

Marquette Interchange Reconstruction

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Project History

- Built – 1968
- Begin Study – 2000
- Preliminary engineering – 2002
- Final engineering - 2003 & 2004
- Mitigation construction - Spring 2004
- Freeway construction - Spring 2005 to Sept. 2008



Marquette Interchange Program Budget

- \$76M Design - including Department
- \$58M Real Estate
- \$23M Compensable Utilities
- \$20M Mitigation
- \$633M Construction & Construction Administration

- **\$810M Total**



Goals of the Marquette Interchange

- Modernize Freeway to Satisfy Safety and Operations
- On Time - Open by Dec. 31 '08
- On Budget - \$810M Program Cost
- Minimize Impacts on the Community and Environment
 - ◆ *Keep Milwaukee "Open for Business" during construction*
- Protect the safety of the traveling public and workers



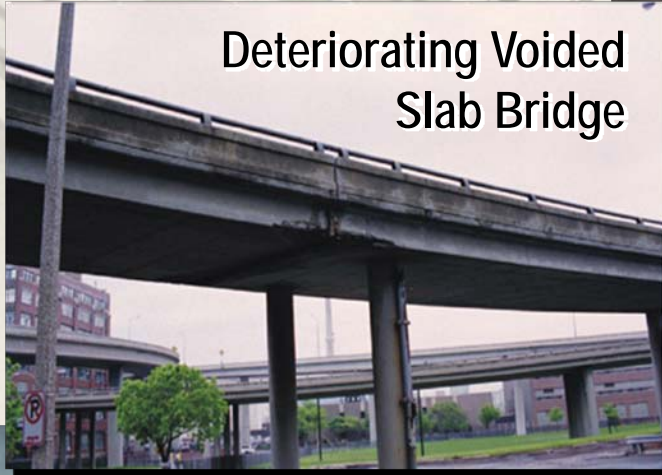
What were the problems?

- Interchange structures were at the end of their useful life
- Crash rates are high
- Traffic congestion is increasing





Deteriorating Voided
Slab Bridge



Deteriorating joints
between two bridges



Deteriorating joints
between two bridges



Deteriorating Box Girder



Deteriorating Pier



Mega Projects

"Creating their own weather"



Project Manager & Scout

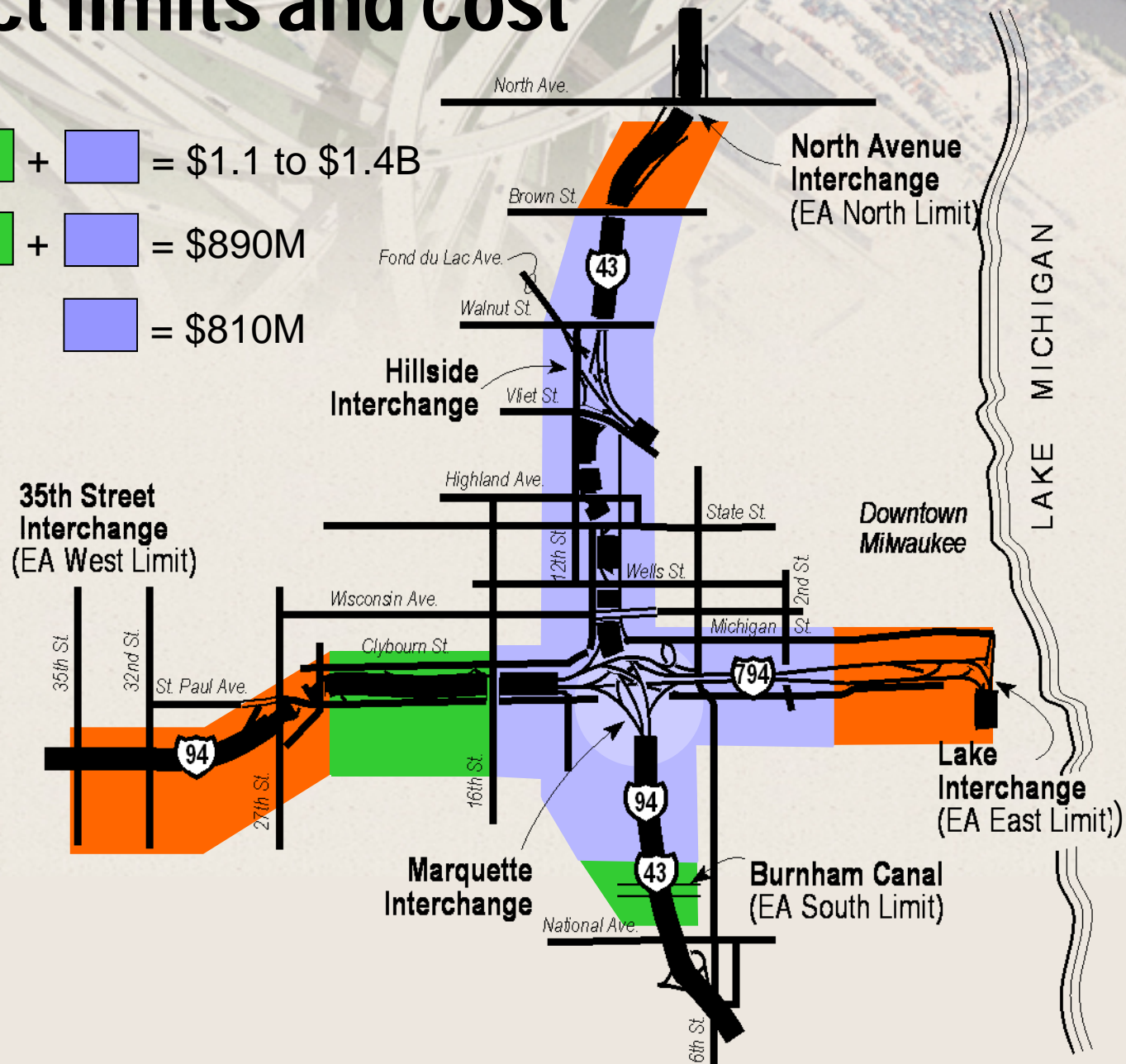


Project limits and cost

Orange + Green + Blue = \$1.1 to \$1.4B

Green + Blue = \$890M

Blue = \$810M



Marquette Interchange Program Scope

- 2M sf of bridge deck
 - ◆ *Steel I girder 560,000 sf*
 - ◆ *prestressed concrete I girder 990,000 sf*
 - ◆ *Steep box girder 450,000 sf*
- 5 miles of retaining walls
 - ◆ *300,000 sf*



Oversight Committee

Office of the Secretary
Federal Highway Administration

Change

Management
Review cost and
schedule changes

Program Director
Don Reinbold

Project Design/Finance

Manage project interactions
and overall scope

Project construction

Manage individual
construction projects

Wisconsin DOT project staff and the design team
are housed in the Milwaukee Amtrak station,
in the heart of the Marquette Interchange.



Community OUTreach

- Meet “Anytime & Anyplace”
- 1200 meetings
- Community Liaisons
- 1.5% of budget



User Communication – Web Site

- *“Map-It” Tool* Helps users plan routes during construction by generating directions and map
- *Toolbar Icon* Icon can be installed on computer toolbar; flashes when alerts occur within user’s selected routes



Community Aesthetics

- Advisory Group
- Fixed Budget



Conflict Forecasting

- Funding
- Cost / Scope Creep
- Schedule



Funding – Building Support

- Minimize acquisition
- Keep Downtown “Open for Business”
- Job & Business Opportunities







Utility costs reduced from \$120M to \$23M



Aldrich Chemical Building

- City
- County
- Dept of Commerce
- DOT



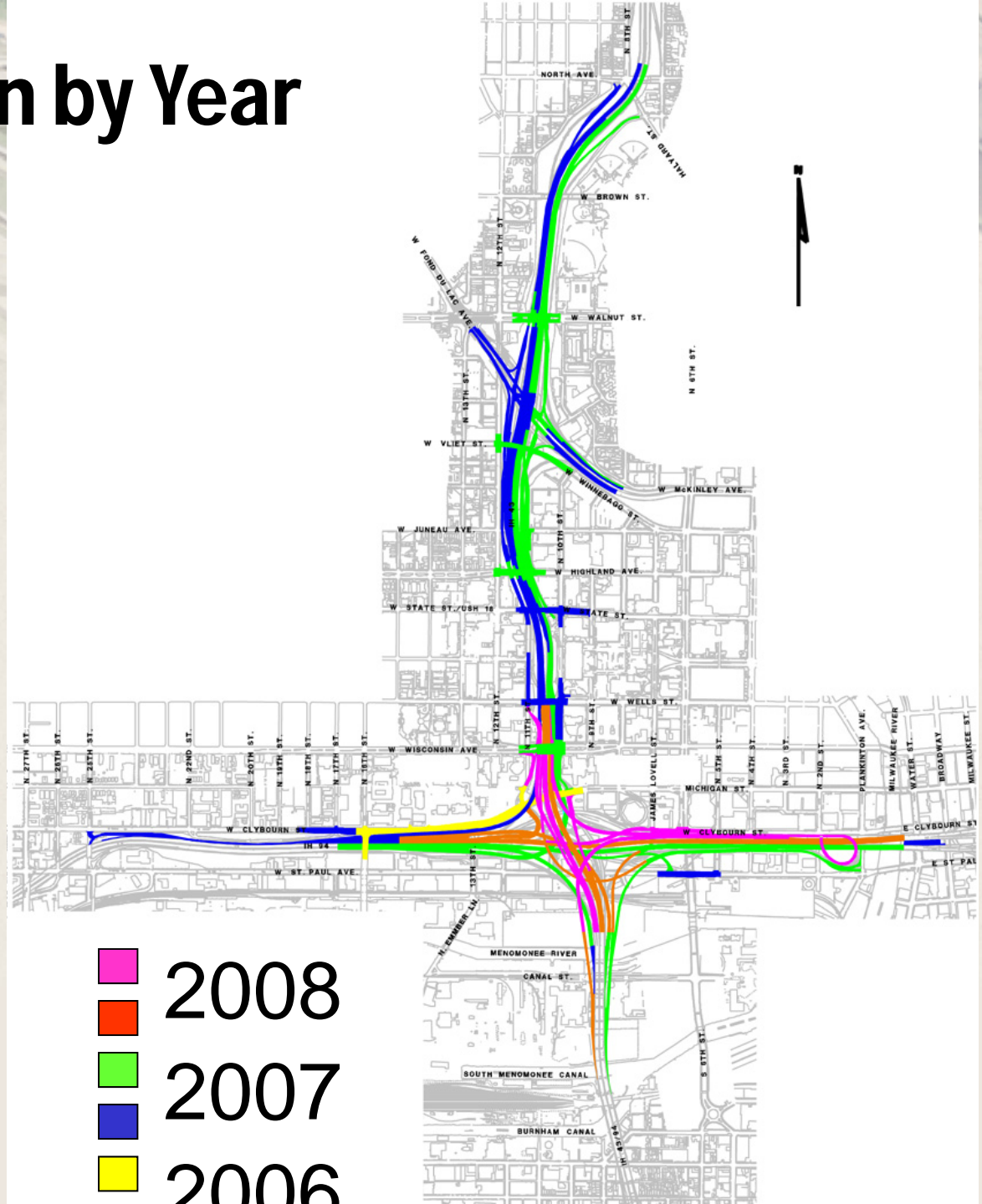
Maintaining Traffic



by Year

An aerial photograph of a complex highway interchange with multiple overpasses and ramps. The word "Construction" is written in large, bold, black sans-serif font across the top center of the image, partially obscuring the highway. The background shows green grassy areas and some industrial or construction-related structures in the distance.

Construction



Mitigation task force

WisDOT & FHWA

Advisory Committee

4-Subcommittees

- **Freeway Operations & Incident Management**
- **Public Information**
- **Transit & Demand Management**
- **Local Road Operations**



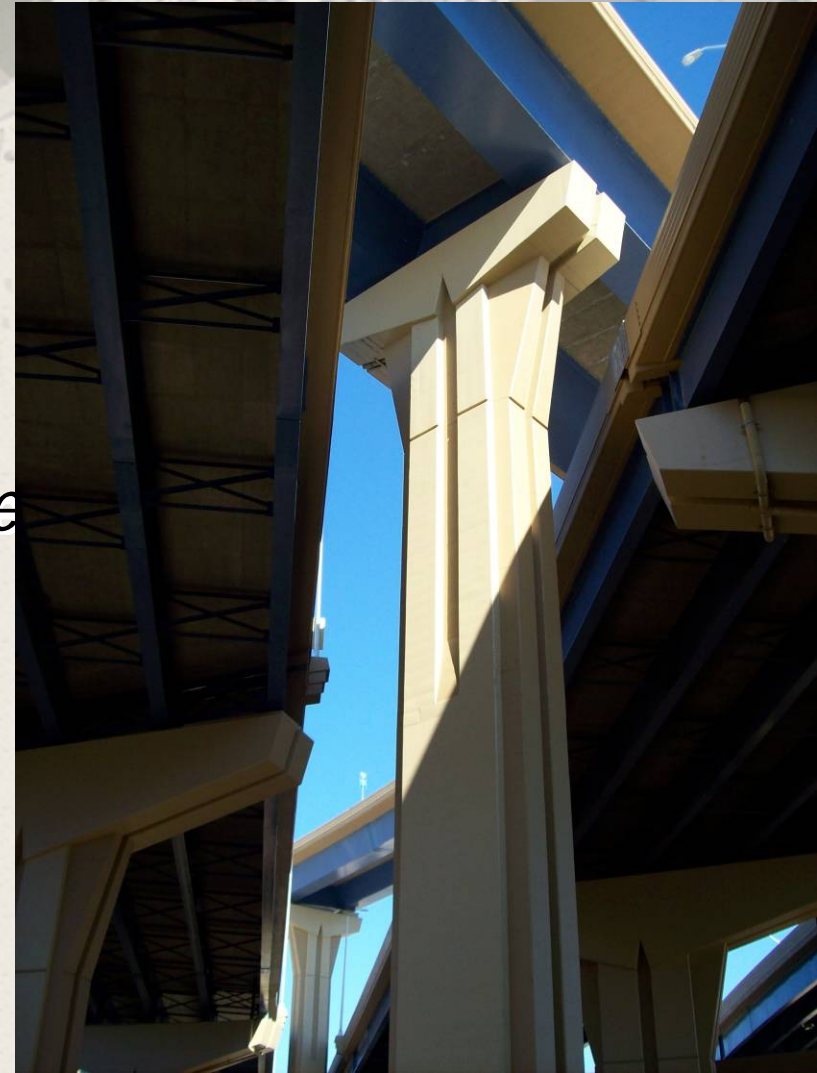
Job and Labor Opportunities

- Job Training
- DBE Capacity and Opportunities
 - ◆ *Mandatory Subcontracts*
 - ◆ *Small Contracts*



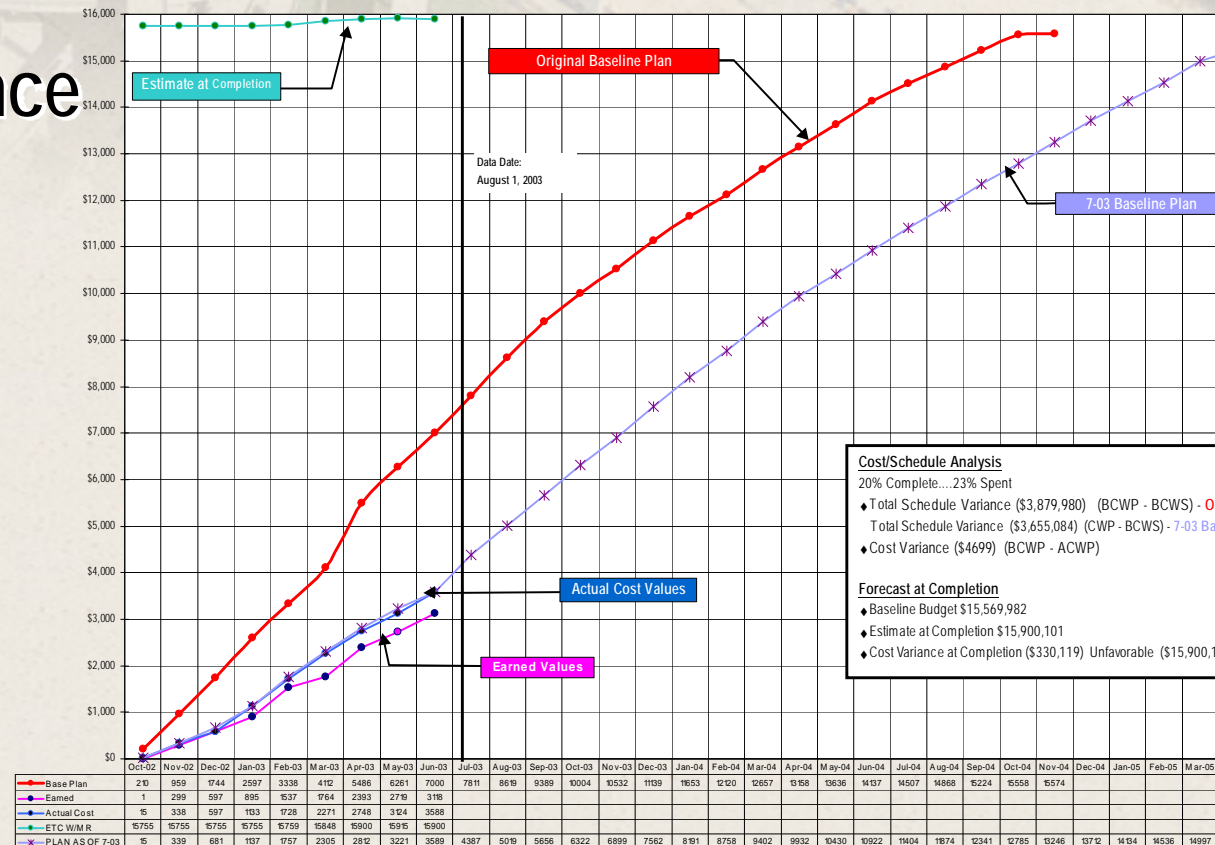
Cost /Scope Creep

- Scope “Lockdown”
- Quarterly Estimates
 - ◆ *Track major items (Steel & Cement)*
- Flexibility
 - ◆ *Plate girders*
 - ◆ *Staining*
 - ◆ *Stainless steel rebar*



Project Controls

- Schedule Variance
- Cost Variance
- Earned Value



Schedule

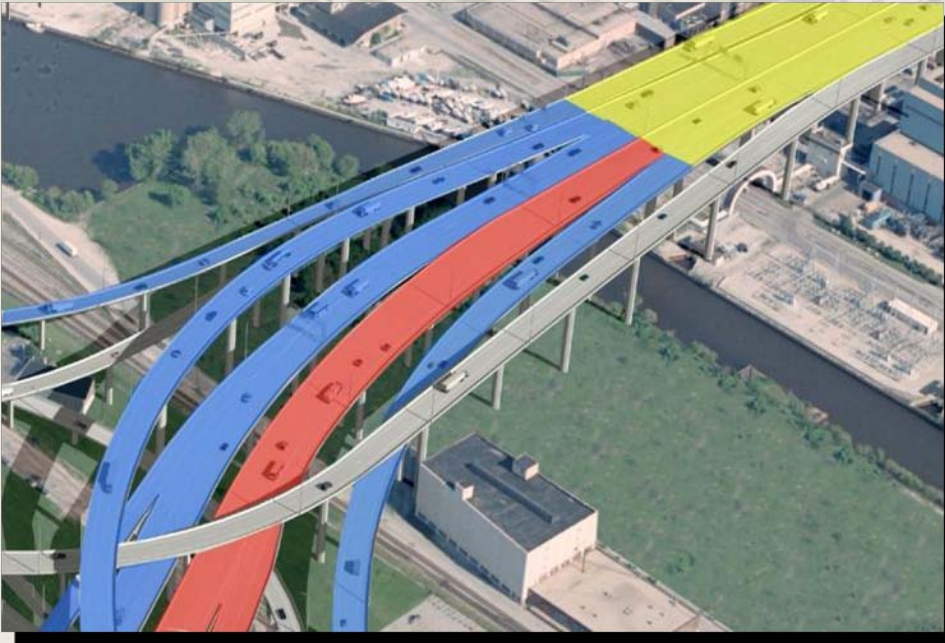
Detailed Construction Schedule

- Local Government Agreements & talk with neighbors
 - ◆ *Noise, Air Quality, Health*
- Advance Risky work
 - ◆ *Utility MOU's*
- Safety

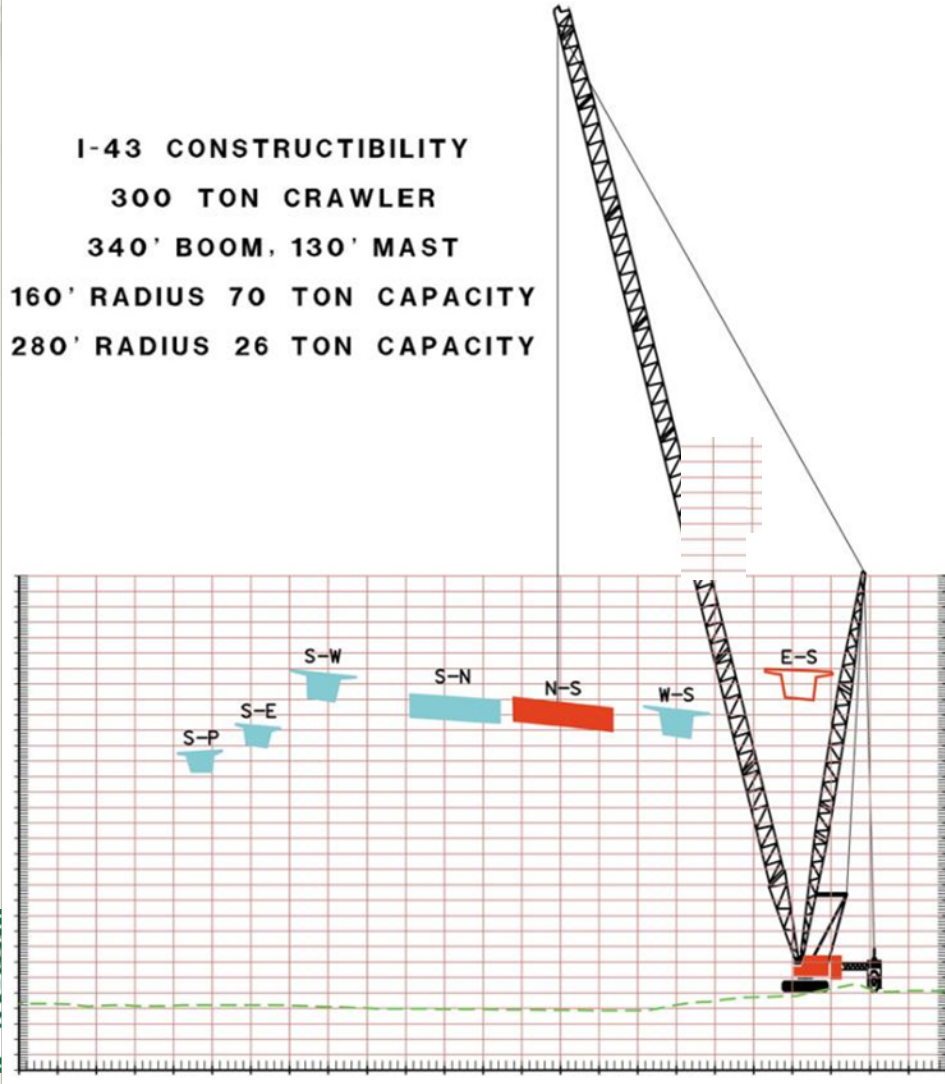




Constructibility



300 ton crawler
340' boom, 130' mast
160' radius 70 ton capacity
280' radius 26 ton capacity



Marquette Interchange Not WisDOT Business as Usual!

- ◆ *MPC / Perpetual Pavements*
- ◆ *Steel Tub Design*
- ◆ *Pile Load Test*
- ◆ *Escrow Bid Documents*
- ◆ *Mobilization Workshops*
- ◆ *ADR for Claims Process*
- ◆ *Owner Controlled Insurance Program*
- ◆ *Pay Plan Quantity*
- ◆ *Reporting DBE Payments*
- ◆ *Haul Roads*
- ◆ *Noise*
- ◆ *Vibration*
- ◆ *Project Air Quality*
- ◆ *Executive Partnering*
- ◆ *Scheduling Specifications*
- ◆ *New Employee Training*



Keys to Success

- Minimized Handoffs
- Early and extensive Outreach to neighbors
- Detailed Scoping
- Aggressive Change Management
 - ◆ *Quarterly Cost Estimates*
- Forecast Conflict



Thank You!

