

Public/Private Partnerships-P³

US-23/Lee Road Interchange Improvement Green Oak Township, Livingston County

- Steven Bower, P.E. Michigan Department of Transportation
- Mike Craine, Livingston County Road Commission
- Bill Clark, Quadrants Incorporated



Public/Private Partnerships-P³

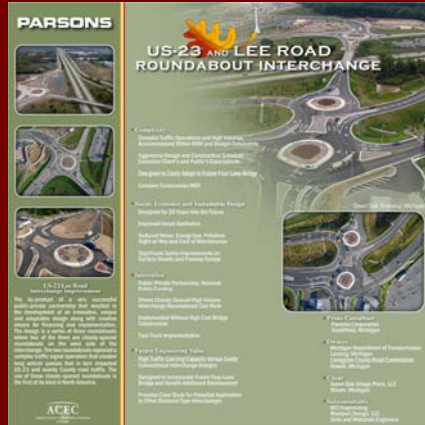
What are they?

Ad-hoc coalition of public and private citizens who develop and implement a shared business strategy for public works improvements that mitigate transportation impacts of new development and enhance future transportation operations.



Project Stakeholders

- Michigan Department of Transportation
- Livingston County Road Commission
- Green Oak Township
- Quadrants Incorporated
- Parsons Engineering



US-23/Lee Road Interchange

Project Overview

- Project Need/Scope
 - Proposed Retail Center "Green Oak Village Place"
 - Interchange Reconfiguration
 - Park & Ride Replacement
- Project Schedule/Cost
 - Retail Center Complete for tenants in Aug 2006
 - All interchange improvements must be completed by August 2006
 - Approx \$5 Million Construction Cost Financed by Quadrants Inc.



US-23/ Lee Road Interchange

Project Overview

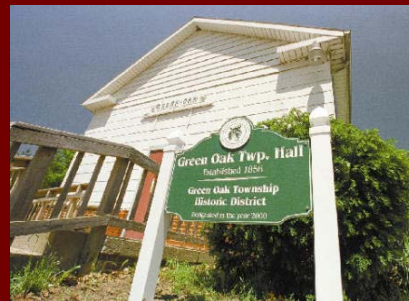
- Public Benefits
 - Less Congestion
 - Improved Safety
 - Improved Park & Ride
 - Privately Funded
 - Fast Track
- Developer Benefits
 - Improved Profitability for 600,000 sq ft Mall
 - Improved Long Term Access
 - Better relationship with local and state government



Local Planning Process

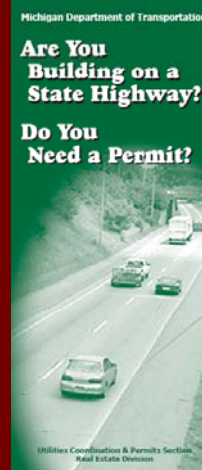
Planned Urban Development (PUD) Agreement

- City/township an essential partner
- Conduit for public comment
- PUD agreement for off-site work are based on statute
- Anchored to site plan
- Rational nexus to permit



Permit Process

- Local Township Requirements
- Traffic Impact Study
- Formal Design Process
- Roundabout Design Expertise
- Developer Financed CE for LCRC



Permit Process

- Standard Insurances
- Special Bonding Requirements
- Developer Secured Contractor
- Legislative Notification by MDOT



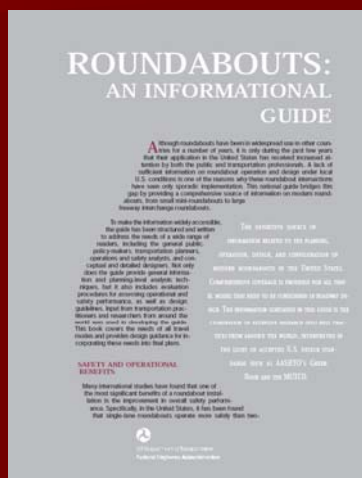
Traffic Impact Study (TIS)

- Agreed Upon TIS Criteria
 - Base Year 2004
 - 3.0% Annual Traffic Growth (2005-2010)
 - 1.5% Annual Traffic Growth (2011-2030)
 - Trip Generation
 - Background Traffic
- Design Year (Breakdown Year 2019)
- Rodel Roundabout Analysis



Design Criteria/Constraints

- Maintain Existing LOS whenever possible (Overall and Specific Movements)
- Utilize Existing ROW
- Maximize interchange capacity while using the existing two lane Lee Road Bridge
- Ramp queues must not interfere with the freeway operation at any time
- Open to Traffic by August 2006



Design Alternatives

- Fully Signalize Interchange & Whitmore Lake/Lee Rd with Interconnects
- Single Point Urban Interchange (SPUI)
- Diamond Interchange
- Partial Diamond Interchange



Practical Alternatives

- Modified Diamond Roundabout Interchange Option I
 - Single Four Leg Roundabout East Side
 - Single Six Leg Roundabout West Side
- Modified Diamond Roundabout Interchange Option II
 - Single Four Leg Roundabout East Side
 - Two Four Leg Roundabouts West Side



Preferred Design Alternative



Project Challenges

- Maintaining Traffic
- Lighting
- Sign Standards
- Pavement Marking
- Maintenance Responsibilities
- Construction Oversight



Project Musts

- Developer Financing
- Local/State Gov't Cooperation
- Flexibility by all parties
 - Design Standards
 - Shorter Review Times
 - Staged Bonding Requirements
 - Engineering Review Costs (CE/PE)



Project Musts

- Communication !!!!
 - Continuous
 - Schedule is Vital
 - No Surprises
- Effective Decision Making
 - Readily Available
 - Empowered
 - Timely Decisions
- Trustworthy Working Relationship



What have we seen?

2004 to 2008

- Higher Crash Frequency on Three Lane Roundabout (20/yr to 40/yr)
- Lower Severity Crashes
 - 50% decrease in severe injuries
 - 75% decrease in non-severe injuries
- Traffic Volumes have increased by 17 Percent overall for the three roundabouts.



What did we learn?

- No Single Template
 - Project scope determines process design
 - “One size does not fit all”
- Early Consensus on Process Issues
 - Traffic & design
 - Public involvement
 - Coordination & clearances
 - Construction & QC/QA
 - Acceptance
 - Environmental Permits



Thank You.

- Questions???