

**Documented Categorical Exclusion**  
**Birmingham In-Town Transit Partnership Project**

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Date: August 12, 2008

Grant Applicant: Regional Planning Commission of Greater Birmingham

Proposed Project: Birmingham In-Town Transit Partnership Project

**INFORMATION REQUIRED FOR PROBABLE  
CATEGORICAL EXCLUSION  
(SECTION 771.117(d))**

- A.      **DETAILED PROJECT DESCRIPTION:**
- B.      **LOCATION (INCLUDING ADDRESS):** Attach a site map or diagram, which identifies the land uses and resources on the site and the adjacent or nearby land uses and resources. This is used to determine the probability of impact on sensitive receptors (such as schools, hospitals, residences) and on protected resources.
- C.      **METROPOLITAN PLANNING AND AIR QUALITY CONFORMITY:** Is the proposed project "included" in the current adopted MPO plan, either explicitly or in a grouping of projects or activities? What is the conformity status of that plan? Is the proposed project, or are appropriate phases of the project included in the TIP? What is the conformity status of the TIP?
- D.      **ZONING:** Description of zoning, if applicable, and consistency with proposed use.
- E.      **TRAFFIC IMPACTS:** Describe potential traffic impacts; including whether the existing roadways have adequate capacity to handle increased bus and other vehicular traffic.
- F.      **CO HOT SPOTS:** If there are serious traffic impacts at any affected Intersection and if the area is nonattainment for CO, demonstrate that CO hot spots will not result.
- G.      **HISTORIC RESOURCES:** Describe any cultural, historic, or archaeological resource that is located in the immediate vicinity of the proposed project and the impact of the project on the resource.
- H.      **NOISE:** Compare the distance between the center of the proposed project and the nearest noise receptor to the screening distance for this type of project in FTA's guidelines. If the screening distance is not achieved, attach a "General Noise Assessment" with conclusions.

- X   I.       **VIBRATION:** If the proposed project involves new or relocated steel tracks, compare the distance between the center of the proposed project and the nearest vibration receptor to the screening distance for this type of project in FTA's guidelines. If the screening distance is not achieved, attach a "General Vibration Assessment" with conclusions.
- X   J.       **ACQUISITIONS & RELOCATIONS REQUIRED:** Describe land acquisitions and displacements of residences and businesses.
- X   K.       **HAZARDOUS MATERIALS:** If real property is to be acquired, has a Phase I site assessment for contaminated soil and groundwater been performed? If a Phase II site assessment is recommended, has it been performed? What steps will be taken to ensure that the community in which the project is located is protected from contamination during construction and operation of the project? State the results of consultation with the cognizant State agency regarding the proposed remediation?
- X   L.       **COMMUNITY DISRUPTION AND ENVIRONMENTAL JUSTICE:** Provide a socio-economic profile of the affected community. Describe the impacts of the proposed project on the community. Identify any community resources that would be affected and the nature of the effect.
- X   M.       **USE OF PUBLIC PARKLAND AND RECREATION AREAS:** Indicate parks and recreational areas on the site map. If the activities and purposes of these resources will be affected by the proposed project, state how.
- X   N.       **IMPACTS ON WETLANDS:** Show potential wetlands on the site map. Describe the project's impact on on-site and adjacent wetlands.
- X   O.       **FLOODPLAIN IMPACTS:** Is the proposed project located within the 100-year floodplain? If so, address possible flooding of the proposed project site and flooding induced by proposed project due to its taking of floodplain capacity.
- X   P.       **IMPACTS ON WATER QUALITY, NAVIGABLE WATERWAYS, & COASTAL ZONES:** If any of these are implicated, provide detailed analysis.
- X   Q.       **IMPACTS ON ECOLOGICALLY-SENSITIVE AREAS AND ENDANGERED SPECIES:** Describe any natural areas (woodlands, prairies, wetlands, rivers, lakes, streams, designated wildlife or waterfowl refuges, and geological formations) on or near the proposed project area. If present, state the results of consultation with the state department of natural resources on the impacts to these natural areas and on threatened and endangered fauna and flora that may be affected.

X   R.        **IMPACTS ON SAFETY AND SECURITY:** Describe the measures that would need to be taken to provide for the safe and secure operation of the project after its construction.

  X   S.        **IMPACTS CAUSED BY CONSTRUCTION:** Describe the construction plan and identify impacts due to construction noise, utility disruption, debris and spoil disposal, air and water quality, safety and security, and disruptions of traffic and access to property.

**APPENDICES**

**Appendix 1: Socioeconomic and Community Characteristics Technical Memorandum**

**Appendix 2: Transportation Effects Technical Memorandum**

**Appendix 3: Air Quality Assessment Technical Memorandum**

**Appendix 4: Determination of No Effect on Cultural Resources**

**Appendix 5: Noise Assessment Technical Memorandum**

**Appendix 6: Known Hazardous Materials Sites**

**Appendix 7: Wetlands and Floodplains within Study Area**

**Appendix 8: Determination of No Effect on Ecologically Sensitive Areas and Endangered Species**

The action described above meets the criteria for a NEPA categorical exclusion (CE) in accordance

with 23 CFR Part 771.117 \_\_\_\_\_.

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**Applicant's Environmental Reviewer**

**Date**

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**FTA Grant Representative**

**Date**

**Birmingham In-town Transit Partnership Project  
Documented Categorical Exclusion  
Attachment**

**A. Detailed Project Description:** The Regional Planning Commission of Greater Birmingham (RPCGB) in cooperation with Jefferson and Shelby Counties, the cities of Birmingham, Homewood, Hoover, Irondale, Mountain Brook, and Vestavia Hills, and the Birmingham and Jefferson County Transit Authority propose transit improvements in City Center Birmingham and surrounding in-town neighborhoods. The central spine of the In-Town Transit Partnership Project (ITP) extends approximately 2.3 miles from the intersection of 20<sup>th</sup> Street South and 11<sup>th</sup> Avenue South in Five Points South to the Birmingham-Jefferson Convention Complex (BJCC) at Richard Arrington Junior Boulevard North and 9<sup>th</sup> Avenue North. The project also consists of three neighborhood connector routes which provide access to the in-town neighborhoods near the City Center.

The In-Town Transit Partnership Project would provide improved mobility, support continued economic growth and revitalization, enhance current and future regional transit services, and serve area residents and businesses. The bus transit improvements would use existing right-of-way. In the City Center, buses would operate on dedicated lanes in existing streets. The neighborhood connector service would run in mixed traffic using small buses. The planned alignment and neighborhood connectors are presented in Figure 1, Project Study Area.

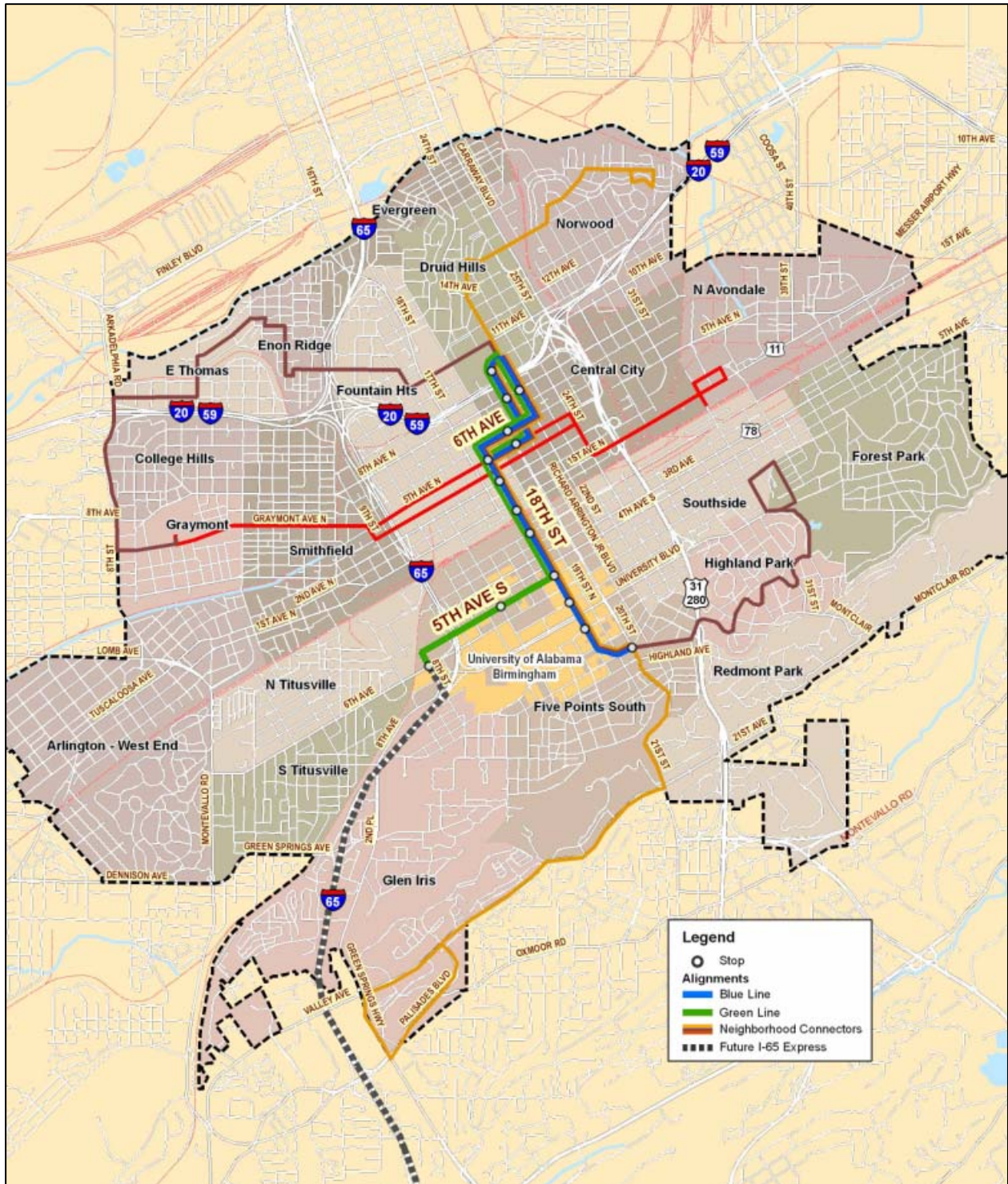
**B. Location Including Address:** The proposed alignment for the ITP project is located in the City of Birmingham, Alabama. The proposed improvements include BRT service along central north-south and east-west spines in dedicated transit lanes, and a complementary system of neighborhood connectors.

The BRT alignment along the north-south ITP spine begins at Five Points South and ends at the BJCC in the City Center. Dedicated lanes for transit vehicles would be developed along 18<sup>th</sup> Street between 10<sup>th</sup> Avenue South and 6<sup>th</sup> Avenue North; dedicated transit lanes would extend along Richard Arrington, Jr. Boulevard North and 22nd Street North between 6<sup>th</sup> and 10<sup>th</sup> Avenues North. The ITP would also have an east-west spine along 5<sup>th</sup> Avenue South, with dedicated lanes extending between the UAB remote parking area at 8<sup>th</sup> Street and the UAB Medical Center area at 18<sup>th</sup> Street. The neighborhood connector routes would provide service between nearby neighborhoods and the ITP spine in the City Center. Transit service along each line is described below and shown graphically in Figure 1:

*Blue Line DART (BRT in Exclusive Lanes)* – Service between Five Points South and BJCC via 18<sup>th</sup> Street. The Blue Line would operate in exclusive lanes on 18<sup>th</sup> Street and on Richard Arrington, Jr. Boulevard North and 22nd Street North. It would operate in mixed traffic along 5<sup>th</sup> Avenue North and 6<sup>th</sup> Avenue North. It would also operate in mixed traffic at the southern end of the proposed alignment along 10<sup>th</sup> Court South and 11<sup>th</sup> Avenue South. The peak and midday headways for this line would be 10 minutes each way.

*Green Line DART (BRT in Exclusive Lanes)* – Service between the UAB Remote Parking Lot (at 8<sup>th</sup> Street and 6<sup>th</sup> Avenue South) and the UAB hospital complex via 5<sup>th</sup> Avenue South. The Green Line would operate in exclusive lanes on 18<sup>th</sup> Street, 5<sup>th</sup> Avenue South, Richard Arrington, Jr. Boulevard North and 22nd Street North. It would operate in mixed traffic along 5<sup>th</sup> Avenue North and 6<sup>th</sup> Avenue North. The peak headways for this line would be 10 minutes each way and the midday headways would be 15 minutes.

Figure 1: Project Study Area and Proposed Alignment



*Northside-Highland Park Neighborhood Connector (Brown Line)* – Service between the new Park & Ride lot at Legion Field in the northwest to the intersection of Clairmont Avenue and Highland Drive in the southeast, via the Blue Line DART alignment. The peak headways for this line would be 15 minutes each way and the midday headways would be 15 minutes.

*Southside-Norwood Neighborhood Connector (Orange Line)* – Service between the intersection of Oxmoor Road and Green Springs highway in the southwest to the intersection of 35<sup>th</sup> Street and 17<sup>th</sup> Avenue North in the northeast, via the Blue Line DART alignment. The peak headways for this line would be 15 minutes each way and the midday headways would be 15 minutes.

*Crosstown Neighborhood Connector (Red Line)* – Service between the new Park & Ride lot at Legion Field to the new Park & Ride lot located at Sloss Furnaces via Graymont Avenue North and 1<sup>st</sup> Avenue North. The peak headways for this line would be 10 minutes each way and the midday headways would be 15 minutes.

**C. Metropolitan Planning and Air Quality Conformity:** The proposed ITP project is included in the current conforming Birmingham Metropolitan Planning Area 2030 Long Range Transportation Plan (LRTP), as amended in September 2007. According to the LRTP, the ITP study is currently exempt from demonstrating conformity. Therefore, because the ITP project is included in the LRTP, which has been shown to conform to the National Ambient Air Quality Standards (NAAQS), the ITP project is also assumed to conform and to be in compliance with the NAAQS.

**D. Zoning:** There is a wide range of zoning categories within 1,000 feet of the proposed alignment, though Single Family (Class 3) is the predominant category at 1,187 acres with that designation. Multiple Family housing is another category for which there are a large number of acres zoned (over 500 acres for Multiple Family R5 and R6 combined). Table 1 lists the zoning categories and acreages for the 1,000-foot buffer around the proposed alignment. Figure 2 shows a map of this information. It is not expected that any conversion of existing land use or zoning would occur as a result of the proposed project. **Appendix 1** provides a detailed analysis of zoning within the 1,000-foot study area.

## **E. Transportation Impacts**

Based on the travel demand forecasting model developed by the Regional Planning Commission (RPC) of Birmingham, growth levels within and around the project corridor between the current year and the forecast year of 2030 will lead to increased vehicular travel and increased use of transit services. The study team developed computer-based simulations to assess traffic and transit conditions in the corridor for No-Build and Build scenarios. Under the No-Build scenario, increasing vehicular traffic would begin to adversely affect the performance of transit service along the entire corridor.

With the dedicated transit lanes introduced with the ITP Project, transit service will perform more efficiently in the project corridors. The Build Scenario traffic network is characterized by reserved lanes along the proposed transit alignment. These lanes will improve transit travel times, reliability, and the ease of system use.

Under the Build scenario, transit signal priority measures are tested to assess their effects on transit performance and traffic delays. In some cases, the simulation of signal priority may show extended green time along a major street to allow transit vehicles operating on that street to progress through the intersection. Alternatively, signal priority may work to shorten green time along the major street to allow transit vehicles traveling along a minor street to cross and proceed with minimal schedule delay. Per the direction of City of Birmingham staff, signal cycle lengths are to be held constant as far as possible to preserve efficient traffic flows throughout downtown Birmingham.

The results of the traffic simulation show that by 2030, given the expected growth patterns and even if no major transit improvements are made, three of the study intersections would perform at Level of Service (LOS) D or worse:

- North 18<sup>th</sup> Street/9th Avenue North/I-20/59
- South 18<sup>th</sup> Street/University Boulevard
- South 20<sup>th</sup> Street/11<sup>th</sup> Avenue South

Assuming no diversion of traffic to other streets parallel to the project alignment, addition of dedicated transit lanes along the proposed alignment would lead to minor increases in traffic delay for the Build scenario as compared with the No Build scenario. Delays would average 5 seconds over the 15 key intersections studied. **Table 1** shows the projected intersection level of service at the study intersections based on results of the traffic simulation. Traffic simulations for the entire corridor were optimized separately for the 2015 and 2030 forecast years. See **Appendix 2**, Transportation Effects Technical Memorandum, for detailed results of the transportation analyses.

**Table 1: Traffic Delay and Intersection Level of Service<sup>1</sup>**

Intersection Name			Existing		2030 No Build <sup>3</sup>		2030 Build <sup>3</sup>	
					2030 No Build Volume + 2 Way conversion of 18th St. and 17th St.		2030 No Build Volume + 2 Way conversion of 18th St. and 17th St. + Exclusive Busway	
			Delay (Sec / Veh)	LOS <sup>2</sup>	Delay (Sec / Veh)	LOS <sup>2</sup>	Delay (Sec / Veh)	LOS <sup>2</sup>
18th Street	&	I-20 / I-59 Ramp	12.9	B	39.1	D	41.2	D
18th Street	&	8th Avenue N	11.6	B	30.4	C	31.7	C
18th Street	&	7th Avenue N	7.5	A	16.9	B	24.6	C
18th Street	&	6th Avenue N	8.7	A	7.7	A	20.2	C
18th Street	&	5th Avenue N	8.0	A	8.9	A	21.7	C
18th Street	&	Morris Avenue	12.4	B	20.1	C	22.8	C
18th Street	&	5th Avenue S	7.6	A	10.4	B	13.1	B
18th Street	&	University Blvd.	20.4	C	58.8	E	55.8	E
18th Street	&	10th Avenue S	12.5	B	13.3	B	22.7	C
19th Street	&	6th Avenue N	12.1	B	18.2	B	13.8	B
19th Street	&	5th Avenue N	17.0	B	11.4	B	11.0	B
20th St. S	&	11th Avenue S	30.8	C	41.6	D	65.1	E
5th Avenue S	&	6th Avenue S	13.2	B	17.7	B	19.0	B
R. Arlington Blvd. / 21st St. N	&	9th Avenue N	22.4	C	25.4	C	24.6	C
R. Arlington Blvd. / 21st St. N	&	8th Avenue N	12.8	B	17.1	B	19.6	B

<sup>1</sup> All findings developed using VISSIM traffic simulation software.

<sup>2</sup> LOS is calculated based on the HCM 2000 methodology.

<sup>3</sup> Signals are optimized for splits and offsets using Synchro traffic modeling software.

**Pedestrian Effects**

Pedestrian improvements along the proposed transit corridor will include restriped crosswalks, adequate sidewalks and ramps, and pedestrian countdown timers where traffic signals are to be modified. Proposed stops along the Build transit alignment are larger than typical bus stops, therefore they will provide a safer and more comfortable waiting experience for transit patrons. All of these improvements will lead to an enhanced pedestrian environment where transit passengers and local pedestrian traffic will have improved access to buildings and amenities along the planned transit route. Pedestrian effects are listed below by segment or area of the project corridor.

- BJCC Area (21<sup>st</sup> and 22<sup>nd</sup> Streets North) –There are several important activity centers within walking distance of each other, including: Linn Park, the Civic Center, the Art Museum, the Central Public Library, and the Courts complex. The planned transit service and stop amenities, combined with sidewalk improvements around the stops, will help to make this portion of the corridor more desirable for pedestrians.
- Central Business District (5<sup>th</sup> and 6<sup>th</sup> Avenues North, 18<sup>th</sup> Street North) –Proposed transit stops include expanded sidewalks and pedestrian amenities at key downtown locations

including 20<sup>th</sup> Street at 5<sup>th</sup> and 6<sup>th</sup> Avenues North, and 18<sup>th</sup> Street between 4<sup>th</sup> and 6<sup>th</sup> Avenues North. These improvements will reinforce “Green Streets” as designated in the City Center Master Plan: 20<sup>th</sup> Street and 6<sup>th</sup> Avenue North. As defined in the Master Plan, Green Streets are “upgraded streetscapes (trees, sidewalk paving, lighting, and signage) which become a recognizable armature for pedestrians and cyclists connecting parks and cultural amenities in the City Center.”

- Railroad Reservation Area (18<sup>th</sup> Street between 4<sup>th</sup> Avenue North and 4<sup>th</sup> Avenue South) – In this area, the transit improvements will combine with an increasing pace of redevelopment to improve pedestrian conditions. The transit project will include sidewalk expansion and ramps near station stops. This area includes the Green Streets 1<sup>st</sup> Avenues North and South.
- UAB / Medical Center Area (18<sup>th</sup> Street South between 4<sup>th</sup> and 9<sup>th</sup> Avenues South; 5<sup>th</sup> Avenue South) – In this area, the transit improvements will complement ongoing campus master planning efforts and the expanding biomedical complex by providing improvements to the pedestrian environment as well as to accessibility of this entire area via the proposed transit service. The transit project will include sidewalk expansion and ramps near station stops. This area includes the Green Street 5<sup>th</sup> Avenue South.
- Five Points South (18<sup>th</sup> Street south of 9<sup>th</sup> Avenue South; 10<sup>th</sup> Court; 11<sup>th</sup> Avenue South, west of 20<sup>th</sup> Street) – Proposed transit stops near Five Points South along 11<sup>th</sup> Avenue South will be in keeping with the vitality of this area and will contribute additional physical facilities with sidewalk expansion and new ramps near station stops. This area includes the Green Street 20<sup>th</sup> Street South.

Parking: An assessment of existing parking was conducted as part of the ITP Project. In general, although the proposed Build scenario would remove parking along several blocks of 18<sup>th</sup> Street and in the vicinity of proposed transit stops, blocks adjacent to the proposed transit alignment have adequate capacity to accommodate the displaced parking spaces. Parking effects are listed below by segment or area of the project corridor.

- BJCC Area (21<sup>st</sup> and 22<sup>nd</sup> Streets North) – In this area about 15 parking spaces will be displaced, due to proposed stops. Proposed dedicated transit lanes may also affect existing parking on the remainder of the block between 8<sup>th</sup> and 9<sup>th</sup> Avenue North (about 5 additional spaces).
- Central Business District (5<sup>th</sup> and 6<sup>th</sup> Avenues North, 18<sup>th</sup> Street North) – In this area about 20 parking spaces will be displaced, due to proposed stops.
- Railroad Reservation Area (18<sup>th</sup> Street between 4<sup>th</sup> Avenue North and 4<sup>th</sup> Avenue South) – In this area about 30 parking spaces will be displaced, due to proposed stops. The proposed configuration of 18<sup>th</sup> Street will allow for placement of about 12 additional spaces along the east side of the block between 1<sup>st</sup> and 2<sup>nd</sup> Avenues North. The result is a net of 18 parking spaces displaced in this area.
- UAB / Medical Center Area (18<sup>th</sup> Street South between 4<sup>th</sup> and 9<sup>th</sup> Avenues South; 5<sup>th</sup> Avenue South) – In this area, parking will be displaced at proposed stop locations. There is also one block—along 18<sup>th</sup> Street between 7<sup>th</sup> and 8<sup>th</sup> Avenues South—where parking along the west side of the street will be displaced to accommodate the proposed bus lanes and general traffic lanes. In all, about 55 total spaces will be displaced in the UAB/Medical Center area.
- Five Points South (18<sup>th</sup> Street south of 9<sup>th</sup> Avenue South; 10<sup>th</sup> Court; 11<sup>th</sup> Avenue South, west of 20<sup>th</sup> Street) – In this area several parking spaces will be affected at proposed stop locations. The Five Points stop, located just west of 20<sup>th</sup> Street along 11<sup>th</sup> Avenue South, will displace an estimated 15 parking spaces. The stop on 18<sup>th</sup> Street at 9<sup>th</sup>

Avenue South will displace about 10 spaces. Reconfiguration of 10<sup>th</sup> Court South to accommodate two-way traffic will lead to displacement of about 15 parking spaces along the west side of this street.

**F. CO Hot Spots:** The project is not predicted to cause any violations of the applicable National Ambient Air Quality Standards (NAAQS). Similarly, the project has been shown to conform to the State Implementation Plan (SIP) with respect to regional emissions and conformity. No mitigation measures are necessary with respect to compliance with the transportation conformity requirements. With respect to localized air quality impacts, the modeled one-hour and eight-hour carbon monoxide (CO) concentrations do not exceed CO standards. For details of the analysis, see the Air Quality Assessment Technical Memorandum in **Appendix 3**.

**G. Historic Resources:** Known historic resources have been documented within the study area. However, based on coordination with the State of Alabama Historical Commission the project activities would have no effect on any known cultural resource listed on or eligible for the National Register of Historic Places. As a result, the commission concurred with the proposed project activities. The ITP project submittal made to the Alabama Historical Commission and its concurrence letter are included in **Appendix 4**.

**H. Noise:** Existing background, or baseline, noise levels at sensitive receptors, such as residential properties, hospitals, historic landmarks, areas designated for serenity, and institutional land uses, were estimated as part of the noise analysis. Estimates were based on FTA guidelines that include several environmental factors such as distance from major roadways and population density.

The dominant noise sources related to the project would be from the bus engines and rooftop exhaust. None of the Day-Night (Ldn) noise levels produced as a result of the ITP project is predicted to exceed the Federal Transit Administration's (FTA) *moderate* or *severe impact* criteria, with the exception of residences and other FTA Category 2 receptors directly adjacent to proposed station stops. To avoid potential impacts from the project during operations, such as excessive idling from buses, proposed station stops should be relocated away from noise-sensitive receptors identified within 50 feet. There were no residences identified near the BRT alignment station stops. Details of the noise modeling assessment, including results of the monitoring program, are included in the Noise Assessment Technical Memorandum, **Appendix 5**.

**I. Vibration:** The vibration impacts from rubber-tired buses at receptors adjacent to the transit facility are typically not a problem due to slower speeds, lighter vehicle weights, damped suspension and relatively longer receptor distances. Therefore, a vibration impact assessment is not included as part of this analysis per the FTA guidelines.

**J. Acquisitions and Relocations Required:** The transit improvements for the ITP Project would be completely within existing rights-of-way. No acquisitions of land or relocations of residents or businesses would be associated with the improvements.

**K. Hazardous Materials:** The study area for the assessment of hazardous and contaminated materials is defined as 200 feet on either side of the centerline of the transitway. Although sites located outside the 200-foot buffer could impact the project alternatives, the study area was chosen to include potential sites within, or immediately adjacent to, the proposed alignment due to the relatively limited construction foreseen for the project. All of the project work is assumed to be completed at-grade on existing streets.

The U.S. Environmental Protection Agency's Envirofacts database (<http://www.epa.gov/enviro/index.html>) was used to conduct a multi-system query of reported hazardous materials sites in the study area. Systems in the database include:

- The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS);
- The Safe Drinking Water Information System (SDWIS);
- The Resource Conservation and Recovery Act Information (RCRA) System;
- The Toxic Release Inventory;
- The Facility Registry System;
- The Water Discharge Permit Compliance System;
- The Brownfields Management System;
- Air Release Source Reports;
- Superfund databases; and
- Other local sources of information about contaminants.

The Envirofacts Query Form allows users to search the above listed environmental databases for facility information about toxic chemical releases, water discharge permit compliance, hazardous waste handling processes, Superfund status, and air emission estimates. Fifty-seven properties were identified within the study buffer that are permitted to discharge to water, have had a toxic release reported, are a designated hazardous waste handler, or have had an air release violation. No active or archived superfund sites were identified during this search. The properties identified are listed in **Appendix 6** along with discharge type.

Because known releases have occurred within the study area, the potential exists to encounter contaminated sites or materials during construction. Where possible, contaminated sites or materials encountered during construction would be addressed as they are detected. If encountered, specific environmental health and safety planning would be required with regard to the workers, the surrounding communities, and the environment. Material handling plans, personal protection, workplace monitoring, alternative designs, and methods of construction would need to be evaluated and adjusted to limit the impact from contaminated materials.

**L. Community Disruption and Environmental Justice:** The proposed project is located near the City Center of Birmingham. The proposed project also includes a network of neighborhood connectors that would provide access to the in-town neighborhoods and City Center. Various community facilities are located within the study area and would be directly served by the proposed transit improvement. There would be no adverse affects to these facilities, and these

facilities would be made more accessible by the proposed transit improvement. It is not expected that project would result in community disruption.

The population in the City of Birmingham is approximately 76 percent minority and 24 percent low-income. Within the study area, which includes 1,000-foot impact buffer, the minority population is approximately 69 percent for the City Center alignment and 66 percent for the combined City Center and neighborhood connectors buffer. Low-income populations within the same buffer area are 45 percent for the City Center alignment and 28 percent for the combined City Center and neighborhood connectors buffer. The project is not expected to have disproportionate or adverse effects on these populations. The project would be constructed completely within existing transportation rights-of-way and no facilities, other than bus stops and shelters, are proposed. No residences were identified within a distance of proposed City Center BRT stations that would cause a moderate or severe noise impact. The low income and minority populations would benefit from enhanced mobility and access provided by the proposed project. **Appendix 1** provides detailed analysis of the socioeconomic characteristics of the study area.

**M. Use of Public Parkland and Recreation Areas:** Several parks exist within the study area and adjacent to the proposed transit alignment. However, no impacts to these parks are expected. No property acquisition is proposed with the project; therefore, no taking of any parklands would occur. It is not expected that any proximity effects, such as noise or vibration, to these resources would occur. (See Sections H and I of this report for a discussion of noise and vibration.) **Appendix 1** illustrates the locations of parklands within the study area.

#### **N. Impacts on Wetlands**

There is no direct alteration to wetlands anticipated as a result of the proposed project as it would occur completely within existing right-of-way and would not increase impervious surfaces. **Appendix 7** illustrates wetland and floodplain locations in relation to the proposed project alignments (BRT and neighborhood connectors).

#### **O. Floodplain Impacts**

A floodplain area is located along a 2,000 foot segment of 15<sup>th</sup> Street West between 3<sup>rd</sup> Street West and Center Street North. Given that the proposed ITP Project would not increase impervious surfaces and would be contained completely within existing paved transportation right-of-way, no encroachment of impacts are expected to this floodplain. **Appendix 7** illustrates wetland and floodplain locations in relation to the proposed project alignments (BRT and neighborhood connectors).

#### **P. Impacts on Water Quality, Navigable Waterways & Coastal Zones**

There are no navigable waterways or coastal zones in the vicinity of this proposed project. No surface waters are located within the study area; therefore no impacts to surface waters would occur.

**Q. Impacts on Ecologically-Sensitive Areas and Endangered Species:** Birmingham's City Center and in-town neighborhoods are urbanized with very little natural upland habitat. Upland habitat within the study area is limited to parks and undeveloped areas. Most of the parks include active uses, leaving little habitat for species. The majority of undeveloped land within the study area appears to have been previously developed and cleared, or is slated for new development. Some areas have been cleared long enough for some vegetation to grow on these vacant sites. The area has some ornamental trees planted along streets. Wildlife species likely occurring within the study area are those species that are tolerant of human related activities in developed areas, such as squirrels, rodents, song birds and other small mammals. No adverse impact to ecologically sensitive areas or protected species is expected. The State Lands Division of the Alabama Department of Conservation and Natural Resources concurs that the project should have no impact on any sensitive species. See **Appendix 8** for a copy of correspondence with the State.

**R. Impacts on Safety and Security:** It is not expected that the proposed project would have adverse impacts on safety and security within the study area. Improvements to safety conditions along the proposed transit alignments include restriped crosswalks and curb extensions at proposed passenger stop locations, and pedestrian crossing signals at locations where traffic signals are to be modified. Administrators of the ITP project would prepare a Safety and Security Management Plan (SSMP) as a component of the Project Management Plan (PMP), consistent with Federal Transit Administration requirements for all federally funded major capital projects. FTA's Circulator 5800.1 outlines the elements of the SSMP, but also identifies those projects that are excluded from the SSMP requirement. These projects include those receiving federal funding under 49 U.S.C. 5309(e), also known as Small Starts and Very Small Starts projects. In this case ITP project administrators would petition appropriate regional FTA staff to review the case for the necessity of a SSMP. The process for submitting this petition is also outlined in FTA's Circulator 5800.1.

**S. Impacts Caused by Construction:** Construction activities for the ITP Project would take place within existing transportation rights-of-way. Along the ITP spine, construction activities include paving, curb cuts, curb extensions, and construction of stops, which would include shelters and other passenger amenities such as signage, trash receptacles, and lighting. All activities would be completed within the existing public right-of-way. Some streetscape improvements – consistent with the Birmingham City Center Master Plan streetscape design guidelines – would also be included. Streetscape improvements include plantings, lighting, and changing paving material at crosswalks. Some roadway re-striping would be necessary to designate dedicated bus lanes. Construction activities along the alignments of the neighborhood connectors would consist, at most, of simple stop shelters and passenger amenities. Because the neighborhood connectors would run entirely in mixed traffic, no roadway re-striping would be necessary.

**Noise and Vibration:** Noise and vibration levels from construction activities along the proposed BRT corridor, although temporary, could create a nuisance condition at nearby sensitive receptors along 18<sup>th</sup> Street and 5<sup>th</sup> Avenue. Exposure to excessive noise and vibration levels would vary depending on the type of construction activity and the types of equipment used for each stage of work. Project construction activities may include heavy machinery to relocate curb cuts, construct station stops, lay down new pavement, and other miscellaneous activities. Although details of the actual construction activities are not known at this preliminary phase of the project, particular attention should be paid during final design when details of the actual

construction equipment required become clearer. However, several “good housekeeping” practices, such as careful monitoring of work hours in sensitive areas, can be used to eliminate or reduce the annoyance associated with these activities.

Utilities: Construction operations are not anticipated to result in disruption of utilities to commercial, industrial, or residential customers in the study area.

Disposal of Debris: Project contract specifications would require the contractor to dispose of construction-generated solid waste. The disposal method would be either transportation of materials to an approved disposal facility or collection by an approved agent. No waste would be disposed of or incinerated on site.

Water Quality: Temporary impacts to water quality are not expected. Best Management Practices (BMPs) would be used to comply with local sediment and erosion control standards during construction.

Access and Distribution of Traffic: All access to public and private property would be maintained during construction. Temporary lane closures may result during construction activities, but would most likely occur during off-peak hours to minimize impacts to traffic flow.

Air Quality: Direct emissions from construction equipment are not expected to produce adverse effects on local air quality provided that all equipment is properly operated and maintained. These potential impacts would include direct emissions from construction equipment and trucks, increased emissions from motor vehicles on the streets due to disruption of traffic flow, and fugitive dust emissions. Emissions from project-related construction equipment and trucks would be much less than the total emissions from other industrial and transportation sources in the region, and therefore, are expected to be insignificant with respect to compliance with the NAAQS.