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MEMORANDUM

To: CMAP ECD Committee

From: Brett Baden

Date: October 20, 2010

Re: Cluster “Drill Down Analysis” Report Overview

GO TO 2040 recommends that CMAP should perform research to “drill down” into the Chicago region’s clusters in order to identify workforce, infrastructure, and financing needs, and to provide strategies for coordination and communication. This goal is to provide a deeper understanding of the specializations in the region to policy-makers, to identify any needs that the public sector can address, and to address and encourage economic growth.

This overview of the cluster “drill down” provides a working description for how to perform an analysis that will explore the inner workings of clusters of specialized economic power in the Chicago metropolitan region. The drill-down reports are meant to inform policy-makers and political leaders about the challenges faced by firms that generate economic growth and jobs. As noted in GO TO 2040, while most innovation is led by the private sector, there may be under-investment in innovation because firms may fear that competitors will benefit from such investments, and because information gaps can constrain economic activity. By identifying challenges and opportunities, public officials can more effectively use public resources to provide solutions.

As part of the process of performing the first cluster analysis on freight (see below for the reasons for selecting freight), a standardized format will be developed that could be used across industries. The report will have several chapters, following the format below:

0. *Executive Summary*, with supporting pictures of maps (this may become a separate pamphlet-style CMAP brochure).
1. *Introduction* (6 pages) preliminary information about GO TO 2040, the drill-down process, its intent, and the cluster being studied
2. *Methodology* (15 pages) This chapter will be standardized across all clusters. The methodology chapter will draw from examples by cluster analysis practitioners, the academic literature, and other drill-down type reports. The methodology will be

designed to complement CMAP's ongoing work on cluster asset mapping (and other cluster related analysis).

3. *Historical Context* (10 pages) This will be a brief summation of the historical context for the cluster, including its development and importance in the larger Chicago regional economy.
4. *Existing Conditions* (40 pages) This section would have a description of the economics of the cluster, current statistics about the cluster, a discussion of the current business climate and its impacts on the cluster, industry trends, and a section describing the workforce and training opportunities for that cluster.
 - a. *Cluster Economics:* This section will describe how the cluster relates to the rest of the Chicago area economy, as well as regional, national, and international markets. This section will also address the role of public and private infrastructure in the operation of the cluster.
 - i. Economies of Scale: This section will describe any economies of scale that are present; economies of scale are realized when a large investment in capital goods (infrastructure) reduces the per unit cost of production.
 - ii. Economies of Scope: This section will address any potential economies of scope; economies of scope are realized when production of some good enables a low-cost production of a different good.
 - b. *Business Climate:* This section will address the role of government, regulations, and civic organizations in terms of facilitating the operation of the cluster. This part of the report will address potential barriers to business expansion, and may (if data are available) address business location decisions for the cluster. This chapter will also address potential funding limitations faced at various stages of development for firms within this cluster.
 - c. *Industry Trends:* This section will provide a critical look at the state of the cluster in the current economy, and (to the extent possible) forecast trends for the cluster's firms, outputs, and potential growth. This forecasting should help identify potentially important influences on the cluster's success.
 - d. *Labor Force:* The labor force section will address the current state of employment for the cluster, including employment, unemployment, skill levels, the availability of labor pools, and training opportunities. The section will then address trends in terms of training needs and employment opportunities, and will assess whether there gaps (and if so, why the gaps exist).
5. *Supplemental Data Analysis* (as appropriate) This will only be present if there were some substantial data available to investigate some determinants of cluster processes or successes. For example, if there are extensive, detailed data about the value of the cluster to the regional economy that are readily available, an extensive supplemental analysis that investigates this data could be developed. However, if the data are all qualitative in

nature, or there are only descriptive quantitative data, the inclusion of this data (and analysis), trends, and forecasts would be distributed through the sections of Chapter 4.

6. *Summary and Conclusion*
7. *Key Challenges and Implementation Actions* This section will provide policy recommendations to address key challenges identified in the report. These recommendations will be similar to those in GO TO 2040; they will suggest roles for various stakeholders to play, and may include functions for CMAP to carry out.

Project Timeline

Chapter	Expected Completion
2. Standardized methodology: Based on survey or existing research and stakeholder involvement	March 2011
3. Historical context; 4a. Cluster economics	April 2011
4b. business climate; 4c industry trends;	June 2011
4d labor force concerns	August 2011
5. Supplemental Data Analysis; 6. Summary and Conclusions; 7. Key Challenges and Implementation Areas	September 2011
Final Report	October 2011

The case for a freight drill-down: The decision to perform the first CMAP GO TO 2040 drill down analysis on Chicago's freight cluster is based on multiple reasons:

- CMAP has expertise in freight policy, has a standing freight committee, and has many contacts in the freight industry that can facilitate this work,
- CMAP recently (January 2010) produced a freight plan for the CMAP region.
- Centerpoint, Inc., has expressed interest in an analysis of intermodal yards and is willing to be supportive.
- Freight is an established industry in the region. Studying what works and how it has come to work is useful for the development of the drill-down methodology. More difficult cases can be addressed after the drill-down methodology has been developed.
- CMAP is concurrently developing a three-level freight forecasting model for the region. This model will look at macroeconomic relationships (supply and demand for freight commodities), meso-level relationships, and micro (simulation) level analysis. Work on the freight model will help inform the drill-down analysis.

The analysis of freight should also work synergistically with a similar drill-down effort by the Chicago Federal Reserve and the Chicago Manufacturer's Renaissance Council that is focusing on advanced manufacturing in the region.

Later drill-down reports will focus on energy, bio-med/bio-tech, and other clusters as they are identified.