

# Detailed Work Plan – Pilot Area 2

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## Project Objectives

**Pilot Area 2 (PA2):** *Using Smart Mobility Framework (SMF) principles to more fully integrate Caltrans work into sub regional transportation and land use planning processes, at the regional (MPO) and local levels*

A main objective of this work is to apply SMF principles and performance measures to assess future projects for a sub-regional long range transportation plan compared to conventional transportation performance measures.

This work will focus on the South Bay Cities area (PA2) and will build off of Los Angeles County Metropolitan Transportation Authority's (Metro) existing performance measures and an alternative Smart Mobility assessment framework. The SMF principles will be used to inform and more fully integrate Caltrans work on sub-regional long range transportation plans with local land use plans and the regional Sustainable Communities Strategy (SCS).

For testing these transportation and land-use scenarios, the Dowling Team will review the current forecasting and sketch-planning tools available, including Envision Tomorrow Plus (ET+), Urban Footprint and Rapid Fire Models, and other applicable tools. The goal for this pilot area work will be to develop a suite of easy-to-use processes and tools (e.g., Excel spreadsheets) to apply the framework toward best practices for regional planning products, project analysis, and ultimately, infrastructure decision making.

## Task 1: Project Initiation and Scoping

**Objective:** The purpose of this task is to develop a refined scope for achieving the project objectives based on input received from Caltrans and the Pilot Area 2 Sponsor. The Dowling team will convene a project kick-off meeting between the PA 2 Sponsor and Headquarters planning and operations staff.

**Approach:** The Dowling Team will coordinate with the Pilot Area Sponsor to hold Smart Mobility Framework Implementation Study kickoff meeting. Dowling Associates will work with the PA 2 project team to confirm the refined work plan, schedule, and list of expected deliverables for PA 2.

Two days before the kick-off meeting the Dowling Team will distribute a memo with the meeting agenda, a draft work plan, schedule, and budget.

## Work Tasks

Task 1 will include the following work tasks, which will be accomplished through our discussions with Caltrans and the project team at the kick-off meeting and documented in the refined draft scope of work.

- Identify project team members. The project team will consist of representatives of Caltrans D7, Metro, HQ Planning and Traffic Operations, Southern California Association of Governments (SCAG), and the South Bay Cities Council Of Governments (SBCCOG), as appropriate.

- Identify preferred approach to obtaining stakeholder input. Objectives, roles, schedules, responsibilities.
- Develop draft detailed work plan, schedule, and budget; prepare a draft detailed work scope, schedule, and budget for review and approval by the Caltrans project manager and other involved agencies.
- Plan project team meeting approach and preliminary stakeholder meeting schedule.

***Deliverables:***

- Deliverable 1.2 – Kickoff meeting for PA 2, meeting materials, and notes.
- Deliverable 1.4 – Pilot Area 2, refined overall SMF study schedule, work plan, and list of deliverables.

**Task 2: Project Management and Coordination**

**Objective:** The purpose of this task is to maintain good communications between the Dowling Team, the Caltrans Contract Manager, the advisers, stakeholders, and participants in the implementation project and pilot tests.

**Approach:** Dowling Associates will prepare monthly written progress reports for the Caltrans Contract Manager, and in addition participate in a conference call with the Caltrans Contract Manager at least once a month or more if needed. As part of project management duties, Dowling will participate in quarterly meetings with the SMF study Steering Committee, which the Contract Manager will organize. Dowling will also maintain ongoing communication and coordination with both Pilot Area Sponsors, including at a minimum, monthly phone calls.

As this study requires intensive coordination and teamwork, the consultant will participate in and provide briefings as needed for the following advisory group meetings:

- For Pilot Area 2 (PA2) the following schedule of meetings will be used as a starting point, to be refined and agreed upon in Task 1. This will include arranging meeting schedule and locations including monthly Project Team meetings and milestone-driven meetings with the South Bay Cities Livable Communities Working Group.
  - PA 2 project team: Attend and participate in up to 12 meetings as needed (monthly meetings on average starting January 2013) Initial meetings will be face-to-face, but subsequent meetings may be via teleconference.
  - South Bay Cities Livable Communities Working Group: Attend and provide briefings for up to 3 meetings, as needed. At this time, it is anticipated that these meetings would occur as part of the following tasks:
    - Kick-off/Development of Portfolio Scenarios
    - Selection of SMF Performance Measures
    - Draft Report with Preliminary Results
  - Board/Executive Meetings: Attend and provide final briefings for up to 3 meetings, as needed.

### ***Task 2 Deliverables/Outcomes***

- Deliverables 2.4a-1 – Meeting materials and notes for monthly calls or meetings and additional communication as needed with Pilot Area 2 sponsor and project team (up to 12 meets/calls).
- Deliverables 2.5a-c – Meeting materials (including PowerPoint presentation) and notes for up to 3 calls or meetings with Pilot Area 2 Board/Executive.
- 2.6a-c – Meeting materials and notes for up to 3 calls or meetings with Pilot Area 2 South Bay Cities Livable Communities Working Group.

### **Task 3: Literature and “Practice in Progress” Review**

**Objective:** In order to identify the leading edge of sustainable and multi-modal transportation practice and how it may be applied in California, the consultant will identify subject matter experts and literature review sources, to be confirmed by Caltrans Contract Manager. These should be focused on developments in research, guidance, performance measures, and tools released or under development since the release of the Smart Mobility Framework in 2010, as well as, research that might be particularly relevant for mature suburbs like the South Bay.

**Approach:** This task will build off the recently available survey of current practice and related research on Smart Mobility that was conducted for Caltrans as a Preliminary Investigation (dated April 25, 2012). Dowling will prepare draft lists of sources and people to be interviewed for review by the Caltrans Project Manager. We will include a draft list of interview questions/topics for the experts. Based on the approved source and expert lists, the consultant will interview experts, review identified literature, and summarize and assess current research and practices findings and their potential application to the pilot areas. Then Dowling will prepare the draft report with findings and best practice examples, to be included in the final report. Research will include but not be limited to corridor management, measurement, and long range planning, and regional and subregional long range transportation planning, project development, and project analysis, and should capture the leading edge of practice and research. As this task relates to PA2, the focus will be on Smart Mobility applications and tools related to regional and subregional long range transportation planning. To the extent possible, Dowling will seek local experts and research to address the unique conditions of mature suburbs, like the South Bay. Original research conducted by the South Bay COG should be reviewed as part of this task. In addition, the census tract analysis of transportation behaviors completed for Metro’s Countywide Sustainability Planning Policy should be reviewed.

#### ***Deliverables:***

- Deliverable 3.1 – Draft lists of sources to be reviewed and expert people to be interviewed. Draft list of questions/interview topics for expert interviews.
- Deliverable 3.2 – Report summarizing research, interviews, and findings for inclusion as a chapter or appendix in final report

## Task 4: Identify Approaches, Data Needs, and Sources

The purpose of this task is to identify the recommended approaches for incorporating Smart Mobility concepts for Pilot Area 2 based on the best practices documented in Literature Review (Task 3) and the content and direction of the Smart Mobility 2010 Call to Action document.

### *Subtask 4.1: Develop Portfolio Scenarios PA2*

**Objective:** The main purpose of this subtask is to develop three scenarios in consultation with the South Bay Cities Council of Governments (SBCCOG) that illustrate the benefits of using the SMF at a sub-regional level to identify transportation improvement projects in combination with land use strategies to attain sustainable community objectives.

**Background:** Metro recently completed the Countywide Sustainability Planning Policy (CSPP) that builds on the SMF to create a sustainability assessment framework that is unique to land-use, transportation, and demographic conditions in Los Angeles County. The CSPP consultant effort was completed in the summer of 2012, and the policy was adopted by the Metro Board in December 2012. The CSPP defines and maps 4 place-types, referred to as Accessibility Clusters, by census tract across the county, and provides planning guidance specific to each Cluster to support Metro's project managers in integrating sustainability into program and project development. The CSPP will be accompanied by a Strategy Guide (in development) to be used by city partners and includes more specific transportation treatments that can be applied in each cluster to promote more sustainable outcomes. The Strategy Guide will not be published until Spring of 2013, but strategies exist in a draft form for consideration by the project team as part of scenario development. The framework provides guidance to more fully integrate sustainability into Metro's planning functions. It is also a resource for collaborating with regional and local agencies to implement California's climate change laws and encourage local policies and projects that will contribute to a more sustainable countywide transportation system.

While CSPP has its own principles and priorities, unique place types, and performance measures, it follows the same general SMF framework. SMF identifies seven place types and the desired objectives of preserving or transitioning these place types with strategic transportation investments and land use development goals.

Some of the differences between the SMF and the SCPF/CSPP:

- Rather than Location Efficiency, an Accessibility Index and related Accessibility Clusters are used for place types based on residential density and "job centrality" (defined as employment accessibility) calculated for each census tract.
- The CSPP focuses on transportation investments with some minimal guidance on ways Metro can support good land-use planning.
- Performance metrics from the CSPP are included for monitoring purposes at the regional level rather than for evaluation or prioritization. Additional project-based metrics were developed through consultant efforts related to the CSPP, but are meant to be used to compare and contrast the performance of different project alternatives rather than to compare and prioritize different projects as part of a subregional planning effort.

Potential local inputs coming from the CSPP and going into the SMF framework may be:

- 1) Distinguishing between locations that are underperforming or overperforming regarding travel characteristics (i.e. average annual VMT per Household, Non-SOV Commuters, etc.) relative to Accessibility Index value and Cluster type and based on local planning objectives
- 2) Defining the objectives and outcomes of targeting underperforming locations

**Approach:** A key goal of the Pilot Area 2 project work will be to use the principles, priorities, and place typologies in Metro’s CSPP and the performance measures in the SMF to develop and analyze the benefits of various sub-regional planning scenarios in the South Bay Cities. This effort differs from Metro’s CSPP and associated work products, because of its focus on analyzing a portfolio of projects in a sub-regional plan, rather than the assessment of a single project or multiple alternatives for a single corridor. It is assumed that some of the performance measures used for Pilot Area 2 may be similar to those used in the Metro’s CSPP work products for individual project assessment, but some may be different. Therefore a key task will be to set up easy-to-use processes and tools to dynamically understand the trade-offs, costs and benefits of various components of the transportation project portfolios to optimize a comprehensive set of beneficial economic, environmental and social equity outcomes based on the CSPP principles and priorities as well as the SBCCOG’s subregional priorities.

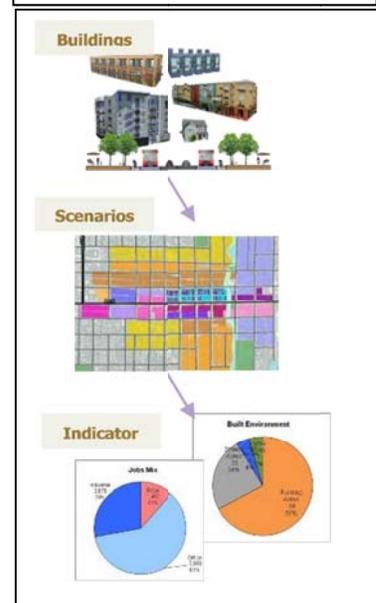
## Work Tasks

A key initial step for Pilot Area 2 will be developing three planning scenarios to be analyzed using Metro’s principles and place typologies and the SMF performance measurement tools. These scenarios will be developed by the selected contractor in consultation with the South Bay Cities Council of Governments.

The Dowling Team will develop three subregional portfolio scenarios for PA 2 in consultation with the South Bay Cities Council of Governments (The South Bay study area for PA 2 is shown in Figure 2). The 3 planning scenarios will be developed using Metro’s principles and place typologies and the SMF performance measurement tools. As specified in the request for offer (RFO), the three scenarios are:

- (1) A business-as-usual scenario that includes between five to eight unfunded strategic projects in Metro’s Long Range Transportation Plan,
- (2) A SCPF scenario that reflects the recommended transportation investments (between 5-8 projects) and policies in Metro’s Strategy Guide, a product of CSPP process. The Strategy Guide describes actions that can advance the sustainability planning principles and priorities included in the CSPP. These actions are varied-some can be implemented by Metro with the support of stakeholders, while others require actions by local governments, private investors, or others.
- (3) An integrated land-use/transportation scenario that

**Figure 1:Envision Tomorrow Plus (ET+) Overview**

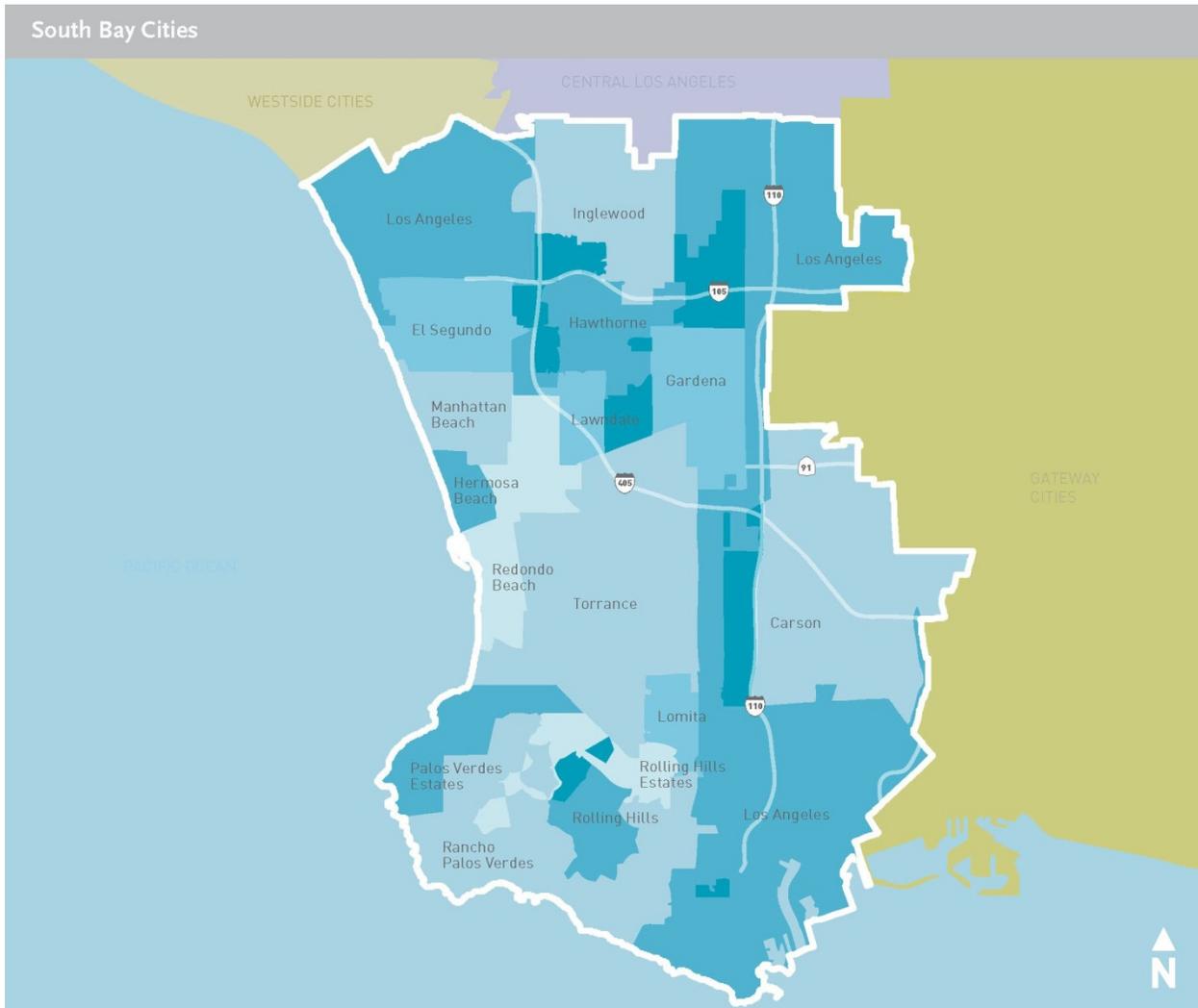


combines guidance from Metro’s CSPP Strategy Guide with the land-use vision in the South Bay Sustainable Strategy with between 5 and 8 transportation projects (<http://www.southbaycities.org/node/684>).

The Southern California RTP/SCS will be used as a baseline scenario by which to compare the performance of the scenarios 1, 2, and 3. For testing these transportation and land-use scenarios the Dowling Team will review the sketch planning tools, including Envision Tomorrow Plus (ET+) (See Figure 1), Urban Footprint and Rapid Fire Models, and other applicable tools.

**Figure 2: South Bay Cities Pilot Area 2 Study Area**

(Adapted from Figure 2-15, Metro LRTP)



The details of each scenario will be worked out in coordination with the Pilot Area 2 sponsor and project team. As specified in the request for offer, five to eight projects will be selected for Scenario #1 from the unfunded projects list in Metro’s LRTP for the South Bay Cities.

We propose that the total transportation improvement investment dollars be approximately equivalent across all three scenarios to facilitate comparison and lessons that can be learned from the pilot study. Specific land use changes for scenario #3 will be confirmed with the Pilot Area 2 sponsor and project team and South Bay Livable Communities Working Group.

#### ***Subtask 4.2: Identify Performance Measures and Data Needs For PA2***

**Objective:** The purpose of this subtask is to identify the appropriate performance measures, data needs, and recommended SMF analysis approach. Starting with PA2, the Dowling Team will review existing System-Level and Project-Level Performance Measures used in Metro's Long Range Transportation Planning process and included as part of Metro's CSPP and associated work products<sup>1</sup>.

#### **Background:**

The SMF identifies 17 performance measures related to the SMF principles for evaluating the level of success at achieving the objectives of the SMF process. These measures are comprehensive and cover all the SMF dimensions.

As illustrated in the tools and data required to evaluate all 17 performance measures for each contemplated transportation improvement (or bundle of improvements) are not trivial. This is probably the single greatest obstacle to the implementation of SMF in regular Caltrans and local planning practice. Particularly, it is an obstacle in using the full SMF framework in project development, when many alternatives are being considered.

SMF requires a significant planning analysis infrastructure (e.g. regional travel demand models) be already in place (and accessible to the planner considering project alternatives) to support the computation of all 17 performance measures, and SMF requires significant investment of professional effort to perform the computations for a variety of possible transportation improvement projects. So, the intent is not to analyze all 17 SMF performance measures, but to identify and prioritize those measures that best support the principles and priorities established in the SCPF or informed by the sustainability performance measures included in the Draft Countywide Sustainability Planning Policy.

The Dowling Team therefore proposes to develop and apply a sketch planning approach to the selection of SMF supporting transportation improvements for the PA 2 scenarios. This sketch planning methodology will be a valuable legacy of this SMF implementation pilot project, a set of procedures that will facilitate the adoption and application of SMF to everyday project planning selection and evaluation by Caltrans staff.

#### **Approach:**

The Dowling Team will identify potential SMF performance measures and the data they require. We will assess the quality and availability of data for each performance measure. We will identify any analysis or modeling tools or alternative methodologies required to produce each performance measure, and assess their quality, availability, and utility, and any shortcomings. As described under Task 2, we will present the data and analysis,

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<sup>1</sup> See page 91 of the Draft 2008 Long Range Transportation Plan Technical Document ([www.metro.net/projects\\_studies/images/2008\\_lrtp\\_techdoc.pdf](http://www.metro.net/projects_studies/images/2008_lrtp_techdoc.pdf)).

Also include link to policy:[http://www.metro.net/projects\\_studies/sustainability/images/20120418AAHS.pdf](http://www.metro.net/projects_studies/sustainability/images/20120418AAHS.pdf).

assessment, and options to each appropriate Pilot Area advisory body for direction on moving forward and selection of SMF performance measures.

The intent is to rely as much as possible on data already being collected, analysis already performed, and tools and performance measures already developed for the SCPF and the CSPP. Our goal is to rely on relatively little new data collection. Most of the analysis will be processing of data already collected and processed by others.

### **Work Tasks**

The SMF performance measures will be prioritized based on the SCPF and CSPP principles and priorities and related performance metrics, as well as input from the SBBCOG to focus on the priorities for the South Bay subregion as set in their sustainability strategy. For example, the SMF does not make the distinction between auto travel using a gas-powered vehicle versus an electric vehicle. The SMF performance measure that best captures this priority of the subregion would be prioritized.

To the extent the selected SMF performance measures overlap or are highly correlated, they may be combined into a single measure or replaced with one or the other. For example, under Location Efficiency three performance measures are proposed in the SMF framework: 1. Support for Sustainable Growth, 2. Transit Mode Share, 3. Accessibility and Connectivity. These three measures are all highly correlated (connectivity will result in improved transit share, etc.) and are really a means of achieving the SMF goal, reduced carbon emissions per capita, rather than the goal itself. A good proxy for these three performance measures would be the non-auto mode split (measuring the benefits of improved walkability as well as improved transit access).

### ***Deliverables:***

- Deliverable 4.1 – Potential transportation project portfolios for each of the three scenarios, including project descriptions and maps, for the South Bay subregion.
- Deliverable 4.2b – Memo on Approach, Data Needs, Sources for Pilot Area 2
  - List of performance measures, data needs, sources
  - Assessment of data quality and availability
  - Assessment of available and alternative methodologies for analysis
  - Recommended analysis and data collection approach

(Meeting notes/feedback from pilot area advisory committees and/or project teams are already described under Task 2)

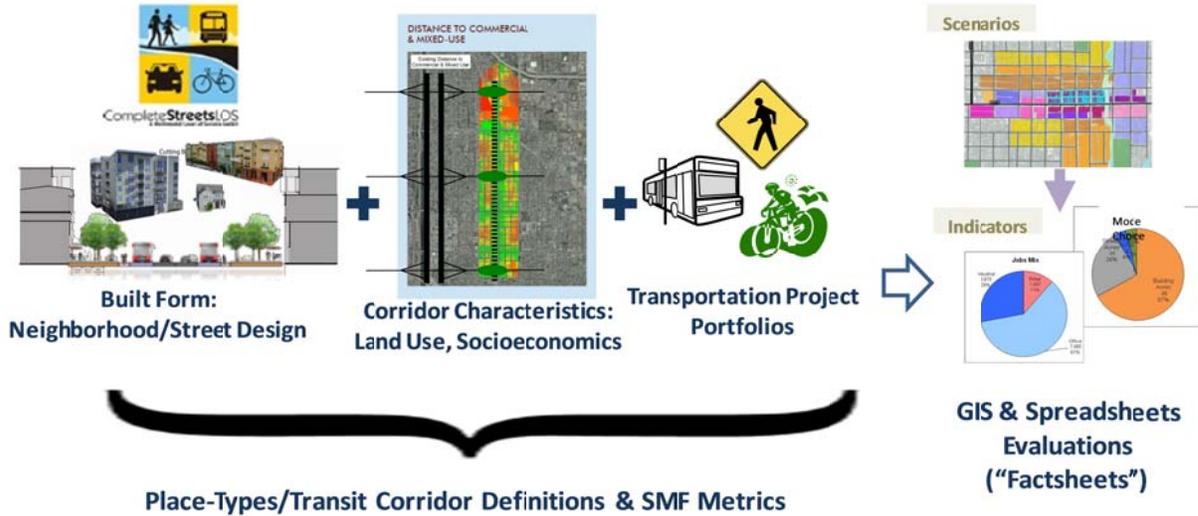
## **Task 5: Data Collection, Analysis, and Performance Testing**

To identify the appropriate SMF performance measures and the data required, the Dowling team will evaluate scenarios based on the SMF performance metrics identified in Task 4.

We would focus on PA2 to evaluate the alternative transportation project portfolios (5-8 projects for each of three planning scenarios). Each of these scenarios will be modeled for the determined set of improvements, places and place-types to evaluate the potential

effectiveness of planning strategies identified in the literature review. Based on this analysis the team will develop SMF “factsheets” that will describe the definition and typology and will identify the transportation services, land use patterns, and transport policies having the most profound effects in moving toward SMF goals. Finally, to provide practitioners with an easy-to-use set of reference materials, the Dowling team will develop a series of matrices of potential strategies and their potential effectiveness at influencing SMF outcomes.

**Figure 3: SMF Performance Evaluation Graphic**



Our work under this task will build as much as possible on data collected and evaluated by others and using tools already developed for the SCPF and CSPP (PA2), to avoid “re-inventing the wheel” thus reducing redundant and unnecessary analysis.

***Subtask 5.1 Develop Data Collection Plans***

For PA 2, Dowling will develop a recommended Data Collection Plan with the project team. Upon review of the available tools and data and prioritization of the SMF performance measures for this application, the team will identify data needs.

***Subtask 5.4 (a & b): Data Collection Results and Analyses (PA 2)***

For PA 2, Dowling will gather data for selected performance measures, and perform analyses on the three subregional portfolio scenarios.

***Subtask 5.5b***

For PA2, the Dowling Team will also provide an analysis of the identified portfolio of projects using Metro’s existing performance measures framework, as contained in the Draft 2008 Long Range Transportation Plan Technical Document and the alternative Smart Mobility-based assessment framework.

### ***Deliverables:***

- Deliverable 5.1b – Draft Data Collection Plan for PA 2
- Deliverable 5.4a – Memo on performance measures and results for each PA 2 scenario.
- Deliverable 5.4b – Draft report of data collection and analyses methodologies and performance results for PA 2. Also referred to herein as SMF “fact sheets”.
- Deliverable 5.5b – Presentations/materials with draft data and assessment for PA 2.

Meeting notes/feedback from pilot area advisory committees and/or project teams. (Meeting deliverables are already described under Task 2)

## **Task 6: Recommendations and Evaluation**

The overarching goal of this task will be to consolidate the lessons learned from the development, testing, and evaluation of the processes, methodologies, and results of applying the Smart Mobility Framework in the two planning efforts. Final products will present best practices, performance measures, and a replicable process for incorporating Smart Mobility into comparable efforts throughout the Department and partner agencies’ work.

### ***Subtask 6.2 Briefing Paper***

The Dowling Team will develop draft briefing paper with results and recommendations for SMF application in both pilot areas.

For PA2, we will discuss the findings of the analysis and any challenges, including gaps in available data and the time/cost required to analyze projects using the Smart Mobility-based measures, and recommending next steps subregional agencies or Metro could take to incorporate Smart Mobility Measures into future project portfolio development or analysis for the Long Range Transportation Plan.

### ***Deliverables:***

- Deliverable 6.2 – Draft briefing paper with results and recommendations for each pilot area.
- Deliverable 6.3 – Draft evaluation report on pilot applications of SMF, including comparison assessment of performance measure frameworks and the performance of SMF/CSPP versus non-SMF/CSPP strategies.