

Value Engineering and Context Sensitive Solutions

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1

Congratulations !!

- I Congratulate the Ontario Ministry of Transportation for Voluntarily Conducting Value Engineering Studies without being prodded by Regulations.
- You have seen the Value!!

2

US Regulations on VE

- US Federal Highway Administration: 1995
\$25 Million Total Project Cost
includes Planning, EPE, Design, ROW, and
Construction phases
- Michigan DOT: Began 1997
VE Studies only to meet FHWA Requirements
70+ VE Studies since 1997

3

US Regulations on CSS

- No Federal Regulations currently
- Might have individual State Regulations or
Requirements
- CSS is in development:
much agreement
some disagreement
much doubt due to many unknowns

4

The Public, VE, and CSS

- Public and local government input to DOT
- DOT dialogues with Public and local government
- Then hold VE Study to improve Value or Reduce Cost
- Always Retain the original Intended Function

5

VE and CSS on Projects

I-94 Downtown Detroit, 6 miles:

- 3-week VE in 2004 just before FEIS, after 10 years EPE
- Improved ROW use, kept sidewalk, service road lanes, and parking
- Confirmed tight ROW can contain freeway, walls, and service drives
- Improved pedestrian crossings of freeway only, not of service roads
- Questioned many cost assumptions (large & small)

6

VE and CSS on Projects

From 70 other VE Studies:

- Retain Environmental Commitments, but improve implementation to Add Value
- Maintaining Traffic
- Work Hour Restrictions: fewer hours over more days, or more hours over fewer days
- Citizen input often different than City Hall

7

History of Value Engineering

- Began in 1940's to aid the war effort
- Now also called Value Planning, Value Methodology, and other Value terms
- Considers Function, Cost, & Worth to Maximize all three

8

History of Value Engineering

- 1995: US law requires VE Studies on highway projects with Total Cost greater than \$25 Million
- 1997: Michigan DOT required to comply
- 1997: Ontario voluntarily begins VE

9

Status of Value Engineering

- 2006: This Formalized VE Work Plan followed by all practitioners: (approx)

Investigation	10 hours
Speculation (Brainstorming)	6 hours
Evaluation	3 hours
Development	20 hours
Presentation	2 hours
Implementation	

10

Status of Value Engineering

- Usually a 40-hour 1-week Study
 - VE Team of 5-8 experts not connected with the project design (fresh set of eyes)
 - Led by Trained VE Facilitator
 - Follows VE Work Plan
 - Owner retains 100% of cost savings
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- MTO & FHWA: Owner's decision whether to Implement VE Recommendations is Voluntary!!!

11

Value Engineering Change Proposal (VECP)

- Held during Construction
- Contractor-initiated
- Abbreviated work plan; fast track approval
- Cost Savings split 50/50 between Owner and Contractor

12

History of Context Sensitive Solutions (CSS)

- 1998: Context Sensitive Design coined at 'Thinking Beyond the Pavement' conference: describes many current processes to engage the public
- 2000: 5 Pilot US DOTs document their existing and new processes
- 2000-2006: many new publications and terms (CSS, Common Sense, Placemaking, ...)
- December 2003: Michigan Governor directed MDOT to begin CSD (now called CSS)

13

History of Context Sensitive Solutions (CSS)

- 2005: Michigan DOT called our process Context Sensitive Solutions, to indicate broader responsibility (Planning, Design, Construction, Operation, Maintenance)
- Identified 60 Statewide Stakeholders
- Stakeholders helped write MDOT's first CSS Policy

14

2006 Status of CSS in US

- Already embraced by 10-15 DOTs
- Very flexible process to engage the Public, to fit each local situation
- Early, Often, Continuous
- DOT led; DOT retains final say
- Voluntary whether to implement Requests
- US Policies and Procedures currently being discussed, before Regulations in (2007/08?)

15

If CSS is so good,

- Why is CSS only talked about in relation to Transportation???
 - And most often, only with Highways???
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- It is good that CSS is being advocated in both Canada and the US.

16

Comparing VE and CSS Similarities

Value Engineering

- Is a Process
- Constraints given early by DOT
- Voluntary to Implement VE Recommendations

Context Sensitive Solutions

- Is a Process
- Constraints given early by DOT
- Voluntary to Implement Requested Items

17

Comparing VE and CSS Differences

Value Engineering

- Required
- Projects > \$25 Million
- 40-hour Study
- Occurs at 30-50% Final Design
- Done by those Not Involved
- Led by Trained Facilitator
- One-time peer review
- Saves or costs money, but Adds Value
- Formalized Work Plan

Context Sensitive Solutions

- Voluntary
- All Projects
- Ongoing Dialogue – years!
- Occurs Planning through Construction & Operation
- Includes those who will be Involved
- Led by anyone
- Continuous, with lay people
- Adds Value, might cost or save money
- No set Work Plan

18

Both VE and CSS

- Attempt to Add Value
- Try to integrate the project into the adjacent setting

19

VE and CSS: Increasing Value, while Retaining Function

- Lower the Cost, keep the Function
- Add Function at same Cost
- Provide for Additional Users
- Cost-share on Construction and/or Maintenance
- Provide Desired Functions elsewhere
- US History sides with those that Pay (motorists), but I feel a change underway

20

VE and CSS

- The Jury is still out (FHWA, DOTs, Public)
- Further AASHTO discussion winter 2006
- TRB sessions January 2007
- FHWA encouraging all State DOTs to give CSS Training to their staff during 2007
- I doubt the two processes will be combined

21

Many Users of the Public ROW

- Active Users, and Quiet Users
- Most ROWs are too narrow to safely accommodate all uses
- Some uses can safely co-exist
- Some users do not want to share the Public ROW
- Some adjacent users do not want other users in the Public ROW, or want to dictate their use patterns (speed, type, ...)

22

Win's Conclusions

- VE & CSS are compatible and complimentary Processes
- VE & CSS are not in competition
- VE & CSS work for the Public Good, in different ways
- VE: larger jobs; CSS: all jobs
- Many current reasons why they won't be done together, or why one won't replace the other
- More discussion must occur and experience gained to determine the eventual relationship between VE and CSS

Suggested CSS Readings (see handout)

- FHWA national CSS website
- When Main Street is a State Highway
2001 Maryland State Highway Admin
- People and Pavement: Transportation Design that Respects Communities
2004 Michigan Land Institute
- MDOT CSS Awareness Training Material on MDOT website
- Also New York, Minnesota, Pennsylvania

24

Thank You

- Please tell others if you have the Answers!
- Please share your Best Practices with others!

I'll try to answer your questions

Win Stebbins, Michigan DOT Design