to solicit input from the neighborhoods on issues of concern. EPA and JAR hosted a meeting in December 1998 with the Home Park community to discuss specific design aspects of the redevelopment. Concerns raised in these meetings have been largely incorporated into the latest design of the site and of the associated transportation improvements. The City of Atlanta and JAR commit to continued involvement with the neighborhoods as the site builds-out to provide information about the latest site design and solicit input on issues of concern to the neighborhoods.

Property Values. The improvement of the Atlantic Steel Brownfields Redevelopment Area is likely to continue to enhance the value of a substantial portion of the real property in the district. This would have both a positive and negative impact on the surrounding communities. The effect would be positive for individuals in the community who own property and can afford to pay for the increasing taxes likely to ensue over time. Other residents who rent or own property but cannot afford to pay for the higher property taxes may be forced to move out of the area and find alternative housing.

Employment/Economic Activity. Closure of the Atlantic Steel Mill has left the City of Atlanta with an underutilized piece of property that contributes very little to the economic tax base of the area. Transformation of the site into a mixed-use development of residential units, commercial office space, hotel rooms and retail would have many positive impacts in terms of new employment and economic activity for the nearby minority and low-income residents, including creating approximately 17,000 to 20,000 new jobs. It is envisioned that a wide range of jobs and skill levels would be available and allow for job advancement within the area. Similarly, there would be new employment opportunities related to build-out of the site and construction of the associated off-site roadway improvements. However, it is impossible to estimate how the net new jobs created by the proposed action would be allocated by jurisdiction; therefore, it is impossible to accurately quantify how the proposed action would affect minority and/or low-income populations. New employees would be hired by skill level, experience, or other qualifications, not by jurisdiction of residence.

Based on several comments received at public meetings, JAR has agreed to place an emphasis on minority participation in the redevelopment of the Atlantic Steel site, specifically in short-term construction jobs and long-term employment opportunities. JAR is currently in the process of putting together a comprehensive strategy that addresses this goal for the project.

Public Facilities and Services. The amount of educational ad valorem tax revenues collected in excess of the amount needed for debt service is projected to increase greatly after the project is fully developed, thereby providing a substantial new revenue source for the school system. Further, the development is expected to generate further revenue increases for the school system as a result of increased property values. This would benefit the minority and low-income residents located within the project area. JAR will also provide a satellite police and emergency services station on-site as part of the redevelopment. This station would not only serve the Atlantic Steel site, but the adjacent communities, as well.

Visual Impacts. The transformation of the Atlantic Steel site into a mixed-use development would include several activities that would improve the overall visual character of nearby minority and low-income communities. Improvements include: demolition of an industrial steel making facility and cleaning up a major brownfields site; undergrounding unsightly utilities; and creating a development that would include pedestrian and bike friendly, well-functioning, aesthetically pleasing corridors, and streetscaping.

Access. The multi-modal connection created by the 17th Street Bridge would give residents, workers, and shoppers a variety of transportation options. Use of the free bus shuttle system connection from the MARTA Arts Center Station would allow mass transit users to have a reliable connection to reach employment, residential, and retail opportunities on-site.

Traffic Impacts. As described in Section 4.3.3, there would be additional traffic on surrounding roadways associated with the extension of 17th Street and redevelopment of the Atlantic Steel site. However, the greatest increases in AADT, as compared to the no action alternative, are predicted to occur in non EJ-designated areas. In addition, without the 17th Street Extension and redevelopment project as currently proposed, significant increases in traffic along 14th and 10th Streets, adjacent to potential EJ areas, are predicted.

However, given concerns raised by the surrounding neighborhoods related to traffic impacts, a MOU is being developed between EPA, GDOT, GRTA, the City of Atlanta, JAR, Ansley Park, Home Park, Loring Heights, and the Midtown Alliance. This MOU would commit the above mentioned agencies to collect specific data on future trips associated with the project and additional development in the vicinity of the project in order to study the magnitude and cumulative effects of traffic in the neighborhoods as well as to develop and implement means of minimizing these impacts. Based on these commitments, no disproportionate adverse impacts associated with additional traffic are anticipated to low-income or minority populations.

Noise. As described in Section 4.3.5, 17 sites or receptors (13 commercial businesses and 4 residences) outside the Atlantic Steel property were identified as being impacted by future traffic-generated noise associated with this project. Based on the distribution of these receptors, there would be minimal impacts to potential EJ areas. Seven of the seventeen receptors are located in potential EJ areas; however, the majority of the receptors are located in non-EJ designated areas. Therefore, no disproportionate adverse impacts associated with noise are anticipated to low-income or minority populations.

Possible Commercial Business/Residential Displacements. As described in Section 4.3.9.3, the project would require residences and/or commercial businesses located within the study area to be displaced or relocated. A total of 19 commercial businesses and eight residences would be displaced as a result of the project. Based on the distribution of these displacements, there would be minimal impacts to potential EJ areas. Seven of the eight residences are properties currently owned by JAR and are located in non-EJ designated areas. Nine of the 19 commercial businesses are located in potential EJ areas; however, the majority of the commercial businesses to be displaced are located in non-EJ designated areas. Therefore, no disproportionate adverse impacts associated with property relocations are anticipated to low-income or minority populations.

4.3.11 Aesthetic Resources

Aesthetic resource impacts are highly subjective. However, the redevelopment of the Atlantic Steel site and associated roadway improvements would drastically alter the visual landscape of the Midtown Atlanta area. Not only would the abandoned Atlantic Steel site be converted from an industrial use to a residential/commercial/retail use, but the addition of an interchange at 17th Street over I-75/85 would alter traffic patterns in this area, affecting how citizens view this part of Atlanta. The Atlantic Steel site would emerge as an attractive area for people to live and enjoy social events, inviting people back into the urban core of the city. The planned Atlantic Steel redevelopment is expected to contain residential units, retail space, hotel rooms, and several large office buildings as well as a lake, park area, and roadway facilities (Appendix G).

Careful coordination of the Atlantic Steel redevelopment and 17th Street Bridge with the surrounding communities would assist in keeping project harmony with the surrounding landscape.

Also, such coordination efforts would provide opportunities to incorporate any scenic viewshed areas into the overall design. To effect this coordination, there are a number of specific zoning conditions for the Atlantic Steel site that address aesthetic, architectural, and landscaping requirements (see Appendix A). In general, design and placement of specific buildings would be completed in a manner so as to create transitions from, and compatibility with, surrounding uses. For example, residential components along 16th Street, adjacent to Home Park, would be constructed as low-rise single family dwellings and condominiums. Building height would gradually increase and land use would change towards the center and northeast portion of the site to provide for an appropriate transition from residential to mixed retail and office use. The proposed high-rise office buildings are anticipated to be located in the northeast corner of the property, the highest point on the property. These high rise office buildings would be designed to complement existing high rise buildings in Midtown Atlanta on the east side of the Interstate. The high tech office and mixed use village is proposed on the western portion of the site. Design of these areas would likely complement some of the older industrial facilities along Northside Drive, such as the Atlanta Water Works building.

The new 17th Street Bridge and Extension would provide direct access into the Atlantic Steel area, Midtown Atlanta, and the nearby MARTA Arts Center Station. The bridge over the interstate would be multi-modal, meaning that vehicles, pedestrians, bicycles, and transit buses would all utilize it. At this time, potential designs for the bridge are unknown; however, there is a general agreement that the 17th Street Bridge should be designed as a “gateway” structure into the heart of Downtown Atlanta, if possible. Regardless, qualified landscape architects would work to ensure that aesthetic values and overall compatibility with existing and future Midtown streetscapes are achieved in the course of final bridge and roadway design. These are anticipated to be beneficial visual effects.

SECTION 5
REFERENCES AND
LIST OF ACRONYMS

REFERENCES

Atlanta Regional Commission. June 1995. Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan, 1995 Update. Atlanta Regional Commission. Atlanta, Georgia.

City of Atlanta. 2000. *2001 Comprehensive Development Plan.* City of Atlanta, Department of Planning and Neighborhood Conservation.

Clark, William Z. Jr., and Zisa, Arnold C. 1976. *Physiographic Map of Georgia*. Department of Natural Resources, Environmental Protection Division, Geologic Survey Branch. Atlanta, Georgia.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of wetlands and deep water habitats of the United States*. U.S. Fish and Wildlife Service Pub. FWS/OBS-79-31. Washington, D.C. 103 p.

CRB Realty. June 2000. *The Redevelopment of the Atlantic Steel Site.* CRB Realty. http://www.crbrealty.com/play.htm.

Cressler, C.W., Thurmond, C.J., and Hester, W.G. 1983. *Ground Water in the Greater Atlanta Region, Georgia. Information Circular 63*. Department of Natural Resources, Environmental Protection Division, Geologic Survey Branch. Atlanta, Georgia.

Dames & Moore. August 1999 [2000]. *Technical Memorandum - Transit Connection Atlantic Steel Redevelopment Project To Marta Arts Center Station*. Atlanta, Georgia.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, 13 pp.* US Army Engineer Waterways Experiment Station, Vicksburg, MS.

Environmental Protection Agency. 1998. *Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses.* U.S. Environmental Protection Agency, Washington, D.C.

______1998a. *Draft Guidance for Conducting Environmental Justice Analyses.* U.S. Environmental Protection Agency, Washington, D.C.

______December 1999. *Maximum Monitored Ambient Concentrations in Atlanta for 1995-1999.* World Wide Web Site http://www.epa.gov/airsdata.

______1999a. *Title 40 CFR-Protection of the Environment, Part 50-National Primary and Secondary Ambient Air Quality Standards.* U.S. Environmental Protection Agency, Washington, D.C.

______September 1999b. *Final Project XL Agreement between EPA and Atlantis 16th LLC.* U.S. Environmental Protection Agency, Atlanta, Georgia.

Economics Research Associates (ERA) 1999. *Economic and Fiscal Benefits Analysis of the Atlantic Steel Redvelopment.* Atlanta, Georgia.

Executive Order 12898. February 1994. *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations with Accompanying Memorandum.*

Federal Highway Administration (FHWA). 1982. *FHWA Highway Traffic Noise Prediction Model.*

Green Building Council, March 2000. *Green Building Rating System, Version 2.0.*

Hagler Bailly Services, Inc. May 1999. *Transportation and Environmental Analysis of the Atlantic Steel Development Proposal*. Arlington, VA.

Harmon, N. July 1999a. *Personal Communication*. Neil Harmon, Atlantic Steel Industries, Inc., Atlanta, Georgia with Parsons ES.

______October 1999b. *Personal Communication.* Neil Harmon, Atlantic Steel Industries, Inc., Atlanta, Georgia with Parsons ES.

______November 1999c. *Personal Communication.* Neil Harmon, Atlantic Steel Industries, Inc., Atlanta, Georgia with Parsons ES.

Institution of Transportation Engineers. 1997 (ITE 1997). *Trip Generations 6th Edition*

Johnson, Brenda. July 2000. *Personal Communication,* Jordan, Jones and Goulding with Parsons ES.

Krakow, Greg. September 1999. *Letter of Correspondence,* Georgia Department of Natural Resources, Wildlife Resources-Georgia Natural Heritage Program.

Law Engineering and Environmental Services, Inc. August 1997. *Phase II WORK PLAN for Atlantic Steel Industries, Inc. Property.* Atlanta, Georgia.

______October 1999a. *Final Phase II Investigation Report, Atlantic Steel Industries, Inc. Property,* Atlanta, Georgia.

______May 1999b. *Natural Gas Conceptual Plan, Atlantic Steel Industries, Inc.,* Atlanta, Georgia.

______October 1999c. *Final Remediation Plan, Atlantic Steel Industries, Inc*., Atlanta, Georgia.

______May 1999d. *Stormwater Conceptual Plan, Atlantic steel Industries, Inc*., Atlanta, Georgia.

______October 1999e. *Surface Water Assessment Report, Atlantic Steel Industries, Inc*., Atlanta, Georgia.

______May 1999f. *Water Conceptual Plan, Atlantic Steel Industries, Inc.*, Atlanta, Georgia.

______December 1999g. *Surface Water Runoff Calculations -- TR-55, Atlantic Steel Industries, Inc*., Atlanta, Georgia.

______May 1999h. *Sanitary Sewer Conceptual Plan, Atlantic Steel Industries, Inc*., Atlanta, Georgia.

______May 12, 2000i. *Preliminary Building Permit Drawings, Atlantic Steel Redevelopment Rough Grading Plan (GP-9).*

Moreland Altobelli Associates, Inc. (MAAI). March, 2000a. *17th Street Bridge/Interchange Concept Report*. Atlanta, Georgia.

______May 2000b. *Noise Report., Atlanta, Georgia.*

______July 2000c. *Conceptual Stage Study Atlantic Steel/17th Street Bridge Project, Atlanta, Georgia.*

Niering, William A. 1985. *National Audubon Society Nature Guides - Wetlands*. Chanticleer Press, Inc.

Ozier, James C. et al., 1999. *Protected Animals of Georgia.* State of Georgia.

Parsons Engineering Science, Inc. 2000a. *Archaeological Assessment of the Atlantic Steel Redevelopment Project.* Atlanta, Georgia.

______2000b. *Historical Architectural Properties Identification and Evaluation for the Proposed 17th Street Extension (GDOT Project NH-7141-00(900) and the Atlanctic Steel redevelopment Project, Atlanta,* Atlanta, Georgia.

Patrick, Thomas S., Allison, James S., and Krakow, Greg A. 1995. *Protected Plants of Georgia.* Georgia Department of Natural Resources.

Porterfield, John. April 2000. *Personal Communication*. Jordan, Jones and Goulding with Parsons ES.

Reheis, Harold F.. December 1999. *Letter to Jesse J. Webb (Atlantic Steel Industries, Inc,) and Hilburn O. Hillestad (Jacoby Atlantic Redevelopment, L.L.C),* from Georgia Department of Natural Resources, Environmental Protection Division, Director.

Richards, T. March 1997. *Personal Communication.* Tyler Richards, Operations Manager, City of Atlanta, Department of Public Works with Parsons ES.

______January 1998. *Memorandum.* Tyler Richards, Operations Manager, City of Atlanta, Department of Public Works with Parsons ES.

Stokes, J. November 1999. *Personal Communication.* Alston and Bird, Atlanta, Georgia

Tiner, Ralph W. 1988. *Field Guide to Nontidal Wetland Identification.* U.S. Fish and Wildlife Service, Department of the Interior.

Transportation Research Board. 1997. *1994 Highway Capacity Manual, Special Report 209, 1997 Update.*

Tucker, Sandy S. September 1999. *Letter to Muller, Heinz J., U.S. Environmental Protection Agency*. Atlanta Federal Center, Atlanta, Georgia.

U.S. District Court, Northern District of Georgia, Atlanta Division. June 1999. *First Amended Consent Decree*, the United States of America and The State of Georgia, Plaintiffs, V. The City of Atlanta, Defendant, Civil Action File No. 1-98-LV=1956 - TWT.

U.S. Geologic Survey. 1993. North West Atlanta, Georgia quadrangle.7.5 minute series. Department of the Interior, Washington, D.C.

______1995. *Aerial Photograph.* Northwest Atlanta, Georgia.

Walker, J.H. Miller, T.W. Green, and R.F. Wells. 1958. *Soil Survey of Fulton County, Georgia.* Government Printing Office, Washington, D.C.

LIST OF ACRONYMS

AADT	Average Annual Daily Traffic
ADT	Average Daily Traffic
AHC	Atlanta History Center
APE	Area of Potential Effects
ARC	Atlanta Regional Commission
AUDC	Atlanta Urban Design Commission
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CBD	Central Business District
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CO	Carbon Monoxide
COE	U.S. Army Corps of Engineers
COPC	Constituents of Potential Concern
CSO	Combined Sewer Overflow
dB	decibels
DOT	Department of Transportation
DPW	Department of Public Works
DPZ	Duany Plater-Zyberk
EA	Environmental Assessment
EJ	Environmental justice
EMT	Emergency medical technicians
EPA	U.S. Environmental Protection Agency
EPD	Georgia Environmental Protection Division
ERA	Economics Research Associates
FHWA	Federal Highway Administration
FTA	Federal Transit Administration

LIST OF ACRONYMS (con't)

GDOT	Georgia Department of Transportation
GIS	geographical information system
GNHP	Georgia Natural Heritage Program
gpm	gallon per minute
GRTA	Georgia Regional Transportation Authority
HABS-HAER	Historic American Buildings Survey – Historic American Engineering Record
HOV	High Occupancy Vehicle
HWFP	Hazardous Waste Facility Permit
IMR	Interchange Modification Report
ITE	Institute of Transportation Engineers
JAR	Jacoby Atlantic Redevelopment, L.L.C.
kWh	kilo watt hour
LOS	level of service
Lp	sound-pressure level
LEED	Leadership in Energy and Environmental Design
LRT	light rail transit
LUST	leaking underground storage tank
MARTA	Metropolitan Atlanta Rapid Transit Authority
Mcf	thousand cubic feet
MGD	Million Gallons per Day
MOU	Memorandum of Understanding
mph	miles per hour
MSA	metropolitan statistical area
MSL	mean sea level
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NEPA	National Environmental Policy Act of 1969
NOI	Notice of Intent
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides

LIST OF ACRONYMS (CON'T)

NPDES	National Pollutant Discharge Elimination System
NPU-E	Neighborhood Planning Unit - E
NWP	Nationwide Permit
PAHs	Polycyclic Aromatic Hydrocarbons
Pb	lead
PCB	PolyChlorinated Biphenyl
PIA	Potentially Impacted Area
PM_{10}	Particulate Matter smaller than 10 microns
RBC	Risk Based Criteria
RTP	Regional Transportation Plan
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SOV	single occupancy vehicle
SR	State Route
SVOC	Semi-Volatile Organic Compound
SWPPP	Storm Water Pollution Prevention Plan
TBS	Turner Broadcasting Systems
TCE	Trichloroethylene
TCM	Transportation Control Measure
TMA	Transportation Management Association
TSS	Total Suspended Solid
TWV	Tap Water Value
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
VMT	vehicle miles traveled
v/c	volume to capacity
VOC	Volatile Organic Compounds

SECTION 6
LIST OF PREPARERS

Name/Affiliation	Degree	Professional Discipline/Capacity	Years of Experience
EPA			
Catherine Fox	M.S., Oceanography	Senior Environmental Scientist	10
Heinz Mueller	M.C.P., City Planning	Program Manager	20
Benjamin West	M.S., Ecology	Project Manager	10
PARSONS			
Steven Bach	Ph.D., Botany	Biologist/Program Manager	24
Dana Brantley	B.S., Civil Engineering	Principal Planner	17
Jay Claypoole	B.S., Environmental Engineering	Environmental Engineer	2
Elizabeth Crowell	Ph.D., Archaeology	Senior Archaeologist/Cultural Resource Task Manager	23
Keith Dewey	B.A., Geography	Transportation Planner	7
Kriste Elia	M.A., Geography	GIS Applications	5
Alyse Getty	B.A., Env. Science/Political Science	Delivery Order Manager	19
Diane Halsall	B.A., Anthropology/ Sociology	Historian/Cultural Historian	6
Phillip Jo	M.S., Environmental Engineering	Associate Acoustic Engineer	2
Meredith Kirby	B.S., Environmental Health Science	Environmental Scientist	2
Cynthia Liccese	B.A., History	Architectural Historian	6
Chris Martin	Ph.D., American Studies	Senior Architectural Historian	16
Heidi Rous	B.S., Physics	Principal Scientist	10
Alexander Sharp	M.S., Biology/ Env. Engineering	Environmental Engineer	3
Rick Shih	M.S., Mechanical Engineering	Air Quality Engineer	3
Sean Wallace	B.A., Environmental Marine Science	Senior Environmental Scientist	6

SECTION 7
LIST OF RECIPIENTS

The following list includes all the individuals and agencies who received copies of the Environmental Assessment for the proposed 17th Street Extension and Atlantic Steel Redevelopment Project, Atlanta, Georgia.

ELECTED/APPONTED OFFICIALS

State Senator Vincent D. Fort
State Representative Kathy Ashe
State Representative Douglas C. Dean
State Representative Pam Stanley
Mayor William C. Campbell
Fulton County Commission Chairman
U.S. Congressman John Lewis
U.S. Senator Zell Miller
U.S. Senator Max Cleland
Atlanta City Councilman Member Michael J. Bond
Atlanta City Councilwoman Felicia Moore
Atlanta City Councilman Lee Morris
Atlanta City Councilwoman Claire Muller
Atlanta City Council President Robert L. Pitts
Atlanta City Councilwoman Debi Starnes
Atlanta City Councilwoman Cathy Woolard
Governor Roy Barnes

FEDERAL AGENCIES

U.S. Environmental Protection Agency
Federal Highway Administration
Federal Transit Administration
U.S. Fish & Wildlife Service
U.S. Army Corps of Engineers
Advisory Council for Historic Preservation

STATE GOVERNMENT

Georgia Department of Transportation
Georgia Department of Natural Resources
    Environmental Protection Division
Georgia Department of Natural Resources
    Wildlife Resources Division
Georgia Regional Transportation Authority
Georgia Department of Natural Resources
    Historic Preservation Division

LOCAL GOVERNMENT

Metropolitan Atlanta Rapid Transit Authority
Atlanta Regional Commission
Atlanta Fulton County Public Library
    Central Library
    Peachtree Branch
Atlanta Neighborhood Planning Unit - E
Cobb County Department of Transportation
Fulton County Transportation Administrator
City of Atlanta
    Department of Planning, Development and
        Neighborhood Conservation
    Department of Public Works

ORGANIZATIONS AND GROUPS

Atlanta History Center
Home Park Community Improvement Association
Loring Heights Neighborhood Association
Ansley Park Civic Association
Midtown Alliance
African-American Environmental Justice Network
Midtown Neighborhood Association
Winter Properties
Post Properties
Atlanta Bicycle Campaign
Woodruff Center for Performing Arts
Norfolk Southern
Atlantic Steel Industries, Inc.
Southern Organizing Committee for Economic and Social Justice
Atlanta Preservation Center
Sierra Club
Georgia Institute of Technology
Mills Corporation
Atlanta Journal-Constitution
Central Atlanta Progress
Georgia Tech Foundation
Atlanta Development Authority
The Georgia Conservancy
Southern Environmental Law Center
Georgians for Transportation Alternatives
The PATH Foundation
Georgia Trust for Historic Preservation
Jacoby Atlantic Redevelopment

APPENDIX A

ATLANTIC STEEL ZONING CONDITIONS

NAL

ATLANTIC STEEL
Z-97-58 CONDITIONS

1. The property will be rezoned to the C- 4 - C zoning classification with a maximum development limitation of 50 percent of the allowable residential FAR and 30 percent of the allowable non-residential FAR under such classification. These development limitations shall apply to the property as a whole and not to any component tract.

2. The property shall be developed in accordance with the Use Diagram ("Diagram") attached hereto and titled "Proposed Atlantic Steel Redevelopment for Jacoby Development Incorporated, prepared by Thompson, Ventulett, Stainback and Associates stamped received by the Bureau of Planning April 3, 1998, more particularly as follows:

   A. The Street system will be constructed as indicated on the Diagram. Bike lanes shall be included on 17th Street, State Street (including loop north of 17th Street), and Center Street.

   B. The Area south of 16th Street as shown on the Diagram and east of State Street will be developed in accordance with the standards of the R-5 zoning classification.

   C. The area south of 16th Street as shown on the Diagram and between State and Mecaslin Streets will be developed in accordance with the standards of the RG-3 zoning classification with a maximum 35' height restriction on the State Street side and those units facing State Street.

   D. Areas north of 16th Street as indicated on the Diagram and specified as "Low Rise Residential" will be restricted to residential use except for a maximum of 10 percent accessory retail use and shall be contained in buildings not greater than four (4) stories in height.

   E. Not less than 90 percent of the developed square footage in the area designated as "Predominantly Residential" on the Diagram shall contain residential and accessory uses.

3. The development will be subject to restrictive covenants which will provide for maintenance of open space areas and architectural control, through an architectural review board, of all buildings. The developer will include a representative from Home Park neighborhood and a representative from Loring Heights neighborhood on the architectural review board.

4. The developer will work with the City ı ıd Home Park to limit cut-through traffic on residential streets perpendicular to and south of 16th Street by means of cul-de-sacs, speed humps, gates, control arms, and other traffic-calming devices. The developer will work with the City and Loring Heights neighborhood to limit cut-through traffic on Bishop Street.

NAL

5. There will be open space of not less than seven acres which will include a lake and landscaped area as indicated in the "Predominantly Residential" area of the Diagram.

6. Design standards with dimensions for streetscape, pedestrian circulation and bike paths will be indicated on the attached drawing from Thompson, Ventulett and Stainback (TVS), and pedestrian and bicycle elements will be installed concurrently with the street system. These standards are shown in the attached drawings dated February 2, 1998, stamped received by the Bureau of Planning April 3, 1998, and respectively include: (a) a plan drawing of proposed16th and 17th Streets; (b) a section through 16th Street; and (c) a section through 17th Street.

7. The development will not utilize the existing at-grade crossing over the railroad at Mecaslin Street, and will not pursue any other crossing into Mecaslin Street north of the railroad, except to provide for a trail link, and will support closure of the crossing by the City. However, the crossing will be retained as a signalized bike/pedestrian crossing and the developer shall construct a 12 foot concrete multi-use trail connection to this crossing from the bike lanes on 17th Street and from the multi-use trail running parallel to the Southern railroad right-of-way.

8. The developer will incorporate public art as possible into the development.

9. The Bureau of Buildings shall not issue permits for any buildings or structures on the property, except for infrastructure improvements (defined as bridge/road access and water/sewage projects and remediation of existing utilities) until a contract is approved for construction of the 17th Street bridge over I-75/85.

10. The developer will incorporate people movers and other alternative forms of public transportation into its plans, subject to the required approvals by federal, state, City of Atlanta, and MARTA, including plans for access to the Marta Arts Center station as well as provision for connection to the rail corridor to the west and will use its best efforts to see that such transportation is provided.

11. All buildings along the new 17th Street in the area of the property designated as "Mixed Use" on the Diagram will contain ground level retail facing the street.

12. Service and loading areas, will be placed underground or in otherwise inconspicuous areas.

13. All utilities will be underground.

14. The developer will use its best efforts to ensure that development is phased so that the proposed residential space is developed in advance of, or concurrent with, retail/ commercial space in such a manner that when 100 percent of the proposed retail/ commercial space has been built, 100 percent of the proposed residential space shall also have been built.

15. The primary pedestrian entrance to any building shall face toward the public sidewalk.

16. Along the new 17th Street in the area of the property designated as "Mixed Use" on the Diagram, no parking or driveways shall be permitted between any building and the sidewalk; provided, however, that hotels may have circular driveways in the front of a building for the purpose of providing for the arrival and departure of guests; and that a building surrounded on more than one side by public streets may have a circular drive on any one except 17th Street.

17. Along the new 17th Street in the area of the property designated as "Mixed Use" on the Diagram, the number of curb cuts shall be limited to one per building per street, provided, however, that properties fronting on 17th Street shall not be permitted to have curb cuts onto 17th Street, with the exception of parking garages and hotels with circular driveways, which may have a maximum of two curb cuts from any street frontage which serve a circular driveway.

18. Along the new 17th Street in the area of the property designated as "Mixed Use" on the Diagram, buildings shall be set back no more than 25 feet from the edge of the street curb, except to provide for public plazas, pedestrian space, or usable public green space.

19. The Bureau of Buildings shall not issue a building permit until such time as the Commissioner of the Department of Public Works has certified that for each prospective phase of development the sanitary sewer capacity is sufficient to carry the projected additional flow, and such building permit shall require the installation of non-bypass style grease traps for all proposed restaurants.

20. A final landscape plan, including a phasing plan, shall be approved by the Bureau of Planning. The Bureau of Buildings shall not issue temporary or permanent Certificates of Occupancy unless and until it has inspected the property and verified that the entire landscape plan has been fully implemented, in accordance with the applicant's phasing plan.

21. All proposed pedestrian and open space improvements, as required in condition 6 above, shall be fully implemented prior to temporary or permanent Certificates of Occupancy being issues, in accordance with the phasing plan to be approved by the Bureau of Planning.

22. The Department of Public Works shall not issue any clearing and grading permits for any building components of this project until such time as the Bureau of Buildings has issued a building permit which includes a stormwater drainage plan, approved by the Department of Public Works.

23. The Bureau of Buildings shall not issue a building permit until such time as the applicant has submitted a transportation management plan (TMP) for all non-residential components. The number of single occupancy vehicle trips proposed to be generated by this project exceeding 5,366 peak period a.m. trips will be mitigated by the development of a TMP. This plan will be developed through the implementation of an annual commute mode survey. Said survey will be submitted on an annual basis from the day of initial occupancy of each tenant employing more than 50 employees. The survey will be based on a continuous five-day work week for all employees arriving at the work site between 6:00 a.m. and 10:00 a.m., Monday through Friday. Based upon the survey information, the employer will develop a

FINAL

TMP. The TMP will contain strategies and implementation programs for reducing the number of single occupant vehicle trips by 25 percent during a five year period from the first day of initial occupancy. Said TMP shall include, but not be limited to:

A. An estimate of the number of employees and visitors per hour estimated to use rail and bus transit throughout the day, and a bus and rail schedule showing the frequencies of stops near the property.

B. A description of how information regarding new or existing transit stops and building access to such stops will be displayed on the property in indoor or outdoor locations.

C. A program to promote and maintain employee participation in carpooling, van-pooling and use of mass transit, including a system for monitoring the number of, and travel patterns of, ride sharers.

D. Identification of nearby land uses that are projected to generate high volumes of pedestrian traffic and an illustration of the means of pedestrian access an assurance of continuity to these land uses from within the property.

E. An illustration of the means of ingress and egress for motorized vehicles.

F. A statement committing to support for, and participation in a Transportation Management Association (TMA) and the funding mechanism necessary to support its activities.

G. During the construction of the project, the developer will post and issue notices directing all construction traffic to avoid all residential streets surrounding the development.

24. The Bureau of Buildings shall not issue a building permit for any structures until such time as confirmation that the Phase II (environmental) Work-plan has been fully implemented and that the applicant has certified to the Commissioner of Planning Development and Neighborhood all other necessary site remediation has been fully executed. Said work-plan is a matter of public record according to August 25, 1997, letter from State of Georgia Environmental Protection Division.

25. The developer shall encourage residential developers to provide residential units for owner occupancy, particularly on the low-rise units both north and south of 16th Street and in at least one of the high-rise residential structures.

26. The developer(s) or member of the property owners association shall meet with the NPU on an annual basis, or at such time that a building permit is requested, to report on the status of the project.

27. It is the intent of the City Council to pursue adoption of a Special Public Interest District (SPI) for an area that includes, but is not limited to, the Atlantic Steel property that incorporates the conditions herein contained.

RCS# 237
4/06/98
4:27 PM

Atlanta City Council

Regular Session

98-O-0080 1300 MECASLIN STREET, N.W. CHANGE I-2 TO C-4-C.
ADOPT AS AMEND

YEAS:	15
NAYS:	0
ABSTENTIONS:	0
NOT VOTING:	1
EXCUSED:	0
ABSENT	0

Y McCarty	Y Dorsey	Y Moore	Y Thomas
Y Starnes	Y Woolard	Y Martin	Y Emmons
Y Bond	Y Morris	Y Maddox	Y Alexander
Y Winslow	Y Muller	Y Boazman	NV Pitts

RCS# 236
4/06/98
4:25 PM

Atlanta City Council

Regular Session

98-O-0080 1300 MECASLIN STREET, N.W. CHANGE I-2 TO C-4-C.
AMEND/STARNES

YEAS:	15
NAYS:	0
ABSTENTIONS:	0
~~NOT VOTING:~~	~~1~~
EXCUSED:	0
ABSENT	0

Y McCarty	Y Dorsey	Y Moore	Y Thomas
Y Starnes	Y Woolard	Y Martin	Y Emmons
Y Bond	Y Morris	Y Maddox	Y Alexander
Y Winslow	Y Muller	Y Boazman	NV Pitts

APPENDIX B

CITY OF ATLANTA LETTER – NO ACTION ALTERNATIVE

DEPARTMENT OF PLANNING, DEVELOPMENT AND NEIGHBORHOOD CONSERVATION
55 TRINITY AVENUE, S.W. SUITE 1450 • ATLANTA, GEORGIA 30335-0308
404-330-6070 • FAX: 404-658-7638

BILL CAMPBELL
MAYOR

MICHAEL A. DOBBINS
Commissioner

TIM POLK
Deputy Commissioner

April 24, 2000

Mr. Benjamin West
Environmental Engineer
Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303

Dear Ben:

Subject: Atlantic Steel TCM – No Build Alternative

Pursuant to your request to provide a reasonable development scenario for the Atlantic Steel property in the event a bridge is not constructed across I-75/85, the following represents our best judgment, based on current trends of development activity and patterns and City land use and zoning policy.

The property is presently zoned C-4-C, the last "C" standing for "Conditional," the practical effect of which is that no development can occur on the site without a formal rezoning process. Our scenario, then, would assume one or a number of rezoning applications, probably in Floor Area Ratio 2 range, depending on whether the property was held intact or parceled out. In either event, we would look for a development pattern that in square footage, and to some extent even distribution of square footage, is not greatly different from the proposal before us. The more marked differences would lie in the likely quality and timing of development.

The quality differences fall into three areas, connectivity, mixture of uses, and design quality. We would expect the site to be developed in many phases, either under a single zoning or zoned in pieces where it would be improbable that an overarching vision of a cohesive "village" or "town" would emerge. Transit linkages, and thus usage, would not be likely nor even to a large extent, possible, relying solely on whatever bus coverage could be provided from Northside Drive or 14th Street. In addition, other internal connections, like pedestrian continuity or provision of continuous streetscapes and useable green space would be problematic.

The site probably would develop with a mixture of uses, overall, including strip shopping, low to mid-rise multifamily residential, mid-rise office/tech space, and lab or light industrial space. I would anticipate, however, that their development components would be built as a series of single-use developments rather than comprehensively. As a consequence, the opportunities for intermixing these uses would be limited. Adjacent land uses probably would be less compatible and not as mutually supportive. Parking would be built on a per site needs basis with less opportunity for shared or coordinated parking strategies, resulting in more parking spaces overall.

The design quality, and quite possibly the construction quality, probably would be run-of the mill, both for the land area as a whole and at the development site level. Opportunities for establishing and maintaining high level, cohesive design standards would be limited.

Finally, the timing and phasing of the development we would expect to be more protracted. We would expect some pieces to get underway soon after rezoning occurred and then to follow on a market driven build-out schedule. The effect of this scheduling would underscore some of the quality issues discussed above: connectivity would be hard to achieve; mixture of use sequencing would be hard to predict; and the opportunity for well thought out, high quality design standards would be lost. Below is a table that illustrates the categories of development likely to occur and the approximate square footages of each:

No-Build Scenario Land Use Type	Estimated Sq. Ft.	Estimated Parking Spaces
High-Tech Office	2,500,000	10,000
High-Tech Lab	1,000,000	3,000
Retail	1,500,000	7,500
Residential	2,400,000	3,120
Hotel	600,000	720
Total	8,000,000	24,340

It should be noted that the above scenario does not fully utilize the density permitted under an F.A.R. of 2. I would anticipate, however, that over the last third or so of the period leading up to the 2025 design year, depending on market forces, the remaining permitted density likely would be built out.

I hope this give you the picture you need to complete your "No-Build" analysis, and, please let me know if you need anything further.

Sincerely,

Mike

Mike Dobbins
Commissioner
Department of Planning,
Development & Neighborhood Conservation

cc: Larry Wallace
DeWayne Martin
Robert Gray
Norman Koplon
Charles Brown

/mlb

APPENDIX C

STORMWATER MODELING REPORT

Surface Water Runoff Calculations – TR-55

Atlantic Steel Industries, Inc. Property
Atlanta, Georgia

Prepared for:

Atlantis 16th, L.L.C.
Atlanta, Georgia

Prepared by:

Law Engineering and Environmental Services, Inc.
Kennesaw, Georgia
December 1999

December 16, 1999

Dr. Hilburn O. Hillestad
Senior Vice President
Jacoby Development, Inc.
d/b/a Atlantis 16th, L.L. C.
1000 Abernathy Rd., N.E.,
Suite 1800
Atlanta, GA 30328

Subject: **Report of Surface Water Runoff Calculations – TR-55**
Atlantic Steel Company Site, Atlanta, Georgia
LAW Project Number 95073-9-0004.02.0201

Dear Dr. Hillestad:

Law Engineering and Environmental Services, Inc. (LAW) is pleased to submit the following final letter report which describes the results of our surface water runoff calculations for the subject site.

Background

LAW was requested to perform calculations to determine the increase in peak discharges due to the redevelopment of the subject site. The increase in peak discharge may then be used to further evaluate storm water conveyance/storage options for the site.

Results

The results of the runoff calculations for the pre and post development scenarios are summarized below:

	Peak Discharge (cu.ft/sec)	**Time (hours)**
Pre development	538	12.3
Post development	1140	12.1

The difference between the post development discharge and the pre development discharge is **602 cubic feet per second**.

Assumptions

The following assumptions were made in calculating the peak discharges:

Generic assumptions about site:

1. Total Pre Development area = 134.11 acres. Area does not include runoffs from 17th Street Bridge, CSX underpass, and North Side Drive connector
2. Total Post Development area = 135.21 acres. 50% of the surface runoff contributions from the 17th Street Bridge and North Side Drive connector, and 100% of the surface runoff contribution from the CSX underpass is assumed to flow onto property (Total 1 acre).

Assumptions in TR-55 model:

1. 25-yr, 24 hour rainfall assumed for calculations (=6.8" for the site)
2. Type II rainfall assumed
3. Hydrologic soil group D was selected for the site
4. Tabular hydrograph method TR-55 to be used for peak flow calculations for both Pre and Post development scenarios
5. 3 sub areas used for runoff calculations

For a detailed list of assumptions, please refer to the attached TR-55 Storm water Runoff Model Assumptions.

We appreciate the opportunity to provide continued environmental consulting services to the Atlantic Steel Redevelopment project. Should you have questions, please contact us at (770) 421-3400.

Sincerely,

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

John J. Ososkie, P.E.
Project Manager

Scott Condra
Assistant Vice President
Project Manager

SWC/JJO/tab

Attachments: Figures
Calculation Tables
Storm water Runoff Model Assumptions

FIGURES

LEGEND

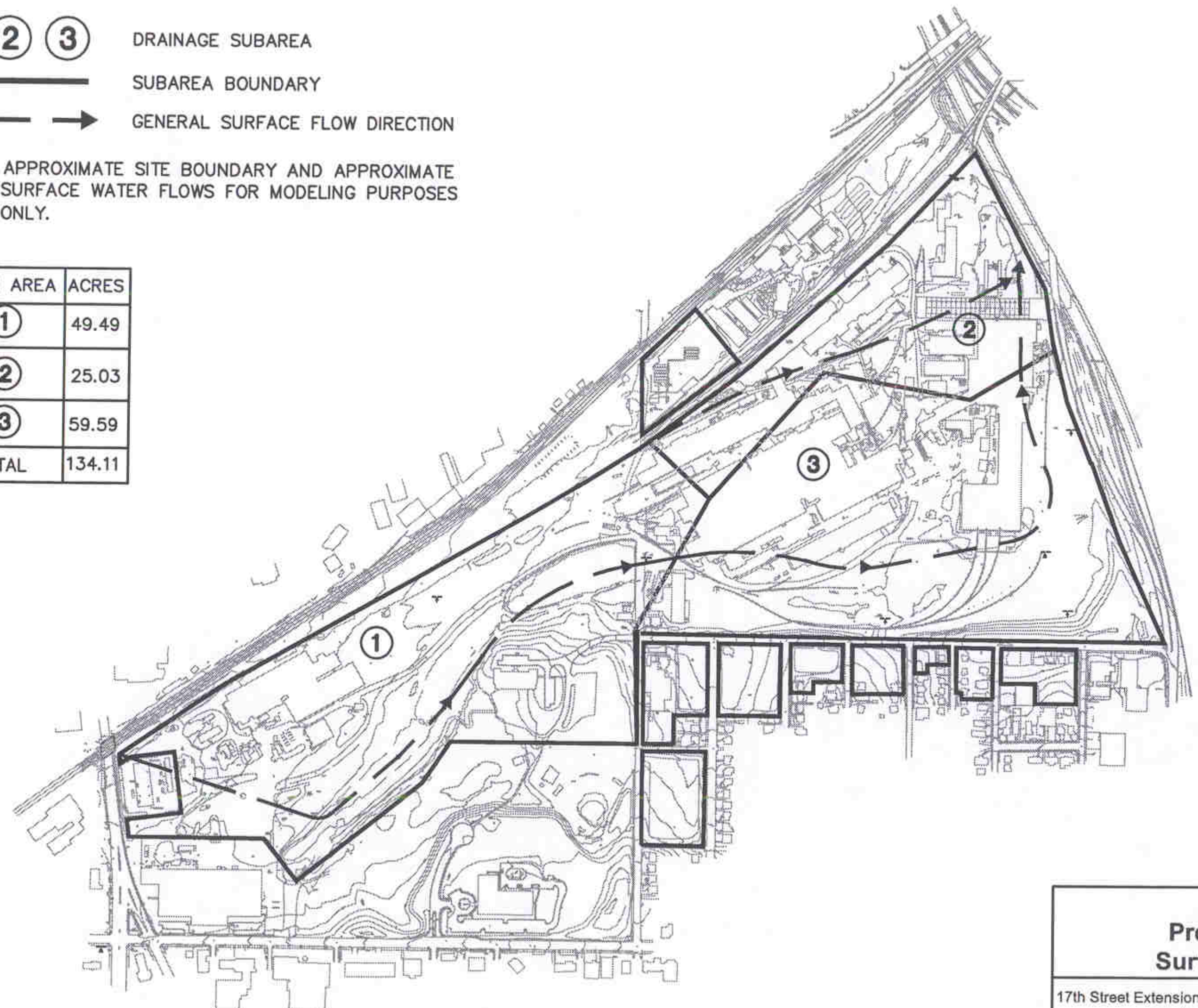
① ② ③ DRAINAGE SUBAREA

SUBAREA BOUNDARY

GENERAL SURFACE FLOW DIRECTION

NOTE: APPROXIMATE SITE BOUNDARY AND APPROXIMATE SURFACE WATER FLOWS FOR MODELING PURPOSES ONLY.

SUB AREA	ACRES
①	49.49
②	25.03
③	59.59
TOTAL	134.11



0 400 800
SCALE

Figure 3-3
Pre-Development
Surface Water Flow

17th Street Extension and Atlantic Steel Redevelopment Project
Environmental Assessment

SOURCE: LAW 1999g

TABLES

Runoff curve number and runoff - Present Site Condition

Project: Atlantic Steel Site — By: KK — 12/14/1999
Location: Atlanta, Georgia — Checked: — Date:
Present Site Condition

1. Runoff Curve Number - Segment 1

Soil name and hydrologic group	Cover description	CN	% Area	Product of CN and % area
Fill Material, D	Impervious areas	98	10	980
Fill Material, D	Woods, Fair	79	43.5	3436.5
Fill Material, D	Urban districts, Industrial	93	46.5	4324.5
		Totals	100	8741

CN (weighted) = total product / total area = 87.41

Use CN = 87

2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency…………………………..yr	25		
Rainfall, P (24-hour)……………….in	6.8		
Runoff, Q…………………………….in	5.29		

Runoff curve number and runoff - Present Site Condition

Project:	Atlantic Steel Site	By:	KK	12/14/1999
Location:	Atlanta, Georgia	Checked:		Date:
Present Site Condition				

1. Runoff Curve Number - Segment 2

Soil name and hydrologic group	Cover description	CN	% Area	Product of CN and % area
Fill Material, D	Impervious areas	98	0	0
Fill Material, D	Woods, Fair	79	10.5	829.5
Fill Material, D	Urban districts, Industrial	93	89.5	8323.5
		Totals	100	9153

CN (weighted) = total product / total area = 91.53

Use CN = 92

2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency…………………………..yr	25		
Rainfall, P (24-hour)………………..in	6.8		
Runoff, Q…………………………….in	5.86		

Runoff curve number and runoff - Present Site Condition

Project:	Atlantic Steel Site	By:	KK	12/14/1999
Location:	Atlanta, Georgia	Checked:		Date:
Present Site Condition				

1. Runoff Curve Number - Segment 3

Soil name and hydrologic group	Cover description	CN	% Area	Product of CN and % area
Fill Material, D	Impervious areas	98	10	980
Fill Material, D	Woods, Fair	79	30	2370
Fill Material, D	Urban districts, Industrial	93	60	5580
		Totals	100	8930

CN (weighted) = total product / total area = 89.3

Use CN = 89

2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency…………………………..yr	25		
Rainfall, P (24-hour)………………..in	6.8		
Runoff, Q…………………………….in	5.51		

Time of Concentration (Tc) - Present

Project:	Atlantic steel site			By:	KK
Location:	Atlanta, Georgia			Date:	12/14/1999
Present Site Condition				Checked:	
				Date	

Sheet Flow

Segment ID	1	2	3		
1. Surface Description………………………………………………..	Woods/Smooth*	Range/Smooth*	Range/Smooth*		
2. Manning's roughness coefficient, n………………………………	0.18	0.023	0.047		
3. Flow length, L (total L<or= 300ft)………………………………..ft	300	300	300		
4. Two-year 24-hour rainfall, P_2……………………………………in	4	4	4		
5. Land slope, s ……………………………………………………ft/ft	0.015	0.02	0.02		
6. $Tt = 0.007\ (nL)^{0.8}/P_2^{0.5}s^{0.4}$ Compute T_t………………………hr	0.4566	0.0785	0.1390	Total =	0.6741

Shallow concentrated flow

Segment ID	1	2	3		
7. Surface description (paved or unpaved)…………………………	Unpaved	Unpaved	Unpaved		
8. Flow length, L………………………………………………………ft	700	1700	2500		
9. Watercourse slope, s……………………………………………ft/ft	0.015	0.02	0.02		
10. Average velocity, V ……………………………………………..ft/s	1.9	2.25	2.25		
11. Tt = L / 3600 V Compute T_t………………………...hr	0.1023	0.2099	0.3086	Total =	0.6209

Channel flow

Segment ID	1				
12. Cross sectional flow area, a…………………………………..ft^2	72				
13. Wetted perimeter, P_w …………………………………………ft	24				
14. Hydraulic radius, $r = a/P_w$ Compute r ……………………ft	3.0				
15. Channel slope, s ……………………………………………..ft/ft	0.005				
16. Manning's roughness coefficient, n ………………………..	0.07				
17. $V = 1.49r^{2/3}s^{1/2}/n$ Compute V ………………………ft/s	3.1308				
18. Flow length, L ………………………………………………ft	2100				
19. Tt = L / 3600 V Compute T_t ……………………..hr	0.1863			Total	0.1863
20. Wateshed or subarea T_c or T_t (add T_t in steps 6,11, and 19) ……………………………..hr					1.4813

* Calculation (Composite n):

Segment 1) n=0.435x0.4 + 0.565x0.011 = 0.180

Segment 2) n=0.895x0.011 + 0.105x0.13 = 0.023

Segment 3) n=0.7x0.011 + 0.3x0.13 = 0.047

Predevelopment Watershed Data

Project: Atlantic Steel Site				Location: Atlanta, Georgia				By: KK		Date: 12/14/1999	
Site Condition: Present				Frequency: 25 yr - 24 hr				Checked:		Date:	
Subarea name	Drainage area	Time of Conc.	Time of travel through subarea	Downstream subarea names	Travel time summation to outlet	24-hr rainfall	Runoff curve number	Runoff		Initial abstraction	
	A_m (mi^2)	T_c (hr)	T_t (hr)		$SumT_t$ (hr)	P (in)	CN	Q (in)	A_mQ (mi^2-in)	I_a (in)	I_a/P
1	0.0741	0.7453	0.0000	N/A	0	6.8	87	5.286156	0.3917	0.299	0.0440
2	0.0379	0.2884	0.0000	N/A	0	6.8	92	5.8573994	0.2220	0.174	0.0256
3	0.0975	0.4476	0.0000	N/A	0	6.8	89	5.5129807	0.5375	0.247	0.0363

Pre Development watershed data

Project: Atlantic steel	Location: Atlanta, Georgia	By: KK	Date: 12/14/1999
		Checked:	Date:
Pre development site condition	Frequency (yr) 25		

Subarea name	Subarea Tc (hr)	Sum Tt to outlet (hr)	Ia/P	AmQ (mi2-in)	12	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13	13.2	13.4	13.6	13.8	14
	Basic watershed data used				Select and enter hydrograph times in hours; Discharge at selected hydrograph times (ft3/s)														
1	0.7453	0.0000	0.0440	0.3917	18.0	26.6	45.0	76.0	115.2	148.8	166.1	160.6	144.5	98.7	67.4	48.2	36.4	29.0	23.9
2	0.2884	0.0000	0.0256	0.2220	52.2	99.2	150.1	150.1	101.9	62.8	43.5	32.4	25.3	17.8	14.7	12.7	11.3	10.2	9.3
3	0.4476	0.0000	0.0363	0.5375	50.5	91.4	165.6	251.0	284.3	272.5	216.1	159.6	121.5	75.3	51.6	39.8	32.8	28.5	25.3
Composite hydrograph at outlet					121	217	361	477	501	484	426	353	291	192	134	101	81	68	58

Runoff curve number and runoff - Post Development Condition

Project:	Atlantic Steel Site	By:	KK	12/14/1999
Location:	Atlanta, Georgia	Checked:		Date:
Post Development				

1. Runoff Curve Number - Segment 1

Soil name and hydrologic group	Cover description	CN	% Area	Product of CN and % area
Fill Material, D	Impervious areas	98	18	1764
Fill Material, D	Urban, Open Space, Good	80	15	1200
Fill Material, D	Urban, Commercial and business	95	67	6365
		Totals	100	9329

CN (weighted) = total product / total area = 93.29

Use CN = 93

2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency……………………………..yr	25		
Rainfall, P (24-hour)………………..in	6.8		
Runoff, Q……………………………..in	5.97		

Runoff curve number and runoff - Post Development Condition

Project:	Atlantic Steel Site	By:	KK	12/14/1999
Location:	Atlanta, Georgia	Checked:		Date:
Post Development				

1. Runoff Curve Number - Segment 2

Soil name and hydrologic group	Cover description	CN	% Area	Product of CN and % area
Fill Material, D	Impervious areas	98	18	1764
Fill Material, D	Urban, Open Space, Good	80	15	1200
Fill Material, D	Urban, Commercial and business	95	67	6365
		Totals	100	9329

CN (weighted) = total product / total area = 93.29

Use CN = 93

2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency……………………………yr	25		
Rainfall, P (24-hour)………………..in	6.8		
Runoff, Q…………………………….in	5.97		

Runoff curve number and runoff - Post Development Condition

Project:	Atlantic Steel Site	By:	KK	12/14/1999
Location:	Atlanta, Georgia	Checked:		Date:
Post Developmen Condition				

1. Runoff Curve Number - Segment 3

Soil name and hydrologic group	Cover description	CN	% Area	Product of CN and % area
Fill Material, D	Impervious areas	98	18	1764
Fill Material, D	Urban, Open Space, Good	80	15	1200
Fill Material, D	Urban, Commercial and business	95	67	6365
		Totals	100	9329

CN (weighted) = total product / total area = 93.29

Use CN = 93

2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency…………………………..yr	25		
Rainfall, P (24-hour)………………..in	6.8		
Runoff, Q…………………………….in	5.97		

Time of Concentration (Tc) - Post development

		By: KK
Project:	Atlantic steel site	Date: 12/14/1999
Location:	Atlanta, Georgia	Checked:
Post Development		Date

Sheet Flow

Segment ID	1	2	3		
1. Surface Description…………………………………………………..	Smooth	Smooth	Smooth		
2. Manning's roughness coefficient, n………………………………	0.011	0.011	0.011		
3. Flow length, L (total L<or= 300ft)………………………………..ft	300	300	300		
4. Two-year 24-hour rainfall, P_2……………………………………in	4	4	4		
5. Land slope, s ……………………………………………………ft/ft	0.02	0.02	0.02		
6. $Tt = 0.007\ (nL)^{0.8}/P_2^{0.5}s^{0.4}$ Compute T_t………………………hr	0.0435	0.0435	0.0435	Total =	0.1305

Shallow concentrated flow

Segment ID					
7. Surface description (paved or unpaved)…………………………					
8. Flow length, L………………………………………………………ft					
9. Watercourse slope, s……………………………………………ft/ft					
10. Average velocity, V ……………………………………………..ft/s					
11. Tt = L / 3600 V Compute T_t………………………...hr				Total =	0

Channel flow

Segment ID	1**	2**	3**		
12. Cross sectional flow area, a…………………………………..ft^2	3.534	3.534	3.534		
13. Wetted perimeter, P_w …………………………………………ft	4.71	4.71	4.71		
14. Hydraulic radius, $r = a/P_w$ Compute r ……………………ft	0.8	0.8	0.8		
15. Channel slope, s ……………………………………………..ft/ft	0.005	0.005	0.005		
16. Manning's roughness coefficient, n ………………………..	0.017	0.017	0.017		
17. $V = 1.49r^{2/3}s^{1/2}/n$ Compute V ………………………ft/s	5.1174	5.1174	5.1174		
18. Flow length, L …………………………………………………ft	1700	2700	1600		
19. Tt = L / 3600 V Compute T_t ……………………..hr	0.0923	0.1466	0.0868	Total	0.3257
20. Wateshed or subarea T_c or T_t (add T_t in steps 6,11, and 19) ……………………………..hr					0.4562

**Runoff in Post-Dev scenario will be routed through storm water pipes and other storm water diversion channels. A half-full 36" circular pipe has been assumed to calculate channel flows. For purposes of modeling, a sheet flow of the first 300 feet and channel flow through circular pipe flowing half full for the remainder of the flow length is assumed.

Post development Watershed Data

Project: Atlantic Steel Site	Location: Atlanta, Georgia	By: KK	Date: 12/14/1999
Site Condition: Post Dev	Frequency: 25 yr - 24 hr	Checked:	Date:

Subarea name	Drainage area	Time of Conc.	Time of travel through subarea	Downstream subarea names	Travel time summation to outlet	24-hr rainfall	Runoff curve number	Runoff		Initial abstraction	
	A_m (mi^2)	T_c (hr)	T_t (hr)		$SumT_t$ (hr)	P (in)	CN	Q (in)	A_mQ (mi^2-in)	I_a (in)	I_a/P
1	0.0747	0.1357748	0	N/A	0	6.8	93	5.9733113	0.4462064	0.151	0.02220588
2	0.0383	0.1900554	0	N/A	0	6.8	93	5.9733113	0.2287778	0.151	0.02220588
3	0.0494	0.1303468	0	N/A	0	6.8	93	5.9733113	0.2950816	0.151	0.02220588

Post Development watershed data

Project: Atlantic steel	Location: Atlanta, Georgia	By: KK	Date: 12/14/1999
		Checked:	Date:
Post development site condition	Frequency (yr) 25		

Subarea name	Subarea Tc (hr)	Sum Tt to outlet (hr)	Ia/P	AmQ (mi2-in)	12	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13	13.2	13.4	13.6	13.8	14
	Basic watershed data used				Select and enter hydrograph times in hours; Discharge at selected hydrograph times (ft3/s)														
1	0.1357748	0	0.0222059	0.446206357	288.7	450.7	278.0	96.8	65.6	54.9	46.4	38.4	33.9	29.4	25.4	22.8	20.5	18.7	17.0
2	0.1900554	0	0.0222059	0.228777824	92.2	169.1	183.0	110.0	57.2	38.0	29.3	23.3	19.7	16.0	14.0	12.4	11.2	10.1	9.2
3	0.1303468	0	0.0222059	0.29508158	190.9	298.0	183.8	64.0	43.4	36.3	30.7	25.4	22.4	19.5	16.8	15.0	13.6	12.4	11.2
Composite hydrograph at outlet					572	918	645	271	166	129	106	87	76	65	56	50	45	41	37

TR-55 STORM WATER RUNOFF MODEL ASSUMPTIONS

TR-55 Stormwater Runoff Model Assumptions
Atlantic Steel Property Redevelopment
Atlanta, Georgia
LAWGibb Project Number 95073-9-0004.02.0201

General Assumptions

- A rainfall amount of 6.8 inches was used for the 25-yr, 24-hr storm, based on data derived from the Soil Conservation Service (SCS) Technical Publication TP-40.
- Type II rainfall distribution was used for the site based on data obtained from the Natural Resources Conservation Service (NRCS) Technical Release 55, dated June 1986.
- Hydrologic soil group D was selected because of the estimated impervious characteristics of on-site soil containing “slag” from foundry operations.
- The model was created with three distinct watershed subareas each for pre-development and post-development condition.

Calculated Drainage Areas

(NOTE: Pre-development and post-development drainage areas were measured using planimeter, and verified using CAD software)

- Total Pre-Development: 134.11acres (Does not include runoffs from 17th Street Bridge, CSX underpass, and North Side Drive connector)

- Total Post-Development area = 135.21 acres. 50% of the surface runoff contribution from the 17th Street Bridge and North Side Drive connector, and 100% of the surface runoff contribution from the CSX underpass is assumed to flow onto the Atlantic Steel property (Total 1 acre).

Cover Types and Flow Lengths:

Subarea Number	Total Flow Length (ft)	Cover Description	Curve Number (CN)	% Area
PRE-DEVELOPMENT (PRESENT) CONDITION				
1	3100	Impervious Areas	98	10
		Woods, Fair	79	43.5
		Urban Districts, Industrial	93	46.5
		Composite CN	**87**	
2	2000	Impervious Areas	98	0
		Woods, Fair	79	10.5
		Urban Districts, Industrial	93	89.5
		Composite CN	**92**	

Subarea Number	Total Flow Length (ft)	Cover Description	Curve Number (CN)	% Area
3	2800	Impervious Areas	98	10
		Woods, Fair	79	30
		Urban Districts, Industrial	93	60
		Composite CN	**89**	
POST-DEVELOPMENT (PROPOSED) CONDITION				
1	2000	Impervious Areas	98	18
		Urban, Open Space, Good	80	15
		Urban, Commercial and Business	95	67
		Composite CN	**93**	
2	3000	Impervious Areas	98	18
		Urban, Open Space, Good	80	15
		Urban, Commercial and Business	95	67
		Composite CN	**93**	
3	1900	Impervious Areas	98	18
		Urban, Open Space, Good	80	15
		Urban, Commercial and Business	95	67
		Composite CN	**93**	

Ground cover types for the pre-development scenario have been estimated based on our knowledge of present site conditions and on aerial photographs. Ground cover types for the post-development scenario have been estimated based on project conceptual plans.

Lake (Post-Development condition)

For purposes of the stormwater model, the lake is modeled as an impervious ground cover type because stormwater will not infiltrate into the soil beneath the lake bottom because it is saturated. The lake will be present in subareas 1 and 3 (90% and 10% of total lake area, respectively) following development.

Manning's Roughness Coefficient "n" - Present Condition

Sub Area 1: Woods/Smooth, Composite n = 0.18
Sub Area 2: Range/Smooth, Composite n = 0.023
Sub Area 3: Range/Smooth, Composite n = 0.047

NOTE: Composite Manning's "n" values are calculated as a weighted average of values for each ground cover type based on the percentage of each ground cover type present in an area.

The Manning's "n" for the channel flow portion of subarea 1 was selected based on minor natural channels with irregular sections and pools. The cross-sectional flow area and wetted perimeter for the channel in subarea 1 were estimated from field measurements taken during LAW's Phase II environmental investigation field activities.

Manning's Roughness Coefficient "n" - Post-Development Condition

Subarea 1: Smooth, n = 0.011
Subarea 2: Smooth, n = 0.011
Subarea 3: Smooth, n = 0.011

Flow Length

Flow lengths presented in the table above were estimated from Figures 1 and 2, which are attached. The first 300 feet of runoff was assumed to be sheet flow, in accordance with recommendations in the TR-55 manual, and the remaining flow length was assumed to be shallow concentrated flow (except for the known natural channel in present condition subarea 1).

Land Slope

Land slopes used to calculate the time of concentration (Tc) for sheet flow and shallow concentrated flow were based on current topographic survey information for the present condition, and a conceptual redevelopment grading plan for the post-development condition. The land slope for the natural channel in subarea 1 (present condition) was estimated based on field measurements performed by LAW during the Phase II environmental investigation field activities. The land slope for the channel flow section in the post-development condition was based on an assumed slope of 0.005 ft/ft (1/2% slope) for storm drain piping.

APPENDIX D

AGENCY CORRESPONDENCE

Georgia Department of Natural Resources
Wildlife Resources Division

LONICE C. BARRETT, COMMISSIONER
DAVID WALLER, DIVISION DIRECTOR

Georgia Natural Heritage Program
2117 U.S. Hwy. 278 S.E., Social Circle, Georgia 30025-4714
(770) 918-6411, (706) 557-3032

Rcd 9/13/99

September 8, 1999

Heinz J. Mueller, Chief
Office of Environmental Assessment
Environmental Accountability Division
U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-8960

Subject: **Known or Potential Occurrences of Special Concern Plant and Animal Species on or near Atlantic Steel Redevelopment Project, Fulton County, Georgia**

Dear Mr. Mueller:

This is in response to your request of August 6, 1999. According to our records, within a three mile radius of the project site, there are occurrences of the following:

Schisandra glabra (Bay Starvine) approx. 1.5 mi. E of site
Schisandra glabra (Bay Starvine) approx. 2.5 mi. E of site

Enclosed are lists for Fulton County that should aid in assessing the potential for rare species occurrences within the area of concern.

Please keep in mind the limitations of our database. The data collected by the Georgia Natural Heritage Program comes from a variety of sources, including museum and herbarium records, literature, and reports from individuals and organizations, as well as field surveys by our staff biologists. In most cases the information is not the result of a recent on-site survey by our staff. Many areas of Georgia have never been surveyed thoroughly. Therefore, the Georgia Natural Heritage Program can only occasionally provide definitive information on the presence or absence of rare species on a given site. Our files are updated constantly as new information is received. Thus, information provided by our program represents the existing data in our files at the time of the request and should not be considered a final statement on the species or area under consideration.

If I can be of further assistance, please let me know.

Sincerely,

Greg Krakow
Data Manager

enclosures

UR 7425

Report Generated 15 June 1998

Special Concern Plants Potentially Occurring in Fulton County

36 Taxa in List

Georgia Natural Heritage Program, 2117 US Hwy 278 SE, Social Circle, GA 30025, (770) 918-6411

Species / Common Name	Global Rank	State Rank	Federal Status	State Status	Habitat
Aesculus glabra OHIO BUCKEYE	G5	S2			Mesic forests in circumneutral soil
Amorpha schwerinii SCHWERIN INDIGO-BUSH	G3	S2			Rocky upland woods
Amsonia ludoviciana LOUISIANA BLUE STAR	G3	S2			Open woods near granite outcrops (limited to Lithonia Gneiss types)
Anemone berlandieri GLADE WINDFLOWER	G4?	S1S2			Granite outcrop ecotones; openings over basic rock
Arabis missouriensis MISSOURI ROCKCRESS	G4?Q	S2			Granite outcrops
Aster avitus ALEXANDER ROCK ASTER	G3	S3			Granite outcrops
Aster georgianus GEORGIA ASTER	G2G3	S2			Upland oak-hickory-pine forests; especially with Echinaceae laevigata
Castanea dentata AMERICAN CHESTNUT (NUT-BEARING ONLY)	G4	S3			Upland mixed oak or oak-hickory forests
Clematis ochroleuca CURLY-HEADS	G4	S2			Dry woods in circumneutral soil
Cypripedium acaule PINK LADYSLIPPER	G5	S4		U	Upland oak-hickory-pine forests; piney woods
Cypripedium calceolus var. parviflorum SMALL-FLOWERED YELLOW LADYSLIPPER	G5	S2		U	Upland oak-hickory-pine forests; mixed hardwood forests
Cypripedium calceolus var. pubescens LARGE-FLOWERED YELLOW LADYSLIPPER	G5	S3		U	Upland oak-hickory-pine forests; mixed hardwood forests
Delphinium carolinianum CAROLINA LARKSPUR	G5	S3			Granite outcrops; rocky, calcareous oak forests; Altamaha Grit outcrops
Dodecatheon meadia SHOOTING-STAR	G5	S3			Mesic hardwood forests over basic soils
Dryopteris celsa LOG FERN	G4	S2			Floodplain forests; lower slopes of rocky woods [illegible]
Dryopteris cristata CRESTED WOOD FERN	G5	S1SE?			Swamps
Eleocharis wolfii SPIKERUSH	G4?	S1			Shallow pools on granite outcrops
Eriocaulon koernickianum PIPEWORT	G2	S1			Granite outcrops
Fothergilla major MOUNTAIN WITCH-ALDER	G3	S1			Rocky (sandstone, granite) woods; bouldery stream margins
Hexastylis shuttleworthii var. harperi HARPER HEARTLEAF	G4T3	S2?		U	Low terraces in floodplain forests; edges of bogs
Hydrastis canadensis GOLDENSEAL	G4	S2		E	Rich woods in circumneutral soil
Ipomopsis rubra STANDING CYPRESS	G4G5	S3			Granite outcrops; sandridges

Report Generated 22 June 1998

Special Concern Plants Potentially Occurring In Fulton County

36 Taxa in List

Georgia Natural Heritage Program, 2117 US Hwy 278 SE, Social Circle, GA 30025, (770) 918-6411

GEORGIA

Species Common Name	Global Rank	State Rank	Federal Status	State Status	Habitat
Isoetes melanospora BLACK-SPORED QUILLWORT	G1	S1	LE	E	Vernal pools on granite outcrops
Listera australis SOUTHERN TWAYBLADE	G4	S2			Poorly drained circumneutral soils
Lonicera flava YELLOW HONEYSUCKLE	G5?	S3?			Rocky, upland forests and thickets
Melanthium latifolium BROADLEAF BUNCHFLOWER	G5	S2?			Mesic deciduous hardwood forests
Nestronia umbellula INDIAN OLIVE	G4	S2		T	Mixed with dwarf shrubby heaths in oak-hickory-pine woods; often in transition areas between flatwoo
Panax quinquefolius AMERICAN GINSENG	G4	S3			Mesic hardwood forests; cove hardwood forests
Platanthera integrilabia MONKEYFACE ORCHID	G2G3	S1S2		T	Red maple-gum swamps; seepy streambanks in sphagnum mats
Portulaca umbraticola ssp. coronata WINGPOD PURSLANE	G5T?	S2			Granite outcrops; Altamaha Grit outcrops
Rhus michauxii DWARF SUMAC	G2	S1	LE	E	Open forests over ultramafic rock
Schisandra glabra BAY STARVINE	G3	S2		T	Stream terraces
Sedum pusillum DWARF GRANITE STONECROP	G3	S3		T	Granite outcrops
Veratrum woodii OZARK BUNCHFLOWER	G5	S2		R	Mesic hardwood forests over basic soils
Waldsteinia lobata PIEDMONT BARREN STRAWBERRY	G2?	S2		T	Stream terraces and adjacent gneiss outcrops
Zanthoxylum americanum NORTHERN PRICKLY ASH	G5	S1			Rocky, openly wooded slopes; river banks

Special Concern Animals Potentially Occurring in Fulton County

Report Generated 15 June 1998

17 Taxa in List

Georgia Natural Heritage Program, 2117 US Hwy 278 SE, Social Circle, GA 30025, (770) 918-6411

GEORGIA

Species / Common Name	Global Rank	State Rank	Federal Status	State Status	Habitat
Aimophila aestivalis BACHMAN'S SPARROW	G3	S3		R	Open pine or oak woods; old fields; brushy areas
Ammodramus henslowii HENSLOW'S SPARROW	G4	S3			Fields; meadows
Cyprinella callitaenia BLUESTRIPE SHINER	G2	S2		T	Brownwater streams
Etheostoma rupestre ROCK DARTER	G4	S2S3			Mountain streams
Extrarius aestivalis SPECKLED CHUB	G5	S1S2			Gravelly or sandy mountain streams
Hemidactylium scutatum FOUR-TOED SALAMANDER	G5	S2			Swamps; boggy streams & ponds; wet woods
Hybopsis lineapunctata LINED CHUB	G3	S3			Gravelly or rocky streams
Ichthyomyzon gagei SOUTHERN BROOK LAMPREY	G5	S3			Brownwater & blackwater streams
Lythrurus atrapiculus BLACKTIP SHINER	G4	S2			Brownwater streams
Necturus alabamensis ALABAMA WATERDOG	G2	S2			Streams with submerged logs & rocks
Notropis hypsilepis HIGHSCALE SHINER	G3	S2S3		T	Blackwater & brownwater streams
Notropis stilbius SILVERSTRIPE SHINER	G4	S3			Gravelly or sandy streams
Ophisaurus attenuatus SLENDER GLASS LIZARD	G5	S3			Open woods; savannas; old fields; edges of streams & ponds; sandhills
Phenacobius catostomus RIFFLE MINNOW	G4	S3			Mountain streams
Plethodon websteri WEBSTER'S SALAMANDER	G3	S1			Moist forests near rocky streams
Scartomyzon lachneri GREATER JUMPROCK	G3	S3			Brownwater streams
Thryomanes bewickii BEWICK'S WREN	G5	SU		R	Thickets; brushy areas; open woods

GEORGIA NATURAL HERITAGE PROGRAM
EXPLANATION OF RARITY RANKS AND LEGAL STATUSES

The "State Rank" and "Global Rank" codes indicate relative rarity of species statewide and range-wide, respectively. An explanation of these codes follows.

STATE [GLOBAL] RANK

S1[G1] = Critically imperiled in state [globally] because of extreme rarity (5 or fewer occurrences).

S2[G2] = Imperiled in state [globally] because of rarity (6 to 20 occurrences).

S3[G3] = Rare or uncommon in state [rare and local throughout range or in a special habitat or narrowly endemic] (on the order of 21 to 100 occurrences).

S4[G4] = Apparently secure in state [globally] (of no immediate conservation concern).

S5[G5] = Demonstrably secure in state [globally].

SA = Accidental in state, including migratory or wide-ranging species recorded only once or twice or at very great intervals.

SN = Regularly occurring, usually migratory and typically nonbreeding species.

SR = Reported from the state, but without persuasive documentation (no precise site records and no verification of taxonomy).

SU[GU] = Possibly in peril in state [range-wide] but status uncertain; need more information on threats or distribution.

SX[GX] = Apparently extirpated from state [extinct throughout range]. GXC is known only in cultivation/captivity.

SE = An exotic established in state; may be native elsewhere in North America; sometimes difficult to determine if native (**SE?**).

SH[GH] = Of historical occurrence in the state [throughout its range], perhaps not verified in the past 20 years, but suspected to be still extant.

[T] = Taxonomic subdivision (trinomial, either a subspecies or variety), used in a global rank, for example "G2T2."

Q = Denotes a taxonomic question - either the taxon is not generally recognized as valid, or there is reasonable concern about its validity or identity globally or at the state level.

? = Denotes questionable rank; best guess given whenever possible (e.g. **S3?**).

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

4270 Norwich Street
Brunswick, GA 31520

West Georgia Section
P. O. Box 52560
Ft. Benning, GA 31995-2560
706-544-6428 706-544-6419 (fax)

North Georgia Section
~~310 Meigs St.~~ 847 South Milledge Ave
Athens, GA 30605
706-613-9493 706-613-6059 (fax)

September 22, 1999

Heinz J. Mueller
U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia 30303-8960

Re: FWS Log 99-0874
Notice of Initiation of Environmental Process for the Atlantic Steel Redevelopment Project

Dear Mr. Mueller:

The Service has received your letter requesting written comments on the Atlantic Steel Redevelopment Project proposed by Jacoby Development, Inc. in Fulton County, Georgia. This information is necessary for you to prepare an Environmental Assessment (EA) for the aforementioned project in accordance with the National Environmental Policy Act of 1969 (NEPA).

Based on the information we were provided, we have determined there is little likelihood for the presence of natural wildlife habitats or any federally- and state-listed species to occur within this portion of the Atlanta Metropolitan Area. Since this is likely the case, the Service anticipates no negative impacts from this redevelopment project. However, if areas of natural habitat exist in the redevelopment area, the Service requests that surveys for likely-occurring species be conducted to determine their presence or absence on the site. In addition, careful consideration should be given to the state-listed peregrine falcon *(Falco peregrinus)* as this species will utilize tall buildings for nesting and surrounding areas for foraging and has been known to occur in the Atlanta Metropolitan Area. The peregrine falcon was recently delisted as an endangered species by the Service.

I have enclosed a list of federally- and state-listed species known to occur or potentially occur in Fulton County and neighboring Cobb and DeKalb counties. Please contact Mr. Jim Bates of our West Georgia Section Office at (706) 544-6422 if you have any further questions or require additional information.

Sincerely,

Sandra S. Tucker

Sandra S. Tucker
Field Supervisor

cc: file
FWS-FBGA

LISTED SPECIES IN FULTON COUNTY

FEDERAL ENDANGERED AND THREATENED SPECIES[1]

Animals

Bald eagle (T,SE)	Haliaeetus leucocephalus	Inland waterways and estuarine areas in Georgia
Red-cockaded woodpecker (E,SE)	Picoides borealis	Nest in mature pine with low understory vegetation (<1.5m); forage in pine and pine hardwood stands ≥30 years of age, preferably ≥10" dbh
Gulf moccasinshell mussel (E,SE)	Medionidus penicillatus	Medium streams to large rivers with slight to moderate current over sand and gravel substrates; may be associated with muddy sand substrates around tree roots

SPECIES OF MANAGEMENT CONCERN[1]: The Fish and Wildlife Service is evaluating population trends and threats to the following Species of Management Concern. Please contact us at 247 South Milledge Ave., Athens, GA, 706-613-9493, if you locate these species during site surveys or have other information on the species' distributions in Georgia.

Animals

Bachman's sparrow (SR)	Aimophila aestivalis	Abandoned fields with scattered shrubs, pines, or oaks
Appalachian Bewick's wren (SR)	Thryomanes bewickii altus	Dense undergrowth, overgrown fields, thickets, and brush in open or semi-open habitat; feed primarily on insects
Bluestripe shiner (ST)	Cyprinella callitaenia	Brownwater streams

STATE OF GEORGIA ENDANGERED AND THREATENED SPECIES[1]: The following species, as well as the Species of Management Concern marked above (SE, ST, SR), are protected by the State. For information on State listed species, contact the GA Department of Natural Resources, GA Natural Heritage Program, 2117 US HWY 278 SE, Social Circle, GA 30279 (706-557-3032).

Animals

Peregrine falcon (SE)	Falco peregrinus	F. p. anatum nests on cliffs, high hills, or tall buildings; F. p. tundrius primarily seen in Georgia migrating along the coast

Plants

Bay star-vine (ST)	Schisandra glabra	Twining on subcanopy and understory trees/shrubs in rich alluvial woods
Piedmont barren strawberry (ST)	Waldsteinia lobata	Rocky acidic woods along streams with mountain laurel; rarely in drier upland oak-hickory-pine woods

[1] Key to notations: E = endangered, T = threatened, and R = rare. The SE, ST, and SR indicate species also listed by the State of Georgia as endangered, threatened, and rare, respectively.

Updated August 1999

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
NORTH AREA SECTION
3485 NORTH DESERT DRIVE
BUILDING 2, SUITE 102
ATLANTA, GEORGIA 30344

REPLY TO
ATTENTION OF:

MAY 12 2000

Regulatory Branch
980016990

Jacoby Atlantic Redevelopment, LLC
Attention: Mr. Hilburn Hillestad
1000 Abernathy Road
Building 400
Suite 1800
Atlanta, Georgia 30328

Dear Dr. Hillestad:

I refer to the Pre-Construction Notification (PCN), submitted on your behalf, requesting authorization to impact 3.75 acres of waters of the U. S. in order to conduct the remediation of the Atlantic Steel property, located northeast of Northside Drive and 14th Street, within the city of Atlanta, Fulton County, Georgia. The proposed project's impacts will be mitigated through the applicant's contribution of $100,000 in funds to Southeast Waters. These funds will be used in their entirety by Southeast Waters, in accordance with the plan outlined in the letter dated March 24, 2000, to conduct stream restoration activities within the impacted watershed.

We have completed coordination with other federal and state agencies as described in Part C(13)(e) of the enclosed excerpt from our Nationwide Permit Program, published in the December 13, 1996, Federal Register, Vol. 61, No. 241, Pages 65874-65922 (61 FR).

As a result of our evaluation of your project, we have determined that the proposed activity, as outlined in the January 14, 2000 submittal, and amended March 24, 2000, is authorized under Nationwide Permit No. 38 as described in Part B(38) of the excerpt from 61 FR. Your use of this Nationwide Permit is valid only if the activity is conducted in accordance with the information submitted and meets the conditions applicable to the Nationwide Permit as described at Part C of the excerpt from 61 FR. We also require that you fill out and sign the enclosed certification and return it to our office within 30 days of completion of the activity authorized by this permit.

This verification will be valid until February 11, 2002. If you commence or are under contract to commence this activity prior to February 11, 2002, you will have an additional 12 months to complete the authorized activity.

This authorization should not be construed to mean that any future projects requiring Department of the Army Authorization would necessarily be authorized. Any new proposal, whether associated with this project or not, would be evaluated on a case-by-case basis. Any prior approvals would not be a determining factor in making a decision on any future request.

Revisions to your proposal may invalidate this authorization. In the event changes to this project are contemplated, I recommend that you coordinate with us prior to proceeding with the work.

This communication does not convey any property rights, either in real estate or material, or any exclusive privileges. It does not authorize any injury to property or invasion of rights, or any infringement of federal, state, local laws or regulations. It does not obviate the requirement to obtain state or local assent required by law for the activity described herein. It does not affect your liability for damages that may be caused by the work, nor does it authorize any interference with any existing or proposed federal project.

If you have any further questions or concerns pertaining to this matter, please feel free to call Mr. Daniel J. Caprioli of the Regulatory Branch at (404) 763-7943.

Sincerely,

Edward B. Johnson Jr.
Acting Chief, North Area Section

Enclosure

Copies Furnished:

U.S. Environmental Protection Agency
Water Managment Division
Wetlands Section, Region IV
ATTN: Mr. William L. Cox, Chief
Atlanta Federal Center
61 Forsyth Street, SW.
Atlanta, Georgia 30303-3104

U.S. Department of the Interior
Fish and Wildlife Service
ATTN: Ms. Sandra S. Tucker, Field Supervisor
247 South Milledge Avenue
Athens, Georgia 30605

Georgia Department of Natural Resources
Environmental Protection Division
Industrial Waste Water Program
ATTN: Mr. Michael Creason
4220 International Parkway, Suite 101
Atlanta, Georgia 30354

Mr. John T. Vermont
Rochester & Associates, Inc.
425 Oak Street, N.W.
Gainesville, Georgia 30501

CERTIFICATION OF COMPLIANCE
WITH
DEPARTMENT OF THE ARMY
NATIONWIDE PERMIT (38)

PERMIT FILE NUMBER (if applicable): 980016990

PERMITTEE: Jacoby Atlantic Redevelopment, LLC

ADDRESS:

1000 Abernathy Road
Building 400
Suite 1800
Atlanta, Georgia 30328

LOCATION OF WORK: Located northeast of Northside Drive and 14^{th} Street, within the city of Atlanta, Fulton County, Georgia.

PROJECT DESCRIPTION: To conduct the remediation of the Atlantic Steel property.

ACRES OF WATERS OF THE U.S. IMPACTED: 3.75

I understand that the permitted activity is subject to a U.S. Army Corps of Engineers' Compliance Inspection. If I fail to comply with the permit conditions at Part C of the Nationwide Permit Program, published in the December 13, 1996, Federal Register, Vol. 61, No. 241, Pages 65874-65922, it may be subject to suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit as well as any required mitigation (if applicable) has been completed in accordance with the terms and conditions of the said permit.

____
Signature of Permittee/Date

APPENDIX E

NOISE REPORTS

X. NOISE

In compliance with *23 USC Section 109 (h) and (i)*, the Federal Highway Administration (FHWA) established guidelines for the assessment of highway traffic-generated noise. These guidelines, published as Part 772 of Title 23 of the Code of Federal Regulations, provide procedures to be followed in conducting noise analyses that will protect the public health and welfare. In accordance with the Noise Control Act of 1972, coordination of this regulation with the Environmental Protection Agency (EPA) has been completed. The following assessment has been prepared in accordance with 23 CFR Part 772.

A. Identification of Existing Activities or Land Uses Which May Be Affected by Noise from the Proposed Atlantic Steel Re-development and 17th Street Bridge/Interchange

Existing activities and land uses were identified from on-site inspection and aerial photography. Adjacent land use along Northside Drive and Bishop Street to the west of the Atlantic Steel Site consists of small to medium size commercial businesses. Adjacent land use to the north and the south of the site consists of primarily residential, with commercial development along 16th Street, Techwood Drive, and 14th Street. East of the site, across the I-75/85 connector in mid-town Atlanta, land use consists of small and large scale commercial development.

B. Ambient Noise Survey and Model Methodology

The proposed mixed-use development and 17th Street bridge/Interchange is located within an urban area that is bisected by the I-75/85 Connector. The proposed bridge and interchange will connect the site with the Atlanta mid-town area to the East. The location and nature of the proposed project presents a complex and dynamic noise environment. Receivers can be affected by noise levels from multiple sources, primarily vehicles; however, contributions from overhead commercial aircraft and helicopters, as well as construction equipment were noted during field investigations. Existing noise measurements were taken at representative locations predicted to receive the largest impact, where there was insufficient traffic data, and in areas where there exists a unique physical situation. The L_{10} noise levels were measured using the Bruel & Kjaer Type 2231 Modular Precision Sound Level Meter system. Measurements were taken at mid-block locations and at intersections in order to qualitatively inventory existing noise levels typical and representative of adjacent and nearby sites. A list of sites, and there corresponding noise levels may be found in Table 1 and are shown in Figure A-1 in the Appendix.

Table 1: Ambient Noise Measurement Sites		
Area A[1] (Northside Drive):	Distance from Nearest Roadway Centerline	Existing Noise Level (dBA)
1. Restaurant Parking Lot; corner of Northside Dr. @ Bishop St. (A4)[2]	45' (Northside Dr.)	75
2. Office Building; westbound Bishop St., approaching Northside Dr. (A6)	40' (Bishop St.)	69
3. Office Building; corner of Hemphill Ave. @ 14th St. (A14)	55' (Hemphill Ave.)	69
Area B (Home Park Area and Techwood Drive):		
1. Office/Warehouse Parking Lot; corner of State St. @ 14th St. (B1)	50' (State St.)	66
2. Parking Lot (Abandoned); westbound 16th St. @ Atlantic St. (B5a)	45' (16th Street)	64
3. Front of Office Building; eastbound 16th St., east of Barnes St. (B10a)	35' (16th Street)	70
4. Front of Office Building; southbound Techwood Dr. (B15a)	40' (Techwood Dr.)	74
5. Parking Lot across from a residence; northbound Fowler St. (B21)	35' (Fowler Street)	65
6. 15th St., between two residences; facing southbound State St. (B25)	55' (State Street)	60
Area C (Midtown Atlanta):		
1. Grass yard in front of Funeral Home; eastbound 16th St. @ Spring St. (C5)	45' (16th Street)	68
2. Parking Lot at end of 17th Street Culdesac; facing northbound I-75/85 (C8)	130' (I-75/85)	73*
3. Parking Lot; westside of Spring St. @ 17th St. (C13)	60' (Spring St.)	67
4. In front of Office Building; eastside of Spring St. @ 18th St. (C14)	55' (Spring St.)	71
5. Parking Lot; westside of West Peachtree St. @ Lombardy Way (C15)	70' (W. Peachtree St.)	71
6. Grass area; eastside of West Peachtree St., south of Lombardy Way (C16)	65' (W. Peachtree St.)	70
7. Intersection of West Peachtree St. @ 17th St. (C17)	20' (17th Street)	73*
8. Pershing Point (triangle) Park; West Peachtree St. @ Peachtree St. (C19)	50' (Both)	70
9. Office Building; southbound Peachtree St. @ Buford Hwy. Connector	35' (Peachtree St.)	73
Area D (Ansley Park):		
1. Residence; westbound Peachtree Circle (D1)	25' (Peachtree Circle)	66
2. Residence; eastbound 17th Street @ Peachtree Circle (D3)	25' (Peachtree Circle)	66
Area E (Atlantic Steel Site):		
1. Outside abandoned warehouse; facing I-85 southbound off-ramp	300'	66*
2. Underneath Billboard sign; facing I-85 southbound off-ramp	100'	71*
3. North Corner of Atlantic Steel Site; facing I-75 southbound and Amtrak train bridge, behind the retaining wall (E17)	90' (and 20' above I-75)	65*

* These noise levels represent average of AM & PM levels shown in Table 6 in Appendix A.

---

1 Due to the bulk of material, the project was broken into five sections: see Appendix A, "How to Use the Tables and Figures."

2 Receiver Number: see Tables and Figures in Appendix A.

Within the Home Park community adjacent to the proposed development, as well as the Ansley Park community on the east side of mid-town, receivers were modeled at major intersections, as well as mid-block locations. Within their respective areas, the majority of residences lie approximately the same distance from the roadway centerline due to required setbacks, approximately 50 feet in Home Park, and between 35 and 50 feet in Ansely Park. With this understanding, field measurements at each residence were not necessary since noise levels were assumed to be the same on each side of the street. It should be noted that field measurements represent an hour or a few hours of a day or days of data in an attempt to capture typical conditions and there is always the possibility that the times chosen will not represent typical conditions and that measurements may over or underestimate noise levels at that specific time.

C. Existing and Future Noise Levels

Existing and future traffic noise levels along the Interstate and the associated roadways were calculated using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108; STAMINA 2.0). This model arrives at a predicted noise level through a series of adjustments to a reference sound level. Inputs to the model include existing and future peak hour traffic volumes, approximate vehicle speed, traffic mix, roadway design characteristics, and topography under the build/no-build conditions. Use of this model is endorsed by FHWA and tests have shown a high correlation between noise levels measured along existing highways and computed noise levels for the same highway section. Unlike field measurements, calculated noise levels utilize monthly and yearly traffic data that more accurately represent typical conditions. One hundred sites (24 within the proposed development - see Table A-2 in Appendix A) were modeled and the resulting levels were used to extrapolate noise levels at nearby and adjacent sites.

Where appropriate and feasible, the model took into account any shielding given by natural terrain (earth berms) and man-made features (buildings and retaining walls) that could have obstructed the sound propagation path. The STAMINA model cannot accurately model the dynamic traffic conditions found in an urban grid roadway network which experiences frequent vehicle starts and stops; therefore, arterial roadway segments were analyzed using posted or observed average speeds where reasonable. All interstate segments were assigned peak hour speeds corresponding to the specific capacity of that section of roadway (see Table 2). Two percent of total traffic consisted of trucks (1.5% medium trucks, 0.5% heavy trucks), reflecting the existing ban on heavy truck (over six wheels) through-traffic on radial freeways within I-285.

Table [illegible]: Basic Freeway LOS Chart*		
Level of Service	**Operating Speed**	**Design Capacity**
A	60 mph	800 vplph**
B	> / = 55 mph	1200 vplph
C	> / = 50 mph	1700 vplph
D	> / = 45 mph	2050 vplph
E	> / = 30 mph	2200 vplph
F	< 30 mph	2200 + vplph

* Modified table from pg. 3-9, 1994 Highway Capacity Manual.
**Measured units are vehicles per lane per hour (vplph).

D. Determination of Impacts

Predicted traffic generated noise levels were compared with existing levels and with the noise abatement criteria to determine where noise impacts would occur. Two methods are used to identify noise impacts. The first is a comparison of predicted noise levels with the noise abatement criteria (see Table A-1 in Appendix A). The L_{10} descriptor is preferred by the Georgia Department of Transportation (GDOT) for highway related projects, and was used in this analysis. A 70 dBA L_{10} criterion has been established for schools, libraries, residences, churches, playgrounds and recreational areas and 75 dBA L_{10} criterion has been established for commercial activities. Any predicted noise increase from the proposed project which approaches or exceeds the applicable noise abatement criterion is considered an impact. Georgia DOT has defined approach to mean within one decibel of the noise abatement criterion. For indoor activities, impacts are assessed using category E of the criterion. No receivers of this type were analyzed. The following table lists the number and types of sites which would be impacted on the basis of their noise abatement criteria:

Table [illegible]: Impacted Sites (Method One)			
Site Type	1998 Existing	2025 No-build	2025 Build
Residences	3	12	4
Apartment buildings/Condominiums (# of units unknown at this time; all located within the proposed development)	N/A	N/A	6
Commercial Businesses	7	18	12

The second method of determining noise impacts involves the amount of increase from existing to future noise levels, and assesses impacts where there is a "substantial increase" from existing levels. GDOT considers a substantial increase to be 10 dBA or more. Because the proposed project does not involve the construction of a major new location facility through an undeveloped area, few existing receptors would be impacted on the basis of substantial increases. Two residences within Home Park experienced a substantial increase under the future No-Build condition, and one commercial business experienced a substantial increase under the future Build condition. It was understood that future noise levels within the proposed Atlantic Steel site redevelopment would be substantially greater than the existing measured levels; however, since there is no exterior existing nosie-sensitive land use at these locations, impacts may only be assessed based on the noise abatement criterion (method one).

E. Noise Abatement Considerations and Alternative Abatement Measures

Noise abatement was considered for the 22 sites (6 within the proposed development) predicted to be impacted. A number of conditions were taken into account at impacted sites to determine the feasibility of abatement. First, noise abatement was not considered for sites which would be displaced or constructed as a result of this project[3]. Second, noise abatement was not considered where the predicted noise level was less than 60 dBA L_{10}, the noise abatement criterion for "lands on which serenity and quiet are of extraordinary significance..." (Table 2)[4]. Third, where barriers were considered, a minimum five decibel noise reduction had to be achieved in order to justify construction of the barrier. Fourth, cost per benefitted unit for a noise barrier is always a consideration in determining whether a wall is economically reasonable. Most recently, $25,000 per benefitted unit has been used by Georgia DOT as a cost criteria guideline of economic reasonableness. In this instance the project is a re-development of an isolated brown field site with new location access roadways and auxiliary access improvements. From the outset it was realized that the existing urban environment already experienced relatively high noise levels and that noise impacts associated with this project are unavoidable and difficult to abate, occurring primarily along existing corridors. The effectiveness of a noise barrier is primarily dependent on its height, length, and location with respect to the noise source (traffic) or receiver (sensitive area). Barriers are normally most effective when located close to the noise source or receiver. Noise barriers should be high enough to effectively block noise sources (tires, engine, exhaust) and long enough to maintain effectiveness at sensitive sites near the barrier ends. The optimum situation of the use of

---

3 Refer to the Conceptual Stage study for the listing of all relocated and/or demolished structures.

4 No "Category A" activities were found along the project.

noise barriers results when a dense concentration of impacted sites is directly adjacent to the highway right-of-way. In these instances, one barrier can result in the protection of a substantial number of people. Among the most common barriers are earth berms and free-standing walls. A noise barrier was evaluated at one location for decibel reduction, cost per unit, total cost and feasibility for construction and is identified below (refer to Figure A-2 for approximate location):

1. A barrier approximately 500 feet long and 7 to 10 feet tall beginning just south of the 14th Street bridge extending south, mounted on top of the existing retaining wall/Jersey barrier adjacent to I-75/85 would reduce noise levels at the impacted two-story hotel by 5 to 7 decibels and would benefit approximately 67 individual hotel rooms.

There were no other sites determined reasonable or feasible for noise barriers. Abatement measures other than barriers such as traffic management, alteration of horizontal and vertical alignments, and acquisition of rights-of-way to serve as buffer zones, were considered. These measures were found to be infeasible or ineffective or would not meet abatement conditions. Traffic management measures exterior to the proposed development would be implemented to the extent that heavy truck through traffic would be prohibited. Horizontal alignments have been designed to avoid displacements along the corridor. Acquiring rights-of-way to serve as buffer zones would be prohibitively disruptive and expensive, and there are no adequate locations where county owned right-of-way is open to be used for this purpose.

As final plan development proceeds, further refinement of the placement and configuration of the proposed barrier will continue. Changes in land use would have a bearing on plans for abatement. There is a possibility that, by the time construction would commence, commercial development would have displaced receivers and other noise sensitive areas identified in this analysis where a barrier is now proposed. Should this occur, the barrier(s) would not be built. Similarly, a continuing trend toward high density residential development would cause a reassessment of barrier feasibility, partly due to the difficulty of providing abatement for multi-story buildings and partly because the units would have been built after public knowledge of the proposed project and its predicted nosie impacts.

Topography, relocation, high unit cost, or a combination of all of these factors made it infeasible or unreasonable to place barriers for some noise impacted sites. These sites are described below:

2. The impacted commercial building adjacent to the proposed 16th Street Extension (approaching Northside Dr.) within the proposed development has little or no noise sensitive outdoor land use with windows closed year-round. Exterior human activity is limited to the parking lot. Effective abatement would be unreasonable, and would limit access to the

building from the adjacent street.

3. The two houses along westbound 14th Street and one house along eastbound 14th Street are currently impacted, and would continue to be impacted as a result of the project. Effective noise barriers for these sites would not be reasonable and would limit access to the adjacent street.

4. Exterior areas in the rear parking lot (facing Williams Street) and front entrance (facing 14th Street) of the hotel at the corner of Williams Street and 14th Street would be impacted. Noise abatement for this building and other commercial structures, with little or no noise-sensitive outdoor land use and closed windows year-round is limited to the ground floor areas, and would not be impacted internally. Because all first floor receivers of the hotel are located 25 feet above the elevation of the nearest roadway (Williams Street), noise abatement is unfeasible.

5. The exterior area of a multi-story office complex, located immediately south of the proposed 17th Street bridge/Interchange, would be impacted by the elevated northbound exit ramp as it approaches 17th Street. As is the case with site # 3 above, any noise abatement would be limited to the ground floor receivers. A structure barrier mounted on top of the ramp Jersey barrier would provide limited noise abatement, affecting only those building floors directly adjacent to the ramp profile, and provide no abatement to ground floor tenants. However, as there is no exterior human activity in this area, interior noise levels would have to be studied on a specific basis. The cost of combining a structure barrier for the ramp and a barrier mounted on the retaining wall above Williams Street would require two separate barriers costing approximately $125,000, and is not considered reasonable.

F. Construction noise

Although temporary in nature, construction noise can, at times, interfere with day-to-day activities. Construction equipment for this project will be required to have factory-installed mufflers or their equivalent in good working order during the life of the construction contracts; and where feasible, construction should be limited to daylight hours whenever possible. Where noise sensitive areas abut construction areas, temporary fences or barriers may be erected to break the line of site of the receiver with the noise source. These fences should be of a solid texture, such as wood or metal, rather than chain-linked.

APPENDIX K

Noise Data

- Receptor Locations and Information
- Instructions on Use of Tables and Attached Maps

The following maps and tables give receptor locations and noise levels. Receptors are sites which were computer modeled for prediction of noise levels. The tables show existing levels (both modeled and ambient), design year (2025) noise levels, and the change in noise levels from existing to future no-build and build condition, and the change in noise levels between the future build and no-build conditions. Time-variance as it relates to highway traffic noise, can fluctuate between intensely loud and quieter periods. Traffic noise will peak with the passage of a heavy truck and have quiet intervals when there is little or no traffic. To adequately characterize the hourly contributions of highway noise it is examined using statistical values, primarily the L_{eq} (hourly equivalent sound level), and the L_{10}, the sound level exceeded 10 percent of a specific time period. While both are accepted by FHWA and Georgia DOT, the L_{10} is preferred for analyzing traffic noise because it describes the manner in which traffic noise levels are distributed in time between noise sources whose time histories are similar, i.e. highways. Some receptors modeled originally will be acquired for rights-of-way, or as part of the proposed development. Noise levels for these sites are shown; however, abatement was not considered since they will be replaced or relocated.

Table A-1: Noise Abatement Criteria
Hourly A-Weighted Sound Level - decibels (dBA)

L_{eq} (h)	L_{10} (h)	Description of Activity Category
57 (Exterior)	60 (Exterior)	A; Land on which serenity and quiet are of extraordinary importance and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose; i.e., an outdoor amphitheater.
67 (Exterior)	70 (Exterior)	B; Picnic Areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
72 (Exterior)	75 (Exterior)	C; Developed lands, properties, or activities not included in Categories A or B above (commercial).
--	--	D; Undeveloped Lands.
52 (Interior)	55 (Interior)	E; Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Note: Either L_{eq} or L_{10} (h) (but not both) may be used on a project.

Source: *Federal-Aid Highway Program Manual,* Transmittal 348, August 9, 1982, Vol. 7, Ch. 7, Sec. 3.

How to use the following tables and attached maps:

1. Find the desired receptor location on the map and note the letter and number associated with it.
2. Go to Table A-2, find the appropriate area corresponding to the location on the map, and locate the receptor number.
3. Read the table horizontally to obtain receptor noise level information. (If a particular receptor is not included, or is located outside of the areas of impact, it would not be impacted.

Note: Receptors that are going to be acquired as a result of the transportation improvement portion of the project have been shaded solid on the attached maps. Abatement measures were therefore not considered for these receptors.

Example:

- Figure A-2: Receptor B27 (residence) is located along northbound State Street within the Home Park Community.
- Receptor B27 is represented on the second page of Table A-2.
- Noise levels for B27 are:

Ambient:	60 dBA (L_{10}), measured
	63 dBA (L_{10}) calculated (am)
Future noise level under no-build alternative:	72 dBA (L_{10}) calculated (pm)
Future noise level under the build alternative:	66 dBA (L_{10}) calculated
Increase with no-build Alternative:	8 - 10 dB
Increase with build Alternative:	3 - 4 dB
Difference between build and no-build:	5 - 6 dB

Notes regarding receptors in Table A-2:

- All receivers shown represent exterior locations.
- Numbers in bold at specific receptors indicate noise impacts as per the NAC.
- Negative numbers represent *reductions* in noise levels at that location.
- All noise impacts for Area E receptors are assessed under their *proposed* land uses.
- Under the site location column, the letters in parentheses indicate the side of the street on which the receptor was modeled, e.g. NB = northbound side, etc.

TABLE A-2: TRAFFIC NOISE LEVELS
17TH ST. BRIDGE/INTERCHANGE & ATLANTIC STEEL SITE REDEVELOPMENT

Area	Area Name	Receiver Number	Existing Land Use Category	Site Location Identification (Closest Roadway)	Approx. Dist. To Exist./(Prop.) Centerline (feet)	Field Reading 1999 (dBA L10)		Existing Conditions 1998 (dBA L10)		Future No-Build 2025 (dBA L10)		Change from Existing to Future No-Build (dBA L10)		Future Build 2025 (dBA L10)		Change from Existing to Future Build (dBA L10)		Change from Future No-Build to Future Build (dBA L10)	
						AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
A	Northside Drive / 14th St. / Bishop St.	A1	Commercial	Northside Dr. (SB) @ Bishop St.	80	75	---	70	70	72	71	2	1	72	72	2	2	0	1
		A2	Commercial	Bishop St. (WB) @ Northside Dr.	100			63	63	67	67	4	4	68	67	5	4	1	0
		A3	Commercial	Bishop St. (WB); mid-block	45	69	---	68	68	71	70	4	2	72	70	4	2	0	1
		A4	Commercial	Bishop St. (WB); mid-block	45			67	67	70	69	4	2	71	69	4	2	0	0
		A5	Commercial	Bldg. Corner; New 17th St. (EB)	70			70	71	72	72	2	1	72	73	2	2	0	1
		A6	Commercial	Bldg. Corner; New 17th St. (EB)	170 / (100)			62	62	66	66	4	4	67	66	5	5	1	0
		A7	Commercial	Bldg. Corner; Northside Dr. (NB)	55			72	73	74	74	2	1	74	74	2	2	0	1
		A8	Commercial	Bldg. Face; New 16th St. (EB)	180 / (30)			64	65	66	66	2	1	71	72	7	7	5	6
		A9	Commercial	Bldg. Face; New 16th St. (EB)	380 / (30)			59	59	61	61	2	2	70	71	11	**12**	9	**10**
		A10	Commercial	Bldg. Corner; Hemphill Ave. (NB)	60 / (85)			69	70	72	72	3	3	70	71	1	1	-2	-1
		A11	Commercial	Hemphill Ave. (NB)	55 / (135)	69	---	68	69	72	71	4	2	68	69	0	0	-4	-2
		A12	Commercial	Bldg. Face; 14th St. (WB)	85 (105)			66	67	70	70	4	3	68	69	2	1	-2	-1
		A13	Commercial	Bldg. Face; 14th St. (WB)	65			66	69	70	70	4	1	69	70	3	1	-1	0
B	14TH St. / Techwood Dr. & Home Park	B1	Commercial	Parking Lot; State St. (SB)	50 / (40)	66	---	65	66	72	74	7	8	67	68	2	2	-5	-6
		B2	Residence	Bldg. Face; State St. (SB)	50			63	63	71	72	8	9	**Displaced**		N/A			
		B3	Residence	Bldg. Face; State St. (SB)	60			62	62	70	72	8	**10**	66	65	4	3	-4	-7
		B4	Residence	Bldg. Face; 16th St. (EB)	325 / (350)			57	56	61	62	4	6	58	59	1	3	-3	-3
		B5	Residence	Bldg. Face; 16th St. (EB)	180 / (205)			58	57	62	63	4	6	61	62	3	5	-1	-1
		B6	Residence	Bldg. Face; 16th St. (EB)	175 / (200)			59	57	62	63	3	6	61	62	2	5	-1	-1
		B7	Residence	Bldg. Face; 16th St. (EB)	175 / (200)			59	57	62	63	3	6	61	62	2	5	-1	-1
		B8	Residence	Bldg. Face; 16th St. (EB)	180 / (205)			59	58	62	63	3	5	61	62	2	4	-1	-1
		B9	Residence	Bldg. Face; 16th St. (EB)	130 / (155)			61	59	64	64	3	5	63	64	2	5	-1	0
		B10	Residence	Bldg. Face; 16th St. (EB)	45 / (70)			66	63	70	71	4	8	**Displaced**		N/A			
		B10a	Residence	Bldg. Face; 16th St. (EB)	35 / (60)	70	---	68	66	72	73	4	7	**Displaced**		N/A			
		B11	Residence	Bldg. Face; 16th St. (EB)	40 / (65)			67	65	71	72	4	7	**Displaced**		N/A			
		B12	Commercial	Bldg. Face; 16th St. (EB)	60 / (85)			68	66	70	70	2	4	69	70	1	4	-1	0
		B13	Commercial	Bldg. Face; 16th St. (EB)	50 (75)			70	69	72	72	2	3	71	72	1	3	-1	0
		B14	Commercial	Bldg. Face; Techwood Dr. (SB)	65 / (75)			70	70	70	70	0	0	69	69	-1	-1	-1	-1
		B15	Commercial	Bldg. Face; Techwood Dr. (SB)	50 / (60)			70	70	70	71	0	1	69	69	-1	-1	-1	-2
		B15a	Commercial	In front of B15, for comparison	40 / (50)	74	---	75	74	76	76	1	2	73	73	-2	-1	-3	-3

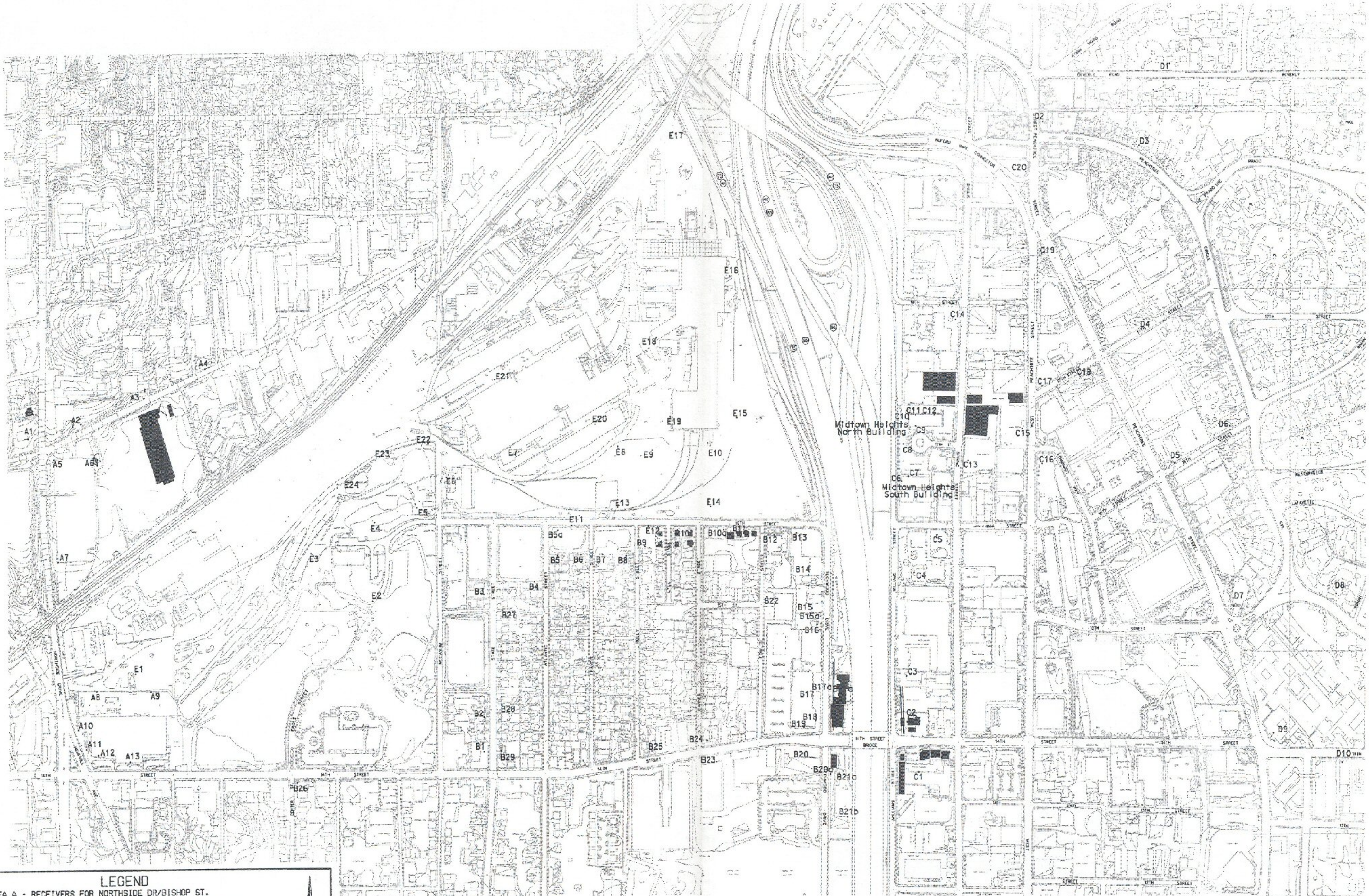
TABLE A-2: TRAFFIC NOISE LEVELS
17TH ST. BRIDGE/INTERCHANGE & ATLANTIC STEEL SITE REDEVELOPMENT

Area	Area Name	Receiver Number	Existing Land Use Category	Site Location Identification (Closest Roadway)	Approx. Dist. To Exist./(Prop.) Centerline (feet)	Field Reading 1999 (dBA L10)		Existing Conditions 1998 (dBA L10)		Future No-Build 2025 (dBA L10)		Change from Existing to Future No-Build (dBA L10)		Future Build 2025 (dBA L10)		Change from Existing to Future Build (dBA L10)		Change from Future No-Build to Future Build (dBA L10)	
						AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
B (continued)	14TH St. / Techwood Dr. & Home Park	B16	Commercial	Bldg. Face; Techwood Dr. (SB)	65 / (75)			72	72	73	73	1	1	71	71	-1	-1	-2	-2
		B17	Commercial	Bldg. Face; Techwood Dr. (SB)	75 / (85)			70	70	71	71	1	1	69	69	-1	-1	-2	-2
		B17a	Commercial	Bldg. Face; Techwood Dr. (SB)	70 / (60)			71	71	72	72	1	1	Displaced		N/A			
		B18	Commercial	Bldg. Face; Techwood Dr. (SB)	60 / (70)			71	71	73	74	2	3	71	71	0	0	-2	-3
		B19	Commercial	Bldg. Face; 14th St. (WB)	55			71	72	74	75	3	3	71	71	0	-1	-3	-4
		B20	Commercial	Bldg. Face; 14th St. (EB)	90 / (35)			72	72	73	74	1	2	74	75	2	3	1	1
		B21a	Commercial	Hotel, facing Connector (SB)	170			77	77	76	76	(1)	(1)	76	76	-1	-1	0	0
		B21b	Commercial	Hotel, facing Connector (SB)	140			74	76	76	75	2	(1)	76	75	2	-1	0	0
		B22	Residence	Parking Lot; Fowler St. (NB)	35	65	—	64	63	64	64	0	1	63	62	-1	-1	-1	-2
		B23	Commercial	Bldg. Face; 14th St. (EB)	60			69	70	73	74	4	4	70	71	1	1	-3	-3
		B24	Residence	Bldg. Face; 14th St. (WB)	60			69	70	73	74	4	4	69	71	0	1	-4	-3
		B25	Residence	Bldg. Face; 14th St. (WB)	60			69	70	73	74	4	4	70	71	1	1	-3	-3
		B26	Residence	Bldg. Face; 14th St. (EB)	40			71	72	73	74	2	2	72	73	1	1	-1	-1
		B27	Residence	Bldg. Face; State St. (NB)	55	60	—	63	62	71	72	8	10	66	66	3	4	-5	-6
		B28	Residence	Bldg. Face; State St. (NB)	55			63	63	71	72	8	9	66	66	3	3	-5	-6
		B29	Residence	Bldg. Face; State St. (NB)	50			66	66	72	74	6	8	68	68	2	2	-4	-6
C	Mid-town Atlanta; East of the I-75/85 Connector	C1	Commercial	Hotel; 14th St. @ Williams	135 / (85)			74	73	74	74	0	1	74	74	0	1	0	0
		C2	Commercial	Hotel; 14th St. @ Williams	160 / (110)			73	73	74	74	1	1	73	73	0	0	-1	-1
		C3	Commercial	Warehouse; Williams St. (NB)	85 / (25)			76	76	76	76	0	0	78	79	2	3	2	3
		C4	Commercial	Funeral Home; Williams St. (NB)	110 / (70)			75	74	74	75	(1)	1	74	75	-1	1	0	0
		C5	Commercial	16th St. (EB) @ Spring St.	45	68	—	67	67	69	69	2	2	69	69	2	2	0	0
		C6	Commercial	Williams St. (NB); I-75/85 (NB)	120 / (40)			73	72	73	71	0	(1)	75	73	2	1	2	2
		C7	Commercial	Williams St. (NB); cul-de-sac	155 / (80)			72	71	72	70	0	(1)	72	71	0	0	0	1
		C8	Commercial	Williams St. (NB); I-75/85 (NB)	130	75	71	73	72	73	71	0	(1)	75	73	2	2	2	2
		C9	Commercial	Williams St. (NB); cul-de-sac	195 / (120)			70	68	70	68	0	0	70	69	0	1	0	1
		C10	Commercial	Williams St. (NB); I-75/85 (NB)	150 / (80)			71	69	71	69	0	0	72	71	1	2	1	2
		C11	Commercial	Williams St. (NB); New 17th St.	150 / (115)			70	68	70	67	0	(1)	71	71	1	3	1	4
		C12	Commercial	Williams St. (NB); New 17th St.	280 / (125)			68	67	69	67	1	0	70	70	2	3	1	3
		C13	Commercial	Parking Lot; Spring St. (NB)	60	—	67	70	68	72	71	2	3	72	71	2	3	0	0
		C14	Commercial	Spring St. (SB) @ 18th St.	55	—	71	72	70	73	72	1	2	73	71	1	1	0	-1
		C15	Commercial	Parking Lot; W. Peachtree (NB)	70	—	71	69	71	71	74	2	3	71	72	2	2	0	-2
		C16	Commercial	W. Pchtree (NB) @ Lmbdy Way	65	71	70	69	71	71	74	2	3	71	72	2	1	0	-2
		C17	Commercial	17th St. (WB) @ W. Pchtr. St.	20	71	74	72	74	74	76	2	2	74	76	2	2	0	0
		C18	Commercial	17th St. (EB), app.. Pchtr. St.	40			66	67	69	68	3	1	70	72	4	5	1	4
		C19	Commercial	W. Pchtr. St. (NB) @ Pchtr. St.	50	69	70	68	70	74	77	6	7	75	76	7	6	1	-1
		C20	Commercial	Pchtr. (SB) @ Buf. Hwy. Conn.	35	71	74	72	73	75	76	3	3	75	77	3	4	0	1

TABLE A-2: TRAFFIC NOISE LEVELS
17TH ST. BRIDGE/INTERCHANGE & ATLANTIC STEEL SITE REDEVELOPMENT

Area	Area Name	Receiver Number	Existing Land Use Category	Site Location Identification (Closest Roadway)	Approx. Dist. To Exist./(Prop.) Centerline (feet)	Field Reading 1999 (dBA L10)		Existing Conditions 1998 (dBA L10)		Future No-Build 2025 (dBA L10)		Change from Existing to Future No-Build (dBA L10)		Future Build 2025 (dBA L10)		Change from Existing to Future Build (dBA L10)		Change from Future No-Build to Future Build (dBA L10)	
						AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
D	Ansley Park	D1	Residential	Beverly Street - Mid-block	60			65	65	66	66	1	1	66	66	1	1	0	0
		D2	Commercial	Bldg. Face; NE corner, Peachtree St. @ Peachtree Circle	55			72	73	73	75	1	2	73	75	1	2	0	0
		D3	Residential	Peachtree Circle - Mid-block	60	66	—	65	66	67	67	2	1	66	68	1	2	-1	1
		D4	Residential	17th Street - Mid-block	40			65	65	66	66	1	1	66	67	1	2	0	1
		D5	Commercial	Bldg. Face; NE corner, Peachtree St. @ 16th St.	30			68	68	70	70	2	2	69	69	1	1	-1	-1
		D6	Residential	16th St. - Mid-block	30			65	65	67	67	2	2	67	67	2	2	0	0
		D7	Residential	Church Façade; NE corner, Peachtree St. @ 15th St.	90			66	67	68	69	2	2	68	69	2	2	0	0
		D8	Residential	15th St. - Mid-block	75			62	63	64	65	2	2	64	65	2	2	0	0
		D9	Commercial	Bldg. Face; NE corner, Peachtree St. @ 14th St.	100			66	67	68	69	2	2	68	69	2	2	0	0
		D10	Commercial	14th St. - Mid-block	40			69	70	72	73	3	3	71	72	2	2	-1	-1
E	Redeveloped Atlantic Steel Property	E1	*Commercial*	Bldg. Face; 16th St. (WB)	(55)			None exceeded 55 dB				N / A		—	65	> 10 dB		> 10 dB	
		E2	*Commercial*	Bldg. Face; 16th St. (WB)	(30)			None exceeded 55 dB				N / A		—	70	> 10 dB		> 10 dB	
		E3	*Residential*	Bldg. Face; 17th St. (EB)	(90)			None exceeded 55 dB				N / A		—	66	> 10 dB		> 10 dB	
		E4	*Residential*	Bldg. Face; 17th St. (EB)	(50)			None exceeded 55 dB				N / A		—	68	> 10 dB		> 10 dB	
		E5	*Residential*	Bldg. Face; 17th St. (EB)	(40)			None exceeded 55 dB				N / A		—	70	> 10 dB		> 10 dB	
		E6	*Residential*	Bldg. Face; 17th St. (EB)	(35)			None exceeded 55 dB				N / A		—	70	> 10 dB		> 10 dB	
		E7	*Commercial*	Bldg. Face; 17th St. (EB)	(70)			None exceeded 55 dB				N / A		—	68	> 10 dB		> 10 dB	
		E8	*Commercial*	Bldg. Face; 17th St. (EB)	(70)			None exceeded 55 dB				N / A		—	69	> 10 dB		> 10 dB	
		E9	*Commercial*	Bldg. Face; 17th St. (EB)	(80)			None exceeded 55 dB				N / A		—	68	> 10 dB		> 10 dB	
		E10	*Commercial*	Bldg. Face; 17th St. (EB)	(70)			None exceeded 55 dB				N / A		—	69	> 10 dB		> 10 dB	
		E11	*Residential*	Bldg. Face; 16th St. (EB)	15 / (25)			N / A				N / A		—	72	> 10 dB		> 10 dB	
		E12	*Residential*	Bldg. Face; 16th St. (EB)	20 / (30)			N / A				N / A		—	72	> 10 dB		> 10 dB	
		E13	*Commercial*	Atl Steel Site; 16th St. (WB)	70 / (20)			N / A				N / A		—	72	> 10 dB		> 10 dB	
		E14	*Commercial*	Atl. Steel Site; 16th St. (WB)	80 / (20)			N / A				N / A		—	73	> 10 dB		> 10 dB	
		E15	*Commercial*	Atl. Steel Site; I-85 SB ramp	300	67	65	65	64	64	64	N / A		—	69	—	5	—	5
		E16	*Commercial*	Atl Steel Site; I-85 SB ramp	100	72	70	70	70	69	70	N / A		—	73	—	3	—	3
		E17	*Commercial*	Atl Steel Site; I-85 SB ramp	90	66	64	66	65	64	64	N / A		—	64	—	-1	—	0
		E18	*Commercial*	Bldg. Face; Lyle St. (SB)	(40)			None exceeded 55 dB				N / A		—	70	> 10 dB		> 10 dB	
		E19	*Commercial*	Bldg. Face; 17th St. (WB)	(60)			None exceeded 55 dB				N / A		—	70	> 10 dB		> 10 dB	
		E20	*Commercial*	Bldg. Face; 17th St. (WB)	(60)			None exceeded 55 dB				N / A		—	70	> 10 dB		> 10 dB	
		E21	*Commercial*	Bldg. Face; State St. (NB)	(50)			None exceeded 55 dB				N / A		—	69	> 10 dB		> 10 dB	
		E22	*Residential*	Bldg. Face; 17th St. (WB)	(30)			None exceeded 55 dB				N / A		—	70	> 10 dB		> 10 dB	
		E23	*Residential*	Bldg. Face; 17th St. (WB)	(60)			None exceeded 55 dB				N / A		—	65	> 10 dB		> 10 dB	
		E24	*Residential*	Bldg. Face; 17th St. (WB)	(40)			None exceeded 55 dB				N / A		—	69	> 10 dB		> 10 dB	

STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
GEORGIA	97313	1	2



LEGEND

AREA A - RECEIVERS FOR NORTHSIDE DR/BISHOP ST.
AREA B - RECEIVERS FOR HOME PARK/TECHWOOD DR./14TH ST.
AREA C - RECIEVERS FOR MID-TOWN ATLANTA
AREA D - RECEIVERS FOR ANSELY PARK
AREA E - RECEIVERS FOR REDEVELOPED ATLANTIC STEEL SITE
CIRCLED RECEPTORS INDICATE IMPACTS
SHADED BUILDINGS INDICATE DISPLACED BUILDINGS (CONCEPTUAL STAGE STUDY)

PLAN SCALE: 1" = 200'

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

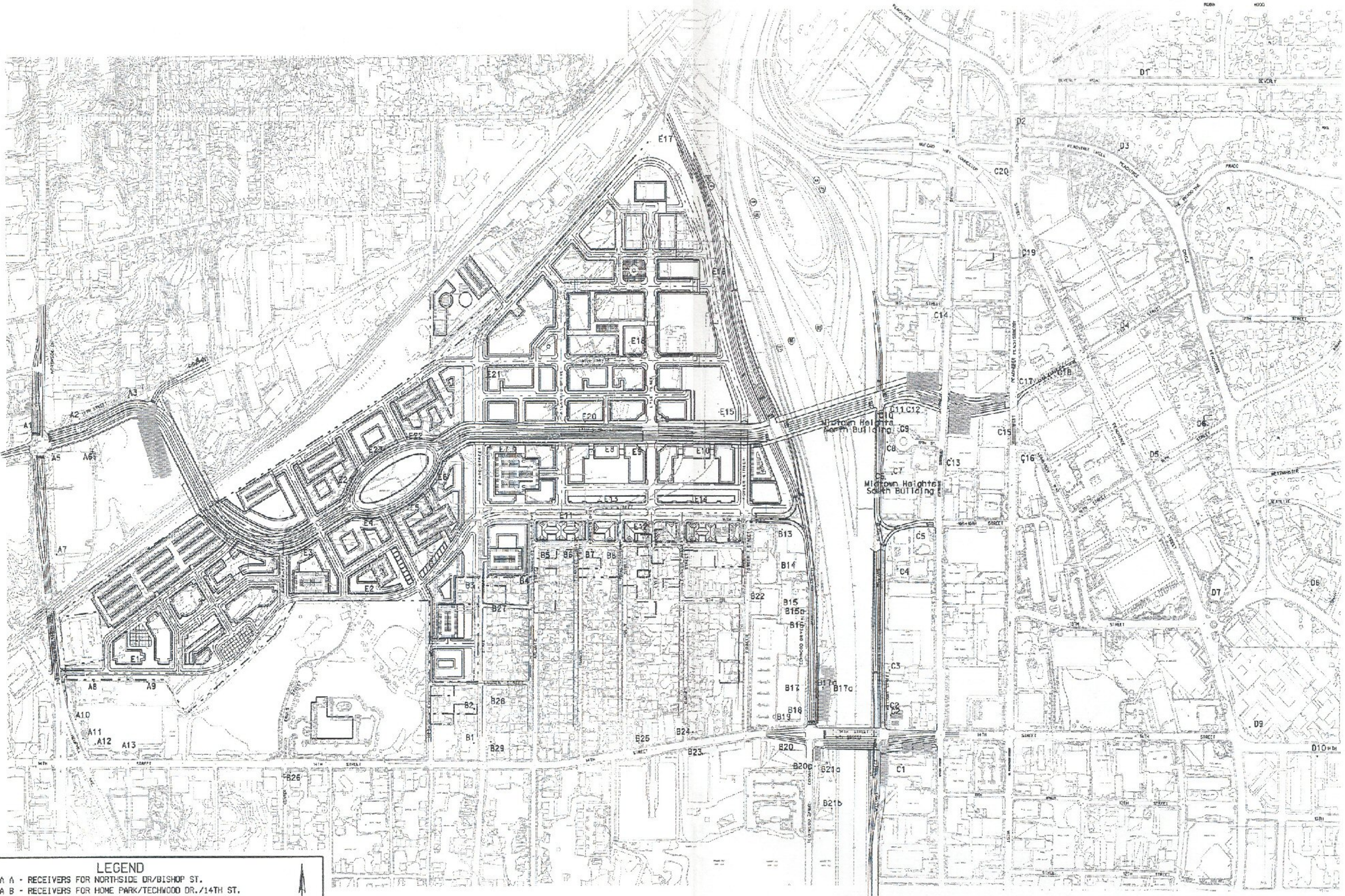
Moreland Altobelli Associates, Inc.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRAFFIC NOISE STUDY
RECEIVER LOCATION MAP; EXISTING AND FUTURE NO-BUILD CONDITION

DRAWING NUMBER A-1

STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
GEORGIA	97313	2	2



LEGEND

AREA A - RECEIVERS FOR NORTHSIDE DR/BISHOP ST.
AREA B - RECEIVERS FOR HOME PARK/TECHWOOD DR./14TH ST.
AREA C - RECIEVERS FOR MID-TOWN ATLANTA
AREA D - RECEIVERS FOR ANSELY PARK
AREA E - RECEIVERS FOR REDEVELOPED ATLANTIC STEEL SITE
CIRCLED RECEPTORS INDICATE IMPACTS
SHADED BUILDINGS INDICATE DISPLACED BUILDINGS (CONCEPTUAL STAGE STUDY)

PLAN SCALE: 1' = 200'

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Moreland Altobelli Associates, Inc.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRAFFIC NOISE STUDY
RECEIVER LOCATION MAP; FUTURE BUILD CONDITION

DRAWING NUMBER A-2

APPENDIX F

HISTORIC RESOURCES/PROGRAMMATIC AGREEMENT

APPENDIX F
HISTORIC RESOURCES

ATLANTIC STEEL INDUSTRIES, INC. (IDENTIFIED ELIGIBLE)

The former steel mill owned by Atlantic Steel Industries, Inc., had not been evaluated regarding National Register eligibility prior to Section 106 compliance for the proposed 17th Street Extension and the Atlantic Steel Redevelopment Project. The site, composed of approximately 135 acres, extends from the Norfolk Southern Railroad line south to approximately 14th Street. Originally founded in 1901 as the Atlanta Steel Hoop Company, the property remained in continuous operation until its closure in December 1998. During its peak years of operation, the mill produced more than 750,000 tons of steel annually. The site contained a mixture of large steel frame production mills, warehouses, and industrial buildings, as well as smaller frame and brick structures that accommodated mechanical and service-oriented functions. Collectively, these buildings reflected changing steel making technology during the 20th century, including the change from open hearth furnaces to electric arc furnaces in the mid-1950s. Atlantic Steel is significant under Criterion A for its contribution to the development of the steel industry in Atlanta and the Southeast region. The property is also significant under Criterion C for architectural and engineering significance. Its various buildings reflected the evolution of the steel making process throughout nearly a century of operation.

NORFOLK SOUTHERN RAILROAD (IDENTIFIED ELIGIBLE)

The Norfolk Southern Railroad originated as the Atlanta & Charlotte Air Line Railroad that was built from 1869 to 1873. By the time the line was consolidated into the Southern Railroad in 1894, Atlanta was the strategic center of the largest railroad system in the South. The railroad tracks abutting the Atlantic Steel parcel are a portion of the Southern Railway System's main line to the Northeast (Washington). The spur line bordering the Atlantic Steel property was created as a "runaround" (bypass) in case the Brooklandville Bridge to the northeast failed. In 1982, Southern merged into the Norfolk Southern Corporation. The rail route possesses local and state significance in the areas of engineering and transportation. Under Criterion A, the Norfolk Southern Railroad line is significant because of its dominant role in the shaping of the economic and transportation history of the state, region, and local community. Furthermore, under Criterion C, the Norfolk Southern Railroad is significant as an example of rail transportation engineering in Georgia.

SIEMENS (IDENTIFIED ELIGIBLE)

Siemens, which occupies the southeast corner of Northside Drive and Bishop Street, is located at 1299 Northside Drive. Constructed for the Westinghouse Electric & Manufacturing Company in 1941 by the Atlanta design firm of Robert & Co., Inc., the complex originally served as a distribution facility for the power generation department, a division of Westinghouse Electric & Supply Company. Strategically located along the Southern Railroad (Norfolk Southern) line, the 2-

story, brick office and warehouse complex served as the company's Southeast region headquarters, as well as housed approximately 240 employees involved in the distribution and sales of lighting and electrical control products (i.e., lamps and elevators). Constructed in the Art Moderne style, a popular style for commercial design prior to World War II, the building retains such characteristic traits as an asymmetrical streamlined form, smooth wall surfaces of brick and stone, continuous horizontal bands of windows, curved corners, and a flat roof. Siemens is significant under National Register Criterion A for its contribution to the development of the Westinghouse Electric Company as a regional corporate center in Atlanta. The property is also significant under National Register Criterion C as a notable example of the Art Moderne style both designed and located in Atlanta.

KOOL KORNER GROCERY (IDENTIFIED ELIGIBLE)

The Kool Korner Grocery, situated at the northeastern corner of 14th and State Streets, is located at 349 14th Street amidst the community of Home Park. Constructed sometime between 1927 and 1935, the 1-story, clapboard-sided, commercial building continues to serve as a corner grocery store with a residential extension at the rear. The Kool Korner Grocery is significant under National Register Criterion A for its role as a local community landmark, as well as the various commercial and social functions it continues to fulfill within the surrounding neighborhood. The property is also significant under National Register Criterion C as an example of a historic corner store building that retains such characteristic features as exterior wood siding, a stepped parapet roofline, and period light fixtures and interior elements.

EWELL JETT HOUSE (PREVIOUSLY IDENTIFIED ELIGIBLE)

The Ewell Jett House is located at 1385 Spring Street, NE. Constructed some time between 1915 and 1917 for Ewell Jett, Atlanta's assistant chief of police and a descendant of the original settlers of Fulton County, the resource is a 2-story, frame American four-square type. Notable features include the 12-over-1 double-hung sash windows, beveled siding, four large exterior end chimneys, a hipped roof with central dormer, and Craftsman-inspired paneled post supports on ashlar piers. The building remained a single-family residence until its conversion to three apartments after 1959. Currently used as commercial office space, the property is situated immediately adjacent to a large asphalt parking lot and along a highly traveled commercial thoroughfare. The Ewell-Jett House is significant under National Register Criterion C as an excellent early-20th century example of the residential American four-square type surviving in a modern commercial area. The property was previously determined eligible by the Atlanta Urban Design Commission.

THE GRANADA (PREVIOUSLY IDENTIFIED ELIGIBLE)

The Granada (or Spanish Court) Apartments, located at 1302 West Peachtree Street, are situated at the northwestern corner of 16th and West Peachtree streets. The property was originally constructed as a garden apartment complex in 1924, with design by architects Barney Havis and Augustus Constantine. The complex features three stucco Spanish Revival-style buildings enclosing a central courtyard. While the multi-paned glass double-entrance doors are adorned with twisted colonettes and decorative finials, the fenestration consists of paired and arched multi-paned windows. The flat roofs feature an elaborate cornice, mission-style parapets, and finials. Converted to the Granada Best Western Suite Hotel in 1984, the rehabilitation received an Urban Design Commission Award of Excellence in 1986. The Granada Apartments are significant under two

National Register criteria: A (for contributions to the development of middle class multi-family housing in urban Midtown in the early-20th century) and C (as an outstanding example of the Spanish Revival style). The property was previously determined eligible by the Atlanta Urban Design Commission.

THE BELVEDERE (PREVIOUSLY IDENTIFIED ELIGIBLE)

The Belvedere, located at 1384 West Peachtree Street, is situated on the western side of the street just north of the 17th Street intersection. Originally constructed as a residential hotel in 1922 by G. Lloyd Preacher, a prominent Atlanta architect, the resource is a three-story, brick, hotel-style apartment building with a rectangular plan. The principal facade is divided into three bays. A double-door entrance (topped with a stone nameplate inscribed "Belvedere") and series of triple windows are located in the central bay. The outer bays contain balconies with iron railings. The tile covered pent roof features extended eaves supported by paired brackets. Still in operation as an apartment building, The Belvedere is significant under two National Register criteria: A (for contributions to the development of middle class multi-family housing in urban Midtown in the early-20th century) and C (as a notable example of the Chicago-influenced Commercial style). The property was previously determined eligible by the Atlanta Urban Design Commission.

WINWOOD APARTMENTS (PREVIOUSLY IDENTIFIED ELIGIBLE)

The Winwood Apartments, located at 1460 West Peachtree Street, are situated on the western side of the street just south of the 19th Street intersection. Constructed in 1931, the resource is a 2-story, brick U-shaped apartment building that encloses a central courtyard. The two end entrances facing West Peachtree Street each feature a 2-story portico with elongated Neoclassical columns. The fenestration consists primarily of single and paired 6-over-6 light double-hung sash. The hipped roof is clad in tile and pierced with end chimneys (Photographs 26-1 and 26-2). The Winwood Apartments are significant under two National Register criteria: A (for contributions to the development of middle class multi-family housing in urban Midtown in the early-20th century) and C (as a good example of the Neoclassical style). The property was previously determined eligible by the Atlanta Urban Design Commission.

FIRST PRESBYTERIAN CHURCH (PREVIOUSLY IDENTIFIED ELIGIBLE)

The First Presbyterian Church, located at 1328 Peachtree Street, NW, is situated at the northwestern corner of 16th and Peachtree Streets. Constructed of sandstone by architect W.T. Downing, the Gothic building was completed in 1919 and replaced an earlier structure on Marietta Street. In addition to a bell tower and an adjacent rectory, the resource incorporates several prominent rear additions that extend west to the intersection of Lombardy Way and 16th Street. These additions clearly express the expanding needs and size of the congregation. The interior of the church features remarkable stained glass windows illustrating Biblical themes and designed by the Tiffany Studio of New York and the D'Ascenzo and Willett Studios of Philadelphia. Also of note is the baptismal font from the ruins of the Double Church of St. John at Ephesus in Greece. In 1922, the resource was the first church in the South to broadcast religious services in conjunction with WSB radio. The First Presbyterian Church is significant under two National Register criteria: A (for historical contributions in introducing broadcasts of services throughout the Southeast in the early-20th century) and C (as a notable example of the Gothic style). The property was previously determined eligible by the Atlanta Urban Design Commission.

MITCHELL KING HOUSE (PREVIOUSLY IDENTIFIED ELIGIBLE)

The Mitchell King House, located at 1382 Peachtree Street, NW, is situated at the southwestern corner of 17th and Peachtree Streets in the Pershing Point neighborhood. Built for the King family in 1912 by J.L. Hiers, the building is regarded as "the last house on Peachtree Street." The two-story, brick resource features elements of the Craftsman style (e.g., 6-over-1 light double-hung sash windows, exposed rafter tails, bracketed overhangs) and the Tudor Revival style (e.g., crenellated bay tower and ornament, multi-pane windows). A private residence until Spring 1980, the architectural firm of Nix, Mann & Associates renovated the building for conversion to office space. The firm, which received an Urban Design Commission Award of Excellence in 1982 for its rehabilitation efforts, still occupies the building. The Mitchell King House is significant under National Register Criterion C as a notable early-20th century example of a Craftsman- and Tudor Revival-inspired residence surviving in a modern commercial area. The property was previously determined eligible by the Atlanta Urban Design Commission.

THE CASTLE (PREVIOUSLY IDENTIFIED ELIGIBLE)

The Castle, also known as “Fort Peace,” is located at 87 15th Street NW between Lombardy Way and Peachtree Street. Designed and constructed as a single-family residence in 1910 by its original owner Ferdinand McMillan, the property is an eclectic mixture of architectural styles and building materials. Resting on a massive, medieval-inspired, 2-story granite foundation, the frame cross-gable dwelling rises an additional 2 ½ stories in height. Unique features of the building include its Victorian fish-scale shingle wall treatment and decorative wooden brackets and balustrades, Corinthian column and brick pillar porch supports, Asian-influenced turret, and ornamental plaster and stone interior finishes and detailing. Following McMillan’s death in 1925, the property subsequently served as a boarding house, the headquarters of the Atlanta Theater Guild, as well as the host of various art- and theater-related groups in Atlanta until the 1970s. The Castle underwent renovations in 1990 after a period of neglect, and is currently undergoing redevelopment efforts sponsored by AT&T. The Castle is significant under two National Register Criteria: A (for cultural contributions to the Atlanta arts community) and C (as an unusual example of numerous architectural styles). The property previously was determined eligible by the Atlanta Urban Design Commission.

RHODES HALL (LISTED IN NATIONAL REGISTER)

Rhodes Hall, which currently serves as the headquarters of the Georgia Trust for Historic Preservation, is located at 1516 Peachtree Street NW. Architect Willis F. Denny designed the Richardsonian Romanesque building in 1904 as the residence of Amos Giles Rhodes. Constructed entirely of rough-faced Stone Mountain granite, the asymmetrical castle-like structure features an arcaded portico, 4-story tower, and a turret. Deeded to the state of Georgia in 1929, Rhodes Hall was listed in the National Register of Historic Places in 1974.

GARRISON APARTMENTS (LISTED IN NATIONAL REGISTER)

Garrison Apartments, now known as Reid House, are located at 1325-1327 Peachtree Street, NE. Constructed in 1924 and designed by classical architect Philip Trammell Shutze, the 9-story, brick building was Atlanta's third luxury apartment building. The Garrison Apartments underwent a $2 million renovation and conversion to condominiums in 1974. The property was listed in the National Register of Historic Places in 1979.

ANSLEY PARK HISTORIC DISTRICT (LISTED IN NATIONAL REGISTER)

The Ansley Park Historic District, located east of commercial Peachtree Street, is an early-20th century residential neighborhood comprised of approximately 275 acres and nearly 600 homes, several apartment buildings, and the First Church of Christ Scientist. Developed in four stages between 1904 and 1913, the neighborhood was largely completed by 1930. The rolling terrain, open parks, and curvilinear streets inspired by the landscape tradition of Frederick Law Olmsted provide the setting for this planned suburban community. Houses display a range of architectural styles, including Colonial Revival, Federal, Neoclassical, Tudor, Victorian, Prairie, and Craftsman. Ansley Park was listed in the National Register of Historic Places in 1979.

ATLANTA WATERWORKS HEMPHILL AVENUE STATION (LISTED IN NATIONAL REGISTER)

The Atlanta Waterworks Hemphill Avenue Station is located at 1210 Hemphill Avenue NW. As Atlanta's second waterworks complex constructed between January 1892 and July 1893, the brick pumping station was designed by Robert M. Clayton and William G. Richards. In addition to providing the city with a permanent water supply, the resource is a notable example of the late-Victorian style as applied to an industrial complex. The Atlanta Waterworks Hemphill Avenue Station was listed in the National Register of Historic Places in 1978.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JAN 0 3 2000

4EAD/OEA

Dr. Richard Cloues
Deputy State Historic Preservation Officer
Georgia Department of Natural Resources
Historic Preservation Division
500 The Healey Building
57 Forsyth Street, N.W.
Atlanta, Georgia 30303

SUBJECT: Atlantic Steel Redevelopment Project - Project No. HP990810-010
Final Programmatic Agreement

Dear Dr. Cloues:

Enclosed is an original of the final executed Programmatic Agreement for the Atlantic Steel Redevelopment Project in Atlanta, Georgia. Thank you for your help in finalizing and expediting signature of the Agreement. EPA looks forward to working with you on the remaining issues related to completion of the Section 106 process for this project. If you have questions about anything related to the Agreement, please call Ben West of my staff at (404) 562-9643.

Sincerely,

Heinz Mueller

Heinz J. Mueller, Chief
Office of Environmental Assessment
Environmental Accountability Division

Enclosure

cc: Douglas Young – Atlanta Urban Design Commission
Michael Rose – Atlanta History Center
Hilburn Hillestad – Jacoby Development, Inc.
Neil Harmon – Atlantic Steel Industries, Inc.
Chris Martin – Parsons Engineering Science

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

PROGRAMMATIC AGREEMENT AMONG THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND THE GEORGIA STATE HISTORIC PRESERVATION OFFICER REGARDING IMPLEMENTATION OF THE ATLANTIC STEEL REDEVELOPMENT PROJECT IN ATLANTA, GEORGIA

WHEREAS, the U.S. Environmental Protection Agency (EPA) is involved in the undertaking known as the Atlantic Steel Redevelopment Project (hereafter Project), consisting of proposed remediation and redevelopment of an approximately 138-acre former steel mill site currently owned by Atlantic Steel Industries, Inc. in Atlanta, Georgia; the proposed redevelopment includes high and mid-rise residential areas, retail areas, hotels, office space, and parking; project plans include a new 17th Street Bridge that would cross Interstate 75/85 and other related road improvements as shown in the conceptual development plan provided in Appendix A; and

WHEREAS, the EPA is preparing an Environmental Assessment (EA) for the Atlantic Steel Redevelopment Project, in accordance with the National Environmental Policy Act of 1969 (NEPA); EPA is involved with this project through its Project XL Program, which stands for "eXcellence and Leadership" and encourages companies and communities to come forward with new approaches that have the potential to advance environmental goals more effectively and efficiently than have been achieved using traditional regulatory tools (see Appendix A); and

WHEREAS, Atlantis 16th, L.L.C., a developer in Atlanta, is participating with EPA in its Project XL and is the primary developer responsible for implementation of the redevelopment plan; and

WHEREAS, the EPA has the responsibility to ensure that the conditions of this Agreement will be implemented; and

WHEREAS, the EPA has identified the former steel mill (hereafter Atlantic Steel) currently occupied by Atlantic Steel Industries, Inc., as a property eligible for listing in the National Register; and

WHEREAS, Atlantic Steel Industries, Inc., Atlantis 16th, L.L.C., the Georgia Department of Natural Resources, Environmental Protection Division, and EPA have determined, after consideration of avoidance and other minimization alternatives, that demolition of the former steel mill is a necessary component of environmental remediation and redevelopment of the site; and

WHEREAS, the EPA has determined that demolition of buildings associated with the remediation of Atlantic Steel constitutes an adverse effect on this historic property; however, until final project plans are developed, primarily those related to off-site aspects of the redevelopment project, it is not possible at this time to fully assess the affects to historic properties not contained within the Atlantic Steel site, but within the area of potential effects; and

WHEREAS, the EPA has consulted with the Georgia State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR Part 800.14(b) of the regulations implementing Section 106 of the NHPA; and

WHEREAS, the EPA has identified the Atlanta History Center (AHC) and the Atlanta Urban Design Commission (AUDC) as potential consulting parties in accordance with 36 CFR 800.2(a)(4) which have been invited to concur in this Agreement; and

WHEREAS, the EPA has conducted public notification and public involvement about the Project, including planned efforts to identify historic properties, through its Project XL and NEPA scoping and environmental analysis process for the Project, as encouraged by 36 CFR 800.2(a)(4); and

WHEREAS, consultation revealed that Atlantic Steel Industries, Inc., has, over a period of several years, taken several measures to preserve its heritage at various off-site locations (see Appendix B), including: preservation of selected structures, machinery, and buildings by transfer or sale to various museums, including the Atlanta History Center, The Railroad Museum in Savannah, the Southeastern Railway Museum in Duluth, Georgia, and the Carter Machine Company in Toccoa, Georgia; preservation of company documentary records, photographs, engineering drawings, and other related documents through transfer to the Atlanta History Center for storage and display; support of other interpretive efforts including two books documenting the company's history and a professional photographic exhibit at Georgia Institute of Technology in 1999; plans for creation of a permanent exhibition space celebrating the company's history in the redevelopment plan; and plans for the integration of selected tools and pieces of machinery in the redevelopment plan (see Appendix B); and

WHEREAS, the agencies and organizations listed in Appendix C have been identified as potentially interested parties and either have been contacted by the EPA as part of its scoping process under NEPA or will be contacted shortly in accordance with 36 CFR 800.3(f) in order to identify potential consulting parties and invite their participation in the Section 106 process; specific coordination with Indian tribes and additional public involvement are discussed in the Stipulations below; and

WHEREAS, for the purposes of this Agreement, the definitions found at 36 CFR 800.16 are applicable; and

NOW, THEREFORE, the EPA, the SHPO, and the Council agree that the Project will be implemented in accordance with the following stipulations:

STIPULATIONS

The EPA will ensure that the following measures are carried out:

I. ADMINISTRATIVE STIPULATIONS

A. Professional Qualifications: All studies conducted under the terms of this Agreement will be carried out or directly supervised by appropriately trained persons who meet the Secretary of the Interior's Professional Qualification Standards (48 Fed. Reg. 44738) for the particular field of study in which they are working. Should the EPA hire new personnel for the purposes of implementing the terms of this Agreement, the EPA shall forward copies of the professional qualifications of such persons to the SHPO for its review. The SHPO shall provide written comments within ten days.

B. The signing and concurring parties to this Agreement agree to perform their respective obligations, including the execution and delivery of any documents or approvals as may be necessary or appropriate, in a timely fashion consistent with the terms and provisions of this Agreement.

Where a specific number of days is specified for review and comment and/or approval, comments shall be provided in written form within the specified number of days following receipt of the documents. Failure to respond within this time frame will constitute concurrence on the part of the reviewing party.

II. TREATMENT OF HISTORIC PROPERTIES

A. Treatment of Atlantic Steel Site (On-Site Properties)

1. Photographic Recordation Plan

The EPA, in consultation with the SHPO, AHC, and AUDC staff, will develop and implement a photographic recordation plan for Atlantic Steel prior to demolition and site remediation activities. The plan shall include large-format photographic recordation that will be performed by a professional photographer experienced in performing Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) photographic documentation to National Park Service standards. The photographic recordation plan will be developed by the EPA and submitted to the SHPO for review and approval, and to the AHC and AUDC staff for review and comment. All reviewing parties shall provide written comments or acceptance of the photographic recordation plan within ten days after receipt. Demolition of any part of Atlantic Steel will not begin until the recordation plan has been approved by the SHPO. It is anticipated that the recordation plan will include a phased approach of photographic documentation to allow Atlantic Steel Industries, Inc. and Atlantis 16th, L.L.C. to demolish certain buildings, while others are still being recorded and documented. All photographic products for a specific building or group of buildings will be presented to the SHPO for review and approval prior to the demolition of such building or group of buildings. SHPO shall provide comments or acceptance of the photographs within five days after receipt.

2. Outreach and Public Education

The EPA and Atlantis 16th, L.L.C. shall ensure that information gathered in accordance with stipulations contained in this Agreement and related to the history of the Atlantic Steel site is used to produce public information materials. EPA and Atlantis 16th, L.L.C., in consultation with the SHPO, AHC, and AUDC staff, will develop and implement an outreach and public education plan for the Atlantic Steel Redevelopment project. The plan will focus on public education approaches that benefit preservation in a larger context and the community as a whole. At a minimum, the following will be considered:

– Development of oral history of Atlantic Steel site
– Development of a visitor's center/interpretive center as part of the redevelopment plan
– Educational video and other publications documenting various aspects of Atlantic Steel and/or its changes through history
– Reuse and/or relocation of either historic buildings, machinery, or steel making products to be part of either on-site or off-site exhibits
– Publication of appropriate research material

B. Treatment of Other Historic Properties (Off-Site Properties) Identified During the Section 106 Process

Any other historic properties, not located on the Atlantic Steel site, determined to experience an adverse effect from the Project will be addressed in accordance with 36 CFR 800 and as stated below in Item III (Continuation of the Section 106 Process for the Project).

III. CONTINUATION OF THE SECTION 106 PROCESS FOR THE PROJECT

The EPA will comply with the requirements of 36 CFR 800 regarding public involvement, identification of historic properties, effects assessment, and treatment of properties that may experience an adverse effect from the Project.

A. Historic Architectural Resources

"Historic architectural resources" include buildings, structures, objects, districts and landscapes listed in, or eligible for listing in, the National Register of Historic Places. The EPA will assess the potential for historic architectural resources within the Project's area of potential effects in accordance with 36 CFR 800. This will include on-site examination by a professional architectural historian meeting the qualification standards contained in 36 CFR 61, Appendix A, review of existing historic maps, previous historic investigations in the Project vicinity, and other pertinent documentary data. The EPA shall submit to the SHPO and AUDC staff, for review and comment, an Identification/Effects Assessment Report for the Project. The report will include discussions of: Description of the Undertaking; Area of Potential Effect (APE); Efforts to Identify Historic Properties; Affected Historic Properties; and Adverse Effects. All reviewing parties shall provide written comments within ten days after receipt. The EPA shall consult with the SHPO, the concurring parties, and any other consulting parties to develop treatment strategies for historic architectural resources that will be adversely affected by the Project. Resolution of any adverse effects will follow 36 CFR 800.6. EPA anticipates development of specific Memorandum of Understanding (MOU) to document how the adverse effects will be resolved. The MOU will be developed within the context of this Agreement and will serve as the instrument by which all parties will agree to final resolution of any adverse effects.

B. Archeological Resources

"Archeological resources" include prehistoric or historic archeological resources listed in, or eligible for listing in, the National Register of Historic Places. The EPA will assess the potential for archeological resources within the Project's area of physical disturbance in accordance with 36 CFR 800. This will include on-site examination by a professional archeologist meeting the qualification standards contained in 36 CFR 61, Appendix A and review of existing geophysical data, historic maps, previous archeological investigations in the Project vicinity, and other pertinent documentary data. Results will be submitted to the SHPO and pertinent consulting parties for review and comment. The SHPO shall provide written comments within ten days after receipt. Any potential subsurface testing and evaluation of significance will be determined through subsequent consultation in accordance with 36 CFR 800. The EPA shall consult with the SHPO and any identified consulting parties to develop treatment strategies for any archeological resources that will be adversely affected by the Project. Resolution of any adverse effects will follow 36 CFR 800.6. EPA anticipates development of specific Memorandum of Understanding (MOU) to document how the adverse effects will be resolved. The MOU will be developed within the context of this Agreement and will serve as the instrument by which all parties will agree to final resolution of any adverse effects.

IV. TRIBAL COORDINATION

EPA has identified the Indian tribes listed in Appendix C as groups that might attach religious and cultural significance to historic properties in the area of potential effects. In accordance with 36 CFR 800.4(a)(4), EPA will solicit any information from these tribes to assist the agency in identifying properties which may be of religious and cultural significance to them and may be eligible for the National Register. Based on the results of this coordination, EPA will complete an effects assessment and identify treatment of these properties to determine if they may experience an adverse effect from the Project. Further coordination with the Indian tribes will follow 36 CFR 800.4 through 36 CFR 800.6. Should any issues of concern be raised by Indian tribes about the identification of, evaluation of or assessment of effects on these historic properties, EPA will notify the Council of these concerns and invite their participation in the 106 process.

V. PUBLIC PARTICIPATION

A. Continuation of Public Outreach

EPA and Atlantis 16th, L.L.C. have participated in a number of public stakeholder meetings to discuss the project. EPA and Atlantis 16th, L.L.C. have also participated in meetings with an Environmental Justice Focus Group and several meetings regarding the proposed bridge at the invitation of the City of Atlanta and/or the Georgia Department of Transportation and the Atlanta Regional Commission. EPA received valuable feedback on the project from national and local environmental and transportation groups and other interested organizations and individuals, as part of its Project XL and NEPA scoping processes.

The EPA will integrate consideration of Project effects on historic properties into its NEPA environmental analysis process. The EPA will hold public meetings for purposes of fulfilling requirements of NEPA and NHPA and will include updates on the status of the identification and evaluation process for historic properties. Future public notices shall inform the public of their opportunity to comment pursuant to Section 106 of the NHPA.

B. Review of Public Objections

At any time during implementation of the measures stipulated in this Agreement should a member of the public raise an objection to any such measure or its manner of implementation, the EPA shall take the objection into account and consult as needed with the objecting party, pertinent consulting parties, and the SHPO to resolve the objection.

VI. AMENDMENTS

Any party to this Agreement may request that it be amended, whereupon the parties will consult in accordance with 36 CFR Part 800.13 to consider such amendment.

VII. DISPUTE RESOLUTION

Should the SHPO object within 20 days to any plans/specifications provided for review or any actions proposed pursuant to this Agreement, the EPA shall consult with the SHPO to resolve the objection. If the EPA determines that the objection cannot be resolved, the EPA shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all pertinent documentation, the Council will provide the EPA with recommendations which the EPA will take into account, in accordance with 36 CFR 800.6(c)(2), in reaching a final decision regarding the dispute. The EPA shall report its final decision to the Council within 15 days.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; the EPA's responsibility to carry out all actions under this agreement that are not the subject of the dispute will remain unchanged.

VIII. FAILURE TO CARRY OUT THE TERMS OF THIS AGREEMENT

In the event that the EPA does not carry out the terms of this agreement, the EPA will comply with 36 CFR 800.4 through 36 CFR 800.6 with regard to the Project.

IX. SIGNATORIES

Execution and implementation of this Programmatic Agreement evidences that the EPA has afforded the Council a reasonable opportunity to comment on the Atlantic Steel Redevelopment Project and that the EPA has taken into account the Project's effects to historic properties.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION IV

By: Heinz Mueller Date: 12/13/99

Name: Heinz Mueller
Title: Chief, Office of Environmental Assessment

GEORGIA STATE HISTORIC PRESERVATION OFFICER

By: W. Ray Luce Date: 12/13/99

Name: W. Ray Luce
Title: Division Director and Deputy State Historic Preservation Officer

CONCUR:

~~JACOBY DEVELOPMENT, INC~~. ATLANTIS 16th L.L.C. JJJ

By: James J. Jacoby Date: 12-17-99

Name: James J. Jacoby
Title: ~~President~~

ATLANTA HISTORY CENTER

By: [signature] Date: 12/30/99

Name: Michael Rose
Title: Interim Director, Atlanta History Center Archives

ATLANTA URBAN DESIGN COMMISSION

By: Karen Huebner Date: 12/16/99

Name: Karen Huebner
Title: Executive Director

LIST OF APPENDICES

Appendix A: Notice of Initiation of Environmental Assessment Process for the Atlantic Steel Redevelopment Project (with project map attached)

Appendix B: Letter from Atlantic Steel Industries, Inc. to EPA

Appendix C: List of Interested Parties

APPENDIX A

Notice of the Environmental Assessment Process

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 0 6 1999

NOTICE OF INITIATION OF ENVIRONMENTAL ASSESSMENT PROCESS
for the
ATLANTIC STEEL REDEVELOPMENT PROJECT

To Interested Agencies, Officials, Public Groups and Individuals:

Jacoby Development, Inc., a developer in Atlanta, Georgia, has proposed redevelopment of a 138-acre former steel mill site currently owned by Atlantic Steel Corporation in Atlanta's Midtown district. The proposed redevelopment includes high and mid-rise residential areas, retail center areas, hotels, general and high tech office space, and parking. Project plans include construction of a multi-modal (cars, pedestrians, bicycles, mass transit) bridge at 17^{th} Street that would cross Interstate 75/85 and provide access to the site as well as connecting the site to the nearby Arts Center Metropolitan Atlanta Rapid Transit Authority (MARTA) rail station. In addition to the bridge, there would be new access ramps for I-75/85 northbound traffic for 17^{th} Street, reconstruction of existing southbound exits on I-75 and I-85 for 10^{th}/14^{th} Street to provide access to 17^{th} Street, and other surface street roadway improvements adjacent to the project area. Figure 1 shows the location of the project and a conceptual development plan. Figure 2 shows a generalized cross-section of the proposed 17^{th} Street bridge. The proposed Atlantic Steel development is projected to add approximately 21,000 jobs and 7,500 residents to the Midtown area.

The Environmental Protection Agency (EPA) is involved with this project through its Project XL Program. Project XL, which stands for "eXcellence and Leadership," encourages companies and communities to come forward with new approaches that have the potential to advance environmental goals more effectively and efficiently than have been achieved using traditional regulatory tools. Jacoby is participating in Project XL for the redevelopment project because neither the 17^{th} Street Bridge nor the associated I-75/85 access ramps would be able to proceed without the regulatory flexibility allowed by EPA under its XL Program. The specific regulatory flexibility includes the consideration of the entire redevelopment project, including the bridge, as a Transportation Control Measure (TCM). To be considered a TCM, the site's location, infrastructure and building design, in combination with transit and other transportation elements, (i.e. bicycle lanes) must demonstrate an air quality benefit.

The EPA, in cooperation with the Federal Highway Administration, the Federal Transit Administration, the Georgia Department of Transportation, MARTA and the City of Atlanta, is preparing an Environmental Assessment (EA) for the Atlantic Steel Redevelopment Project, in accordance with the National Environmental Policy Act of 1969 (NEPA). The EA will provide a summary of planning efforts associated with the development of concept alternatives, design traffic study, preliminary engineering analysis, and environmental impacts assessment, including all public comments and agency coordination. Several alternatives are being considered as part of this project. These include alternative site designs, bridge and access ramp locations and configurations, and transit connections. The no action alternative will also be considered. For the purposes of the EA, no action is defined to mean the TCM is not approved and the new 17th Street bridge and related transit improvements are not built. The study area will be assessed for impacts to archeological and historic resources, any protected plant or animal species, jurisdictional wetlands, and water quality. The transportation aspects of the project will be assessed, including noise and air quality impacts, as well as impacts to the surrounding community.

Many of the recipients of this letter have been participating with EPA as part of its XL Program. There have been numerous public meetings with stakeholders throughout this process. In fact, a number of letters and comments about the project have already been received by EPA via its public outreach campaign as part of Project XL. These will be duly noted and included as part of the identification of issues to be addressed in the EA process. If you have submitted written comments or have previously been listed on the Atlantic Steel stakeholder list, you will continue to be considered a stakeholder for the Atlantic Steel Redevelopment Project. If you have not already provided specific comments on this project, we are requesting that you provide written comments (by letter or e-mail) outlining your concerns or issues for consideration in the EA. A timely response is needed to ensure that all comments can be addressed in the scope of work for the EA. Please send your written comments to my attention at the above address within the next 30 days.

The next opportunity for formal public comment on this project, as part of the NEPA process, will include a public hearing on the results of the EA sometime this fall. If you have any questions or would like additional information about the project, please contact Mr. Ben West of my staff at (404) 562-9643, E-mail: west.ben@epa.gov. More information on Project XL and the Atlantic Steel project can be found at: http://www.epa.gov/projectxl. Thank you in advance for your assistance.

Sincerely,

Heinz Mueller

Heinz J. Mueller, Chief
Office of Environmental Assessment
Environmental Accountability Division

cc: Robert Chaapel, Federal Highway Administration
Len Lacour, Federal Transit Administration
Joe Palladi, Georgia Department of Transportation
Tom Queen, Georgia Department of Transportation
Joe McCannon, Metropolitan Atlanta Rapid Transit Authority
Dan Cohen, City of Atlanta
Charles Brown, CRB Realty

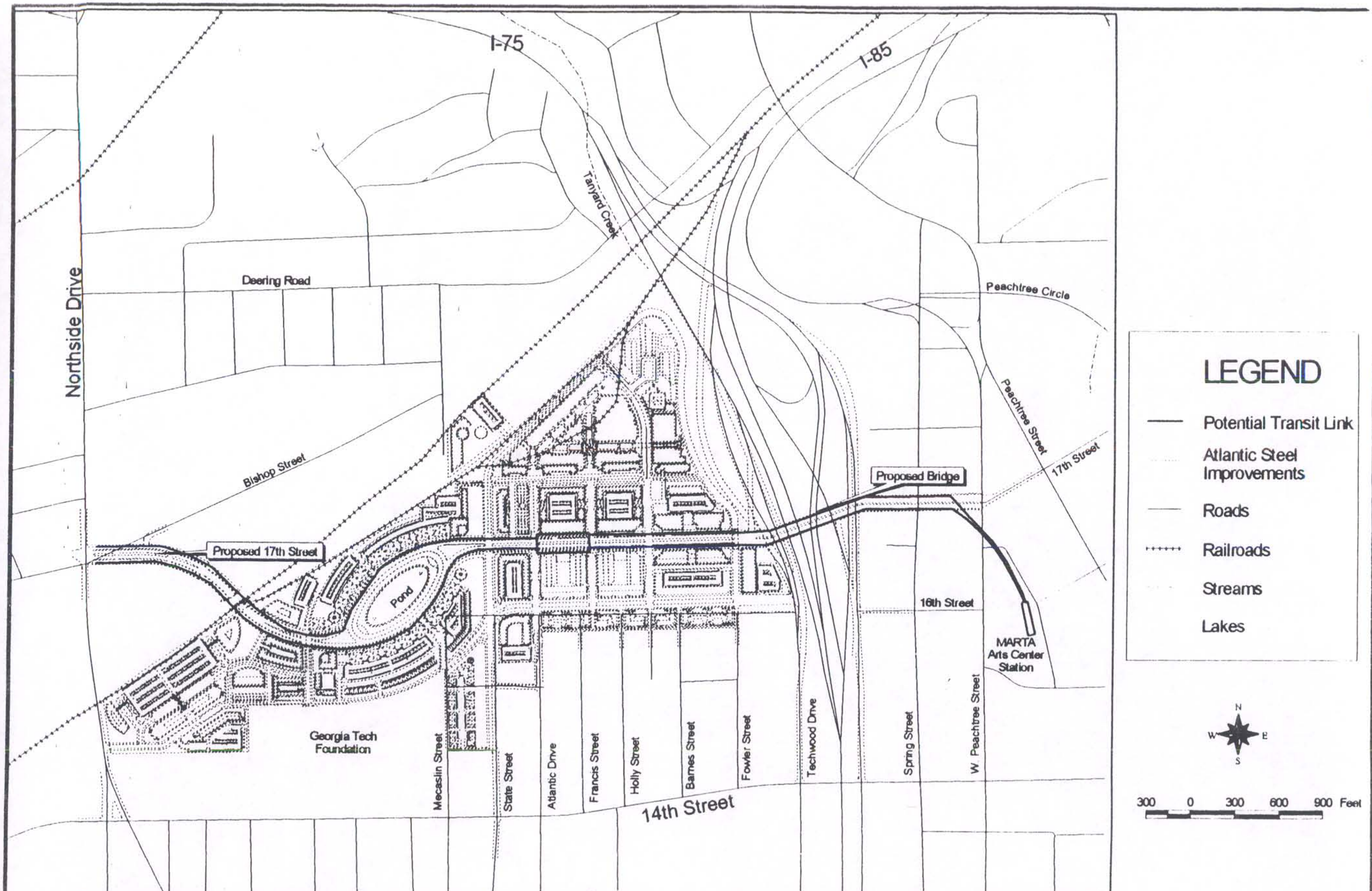


Figure 1. Atlantic Steel Redevelopment Project Area

August 1999

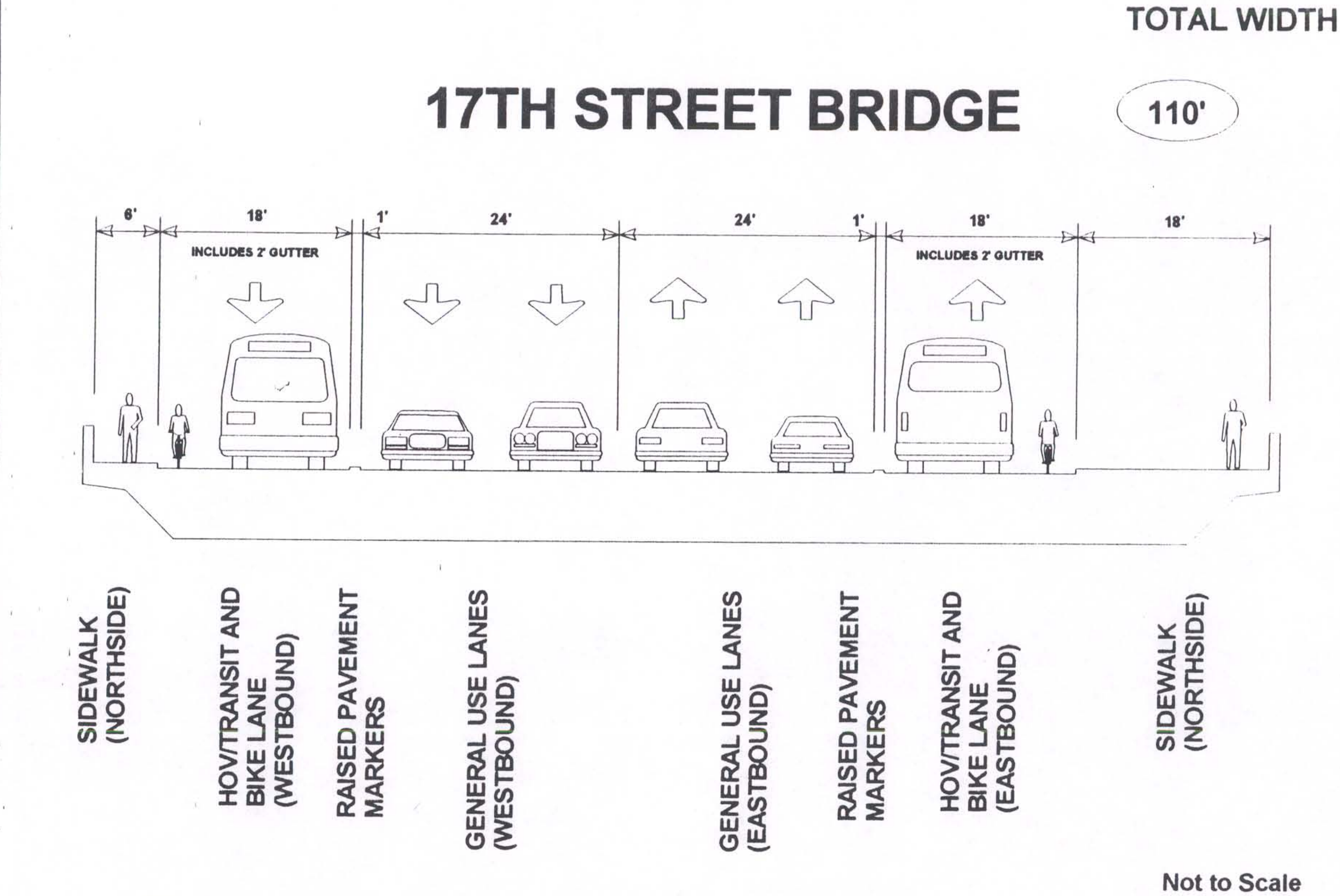


Figure 2. Typical Cross Section for Proposed 17th Street Bridge

APPENDIX B

Letter from Atlantic Steel Industries, Inc.

Atlantic Steel
INDUSTRIES, INC.

August 31, 1999

USEPA, Region IV
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303

Attention: Mr. Ben West

Dear Ben,

As a means of supplement to the Preliminary Assessment of Historic Resources - Atlantic Steel Redevelopment Project Report, Atlantic Steel offers the following summary of the efforts we have made to identify and preserve historically significant documents and assets of the Company.

As one of the oldest industries in Atlanta, Atlantic Steel has always been proud of its history. Throughout its operation the Company has meticulously preserved the records of the plant facilities and its related operation. As a result, the Company possesses a massive archive of records, publications and photos which document the Company's history.

The formal documented history of Atlantic Steel began with a book, *The Story of Dixie Steel,* written by Charles F. Stone, President of Atlantic Steel, and was published in 1951. A second publication, *A Business History of Atlantic Steel Company, 1901-1968,* by Harry Richard Kuniansky, was published in 1970.

Atlantic Steel has made numerous contributions of historic items to various history centers and museums over the years. The earliest known contribution consisted of a Buckeye steam operated generator which the Company gave to a museum in Ohio in about 1979. Later, in about 1987, the Company donated two of the original Hoop Mill roll stand housings to the Atlanta History Center.

At about the same time, we gave the Company's Power House steam whistle which signaled the shift changes over the years to the Atlanta History Center. These items are currently on display at the museum. In 1995, we donated "Old No. One", one of the Company's original steam locomotives, to The Railroad Museum in Savannah, Georgia. We are proud of each of these contributions.

As early as 1996 when interest in the purchase of the Atlantic Steel property became serious, the Company developed plans for the preservation and transfer of historically significant documents to appropriate history centers. We held several meetings with the staff of the Atlanta History Center in 1998 to discuss an orderly manner of transferring the Company documents to the

Post Office Box 1714, Atlanta, Georgia 30301 • 404-897-4500 • 800-241-4596 • Telecopier 404-897-4623

Center's archives. We gave many photos, records and in-house publications to the History Center at those meetings. In the last quarter of 1998, plant operations were coming to a close. At that time, the Company transferred hundreds of Engineering drawings of the facility, buildings and machinery to the Atlanta History Center for permanent storage and display. Among these drawings are Property Surveys, Topographic Maps, Architectural plans, and infrastructure maps. Some of these drawings date back to 1904. Atlantic Steel also provided storage cabinets necessary to house the drawings.

Following the plant closure in December, 1998, we held numerous meetings with the property purchaser, Jacoby Development, Inc., to discuss plans for the ownership transition. During these meetings, Atlantic Steel agreed to save certain items of historical significance for incorporation into Jacoby's development plan. Among these items are: rolling mill stands, the Company flag pole, old mill tools, and miscellaneous pieces of machinery. Furthermore, Jacoby plans to provide a permanent exhibition space on the property for historic Atlantic Steel items.

In February of 1999, Atlantic Steel welcomed Ruth Dusseault, a professional photographer operating under a City of Atlanta Bureau of Cultural Affairs grant, to photograph the various buildings on the property. During August, 1999, Ms. Dusseault's photos were placed on display as a special exhibit at the Georgia Tech School of Architecture.

Throughout 1999, Atlantic Steel has been planning the demolition of the facility in preparation for development. In doing so, significant efforts have been made to preserve and find a reuse for many parts of the facility. In April, we held a public auction which enabled other businesses to reuse a substantial amount of the plant machinery and spare parts. The most pleasing purchase was that of David Carter, of Carter Machine Company. He purchased the Machine Shop building, constructed in 1912, which he intends to relocate to Toccoa, Georgia for use as a machine shop museum. Mr. Carter also purchased several of the old machine tools to be placed in the museum. A 40,000 sq. ft. warehouse building has also been sold for reuse at another steel mill in Kansas.

Furthermore, we have just donated a number of maintenance shop appliances including a 1919 model forge hammer to the Southeastern Railway Museum in Duluth, Georgia.

In summary, Atlantic Steel has done a great deal over the years on it's own initiative to preserve the historical value of it's Company and certain assets. We trust that these efforts are compatible with EPA's endeavor to assess the historic resources of the property. If we can be of further assistance in obtaining EPA's assessment objective, we would be delighted to do so.

Cordially,

Neil Harmon

C. A. (Neil) Harmon
Environmental Engineer

APPENDIX C

List of Interested Parties

Elected Officials

U.S. Senator Max Cleland
U.S. Senator Paul Coverdell
U.S. Representative John Lewis
U.S. Representative John Linder
U.S. Representative Johnny Isakson
Georgia Governor Roy Barnes
City of Atlanta Mayor Bill Campbell

Federal Agencies

Advisory Council on Historic Preservation
Federal Highway Administration
Federal Transit Administration
U.S. Army Corps of Engineers
U.S. Environmental Protection Agency

State of Georgia

Georgia Department of Community Affairs
Georgia Department of Natural Resources, Environmental Protection Division
Georgia Department of Natural Resources, Historic Preservation Division (State Historic Preservation Office)
Georgia Department of Transportation
Georgia Institute of Technology

Local Atlanta Agencies/Organizations

Atlanta Chamber of Commerce
Atlanta City Council
Atlanta History Center
Atlanta Planning Department
Atlanta Regional Commission
Atlanta Urban Design Commission
Metropolitan Atlanta Rapid Transit Authority

Native American Groups

Muscogee (Creek) Nation of Oklahoma
Thlopthlocco Tribal Town
Alabama Quassarte Tribal Town
Kialegee Tribal Town
Seminole Tribe of Florida
Poarch Band of Creek Indians of Alabama
Miccosuki Tribe of Indians of Florida
Absentee Shawnee Tribe of Oklahoma
Cherokee Nation of Oklahoma
United Keetoowah Band
The Eastern Band of the Cherokee Indians
Alabama-Quasatte Tribe of Texas
Coushatta Tribe
Seminole Nation of Oklahoma

Other Stakeholders/Interested Parties

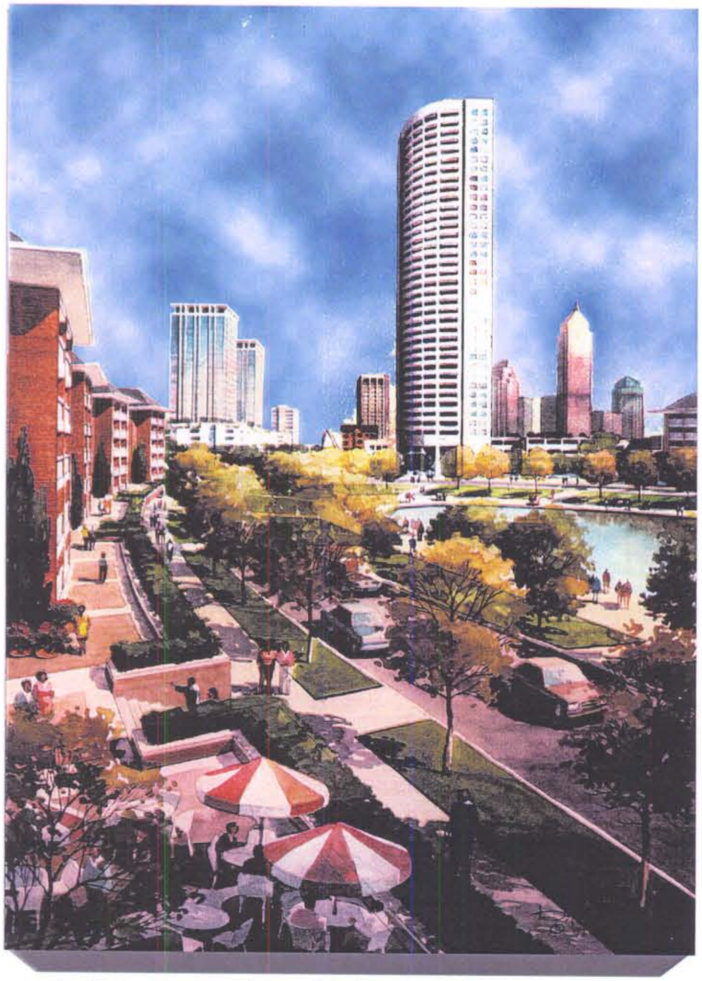
Ansley Park Neighborhood
Environmental Defense Fund
Georgia Conservancy
Georgia Trust for Historic Preservation
Home Park Neighborhood
Loring Heights Neighborhood
Midtown Alliance
National Trust for Historic Preservation
Railroad Museum in Savannah, Georgia
Sierra Club
Southeastern Railway Museum
Urban Land Institute

APPENDIX G

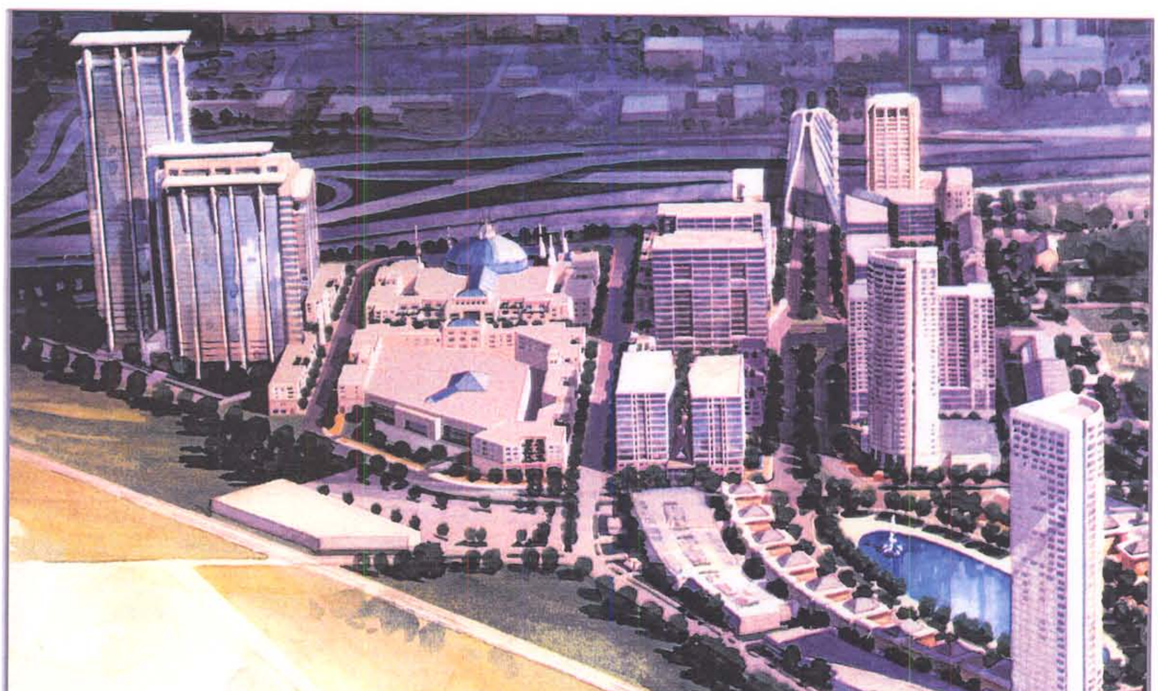
VISUAL RESOURCES AND ARTISTIC RENDERINGS

Artists Rendering of 16th Street

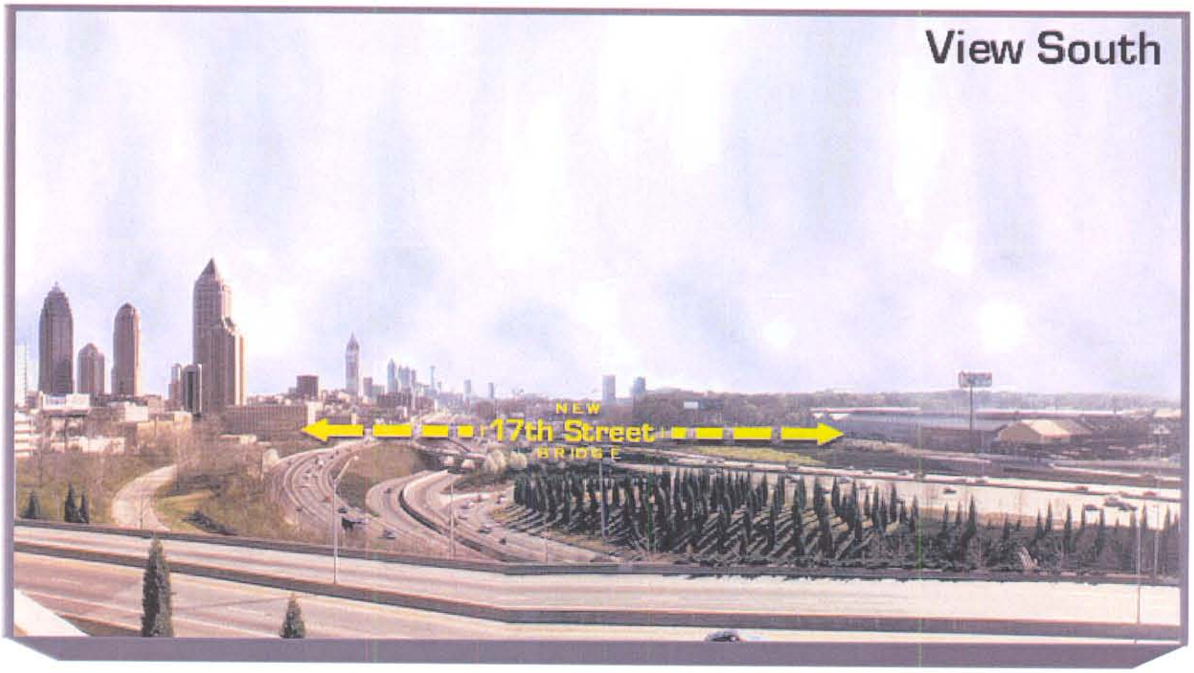
Artists Rendering of 17th Street



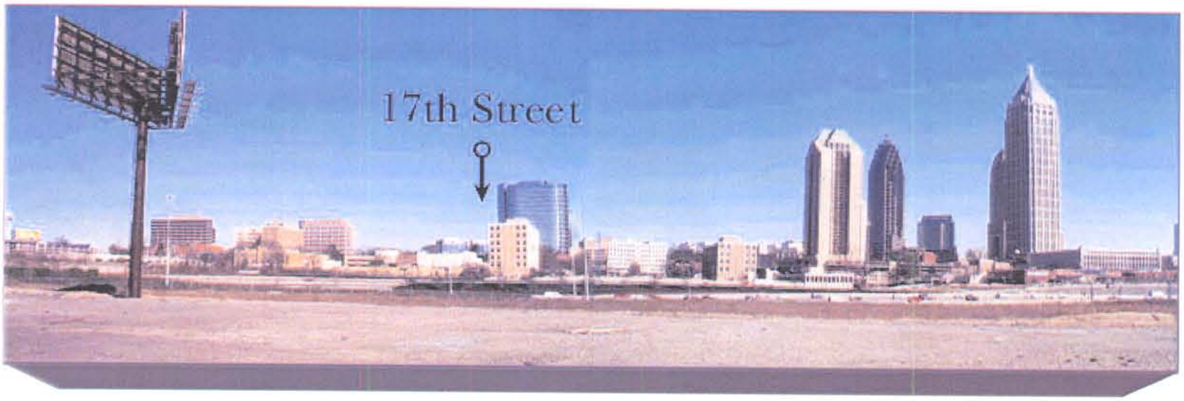
Artist's Rendering of Mixed Use Development



Artists Rendering of Site Development



View South from Former Equifax Building



View East to Midtown

APPENDIX H

CITY OF ATLANTA WATER AND SANITARY SEWER CAPACITY CERTIFICATIONS AND STORM SEWER ALIGNMENT VERIFICATION

JDI

JACOBY DEVELOPMENT, INC.

May 24, 2000

MEMORANDUM

TO: Mr. Ben West, *EPA*
Ms. Alyce Getty, *Parsons*
Mr. Scott Condra, *Law*
Mr. Gerald Pouncey, *Morris, Manning & Martin*

FROM: Hilburn O. Hillestad HOH

RE: CITY'S WATER SYSTEM CAPACITY & CONVEYANCE LETTER

Pursuant to our discussions, please find attached the above referenced letter from the City. This confirmation of water availability for the Jacoby, Atlantic Redevelopment, LLC should be included in the EA.

I hope to receive the City's Confirmation of sewer capacity shortly. I will forward that letter to you as well for inclusion in the EA.

Please do not hesitate to call me if you have any questions.

HOH/ks
Enclosure

cc: Mr. James F. Jacoby
Mr. Charles R. Brown

1000 Abernathy Road, NE, Suite 1250, Atlanta, Georgia 30328
(770) 399-9930 Fax (770) 206-9150

CITY OF ATLANTA

BILL CAMPBELL
MAYOR

68 MITCHELL STREET, SUITE 5700, SOUTH BLDG.
ATLANTA, GEORGIA 30330-0330
OFFICE • 404-330-6075
FAX • 404-658-7194

DEPARTMENT OF WATER
REMEDIOS K. DEL ROSARIO
Commissioner

May 22, 2000

Hilburn Hillestad, Ph. D.
Senior Vice President
Jacoby Development, Inc.
1000 Abernathy Road, N.E., Suite 1250
Atlanta, Georgia 30328

RE: **Atlantic Steel Site Redevelopment**
Water System Capacity and Conveyance Verification

Dear Mr. Hillestad:

In response to a request from your design Engineers on the subject Development, this is a letter of confirmation of available capacity to provide appropriate water flows for domestic and fire protection purposes for the proposed redevelopment of the Atlantic Steel property located between Northside Drive and the IH 75/85 Connector, and south of the Norfolk Southern Railway lines and north of 14th Street.

The City's primary water treatment facility, the Hemphill Water Treatment Plant is located immediately west of the proposed project.

Within the immediate proximity of this development, the City currently has a 36-inch diameter transmission main in 14th Street, a 36-inch diameter water transmission main in Northside Drive, and a 16-inch diameter water main in Bishop Street. Any of these mains can utilized to provide service to the proposed project.

As requested, the City has sufficient water treatment capacity and a water distribution system available to allow development of the proposed Atlantic Station project at the following estimated water flows:

- Domestic water flows projected at 3,000GPM to 5,000GPM
- Fire flows in the range of 3,000GPM to 10,000GPM

These capacities were verified by utilizing a computer based hydraulic model of our water distribution system, with the assumption that two feeds into the development would be made, one from 14th Street and one from Bishop Street.

I trust that this information will satisfy any needs for confirmation of the water system capacity to serve this important development

Sincerely,

Remedios K. del Rosario

Remedios K. Del Rosario
Commissioner, Department of Water

cc: Chris New
Lee Hunt, P.E.

CITY OF ATLANTA

BILL CAMPBELL
MAYOR

55 TRINITY AVENUE ✎ ATLANTA, GEORGIA 30335-3029
SUITE 4700, CITY HALL SOUTH
(404) 330-6073 ✎ FAX: (404) 658-7631

DEPARTMENT OF PUBLIC WORKS

Norman Koplon, P.E.
Interim Commissioner

David Peters, P.E.
Deputy Commissioner

John W. Griffin, Jr
Deputy Commissioner

Tuesday, August 1, 2000

Hilburn Hillestad, Ph.D
Senior Vice President
Jacoby Development, Inc.
1000 Abernathy Road, NE
Suite 1250
Atlanta, GA 30328

Re: Sewer System Capacity, Storm Water Management and Sewer Alignments for Atlantic Steel Site Redevelopment, 1365 Mecaslin Street, NW

Dear Dr. Hillestad:

This letter is intended to clarify my two referenced letters to you dated July 6, 2000. It is important that we continually update data provided to the public including clarification of any information relevant to the draft Environmental Assessment that EPA released this week.

First, further review reaffirms my conclusion that capacity will be available to convey and treat the wastewater that you predict will be generated by your development between 2002 and 2012. That further review, however, identified a need to clarify some of the underlying facts supporting my previous correspondence. Most pertinent, the upgrades that will soon be completed at the R.M. Clayton Water Reclamation Plant should increase treatment capacity substantially to handle maximum month average daily flows of approximately 122 MGD, in contrast to our expectations for the average annual daily flow referenced in the previous letters. I also have confirmed that planning and other work are well underway to reduce flows from the Hemphill Plant to the Orme Street Combined Sewer.

Accordingly, we are in a good position to process your permits when you are able to provide design parameters, including proposed connection location(s), for review by the City staff and consultants.

Second, our additional review indicates that we must work closely to assure that our staffs develop and implement sound alternatives for managing stormwater in the short term, as well as for the long term. Recent investigations have provided a better understanding of how the complex interrelationship of pipes, valves and storage ponds function to capture and convey the several wastewater and stormwater flows, past and present. We also have some limited experience with the effects of setting the control valves to reduce the use of the process ponds for conveying stormwater and other flows. The recent rehabilitation of the combined and separate sewers on your property will reduce the contribution of flows from Hemphill and upstream dry-weather flows. The city expects your developments plans to incorporate advanced control of both stormwater and wastewater. One example previously discussed is the importance of connecting your wastewater collection system to the trunk sewer below the Tanyard CSO treatment facility at the last manhole just before the trunk crosses under I-75.

We understand that you intend to reconfigure your system of ponds and channels. In that regard, we encourage frequent communication with my staff and me so that we can respond expeditiously on evaluation of details of your plan including the volumes, rates and connection points for wastewater and stormwater flows.

Thank your for your cooperation. Please coordinate with us to assure that current information is incorporated into the Final Environmental Assessment for your project as appropriate.

Sincerely,

Norman A. Koplon

Norman A. Koplon, PE

NAK/DWP/sm

CITY OF ATLANTA

BILL CAMPBELL
MAYOR

68 MITCHELL ST, SW, ATLANTA, GEORGIA 30335-0324
SUITE 4700, CITY HALL - SOUTH
(404) 330- 6240
FAX (404) 658-7552
email: publicworks@ci.atlanta.ga.us

DEPARTMENT OF PUBLIC WORKS

Norman A. Koplon, P.E.
Interim Commissioner

David W. Peters, P.E.
Acting Deputy Commissioner

July 6, 2000

Hilburn Hillestad, Ph.D.
Senior Vice President
Jacoby Development, Inc.
1000 Abernathy Road, NE
Suite 1250
Atlanta, GA 30328

Subject: Atlantic Steel Site Redevelopment
1365 Mecaslin Street, NW
Sanitary Sewer System Capacity
And Conveyance Verification

Dear Dr. Hillestad:

This letter is to confirm the availability of wastewater treatment capacity and collection system capabilities to provide appropriate sanitary sewer services for the proposed redevelopment of the Atlantic Steel property located between Northside Drive and the I-75/85 Connector, and south of the Norfolk and Southern Railway lines and north of 14th Street.

The City's primary wastewater treatment facility, the R. M. Clayton Water Reclamation Plant is located downstream some 4 to 5 miles from the proposed project. The R. M. Clayton Facility currently treats an average daily flow of 86MGD+/-, and is currently being expanded to treat an average daily flow of 103MGD and maximum daily flow of 186MGD as noted in the Camp Dresser McKee report to the City dated April, 1997.

Due to the shut-down of the Atlantic Steel operations and current re-circulation of flows at the Hemphill Water Treatment Plant, a reduction of flows estimated between

1.5MGD to 2.5MGD that previously flowed to the Orme Street Combined Sewer and the R. M. Clayton Wastewater Reclamation has resulted. These earlier flows included wastewater released from the City's Hemphill Water Treatment Plant (filter backwash, leakage, washdown, water, etc.).

The City has sufficient wastewater treatment capacity available to allow development of the proposed Atlantic Station project at the following projected average daily sewage flows:

- an estimated 0.6 MGD flow beginning in the year 2002
- an estimated 1.4 MGD total flow by the year 2006
- an estimated 1.8 MGD total flow by the year 2012

There currently exists a 54-inch diameter sewer main, which will be utilized to provide sanitary sewer service to the proposed project. The project will develop a new separated sanitary sewer collection system through the development and make its connection to the City's sanitary sewer system via the existing 54-inch diameter main adjacent to the Tanyard Creek CSO. This 54-inch diameter main extends to a 60-inch diameter main near Atlanta Memorial Park east of Northside Drive and north of Overbrook Drive. Recent flow monitoring performed for the City by ADS Environmental Services, Inc., in this area during February, 2000, provides the following data relative to current flows in, and capacities of, the downstream sanitary sewer system:

- Flow meter #PTC30 on the 60-inch diameter main downstream of Tanyard Creek CSO on the Tanyard Creek Interceptor (formerly known as the Peachtree Creek Interceptor Sewer)

Average daily flow	-	10.8065 MGD
Minimum flow	-	5.1387 MGD
Peak flow		39.1835 MGD

No surcharge periods
Flow depths range to 10.76" to 44.58" in the 60.5" diameter pipe

It is my understanding that according to your Consultant, Jordan, Jones, & Goulding that this 60-inch diameter main is at a 0.2% slope which would indicate a theoretical capacity of some 75 MGD flowing full. This would provide an excess capacity of some 64 MGD for average daily flows and some 35 MGD for peak flow events. As evidenced by this flow data and by the specific approval of Form 2 (attached) entitled City of Atlanta – Department of Public Works Confirmation of Adequate Capacity to Convey New Flows in the Wastewater Collection and Transmissions System dated July 5, 2000, the City's sanitary sewer system has adequate conveyance capacity to service the proposed redevelopment of the Atlantic Steel site.

I trust that this information will satisfy any needs for confirmation of the sewer system capacity to serve this important development.

Sincerely,

Norman A. Koplon

Norman A. Koplon, P.E.
Interim Commissioner
Department of Public Works

NAK/bah

Attachments

Xc: David Peters

City of Atlanta – Department of Public Work
Confirmation of Adequate Capacity To Convey New Flows in the Wastewater Collection and Transmission System

Building Log Number: BLC7-20000015B Zoning Classification: C-4-C

Sewer Basin: PEACHTREE CREEK Major Trunk: TANYARD CREEK INTERCEPTOR

Street Address: 1365 MECASLIN St. ATLANTA, GA 30318

Land Lot: 108, 148 & 149 District: 17TH DISTRICT

Misc. Information: ______

Applicant (Owner or Developer): JACOBY ATLANTIC REDEVELOPMENT LLC

Project Name: ATLANTIC STATION

Proposed Use: MIXED-USE DEVELOPMENT

Calculated or Estimated Sewage Flow: 1.789 MGD
(Average Daily Flows)

As a condition of authorizing the addition of sewage flow into the City's Sewer System, the Commissioner of Public Works for the City of Atlanta will certify the availability of "Adequate Capacity" to treat, transmit and convey increased sewage flow or require the completion of offsetting sewer improvements to the City's system or assure that the applicant has received all required approvals for alternative sewage disposal techniques where "Adequate Capacity" is not available. The final acceptance of submissions to other City Departments of applications for zoning or for building permits and the approval of those applications are contingent upon the satisfaction of the condition requiring completion of offsetting sewer improvements or the receipt of all approvals for alternative sewage disposal techniques. Securing either the certification of "Adequate Capacity" from the Commissioner of Public Works or of the satisfaction by the Building permit conditions is a requirement of the City Ordinances § 154 –145 entitled "Plans and specifications generally" and is consistent with the relief requested in the federal lawsuit initiated by the U. S. Environmental Protection Division, including Paragraph VIII.B.8 of the First Amended Consent Decree between the United TWT). The Consent Decree definitions of terms "Adequate Capacity" and "New Flows" are described below. The Consent Decree provisions are available at the Department of Public Works.

Approvals by other City Departments based on zoning, building permit or other applications submitted to the City after this date shall require a certification of "Adequate Capacity" in accordance with Section 154-145 of the City Ordinance. The Commissioner of Public Works will certify "Adequate Capacity" and issue a finding that no downstream problems exist. The Commissioner of Pubic Works will base this decision on information submitted by the applicant and other information regarding the condition of the City's Sewer that is available during the period of consideration of the permit application. The term "New Flows" is defined to mean new sewer service connections or an increase in flow at existing sewer service connections. The Consent Decree defines the term "Adequate Capacity" to mean a demonstration of the following:

a. Adequate treatment capacity shall be demonstrated by certification from the Commissioner of Public Works that the wastewater treatment plant which will receive flow from newly authorized sewer service connection(s) will not be in "significant non-compliance" for quarterly reporting as defined in 40 C.F.R. Part 123.45, Appendix A, at the time the wastewater treatment plant receives the flow from the Appendix A, at the time the wastewater treatment plant receives the flow from the newly authorized sewer service connection(s), and the flow predicted to occur from all other authorized sewer service connection(s) which have not begun to discharge into the collection and transmission systems.

b. Adequate transmission capacity shall be demonstrated by a certification from the Commissioner of Public Works that each pump station through which all flow from the newly authorized sewer service connection(s) passes to the wastewater treatment plant receiving such flow can transmit the existing one (1) hour peak flow passing through the pump station plus the addition to existing peak flow predicted to occur from all other authorized sewer service connection(s), and the addition to existing peak flow predicted to occur from all other authorized sewer service connections which have not begun to discharged into the collection system.

c. Adequate collection capacity shall be demonstrated by a certification from the Commissioner of Public Works that each gravity sewer line through which all flow from the newly authorized sewer service connection(s) passes to the wastewater treatment plant receiving such flow can carry the existing one (1) hour peak flow passing through the gravity sewer line plus the addition to existing peak flow predicted to occur from the newly authorized sewer service connections which have not begun to discharge into the collection system, provided as follows:

(i.) The Commissioner may hereby authorize the additional flow upon a determination that capacity is available to carry existing and new flows in the Wastewater Collection and Transmission System without causing surcharging except as otherwise provided by the CSO permit.

(ii.) The Commissioner determines the additional flow in the Combined Sewer System upon a determination that capacity is available to carry existing and new flows in the Wastewater Collection and Transmission System without causing sewage overflows during the one (1) hour peak flow condition. Where additional flows to the Combination Sewer System are predicted to cause overflows, the Commissioner may authorize additional flow upon demonstrating that a project or projects will offset the new flow by an amount greater than the estimated additional flows.

(iii.) Where the Commissioner determines that a new sewer connection or addition to an existing sewer service connection will cause the peak flow in a separate gravity sewer line to surcharge, the City will evaluate the affected sewer line(s) and determine whether the potential effect of the proposed flow requires application of the offset provisions described in subparagraph VIII.B.8e. before authorization of the "New Flows".

(iv.) For any sewershed for which the Commissioner cannot certify that "New Flows" will not cause overflows, or determines that the degree of surcharging is unacceptable, Commissioner may apply the off set program described in subparagraph VIII.B9e. The offset program will apply immediately to projects in the Nancy Creek sewer basin and to the North Fork and South Fork sewersheds of Peachtree sewer basin until further notice.

The offset program described in subparagraph VIIIB.8.e of the First Amended Consent Decree allows the authorized of New Flows by the Commissioner provided that before connection of all New Flows they are offset by improvements of the affected sewer lines, including added capacity through capital improvements, permanent removal of the sewer service connection, or infiltration/inflow reduction.

Subject to the above conditions, this project is ✓ approved ____ disapproved.

This 5th day of July, 2000

Commissioner of Public Works

Valentino Bates

Signature of City's Agent (Atlanta Sewer Group)

GEORGIA REGISTERED No. 015563 PROFESSIONAL ENGINEER VALENTINO T. BATES

CAPACITY CERTIFICATION

ASG

CITY OF ATLANTA
SEWER CAPACITY LEVEL A and/or B

BASIS OF CERTIFICATION FOR
CONNECTIONS 2500 GPD OR LARGER

Building Permit Application No.: BLC1-20000158

Address: 1365 Mecaslin Street

Date of Certification: July 5, 2000

Additional Sewage Flow: 1,791,325.7 GPD

Basis of Certification:

- Capacity Exists in the R.M. Clayton WRC
- Capacity Exists in the ______ Pump Station(s)
- Are any Capacity Related Overflows known along the Sewers between the point of new connection and the above WRC: ______ YES ✓ NO
- Proposed Connection is in a capacity–limited area: ______ YES ✓ NO
  (If yes, attach back-up)
- Capacity is available in the following trunk sewers from the new connection to the WRC based on observations, survey data or flow data:
  White Provision OF, Orme St TRK, Orme St TRK Inter, Peachtree CRK TRK Inter, Peachtree CRK TRK Relf.
- Capacity is limited in the following trunk sewers for which observations, survey or flow data is available:
  ______
  ______

CAPACITY CERTIFICATION

- Connection is in a predominately residential area and the number of lots upstream of this additional flow is less than 500 minus (The New Flow divided by 240 gpd):
  ✓ YES ______NO ______NA (If answer is no, proceed to spot check of sewers)

- Connection is in a predominately residential area and the number of lots both upstream and downstream of this additional flow to the first trunk is less than 500 minus (The New Flow divided by 240 gpd):
  ✓ YES _______NO _______NA (If answer is no, proceed to spot check of sewers)

- Spot check of flow depths at the following manholes on the indicated trunks and outfalls for which survey or flow monitoring data is not available indicate that capacity is available (attach field check records):
  ____
  ____

- Other basis of determining that capacity is available in specific sewers as follows:
  ____
  ____
  ____

- Connection is in a CS Area and additional flow is balanced by storm water detention basin: _____ YES _______NO ✓ NA (CS) or (SS)

- Other data and information relevant to certification of capacity not covered above:
  ____
  ____

- Downstream Manhole No. ______________________________

- Available Capacity can not be certified until the following conditions are met:
  ☐ Available I/I Reduction Credits are allocated by Norman Koplon
  Other: ____
  ____

Certification Reviewed By: LNCanzek
Date: 07/05/00

Revision 4 – June 9, 2000

BILL CAMPBELL
MAYOR

CITY OF ATLANTA

68 MITCHELL ST, SW, ATLANTA, GEORGIA 30335-0324
SUITE 4700, CITY HALL - SOUTH
(404) 330- 6240
FAX (404) 658-7552
email: publicworks@ci.atlanta.ga.us

DEPARTMENT OF PUBLIC WORKS

Norman A. Koplon, P.E.
Interim Commissioner

David W. Peters, P.E.
Acting Deputy Commissioner

July 6, 2000

Hilburn O. Hillestad, Ph.D.
Senior Vice President
Jacoby Development, Inc.
1000 Abernathy Road, NE
Suite 1250
Atlanta, GA 30328

Subject: Atlantic Steel Site Redevelopment
1365 Mecaslin Street. NW
Storm Sewer Outfall Alignment

Dear Dr. Hillestad:

The City of Atlanta has reviewed your conceptual point of connection (Exhibit "A") of the proposed storm sewer bypass system within the Atlantic Steel site. It is our understanding that the proposed bypass storm sewer will be designed to collect all off-site stormwater near the rear of the Institute of Paper Science and Technology (Hemphill and 14th Street), and transport the stormwater to the existing Orme Street Sewer near I-75.

Jacoby Atlantic Redevelopment, LLC will be required to meet all City of Atlanta's codes, ordinances and regulations related to the on-site stormwater systems and in particular, provide detention facilities to reduce the peak runoff from the post-developed site conditions to less than or equal to the pre-developed conditions. Additional stormwater detention capacity must be provided to off-set the net increase in sanitary sewer flow in the downstream combined Orme Street Sewer, according to Short-Term Capacity Certification Protocols.

The proposed sanitary sewer must be extended to connect directly to the Tanyard Creek Interceptor Sewer downstream of the CSO facility.

Your proposed connection to the Orme Street Sewer between the Norfolk and Southern mainline tracks and the Norfolk and Southern siding tracks as shown on Exhibit "A" meets the City's minimum requirements under the condition that this storm drainage bypass system will be properly designed by Jacoby Atlantic Redevelopment, LLC, both horizontally and vertically, to allow for future extension to a connection point downstream of the Tanyard Creek CSO Facility, said alignment and point would be as approved by the City of Atlanta. At this time, funding has not been identified for this extension.

I trust that this information will satisfy any needs for confirmation of the storm sewer system alignment to serve this important development.

Sincerely,

Norman A. Koplon

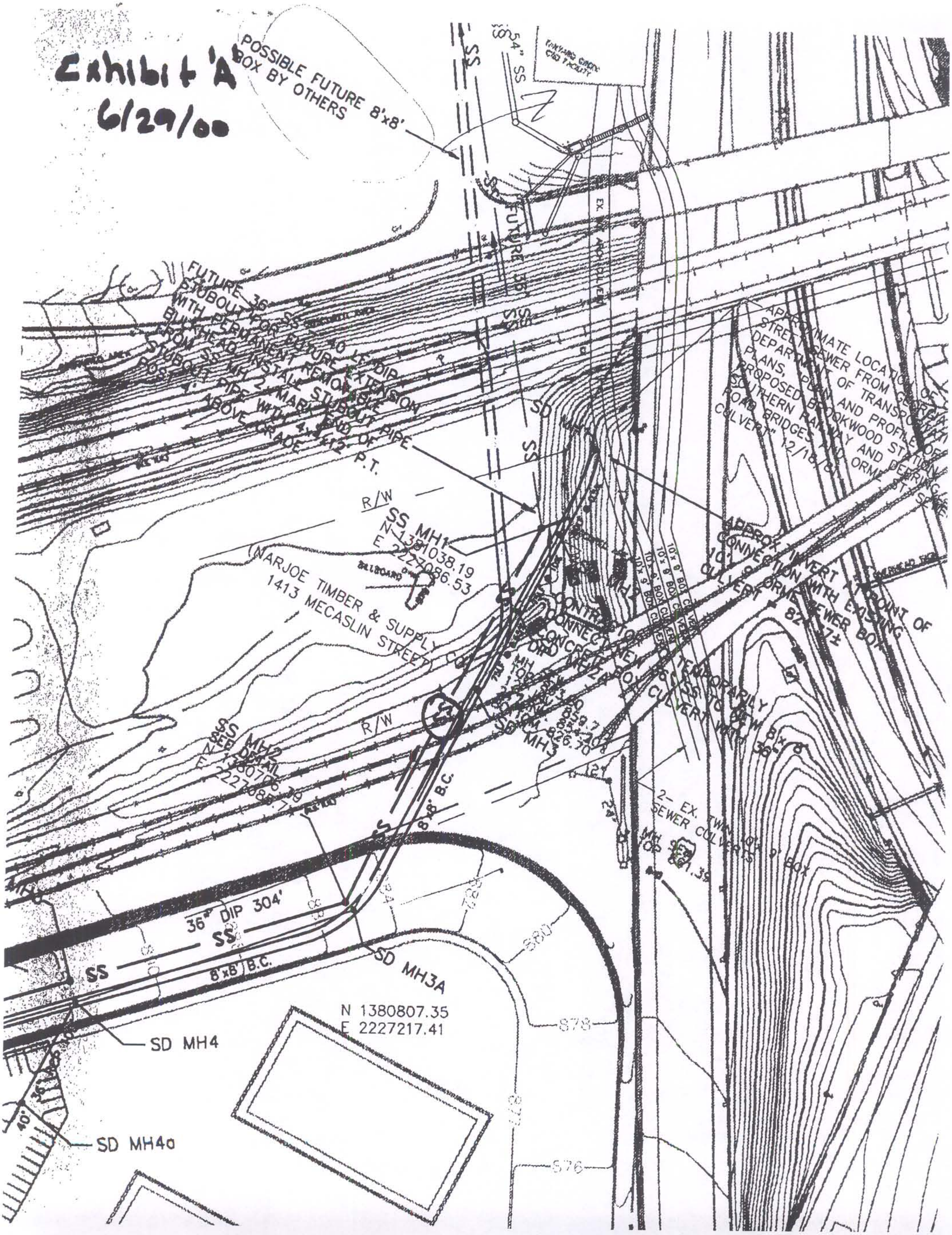
Norman A. Koplon, P.E.
Interim Commissioner
Department of Public Works

NAK/bah

Attachment

Xc: David Peters

Exhibit 'A'
6/29/00



APPENDIX I

DRAFT MEMORANDUM OF UNDERSTANDING

DRAFT

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE U.S. ENVIRONMENTAL PROTECTION AGENCY
THE GEORGIA DEPARTMENT OF TRANSPORTATION
THE GEORGIA REGIONAL TRANSPORTATION AUTHORITY
THE CITY OF ATLANTA, AND
JACOBY ATLANTIC REDEVELOPMENT, L.L.C.

TO ESTABLISH A COMMUNITY-BASED PROCESS TO STUDY THE MAGNITUDE AND CUMULATIVE EFFECTS OF ADDITIONAL TRAFFIC IN NEIGHBORHOODS ASSOCIATED WITH DEVELOPMENT IN MIDTOWN ATLANTA, GEORGIA

1. BACKGROUND

The U.S. Environmental Protection Agency, Region IV (EPA), in cooperation with the Georgia Department of Transportation (GDOT), Georgia Regional Transportation Authority (GRTA), City of Atlanta, and Jacoby Atlantic Redevelopment, L.L.C. (JAR), is preparing an Environmental Assessment (EA), in accordance with the National Environmental Policy Act of 1969 (NEPA) for the 17th Street Extension and Atlantic Steel Redevelopment Project. This EA is intended to supplement EPA's regulatory decision on approval of this project as a transportation control measure (TCM) and to fulfill applicable requirements associated with other federal actions on the Project, specifically in order that the transportation components of the project may become eligible for federal funding.

As part of the development of the EA, several neighborhoods in the project area (Ansley Park, Home Park, and Loring Heights) and the Midtown Alliance have raised concerns about traffic impacts to their communities resulting from the 17th Street Extension and Atlantic Steel redevelopment, as well as new development that is either under construction or planned to occur in the area. The communities are concerned about the cumulative impacts of additional traffic resulting from all of this development.

2. PURPOSE

To address these community concerns, this Memorandum of Understanding (MOU) establishes an agreement between the undersigned parties on conditions to be met and procedures to be followed for continued study of traffic impacts to neighborhoods in Midtown Atlanta. The undersigned parties are concerned about the localized impacts of smart growth and urban revitalization projects and seek to conserve the integrity and stability of existing neighborhoods and support overall community improvement goals.

The primary purpose of this MOU is to establish a community-based planning process that will collect specific data on future trips associated with the redevelopment of the Atlantic Steel site and other projects in Midtown Atlanta in order to study the magnitude and cumulative effects of traffic in the neighborhoods and develop and implement means of minimizing these impacts. Commitments in this MOU consist of: 1) existing commitments in the City of Atlanta zoning for the Atlantic Steel site, 2) proposed commitments in the TCM included in the Georgia State Implementation Plan, and 3) new commitments in this MOU.

3. GENERAL PROVISIONS

The following general provisions shall be conducted or followed in the course of completing commitments in this MOU.

A. The City of Atlanta, as the sponsor of the TCM, shall be the lead agency in the joint agency effort to study the effects of additional traffic in the neighborhoods and develop and implement means of minimizing these impacts. The City of Atlanta, in cooperation with the agencies listed below, shall be responsible for monitoring traffic volumes and characteristics in the project area, developing conceptual traffic calming treatments at all key entry points to the neighborhoods, and securing funding for improvements as their need becomes apparent and their application is agreed upon by all parties.

B. GDOT and GRTA shall be designated as cooperating agencies for purposes of coordinating the proposed action with all current and future federal and state transportation projects in proximity to the project area and overseeing impacts to neighborhoods as a result of the 17th Street Extension project.

C. EPA shall be designated as a cooperating agency and shall be responsible for participation in areas related to Project XL and TCM monitoring and reporting requirements.

D. JAR shall work with the agencies listed above to provide relevant information and funding, as appropriate, in accordance with existing zoning commitments and Project XL and TCM monitoring and reporting requirements.

E. The Ansley Park Civic Association, Home Park Community Improvement Association, Loring Heights Neighborhood Association, and Midtown Alliance shall be designated as concurring parties for the purposes of this MOU. Individuals from these organizations shall serve as the designated representatives for the interests and positions of the entire neighborhood and Midtown Atlanta.

4. SPECIFIC PROVISIONS

The following specific provisions shall be conducted or followed in the course of completing commitments in this MOU. Some of the specific provisions are included in other enforceable documents (e.g., zoning conditions, TCM document), and these commitments are merely summarized below:

Zoning Commitments

A. When the Atlantic Steel property was rezoned in 1998, a specific condition was included that attempted to address the neighborhood concerns related to future traffic impacts. Condition #23 of the current zoning includes a commitment by JAR to complete a transportation management plan (TMP) for all non-residential components containing strategies and implementation programs for reducing the number of single occupant vehicle trips. This represents an enforceable zoning condition by the City of Atlanta on JAR to reduce trips and better manage off-site traffic. In addition to the current zoning commitment, it is agreed that the TMP for the site will be developed with input from the surrounding neighborhoods, as represented by City of Atlanta Neighborhood Planning Unit E (NPU-E), and the Midtown Alliance.

B. When the Atlantic Steel property was rezoned, another condition was included that attempted to address specific concerns of Home Park and Loring Heights related to future cut-through traffic. Condition 4 of the current zoning states, "The developer will work with the City (of Atlanta) and Home Park to limit cut-through traffic on residential streets perpendicular to and south of 16^{th} Street by means of cul-de-sacs, speed humps, gates, control arms, and other traffic calming devices. The developer will work with the City (of Atlanta) and Loring Heights neighborhood to limit cut-through traffic on Bishop Street." This represents an enforceable commitment on behalf of the City of Atlanta and JAR to work with these adjacent neighborhoods to minimize traffic impacts in the future.

TCM Commitments

A. The TCM requires annual monitoring of the build-out and performance of the Atlantic Steel site relative to certain site design and transportation performance measures (see Section 4.2.4). Data will be collected about the nature of trips made to, from and on the site. The City of Atlanta may choose to solicit other transportation information that would be beneficial for devising strategies to reduce single occupancy vehicle trips. In addition to these commitments, it is agreed that the City of Atlanta and JAR will continue to meet with NPU-E and the Midtown Alliance as the Atlantic Steel site builds out to review the latest site plan and discuss preliminary results of the monitoring.

B. In order to respond to concerns raised about the TCM and NEPA analyses, the City of Atlanta and EPA recognized the need to better balance the regional air quality benefits with the localized impacts of additional traffic created by this project. This would require some mechanism to minimize future traffic impacts associated with build-out of the Atlantic Steel site. Therefore, a new transportation performance measure is included in the TCM that identifies an upper limit for the average daily total number of vehicle trips that would be generated by the project. If this upper limit is exceeded, JAR will participate in a Transportation Management Association that will develop alternative transportation programs to achieve the performance measure. This represents an enforceable commitment on behalf of the City of Atlanta, EPA and JAR to minimize traffic impacts in the future.

Additional Commitments

A. Atlantic Steel Brownfield Area and Tax Allocation District Number Two (BATAD #2) was created to make possible the redevelopment of the Atlantic Steel site and encourage additional development on the perimeter of the redevelopment area. More specifically, BATAD #2 promotes maximum use of alternative transportation modes to minimize congestion and creates a financing tool for transportation and other infrastructure to improve and connect major activity centers. Since certain surface streets in the adjacent neighborhoods of Home Park and Loring Heights are included in the boundary for BATAD #2, it provides a specific process and dedicated funding source for the implementation of future transportation projects, including potential traffic calming measures, in these areas. Therefore, if cut-through traffic is determined to be excessive in Home Park or Loring Heights attributed to the Atlantic Steel redevelopment or surrounding areas, it is agreed that BATAD #2 funds would be utilized to study and implement measures to limit cut-through traffic. All monies and expenditures would be managed by the Atlanta Development Authority and the City of Atlanta. For any traffic calming measures that would require changes in traffic ingress and egress at certain intersections, the City of Atlanta commits to providing temporary barricades for an agreed upon trial period to determine the effects of eliminating (or improving) access.

B. Specific to Loring Heights, two proposed transportation improvement projects have been identified as part of discussions with the Loring Heights Neighborhood Association. These are: 1) construction of an elevated pedestrian/bicycle bridge at Mecaslin Street, and 2) widening of Bishop Street between Northside Drive and Howell Mill Road. It is agreed that the City of Atlanta and JAR will continue to work with the Loring Heights neighborhood and the adjacent commercial district to further these projects, as appropriate. As stated above, it is anticipated that BATAD #2 funds would be utilized to study and implement these projects.

C. Similar commitments to that of Home Park and Loring Heights were not made to the Ansley Park neighborhood as part of the Atlantic Steel site rezoning, primarily due to the distance of Ansley Park from the Atlantic Steel site. However, the extension of 17th Street to West Peachtree Street more closely links the two areas. In addition, since Midtown Atlanta is undergoing significant changes related to new development in the vicinity of the 17th Street Extension, the project team recognized the need to develop similar commitments for the Ansley Park neighborhood. Therefore, it is agreed that the

City of Atlanta, in cooperation with EPA, GDOT, GRTA, and JAR, will work with Ansley Park to study the traffic patterns in the area and develop alternatives to minimize impacts of additional traffic on residential streets east of Peachtree Street.

D. In order to better characterize the cumulative traffic increase that is predicted to occur in Midtown and the Ansley Park neighborhood, it is agreed that JAR, with support from the Midtown Alliance and other developers in the area, will fund a comprehensive traffic study in this area. This study will attempt to determine the distribution of trips related to the Atlantic Steel development, as well as new development that is either under construction or planned to occur in Midtown. Midtown Alliance and Ansley Park will participate in the selection of a traffic consultant that will conduct the work and will work with the City of Atlanta, GDOT, GRTA, JAR, and other developers to develop the limits of the study area, time-frame and scope of work for the study. It is anticipated that this study would identify future traffic calming measures, such as cul-de-sacs, traffic barriers, speed humps, gates, control arms, and other traffic calming devices.

E. Since BATAD #2 does not extend into the Ansley Park neighborhood, this dedicated funding source for traffic mitigation would not be available for the neighborhood. Therefore, it is agreed that the City of Atlanta and GRTA will take the lead in securing potential funding sources for any traffic calming measures identified as part of the study referenced above. Potential funding sources would be based in large part on the nature of the improvements identified by the study. It is anticipated that funds would be identified and pursued through the Atlanta Regional Commission planning and funding process. Funding for these measures is anticipated to come from a variety of public and private sources. For any traffic calming measures that would require changes in traffic ingress and egress at certain intersections, the City of Atlanta commits to providing temporary barricades for an agreed upon trial period to determine the effects of eliminating (or improving) access.

F. Five alternatives were presented to the Ansley Park neighborhood to discourage cut-through traffic on 17th Street into the neighborhood. The neighborhood agreed to discuss these alternatives with the adjacent commercial district to identify which of the alternatives would be preferred. It is agreed that GDOT, the City of Atlanta, and JAR will continue to work with the Ansley Park neighborhood and the adjacent commercial district to determine a preferred alternative within the context of other potential improvements identified as part of the study referenced above.

G. Several concerns have been raised by the Georgia Historic Preservation Division (HPD), State Historic Preservation Office, the Georgia Trust for Historic Preservation, Atlanta Preservation Center, and citizens of Ansley Park, which is listed in the National Register of Historic Places, related to potential impacts of future transportation improvements to historic properties in Midtown. In recognition of these concerns, the City of Atlanta, in consultation with the Atlanta Urban Design Commission, agrees to insure that historic properties that might be affected by any proposed transportation improvements are taken into account at the earliest possible opportunity. The City of Atlanta will also consult with HPD, the Georgia Trust for Historic Preservation, Atlanta Preservation Center, and Ansley Park neighborhood in this effort.

5. DISPUTE RESOLUTION

Any dispute which arises under or with respect to this MOU will in the first instance be subject to informal negotiations between the undersigned parties. The period of informal negotiations will not exceed twenty (20) calendar days from the time the dispute arises unless that period is extended by a written agreement of the parties to the dispute. The dispute will be considered to have arisen when one party sends to the other parties a written Notice of Dispute. In the event that the parties cannot resolve a dispute by informal negotiations, the parties may invoke non-binding mediation by setting forth the nature of the dispute with a proposal for resolution in a letter submitted to a mutually agreed upon third party mediator.

6. TERMINATION

Each party to this Memorandum of Understanding may terminate it for any reason after providing thirty (30) days prior written notice to all other parties. During the intervening thirty (30) days, the parties agree to actively attempt to resolve any outstanding disputes or disagreements.

7. SIGNATORIES

Execution and implementation of this Memorandum of Understanding evidences that the signatories agree to study the magnitude and cumulative effects of cut-through traffic in the neighborhoods and develop and implement means of minimizing these impacts.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION IV

By:____ Date:__________
Name:
Title:

GEORGIA DEPARTMENT OF TRANSPORTATION

By:____ Date:__________
Name:
Title:

GEORGIA REGIONAL TRANSPORTATION AUTHORITY

By:____ Date:__________
Name:
Title:

CITY OF ATLANTA

By:____ Date:__________
Name:
Title:

JACOBY ATLANTIC REDEVELOPMENT, L.L.C.

By:____ Date:__________
Name:
Title:

CONCUR:

ANSLEY PARK CIVIC ASSOCIATION

By:____ Date:__________
Name:
Title:

HOME PARK COMMUNITY IMPROVEMENT ASSOCIATION

By:____ Date:__________
Name:
Title:

LORING HEIGHTS NEIGHBORHOOD ASSOCIATION

By:____ Date:__________
Name:
Title:

MIDTOWN ALLIANCE

By:____ Date:__________
Name:
Title:

APPENDIX J

MICROSCALE CARBON MONOXIDE IMPACT ASSESSMENT FOR THE ATLANTIC STEEL DEVELOPMENT PROJECT

Microscale Carbon Monoxide Impact Assessment for the Atlantic Steel Development Project

Randall Guensler, Ph.D.
Michael O. Rodgers, Ph.D.
William H. Bachman, Ph.D.
John D. Leonard II, Ph.D.

March 18, 1999

INTRODUCTION

Hagler Bailly Services, Inc., is under contract to the US Environmental Protection Agency to evaluate the environmental impacts of redeveloping the Atlantic Steel site in Midtown Atlanta. As part of the modeling of the development impacts, EPA required assistance in evaluating whether the proposed development would produce new CO hotspots in the surrounding neighborhood. To provide that support, the contractor assembled a microscale modeling team made up of staff from the Georgia Institute of Technology who served as project subcontractors. Drs. Randall Guensler and Michael Rodgers led the research team and directed the research and modeling tasks summarized in this document.

The Atlantic Steel project is a major urban development located in downtown Atlanta. Freeway access to the area is proposed from I-75 between Howell Mill road and 14th Street. Because the project will yield a significant increase in number of trips generated and attracted to the local area, and vehicle miles of travel on arterial roads and freeways, it is necessary to undertake an analysis of the local air quality impacts expected to result from the development. For federal agency approvals to be issued, the project must not create a violation of the ambient air quality standards for carbon monoxide. Figure 1 illustrates the proposed project location near the Georgia Institute of Technology.

The research team developed the modeling framework using a variety of off-the-shelf modeling tools. The MOBILE5a emission rate model and CALINE4 line source dispersion model served as the analytical tools of choice for this project. A geographic information system (GIS) was employed to link standard regional travel demand model results with the line source analyses. PERL scripts and FORTRAN programming was employed to link corridor travel simulation model results with the line source analyses. Data input files were provided by Hagler Bailly Services, Inc., Moreland Altobelli, Inc., the Georgia Department of Transportation, Atlanta Regional Commission, and Georgia Institute of Technology. The GIS graphics for network and model documentation were developed and links and receptor sites were coded for input to the CALINE4 model. The team reviewed aggregate model outputs and developed appropriate volumes and speeds for microscale analyses. The team also developed and documented all required meteorological parameters and emission rates for use in analyses.

The research team developed new program code to feed the outputs of a variety of vehicle activity and emission rate models into CALINE4 analyses. The new model code was non-invasive, in that the standard models were not modified. Instead, the team developed code that would allow standard models and output data files to be called and run for any desired conditions. The new code allowed the modeling team to run analyses for hundreds of roadway links and receptor sites, predicting worst-case pollutant concentrations throughout the project region. The model code predicts and displays the worst-case wind angle for each receptor in the region. Standardized graphical output reports were prepared for receptors and links, and vectors illustrate the wind direction for worst-case concentrations at receptors. The team also selected additional receptor sites for modeling based on their familiarity with the local region and their professional judgment.

Figure 1 - Atlantic Steel Project Location and Current Roadway Infrastructure

The microscale analyses were based upon the CORSIM traffic simulation model, run for the years 1998, 2005, and 2025. The CORSIM analyses were prepared by Moreland Altobelli, Inc. using system constraints provided from 4-step travel demand model runs prepared by Hagler Bailly Services, Inc (TRANPLAN model runs for the years 2000 and 2015). The microscale modeling team made no changes to any of the TRANPLAN or CORSIM runs.

The research team determined that the project is extremely unlikely to create a violation of ambient air quality standards for carbon monoxide in the foreseeable future. Analyses were developed for worst case morning and evening January conditions when traffic volumes are high, temperatures are cold, and meteorological conditions limit pollutant dispersion. All predicted peak one-hour carbon monoxide concentrations were less than 12 ppm under worst-case conditions. The one-hour carbon monoxide standard is 35 ppm. Analyses were conservative, with assumptions designed to over-predict pollutant concentrations. Given the temporal distribution of vehicle activity, decreased traffic volumes, increased travel speeds, lower emission rates, and increased pollutant dispersion after the peak hour, it is also extremely unlikely that the project will create a violation of the 8-hour standard for carbon monoxide (9ppm).

MISCROSCALE EMISSIONS MODELING

Microscale carbon monoxide impact assessment should be performed for worst-case conditions in the area of transportation projects to ensure that an adequate margin of health safety is provided for individuals expected to work or play in the area. Ambient air quality standards are expressed in units of potential personal exposure or concentration over an averaging time (35 parts per million of CO over a one-hour period, and 9 parts per million of CO over an 8-hour average period). Hence, analyses should examine concentrations expected result over 1-hour and 8-hour period in areas where the population is expected to work, rest, or play for periods in excess of one hour. For transportation projects, microscale line source dispersion models are used to predict the concentrations of carbon monoxide in areas near the implemented project.

To ensure that potential violations of ambient air quality standards are identified before a highway-related project proceeds, microscale line source dispersion models are used to predict the downwind concentrations from planned projects. To provide a margin of safety in analyses designed to predict maximum concentrations, worst-case traffic and meteorological conditions are employed. These worst case conditions are designed to provide a margin of safety for individuals who can be expected to live, work, or play in the area. If the analyses do not predict violations of ambient air quality standards under worst case conditions, the transportation system is not expected to yield air quality standard violations under typical operating conditions.

DEVELOPMENT OF TRAFFIC VOLUMES AND AVERAGE VEHICLE SPEEDS

As more and more vehicles use the roadway, traffic volumes (in vehicles/lane/hour) increase rapidly. When traffic volumes begin to approach 2100 to 2300 vehicles/lane/hour on freeways, travel speeds begin to drop rapidly. Roadway capacity (about 2400 vehicles/lane/hour on freeways) is achieved at about 35 mph. If travel demand surpasses roadway capacity, traffic flow enters what is known as congested flow conditions. Traffic densities continue to increase, vehicles begin stop-and-go driving conditions, and travel speeds drop so rapidly that traffic flow cannot be sustained at capacity levels. As congestion worsens, traffic flow drops and emission rates per vehicle-mile of travel increase. Similar relationships also exist on arterial roadways. Traffic volume estimates for roadways in microscale analyses are usually based upon either the outputs of traditional 4-step travel demand models or upon monitored traffic data (with applied growth factors). Average speeds are usually based upon post-processed travel demand model outputs, traffic simulation model outputs, or generalized relationships for an urban area based upon empirical studies.

Downwind concentrations from a roadway source are in direct proportion to the traffic volumes and vehicle emission rates. Doubling the traffic volume or source strength will roughly double the predicted increase in emissions concentrations (relative to background concentrations) under any given set of meteorological conditions. Because the net mass emissions from a roadway are a function of traffic volume and emission rate, it is important that both parameters be represented as accurately as possible.

This section outlines the methods employed to estimate the traffic volumes and average speeds for the roadway links analyzed in each of the present and future Atlantic Steel scenarios analyzed. The prime contractor provided model output results from two different transportation modeling approaches: 1) TRANPLAN, a standard four-step travel demand model used to predict future traffic conditions at the regional level, and 2) CORSIM, a simulation model designed to analyze traffic impacts at the corridor level. Hagler Bailly Services, Inc. prepared TRANPLAN model runs for the years 2000 and 2015. Moreland Altobelli, Inc. used the TRANPLAN outputs to prepare CORSIM traffic simulation model runs for the years 1998, 2005, and 2025. The microscale modeling team was tasked with estimating the carbon monoxide impacts of the future development using the detailed traffic simulation model outputs. The following subsections describe how each data set was handled to prepare input files for microscale analyses.

TRANPLAN Traffic Volumes and Speeds

The microscale modeling team prepared a spatial representation of the TRANPLAN network and developed a vehicle activity data set that could be used to verify the outputs of the traffic simulation model (which would in turn be used in CALINE4 analyses). The team proceeded as follows:

1. The binary loaded-network TRANPLAN files for the years 2000 and 2015 Atlanta were converted to ASCII loaded-networks using the TRANPLAN 'netcard.exe' utility program.
2. The ASCII network files were converted to an ARC/INFO (GIS product by ESRI) file, using custom software developed by Georgia Tech, and subsequently projected to Stateplane coordinates (NAD 1983, Meters, Georgia West).
3. The two network files were joined to create a single GIS file containing both 2000 and 2015 estimated speeds, capacities, and daily volumes. The network spatial structure was verified (the files were identical in spatial structure except for the addition of links representing proposed post-project infrastructure changes). The 2015 network contained new links that dump project-generated trips on to Northside Drive on the west, State Street to the south, and Spring Street to the east.
4. The combined network file was then 'conflated' to a Georgia Department of Transportation spatially-accurate (1:24,000) road database. 'Conflation' is a term used to describe the transferring of attributes from one line file to another. The TRANPLAN network is designed for correct link connectivity, not for accurate spatial representation (shape points were not included between network connections). For accurate CO modeling, it is important to accurately transfer the estimated travel characteristics to an accurate spatial road network.
5. Coordinates for each node were assigned within ARC/INFO and written as attributes to each road segment as 'from' and 'to' coordinates.
6. A custom GIS software routine developed by Georgia Tech assigned roadway widths (traveled way). The 1994 Digital Ortho Quarter Quadrangle aerial photos were analyzed to

provide roadway traveled way data and an additional 3 meters was added to each side of the lane to establish the appropriate CALINE4 mixing zone widths.

7. The final road database containing ~200 road segments was written to a DBASE IV file. For each roadway link, the file attributes included x, y coordinates for link origin and destination, link capacity, daily traffic volume, peak hour average speeds, and roadway width. An excel spreadsheet was created from the database file so that peak-hour traffic volumes could be inserted and an ASCII output file appropriate for CALINE processing could be developed.
8. Daily traffic volumes were converted to peak hour volumes using information obtained from the Atlanta Regional Commission (Bachman, 1997). Peak hour factors for 7am and 7pm were set at 18% and 10% of daily traffic volumes, respectively (see Figure 2). These values should overestimate traffic volumes during these periods. For freeways, arterials, connectors, and local roads, when demand exceeded capacity, capacity volumes were assigned for the hour (it is impossible to process more traffic through the link than the capacity level). For freeways, the hourly volumes at capacity are probably underestimates. The research team believes that greater traffic volumes than predicted by TRANPLAN can be handled without significant drops in travel speed (capacity appears underestimated at 35 mph). Furthermore, the average speeds predicted by the TRANPLAN model are significantly lower than actually occur on the freeways. Hence, the microscale modeling team does not believe that the TRANPLAN model outputs should be used directly in the CALINE analyses. The assumed low average speeds significantly overestimate emission rates and will result in much higher predicted downwind concentrations than would occur at this site.
9. Each step was reviewed and verified to identify potential process errors.

TRANPLAN link coordinates, traffic volumes, and average speeds are contained in Appendix 1. An example of the loaded network can be seen in Figures 3 and 4, which provide coded link numbers and relative traffic volumes (by line thickness).

Figure 2 - Temporal Distribution of Onroad Activity

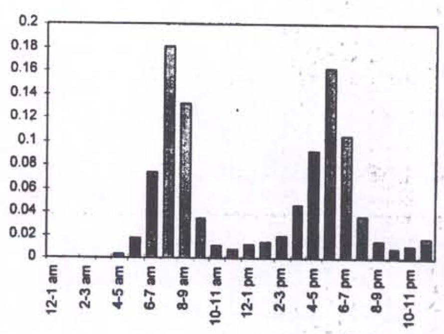


Figure 3 - Loaded TRANPLAN Network

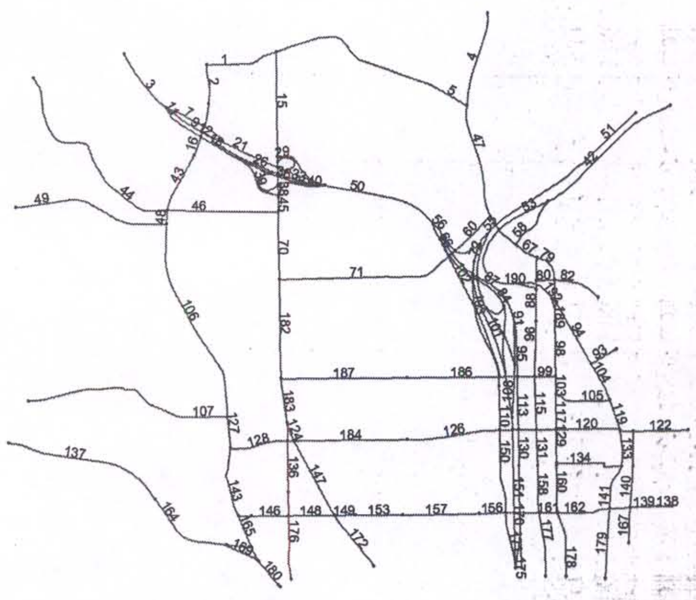


Figure 4 - TRANPLAN Network Loaded with Traffic Volumes (line width indicates relative traffic volume)

TRANPLAN Modeling Limitations

The TRANPLAN network for 2015 post-development suggested that 37,252 trips would be generated over a 24-hour weekday period. The majority of these trips were assigned to a link that heads west to Northside drive. Only 35% were assigned to the link that heads across I-75/85 to Spring Street, and 0% were assigned to State Street that heads south. Further, the assigned speed for the new road segment headed towards Northside Drive is greater than 70 mph, while the surrounding links are all in the 30 mph and less range. These coding issues may result in overestimated congestion levels on some links and underestimated congestion levels on other links.

Average travel speeds on most local roads have not been verified with an independent data source. Current conditions could be validated through monitoring of local traffic in the morning and evening peak hours using laser guns.

The TRANPLAN network shows the freeway overpass at 16th street rather than 17th street as shown in the CORSIM analyses. This will not impact traffic volume and speed predictions, but may impact the spatial allocation of emissions in microscale air quality modeling.

Moreland Altobelli, Inc. used the TRANPLAN outputs to prepare inputs to the CORSIM traffic simulation model developed for the study area (described in the next section). The TRANPLAN predictions serve as input volumes to simulation sections. The accuracy of the input volume transfer from TRANPLAN to CORSIM was not analyzed on a link-by-link basis by the microscale modeling team. As will be discussed later, there is reason to believe that the total input volumes are low. However, as will also be discussed later, the microscale modeling team does not believe that the lower traffic volumes will result in different conclusions with respect to compliance with CO standards.

CORSIM Traffic Volumes and Speeds

FHWA's CORridor SIMulation (CORSIM) model is a microscopic traffic simulation model used to predict the interaction of traffic on a computerized version of the roadway network. A network of interacting links (or roads) is coded in the model and traffic flows in and out of the network boundaries (typically taken from travel demand model outputs) are provided as input model. The CORSIM model then simulates the interactions of vehicles with network controls (signal timing) and with other vehicles (using driver behavior, car following, and lane changing theory). CORSIM combines the NETSIM model for surface streets and the FRESIM model for freeways. Traffic assignment to various routes through the network is based upon user-optimization assumptions (that users try to minimize their travel time). CORSIM is typically used to evaluate the potential traffic impacts of geometric design and signal timing improvements. A variety of other transportation strategies (such as rapid accident detection and response) are analyzed using CORSIM. More information on the CORSIM model can be found at http://www.fhwa-tsis.com/.

Moreland Altobelli, Inc., developed CORSIM modeling runs for the years 1998, 2005, and 2025. The CORSIM model employs a spatial representation of the roadway network. As such, the x, y coordinates of all roadway links are contained in the CORSIM input files provided for the various scenarios by Moreland Altobelli, Inc. The *TRAFVU* software package allows users to view and print CORSIM network links and model outputs. Figures 5 and 6 are the *TRAFVU* network prints for the baseline (1998) and future development (2005 and 2025) years. Notice that the future development years include the 17th street bridge crossing and coded freeway ramp system.

Initial traffic volumes into the network were based upon travel demand model outputs that were provided to Moreland Altobelli, Inc. by Hagler Bailly Services, Inc. The microscale modeling team double-checked these input files to ensure that proper coding was employed. The input data and assumptions were reviewed for accuracy and reasonableness for the existing conditions scenario (1998). Model output was also examined to ensure that the model had been calibrated correctly. Additionally, future scenarios (2005 and 2025) were analyzed for reasonable output.

Figure 5 - CORSIM Year 1998 Network

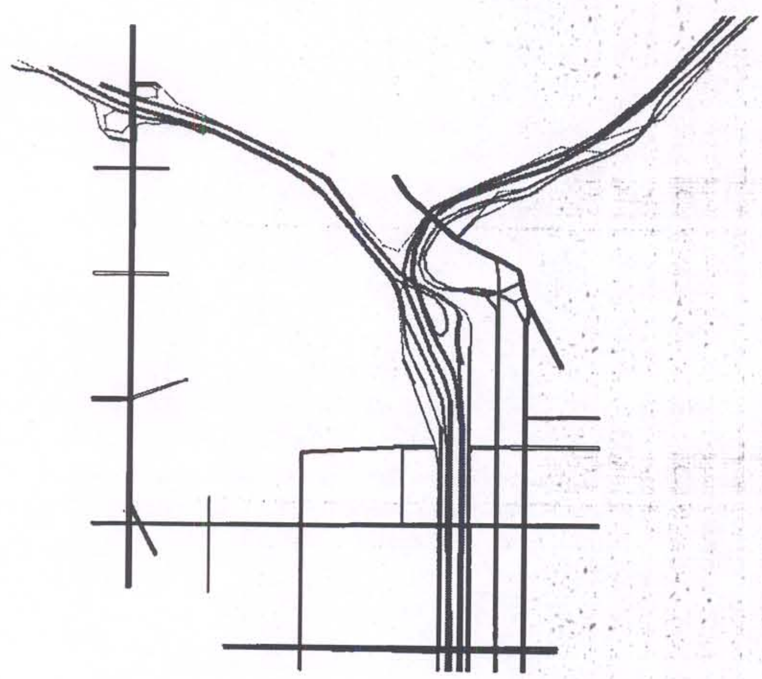
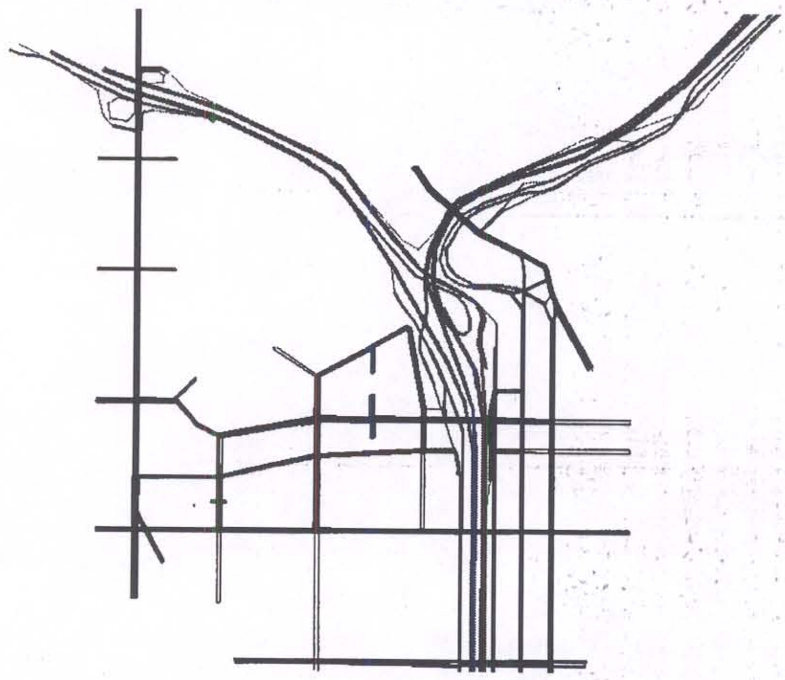


Figure 6 - CORSIM Year 2005 and 2025 Networks



Network Coding

The Atlantic Steel Development CORSIM files were reviewed for network accuracy. The base year transportation network (1998) was compared against a geographic information system (GIS) map for spatial accuracy. The GIS database map is based on a geometrically corrected TIGER file street database. The network was examined for various spatial details. First, the CORSIM network was compared against the GIS database to ensure that no discrepancies existed between the two. All major and most minor roads were represented in the CORSIM network and no significant deviations from the street database were apparent. The lengths of several non-freeway network links were compared against the street database and all actual and network lengths were found to be in agreement. One-way streets were checked to ensure that they were indeed coded as one-way streets. The only major one-way streets are Spring Street, a major southbound arterial, and West Peachtree, a major northbound arterial. Both were coded consistently.

The coded geometry of several intersections in the study network (number of lanes, presence of turning lanes and general intersection geometry) was compared to field data. All of the intersections reviewed were represented correctly in the CORSIM network. The only discrepancy is representation of grades. No grades were noted in the coded network as part of each link's geometry. In reality, a 9% grade is found on the N/S streets along Northside drive between Bishop and Bellemeade. Grades of varying degrees are found on other intersection approaches in the study area but were not accounted for in the model. Grade would affect free-flow speed and capacity. However, it is unlikely that this will have a significant impact on volume or speed outputs.

Although, there was no way to examine the geometric and spatial accuracy of the future scenarios, they were viewed TRAFVU, to make sure no obvious errors in the geometry of the network or unreasonable activity were present. No significant problems were noted and the spatial representation provided by Moreland Altobelli, Inc., is assumed to accurately reflect the project design.

CORSIM defaults were used for vehicle types, lane widths, and various other factors. No evidence suggests that this will negatively impact model output. The network was also viewed in TRAFVU and checked to identify potential visible errors, such spillback on links where spillback would not be expected, vehicles traveling the wrong way on one-way links, etc. No visible problems were noted.

Freeflow speeds for non-freeway links appear reasonable. All non-freeway links are coded between 30 and 40 mph. This assumption is reasonable given that higher volumes and short to medium distances between traffic signals characterize all of the links.

A freeflow speed of 55 mph was specified for all freeway segments. Given the excessive speeds noted in the Atlanta area, the freeflow speed assumption is low. A more reasonable estimate of freeflow speed would be around 70 mph. If traffic were flowing at freeflow speeds, the CO emissions would be underestimated using 55mph maximums (given the nature of speed-emission relationship in MOBILE5a). Fortunately, the conditions of concern in microscale modeling are morning or evening peak hour conditions when traffic flow is high and average speeds are significantly below freeflow values.

Nevertheless, improper coding of freeway link freeflow speeds also affects the CORSIM average speed predictions under more congested conditions. The impact is complex, because CORSIM employs car-following theory. That is, a car attempts to accelerate to freeflow speeds until it encounters a vehicle moving at slower speeds, at which time the car follows the lead vehicle. Hence, impacts of freeflow coding cascade through the system in a nonlinear fashion. The effects of freeflow coding differences will vary from link to link.

Signal timing cycle lengths were examined for several intersections and compared against actual signal timing collected in the field. Field data were collected either in 1997 or 1998. Table 1, below, compares actual and coded network timings. The green time for the major approach is shown as well as the signal cycle. Most of the timing plans are similar except for West Peachtree and 14th street, which has a much shorter green for the NB movement than that taken in the field. For the PM peak period, the Northbound approach has significant volumes since it is a 5 lane one-way segment. A shorter than actual green time for this result may result in reduced capacity, reducing travel speeds. This assumption will likely increase system emission rates and over-predict emissions from this link.

A potential flaw in the CORSIM network is that no pedestrian activity was indicated. Pedestrian activity exists in the downtown section including areas east of I-85 around 14th and Spring, 10th and Spring, 14th and West Peachtree, and 10th and West Peachtree. Pedestrian activity may influence capacity and average speeds. Pedestrian activity could be significant for both present conditions and the future development since the development is being designed to encourage pedestrian activity. Sections of 10th Street near Georgia Tech are also expected to experience pedestrian activity since a number of students park in the Homepark area and then walk to campus across 10th Street. In other portions of the study area, marginal pedestrian activity is expected including segments along 14th Street and Northside Drive.

Table 1: Comparison of Actual and Coded Intersection Timing

Intersection	Time Period	Green Time		Cycle Length	
		Field	CORSIM	Field	CORSIM
Spring & 16th Street SB	AM	40	60	80	90
West Peachtree & 14th NB	AM	70	40	100	120
Spring & 14th Street SB	AM	68	50	100	120
Northside & Deering NB & SB	AM	45	50	90	100
Northside & Deering NB & SB	PM	45	50	90	100

Average Speeds

CORSIM output files were examined to determine whether average speed estimates were reasonable. The existing scenario (1998) data were checked and links with speeds lower than 12 mph flagged. Once links with low average speeds were identified, their locations were compared with the network map to determine whether low reported speeds made sense logistically for these locations. All links identified as such, were either in locations were congestion was likely to occur or along links with short distances between traffic signals. These factors would be expected to cause lower than normal speeds.

CORSIM output for the AM and PM periods of the two future scenarios were also examined for excessively low or high speeds. Average speeds for non-freeway and freeway links were calculated by time period and compared across scenarios. Results are presented in Table 2. Average speeds vary only marginally from existing conditions. The only significant change is speed is that the PM average freeway link speed decreases from 39 mph in 1998 to 33 mph in 2005. The average speed then increases to 37 mph for the 2025 scenario (but should probably have decreased).

Table 2: Average Speeds by Link Category and Time Period

Scenario	Freeway Links		Non-Freeway Links	
	AM	PM	AM	PM
1998	40 mph	39 mph	19 mph	17 mph
2005	41 mph	33 mph	19 mph	18 mph
2025	39 mph	37 mph	17 mph	16 mph

The CORSIM analysis results did not depart significantly from expected average speeds. The microscale modeling team analyzed data that were collected by the Georgia Department of Transportation along the freeway corridor in question for the months of January and February 1999. The data are collected and processed using Autoscope machine vision systems in the Atlanta Traffic Operations center. Average freeway speeds are recorded in five-minute bins for each station along the route between the Brookwood interchange and North Avenue. The average of the minimum reported freeway speeds (in 5-minute bins) from all I75/85 Stations was calculated from the data. The average of the minimum reported freeway speeds along the northbound route was 50 mph between 6am and 7am, and 43 mph between 7am and 8am. The average of the minimum reported freeway speeds along the southbound route was 50 mph between 6am and 7am, and 31 mph between 7am and 8am. Given the serious congestion levels in the Atlanta region, these speeds might appear high to someone living outside the region. It is important to remember, however, that the most serious traffic bottlenecks in the region already restrict traffic flow into these freeway segments. Hence, traffic in this central freeway segment moves fairly smoothly unless there is a freeway incident that spills congestion queues into the study area. The CORSIM average 1998 average speeds may be a few mph higher than expected, but would not significantly impact the resulting microscale analyses.

Arterial Volumes
After checking for input errors, model output was examined to ensure that the model had been calibrated correctly. Actual turning movement counts were available for several intersections in the study area collected during a Georgia Tech research project between 1997 and 1998. After calculating approach arterial volumes from field data, actual versus model output arterial volumes were compared. Details are provided below in Table 3. As shown, volumes are comparable. The differences that exist may be attributed to daily fluctuations in traffic volumes. The only location of concern is West Peachtree at 15th street. A field data count yielded an hourly volume of 336 vehicles/hour (vph) for the morning peak period. The coded link for the same area in the CORSIM network was assigned a volume of 1896, a difference of 464%. West Peachtree is a 5-lane roadway heading north out of the downtown area. A volume of almost 2000 vehicles per hour seems unlikely for morning traffic in the reverse direction of peak traffic flow. With the exception of West Peachtree and 15th, the model appears to be giving reasonable volume outputs. However, the high CORSIM output volumes for West Peachtree represent a very conservative assumption in an air quality analysis which will over-predict emissions and pollutant concentrations.

Table 3: Comparison of Field and Network Coded Traffic Volumes

Location	Time Period	Field Counts	CORSIM	Percent Difference
Northside & Deering NB	AM	756	837	11%
Northside & Deering SB	AM	1446	1452	>1%
Northside & Deering WB	AM	214	198	-7%
Spring & 14th Street SB	AM	2105	2010	-5%
Spring & 16th Street SB	AM	1898	1956	3%
West Peachtree & 15th NB	**AM**	**336**	**1896**	**464%**
Northside & Deering NB	PM	1530	1734	13%
Northside & Deering SB	PM	1116	1068	-4%
Northside & Deering WB	PM	332	321	-3%
West Peachtree & 10th EB	PM	1396	1107	-21%
West Peachtree & 10th NB	PM	2164	2598	20%
West Peachtree & 10th WB	PM	928	1257	35%

Freeway Volumes

The freeway links tend to impact the CO concentration at any receptor site in the project area to a greater extent than arterials and local roads. Hence, the microscale modeling team compared the hourly traffic volumes predicted by CORSIM to those actually experienced in this corridor. To assess the adequacy of freeway traffic volume estimates, the microscale modeling team contacted Mark Demidovich of the Georgia Department of Transportation Traffic Operations Center. Although average speeds for the freeway links of concern were already available to the team via Internet access to a proprietary database, GDOT does not maintain a similar volumes database with public access. Mr. Demidovich provided traffic volumes and average speeds for the North Avenue station for December 8, 1998.

The monitored traffic volumes appear to be much higher than are currently being predicted by the CORSIM model. The maximum predicted CORSIM traffic volume at any station was 7,700 vehicles per hour (at about 22 mph average speed) at North Avenue. Traffic monitoring data indicate that the system handles more than 13,000 vehicles per hour at about 40 mph at this station. This analysis indicates: 1) the CORSIM entry volumes (feeding into the simulation) are currently set too low, and 2) Atlanta drivers are behaving akin to Los Angeles drivers with respect to gap acceptance. For the CORSIM model to predict the volumes and speeds correctly for this area, significant model calibration needs to be performed. As indicated earlier, the average speeds predicted by CORSIM are conservative and provide higher emission rates than would the higher speed estimates from monitoring data. However, the CORSIM traffic volume predictions on the freeway may be underestimated by as much as 60%.

CORSIM Model Shortcomings

The calibration findings indicate that the sponsor should undertake improved CORSIM modeling for the project. Improvements should be made to: 1) simulation entry volumes (based upon actual counts), 2) free flow speed settings, 3) pedestrian interactions, and probably 4) driver/vehicle aggressiveness settings (used in car-following equations). The 1998 CORSIM model runs should then be validated using current ground counts and speeds at various stations.

Use of CORSIM Traffic Volumes and Speeds in Microscale Analyses

Because the transportation network is spatially coded into the CORSIM input file, the x, y coordinates of the roadway links can be readily identified. A Perl script was developed to process the various CORSIM input files for each year and pull from the input files all relevant roadway link parameters. The CORSIM output files contain the predicted traffic volumes and average speeds for each network link that result from the simulation run. Another Perl script was developed to process the output files for these variables. Unfortunately, roadway widths are not employed in CORESIM modeling and are not contained in either the input nor output files. Because matching the roadway geometry of the TRANPLAN and CORSIM data files was too resource intensive (a conflation process would need to be employed) roadway widths for CALINE analyses were based upon the number of lanes multiplied by standard lane width parameters for various roadway types. An additional 3 meters was added to each side of the lane to establish the appropriate CALINE4 mixing zone width.

DEVELOPMENT OF MOTOR VEHICLE EMISSION RATES:

The approved emission rate model for use in microscale transportation analyses is the US Environmental Protection Agency's MOBILE5a model. Motor vehicle emission rates are a function of vehicle fleet characteristics, onroad operating conditions, environmental conditions, fuel characteristics, and the implementation of various regional motor vehicle emissions control programs (such as inspection and maintenance). The MOBILE5a model provides the modeling tool to predict changes in vehicle emission rates (grams/mile) as a function of changes in these conditions over time and across regions. The MOBILE5a model is designed for use in regional modeling efforts, but is also the only approved model for use in estimating vehicle emission rates along transportation corridors and for microscale air quality impact assessment.

Emission rates were developed by the microscale modeling team by running the MOBILE5a model for each scenario, using standard MOBILE5a input files provided to by USEPA regional staff. These standard files are maintained by the region and reflect Atlanta-specific vehicle fleet characteristics, fuel specifications, and inspection and maintenance program requirements. Ambient temperatures and onroad vehicle operating conditions that applied in each of the modeled scenarios were developed based upon review of local environmental parameters (discussed in the next section) and review of the travel demand and simulation model runs (discussed in the previous section). The modification of each local area parameter for use in the scenarios is summarized in Appendix 2. To predict emission rates for various average speeds, each scenario was modeled in MOBILE5a in average speed increments of 2.5 mph. Appendix 3 contains the average speed vs. vehicle emission rate matrices for each scenario, ad were used to provide emission rate inputs to microscale dispersion model runs.

DEVELOPMENT OF METEOROLOGICAL PARAMETERS:

The dispersion modeling requires inputs of realistic "near worst case" meteorological parameters to determine if violation of National Ambient Air Quality Standards (NAAQS) are likely. These inputs include wind speed and direction, temperature, humidity and mixing height. Since the most likely violations are of the carbon monoxide standard during the winter months, January conditions were selected for the analysis. Because no environmental data are available for the property itself, the research team employed data from the best available sources. Each data source was selected to represent local conditions and proximal data sources were employed whenever possible. In some cases, extrapolations account for seasonal differences or differences in topography between the sampling site and the property in question. The parameters selected for use in the analysis are provided in the various tables included in this section. The data sources, extrapolations, and impacts on CO modeling are also discussed.

Wind Conditions:

To assess the wind speed conditions at the site, meteorological data were analyzed from two urban Photochemical Assessment Monitoring Sites (PAMS) sites in the Atlanta area. The Tucker site is located in suburban northeast Atlanta. The South Dekalb site located east Atlanta. Data were considered for January conditions from 1995 to 1999 for both sites. Both sites were located within 20 km of the Atlantic Steel property and should be useful for assessing meso- and synoptic-scale wind conditions. More localized data are available from short-term studies on the Georgia Tech campus (~3 km south of the site) during the summers of 1992, 1995 and 1996. The Georgia Tech data were compared to the Tucker and South Dekalb data for the same time periods to assess the importance of smaller scale circulation patterns.

Mean Wind Speed
As expected for an urban site located away from urban canyons, the Georgia Tech data show slightly lower mean and median wind speeds for comparable periods than do the other sites. Because data from both PAMS sites indicate wind speeds at or below 1 meter/sec for more than 10 % of the time during the January period, the lower limit of accuracy for the dispersion model (1 m/sec) was used for all model runs.

Wind Speed Variability
Wind speed variability is derived from observation of the standard deviation of wind speeds over short (seconds to minutes) while the mean winds are derived from hourly averages. These data are considered unreliable if the wind speed is persistently low and at or near the limit-of-detection of the measurements. Thus for modeling purposes the standard deviation of the wind measurements is assumed to be 50% of the measurement (or modeling) limit or 0.5 meters/sec. This value is somewhat higher than that measured at the Tucker site of 0.26 meters/sec as would be expected due to the large number of "zero" reading at the Tucker site.

Wind Direction:
Wind direction data are those from the Tucker and South Dekalb PAMS sites and are for reference only since the dispersion model calculates a worst-case wind direction.

Wind Direction Variability:
Data from the Tucker PAMS site for January 1995 and January 1997 (when high time resolution data are available). These indicate a standard deviation of wind direction of 27.4 degrees for a five-minute averaging period based on one-second data. Since this is quite close to the default value or 25 degrees, the default value was used.

Wind Variable Summary:
All of the parameters in Table 4 are one to five percentile worst-case, except wind direction (median). Since wind speed is <1 m/sec for more than 10 % of the time during January the lower limit of model accuracy (1 m/sec) was used.

Table 4 - Summary of Site-Specific Wind Conditions for CALINE4 analyses

Time of Day (24 hr clock)	Wind Speed (meters/sec)	Wind Direction (degrees)	Mixing Height (meters)	Wind Variability (Std. Dev.)
1:00	1*	320	20	25 degrees
7:00	1*	285	22	25 degrees
13:00	1	235	160	25 degrees
19:00	1*	270	36	25 degrees

* A minimum wind speed of 1 meter/second is assigned due to dispersion model limitations

Temperature and Humidity

The temperature data employed in the analyses are the NOAA climatological data for "mean coldest January day" for Atlanta, GA scaled to the mean diurnal temperature profile recorded at the Tucker PAMS site and rounded to the nearest degree. Relative humidity data are the 90'th percentile for non-saturated (fog) conditions for the Tucker, GA PAMS site from 1992-1997. Table 5 summarizes the appropriate ambient temperatures used in MOBILE5a and CALINE4 modeling.

Table 5 - Summary of CALINE4 Input Temperatures

Time of Day (24 hr clock)	Temperature (Celsius)	Relative Humidity*
1:00	-10	0.9
7:00	-10	0.9
13:00	-3	0.65
19:00	-5	0.75

Dispersion Mixing Height

Mixing heights were estimated from Southern Oxidants Study data, scaled for seasonal differences. During studies in August-September 1991, July-August 1992, September 1995 and July-August 1996 approximately 65 complete tethersonde profiles of wind, temperature and dew point were recorded on the Georgia Tech campus approximately 3 km south of the site. Based on these profiles, mean boundary layer breakup time was estimated to be two hours after sunrise (~8:30 am in January) with 80% of full boundary layer height achieved 3.5 hours after sunrise (~ 10 am in January). The data periods used to evaluate each time period are given in Table 6 below.

Table 6 - Mixing Height Seasonal Adjustments

Reference Time	Profile times (actual measurement periods)	Mean Mixing Height (meters)	Seasonal Adjustment	Model Mixing Height (meters)
1:00	22:00-6:00	25	0.78	20
7:00	6:00-9:00	28	0.78	22
13:00	9:00-18:00	160	1.0	160
19:00	18:00-22:00	36	1.0	36

Because the primary data sources occur in July-September and the evaluation period is for January, seasonal adjustment is required. Adjustments are made to the 1:00 and 7:00 samples based on the ratio of the mean mixing height for February and May from a rural site in west-central Georgia (Garrettson, 1997) collected by the same tethersonde equipment. Since these measurements were made only during the evening and early morning, no corrections are applied to the daytime values. While this may represent some over-estimate of mixing height during this period, it has little practical significance due to the much lower mixing height predicted for the early morning period. These nocturnal and early morning mixing heights (20 and 22 meters) are in generally good agreement, however, with early estimates by Rodgers (1986) of between 16 and 30 meters for December conditions near the same site.

Surface Roughness

Surface Roughness was estimated using the procedure of Oke (1987) and Garratt (1977). The Logarithmic tethersonde wind profiles from the Georgia Tech campus were extrapolated to zero wind speed to produce a zero wind height. Based on this procedure, calculated zero wind heights on the Georgia Tech campus ranged from ~0 to 51 meters with an average of 18.2 meters. Zero plane displacement at the measurement site (defined as 2/3 of mean effective canopy height (Sutton (1953)) is between 14.5 and 16.8 meters, yielding an estimated surface roughness of between 1.4 and 3.7 meters. In 1991, additional data were collected at another nearby site as part of the Southern Oxidants Study Atlanta Pilot Study a tall scaffold (h=25 meters). At this more open site data were collected at five elevations (1, 3, 6, 10 and 25 meters). These data yield an estimated zero plane height of 2.9 meters with a zero plane displacement of approximately 1 meter. Surface roughness can also be inferred by empirical relationships to Mean Effective Canopy Height (MECH). Guidance from the CAL3QHC model suggests a roughness length of 15 % of MECH. Assuming that the final site plan will be dominated by buildings of height H=50 meters with an average separation (D) of 125 meters (i.e. H/D=0.4), we calculate a MECH of ~25 meters (Oke, 1978). This would correspond to a surface roughness of 3.75 meters. In practice there is likely to be a zero plane displacement of 10-15 meters and thus a surface roughness of 1.5 to 2.25 meters. These results are summarized in Table 7.

Table 7 - Estimates of Surface Roughness Length

Method	Zero Wind Level (meters)	Zero Plane Displacement (meters)	Surface Roughness (meters)	Range (meters)
Tethersonde	18.2	15.6 (14.5-16.8)	2.6	1.4-3.7
Tower	2.9	1.0	1.9	1.6-2.2
Semi-empirical	25 (MECH)	10 (0-18)	2.3	1.1-3.8
AVERAGE			**2.3**	**1.1-3.8**

Based on these results the surface roughness used in the dispersion calculations has been set to 2.3 meters (230 cm).

Background CO Concentrations

Ambient measurements of CO are very limited in the vicinity of the development site. The closest CO measurements to the site were conducted during the Georgia Tech/U.S.EPA Olympic Measurement program near the Olympic Natatorium on the Georgia Tech Campus preceding and following the Olympic games during the summer of 1996. (Measurements during the Olympics were not analyzed as being unrepresentative). These measurements give an average CO concentration of 1.27 ppmv (Grodzinsky, 1998; Pearson, J.R., 1999). These data were scaled to the ratio of winter to summer CO concentrations recorded at the Tucker PAMS site (1.6x) to yield an estimated downtown background concentration of approximately 2.0 ppmv.

MODELING PROCEDURE AND RESULTS

One set of modeling analyses, based upon a traffic simulation model, was completed for the years 1998, 2005, and 2025. For each analysis set, separate runs were made for morning and evening peak conditions (7am and 7pm). Hence, six separate scenarios are reported.

To provide the graphical output for this project, each scenario analysis requires the computation of pollutant concentration contributions from each roadway link (350+) to each receptor site (a grid of 400 receptors) for 10 wind angles (36-degree increments). Thus, each scenario run involves more than 1.4 million dispersion computations. As such, the modeling routine is computationally resource intensive. Each raw scenario requires approximately 54 hours of analysis before predictions can be plotted.

The research team developed a link screening criteria based upon pollutant flux (grams of carbon monoxide per square meter of pavement). All links contributing less than 0.5 grams/hour/meter^2 of pavement were eliminated from the analyses because they do not significantly contribute to ambient pollutant concentrations at receptor sites. This assumption was validated by running one of the modeled scenarios using only those links with a pollutant flux of less than 0.5 grams/hour/meter^2. The results demonstrated that the net contribution to pollutant concentration at all receptor sites was less than 1ppm. The analytical results indicate that a pollutant flux minimum may be a good criteria to include in tools that can be used for rapid screening analysis of proposed projects. The research team is undertaking additional research in this area to develop an optimized cutpoint for use in such analytical tool development.

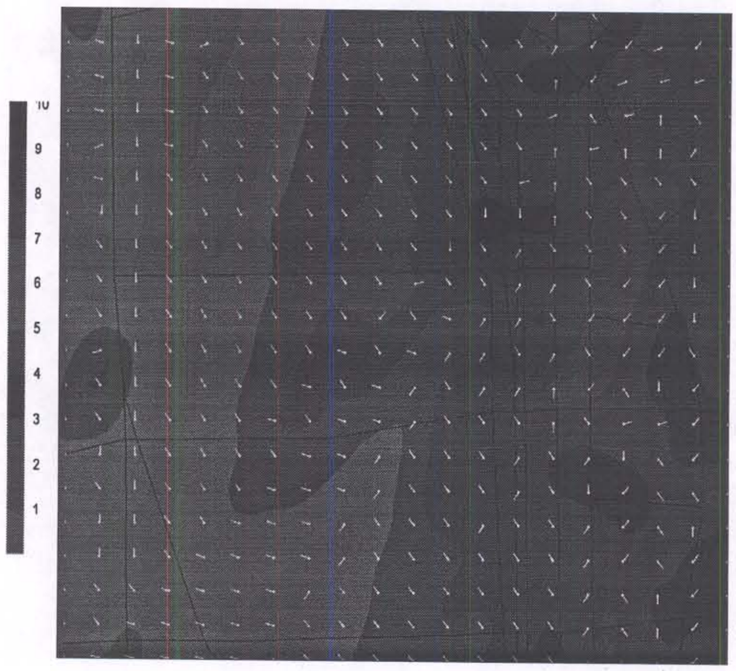
To improve the processing routine, more than half of the low volume, low emission rate links were eliminated from the analysis using the screening criteria. Before running the model, the background concentration was increased from 2ppm to 3 ppm to ensure that elimination of these minor links would not result in artificially low predictions. With the screening criteria in place, scenario analyses run in less than 24 hours.

A large ASCII output file is generated from each modeling run. The file contains a summary table of: worst case wind angle, maximum predicted CO concentration for each receptor site, and contributions from each link in the system (the standard CALINE4 output format for receptors, except that the files are very wide due to the large number of receptors analyzed). This file is then input to a graphics program developed in PERL to summarize the outputs. An isopleth chart is developed illustrating the concentration of pollutants in a topographic map format. In addition, a wind angle diagram illustrates the worst case wind angle for each receptor site in a wind rose format.

Results for the Receptor Grid

The model outputs for the year 2000 CORSIM scenario are presented in Figures 7 and 8. Figure 7 provides the topographic view of maximum pollutant concentration at each point in space. The stated maximum for each receptor location in the region can result from different wind directions and is a function of roadway geometry and emissions flux from the roadway (a function of traffic volume, emission rate, and road area). Figure 7 also illustrates the wind angle for each receptor point in space under which worst-case CO concentrations results. The graphic outputs from all 10 modeling runs are presented in Appendix 4.

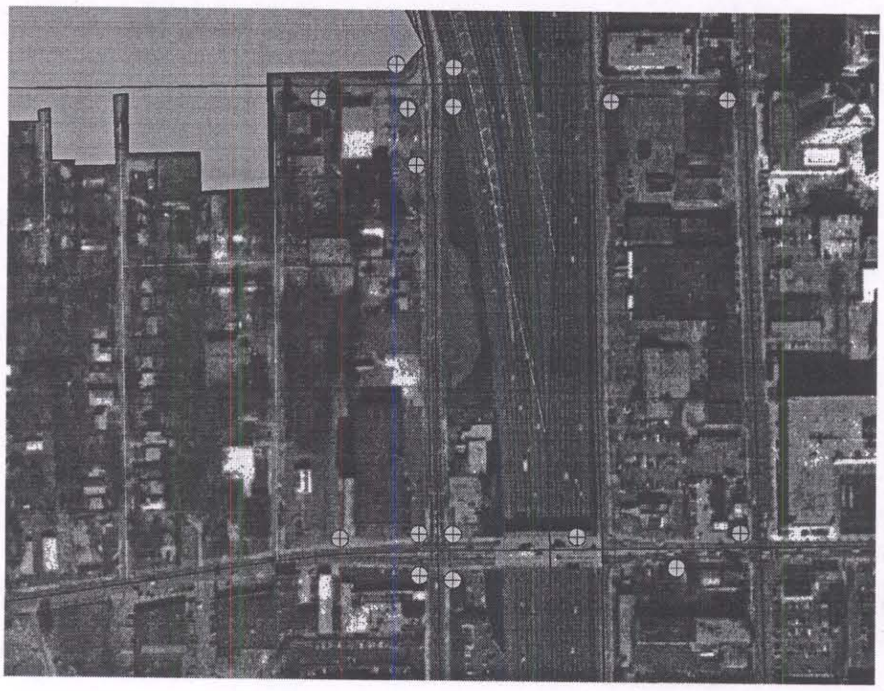
Figure 7 – Graphic Output of CALINE4 Model Run for the Year 2005 CORSIM Scenario, Illustrating Worst-Case CO Concentrations (ppm) and Wind Directions



Specific Receptor Analyses

To ensure that the receptor grid modeling approach identifies worst-case conditions, the microscale modeling team performed a second set of analytical runs using specific receptor sites of interest. Worst-case runs were performed for the CORSIM 1998 a.m. and p.m. runs (which yielded the highest CO concentrations). Receptors were placed at 3m distance from the intersections with the highest traffic volumes, to ensure that the previous grid placement did not overlook a potentially significant location (See Figure 8). One receptor was even placed on the freeway overpass (which is not required by FHWA and EPA modeling guidance). Wind angle was refined to 2-degree increments to ensure that the larger worst case wind angle increments in the receptor grid runs did not overlook a significantly elevated CO concentration prediction between wind angles. In both scenario analyses, the maximum predicted 1-hour concentration for any receptor never exceeded 9.9 ppm.

Figure 8 – Specific Receptor Locations in the Refined CALINE4 Model Run for the Year 1998 CORSIM Scenario (Maximum Predicted Concentrations did not Exceed 9.9 ppm).



CONCLUSIONS

The research team determined that the project is extremely unlikely to create a violation of ambient air quality standards for carbon monoxide in the foreseeable future. Analyses were developed for worst case morning and evening January conditions when traffic volumes are high, temperatures are cold, and meteorological conditions limit pollutant dispersion. All predicted peak one-hour carbon monoxide concentrations for all scenarios were less than 12 ppm under worst-case conditions.

The CORSIM traffic volume predictions for freeways may be underestimated by as much as 60% under the current model runs. The underestimation of traffic volumes by CORSIM impacts predicted CO emissions. Increasing traffic volumes on freeways by 60% will increase predicted CO concentrations. The increase in predicted CO concentrations is likely to be in the 3-5 ppm range. Hence the maximum predicted concentrations for the gridded receptor network should still not exceed 15 ppm.

The one-hour carbon monoxide standard is 35 ppm. Analyses were very conservative, with assumptions designed to over-predict pollutant concentrations. Given the temporal distribution of vehicle activity, decreased traffic volumes, increased travel speeds, lower emission rates, and increased pollutant dispersion after the peak hour, it is also extremely unlikely that the project will create a violation of the 8-hour standard for carbon monoxide (9ppm).

REFERENCES:

Aspy, Dale (1999). Personal Communication; US Environmental Protection Agency, Region IV; Atlanta GA; February 1999.

Bachman, William (1997). Towards a GIS-Based Modal Model of Automobile Exhaust Emissions; Dissertation; School of Civil and Environmental Engineering; Georgia Institute of Technology; Atlanta, GA 1997.

Chatterjee, A., T. F. Wholley, Jr., R. Guensler, D. T. Hartgen, R. A. Margiotta, T. L. Miller, J. W. Philpot, and P. R. Stopher (1997). Improving Transportation Data for Mobile Source Emissions Estimates; NCHRP Project 25-7; National Cooperative Highway Research Program, Report 394; Washington, DC.

Garratt, J.R. (1977). Aerodynamic Roughness and Mean Monthly Surface Stress Over Australia, CSIRO Technical Paper #29, Canberra.

Garrettson, C (1997). Evaluation of Nitrogen Oxide Emissions for Heavy-Duty Diesel Trucks Based on Ambient Measurements, Masters Thesis, Georgia Institute of Technology, Atlanta, GA.

Grodzinsky, G. (1997). Atmospheric Organic Nitrate Photochemistry of the Southeastern United States, Ph.D. Dissertation, Georgia Institute of Technology.

Guensler, R. (1993). "Data Needs for Evolving Motor Vehicle Emission Modeling Approaches"; In: Transportation Planning and Air Quality II; Paul Benson, Ed.; American Society of Civil Engineers; New York, NY.

Guensler, R., and S. Washington (1999 submission). "Incremental Engine Start Emissions Derived from Federal Test Procedure Data"; Journal of the Air and Waste Management Association; March.

Guensler, R., and S. Washington (1998). "Engine Start Emission Rates Derived from FTP Data"; Proceedings of the 8th Annual On-Road Vehicle Emissions Workshop, San Diego, CA; Coordinating Research Council; Atlanta, GA; April.

Oke, T.R. (1987). Boundary Layer Climates, 2nd edition Routledge Press, London.

Pearson, J.R. (1999). Personal Communication.

Rodgers, M.O. (1986). Development and Application of a Photofragmentation Laser-induced-fluorescence Detection System for Atmospheric Nitrous Acid. Ph.D. Dissertation, Georgia Institute of Technology.

Sutton,O.G. (1953). Micrometeorology, McGraw Hill, New York.