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MEMO

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To: Steve Schainker, City Manager

From: Damion Pregitzer, Traffic Engineer

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Subject: Council Referral: Level of Service and Context Sensitive Solutions Overview

On August 8, 2007 City Council directed Public Works Staff to explore and to educate the Council on level of service (LOS) standards for roads and for pedestrian and bicycles, etc. Staff was also directed to update them on newer processes such as Context Sensitive Solutions (CSS).

In response to the Council's direction this memo provides an overview of what is to be discussed at the roundtable meeting on October 16, 2007. First, Context Sensitive Solutions; its core values and steps in the process. This information covers the intent of CSS and what a community could potentially gain from implementing it. Second, Level of service standards; how they may be applied to areas with new development versus areas of redevelopment.

Core Principles of CSS:

The CSS Product: Qualities of Excellence in Transportation Design

The "Qualities that Characterize Excellence in Transportation Design" - that is, of the physical end product of the CSS process - are:

- The project satisfies the purpose and needs as agreed to by a full range of stakeholders. This agreement is forged in the earliest phase of the project and amended as warranted as the project develops.
- The project is a safe facility for both the user and the community.
- The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area, i.e., exhibits context sensitive design.
- The project exceeds the expectations of both designers and stakeholders and achieves a level of excellence in people's minds.
- The project involves efficient and effective use of the resources (time, budget, community) of all involved parties.
- The project is designed and built with minimal disruption to the community.

- The project is seen as having added lasting value to the community.

The CSS Process: Characteristics of the Process That Yield Excellence

"The Characteristics of the Process that will Yield Excellence in Transportation Design" are:

- Communication with all stakeholders is open, honest, early, and continuous.
- A multidisciplinary team is established early, with disciplines based on the needs of the specific project, and with the inclusion of the public.
- A full range of stakeholders is involved with transportation officials in the scoping phase. The purposes of the project are clearly defined, and consensus on the scope is forged before proceeding.
- The highway development process is tailored to meet the circumstances. This process should examine multiple alternatives that will result in a consensus of approach methods.
- A commitment to the process from top agency officials and local leaders is secured.
- The public involvement process, which includes informal meetings, is tailored to the project.
- The landscape, the community, and valued resources are understood before engineering design is started. A full range of tools for communication about project alternatives is used (e.g., visualization).

The Project Development Process: (step-by-step)

1. Engaging Stakeholders and Partners

There are a variety of methods for identifying stakeholders and project partners. Identifying them in the preliminary scoping phase (scoping up-front) can bring many benefits to a CSS project.

2. Purpose and Need/Problem Definition and Project Visioning

The statement of purpose and need under the CSS process is reflective of not only a transportation needs assessment, but also of a statement of environmental values, and community values. In addition to "purpose and need", there are other approaches to broadly identify problems for CSS projects, to create visions, and to establish project goals or criteria, which can later serve as measures for evaluating the project upon its completion.

3. Alternatives Development, Evaluation & Selection

The evaluation of project alternatives and alternative designs (including non-traditional solutions, such as using alternative routes or modes) is important because it allows stakeholders the ability to assess the advantages and disadvantages of a variety of approaches to addressing a project's "purpose and need."

4. Final Design

The final design is crucial in determining the project's ultimate impacts on the road's context. Strategies to keep track of comments made in earlier phases are an essential part of a quality design process.

5. Review & Approvals Process

As a consensus-building process, a CSS project can speed up and ease the review and approval processes. Rather than waiting until the end of the project for review and approvals by other state and local agencies, these entities are involved as stakeholders in the process from the very beginning. Identification of community concerns and participation in the process early on, also helps avoid conflict and community opposition at the approvals stage of a project.

6. Construction

Stakeholders may have concerns about and maintain interest in the details of final design and construction, primarily about mitigation methods and techniques put into place to reduce the impact on communities of project construction. It also is important for agencies to communicate changes to the project that may occur in the post-planning project phase, from changes to the plan, schedule delays, reductions in funding for mitigation or community-desired improvements (or VE), changes to construction detours, and to ensure that "commitments made during the project development process are ...honored during the final design and construction phases of the project."

7. Maintenance and Operations

The maintenance of CSS roads involves more than cleaning and repair, but includes ongoing monitoring and modifications of road operations and design. CSS principles are often carried through under maintenance and operation agreements with communities.

8. Evaluation: CSS Performance Measures

Both qualitative and quantitative performance measures are used to provide feedback and to improve other CSS projects. These measures range from award programs (NYSDOT) to traffic counts and other "hard" data.

Potential Benefits of CSS:

- CSS solves the right problem by broadening the definition of "the problem" that a project should solve, and by reaching consensus with all stakeholders before the design process begins.
- CSS conserves environmental and community resources. CSS facilitates and streamlines the process of NEPA compliance.
- CSS saves time. It shortens the project development process by gaining consensus early, and thereby minimizing litigation and redesign, and expediting permit approvals.
- CSS saves money. By shortening the project development process and eliminating obstacles, money as well as time is saved.

- CSS builds support from the public and from the regulators. By partnering and planning a project with the transportation agency, these parties bring full cooperation, and often additional resources as well.
- CSS helps prioritize and allocate scarce transportation funds in a cost-effective way, at a time when needs far exceed resources.
- Group decisions are generally better than individual decisions. Research supports the conclusion that decisions are more accepted and mutually satisfactory when made by all who must live with them.
- CSS is the right thing to do. It serves the public interest, helps build communities and leaves a better place behind.

City of Ames Level of Service (LOS) Standards:

For motor vehicles on roadways, the Highway Capacity Manual (HCM) defines LOS as a "*quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.*"(3) HCM defines six levels of service for a particular facility type and uses letters A to F to represent them, from best to worst. Each LOS represents a range of operating conditions.

Roadway (Vehicles) Standard

The discussion on October 16, 2007 will cover what are the operating conditions for each LOS category and how they are applied in areas of new development and redevelopment. In cases of redevelopment, specifically those involving residential property, the discussion will cover how the LOS standard could potentially be adjusted if negative impacts are identified.

Pedestrian and Bicycle Standard

There will also be a discussion relating to national efforts to establish a pedestrian and bicycle level of service. In summary, since LOS is a qualitative measurement, national efforts to create a universal Pedestrian and Bicycle LOS have not been successful. This is related to the wide range of "acceptable" facility performance as seen by their respective users throughout other urban areas of the United States. Ergo, from state to state the definition of LOS for pedestrians and bicycles will change dramatically.