

PROJECT WORK PLAN

DC Needs Assessment and Alternatives Analysis

JOB NO. 046.103273.5205



Updated March 2005

Prepared by:

Date

Approved by:

Officer-in-Charge

Date

Quality Representative -

Date

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1. INTRODUCTION AND BACKGROUND

The DC Alternatives Analysis is comprised DC's Transit Future is considering a range of alternatives that would provide enhanced transit connections to support local mobility, accessibility, and economic development goals, and to connect healthy, vibrant communities. This project summary presents a review of the three key elements of the study: 1) the transportation problems in the study area and the project purpose and need; 2) the measures that will be used to evaluate each alternative in relationship to the project's impacts and fulfillment of the project's purpose and need; and 3) the alternatives under consideration. The document also provides some context for the study and identifies the environmental concerns that will be considered. This project summary is intended to assist interested parties in gaining an early understanding of the project. Comments on the problem statement, evaluation measures, and initial alternatives will help to identify needed changes and to ensure that the study will develop efficiently the information needed for crucial decisions

For this job, DMJM+HARRIS is serving as the lead consultant. The firm is being assisted by several other firms including Parsons, Brinkerhoff, Quade, and Douglas; Parsons Transportation Group; EEE Consulting; BMI-SG; Booz, Allen, and Hamilton; Holland and Knight; Planners Collaborative; KM CHNG; Manuel Padron and Associates; and Justice and Sustainability Associates. AECOM Consult is serving as a subconsultant to Parsons Brinkerhoff Quade and Douglas for this project.

2. PROJECT OVERVIEW AND SCOPE OF WORK

DMJM+HARRIS is providing planning services to develop a regional long range system plan for premium transit services in a number of priority corridors throughout the District of Columbia. The resulting system plan is to include a phasing strategy and financial plan. This project consists of Task A: Needs Assessment, Task B2: Alternatives Analysis, and Task C: District Implementation Plan as outlined in Scope of Work for the District of Columbia Alternatives Analysis and Demo-Line Project. Task B1-Anacostia Demo-Line Environmental Assessment is addressed in a separate work plan, since this component was completed separately prior to the other major tasks at the request of the client group. The following outline identifies the organization of scope elements for Task A: Needs Assessment, Task B2: Alternatives Analysis, and Task C: District Transit Implementation Plan.

Task A: Needs Assessment

- Project Management Plan
- Public Involvement Plan
- Existing Conditions
- Purpose and Need
- Needs Assessment

Task B2: Alternatives Assessment

- Preliminary Definition of Corridor/Network Options
- Roundtable Groups
- Study Design parameters/Study Criteria
- Alternatives Development and Evaluation

- Screen 1 Analysis: Transit Modes
- Screen 2 Analysis: Premium Transit Corridors
- Screen 3 Analysis: Premium Transit Types and Phasing
- Vehicle Storage and Maintenance Facility Location Strategy
- FTA New Starts Criteria
- Return on Investment
- Funding Strategy

Task C- District Transit Implementation Plan

- Final Report
- Financial Management Plan

The scope of work for each of these tasks is included as an attachment to this PWP.

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PROJECT ADMINISTRATION

Project Organization – The overall project organization chart is attached. To summarize, the staff members with major responsibilities include:

- (D+H): Project Manager
- (D+H): Deputy Project Manager
- (D+H): Transportation Planning Task Manager
- (D+H): Transit Engineering Task Manager
- (D+H): Economic Analysis Task Manager
- (D+H): Environmental Analysis Task Manager
- (D+H): Public Involvement Task Manager
- (AECOM Consult) Financial Planning Task Manager
- (AECOM Consult) Travel Demand Forecasting Task Manager

In general, DMJM+Harris is responsible for the planning and engineering functions of the job. Planning functions include needs assessment, alternatives development, performing alternatives analysis, cost estimates, implementation/phasing of improvements, and development and management of the AA work products. DMJM+Harris is also responsible for the oversight of subconsultants. Subconsultants and their responsibilities include:

- AECOM Consult- Travel Demand Forecasting, Financial Planning, Return on Investment Analysis
- Manuel Padron and Associates- Operating Plans and Operating Cost Support
- Parsons Brinkerhoff Quade and Douglas- Station Prototypes, CADD, Cost Support
- Parsons Transportation Group- Planning Support
- BMI-SG- Bus Rider Surveys and Transit Trip Origin/Destination Studies
- EEE Consulting- Environmental Analysis Support
- Planners Collaborative- Roundtable Support and Public Involvement Materials
- KM Chng Environmental, Inc.- Air Quality, Noise and Vibration
- Booz Allen and Hamilton- Implementation Planning Support
- Holland and Knight_ Roundtable Meeting Support and Funding Strategy Support
- Justice and Sustainability Associates- Environmental Analyses Support

The project is managed out of the WMATA Planning Department, and the client contact is:

Tom Harrington
Project Manager
Washington Metropolitan Area Transit Authority (WMATA)
600 Fifth Street NW, 6th Floor
Washington, DC. 20001

(Note: Greg Walker of WMATA had served as Project Manager for the project until August 2004. He was replaced by Tom Harrington at that time)

Phone: 202-962-2294
tkharrington@wmata.com

Project Controls

- a) Project time charge and expense breakdown for charge recording as follows:

Task A, B2, and C Activities: 046103273.5205
- b) Communications including internal and external meetings and meeting minutes, use of email, telecom and trip reports, etc. All communications with the client and regulatory officials should be documented with meeting notes or telecom as appropriate. Copies of e-mails are to be filed if this means of communication was used.
- c) Project Schedules: A project schedule is attached. The AA is expected to be completed concurrently by approximately the end of June 2005.
- d) Reporting Requirements (both internal and external) including requirements and means of transmitting data and deliverables to the client and subcontractors. All deliverable submittals to the client require a transmittal form. Document Control procedures as described below are to be followed.
- e) Project Controls including the interface with corporate reporting and finance systems. - The corporate ARIS system will be used to track project labor and expense charges relative to the approved budget.

Document and Data Control

- a) A listing and description of all manuals developed and/or used for the project. The description provided for each manual should include an explanation for use and interface with the project. - N/A.
- b) The project filing system, both in printed and digital (electronic) for correspondence, calculations, and contract documents. - Listed below.
- c) The Project Administrator (PA) for this job is Jennifer Fohs at DMJM+Harris in Baltimore (410) 637-1766.

Central File Location: The central files for the project are located on the third floor in the central hallway with horizontal filing cabinets located along the wall, in the file labeled DC Alternatives Analysis.

Document Control Index: See the document control index in the appendix.

Document Control Log: All documents sent or received shall be reviewed by the Project Administrator. The PA will utilize the ISO File MS Access database to catalogue these documents. Any documents determined not appropriate for the database system will be catalogued utilizing a sequential document control number in accordance with the Document Control Log (Excel spreadsheet) found electronically in i:\projects\4099\Document Control\Document Control Log.

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DESIGN AND PLANNING

The intent of this project is to identify a 25 year transit system plan for the District of Columbia that identifies major bus system enhancements and premium transit services in a number of priority corridors throughout the district. This process includes the identification of the priority corridors based on a transit needs assessment that considers traffic conditions, transit conditions, population and employment growth, transit demand, transit travel times, planned redevelopment, and public comment. The needs assessment results in a series of goals and objectives established for the project. Options for major transit investment in each of the priority corridors are developed and evaluated based on a three step screening process. The first screen narrows the range of possible transit modes considered in each corridor based on engineering constraints of each technology being considered and potential physical impacts to adjacent properties, facilities, and development. The second screening evaluates the remaining transit investment options against measures that address each of the project goals and objectives established for the process. The purpose of the second level screening is to identify the priority corridors that are most promising for investment as premium transit corridors versus those corridors for local bus service enhancement. The third screening is focused on identifying the most appropriate type of premium transit service in the corridors that performed best from Screen 2 and a phasing strategy for bus and premium transit investments in all of the priority corridors. Upon completion of the screening process a phased system plan and financial strategy are developed to support implementation of the recommended plan.

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CONSTRUCTION MANAGEMENT, CONSTRUCTION ENGINEERING AND INSPECTION

Not Applicable

6

QUALITY ASSURANCE AND CONTROL

Quality Assurance and Control will follow the November 2001 Quality Manual. The manual is found under the DMJM+HARRIS intranet site's QRM link, within the Quality tab, and under the Quality Management System link. Robert Joseph, Technical Director for the Boston DMJM+HARRIS Office is responsible for Quality Assurance. Mark Niles, Deputy Project Manager, is responsible for Quality Control. The Project Quality Assurance Representative (PQAP) for this job is Jan Newton

At this phase of the project, the critical milestones for QA/QC are:

- Screen 1 Report
- Screen 2 Report
- Screen 3 Report
- Final Report
- Financial Management Plan

All interim deliverables to the client, which will include primarily draft chapters and sections of these reports will undergo QA/QC review prior to being forwarded.

For planning issues, Jan Newton will perform reviews. For engineering issues, Jason Mumford is the review designee. The Calculation Review Checklist, Drawing Review Checklist, Departmental/Discipline Portion of Study or Report Cover Checklist, and Study or Report Milestone Submittal Cover Checklist will be completed (as appropriate) at the critical and interim milestones.

Quality reviews will be identified in an in-house project schedule as specific, defined, scheduled and assigned tasks as the schedule for each phase is created.

7 COMPUTER AIDED DRAFTING AND DESIGN

Not Applicable.

8 SAFETY AND HEALTH

A safety and health plan shall be developed in accordance with DMJM+HARRIS Safety and Health Program and Procedures Manual if individuals will be required to perform field activities under the project scope of work. This plan may be stand-alone or be a subsection of the Project Work Plan.

**DC's Transit Future
Project Schedule**

REPORT	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
	TASK A: Needs Assessment	■	■												
TASK B2a: Definition of Corridors/Network Option			■												
TASK B2b: Roundtables	■	■												■	
Task B2bc: Study Design Parameters/Criteria		■	■	■											
Task B2d: Alternatives Development and Evaluation					■	■	■	■	■	■	■	■			
Task B2e: Vehicles Storage and Maintenance Facility						■	■				■	■			
Task B2f: FTA New Starts Criteria								■	■				■	■	
Task B2g: Return on Investment										■	■	■	■	■	
Task B2h: Funding Strategy											■	■	■		
Task C1: Final Study Report													■	■	■
Task C2: District Transit Financial Management Report													■	■	■

- § Coordination between travel demand forecasting and planning relative to the travel patterns and travel time analyses
- § Coordination between the public and agency involvement team and planning relative to the public insights and comments on potential corridors. Also coordination regarding needed data collection from agencies and organizations.



TASK PROTOCOL

Task Protocol No.: B2-1 Revision No.: _____
Project: DC Alternatives Analysis
Job No.: 046103273
Task Element: Screen 1 Evaluation of Modes

Originator / Date

Reviewer / Date

Objective

- § Identify a Range of Potential Technologies for Consideration in Priority Corridors
- § Screen the Technologies to Identify the Two Most Promising Premium Transit Technologies for Further Consideration in Priority Corridors

Prerequisites (Input)

- § Priority Corridors from Needs Assessment
- § Aerial Photo Base Mapping for the Priority Corridors
- § Typical Cross-sections, Vehicle and Guideway Characteristics, and Turning Radii for Each of the Candidate Transit Technologies under Consideration
- § Policy Direction from Client and PMT Regarding Acceptability of Potential Physical Impacts of Alignments and Stations

Results

- § Initial Screening of Technologies based on criteria that include:
 - § Surface Running Only
 - § Sufficient Horizontal and Vertical Cross-section to Accommodate Technology Guideway
 - § Sufficient Horizontal and Vertical Cross-section to Accommodate Technology Stations and Facilities
 - § Scale and Visual Compatibility with Neighborhoods
- § Second Screening of the Technologies that Survive the Initial Screening Based on:
 - § Traffic Implications
 - § Adjacent Structures/Neighborhood Scale
 - § Parking Implications
 - § Capacity
 - § Potential Community Support

- § Identification of the Top Two Performing Technologies for Further Study in each of the Priority Corridors

Interdiscipline Coordination

- § Coordination between planning and engineering regarding technology characteristics, available horizontal and vertical cross-sections in the corridors, potential impacts, and acceptability of potential impacts by the client group.
- § Coordination between engineering and planning relative to the traffic and parking implications of technologies in the priority corridors
- § Coordination between transit service planning and planning regarding the capacities of each of the technology options relative to potential transit demands in the corridors
- § Coordination between the public and agency involvement team and planning relative to community acceptance of technologies in the priority corridors.



TASK PROTOCOL

Task Protocol No.: B2-2 Revision No.: _____
Project: DC Alternatives Analysis
Job No.: 046103273
Task Element: Screen 2 Evaluation of
Corridors for Premium
Transit

Originator / Date

Reviewer / Date

Objective

- § Identify the Most Promising Priority Corridors for Premium Transit Services
- § Screen the Priority Corridors to Identify the Best Performers Relative to the Project Goals and Objectives

Prerequisites (Input)

- § Priority Corridors from Needs Assessment
- § Project Goals and Objectives
- § Criteria and Measures of Effectiveness that Relate to each of the Project Goals that have been reviewed by the PMT (steering committee)
- § Technology Assumptions for Premium Transit based on the Results of Screen 1
- § Station Locations and an Alignment for Premium Transit in Each Priority Corridor to use for as a Basis for the Evaluation
- § Defined Individual Corridor Segments for Each of the Priority Corridor. Evaluation is Applied at the Segment and Corridor Levels.

Results

- § Develop Evaluation Methodologies for each of the Criteria and Measures of Effectiveness to be considered in the Screen 2 Evaluations
- § Apply the Evaluation Methodologies to Each of the Priority Corridor Segments and Determine Resulting Values
- § Rate Each Corridor Segment as High, Medium, or Low based on the Performance of Potential Premium Transit along the segment. Ratings are based on the range of values for all segments in the priority corridors to identify the better performers.
- § Identify the Best Performing Corridor Segments to be Advanced for more Detailed Study as Part of the Screen 3 Evaluations.

Interdiscipline Coordination

- § Coordination between travel demand forecasting regarding the coding of the premium transit options, background bus system assumptions, operating plans for the premium transit options, station and alignment locations, travel times for premium transit, and outputs needed to evaluate ridership and travel time impacts
- § Coordination between transit service planning and planning regarding the capacities, load factors, and transit travel times of each of premium transit in each of the corridor segments
- § Coordination between the public and agency involvement team and planning relative to incorporating public comment into the evaluation process.
- § Coordination between the project team and DC Planning regarding city economic development initiatives and neighborhood planning initiatives and the implications for premium transit services in the priority corridors.

DC Needs Assessment and Alternatives Analysis Document Control Filing Index

- 100 CONTRACT FILES
 - 101 Proposal
 - 102 Base Contract (copy)
 - 103 Contract Modifications (copy)(original to be filed with F&A)
 - 104 Invoices (includes progress report section)
 - 105 Contract and Invoice Correspondence

- 110 SUBCONSULTANTS
 - 111 Subconsultant: AECOM Consult Inc.
 - 111.1 Subcontract
 - 111.2 Contract Modifications
 - 111.3 Progress Reports
 - 111.4 Invoices
 - 111.5 Contract and Invoice Correspondence
 - 112 Subconsultant: BMI-SG
 - 112.1 Subcontract
 - 112.2 Contract Modifications
 - 112.3 Progress Reports
 - 112.4 Invoices
 - 112.5 Contract and Invoice Correspondence
 - 113 Subconsultant: Booz Allen and Hamilton
 - 113.1 Subcontract
 - 113.2 Contract Modifications
 - 113.3 Progress Reports
 - 113.4 Invoices
 - 113.5 Contract and Invoice Correspondence
 - 114 Subconsultant: EEE Consulting
 - 114.1 Subcontract
 - 114.2 Contract Modifications
 - 114.3 Progress Reports
 - 114.4 Invoices
 - 114.5 Contract and Invoice Correspondence
 - 115 Subconsultant: Holland and Knight
 - 115.1 Subcontract
 - 115.2 Contract Modifications
 - 115.3 Progress Reports
 - 115.4 Invoices
 - 115.5 Contract and Invoice Correspondence
 - 116 Subconsultant: Justice and Sustainability Associates
 - 116.1 Subcontract
 - 116.2 Contract Modifications
 - 116.3 Progress Reports
 - 116.4 Invoices
 - 116.5 Contract and Invoice Correspondence
 - 117 Subconsultant: KM Chng Environmental, Inc
 - 117.1 Subcontract
 - 117.2 Contract Modifications
 - 117.3 Progress Reports
 - 117.4 Invoices
 - 117.5 Contract and Invoice Correspondence
 - 118 Subconsultant: Manuel Padron and Associates

- 118.1 Subcontract
- 118.2 Contract Modifications
- 118.3 Progress Reports
- 118.4 Invoices
- 118.5 Contract and Invoice Correspondence
- 119 Subconsultant: Parsons Brinkerhoff Quade and Douglas
 - 119.1 Subcontract
 - 119.2 Contract Modifications
 - 119.3 Progress Reports
 - 119.4 Invoices
 - 119.5 Contract and Invoice Correspondence
- 120 Subconsultant: Parsons Transportation Group
 - 120.1 Subcontract
 - 120.2 Contract Modifications
 - 120.3 Progress Reports
 - 120.4 Invoices
 - 120.5 Contract and Invoice Correspondence
- 121 Subconsultant: Planners Collaborative
 - 121.1 Subcontract
 - 121.2 Contract Modifications
 - 121.3 Progress Reports
 - 121.4 Invoices
 - 121.5 Contract and Invoice Correspondence

- 200 CORRESPONDENCE
 - 201 Chronological File
 - 202 Incoming Correspondence
 - 202.1 WMATA (Client)
 - 202.2 Subconsultants
 - 202.2.1 Subconsultant: AECOM Consult Inc.
 - 202.2.2 Subconsultant: BMI-SG
 - 202.2.3 Subconsultant: Booz Allen Hamilton
 - 202.2.4 Subconsultant: EEE Consulting
 - 202.2.5 Subconsultant: Holland and Knight
 - 202.2.6 Subconsultant: Justice and Sustainability Associates
 - 202.2.7 Subconsultant: KM Chng
 - 202.2.8 Subconsultant: Manuel Padron and Associates
 - 202.2.9 Subconsultant: Parsons Brinkerhoff Quade and Douglas
 - 202.2.10 Subconsultant: Parsons Transportation Group
 - 202.2.11 Subconsultant: Planners Collaborative
 - 202.2.12
 - 202.3 Agencies/Cities
 - 202.3.1 District Department of Transportation
 - 202.3.2 District of Columbia Office of Planning
 - 203 Outgoing Correspondence
 - 203.1 WMATA (Client)
 - 203.2 Subconsultants
 - 203.2.1 Subconsultant: AECOM Consult Inc.
 - 203.2.2 Subconsultant: BMI-SG
 - 203.2.3 Subconsultant: Booz Allen Hamilton
 - 203.2.4 Subconsultant: EEE Consulting
 - 203.2.5 Subconsultant: Holland and Knight
 - 203.2.6 Subconsultant: Justice and Sustainability Associates

- 203.2.7 Subconsultant: KM Chng
- 203.2.8 Subconsultant: Manuel Padron and Associates
- 203.2.9 Subconsultant: Parsons Brinkerhoff Quade and Douglas
- 203.2.10 Subconsultant: Parsons Transportation Group
- 203.2.11 Subconsultant: Planners Collaborative
- 203.3 Agencies/Cities
 - 203.3.1 District Department of Transportation
 - 203.3.2 District of Columbia office of planning
- 204 DMJM+HARRIS Interoffice Correspondence
- 205 Email

300 ADMINISTRATION / PROJECT CONTROL

- 301 Basic Project Information Forms
- 302 Project Budget Forms
- 303 Schedule
- 304 Project Work Plan
- 305 Project Specific Quality Assurance Plan
- 306 Project Design Criteria
- 307 Project CAD Standards
- 308 Quality Control
- 309 Quality Assurance

400 TECHNICAL

- 401 Previous Studies

500 SUBMITTALS

- 501 Technical Reports
- 502 Final Reports

700 QUALITY ASSURANCE (Optional)

- 701 Document Control Log (optional)
- 702 Design Task Protocols
- 703 Study or Report Checklist

District of Columbia

Alternatives Analysis and Starter-Line Environmental and Engineering Study

Scope of Work

Washington Metropolitan Area Transit Authority
Department of Planning and Strategic Programs
600 Fifth Street, NW
Washington, DC 20001



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XI.	Cost Estimate.....	Error! Bookmark not defined.

I. Study Purpose

The District of Columbia (District) and the Washington Metropolitan Area Transit Authority (WMATA) have elected to conduct a multi-corridor Alternatives Analysis and Starter-Line Environmental and Engineering Study to develop a network of high-quality, high-capacity transit services to fulfill the market needs of customers underserved by conventional bus service and Metrorail in the District of Columbia.

II. Background Information

The project identified in the following scope is a joint Alternatives Analysis/Environmental and Engineering Study. The Alternatives Analysis (AA) will be conducted for four corridors identified through an initial engineering feasibility study (completed September 2002) and validated through the needs assessment effort of this study. Simultaneous to the beginning of the AA, environmental and engineering work will be initiated on the Anacostia corridor, from Minnesota Avenue Metro south to the Shepard Industrial Track spur off the CSX mainline to Bolling Air Force Base and the Naval Research Lab. This corridor was partially identified in the recently completed engineering feasibility study and is known as the “Starter-Line.”

The product of the AA will be an implementation plan for development of fixed-guideway transit throughout the District. The plan will identify technology, general alignment, station location, preliminary estimates of riders, operating and capital cost estimates, and a capital improvement schedule. Final product of the Starter-Line environmental and engineering study will be a locally preferred alternative (LPA) including approximately 30% design plans for alignment and station location of an initial diesel multiple unit (DMU) service, or other technology if deemed more advantageous, within the corridor, as well as a transition plan for eventual implementation of technology in the corridor that is consistent with the technology chosen for the remaining AA corridors.

III. Study Organization

WMATA will serve as the lead agency, with the District providing technical and policy guidance as necessary. The consultant will assemble a project team to assist WMATA and the District in conducting the study.

This project is divided into three major tasks. The first task will initiate the study and identify the purpose and need for both the alternatives analysis and the starter-line environmental and engineering study. The second task will split the project between the simultaneous AA and starter-line environmental and engineering study. The third task will bring the two projects back together into a final fixed-guideway transit implementation plan for the District of Columbia. This approach, as well as schedule, is presented in the two figures on the following pages.

IV. Consultant Team Requirements

Due to the originality and complexity of this project it is imperative the following requirements be incorporated into the project team development process. The review team for the CTC proposal will specifically be interested in key personnel experience and qualifications as opposed to company qualifications and experience.

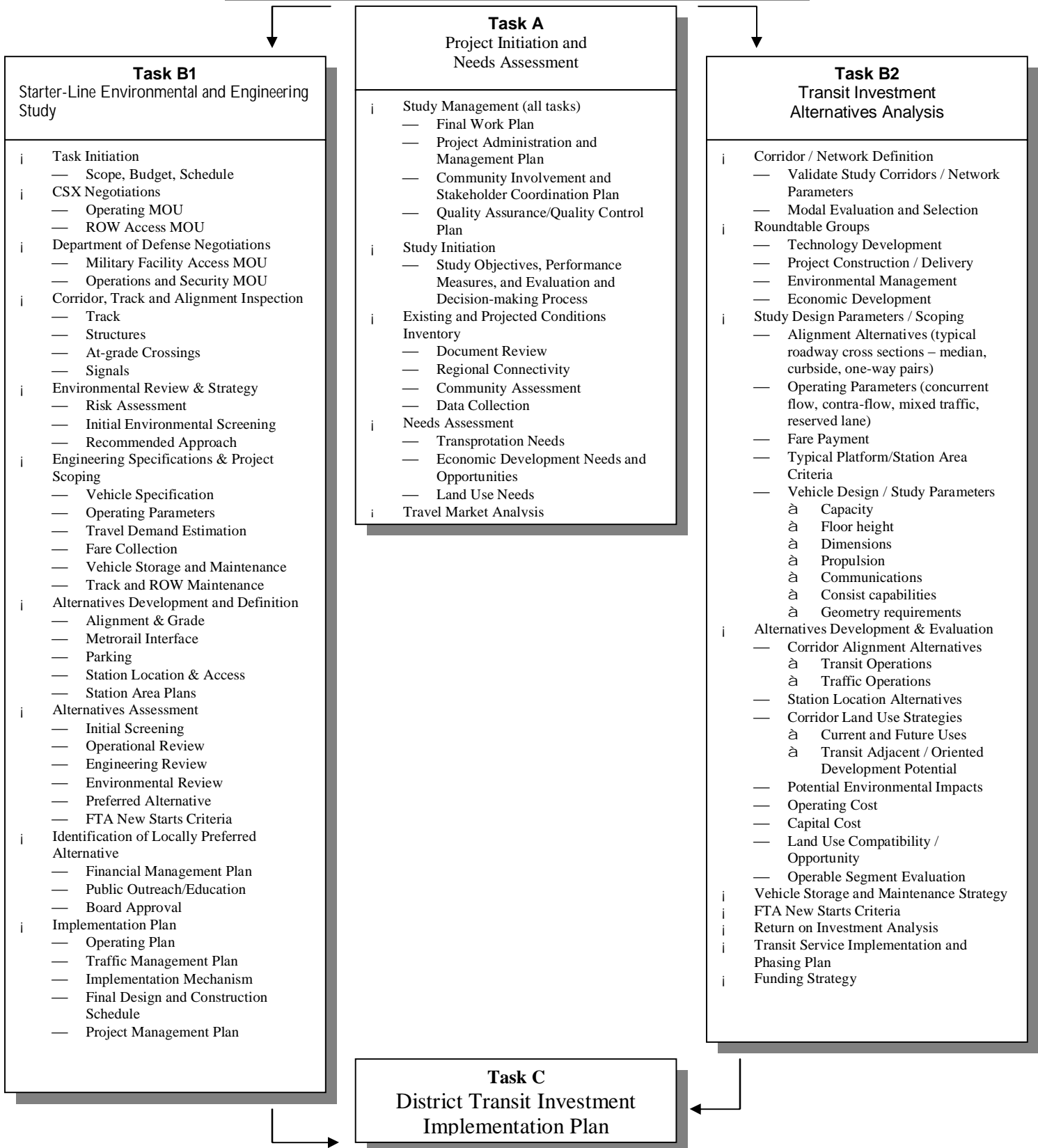
Project Manager – the project manager must be a national leader in the field of transportation planning and environmental study, having project specific experience in delivering cradle to grave (feasibility and alternatives analysis through preliminary engineering and NEPA) system plans for major transportation investments. In addition, it is very important that the project manager be able to demonstrate experience in developing community based transportation/transit solutions that are fitted to the community and serve community specific objectives. National leadership should be demonstrated through experience in conducting national training courses for environmental and transition study, holding of positions on industry professional association committees, or continued involvement and/or oversight of national conference organization for the study of transportation investments and community planning. Given the level of experience as outlined here, the project manager must be intimately involved in developing the overall team for the project.

Personnel Engineering Experience – the firm(s) and personnel identified to lead the transit engineering components of this study must be capable of demonstrating project specific planning and design experience with start-up light rail, trolley, and/or bus rapid transit systems in multiple cities across the country. Agency experience as a lead design engineer is preferred in order to demonstrate knowledge of internal agency decision-making processes and project delivery skills.

Personnel Planning Experience – the firm(s) and personnel identified to lead the transit and community planning components of this study must be able to demonstrate project specific experience in developing city-wide systems plans for light rail transit, trolley, and/or bus rapid transit modes. Capable experience should include examples of system plans prepared by the key individuals proposed for the project that have progressed into development of engineering plans and/or operating segments, complete with development of phased implementation schedules for future extensions and/or improvements.

Other Personnel Specialty Skills – other specialty skill requirements, including, but not limited to, development of vehicle maintenance and storage master plans as well as facility designs and construction, analyzing transit investment returns, community outreach, project finance, etc. must be demonstrated by individual experiences and qualifications as opposed to firm experience and qualifications.

District of Columbia
Transit Investment Study
Study Approach



V. Project Task Schedule	Months from Notice to Proceed (NTP)																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Task A: Project Initiation and Needs Assessment																		
Study Management (Tasks A-C)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Study Initiation	■	■																
Existing and Projected Conditions		■	■	■	■	■	■	■	■	■								
Needs Assessment					■	■	■	■	■									
Travel market Analysis							■	■	■									
Task B1: Starter-Line Environmental and Engineering Study																		
Task Initiation	■	■																
CSX/DoD Negotiations	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Corridor, Track and Alignment Inspection		■	■	■														
Environmental Review & Strategy		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Engineering Specifications & Project Scoping				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Alternatives Development & Definition						■	■	■	■	■	■	■	■	■	■	■	■	■
Detailed Alternative Assessment								■	■	■	■	■	■	■	■	■	■	■
LPA and Implementation Plan											■	■	■	■	■	■	■	■
Task B2: Transit Investment Alternatives Analysis																		
Roundtable Groups			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Corridor / Network Definition					■	■	■	■	■	■	■	■	■	■	■	■	■	■
Study Design Parameters / Study Criteria							■	■	■	■	■	■	■	■	■	■	■	■
Alternatives Development & Evaluation								■	■	■	■	■	■	■	■	■	■	■
Vehicle Storage & Maint. Facility Strategy																		
FTA New Starts Criteria																		
Return on Investment Analysis													■	■	■	■	■	■
Transit Implementation and Phasing Plan														■	■	■	■	■
Funding Strategy								■	■	■	■	■	■	■	■	■	■	■
Task C: DC Transit Inv. Imp. Plan																		
Final Study Report																		■
Financial Management Plan																		■

VI. Task A – Project Initiation and Needs Assessment

- A. Study Management** – develop a final work plan, schedule and budget for the District Alternatives Analysis and Environmental and Engineering Study. In addition, the consultant will develop a Project Administration and Management Plan, a Community Outreach and Stakeholder Coordination Plan, and a Project Quality Assurance/Quality Control Plan.
- i) Final Work Plan – based on input from WMATA and the District DOT, the consultant will finalize the project work plan for Tasks A-C, including the project schedule and budget. Major project tasks are identified as follows:
 - (1) Task A – Project Initiation and Needs Assessment
 - (2) Task B1 – Starter-Line Environmental and Engineering Study
 - (3) Task B2 – Alternatives Analysis
 - (4) Task C – Fixed Guideway Transit Implementation Plan
 - ii) Project Administration and Management Plan
 - (1) Project Staffing Plan – identify key personnel by discipline and/or work effort, particularly identifying task leaders/managers, or those otherwise responsible for resource assignment and product delivery.
 - (2) Project Management and Oversight – the consultant will be tasked to provide advice on development of the project management and oversight functions proposed below and include the final approach in the Project Administration and Management Plan.
 - (a) Project Management Team (WMATA, District DOT, Consultant) – responsible for daily conduct of work and progress in reaching a locally preferred alternative for transit improvements in the District of Columbia, by corridor. The project Management Team will meet regularly as dictated by project requirements. WMATA’s project manager (PM) will chair the team and review agendas, presentation material, as well as document significant decisions made by the group.
 - (i) WMATA PM – Gregory A. Walker, AICP, Program Manager, Systems Planning and Corridor Development

- (ii) WMATA Deputy PM – Arthuro Lawson, Acting Program Manager, Planning Innovations and Support
 - (iii) WMATA Assistant PM (Environmental and Community Involvement) – position to be filled
 - (iv) WMATA Assistant PM (Engineering Support) – position to be filled
 - (v) District DOT PM – Alex Eckmann, Administrator, Office of Mass Transit, DDOT
 - (vi) John Deatruck, Chief Engineer and Deputy Director for Anacostia Waterfront Initiative, DDOT
 - (vii) Consultant PM – see requirements outlined above
 - (viii) Other key staff and task managers as appropriate
- (b) Project Advisory Team (WMATA, District) – tasked with providing review and advice to the Project Management Team. The Project Advisory Team should meet at least monthly, but project schedule and work progression may require more or less frequent meetings. Consultant will provide agenda and maintain meeting minutes for each Project Advisory Team Meeting. An initial list of offices to be represented on the project advisory team includes:
- (i) WMATA PLSP/BPPD Director
 - (ii) WMATA PLSP/CAPR
 - (iii) WMATA OPER/OPAS
 - (iv) WMATA CAPM
 - (v) WMATA GOVR
 - (vi) WMATA .COM
 - (vii) District of Columbia, Department of Transportation
 - (viii) District of Columbia, Office of the Deputy Mayor for Economic Development
 - (ix) District of Columbia, Office of Planning

- (x) District of Columbia, City Council
- (xi) FTA Planning
- (xii) National Capital Planning Commission
- (xiii) Department of Defense
- (c) Project Oversight Team (WMATA, District) – responsible for providing review and insight at key project milestones, such as, prior to presentations to elected and/or decision making bodies, acceptance of products, etc.
 - (i) WMATA GM/CEO (Richard White)
 - (ii) WMATA DGM (Jim Gallagher)
 - (iii) WMATA PLSP/AGM (Edward Thomas)
 - (iv) WMATA CAPM/AGM (P. Takis Salpeas)
 - (v) District of Columbia, DOT, Director (Dan Tangherlini)
 - (vi) District of Columbia, Office of Planning, Director (Andy Altman)
 - (vii) District of Columbia, Deputy Mayor for Economic Development (Eric Price)
- iii) Project Administration – Project administration is an ongoing effort throughout the life of the project and includes such tasks as delivering monthly progress reports and invoices to the WMATA Project Manager, and maintaining an adequate administrative record of the project.
 - (1) Reporting requirements – consultant will prepare monthly progress reports for submittal to the WMATA project manager. Progress reports will identify resources expended for the period, resources expended since notice to proceed, and remaining budget, by major work task. Progress reports will also identify major accomplishments for the period, issues identified / resolved during the period, and expected activities for the next period.
 - (2) Schedule and budget management – The consultant project manager is responsible for overall budget and schedule adherence and is responsible

for notifying the WMATA project manager as early as possible of pending overruns or delays. Consultant responsibility also includes notifying the WMATA project manager as soon as possible of any out-of-scope tasks requested of the consultant.

- (3) Deliverable and scope management – The consultant is responsible for providing on going deliverable and scope management. Proposals for changes in deliverable schedules and/or scope must be submitted to the WMATA project manager for approval.
- iv) Community Involvement and Stakeholder Coordination Plan – consultant will develop a community involvement plan that allows the project team to meet the community involvement objectives outlined below as the first major deliverable of the project and prior to initiating Needs Assessment efforts. The public involvement and stakeholder coordination plan should allow flexibility in order to adjust to changing community and stakeholder climate as the project progresses. It is highly recommended that a sub-consultant be added to the team with specific experience in community involvement activities in the District, and more specifically, east of the Anacostia River to facilitate the Starter-Line environmental and engineering study.
- (1) The Community Outreach and Stakeholder Coordination Plan should make an effort to achieve the following objectives:
 - (a) Educate, inform, and involve the public in the identification and evaluation of alternative transportation investment choices.
 - (b) Develop a consensus of public officials, business leaders, interested citizens, partner agencies and institutions as to the identification of a locally preferred alternative for initial fixed-guideway investment in the District.
 - (c) Present task findings in an easily understood format that facilitates public input.
 - (2) As a method of reaching the objectives outlined above, the consultant should consider the following guiding principles:

- (a) Provide clear, concise, relevant public information oriented to non-technical audiences that explains the features, costs, and potential benefits of public transit to the community.
 - (b) Encourage public involvement throughout the project as a key focus of the project – develop innovative methods to engage the public and obtain input from as many elements of the community as possible, including varying income levels, age, and mobility needs – optimize public outreach by including non-traditional meeting locations and times.
 - (c) Identify suggested public information products, the methods for communicating with the public, and the means of using public input in the development of the Plan – prepare public information materials at various stages of the project to explain key terms, physical features, objectives being served, schedule and input opportunities, and other key information as appropriate.
 - (d) Document citizen and stakeholder input received along with any follow-up actions or plan modifications required – consultant is required to develop a communications system that documents input received as well as responses and follow-up actions required.
- (3) Based upon the consultant team’s experience as to effectiveness of various public involvement methods, the consultant should propose the best combination of the following methods as well as other suggested public involvement techniques:
- (i) Study Website
 - (ii) Educational Brochures/Newsletters
 - (iii) Study Exhibit
 - (iv) Media relations techniques
 - (v) Stakeholder meetings / updates
 - (vi) Alignment / technology / station area planning and design workshops / charrettes

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- v) Quality Assurance/Quality Control Plan – consultant will develop a Quality Assurance/Quality Control Plan that includes:
- (1) Conformance with WMATA standards and criteria
 - (2) Project document/deliverable management
 - (3) Project review / oversight plan

PRODUCT(s):

Project Administration and Management Plan;

Community Involvement and Stakeholder Coordination Plan;

Quality Assurance / Quality Control Plan

B. Study Initiation

- i) Define Study Area and Boundaries – consultant, WMATA, and the District DOT will define the study area boundaries to include the District of Columbia and potentially portions of Maryland and Virginia as may be required to fulfill regional connectivity objectives of the project.
- ii) Define base and forecast year for alternatives development and analysis
- iii) Define Study Objectives – consultant, in coordination with the WMATA PM and the District DOT will develop study objectives with regard to, but not limited to, mobility, economic development, community connectivity, regional connectivity, and transit accessibility.
- iv) Develop Initial Performance Measures – develop an initial set of performance measures to help guide development and screening of corridors and alternatives for the project. Performance measures should be measurable, qualitatively if not quantitatively, and should help the study measure effectiveness in achieving the study objectives.
- v) Design Study Evaluation and Decision-making Process – the consultant, with input from WMATA and the District DOT, will develop a methodology for defining and screening alternatives in the interest of reaching a locally preferred alternative at conclusion of the project.

PRODUCT(s):

Memorandum documenting the Objectives, Performance Measures, and Evaluation and
Decision-Making Process

- C. Existing and Projected Conditions Inventory – consultant, in consultation with WMATA and the District DOT, will develop an understanding of the existing and projected transportation, demographic, and land-use conditions in the study area for base year comparison and no-build alternative definition, to be used in evaluation of future year build alternatives.
- i) Document Review – Inventory previous and on-going transit planning and engineering efforts in the District – provide an evaluation of study approaches and recommendations, making reference to significant findings, opportunities, and shortcomings.
 - ii) Regional Connectivity – Identify opportunities for regional connectivity with efforts underway in Maryland and Virginia to expand transit in accordance with the *WMATA 10-Year CIP* and other projects identified in the *Transit Service Expansion Plan*.
 - iii) Community Assessment – Identify community/neighborhood composition and resources.
 - iv) Data Collection – compile transportation facilities and conditions baseline and forecast year inventory for the following, at a minimum:
 - (1) Land Use Data - Information on current and projected land use patterns based on comprehensive plans, zoning ordinances, the regional Constrained Long Range Plan (CLRP), and information produced by the District's Office of Economic Development.
 - (2) Population and employment – Current and projected population and employment as contained in the Washington Area Council of Governments most recent forecasts by traffic analysis zone.
 - (3) Population and employment density – Current and projected population and employment density by traffic analysis zone.
 - (4) Travel demand – Travel demand should be analyzed for internal, external, and through trips. Travel demand model must be consistent

with the most current regional model maintained by the Metropolitan Washington Council of Governments.

- (5) Traffic congestion / level of service.
- (6) Transportation equity.
- (7) Mode split.
- (8) Travel Times along principal corridors and between principal activity centers.
- (9) Major activity centers / trip generators
- (10) Identify primary trip patterns in and through the study area
- (11) Environmental Database – Compile an environmental database of potential concerns for further investigation in detailed alternative definition and evaluation.

PRODUCT(s):

Existing Conditions Report

D. Needs Assessment

- i) Transportation Needs – Develop a needs assessment using the inventory obtained through the previous task – summarizing transportation system deficiencies in relation to the study objectives defined previously and especially with regard to transportation / mobility and accessibility needs of the local communities in the study area.
- ii) Economic Development Needs/Opportunities – Document the economic development needs/opportunities in the study area.
- iii) Land Use Needs – Summarize existing land use patterns and identify inconsistencies or issues in land regulations, zoning, and development patterns across neighborhoods in order to access regulatory changes that may be needed to support the mix of land uses and that can optimally support the recommended alternative.

E. Travel Market Analysis

- i) Review needs assessment findings and study objectives in comparison to future year conditions to develop study purpose and need statement. Specifically the consultant and WMATA will assess conflicts between transit trip desires and system connectivity, identify markets / trip movements with highest probability of transit use, and identify preliminary travel demand within, to and through the study area.

PRODUCT(s): Purpose and Need Report

VII. Task B1 – Starter-Line Environmental and Engineering Study

NOTE: the objective of this phase is to satisfy District of Columbia and federal environmental impact assessment requirements so as to maximize the probability that any potential non-federally funded Starter-Line would be accepted as local-match for future extensions funded partially with federal funds.

A. Develop Detailed Task B1 Work Scope – to include, but not necessarily limited to:

- i) Project Definition
 - (1) Project Scoping
 - (2) Public Involvement
 - (3) Definition of Alternatives
- ii) Technology
 - (1) Vehicle parameters
 - (2) Propulsion
 - (3) Fare collection
 - (4) Regional Integration
 - (5) Customer Information Systems
- iii) Planning Design Criteria
 - (1) Station Area Plans
 - (2) Track geometry / alignment
 - (3) Signals
 - (4) Utilities

- (5) Structures
- (6) Noise and Vibration
- (7) Traction Power
- (8) Intersection design and control / prioritization
- (9) Ridership projections
- (10) Environmental considerations
- (11) Land uses and development patterns
- (12) Local business and citizen involvement and conflict resolution plan
- iv) Operating plan
- v) Project financing

PRODUCT(s):

Starter-Line Environmental and Engineering Study Detailed Work Scope

- B. Initiate Negotiations with CSX and Department of Defense – consultant, in conjunction with WMATA and the District DOT will initiate discussions with both CSX Railroad and Department of Defense (Bolling AFB and the Naval Research Lab) for right-of-way access and operating agreements. This effort is expected to continue through the life of the project and result in a memorandum of agreement between the sponsoring agency and each CSX and the DOD.
- C. Corridor, Track, and Alignment Inspection – Following initial contact with CSX and DoD officials, secure access authorization and initiate right-of-way, track, structures, crossings, signals, etc. conditions inspection.
- D. Environmental Review and Strategy – with information gathered during Task A and the initial efforts of this task, develop a strategy for completing the necessary environmental study and documentation to meet an acceptable level of risk to both the District and WMATA, while maximizing the future opportunity to use investment in the corridor as future local match for systems extensions under FTA New Starts.

E. Engineering Specifications and Project Scoping – Upon selection of the recommended environmental strategy, initiate development of required engineering specifications for preliminary (up to 30%) engineering and conduct project scoping with community (residents, employers, land owners, and developers) and agency (District and WMATA) stakeholders. Engineering specifications will include, but not necessarily be limited to the following:

- i) Operations Plan
- ii) Capital and operating cost methods
- iii) Civil and Structural
- iv) Track Geometry & Track-work
- v) Station Design Criteria
- vi) Utilities
- vii) Communications
- viii) Signals
- ix) Traction Electrification System
- x) Stray Current/Corrosion
- xi) Operations Facility
- xii) Fare Collection Equipment
- xiii) Vehicles

PRODUCT(s):

Engineering Specifications and Project Scoping Report

F. Alternatives Development and Definition – provide a detailed definition of rail and non-rail modal and alignment alternatives for the proposed starter line.

- i) Alternatives to be Considered
 - (1) No-build Alternative / Baseline Alternative

- (2) Build Alternative (number should be evident following outcome of previous phases)
- ii) Identify Elements Common Across Alternatives – These elements should include, but not be limited to:
 - (1) Station location and area plans
 - (2) Guideway requirements
 - (3) Detailed operations plan
 - (4) Traffic management plan
 - (5) Local / feeder bus service plan
 - (6) Regional connections
 - (7) Ridership/Travel Demand Methodology
 - (8) Land uses / Station Area Development Assessment Methodology
 - (9) Capital and operating cost estimate
 - (10) ITS Applications

G. Detailed Alternatives Assessment – consultant will develop evaluation criteria and measures of effectiveness to be used to assess and identify a locally preferred alternative (LPA). Potential measures may include but are not limited to the following:

- i) Transit ridership
- ii) Impacts on Metrorail ridership
- iii) Roadway /intersection capacity and level of service
- iv) Inter-modal connections
- v) Transit travel times
- vi) Vehicle travel times
- vii) Services available in corridor and activity centers
- viii) Diversity of land uses in the corridor
- ix) Corridor residential population
- x) Corridor employment

- xi) Transportation service provided to activity centers
- xii) Transportation service provided to major travel markets
- xiii) Transportation service provided to the transit dependent population
- xiv) Vehicle miles of travel on congested roadways
- xv) Total person delay due to congestion
- xvi) Transit level of service impacts
- xvii) Pedestrian/bicycle infrastructure
- xviii) Changes in roadway capacity
- xix) Changes in transit system ridership
- xx) Develop FTA New Starts Criteria – Define and submit FTA new Starts criteria for FTA consideration and review

PRODUCT(s):

Alternatives Development and Assessment Report

H. Identify Locally Preferred Alternative Investment

- i) Locally Preferred Alternative (LPA) – in consideration of transportation analysis, along with input received from citizen groups, neighborhood organizations, business leaders, community stakeholders, the District City Council, WMATA Board of Directors, and other interested parties, may recommend a preferred alignment(s) defined by the initial operating segment (a.k.a. Starter-Line) or the No-Build and/or accompanied by an implementation plan for future extensions, and other short-term investments to enhance transit services and preserve expansion options in priority corridors not identified for initial major investment.
- ii) Financing Plan – Develop a finance plan that identifies secure funding sources for immediate implementation of the locally preferred alternative.
- iii) Public Outreach – Conduct public outreach program to educate interested parties of locally preferred alternative and provide additional opportunity for planning process input

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- iv) Obtain Board Approval – Assist WMATA and the District DOT in recommending to the District City Council and WMATA Board of Directors approval of the locally preferred alternative

I. Implementation Plan

- i) Pending approval by the WMATA Board of Directors and the District City Council, prepare a detailed implementation plan for development and operation of the locally preferred alternative, to include but not be limited to:
 - (1) Financing Plan
 - (2) Operating Plan
 - (3) Traffic Management Plan
 - (4) Implementation Mechanism
 - (5) Project management structure
 - (6) Final design scope of work
 - (7) Project schedule and budget estimates
 - (8) Environmental permitting/clearances
 - (9) Contractor procurement specifications
 - (10) Project management oversight

PRODUCT(s):

Starter-Line Environmental Impact Report

Starter-Line Preliminary Engineering Plan Sets

Starter-Line Implementation Plan

VIII. Task B2 – Alternatives Analysis

- A. Preliminary Definition of Corridor/Network Options – Using the Purpose and Need Statement designate a network of corridors to proceed into Alternatives Analysis. Note: Corridor definition should use a combination of the Needs Assessment Findings and prior work prepared for engineering feasibility study under the District of Columbia

Transit Development Study, and should be defined in a way that facilitates making a rational and informed decision on future fixed-guideway transit development in the District. Based on recommendations provided by WMATA and the District DOT, determine the appropriate corridors (network options) to be considered in the AA. Corridor definition should consider, but not be limited to, the following:

- i) Potential for achieving project objectives defined in the Needs Assessment/Purpose and Need Report
- ii) Travel demand identified in the Needs Assessment/Purpose and Need Report
- iii) Technology opportunities/constraints (i.e. vehicle operating parameters, propulsion, etc.)
- iv) System operating feasibility
- v) Planning, engineering, and implementation, and operating costs
- vi) Recommendations of previous transit studies in the District

PRODUCT(s):

Network and Corridor Alternatives Report

B. Roundtable Groups – In an effort to expedite the implementation of surface fixed-guideway transit in the District, it is critical to explore a series of issues early in the development process, harnessing the best thoughts and experiences in the industry to flesh-out state-of-the-art approaches. The consultant will be responsible for identifying key individuals for each group, covering a cross-section of experiences and thoughts in the industry, as well as developing the final approach for conducting the roundtable meetings. The following is an initial list of project roundtable groups that will be assembled within the course of the study:

- i) Technology Development (e.g., propulsion systems – does the technology exist to operate a LRT vehicle on both induction and overhead catenary wire?)
- ii) Project Delivery
- iii) Environmental Management
- iv) Economic Development Opportunities
- v) Project Financing

- C. Study Design Parameters / Study Criteria – The consultant, WMATA, and the District DOT will work together to establish design parameters/study criteria for all modes investigated during the Alternatives Analysis. To the extent possible and appropriate, the design guidelines will make use of the WMATA LRT Design Guidelines currently in development. Design guidelines include, but are not limited to the following:
- i) Develop typical cross-sections for various alignment alternatives in the study area (median running, curbside running, one-way pair operation, etc.) alignment alternatives for each corridor
 - ii) Develop operating parameters for the study (e.g. concurrent v. contra flow, mixed-traffic or reserved right-of-way, etc.)
 - iii) Fare system (rate and payment/collection)
 - iv) Typical platform/station area design criteria
 - v) Vehicle Design/Study Parameters – based on the modal alternatives developed above, consultant will develop criteria for the following:
 - (1) Vehicle dimensions, passenger capacity, floor height, etc.
 - (2) Propulsion system
 - (3) Consist capabilities
 - (4) Operating characteristics (radii, grades, speed, etc.)
 - vi) On-street parking conflicts / opportunities
 - vii) Communications

PRODUCT(s):

Design Parameters and Study Criteria Report

- D. Alternatives Development and Evaluation – within each corridor a series of alternatives will be developed. Alternatives should be designed to address issues raised through community and stakeholder involvement as well as in accordance with the study objectives. The decision point between alternatives should be selection of mode,

alignment, and station locations within each corridor. The consultant will develop a methodology to guide alternatives development and evaluation. Alternatives will be developed to the minimum level necessary to choose mode, alignment, and station location. Other items to be developed and/or evaluated in this task include:

- i) Ridership estimates
- ii) Corridor land use strategies (current and future uses, as well as consideration of transit adjacent/oriented development potential)
- iii) Traffic and transit operations
- iv) Environmental considerations
- v) Operating and capital cost
- vi) Land use compatibility / opportunity
- vii) Operable segment evaluation

PRODUCT(s):

Alternatives Development and Evaluation Report

E. Vehicle Storage / Maintenance Facility Location Strategy –

- i) The strategy for vehicle storage and maintenance facility location should maximize opportunities for identification of an initial operating segment(s) that best serves stated project objectives while minimizing site specific impact concerns. When developing the strategy, the consultant should consider different locations and different types of storage facilities, such as small car barns at the end of each line. In order to complete this task, the following will need to be explored:
 - (1) Facility and Site Criteria –This task will define the facility types, location, and numbers required.
 - (2) Preliminary Site Analysis – identify an appropriate number of sites, such that alternate sites are studied for each facility.

PRODUCT(s):

Vehicle Storage and Maintenance Strategy Report

- F. FTA New Starts Criteria – following evaluation of alternatives, consultant will develop the necessary information to prepare New Starts criteria for FTA review and consideration.

PRODUCT(s):

FTA New Starts Report

- G. Return on Investment – by corridor and at the system level, the consultant will generate estimates of financial and community/society returns to be expected from the investment in surface fixed-guideway transit throughout the city. Prior to initiating work on this task, the consultant will develop a detailed scope of work for the effort and submit the scope to WMATA, who will distribute it to the District DOT and others, for comment.

PRODUCT(s):

Return on Investment Report

- H. Transit Service Implementation and Phasing Strategy

Using selected mode, alignment and station location for each corridor, conduct an analysis designed to help guide decision makers through the process of selecting a logical sequencing and implementation plan for the full system. The selected methodology should consider quantitative data developed throughout the study as well as quantitative considerations appropriate for public investment planning.

PRODUCT(s):

Transit Service Implementation and Phasing Strategy Report

- I. Funding Strategy – through the course of the project, utilize information developed from the financing roundtable to develop a financing strategy that, to the extent possible, is

innovative and integrates non-traditional transit funding sources that have a likely probability of successfully occurring.

PRODUCT(s):

Transit Development Funding Strategy Report

IX. Task C – District Transit Implementation Plan

701 Final Report – At the conclusion of Tasks B1 and B2, a final study report will be prepared identifying the sequencing of transit improvements throughout the study area for the near-term and outlining a long-term strategy for the continued evolution of transit technology and modal integration. This task will result in a final study report that summarizes the alternatives analysis and Starter-Line engineering and environmental work, linking both efforts to the needs assessment (purpose and need statement), and unifying the transit investment strategy for the District.

702 Financial Management Plan – Combining both the funding strategy elements of Tasks B1 and B2, with the overall Transit Implementation and Phasing Strategy, develop a detailed and comprehensive financial management plan that encompasses the near-term Starter-Line investment as well as the future transit improvements recommended in the Alternatives Analysis phase of the study. To the extent possible, integrate non-traditional transit funding sources that have a likely probability of successfully occurring.

PRODUCT(s):

Final Study Report

District Transit Financial Management Report

X. List of Deliverables/Products

The following minimum deliverables are identified for this project. The list will likely change following study initiation and detailed work scope development after the project notice to proceed has been issued by the WAMTA PM. Changes to the project deliverable requirements will be documented and authorized by the WMATA PM.

A. Task A

i) Project Administration and Management Plan

- ii) Community Involvement and Stakeholder Coordination Plan
- iii) Quality Assurance / Quality Control Plan
- iv) Project Memorandum: Project Objectives, Performance Measures, and Evaluation and Decision-Making Process
- v) Existing Conditions Report
- vi) Purpose and Need Report

B. Task B1

- i) Starter-Line Environmental and Engineering Study Detailed Work Scope
- ii) Engineering Specifications and Project Scoping Report
- iii) Alternatives Development and Assessment Report
- iv) Starter-Line Environmental Impact Report
- v) Starter-Line Preliminary Engineering Plan Sets
- vi) Starter-Line Implementation Plan

C. Task B2

- i) Network and Corridor Alternatives Report
- ii) Design Parameters and Study Criteria Report
- iii) Alternatives Development and Evaluation Report
- iv) Vehicle Storage and Maintenance Strategy Report
- v) FTA New Starts Criteria
- vi) Return on Investment Report
- vii) Transit Service Implementation and Phasing Strategy Report
- viii) District Transit Development Funding Strategy Report

D. Task C

- i) Final Study Report
- ii) District Transit Financial Management Plan