BETTER MARKET STREET
EXISTING CONDITIONS & BEST PRACTICES

Part Two: Best Practices
Better Market Street

Existing Conditions and Best Practices

7 December 2011

Prepared for:
San Francisco Department of Public Works
San Francisco Planning Department
San Francisco Municipal Transportation Agency
San Francisco County Transportation Authority
San Francisco Office of Economic and Workforce Development

Prepared by:
Perkins+Will
Gehl Architects
CMG Landscape Architecture
Parisi Associates
Nelson\Nygaard Consulting Associates
Fehr & Peers Transportation Consultants
Existing Conditions & Best Practices: Overview

Purpose
The Better Market Street Existing Conditions & Best Practices documents lay a foundation for the informed, inspired, and integrated design of Market Street which will follow. It is a resource of layered information, drawn from a variety of design and transportation sources, enriched by new investigation and organized to focus on this study area and its key challenges and opportunities. It looks in detail at the Market Street corridor, considers Market Street in the context of the City and surrounding districts, and steps back to consider international best practices.

As the Better Market Street project moves into the next phase of concept alternatives preparation, the Existing Conditions & Best Practices documents will provide an easy reference for use by the City Project Team, Consultant Team and others. As the findings of each chapter suggest specific opportunities for improvement and highlight specific problems to be solved, they will help to frame the detailed evaluation of alternatives.

The multi-faceted nature of the document reflects the role of Market Street as San Francisco's multi-modal “Main Street” and the region’s premier transit corridor. The Existing Conditions & Best Practices documents are a product of Tasks 2 and 3 of the Better Market Street Phase One project. They focus on the section of Market Street between the Embarcadero and Octavia Boulevard.

Approach
Preparation of the Existing Conditions & Best Practices documents engaged not only the City and Consultant teams, but many others who have contributed substantially and on whose shoulders this resource book rests. City teams have been working for years to understand and systematically record the mobility picture for surrounding and overlapping districts. Planning and urban design teams have created extensive mapping resources and in 2008 began the work of a Public Life Public Space study now completed with the Existing Conditions & Best Practices documents. Numerous interested citizens who care about Market Street enough to be trained for the 2011 survey team and carefully observe the comings and goings on the street have made it possible to interject interesting and compelling new information into this work.

A parallel effort opened the first round of public engagement for Better Market Street including workshops, webinars and an online survey which were completed during the course of work on these documents. The participation was impressive in the level of interest and most particularly the time taken to submit detailed comments for the team's consideration. A separate document, Round One Outreach: Findings and an appendix with all comments received, is available in conjunction with the Existing Conditions & Best Practices documents.

Through site observations and review of past and current studies and base information prepared by the City of San Francisco and in consultation with City staff, the Consultant Team identified, investigated and further understood those elements of Market Street which constitute a “Great Street” – its context, urban form, character and operations on all levels and modes. The product of this effort, Existing Conditions & Best Practices, forms a “catalogue”, an easy-to-use reference book, which can be accessed and referred to as needed.
Organization and Content

The Existing Conditions and Best Practices documents are organized into Part One and Part Two, respectively. The table on the opposite page summarizes the content of the documents. The table also refers to the Scope of Services for the Better Market Street project indicating the tasks and subtasks related to each of the documents’ sections.

Part One: Existing Conditions
Part One: Existing Conditions is organized as follows:

Urban Form, Public Space and Streetscape – discusses the broader urban design context of Market Street to better understand the potential role of the street in terms of urban form and structure, districts, destinations, land use and the interface with transportation conditions and potentials. This section also discusses the characteristic elements of sidewalks, existing and potential open spaces, street furnishings and wayfinding.

Multi-Modal Operations – discusses the full range of operations and modes, and the way the street and pedestrian spaces are used, in terms of pedestrian, bicycle, transit, vehicular traffic, parking, delivery and taxis, safety and hot spots. This includes consideration of new information in areas such as the Public Life Public Space study and the just completed Speed and Delay findings.

Relevant Studies and Projects – summarizes adopted and proposed policy directions for the street as well as existing and proposed private and public sector projects that may affect how the street is used.

Underground Utilities – identifies and locates the utility systems under Market Street, including planned refurbishment projects.

Part Two: Best Practices
The Best Practices discussion is keyed to those issues identified by the City’s Project Team and the Consultant Team as applicable to Market Street, as follows:

Public Space/Pedestrian Realm

Pedestrians at Multi-Modal Intersections

Transit and Bicycle Integration

Loading and Delivery Management

Great Streets – Best Practices concludes with a discussion of Great Streets elsewhere, demonstrating fully integrated multi-modal streets that may provide lessons for Market Street.

For both Existing Conditions and Best Practices, each section incorporates a general introduction, a summary of key findings, a discussion of findings, applications to Market Street (in Best Practices) and other information, including study methodology, references and sources, as appropriate.

Appendix
The Appendix includes:

• Gehl Architect’s Public Life Public Space Survey, providing access to detailed data which underpins Section 2.2 Multimodal Operations – Pedestrian and links to the broader urban design analysis;

• Gehl Architect’s Public Life Public Survey – Cycling Findings; and

• A transportation-related Inventory of Acquired Data.
<table>
<thead>
<tr>
<th>Tasks 2 and 3 Deliverable</th>
<th>Associated Scope Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Conditions &amp; Best Practices</td>
<td>Task 3.6</td>
</tr>
<tr>
<td>Part One - Existing Conditions</td>
<td>Task 3</td>
</tr>
<tr>
<td><strong>Overview</strong></td>
<td></td>
</tr>
<tr>
<td>Introduction to Existing Conditions</td>
<td></td>
</tr>
<tr>
<td>1 Urban Form, Public Space and Streetscape</td>
<td></td>
</tr>
<tr>
<td>1 Overview and Key Findings</td>
<td></td>
</tr>
<tr>
<td>2 The Context of Market Street</td>
<td>Task 3.2.B; Task 3.5.A</td>
</tr>
<tr>
<td>3 Urban Form and Structure</td>
<td>Task 3.5.A</td>
</tr>
<tr>
<td>4 Pedestrian Realm</td>
<td>Task 3.2.B; Task 3.5.A</td>
</tr>
<tr>
<td>5 Open Space Destinations</td>
<td>Task 3.2.B</td>
</tr>
<tr>
<td>6 Streetscape Elements</td>
<td>Task 3.2.B</td>
</tr>
<tr>
<td>7 Signage and Wayfinding</td>
<td>Task 3.2.B</td>
</tr>
<tr>
<td>2 Multimodal Operations</td>
<td></td>
</tr>
<tr>
<td>1 Overview</td>
<td></td>
</tr>
<tr>
<td>2 Pedestrian</td>
<td>Task 3.3.A; Task 3.3.B; Task 3.5.B</td>
</tr>
<tr>
<td>3 Bicycle</td>
<td>Task 3.2.C; Task 3.3.B; Task 3.5.B</td>
</tr>
<tr>
<td>4 Transit</td>
<td>Task 3.2.C; Task 3.3.B; Task 3.5.B</td>
</tr>
<tr>
<td>5 Vehicular Traffic</td>
<td>Task 3.2.C; Task 3.3.B</td>
</tr>
<tr>
<td>6 Parking</td>
<td>Task 3.2.C; Task 3.3.B</td>
</tr>
<tr>
<td>7 Delivery and Taxis</td>
<td>Task 3.2.C; Task 3.3.B</td>
</tr>
<tr>
<td>8 Safety</td>
<td>Task 3.3.B</td>
</tr>
<tr>
<td>9 Hot Spots</td>
<td>Task 3.3.B</td>
</tr>
<tr>
<td>3 Relevant Studies and Projects</td>
<td>Task 3.1</td>
</tr>
<tr>
<td>4 Underground Utilities</td>
<td>Task 3.2.D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tasks 2 and 3 Deliverable</th>
<th>Associated Scope Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Conditions &amp; Best Practices</td>
<td>Task 3.6</td>
</tr>
<tr>
<td>Part Two - Best Practices</td>
<td>Task 2</td>
</tr>
<tr>
<td><strong>Overview</strong></td>
<td></td>
</tr>
<tr>
<td>Introduction to Best Practices</td>
<td></td>
</tr>
<tr>
<td>1 Public Space/Pedestrian Realm</td>
<td>Task 2.3</td>
</tr>
<tr>
<td>2 Pedestrians at Multimodal Intersections</td>
<td>Task 2.4</td>
</tr>
<tr>
<td>3 Transit and Bicycle Integration</td>
<td>Task 2.1</td>
</tr>
<tr>
<td>4 Loading and Delivery Management</td>
<td>Task 2.2</td>
</tr>
<tr>
<td>5 Great Streets</td>
<td>Task 2</td>
</tr>
<tr>
<td><strong>Appendix</strong></td>
<td></td>
</tr>
<tr>
<td>A Public Life Public Space Survey</td>
<td>Task 3.3.A</td>
</tr>
<tr>
<td>B Public Life Public Space - Cycling Findings</td>
<td>Task 3.3.A; Task 3.3.B</td>
</tr>
<tr>
<td>C Inventory of Acquired Data</td>
<td>Task 3.3.B</td>
</tr>
</tbody>
</table>

Note: Base Maps prepared as part of Tasks 3.2.A used for all other tasks.
The Best Practices document summarizes best practices approaches for a wide variety of challenges and opportunities for improvements to Market Street. The best practices approaches focus on those areas that would help the Market Street corridor become a Great Street, one with a strong identity; a high priority on mobility, pedestrian amenity and public space; and an active street life.

The document is one of two parts: Part One Best Practices and Part Two Existing Conditions. Existing Conditions & Best Practices documents, inclusive of the two parts, serve as a resource and reference book for both the City’s Project Team and the Consultant Team for the formulation of potential improvements to the corridor.

Content and Organization
Identified by the City’s Project Team and the Consultant Team as applicable to Market Street, the major topical areas of the Best Practices document include:

- Public Space/Pedestrian Realm
- Pedestrians at Multi-Modal Intersections
- Transit and Bicycle Integration
- Loading and Delivery Management

Within each major topical area, specific areas of focus are explained in more detail and organized as follows:

- Description
- Design Considerations
- Potential Market Street Application
- Benefits
- Other Information
- References

In addition, Best Practices includes a section on Great Streets, summarizing the qualities and attributes of great streets, including case studies of streets elsewhere with attributes similar to Market Street. It showcases the successful integration of design and mobility considerations in the making of a Great Street.

Perkins+Will Consultant Team
The principal authors of the Best Practices Report consist of:

- Gehl Architects;
- CMG Landscape Architects;
- Parisi Associates;
- NelsonNygaard; and
- Fehr & Peers
Best Practices: Detailed Contents

Best Practices Introduction iv

1. Public Space / Pedestrian Realm
1.1 The Pedestrian Experience 2
1.2 The Street As A Social Place 13
1.3 The Green Network 25

2. Pedestrians at Multi-Modal Intersections
2.1 Intersection and Mid-block Crosswalk Treatments 36
2.2 Minimizing Pedestrian Exposure to Vehicle Traffic 42
2.3 Minimizing Pedestrian / Bicycle Conflicts 45
2.4 Corner Geometries 50
2.5 Sight Lines 52
2.6 Optimizing Signal Timing and Traffic Control for Pedestrians 54
2.7 Optimizing Pedestrian Access to Bus Stops / Subway Portals 57

3. Transit and Bicycle Integration
3.1 Downtown Transit Stop Configuration 60
3.2 Time-Restricted Transit-Priority Treatments 65
3.3 Cycle Tracks 67
3.4 Shared Bus-Bicycle Lanes 80
3.5 Minimizing Bicycle Conflict with On-Street Infrastructure 88
3.6 Signal Synchronization and Timing to Create Traffic Calming 96
3.7 Bicycle Sharing 98

4. Loading and Delivery Management
4.1 Freight Loading and Delivery Management 102

5. Great Streets
5.1 A great Street 112
5.2 Learning from Other Great Streets 114
5.3 Broadway, New York 120
5.4 Swanston Street, Melbourne 130
5.5 Potential Lessons for Market Street 138