

Scope of Work for the Miami-Miami Beach Transportation Corridor Study

Submitted to:
**METROPOLITAN
PLANNING ORGANIZATION**

MIAMI-DADE

Presented by:



**PARSONS BRINCKERHOFF
QUADE & DOUGLAS, INC.**

June 11, 2001

June 11, 2001

Mr. Wilson Fernandez
Transportation System Specialist
Miami-Dade Metropolitan Planning Organization
111 N.W. First Street, Suite 910
Miami, Florida 33128

Subject: Scope of Work for the Miami-Miami Beach Transportation Corridor Study

Dear Mr. Fernandez:

It was a pleasure meeting with you and the Contract Negotiation Team on Thursday, June 7, 2001. Based on our discussion at the initial negotiation session we have developed and attached twenty-five (25) copies of the Scope of Work, the Project Development Schedule and the Summary Man-hour Assignment and Fee Computation. The Scope of Work and Project Development Schedule are bound together. The cost estimates are provided separately.

The materials provided are based on the assumption that through careful coordination with the Federal Transit Administration (FTA), it is the Miami-Dade Metropolitan Planning Organization (MPO) and the Parson Brinckerhoff Team's (CONSULTANT) intent to carefully review and supplement, as necessary, the Draft Environmental Impact Statement (DEIS) prepared for the East-West Corridor. This approach should facilitate the public hearing process and selection of the Locally Preferred Alternative (LPA) by the MPO Board. If successful this approach may support completion of the DEIS and selection of the LPA as well as the completion of the Preliminary Engineering and Final Environmental Impact Statement (PE/FEIS) within the term and budget anticipated for this contract.

To this end, this proposed Scope of Work has been divided into two phases. The initial phase (Tasks 4 through 7) addresses the scope anticipated to complete the supplemental DEIS. Tasks 8 through 13 reflect the estimated effort necessary to advance the project through the PE/FEIS phase of development after the MPO Board's selection of the LPA at the completion of the initial phase. The work addressed in Tasks 1, 2 and 3 would be common to both phases of effort and has hence been separated into two parts in the corresponding budget sheets.

It is anticipated that notice to proceed would initially be issued for only the first phase. This will allow the budget for the second phase to be held in contingency pending the determination of the viability of the supplemental DEIS approach. If for some reason it is determined that the supplemental approach is unacceptable, a portion of the Phase 2 funds could be used to supplement the effort required to generate a new DEIS and the remaining funds could be allocated to the initial task defined for advancing the PE/FEIS process. It is important to note that the effort required to determine if a supplemental DEIS is possible would also largely be required for a new DEIS; the proposed approach will result in little, if any, wasted effort or budget.

Mr. Wilson Fernandez
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We look forward to meeting with you and the Negotiations Committee on Wednesday, June 13, 2001 at 9:00 a.m. If additional materials are required or we can assist you in any way, please do not hesitate to call.

Sincerely,
PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

Phillip R. Smelley
Senior Vice President
Principal Project Manager, Transit

slb

Enclosures: Scope of Work

MIAMI-DADE METROPOLITAN PLANNING ORGANIZATION

Miami-Miami Beach Transportation Corridor Study

Scope of Work

June 11, 2001

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Introduction

This Scope of Work is intended to define the major work elements necessary to update the technical base, build a public consensus, define a viable financial plan and secure the environmental approvals necessary to advance the transportation improvements identified for the Miami-Miami Beach Corridor into the final design phase of the Federal Transit Administration's (FTA's) project development process. The work will be conducted in accordance with the appropriate federal, state and local regulations and guidelines. The work will be carefully coordinated with the efforts of previous and on-going planning activities within, and effecting, the corridor.

The Miami-Miami Beach Transportation Corridor Study will include an examination and update of the multi-modal alternatives developed in previous studies to enhance the mobility and connectivity between two of Miami-Dade County's major activity centers; downtown Miami and south Miami Beach. Existing and future connections of the corridor to the region are also to be a consideration in the study. The transportation linkages will be coordinated with existing infrastructure (i.e., intermodal terminals, transit centers and services, fixed guideway and roadway facilities, and pedestrian and bikeway paths). The Miami-Miami Beach Transportation Corridor Study will provide transportation alternatives that provide enhanced mobility, congestion relief and intermodal connectivity that support the land use and quality of life so valued in the region in a cost-effective and community-supportive manner. The corridor generally extends from downtown Miami across the McAuthur Causeway to South Miami Beach and northward as far as the Miami Beach Convention Center. The study entails the update and the analysis of environmental, transportation, operating and financial impacts of the proposed transportation improvements resulting from the study.

A strong public outreach and involvement program will be carefully developed and implemented in a thoughtful way to enfranchise the many corridor stakeholders in their efforts to arrive at a consensus on the required improvements. The Miami-Dade Metropolitan Planning Organization (MPO) Board and its subcommittees will be periodically informed of the study's progress. Upon completion, the results will be presented to the MPO Board and will form the basis for the Board's selection of a Locally Preferred Alternative (LPA) to be advanced in the final design phase of project development.

Through careful coordination with the FTA, it is the MPO and the Parsons Brinckerhoff's Team (CONSULTANT'S) intent to carefully review and supplement, as necessary, the Draft Environmental Impact Statement (DEIS) prepared for the East-West Corridor to facilitate the public hearing process and selection of the LPA. If successful, this approach may support completion of the DEIS, selection of the LPA by the MPO Board as well as the completion of the Preliminary Engineering and the Final Environmental Impact Statement (PE/FEIS) within the term and budget anticipated for this contract.

To this end, this proposed Scope of Work has been divided into two phases. The initial phase (Tasks 4 through 7) addresses the scope anticipated to complete the supplemental DEIS. Tasks 8 through 13 reflect the estimated effort necessary to advance the project through the PE/FEIS phase of development after the MPO

Board's selection of the LPA at the completion of the initial phase. The work addressed in Tasks 1, 2 and 3 would be common to both phases of effort and has hence been separated into two parts in the corresponding budget sheets.

It is anticipated that notice to proceed would initially be issued for only the first phase. This will allow the budget for the second phase to be held in contingency pending the determination of the viability of the supplemental DEIS approach. If for some reason it is determined that the supplemental approach is unacceptable, a portion of the Phase 2 funds could be used to supplement the effort required to generate a new DEIS and the remaining funds could be allocated to the initial task defined for advancing the PE/FEIS process. It is important to note that the effort required to determine if a supplemental DEIS is possible would also largely be required for a new DEIS; the proposed approach will result in little, if any, wasted effort or budget.

1. Project Management/Project Administration

This task group contains the necessary project management, control, coordination and administration resources to support the MPO in the execution of the Scope of Work. This effort generally includes: the necessary communication and correspondence; attendance at meetings; preparation of agendas and minutes; progress reporting including monitoring of the schedule and budget; preparation of invoices and processing of payments; provision of document control; and coordination with the MPO and other affected agencies and jurisdictions.

Products

- Correspondence
- Monthly Progress Reports
- Agendas and Meeting Minutes
- Subconsultant Contracts
- Document Control
- Updated Project Quality Control Plan
- Monthly Invoices
- Schedule and Monthly Updates

2. Study Initiation

Prior to launching into the technical work of the study and to foster the proactive environment for success, it is necessary that agreement be reached between the MPO, affected agencies, stakeholders and the CONSULTANT on the study approach, that working committees be established and the basic tools and guidance necessary to work effectively be defined, developed and agreed upon. It is important to note that the methodologies for performing the work of the study are those prepared for the East-West Corridor DEIS updated and supplemented as necessary. The CONSULTANT will support the MPO in accomplishing the following study activities.

2.1 Kick-Off Meeting

The MPO will hold a kick-off meeting(s) to provide all corridor stakeholders, the agencies and the local jurisdictions with the opportunity to review and provide input to the proposed approach for the study. A key element to be reviewed and discussed is the proposed supplementing of the East-West Corridor DEIS.

The CONSULTANT will assist the MPO with the identification and scheduling of a location for the meeting(s). The CONSULTANT will support the MPO in the advertising of the meeting(s) and the identification and notification of meeting attendees. The CONSULTANT will develop the agenda, presentation materials and graphics for the meeting and present the portion of the program assigned to the CONSULTANT by the MPO. The meeting results will be documented and the minutes prepared and distributed by the CONSULTANT. All materials will be approved by the MPO prior to their use.

2.2 Study Committees

In order to conduct, supervise and provide technical assistance to the MPO, two committees will be formed and utilized during the course of the study process. The committees, their membership and responsibilities are described below.

2.2.1 Citizens Advisory Committee

The MPO will form a Citizens Advisory Committee (CAC) specifically to achieve ongoing public participation and input within the Miami-Miami Beach Corridor. The CAC membership will be open to all interested parties and will include a broad spectrum of affected citizens and organizations and will emphasize representation from those within the Corridor.

Regular participants in the process of developing the study will represent the board cross section of public, private, commercial and residential interests concerned with the study area in downtown Miami, the City of Miami Beach Convention Center and South Beach, the Port of Miami and Watson Island transportation systems. Representatives of these sectors are expected to be represented on the CAC. It is anticipated that the CAC membership will be regularly apprised of the study progress by the CONSULTANT.

The CAC shall be an active committee with regular meetings and guidelines for the required participation. The committee should include a mix of opinion leaders, technical staff, policy makers and business interests. The composition should include the homeowners association, public elected officials, business and professional organizations, trade organizations, labor unions, economic development organizations, environmental organizations, business owners, merchant associations, educational institutions, special interest groups, religious organizations and cultural groups located within the corridor.

Participants should include but not be limited to the following: City of Miami (representative from the City Commission, City Manager, Planning and Zoning, Real Estate and Economic Development, Transportation and Parking and Public Work), City of Miami Beach, Miami-Dade County, MPO, FTA, Federal Highway

Administration (FHWA), Florida Department of Transportation (FDOT), Port of Miami-Dade, Greater Miami Visitor and convention Center, Greater Miami Chamber of Commerce, Park West/Overtown, Miami Community Redevelopment Agency, Miami Downtown Development Authority, U.S. Coast Guard, Fisher Island, Parrot Jungle and Gardens, Chalk's Ocean Airline, Miami Outboard Club, Miami Yacht Club, OMNI Advisory Committee and others.

CAC forums should be held in advance of major milestone decision points. The pace of the development effort will to some extent be governed by the CONSULTANT'S ability to bring the public along. Those milestones assume three major tasks that require inputs of direction rather than technical expertise; these are—development of vision, development of alternatives, and development of transportation improvements and proposals.

The CAC will participate in the formulation of the Public Involvement Program (PIP). The CONSULTANT will provide the necessary logistics and staff support to the CAC, under the MPO direction, and will notify members of scheduled meetings. The CAC will review and comment on all major reports and technical memoranda prepared by the CONSULTANT. The CAC will also review all recommendations to be made to the MPO Board and will receive regular reports on the study's progress from the MPO.

The CONSULTANT will support and attend eight (8) CAC meetings and will provide handout materials and presentation graphics as required. The CONSULTANT will document the results of the meetings and prepare and distribute CAC meeting minutes.

2.2.2 Technical Advisory Committee

The Corridor Technical Advisory Committee (TAC) is a technical committee responsible for review and comment on the study process and technical reports. It will also provide technical assistance and advice to the MPO who will serve as a chairperson. The TAC will meet every other month, or as required, and will be composed of the following organizations:

- Miami-Dade MPO
- City of Miami
- City of Miami Beach
- Miami-Dade Expressway Authority
- Miami-Dade Transit Agency
- Florida Department of Transportation
- Federal Transit Administration
- Federal Highway Administration
- Downtown Development Authority
- Miami-Dade DERM
- Miami-Dade Planning and Zoning Department
- Miami-Dade Seaport
- U.S. Coast Guard
- Others as appropriate

Each of the above organizations may appoint one member and an alternate. Additional staff representatives from the CONSULTANT Team, and the MPO will participate as needed. The CONSULTANT will provide meeting agendas, materials

and presentation graphics as required. The CONSULTANT will be responsible for preparing and distributing meeting minutes.

2.3 Scoping

2.3.1 Scoping Booklet

The CONSULTANT will prepare a Scoping Booklet containing a summary description of the project background, purpose and need for the project and the objectives for the Supplemental DEIS process. It will also describe the scope of work, the public involvement process, a draft initial set of alternatives to be studied, issues to be addressed, and the project schedule. The CONSULTANT will be responsible for producing up to 200 black/white booklets in 8.5" x 11" format, including an electronic copy capable of being produced as a visual aid at future public information events. The CONSULTANT will support the MPO with distribution of the booklets to all agencies and organizations and interested individuals on the study's mailing list.

Governmental agencies with a potential interest in the planning of this project will be notified at the beginning of the process. The CONSULTANT will develop a Notice of Intent (NOI) for publication by FTA in the Federal Register. The notice will be prepared and submitted to the MPO for coordination.

With the assistance of CONSULTANT, the MPO will advertise, arrange, and conduct the scoping meeting. The MPO, with support from the CONSULTANT will conduct the meeting under the requirements of the National Environmental Protection Act (NEPA) process and the regulations of FTA and FHWA currently in effect. At the scoping meeting, the public will have the opportunity to comment on the scope of the Supplemental DEIS and provide comments on the information presented in the Scoping Booklet. The CONSULTANT will produce presentation graphics and will provide staff support. The MPO will record the meeting and preparing meeting minutes. The CONSULTANT will prepare response to the public comments and will incorporate comments and responses to comments in the Supplemental DEIS document. In addition, the CONSULTANT will prepare a Scoping Report.

The CONSULTANT will also recommend and coordinate media placement and frequency with the MPO Manager to include local publications, radio and television, as appropriate, including minority, ethnic and low-income media outlets. The CONSULTANT will provide guest sign-in log and comment forms. Information received will be entered into the MPO database/mailing list.

Products

- Support for Kick-Off Meeting
- Establish CAC and TAC
- Scoping Booklet/Support for Scoping Meeting
- Scoping Report

3. Public Involvement Program

The scale and complexity of the corridor study requires a comprehensive, as well as specialized public involvement effort. On the specifics of public involvement, the CONSULTANT will be required to work closely with the Study Public Involvement Management Team represented by the MPO, the City of Miami and the City of Miami Beach.

3.1 Public Involvement Study Administration

The Study Administration for Public Involvement will consist of a Management Team for Public Involvement and a Citizens Advisory Committee (CAC). The Management Team for Public Involvement will be represented by Wilson Fernandez, MPO; Clark P. Turner or Lilia I. Medina, City of Miami; and Joseph W. Johnson, III, City of Miami Beach and Phil Smelley of the CONSULTANT'S team.

At the initiation of the project, a schedule of tasks, meetings, presentations, and milestones will be developed by the CONSULTANT and reviewed by the Public Involvement Management Team. These deliverables will also be reviewed and revised, if appropriate, upon the formation of the CAC. The Management Team will be consulted on major decisions and at agreed-upon milestones and budget expenditures for the Public Involvement task.

At the City of Miami and City of Miami Beach, presentations will be made to the appropriate committees involved with transportation issues to include the Transportation and Parking Committee. If needed, presentations will be made to CTAC, TARC, BPAC, TPTAC, TPC, the MPO Board, and the City Commissions of Miami and Miami Beach.

Documentation of meetings and of practices and procedures developed throughout the course of the study will be documented by the CONSULTANT. Meeting notes will be recorded by the CONSULTANT. Technical memorandums will be distributed by the CONSULTANT in draft, reviewed and commented upon by the Public Involvement Management Team and CAC. At the conclusion of the study, technical memorandums will be combined and appropriately revised to act as input to the final report.

3.2 Public Involvement Plan

The CONSULTANT will evaluate the effectiveness of the East-West Corridor PIP implemented earlier with the Public Involvement Management Team. With the participation of the Public Involvement Management Team and the CAC, the CONSULTANT will formulate a comprehensive, proactive PIP for the Corridor DEIS process.

The objective of the PIP will be to:

- Encourage participation of individuals, with special emphasis on ethnic groups and other interested organizations that would not ordinarily participate in transportation planning activities.

- Create opportunities for citizens to provide meaningful alternatives and evaluations into the process of solving transportation problems within the Corridor.
- Educate citizens on the technical aspects of the project in ways that meet their learning needs and styles.
- Provide meaningful opportunities for interactive activities and exchange of information that are designed to engage citizens in the transportation planning study process, through the use of innovative and creative communications techniques.

The PIP will give special emphasis on including minority, ethnic and low-income segments within the Corridor at major milestones of the study process. The CONSULTANT will present the draft PIP to the Public Involvement Management Team, the CAC and the TAC for review and comment. Comments will be incorporated into the final PIP, the Scoping Booklet and documentation of the Scoping meeting. The MPO will distribute the PIP to the TAC and CAC.

3.3 Public Involvement Database/Mailing List

The CONSULTANT will assist the MPO in identifying stakeholders, citizen groups, and public agencies, as well as data fields to be included in the formations of a public involvement database/ mailing list. The database/ mailing list will include input from the MPO, the City of Miami and the City of Miami Beach. The database/ mailing list will be used to identify CAC membership, generate lists for targeted communications/ mailings, and track and evaluate the effectiveness of the PIP. The database/ mailing list will be implemented and maintained by the MPO with support from the CONSULTANT utilizing Microsoft Access software to ensure flexibility and compatibility with other applications. Fliers mailings—the contact list should be reviewed and updated on a regular basis. Public notice should address a 500 feet radius from the study area. An initial notice of the project should be mailed to property owners within designated study area or corridor. The MPO, with support from the CONSULTANT, will be responsible for data entry, maintenance, accuracy, querying, merging and printing information from the database/ mailing list.

The database/ mailing list will identify corridor-specific information relative to the demographic characteristics of the Corridor, as well as generic community demographic information relative to the urban area. Data will include addresses and contact information for organizations, agencies and individuals.

An address log will be maintained to record address and contact information for walk-ins, call-ins, and others interested parties requesting information and inclusion on the project mailing list.

3.4 Public Communications

The CONSULTANT will assist the Public Involvement Management Team in preparing a communications program for the study. The CONSULTANT will assist in preparing appropriate project information to be distributed to interested parties and at community-based events. The CONSULTANT will provide camera-ready graphics and copy for public notices and event announcements to be placed in the

appropriate public media. Placement and frequency strategies will be coordinated with the Public Involvement Management Team.

3.5 Website

The CONSULTANT will provide a design strategy for preparing the Corridor website. The website will be designed to visually inform visitors about how planned improvements would look within the existing environment. The CONSULTANT will assist the Public Involvement Management Team in updating their existing agency websites to include information and graphics provided by the CONSULTANT developed from major project milestone deliverables. The CONSULTANT will prepare and submit compatible electronic text and graphics to the respective Webmasters. The CONSULTANT will assist the Public Involvement Management Team with eight (8) cycles of uploading text and graphics.

3.6 Newsletters

The CONSULTANT will prepare copy and layout five (5) newsletters. Newsletters will be prepared in 8.5" x 11" double-sided color format. Newsletters will be produced as mailers and handouts in support of the following project milestones.

- Scoping Meetings
- Conceptual Alternatives selections
- Public Meetings
- Project Milestones
- After selection of the LPA

3.7 Other Means of Public Communications

Other means of communications, consistent with the budget, with the public may include notices and meeting minutes in both the City of Miami and the City of Miami Beach home pages on the internet, multi-language translations at publicly noticed meetings, public service announcements on radio stations in both Spanish and English. Draft and final documents should be available in several media formats including CD-ROM.

Collateral Materials may include:

1. Board/Visuals–Aerials should be Year 2000 or 2001, clearly marked with legend and source. Viewshed corridor analysis should be provide from several angles to scale and three-dimensional. CONSULTANT will provide appropriate photo simulations of the corridor once the alternatives are identified.
2. Multimedia Presentations–PowerPoint or equivalent presentation software with compact disk (CD) of each presentation will be provided to the Management Team by the CONSULTANT. The Management Team will need to have the CDs available for in-house briefings and other presentations.
3. Documentation–CONSULTANT should provide written transcripts of all technical and publicly noticed meetings. At key milestone meetings and the project launching, the CONSULTANT should videotape the activity for documentation.

The videotapes should also be made available to the Management Team before project completion; unedited format is acceptable.

4. Promotional Brochures—Needs to be determined by Public Involvement Management Team at milestones. Audience for whom intended and timeframe for use shall be clearly determined and agreed upon by project managers. Mailing or distribution should be in a timely manner in order to effectively reach the targeted audience.
5. Project Briefing Sheets—One page, attractive to the reader, should be provided at key phases of project in Spanish, Creole as well as English.
6. Qs and As—A general information sheet with commonly asked questions and provides the responses by MPO and the City of Miami and the City of Miami Beach should be provided at key decision milestones in Spanish, Creole as well as English.

Products

- Public Involvement Plan – includes Communication Plan
- Mailing List
- Newsletters
- Web Materials
- Camera ready meeting notices
- Public Communications materials

4. Corridor Alternative Conceptual Engineering

4.1 Technology Assessment

Following the initial CAC and TAC participation to identify potential modes and alignments, the CONSULTANT will provide an overview and assessment of a range of transportation technologies appropriate to the initial set of alternatives developed for the Corridor. The overview will be presented in a clear and concise format, including the use of graphics and typical cross sections to ensure the information is readily understandable to decision-makers and the public. The assessment will relate the responsiveness of the alternative technologies to the goals and objectives of the study. In the comparative evaluation, the CONSULTANT will address a range of considerations and their characteristics including:

- Technical Maturity
- Has this technology had at least five years of proven service in the U.S. under conditions similar to those of the N/SE Corridor?
 - Are there several operational systems using this technology in the U.S.?
 - Are there operational systems using this technology elsewhere?
 - Is there a need for added technical development in order to conform to a N/SE Corridor specification?
 - Can it be demonstrated that the technical risk of this technology is low?
 - Are vehicles in this technology generally reliable and safe in operation?

Procurement Considerations	<ul style="list-style-type: none"> • Are there at least three suppliers worldwide who produce this technology currently? • To what extent does this technological concept appear proprietary? • If this technology becomes selected for an initial order, is it likely additional compatible sets of equipment can be procured in five years under competitive circumstances? • Does this technology drive the scoping of a procurement such that the vehicles, guideway and systems must be combined?
System Capacity	<ul style="list-style-type: none"> • Can this technology be closely tailored in capacity to the system demand? • Will this technology allow expansion of its on-line capacity to meet increasing demand? • What level of initial investment must be made in the guideway structures and stations to facilitate system expansion? • Are there extraordinary requirements or investments to be made to effect switching, branching and crossovers?
Right-of-Way Requirements	<ul style="list-style-type: none"> • Are the geometric alignment constraints sufficiently low or flexible so as to minimize casual ROW taking and easements? • Does this technology have enough vertical alignment flexibility to minimize guideway costs? • Are there excessive or unusual clearance requirements associated with this technology? • Does this technology require a fully grade-separated operating envelope? • Are there extraordinary requirements of this technology in its storage and maintenance facility location or design?
Service Characteristics	<ul style="list-style-type: none"> • Does this technology have adequate performance capability to minimize run time, station dwell time and turnback time? • To what degree is this technology controlled remotely or automated? • What dependence on manual operation does this technology require? • How reliable is this technology in maintaining schedule? • Are the vehicles of this technology attractive to the patron in terms of space, comfort, lighting and environment?
Environmental Impact	<ul style="list-style-type: none"> • Does this technology support and contribute to the community's goals of air quality conformance with EPA standards? • Are noise and vibration generated or caused by the operation of this technology acceptable or manageable? • Are the structures or apparatus of this technology a visual intrusion into the vistas of the N/SE Corridor?
Environmental Justice & Equity	<ul style="list-style-type: none"> • Fairness of cost versus benefits across population subgroups. • Financial equity. • Environmental equity.
Urban Integration	<ul style="list-style-type: none"> • Do the fixed facilities or operations of this technology create real or perceived barriers dividing neighborhoods? • Does this technology and its guideway structures and stations cause diminished capacity for motor vehicle traffic flow in general? • To what extent does a system of this technology fit into the urban fabric of the N/SE Corridor? • Does this technology facilitate intermodal transfer movements among public transit service providers and private bus operations?

Capital Cost	<ul style="list-style-type: none"> • To what extent does this technology represent a cost-effective investment independent of system plan? • Are there front-end costs and time associated with this technology to ready it for implementation? • How flexible is this technology in allowing the owner to vary how the design, construction and procurement are packaged for contracting? • How severe are the secondary costs (utilities, street changes) due to placing this technology and its structures in likely locations?
O&M Costs	<ul style="list-style-type: none"> • What is the technical life expectancy of this technology? • To what extent does this technology imply a reasonable level of annual costs? • Is this technology labor intensive to operate? To maintain? • Are there any extraordinary power requirements associated with this technology? • Is this technology susceptible to failures of its rolling stock, systems or fixed facilities? • Can the barrier-free, proof-of-purchase fare collection method be used with this technology? • What relative degree of vehicle failure or down-time is likely with this technology? • What level of vehicle spares seems indicated as prudent?

The CONSULTANT will document the technology assessment efforts in a technical memorandum.

4.2 Preparation of Evaluation Criteria

The CONSULTANT will collect and evaluate current plans, existing studies and proposals related to downtown Miami and Miami Beach to provide a basis for understanding the opportunities, commitments, and restrictions that will dictate the initial assumptions for the study. The review of current studies will include but not be limited to the Downtown Miami Long-Range Transportation Master Plan and the City of Miami Development of Regional Impact, Increment II, the proposed Unified Development Project for the Mega Yacht Marina and Mixed-Use Waterfront Development Opportunity (RFP, February 2001), the Aviation Facilities and Regional Visitors Center and the Miami Children's Museum to be located on Watson Island.

In addition, transportation impacts from gateway projects under way or proposed should be considered in the initial phase of the project including the Performing Arts Center, City of Miami recommendations for Bicentennial Park, and the Biscayne Boulevard improvements, the recently begun study sponsored by MPO, managed by the University of Miami for the alternatives to I-395, the Port of Miami-Dade Master Plan, the Miami Beach Intermodal Feasibility Study and related reports addressing goods movement and tunnel alternatives.

Based on this information, as well as that developed during the East-West Corridor DEIS and that generated in other relevant studies, the CONSULTANT will prepare an overview of transportation system wide planning issues to guide the development of conceptual alternatives for the Miami-Miami Beach Corridor. The CONSULTANT shall identify relevant existing studies and plans and identify their impacts on the Miami-Miami Beach system. Relying on the East-West Corridor DEIS and the

current information available, the CONSULTANT will also prepare an overview and assessment of land use factors and development trends of the existing transportation system within the Corridor. The transportation problems identified will also include a discussion of future traffic problems on parallel corridors resulting from land use and employment projections.

The CONSULTANT will prepare and present goals and objectives that will form the basis for the evaluation criteria. Finally the CONSULTANT will prepare and present evaluation criteria and measures that will be used to quantify the achievement of goals and objectives for each alternative.

The CONSULTANT will review the DEIS work performed as part of the East-West Corridor efforts, as well as other relevant studies, and prepare an overview of transportation planning issues to guide the evaluation of the initial alternatives. This analysis will provide a focused assessment of additional issues related to modes and alignments to be studied within the Corridor.

The overview and assessment of system issues will include:

- Mode/configuration descriptions, which have been assessed for the Corridor.
- Updated land use factors and development trends affecting the existing transportation system within the Corridor.
- Results of other studies relevant to the planning and environmental evaluation process.
- Other factors that may have changed affecting the environmental analysis prepared for the East-West Corridor.

These factors will be recorded in a technical memorandum.

4.3 Develop Alternatives for Alignment

The CONSULTANT will prepare alternative concepts for the connection between Miami Beach and downtown Miami to be evaluated within the context of the DEIS supplement. The additional alternatives identified will be examined to determine how they relate to those alignments presented in the original DEIS. Alternative variations anticipated are as follows:

- Various alignments and termini on Miami Beach.
- Various alignments and termini in downtown Miami
- Any variations across the Causeway and Intercoastal Waterway Bridge
- Any variations across Watson Island
- Additional modes

Any additional environmental analysis and evaluation to address the impact of the added alternatives or variations will be identified and quantified. The alternatives will be evaluated to the extent necessary to show which of the environmental impacts have been adequately addressed in the original DEIS.

4.4 Develop Alternative Sites for the Maintenance Facility

The CONSULTANT will start with the DEIS recommendation for a maintenance facility to determine if the original sites are still feasible. If they are no longer feasible or additional sites are discovered that appear more feasible, then additional sites will be identified for further evaluation in the Supplemental DEIS.

4.5 Conceptual Model Runs

The CONSULTANT will perform up to three 2020 model runs to determine what the traffic impacts and ridership estimates are for the additional alignments that were developed in the task above. These additional runs will be evaluated against the 2020 information provided for the light rail transit (LRT) in the original DEIS.

4.6 Conceptual Costs

Using the cost estimates prepared for the East-West Multi-Modal Corridor Study DEIS, as well as any new cost data required for new modes, lineal foot costs will be developed to facilitate the production of comparative cost estimates in order to compare any new transit alignments to those evaluated in the DEIS.

4.7 Conceptual Alternative Evaluation

Using the data prepared above the CONSULTANT will present the information in a comparative evaluation format to assist the MPO, CAC and TAC in determining which of the alternative alignments should be carried through the Supplemental DEIS. The resulting list of alternatives will form the basis of the added work to be addressed in the Supplemental DEIS.

5. Reevaluation/Supplemental to DEIS

Through thoughtful coordination with the FTA and affected agencies and jurisdictions in the Miami-Miami Beach Corridor, it is the CONSULTANT and MPO's intent to review and supplement the DEIS work performed for the East-West Corridor to satisfy NEPA requirements and gain environmental clearance for an LPA for the Miami-Miami Beach Corridor. The Miami-Miami Beach Corridor was thoroughly addressed in the East-West Corridor DEIS and included in the LPA selection by the MPO Board. The Miami-Miami Beach segment of the East-West Corridor was, however, not included in the Minimum Operable Segment (MOS).

This task summarizes the effort necessary to update the previous work, and subject to FTA/FHWA concurrence, prepare and issue a supplemental DEIS for the Miami-Miami Beach Corridor. The East-West Corridor DEIS was supported by a complete set of methodology reports. These will be used, updated as necessary, to conduct the required supplemental work. Supplemental data may be required to address the changing land use, socio-economic data, traffic and ridership impacts for the Corridor. In addition while a representative number of alternative alignments were addressed in the DEIS, some additional alignment variations and modes may require

analysis. Utilizing the supplemental data generated in the previous task, the following subtask detail the effort envisioned.

5.1 Document Previous Work

The CONSULTANT will review the East-West Corridor DEIS, LPA report and supporting documentation for the Miami-Miami Beach Corridor. The alternative alignments and associated impacts will be documented. The primary environmental considerations for the alternatives addressed in the DEIS, and to some extent, applicable to other typical alignments in downtown Miami or on South Miami Beach will include: social and economic impacts; visual and aesthetic impacts; noise and vibration impacts; transportation/traffic impacts; potential impacts to historic structures; energy and construction impacts and to some extent the wildlife and habitat impacts along the causeway. The previous alignments/modes examined will be documented along with the impacts in narrative and graphic format.

5.2 Examine Potential Impacts

Based on the alternative alignments and modes resulting from the scoping process, the CONSULTANT will examine the potential impacts of the conceptual alternatives resulting from the review and comment process. The potential impacts will be documented in narrative and graphic formats and, at a minimum, address the categories of impacts listed in Task 5.1.

5.3 Identify Additional Environmental Work Required

Based on a comparison of the results of tasks 5.1 and 5.2, the CONSULTANT will identify the areas where additional environmental analysis is required to address the impacts of an alternative or to update the technical baseline data to reflect currently existing conditions. Such categories of analysis could include existing land use, socio-economic data and traffic impacts. Where it is determined that current analysis of an alternative is typical for variations on the alternative, such determination will be documented after review and discussion of the additional analysis required with the MPO, CAC and TAC. The CONSULTANT will generate the necessary documentation of the assumptions underlying the identification of the additional work required.

5.4 Coordination with FTA/FHWA

Prior to initiating the additional work required, the CONSULTANT will support the MPO in coordinating the proposed additional requirements with the FTA. After the necessary revisions have been addressed, the CONSULTANT will assist the MPO in documenting the environmental variations from the existing East-West Corridor DEIS that must be addressed in the supplemental efforts.

5.5 Prepare the Supplemental DEIS

In accordance with state and federal guidelines and the requirements of the NEPA regulations and guidelines, the CONSULTANT will produce any additional supplement of data. Pending the appropriate review and coordination with the MPO, CAC and TAC and the necessary FTA reviews and approvals, the draft supplemental

DEIS will be prepared and carried through the formal publication and notification process and be subjected to a formal public hearing.

Products

- Technical Memorandum documenting efforts of this Task 5.1 through 5.4
- Supplemental DEIS

6. Public Hearing

The CONSULTANT will assist the MPO in organizing and scheduling a public hearing to provide all interested and affected parties with an opportunity to review and comment on the environmental analysis of the impacts of the alternatives evaluated in the supplemental DEIS. The public hearing will be conducted in accordance with the regulations and guidelines of NEPA. The CONSULTANT will prepare presentations graphics, and handout materials and a slide/PowerPoint presentation. The CONSULTANT will assist the MPO with sign-in, documentation of public comments and preparation of responses to the public comments. The CONSULTANT will arrange for recording of the meeting by a court styled stenographer.

Products

- Public Hearing graphics, handouts and presentations
- Documentation of comments
- Responses to comments
- Public Hearing transcript

7. Selection of LPA/Financial and Project Justification

7.1 Selection of LPA

As part of the East-West Multi-Modal Corridor Study, a LPA was adopted that included a general alignment for the Miami-Miami Beach Corridor. The segment comprising the Miami-Miami Beach Corridor was not included in the MOS.

The objective of this task is to identify and select a LPA based on the supplemented DEIS findings. The selection of the LPA will be the responsibility of the MPO Governing Board based on the results of the Supplemental DEIS and Public Hearing process. The decision will be documented to inform interested parties of the decision and its underlying rationale, to explain the decision process, and to demonstrate the cost-effectiveness and financial feasibility of the decision.

1. This task consists of three activities: response to DEIS review comments, selection of the LPA, and preparation of a summary of the LPA for distribution to the public.
2. A report summarizing selection of the LPA will be prepared.
 - A description of the preferred alternative, including mode, alignment, and the operating plan, as well as other relevant material from the environmental documents.
 - A rationale for the selection of the preferred alternative including public review and comment.
 - A financing plan for both capital and operating costs for the preferred alternative.

A draft report will first be submitted to the MPO for review and comment. A final version of the document will be prepared, incorporating MPO's comments as well as an application to initiate the PE/FEIS phase of project development. The final documents will be presented to the MPO for approval.

Deliverables

- Preferred Alternative Report
- Application to FTA requesting approval to initiate the PE/FEIS phase of project development

7.2 Financing Plan and Project Justification

7.2.1 Long-Term Transportation Financing Plan

7.2.1.1 Modify Transit System Plan and LRTP to Reflect LPA for Priority Corridor

Based on the reevaluation of the Long-Range Transportation Plan for the metropolitan area, the CONSULTANT will assist the MPO in the modifications to the Long Range Transportation Plan for the metropolitan area and the Transit Systems Plan that will be necessary to reflect the adoption of the LPA in the preferred corridor and other recommendations that may come out of the study. The modifications will reflect the financial adjustments to these plans that come out of the long-term transportation financing plan that is initiated in this task and completed for the LPA in Phase 2.

7.2.1.2 Develop Cost Data for LRTP (Financially Constrained)

Utilizing the data developed for the LPA, the CONSULTANT will summarize the identified investments. The report will include the estimated capital and O&M cost and will serve as the basis for the development of the financial plan. Given the anticipated magnitude of the investment, a reliable local source of income from a tax supporting transit would be very desirable. The CONSULTANT will assemble the financial plan and support the modification of the MPO's financially constrained LRTP/TIP to include the LPA.

7.2.1.3 Identify Funding Sources and Strategies

The CONSULTANT will prepare research and a technical report related to the development of a stable source of funding for the LPA, and related transit services in the corridor. Both capital and operating funding sources will be explored. Some primary assumptions include:

- There is no large pool of money for this project at the local, state or federal level.
- Funding the project will require assembling a number of projects touched by the connector and including some funding for connector in shared budgets (i.e., Watson Island port tunnel, Collins Avenue improvements, etc.)
- The project will probably have a large number of small sources of funds (similar to Sacramento) not one large one.
- Need to explore and capture opportunities to tie in with private developers/GEO bond projects.
- Direct federal Section 5035 New Starts Funds will probably reflect small percentage of total package; 25 percent or less.

The first step under this assignment will be to complete a review of funding sources used by other similar properties across the country, both federal and local, the level of funding derived from these sources and the conditions under which these sources are administered. Some potential capital funding sources include:

- Convention Center/Tourist development taxes (areas near Miami/Miami Beach Convention Centers or hotels)
- Hotel tax; Miami and Miami Beach
- Property tax/tax assessment district at key Miami/Miami Beach locations—could use funds for LRT, road improvements, signals, sidewalks and landscaping.
- Package parts of project with other projects in geographic area (redevelopment; Watson Island tunnel to port; east channel bridge; Euclid Avenue pedestrian mall/multi-modal facility; projects sponsored by GEO's private developments such as Overton/Parkwest.
- McAuthurs Causeway passenger toll
- Other federal sources (CMAQ)
- Investment tax credits

After review by the TAC, a report will be prepared in a form suitable for distribution to state and local elected officials.

The CONSULTANT will convene a series of local focus groups to assess the willingness of the public to pay for the kinds of services that may be anticipated and to explore the kinds of funding that may be assessed and the public response to those forms of revenue generation.

7.2.1.4 Recommend Detailed Options for Long-Term Funding of Transit Alternatives

Based on the results of the analysis conducted in the above tasks, the response of the TAC and the public reaction from the focus group interviews, the CONSULTANT will

prepare a "White Paper" providing a set of recommendations on funding options for the support of the construction and operation of the endorsed regional transit system.

7.2.1.5 Assist MPO in Building Consensus for Funding Plan

The CONSULTANT will convene a series of local focus groups to assess the willingness of the public to pay for the kinds of services that may be anticipated and to explore the kinds of funding that may be assessed and the public response to those forms of revenue generation. The CONSULTANT with the direction and support of MPO staff and the TAC will convene two public meetings to discuss the Study findings and present the benefits associated with the development of a supportive long-range transit plan in the corridor.

7.2.2 New Starts Project Justification Evaluation

If federal section 5309 New Starts funding is to be pursued, it will be necessary to prepare a new starts project justification evaluation. Application and reporting procedures for the Section 5309 New Starts Criteria will be coordinated closely with the FTA and the MPO. The designated template/format for reporting of criteria/measures will be utilized. The CONSULTANT has completed over 20 of these Justification reports and over 50 percent of the current projects enjoying Full Funding Agreements are PB supported programs. The financial plan and land use portions of the report are critical to successfully pursue federal funding. The outline of the report is as follows:

General

1. Project Description (Template 4.1)
2. Project Map
3. Certification of Technical Assumptions (Template 4.2)

A. Mobility Improvements

1. Travel Times Savings (Template 5.1)
2. Low-Income Households Served (Template 5.2)

B. Environmental Benefits

1. Change in Criteria Pollutant and Greenhouse Gas Emissions (Template 5.3)
2. Change in Greenhouse Gas Omissions (Template 5.5)
3. Change in Regional Energy Consumption (Template 5.6)

C. Operating Efficiencies; Change in Operating Cost Per Passenger Mile (Template 5.7)

D. Cost Effectiveness

1. Incremental Cost Per Incremental Passenger (Templates 5.8 and 5.9)

E. Transit Supportive Existing Land Use and Future Patterns

1. Suggested Rating of LPA(s) (Template 6.1)
2. Quantitative Land Use Data (Template 6.2)

F. Local Financial Commitment

1. Project Finance Worksheet (Template 7.1)

The CONSULTANT will generate both a working copy (review draft) and a final of the evaluation and application.

The methodologies for each technical work area, discussed earlier in the scope, will be specifically designed to generate the detailed data and backup documentation required for each New Starts project evaluation measure. In this work task the CONSULTANT will assemble the required documentation to support the calculations in the previous Task into a supporting report.

8. Preliminary Engineering/Final Environmental Impact Statement (Start of Phase 2)

Based on the LPA adopted by the MPO Board, the purpose of the PE/FEIS phase of development is to advance the definition of the LPA to a point where developmental issues are resolved and local decision makers have reliable data on which to make the necessary commitment to project implementation. The PE/FEIS process also solicits public comment and gains the environmental clearance for the project through the FTA's issuance of a Record of Decision (ROD). If federally funded in part by Section 5309 New Starts funds, the data also provides the basis for the development and submittal of the Project Justification Report.

8.1 Refine the Preferred Alternative

The LPA for the Miami-Miami Beach Corridor will be developed and reflected on plan and profile drawings for the alternative. The alignment will be developed to assure a high level of operational reliability and to minimize the impacts of the design. The level of planning and engineering will be advanced to resolve any development issues and to support the cost estimating process for the entire length of the alignment as described in the following sections.

Product

- Plan and Profile Drawings

8.2 Cross-Sections

Develop typical cross-sections for the preferred alignment that represent:

- The alignment at mid-block for each of the various existing right-of-way widths through downtown Miami, across the causeway and through Miami Beach
- The alignment on the north side of an intersection
- The alignment on the south side of an intersection
- The alignment across the intercoastal bridge
- The alignment across the Alton Road flyover
- Details at both termini

Product

- Typical cross sections for the alignment based on the plan and profile drawing set

8.3 Passenger Facility Plans

Passenger facility plans will be developed at a scale and a level of detail to depict the functional requirements for the facility, assess its community impacts and estimate operating and maintenance (O&M) costs and capital cost. Based on the horizontal and vertical alignment drawings (plan and profiles), preliminary plans for passenger facilities, stations or waiting areas will be developed. Where required, significant variations to the typical facilities will be addressed. The measures addressed in the plans will include:

1. Site plans showing station location, bus interface areas, short-term parking (kiss-ride), circulation roads, pedestrian and bike path connections, and landscaping areas. It has been assumed that none of the facilities in this highly urbanized area will include long-term parking.
2. Passenger access to the transit stations will be shown including direction and mode of access (kiss-ride, feeder bus, bike or walking). Special attention will be given to vehicular traffic interface with pedestrians.
3. The neighborhood context along the route will be analyzed and any special station treatment will be developed.
4. The need for pedestrian grade separations will be examined.
5. Transfer facilities for the terminus stations will be developed.

Product

- Passenger facility layout plans and description, at the scale of 1" =50'

Should a new intermodal or transit center be identified as part of the project, the plans would be developed as part of this task.

8.4 Civil Site and Drainage Plans

The CONSULTANT will prepare and show on the plans, existing and proposed site conditions for the alternative alignment to include:

1. Assessment of the impact of the transitway on the existing conditions and prepare plans at 1"=100' scale showing the following:
 - Existing topography
 - Proposed roadway rearrangements
 - Miscellaneous improvements such as sidewalks, fencing and street lighting
2. Estimate quantity of runoff that will be collected in crossing Biscayne Bay and develop appropriate methods to handle storm water for the transitway.
3. Meet with SFWMD to review plans prior to completion of work.
4. Assess the transitway sections to determine if new construction will impair the existing runoff
5. Calculate runoff for passenger facilities, determine drainage requirements and provide the necessary ties to existing or adequate new facilities.
6. Major drainage features will be shown on the plans.

Product

- Concept Plans and Drainage Report

8.5 Develop Plans for Maintenance Yard

Assuming that the mode selected for the Miami-Miami Beach connection introduces a new technology (i.e., is not rail rapid transit (METRO), an Automated People Mover (METROMOVER), METROBUS, or Electric Wave) a new maintenance and storage yard will be required. Under this task;

- The functional and operational requirements of the facility defined during the Supplemental DEIS efforts will be reviewed and refined as necessary.
- The site, or sites, identified and evaluated during the previous phase of work will be reviewed and the site utilization study(ies) updated as necessary.
- The site plans for the facilities required to operate, maintain and store the vehicles and service equipment will be developed at a scale of 1" = 50'. The plans will be complete enough to support the development of reliable O&M and capital cost estimates.

Product

- Preliminary Design Report
- Site plans and layout drawings

9. Environmental Analysis

The purpose of this task is to prepare an FEIS for the LPA. The work conducted under both the East-West Multi-Modal Corridor Major Investment Study (MIS), and the DEIS

phases will be summarized to provide a basis for the new document, including a description of the process for evaluating and recommending an LPA. The rest of the document will consist of the results of detailed environmental analysis conducted on the LPA following NEPA requirements.

The CONSULTANT will perform necessary coordination with federal, state, and local agencies, the general public, and citizens groups that have a stake in the study and preparation of the FEIS as directed by the MPO. The CONSULTANT will prepare the content of necessary coordination letters from the MPO to other agencies, the public, etc.; meeting minutes for all coordination meetings; and all official supporting environmental documents outlined in the following environmental subsections as related to the FEIS.

9.1 Conduct Environmental Impact Analysis

The environmental impact analyses conducted for the East-West Multi-Modal Corridor DEIS and the FEIS for the LPA were prepared for the year 2020. Since the year 2025 is imminent, the planning horizon will need to be advanced to the year 2025. Therefore, all of the socio-economic data will be refined as necessary for the FEIS. No task by itself will require a major effort, but the total number of tasks in this category result in a significant effort. Changes in mode, alignment, stations, and passenger access will require a reassessment of the impacts identified in the DEIS. The environmental analysis in this task will be conducted concurrently with the design efforts so that refinements can be made to the project and anticipated impacts can be minimized. The analysis of the project impacts will include a description of impacts under each specific environmental area, as required under NEPA and applicable FTA guidance.

Baseline conditions for each of the impact areas will have been documented and included in the DEIS. To the extent practical, this baseline will be used for reassessment of the impacts of the LPA. If necessary, additional data will be collected from existing sources maintained by federal, state, and local agencies, and augmented by field studies and measurements, as appropriate.

The CONSULTANT will identify, verify, and describe all project impacts. Impacts on existing and future conditions will be assessed in terms of beneficial and adverse impacts. Direct primary, indirect (secondary), and cumulative impacts will be considered. Impacts will be classified and their significance addressed in terms of short-term and long-term consequences. The environmental areas to be addressed and the approach proposed are described in the following subtasks.

9.1.1 Social And Economic Impacts

The impacts of East-West Corridor, including the rail line to the west of downtown Miami are documented in the DEIS. The East-West Corridor DEIS work will be reviewed and refined to reflect the impact of a transitway between downtown Miami and Miami Beach without the connection to the east-west rail line.

1. All population and employment data will be presented for the year 2025 within the Corridor.

2. Complete analysis of impacts to land use in the following categories will have to be undertaken.
 - Secondary development
 - Joint land use development
3. A complete analysis of relocation impacts will be undertaken.
 - Review impacts to neighborhoods, businesses, and racial/ethnic groups
 - Verify number of residential, business, and nonprofit organization relocations
 - Verify property values in Corridor to finalize the right-of-way costs of the preferred alternative.
4. For the LPA, conduct analysis of Environmental Justice on affected communities in accordance with U.S. Department of Transportation (DOT) Executive Order 12898.
 - Prepare socio-economic data
 - Present avoidance measures

9.1.2 Visual Impacts/Aesthetics

The transitway will be shown graphically in a generic sense and at key locations to assist the community in understanding its impacts.

1. Using photography and illustration techniques, the CONSULTANT will verify and detail the visual impacts of the preferred alternative as seen from two points of view:
 - the facility user
 - the view of the facility
2. The impacts of the specific LPA design to sensitive sites and areas will be discussed.
 - At the conjunction with Metrorail
 - On the east-west alignment through downtown Miami
 - In proximity to Freedom Tower
 - Crossing Watson Island
 - Crossing the Causeway
 - Along 5th Street on Miami Beach
 - Along the north-south arterial on Miami Beach
 - Miami Beach terminal
 - The maintenance facility
3. Mitigation measures will be defined and developed as necessary.
4. The CONSULTANT will again rely on illustration techniques to document the effectiveness of the project's proposed mitigation measures.

9.1.3 Air Quality Analysis

Air quality impacts due to the operation of the facility will be evaluated on a micro-scale basis. The analysis will include both opening year (2010) analysis for the No-Project, Transportation Systems Management (TSM) and LPA and for the horizon year (2025). This task will involve the analysis of six separate model runs.

1. Complete data collection/analysis
 - Air quality analysis will be performed at the four sites on Miami Beach analyzed in the DEIS plus three additional sites
 - Analysis of “worst case” Carbon Monoxide (CO) levels at each of the seven site locations will be conducted following Environmental Protection Agency’s (EPA’s) “Guideline for Modeling Carbon Monoxide from Roadway Intersections”
 - Vehicle emissions will be calculated using EPA’s Mobile 5A emission model
 - CO concentrations will be determined using EPA’s CAL3QHC Version 2 dispersion model
2. Results from the dispersion modeling will be compared to the state and National Ambient Air Quality Standards (NAAQS) to determine if the project has the potential to cause or exacerbate a violation of the NAAQS.
3. Results Report will be prepared with all data generated by analysis of both the years 2010 and 2025.
4. The Air Quality section in the FEIS will be prepared to reflect the results of the analysis.

9.1.4 Noise and Vibration Impacts

Noise and vibration impacts for the No-Project, TSM, and LPA will be analyzed for both the year 2010 and 2025. The re-analysis of the sites analyzed in the DEIS will require modeling of both noise and vibration levels and projection of impacts for both time-frames. The following tasks will be completed to determine the impact from proposed LPA alignment:

1. Site Selection: Sites selected for the DEIS will be retained and used in the draft FEIS plus three additional sites will be selected.
2. Field Data Collection: All new existing noise readings will be taken
3. Existing Noise Level Estimates: Existing noise level estimates will be used.
4. 2010 and 2025 Noise and Vibration Level Estimates: Utilizing the FHWA traffic noise model, STAMINA2, future peak hour traffic noise levels will be estimated at each of the noise monitoring locations. Employing the procedure outlined in FTA’s Guidance Manual for Transit Noise Impact Assessment (DOT Report DOT-95-16 April 1995), LPA-generated day-night noise levels will be estimated. At each site, future traffic and transit noise levels will be combined to estimate the overall future day-night noise levels.

Future ground-borne vibration velocity levels will be estimated using the method recommended in the guidance manual for vibration estimates.

5. 2010 and 2025 Noise and Vibration Impacts: Noise impacts will be assessed by comparing existing day-night noise levels against future predicted build day-night noise levels. The FTA's Cumulative Noise Exposure Guidelines and Ground-Borne Vibration Criteria will be used in the impact evaluation.
6. Abatement Analysis: Employing the FTA's procedures, noise abatement measures will be developed.
7. Prepare new/updated Results Report.

9.1.5 Contamination Impacts

A Level 1 Contamination Screening Evaluation will be completed for the study Corridor. The purpose of the contamination evaluation is to identify activities in and adjacent to the Corridor that could result in contamination.

A preliminary list of potential contamination sites in the study Corridor will be prepared from the DEIS and any new sites added. The list will be compiled from review of regulatory agency permitting and inventory databases, such as Miami-Dade DERM, the State Hazardous Waste Site List, the Environmental Protection Agency's National Priorities list, and other sources as appropriate, in addition to a field survey.

9.1.6 Floodplains

The FEIS will contain a statement of no-feasible alternative to the project's construction in the floodplain. The CONSULTANT will document the impacts of the LPA on the floodplain in the FEIS. Depending upon the final alignment this could be a significant issue.

9.1.7 Wildlife and Habitat Impacts

1. Perform a specimen tree survey along preferred alignment including:
 - Identification
 - List of impacts
 - Number and size of each type
 - Location description
2. The Endangered Species Biological Assessment Report for affected habitat, flora, and fauna for the DEIS will be modified as required to reflect the LPA in the project area.
3. Review and finalize coordination with applicable agencies.

9.1.8 Energy

Develop Energy Report for traffic for the years 2010 and 2025 for the preferred alternative.

1. Update Energy analysis for FEIS, including:

- Regional energy impact of the proposed action
- Relation to state energy planning

9.1.9 Construction Impacts

The CONSULTANT will verify and address impacts associated with construction of the preferred alternative.

- Air quality impacts
- Noise impacts
- Visual/aesthetic impacts
- Water quality impacts from construction site stormwater runoff
- Traffic maintenance and detour routing
- Maintenance of access to businesses and residences
- Safety considerations
- Public involvement and community interaction to ease disruptive affects
- Disposal of construction materials
- Stock piling of construction materials
- Use of borrow areas

9.2 Identify/Design Mitigation Measures

The identification of design mitigation measures will list and evaluate reasonable and practical measures for avoiding impacts and minimizing harm during both construction and operation of the system. Mitigation measures will be identified in close coordination with the appropriate agencies. The plans will identify mitigation measures for each impact, noting where authority and responsibility for carrying out these measures reside. The mitigation measures will be incorporated into the FEIS.

Mitigation measures that may be developed include:

- Landscape screening and buffers at specific locations for homes that front on the alignment
- Berms along the alignment to insulate a neighborhood
- Local street modifications
- Temporary noise walls erected during construction
- Use of Art in Public Places
- Specific Better Management Practices (BMPs) for drainage during construction

9.2.1 Economic Development

The CONSULTANT will recommend appropriate development and land use densities around station areas.

9.2.2 Land Acquisition And Displacements

The CONSULTANT will identify the actual properties and land uses that will be displaced by the LPA. Based on this listing, parcels will be identified as to what type of relocation assistance will be available and whether a commercial use should be accommodated within the Corridor.

9.2.3 Visual Mitigation

The CONSULTANT will identify areas where localized mitigation is required (landscaping to shield residential areas) as well as system wide measures to improve the visual aesthetics of the facility.

9.2.4 Noise and Vibration

Given the new noise monitoring efforts the recalculation of noise impacts will require the recalculation of noise mitigation, particularly around any new sensitive receptors that are being identified.

9.2.5 Ecosystems and Natural Community

Mitigation measures will be designed as a result of the tree survey performed in Task B.2. Any additional mitigation measures will also be identified and quantified.

9.2.6 Water Resources

Mitigation measures will have to be developed for run-off and construction in the flood plain.

9.2.7 Contamination Sites

Feedback will be provided to the construction methodology to describe construction techniques for avoidance and mitigation of work around contaminated sites.

9.2.8 Construction Impact Mitigation

This will be one of the most critical portions of the FEIS. Description of techniques and methods for minimizing harm during construction will be provided.

Products

- Commitments and Recommendations Section

9.3 Identify Required Environmental Permits

The purpose of this task is to review the list of permits for all federal, state, county, and local agencies.

The construction of the project will be regulated by environmental rules and regulations administered by federal, state, county, and local agencies. Many of these agencies have established environmental permit programs to ensure the careful use of air, land, and water resources. Among the agencies that require permits are the U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Game and Fresh Water Fish Commission, the South Florida Water Management Districts, and Metropolitan Dade County Environmental Resources Management.

Products

- Section of FEIS

10. Travel Demand Model

10.1 Year 2010 and 2025 Networks

The CONSULTANT will use the county's MPO model for all analysis. An opening year model will be developed with 2010 socio-economic data. The network will also be revised as necessary to reflect the most current plans for the year 2010. The model and the network will also be updated to reflect year 2025 socio-economic data and the development of a 2025 network reflecting the latest Long-Range Transportation Plan (LRTP).

10.2 Year 2010/2025 – No-Project

Once the model is revised per the above, the CONSULTANT will run both of the new No-Project alternatives.

10.3 Year 2010/2025 – TSM Alternative (Baseline)

A detailed TSM network for both years 2010 and 2025 will be developed. Once the model is developed the CONSULTANT will run the TSM Alternative for both time frames.

10.4 Year 2005/2020 – Preferred Alternative

Based on the MPO selection of the LPA and the approach detailed above, the CONSULTANT will run a Preferred Alternative for both time frames.

Product

- A travel demand forecast report will be prepared documenting the results of the 2010/2025 model runs.
- Transit ridership forecasts will be prepared for the No-Build, TSM and LPA alternatives for 2010 and 2025. Data will be provided for both the alignment and the countywide system. Detailed line data will be presented by station, by mode of access, by time period and by direction.

10.5 Traffic Analysis

To document the traffic impacts of the proposed alternatives on future traffic characteristics in the area, traffic impacts will be evaluated using travel demand forecasting results produced in earlier task. Projected traffic conditions will be evaluated for the LPA plus the No-Project and TSM alternatives for a.m. and p.m. peak hours for both forecast years. A program of proposed improvements at major intersections and access points to stations will be developed to support and enhance the transportation plan for each alternative. The proposed improvements will be based on the individual elements analysis using the Highway Capacity Software and Florida Department of Transportation (FDOT) guidelines.

The following activities will be performed:

1. Generate updated directional design hour volumes (DDHV) for a No-Project, TSM and the LPA using existing traffic data and updated factors.
2. Document impacts of alternatives on a systemwide basis.
3. Produce figures for the report and presentation.

10.5.1 Traffic Counts

Traffic Counts will be taken at 12 locations representing typical and critical site conditions.

10.5.2 VISSIM

The CONSULTANT will prepare and present VISSIM runs to supplement the public involvement program and to help the public and elected officials understand the impacts of the project on traffic at key locations.

Product

- Traffic Report
- Presentations

11. Project Implementation

11.1 Cost Estimating

1. Based on the methodology developed under the East-West Corridor DEIS, the CONSULTANT will prepare a detailed capital cost estimates for the LPA.
2. The CONSULTANT will prepare the right-of-way cost estimate based on the LPA and values of real estate and relocations provided by the county. Each parcel affected either by a full take or a partial take will be evaluated as to the type of occupancy it is, i.e., residential or business, whether it is improved, unimproved or public lands will be evaluated as to the reasonable purchase price of that parcel.
3. The CONSULTANT estimate will be developed and presented on a block-by-block basis showing summaries of all the data variables identified above.

11.2 Operating and Maintenance Cost Estimating

1. Prepare the annual operating and maintenance (O&M) cost estimate for the No-Build, TSM, and the LPA.
2. The O&M cost model used in earlier phases of work will be updated in consultation with Miami-Dade Transit Agency (MDTA) staff. The new cost coefficients for each cost category will be multiplied by the values of the cost

function variables as determined and the products summed over all cost categories. Estimates of O&M cost will be developed for the years 2000, 2010, and 2025 and expressed in year of expenditure dollars, and in constant year 2000 dollars for use in the financial analysis.

11.3 Project Implementation Plans

1. A Preliminary Engineering Schedule will be prepared for the design and construction phase of the project, in bar chart format, covering all significant work tasks. Identified therein will be work items, tasks and milestones that affect the owner and third parties and events, which are affected by the implementation of the project.
2. The CONSULTANT will use the county's cash flow requirements as a starting point. Any changes that have occurred in the schedule or in the cost estimate will be reflected.
3. Based on the efforts conducted in Task 7.2, and updated as necessary, the CONSULTANT will identify a possible funding package required to construct the LPA for the MPO's consideration. Based upon comments from the MPO the CONSULTANT will put together the final financing and implementation plan.
4. If federal Section 5309 New Starts funds are to be used the CONSULTANT will update the work produced in Task 7.3.

12. Prepare Draft FEIS

The CONSULTANT will prepare the draft FEIS document for review by MPO and other participating agencies. The CONSULTANT will assemble the documentation prepared under each phase of the work into a draft FEIS document that summarizes the results of the environmental analysis. The draft FEIS will be submitted to MPO and other participating agencies for their review and comment. The FEIS document will be processed in accordance with the NEPA process as well as state and local requirements.

Product

- Draft FEIS

13. Respond To Draft FEIS Comments and Prepare Final FEIS

To prepare the final version of the FEIS document, the CONSULTANT will coordinate and respond to comments received on the draft FEIS, incorporate comments as appropriate, and complete the final version of the FEIS document for public distribution. The CONSULTANT will distribute the FEIS to the parties that

received the DEIS, provide legal notification to the public that the Corridor's preferred alternative has received a Record of Decision (ROD) from FTA and that the project is being advanced to the final design phase.

1. The CONSULTANT will prepare and distribute approximately 200 copies of the FEIS.
2. The CONSULTANT will assist the MPO with drafting of the ROD for submittal to the FTA.
3. The CONSULTANT will place the notification in the local newspapers, as required, upon receipt of the ROD.

Product

- Final version of FEIS for public distribution

