

### Consider HOW to Build

- Lesson learned from Design-Build
  - First, what to build
  - Then, HOW to Build
  - Then design details

### Need Construction Input

- Known unknowns
- Unknown unknowns
- Complexity of the timing of construction operations
- Putting all of the independent designs together in the real world

### Staging

- Develop staging with stakeholder input
- “Independent” sub-stage plans allow easier adjustment to schedule modifications
- Innovative contracting can be tied to staging
  - A+B (Cost plus schedule)
  - Lane rentals (budget for lane closures)

### Design Temporary Conditions

- Traffic shifts: widen lanes?
- Temporary drainage
- Winter stages - bridges
- Snow berms/fencing
- Maintenance of traffic elements

### Agreements Needed

- Will official mapping affect businesses?
- Will there be special assessments?
- Will maintenance agreements be needed?
- Will private areaways or utility vaults be impacted?
- Do owners have special requests?
- How much influence over municipal consent?

### Pay Attention to Cross-Streets

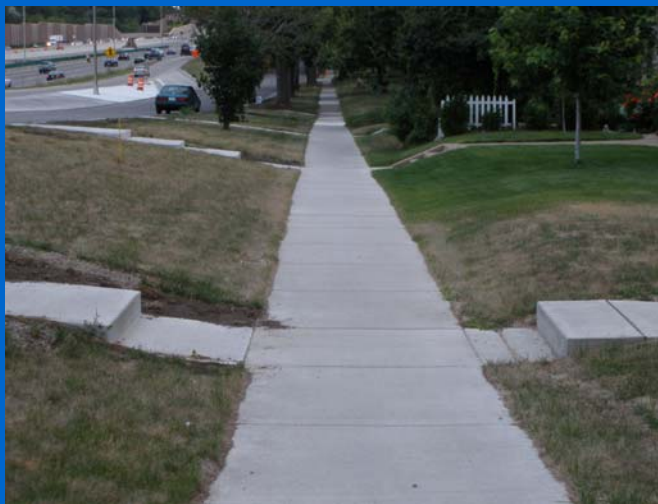
- Hydrant, push button and possibly the sign make this sidewalk non-compliant to ADA guidelines
- Cross street raised and resulted in sloped front yard and eliminated a boulevard garden



What Were They Thinking Here?



Or Here?



### How Should Project Be Constructed?



### Faster Is Usually Better!



### Nighttime Work



### Maintenance of Traffic

- Detours
- Hours/days of operation
- Cross-street/access closures
- Haul routes
- On-street parking



### Haul Routes



### Access to Businesses





### Pedestrians, Bikes and Transit



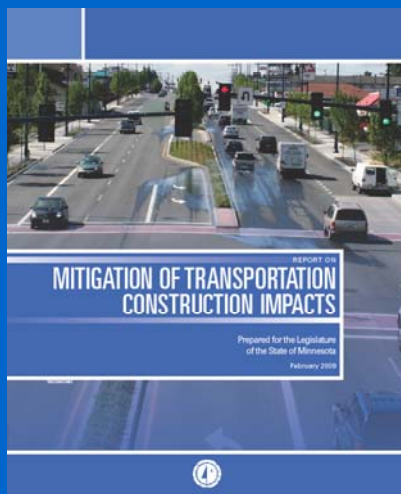
### Impacts to Adjacent Buildings



### Construction Impacts

- Noise
- Dust
- Vibration
- Visibility
- Garbage Collection
- Construction debris
- Storage of construction equipment/materials
- Delivery of equipment/materials

### Mitigation of Business Impacts



Report required by Legislature – delivered in February 2009

### Current Legislation Pending

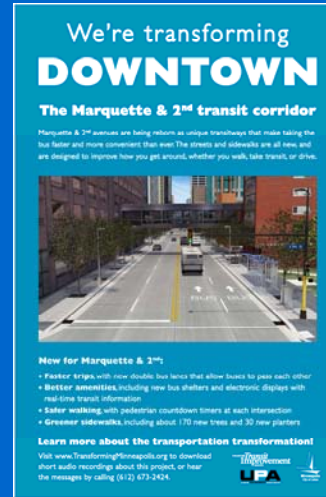
- Impairment of road access, parking or visibility for a minimum period of one month
- Business liaison must be identified
- Mitigation must include signage
- Information must be to identified businesses before and during construction

### Understanding Business Impacts



### Plan for Engagement

- Who is affected?
- Best ways to communicate?
  - Hotline
  - Email
  - Printed information
  - Meetings
  - One-on-one
- Dedicated business liaison



### Information to Businesses

- Project duration and timetables
- Lane and road closures – detours
- Access and customer parking impacts
- Visibility
- Noise, dust, vibration
- Public participation opportunities

### Businesses Helping Themselves



### Discover 169 Campaign



### Construction Impacts

- What and HOW before design details
- Not just about project – also about impacts
- Businesses AND residents
- Think about the details
- Their perspective
- All steps in process



### Questions/Comments?