APPENDIX J: Diverging Diamond Interchange Presentation
Diverging Diamond Interchange (DDI)

- Drivers going in both directions on the approach road cross to the opposite side on both sides of the bridge at the freeway
  - Requires traffic on the crossroad overpass (or underpass) to briefly drive on the opposite side of the road
  - Allows for two-phase operation at all signalized intersections within the interchange
### Diverging Diamond Interchange (DDI)

- Three half-DDIs are planned for the South Mountain Freeway at:
  - Desert Foothills Parkway
  - 17th Avenue

- Full configuration not needed
  - No connections to the south

Graphic representation similar to configuration planned for Desert Foothills Parkway. The freeway mainline will go over the crossroad at 17th Avenue.
Benefits of the DDI

- Improves safety
  - Eliminates long left turns where drivers on the right side of the road must clear opposing traffic
  - Reduces the number of conflict points
  - Recent studies of DDIs nationwide by University of Missouri indicate:
    - Overall crashes decreased by more than 50 percent at DDI locations
    - Fatal and injury crashes decreased by more than 70 percent
Benefits of the DDI (continued)

- Improves efficiency
  - Provides more green-light time
    - Motorists wait through only two traffic signal intervals rather than the six or more found in other interchange designs
  - Increases capacity of an overpass or underpass by removing the need for turn lanes required for other interchange types

- Minimizes right of way footprint
  - Reduces the number of lanes needed on the cross road
New Concept for Metro Phoenix

- Local drivers may be unfamiliar with the DDI configuration and merging maneuvers
- Signage and pavement markings will be used to alert drivers to the change in traffic flow
Questions and Comments

- Direct questions to a Project team member
- Submit your input on the comment form and return it to the sign-in table

Your input is appreciated!