Traffic Control During Construction
Problem

• Provide safe work area
• Minimize impact on traffic congestion
• Keep traffic moving around closures
• What Traffic Control is needed when closures are not an option
• Maximizing efficiency during complete closures
• How to plan closures
Job #39, NDDOT

• Several intersections to be paved
• Complicated phasing plan
• Phasing plan did not allow for closure construction efficiencies
• Safety of contractor and owners workers was a major concern with NDDOT plan
Original Phasing Plan

• “Checkerboard or quilted” pattern
• Long traffic delay & closures
• Illogical process
• Many days lost to cure time
• No consideration for equipment and workers to perform tasks
US Hwy 2, US Hwy 85 Intersection
138th Ave. Intersection

Phase 1
Phase 2
Phase 3
139th Ave. Intersection
New Phasing Plan

- Less traffic/construction interaction
- More working room
- Quicker turnaround time
- Minimizes delays & closures
- Efficient process
US Hwy 2, US Hwy 85 Intersection

- **Phase 1**
- **EB/WB traffic**
- **Turn lane**
US Hwy 2, US Hwy 85 Intersection

- Phase 2
- EB/WB traffic
- Turn lane
138th Ave. Intersection

Phase 1
EB/WB traffic
Turn lane
138th Ave. Intersection

- Blue: Phase 2
- Red/Blue: Head to head traffic
- Green: Turn lane
139th Ave. Intersection
139th Ave. Intersection
Construction Staging
Kennewick, Washington
Kennewick Intersection Staging:

• Monday AM to Thursday 7:00 PM
  • Complete Approach & Departure Legs on Southbound Legs as Shown in Stage 1 & Stage 2 at both Kennewick & Clearwater
  • Set up Traffic Control for Closure at Clearwater
  • Move materials, (Tie Bars, Dowel Baskets, Forms, etc), into position for easy access
Kennewick Intersection Staging:

- Complete Interior Portion of Clearwater Avenue over the weekend
- Monday through Friday Completed Northbound Approach and Departure Legs at Kennewick & Clearwater Avenue
Kennewick Intersection Staging:

• 7:00 PM Thursday to 6:00 AM Monday
  • Close Kennewick Intersection 7:00 PM Thursday
  • Begin Milling at 8:00 PM
  • Start Finish Grading at 2:00 AM Friday Morning.
  • Set Forms 7:00 AM
  • Start Concrete Placement 11:00 AM
  • Complete Daily placement 11:00 PM Friday Evening.
• Begin Green Sawing 4 to 6 hours after start of placement
Kennewick Intersection Staging:

- Saturday
  - Check Maturity Meter
  - 7:00 AM Remove & Reset Forms, Place Baskets
  - 8:00 AM Begin Placing Concrete
  - Complete Concrete placement 4:00 PM
  - Start Cleanup.
• Stage 4a
• Stage 4b
Kennewick Intersection Staging:

- Sunday
  - Check Maturity Meter for Required Strength
  - Clean and Seal Joints 7:00 AM to 2:00 PM
  - Set Up Traffic Control for opening
  - Place Traffic on Pavement 6:00 PM Sunday
• Intersection Complete
Time for Completion:

- In 15 days approximately 3384 cubic yards of concrete were placed at Kennewick Avenue and Cleawater.
- Kennewick Avenue and Clearwater were built concurrently.
- The concurrent construction saved a considerable amount of time. Crews were able to place concrete daily.