

I-10: SR 202L to SR 387
Alternatives and Options Evaluation Matrix - Environmental (Criteria 1-8 of 15)

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ALTERNATIVES and OPTIONS		Environmental Impacts							
		Floodplain (Acres)	Jurisdictional Waters (Acres)	Water Resources	Noise	Air Quality	Visual	Hazardous Materials	Land Use (Existing and Future)
I-10 Mainline Widening Alternatives (1 added lane each direction + HOV lanes from SR 202L to Riggs Road)									
ML1	No Build	No impact. The study area in Phoenix and Chandler to the Community boundary is in FEMA Flood Zone B-X protected by flood control from a 100-year flood by the Southeast Valley Regional Drainage System. The study area within the Community is Flood Zone D where no flood hazard analysis has been conducted and flood hazards are undetermined (undelineated). The study area south of the Community in Casa Grande is Flood Zone C-X with minimal flood hazard.	No impact. No wetlands or riparian vegetation were identified in the study area. Jurisdictional canals: MP 177.0, Casa Blanca Canal MP 177.1, Unnamed earthen conveyance channel MP 180.2, Southside Canal MP 180.9, Unnamed earthen conveyance channel	No impact. The only water resources in the study area that could be affected, other than the Gila River, which is not part of this I-10 project, are manmade irrigation canals. These include the Casa Blanca Canal at MP 177.0 and an unnamed earthen conveyance channel at MP 177.1, the Southside Canal at MP 180.2, and an unnamed earthen conveyance channel at MP 180.9.	Higher noise levels in peak noise hour for nearby sensitive receptors attributable to larger traffic volumes compared with the existing condition.	Increased traffic congestion could worsen air quality over time.	There would be no visual change as viewed from the freeway, cross streets, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
ML2	Median Widening + Ramp Upgrades	Floodplain is undelineated on Community. No 100-year floodplain outside Community.	Alternative crosses 4 jurisdictional canals: MP 177.0, Casa Blanca Canal MP 177.1, Unnamed earthen conveyance channel MP 180.2, Southside Canal MP 180.9, Unnamed earthen conveyance channel None of the canal crossing structures would require modification, and no impacts to any jurisdictional waters are anticipated.	The following cross under I-10 through box culverts or similar conveyances: MP 161.7: Westside IA Level Top Canal MP 161.8: P-MIP Memorial Pipeline MP 162.1: Broadacres Canal (abandoned) MP 162.3: Gila Drain MP 169.7: Westside VA Canal MP 174.1: Old Canal 13 MP 174.5: Unnamed concrete irrigation channel that ties into Canal 13 MP 177.0: Casa Blanca Canal MP 177.1: Unnamed earthen irrigation channel MP 177.8: Unnamed earthen irrigation channel MP 178.4: Unnamed concrete irrigation channel MP 178.6: Unnamed earthen irrigation channel MP 178.7: Unnamed earthen irrigation channel MP 179.5: Unnamed earthen irrigation channel MP 180.2: Southside Canal MP 180.9: Unnamed earthen irrigation channel None of the canals or irrigation channels would be impacted or require long-term modification to existing conditions.	Higher noise levels (than existing) attributable to increased traffic volumes; noise barrier would be recommended for RV Park/Mobile Coach Resort.	Conformance compliant	The change in view from the freeway would be moderate. What is now a vegetated median would become paved, so more urban looking and less rural, including the loss of large trees in the median in many locations. The view change from the cross roads would be minor. The view change from off-site would be minor because the improvements would not be discernible from a distance. From freeway: Moderate From crossroads: Minor From off-site: Minor	No specific sites of concern	No land conversion outside Community. Slivers of land would be acquired resulting in their conversion to a transportation corridor within the Community. Land use category and its conversion to a transportation corridor: *Existing undeveloped/future industrial: 0.32 acre *Existing undeveloped/future agriculture: 0.5 acre *Existing open space/future open space: 0.26 acre Total conversion of land to a transportation corridor = 1.08 acres
ML3	Outside Widening + Ramp Upgrades	Floodplain is undelineated on Community. No 100-year floodplain.	Alternative crosses 4 jurisdictional canals: MP 177.0, Casa Blanca Canal MP 177.1, Unnamed earthen conveyance channel MP 180.2, Southside Canal MP 180.9, Unnamed earthen conveyance channel The culvert on the unnamed earthen conveyance channel at MP 177.1 would require extension, but no impacts are anticipated at the other 3 canals. Alternative would impact 2.14 acres including 1 jurisdictional canal and 36 ephemeral drainages.	The following cross under I-10 through box culverts or similar conveyances: MP 161.7: Westside IA Level Top Canal MP 161.8: P-MIP Memorial Pipeline MP 162.1: Broadacres Canal (abandoned) MP 162.3: Gila Drain MP 169.7: Westside VA Canal MP 174.1: Old Canal 13 MP 174.5: Unnamed concrete irrigation channel ties into Canal 13 MP 177.0: Casa Blanca Canal MP 177.1: Unnamed earthen irrigation channel MP 177.8: Unnamed earthen irrigation channel MP 178.4: Unnamed concrete irrigation channel MP 178.6: Unnamed earthen irrigation channel MP 178.7: Unnamed earthen irrigation channel MP 179.5: Unnamed earthen irrigation channel MP 180.2: Southside Canal MP 180.9: Unnamed earthen irrigation channel Unnamed earthen irrigation channel at MP 177.1 would require extension of existing culvert. No other canals or irrigation channels would be impacted. All would be protected during the short-term construction phase of the project. No impact to wells	Higher noise levels (than existing) attributable to increased traffic volumes; travel lanes closer to the noise receptors because of outside widening; noise barrier would be recommended for RV Park/Mobile Coach Resort.	Conformance compliant	The change in view from the freeway would be moderately high . The wider freeway, from side to side, would be more visually intrusive. All the bridges would likely be replaced or modified, however, the new would be similar to the old, so would not be visually out of character with what exists now. In many locations, the trees in the median would remain, but more would be removed along the outer edges as compared to ML2a and ML2b. The view change from the cross roads would be minor . The view change from off-site would be minor because of the loss of mature vegetation. From freeway: Moderately High From crossroads: Minor From off-site: Minor	No specific sites of concern	Additional land required: 85.18 acres. All located in the Community. Outside widening mainline design option needs substantially more additional easement. Amounts would be 10' to 30' on each side of I-10 the length of the mainline corridor, beginning just south of the Wild Horse Pass interchange and ending just south of the SR 387/Pinal Avenue interchange. Conversion of most types of existing and planned future land use in the Community to a long-term transportation use for the outside widening of I-10.
Wild Horse Pass/Sundust Road Interchange Options									
WH1	No Build, Except for ADA Upgrades	No impact	No impact	No impact	Higher noise levels in peak noise hour for nearby sensitive receptors attributable to larger traffic volumes compared with the existing condition.	Increased traffic congestion could worsen air quality over time.	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
WH2	Diverging Diamond Interchange (DDI) with bike & ped accommodations	Floodplain is undelineated on Community.	No impact	The Gila Drain, an SRP irrigation canal, crosses diagonally under I-10 via a 100-foot box culvert. It is within the limits of work for this design option and would be protected during construction.	Improved traffic flow would reduce truck acceleration and deceleration noise. Compared with No Build condition, noise impact would be minimal.	Improved traffic flow and wait times, and thus reduced pollutant emissions.	The change in view from the freeway would be moderate because of the additional bridge and added and relocated ramps. The new ramp alignments would create new, longer fill slopes and loss or relocation of vegetation. The visual change from Wild Horse Pass Boulevard would be moderate - there would be an additional bridge, larger interchange, and a large increase in the amount of pavement. The added and relocated ramps with increased fill slopes and loss of vegetation would also be a moderate change. From off-site, the visual change would be minor because the bridge and ramps would be similar to the existing interchange. From freeway: Moderate From crossroads: Moderate From off-site: Minor	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing undeveloped/future open space: 0.65 acres *Existing commercial/future commercial: 0.57 acres *Existing industrial/future industrial: 0.04 acres Total conversion of land to a transportation corridor = 1.26 acres
WH3	Displaced Left Turn (DLT) Interchange with bike & ped accommodations	Floodplain is undelineated on Community.	No impact	The Gila Drain, an SRP irrigation canal, crosses diagonally under I-10 via a 100-foot box culvert. It is within the limits of work for this design option and would be protected during construction.	Improved traffic flow would reduce truck acceleration and deceleration noise. Compared with No Build condition, noise impact would be minimal.	Improved traffic flow and wait times, and thus reduced pollutant emissions.	The change in view from the freeway would be minor - the additional ramp/bridge would increase the overall bridge width but would be visually similar to the existing condition; the ramp fill slopes, especially in the northwest quadrant where a new ramp would be located, would extend farther out but would be visually similar to the existing slopes. The visual change from Wild Horse Pass Boulevard would be minor - the bridge would be wider but of similar character. From off-site, the visual change would be minor because the bridge and ramps would be similar to the existing interchange. From freeway: Minor From crossroads: Minor From off-site: Minor	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 0.21 acre *Existing industrial/future industrial: 0.86 acre Total conversion of land to a transportation corridor = 1.07 acres

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ALTERNATIVES and OPTIONS		Environmental Impacts							
		Local Businesses (including impacts on billboards)	Socioeconomic Factors (Environmental Justice, local communities)	Biological Resources	Prime and Unique Farmlands	Archaeological Resources	Traditional Cultural Properties (TCP)	Section 4(f) and Section 6(f)	
I-10 Mainline Widening Alternatives (1 added lane each direction + HOV lanes from SR 202L to Riggs Road)									
ML1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact	No direct use of Section 4(f) properties No impacts to Section 6(f) properties
ML2	Median Widening + Ramp Upgrades	There are no nearby local businesses; no impact. No impacts to billboards.	There are no residences that would require full or partial property acquisition, displacement, relocation, or otherwise be adversely affected. The project would benefit local and regional users of I-10 with improved travel time, access, safety, and driving conditions. There may be short-term temporary impacts during construction, such as travel time delays and access changes.	Low-medium impact. The entire study area is defined by poor to marginal habitat for all species; therefore, impacts would be different intensities of low. Impacts are based on the low-quality habitat removed.	No impact; this mainline design option does not require additional easement.	29 NRHP-eligible resources would be impacted: GR-205 (D), GR-206 (D), GR-393 (D), GR-386 (D), GR-387 (D), GR-473 (D), GR-513 (D), AZ U:13:110(ASM) (D), GR-587 (D), GR-598 (unevaluated, D), GR-832 (D), GR-886 (D), GR-887 (D), GR-914 (D), GR-931 (D), GR-980 (D), GR-1175 (D), GR-1205 (D), GR-1206 (D), GR-1422 (A,D), GR-1528 (D), GR-1689 (D), AZ U:9:96(ASU) (D), AZ U:13:12(ASM) (D), AZ U:13:43(ASM) (D), AZ U:13:96(ASM) (D), AZ U:13:97 (ASM), (D), AZ U:13:98(ASM) (D), AZ U:13:219(ASM) (D). Historically documented linear sites intersected include: Midvale North Branch Canal, Midvale South Branch Canal, prehistoric and historic canals (treated as NRHP eligible under Criterion D) and the GR-1581 (Broadacres Canal) and GR-1612 (Gila Drain), which are both NRHP eligible under Criteria A and D. Construction footprint defined by the I-10 easement/ROW and new ROW. Components of the SCIP are considered mitigated through prior HAER documentation; no further treatment required. The Alternative is within the boundaries of the Hohokam Pima National Monument. Based on CRMP correspondence files and notes on the Hohokam Pima National Monument, the Gila River Indian Community never completed the acquisition of Tribal and allotment lands identified for inclusion in the monument. However, the National Park Service continues to recognize the area as a monument. Anticipate no adverse effect. While the number of sites impacted is equal, it is anticipated that there is less potential for intact cultural deposits within the median due to prior highway construction. Thus, alternatives for widening to the inside are anticipated to have less impacts to cultural archaeological resources than the outside widening alternatives.	Proposed widening is not anticipated to cause new adverse impacts to the 7 TCPs (TCP 5, 6, 7, 14, 18, 26, 30) within the existing I-10 easement. Impacts from the current facility are existing.	Direct use of 7 Section 4(f) TCPs: TCP 5, TCP 6, TCP 7, TCP 14, TCP 18, TCP 26, and TCP 30 Since impacts would be primarily caused from existing I-10, this alternative would not further impact the ability of the TCPs to convey their historic or cultural significance. Therefore, anticipate <i>de minimis</i> impact finding for all 7 TCPs. GR-1422 is part of the SCIP system. Although there would be a direct use of this archaeology site, the use would not adversely affect the ability of the site to convey its historic integrity; therefore, the impact is anticipated to be <i>de minimis</i> . Hohokam Pima National Monument is a Section 4(f) property. Although there would be a direct use, it is anticipated that the use would be <i>de minimis</i> . No direct use of recreational Section 4(f) properties No impacts to Section 6(f) properties	
ML3	Outside Widening + Ramp Upgrades	There are no nearby local businesses; no impact. 15 billboards located within new easement boundary.	There are no residences that would require full property acquisition, displacement, relocation, or otherwise be adversely affected. One residence on the east side of I-10 at MP 174 will require a small silver land acquisition that would not be near the structure and would not require a relocation. The project would benefit local and regional users of I-10 with improved travel time, access, safety, and driving conditions. There may be short-term temporary impacts during construction, such as travel time delays and access changes.	Low-high impact. The entire study area is defined by poor to marginal habitat for all species; therefore, impacts would be different intensities of low. Impacts are based on the low-quality habitat removed.	Farmland soil type conversion to a transportation use: Unique farmland: 57 acres Irrigated Prime farmland: 15 acres Total: 72 acres Land adjacent to the west side of I-10 between MP 164.5 and 168.5 designated as future Agricultural land in the Community. All soils classified as Unique farmland. 12 acres of the 67 acres required for new easement at this location Irrigated prime farmland soil located between MP 177.5 and 180; most active agricultural land in Community located here. System of canals provides irrigation to active agricultural fields. 15 acres of Irrigated Prime farmland soil required for new easement at this location.	29 NRHP-eligible resources would be impacted: GR-205 (D), GR-206 (D), GR-393 (D), GR-386 (D), GR-387 (D), GR-473 (D), GR-513 (D), AZ U:13:110(ASM) (D), GR-587 (D), GR-598 (unevaluated, D), GR-832 (D), GR-886 (D), GR-887 (D), GR-914 (D), GR-931 (D), GR-980 (D), GR-1175 (D), GR-1205 (D), GR-1206 (D), GR-1422 (A,D), GR-1528 (D), GR-1689 (D), AZ U:9:96(ASU) (D), AZ U:13:12(ASM) (D), AZ U:13:43(ASM) (D), AZ U:13:96(ASM) (D), AZ U:13:97 (ASM), (D), AZ U:13:98(ASM) (D), AZ U:13:219(ASM) (D). Historically documented linear sites intersected include: Midvale North Branch Canal, Midvale South Branch Canal, prehistoric and historic canals (treated as NRHP eligible) and the GR-1581 (Broadacres Canal) and GR-1612 (Gila Drain), which are both NRHP eligible under Criteria A and D. Construction footprint defined by the I-10 easement/ROW and new ROW. Components of the SCIP are considered mitigated through prior HAER documentation; no further treatment required. The Alternative is within the boundaries of the Hohokam Pima National Monument. Based on CRMP correspondence files and notes on the Hohokam Pima National Monument, the Gila River Indian Community never completed the acquisition of Tribal and allotment lands identified for inclusion in the monument. However, the National Park Service continues to recognize the area as a monument. Anticipate no adverse effect. While the number of sites impacted is equal, it is anticipated that there is less potential for intact cultural deposits within the median due to prior highway construction. Thus, alternatives for widening to the inside are anticipated to have less impacts to cultural resources than the outside widening alternatives.	Proposed outside widening will introduce new adverse impacts to 7 TCPs (TCP 5, 6, 7, 14, 18, 26, and 30), which are located within the existing I-10 easement and extend out to either or both sides. TCP 9, which is an active O'Odham traditional homestead and residence, could potentially have indirect impacts because this alternative would be approximately 100 feet from the residence associated with TCP 9 (and even closer to the yard).	Direct use of 7 Section 4(f) TCPs: TCP 5, TCP 6, TCP 7, TCP 14, TCP 18, TCP 26, and TCP 30 Because the TCPs extend beyond the existing easement, ML3 would result in greater impacts than either median alternative. ML3 would result in new direct use that would not be <i>de minimis</i> . GR-1422 is part of the SCIP system. Although there would be a direct use of this archaeology site, the use would not adversely affect the ability of the site to convey its historic integrity; therefore, the impact is anticipated to be <i>de minimis</i> . Hohokam Pima National Monument is a Section 4(f) property. Although there would be a direct use, it is anticipated that the use would be <i>de minimis</i> . No impacts to Section 6(f) properties	
Wild Horse Pass/Sundust Road Interchange Options									
WH1	No Build, Except for ADA Upgrades	No impact	No impact	No impact	No impact	No impact	No impact	No impact	
WH2	Diverging Diamond Interchange (DDI) with bike & ped accommodations	A small business plaza is located along Wild Horse Pass Boulevard just east of the I-10/Wild Horse Pass traffic interchange and a gas station is located just to the west. The WH2 design option would not directly affect the businesses on either side of I-10. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-medium impact	Farmland soil type conversion to a transportation use: Unique farmland: 6.74 acres.	No archaeological resources impacted	No TCPs impacted	No impacts to Section 4(f) resources No impacts to Section 6(f) properties	
WH3	Displaced Left Turn (DLT) Interchange with bike & ped accommodations	A small business plaza is located along Wild Horse Pass Boulevard just east of the I-10/Wild Horse Pass traffic interchange and a gas station is located just to the west. The WH3 design option would not directly affect the businesses on either side of I-10. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	Farmland soil type conversion to a transportation use: Unique farmland: 6.00 acres.	No archaeological resources impacted	No TCPs impacted	No impacts to Section 4(f) resources No impacts to Section 6(f) properties	

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ALTERNATIVES and OPTIONS		Environmental Impacts							
		Floodplain (Acres)	Jurisdictional Waters (Acres)	Water Resources	Noise	Air Quality	Visual	Hazardous Materials	Land Use (Existing and Future)
SR 347 / Queen Creek Road Interchange Options									
QC1	No Build	No impact	No impact	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
QC2	Diverging Diamond Interchange (DDI) with bike & ped accommodations	Floodplain is undelineated on Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be moderate because of the additional bridge. The visual change from Queen Creek Road would be moderate - there would be an additional bridge, larger interchange, and an increase in the amount of pavement. From off-site, the visual change would be minor because, while there would be an additional bridge, from a distance it would blend with the existing bridge. From freeway: Moderate From crossroads: Moderate From off-site: Minor	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing undeveloped/future commercial: 2.86 acres *Existing undeveloped/future industrial: 0.95 acre *Existing undeveloped/future agriculture: 0.95 acre *Existing undeveloped/future open space: 0.34 acre Total conversion of land to a transportation corridor = 4.34 acres
QC3	Displaced Left Turn (DLT) Interchange with bike & ped accommodations	Floodplain is undelineated on Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the additional ramp/bridge would increase the overall bridge width but would be visually similar to the existing condition. The visual change from Queen Creek Road would be minor - the bridge would be wider but of similar character and the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. From off-site, the visual change would be minor because the widened bridge would not be discernible from a distance. From freeway: Minor From crossroads: Minor From off-site: Minor	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing undeveloped/future commercial: 2.71 acres *Existing undeveloped/future industrial: 0.03 acre *Existing undeveloped/future agriculture: 1.56 acres *Existing undeveloped/future open space: 0.14 acre Total conversion of land to a transportation corridor = 4.44 acres
Riggs Road Interchange Options									
RR1	No Build	No impact	No impacts	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
RR2	Bridge deck rehabilitation	No impact	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would not change. The change in view from Riggs Road would be minor, if not improved, as the new deck would match old deck in material. From off-site, there would be no change because the improvement would not be discernible from a distance. From freeway: No change From crossroads: Minor- improved From off-site: No change	No specific sites of concern	No additional easement required in Community; no change in land use.
RR3	Bridge deck rehabilitation with shoulder widening	Floodplain is undelineated on Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be wider but would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from Riggs Road would be minor - the bridge would be wider but of similar materials. From off-site, there would be no change because the widened bridge would be similar to the existing bridge. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	No additional easement required in Community; no change in land use.
RR4	Bridge deck rehabilitation with shoulder widening and sidewalks	Floodplain is undelineated on Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be wider but would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from Riggs Road would be minor - the bridge would be wider but of similar materials; the addition of sidewalks would be a minor visual change but would not be out of context for a typical roadway section. From off-site, there would be no change because the widened bridge would be similar to the existing bridge. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	No additional easement required in Community; no change in land use.
RR5	Bridge replacement off of the existing alignment	Floodplain is undelineated on Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be a moderate change because the new bridge would be longer than the existing; the ramp fill slopes would extend farther in all directions but would be visually similar to the existing slopes. The visual change from Riggs Road would be minor - the bridge would be wider but of similar materials. From off-site, there would be no change . The new bridge would be similar to the existing bridge. From freeway: Moderate From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing undeveloped/future commercial: 1.61 acres *Existing undeveloped/future agriculture: 0.20 acres Total conversion of land to a transportation corridor = 1.81 acres

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ALTERNATIVES and OPTIONS		Environmental Impacts						
		Local Businesses (including impacts on billboards)	Socioeconomic Factors (Environmental Justice, local communities)	Biological Resources	Prime and Unique Farmlands	Archaeological Resources	Traditional Cultural Properties (TCP)	Section 4(f) and Section 6(f)
		SR 347 / Queen Creek Road Interchange Options						
QC1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
QC2	Diverging Diamond Interchange (DDI) with bike & ped accommodations	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-medium impact	Farmland soil type conversion to a transportation use: Unique farmland: 4.34 acres	2 NRHP-eligible resources would be impacted: GR-392 (D) and AZ U-9:96(ASU) (D)	No TCPs impacted	No direct use of Section 4(f) properties No impacts to Section 6(f) properties
QC3	Displaced Left Turn (DLT) Interchange with bike & ped accommodations	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	Farmland soil type conversion to a transportation use: Unique farmland: 4.44 acres	2 NRHP-eligible resources would be impacted: GR-392 (D) and AZ U-9:96(ASU) (D)	No TCPs impacted	No direct use of Section 4(f) properties No impacts to Section 6(f) properties
Riggs Road Interchange Options								
RR1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
RR2	Bridge deck rehabilitation	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	No impact	No archaeological resources impacted	No TCPs impacted	No direct use of Section 4(f) properties No impacts to Section 6(f) properties
RR3	Bridge deck rehabilitation with shoulder widening	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-medium impact	No impact	No archaeological resources impacted	No TCPs impacted	No direct use of Section 4(f) properties No impacts to Section 6(f) properties
RR4	Bridge deck rehabilitation with shoulder widening and sidewalks	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-medium impact	No impact	No archaeological resources impacted	No TCPs impacted	No direct use of recreational or TCP Section 4(f) properties No impacts to Section 6(f) properties
RR5	Bridge replacement off of the existing alignment	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Unique farmland: 1.81 acres.	No archaeological resources impacted	No TCPs impacted	No direct use of Section 4(f) properties No impacts to Section 6(f) properties

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ALTERNATIVES and OPTIONS		Environmental Impacts							
		Floodplain (Acres)	Jurisdictional Waters (Acres)	Water Resources	Noise	Air Quality	Visual	Hazardous Materials	Land Use (Existing and Future)
Goodyear Road Grade Separation Options									
GY1	No Build	No impact	No impacts	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
GY2	Shoulder widening on approaches and bridge	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be wider but would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from Goodyear Road would be minor - the bridge would be wider but of similar materials. From off-site, there would be no change because the widened bridge would not be discernible from a distance. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 1.29 acres Total conversion of land to a transportation corridor = 1.29 acres
GY3	Bridge replacement off of the existing alignment	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be a moderate change because the new bridge would be longer than the existing; the ramp fill slopes would extend farther in all directions but would be visually similar to the existing slopes. The visual change from Goodyear Road would be minor - the bridge would be wider and longer but of similar materials. Being on a parallel alignment to the current alignment would not be a noticeable visual change. From off-site, there would be no change because the new bridge would be similar to the existing bridge. From freeway: Moderate From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 7.23 acres Total conversion of land to a transportation corridor = 7.23 acres
Nelson Road Grade Separation Options									
NR1	No Build	No impact	No impacts	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
NR2	Shoulder widening on approaches and bridge	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be wider but would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from Nelson Road would be minor - the bridge would be wider but of similar materials. From off-site there would be no change because the widened bridge would not be discernible from a distance. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 2.25 acres Total conversion of land to a transportation corridor = 2.25 acres
NR3	Full crossroad and bridge replacement	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be a moderate change because the new bridge would be longer than the existing; the ramp fill slopes would extend farther in all directions but would be visually similar to the existing slopes. The visual change from Nelson Road would be minor - the bridge would be wider and longer but of similar materials. From off-site there would be no change because the new bridge would be similar to the existing bridge. From freeway: Moderate From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 9.61 acres Total conversion of land to a transportation corridor = 9.61 acres

I-10: SR 202L to SR 387

Alternatives and Options Evaluation Matrix - Environmental (Criteria 9-15 of 15)

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ALTERNATIVES and OPTIONS		Environmental Impacts						
		Local Businesses (including impacts on billboards)	Socioeconomic Factors (Environmental Justice, local communities)	Biological Resources	Prime and Unique Farmlands	Archaeological Resources	Traditional Cultural Properties (TCP)	Section 4(f) and Section 6(f)
Goodyear Road Grade Separation Options								
GY1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
GY2	Shoulder widening on approaches and bridge	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	Farmland soil type conversion to a transportation use: Unique farmland: 1.29 acres.	No archaeological resources impacted	No TCPs impacted	No direct use of Section 4(f) properties No impacts to Section 6(f) properties
GY3	Bridge replacement off of the existing alignment	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Unique farmland: 7.23 acres.	No archaeological resources impacted	No TCPs impacted	No direct use of Section 4(f) properties No impacts to Section 6(f) properties
Nelson Road Grade Separation Options								
NR1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
NR2	Shoulder widening on approaches and bridge	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	Farmland soil type conversion to a transportation use: Unique farmland: 2.25 acres.	3 NRHP-eligible resources impacted: GR-931 (D), GR-1469 (D), 1936 Soil Conservation Service Canal (D)	TCP 14 would be impacted. TCP 13 would be adjacent to this option and would likely require protection in place during construction. Option affects access to TCP 15 and TCP 9. Access to TCP 9 and TCP 15 would be restored and potentially improved.	Direct use of TCP 14 Since impacts are primarily caused from existing I-10/Nelson Road grade separation, this option would not further impact the ability of the TCPs to convey their historic or cultural significance. Therefore, anticipate <i>de minimis</i> impact finding for TCP 14 No direct use of recreational Section 4(f) properties No impact to Section 6(f) properties
NR3	Full crossroad and bridge replacement	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Unique farmland: 9.61 acres.	4 NRHP-eligible resources impacted: GR-931, GR-1469, Old Mountain Top Canal, 1936 Soil Conservation Service Canal.	TCP 14 would be impacted. TCP 13 would be adjacent to this option and would likely require protection in place during construction. Option affects access to TCP 15 and TCP 9. Access to TCP 9 and TCP 15 would be restored and potentially improved.	Direct use of TCP 14 Since impacts are primarily caused from existing I-10/Nelson Road grade separation, this option would not further impact the ability of the TCP to convey its historic or cultural significance. Therefore, anticipate <i>de minimis</i> impact finding for TCP 14. No direct use of recreational Section 4(f) properties No impact to Section 6(f) properties

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Alternatives and Options Evaluation Matrix - Environmental (Criteria 1-8 of 15)

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ALTERNATIVES and OPTIONS		Environmental Impacts							
		Floodplain (Acres)	Jurisdictional Waters (Acres)	Water Resources	Noise	Air Quality	Visual	Hazardous Materials	Land Use (Existing and Future)
SR 587/Casa Blanca Road Interchange Options									
CB1	No Build	No impact.	No impacts	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
CB2	Add ramp terminal signals and turn lanes only	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The change in views from SR 587, Casa Blanca Road, and the on/off ramps would be minor - roads would be wider and cut/fill lines moved out but would be similar to the existing condition. From off-site there would be no change because the added features would not be discernible from a distance. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 8.77 acres Total conversion of land to a transportation corridor = 8.77 acres
CB3	Add ramp terminal signals, turn lanes, bridge deck rehabilitation, and widening for bike and ped accommodations	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be wider but would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from SR 587/Casa Blanca Road would be minor - the bridge would be wider but of similar materials and roads would be wider and cut/fill lines moved out but would be similar to the existing condition. From off-site there would be no change because the widened bridge would not be discernible from a distance. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 9.55 acres Total conversion of land to a transportation corridor = 9.55 acres
CB4	CB3 but with bridge replacement off of the existing alignment	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from SR 587/Casa Blanca Road would be minor - the bridge would be wider but of similar materials and roads would be wider and cut/fill lines moved out but would be similar to the existing condition. From off-site there would be no change because the replacement bridge would be similar to the existing bridge. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 9.00 acres Total conversion of land to a transportation corridor = 9.00 acres
CB5	Diamond Interchange with 5-legged roundabouts at intersections	Floodplain is undelineated on Community.	0.02 acre (2 ephemeral drainages - currently not jurisdictional)	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be moderate - while the bridge would be similar to the existing, there would several additional ramps, with the area devoted to ramps much larger than in the existing condition. The change in view from Casa Blanca Road and SR 587 would be substantial because of the significant increase in ramps, paving, and the addition of roundabouts. From off-site, the visual change would be moderate because a larger area than existing would be devoted to interchange pavement. From freeway: Moderate From crossroads: Substantial From off-site: Moderate	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 17.44 acres Total conversion of land to a transportation corridor = 17.44 acres
CB6	Diamond Interchange with Casa Blanca Road bypass	Floodplain is undelineated on Community.	0.02 acre (2 ephemeral drainages)	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be substantial with the addition of a second bridge and several additional ramps, with the area devoted to ramps much larger than the existing condition. The change in view from Casa Blanca Road and SR 587 would be substantial because of the significant increase in ramps, paving, and the addition of roundabouts. From off-site, the visual change would be moderate because a larger area than existing would be devoted to interchange pavement. From freeway: Substantial From crossroads: Substantial From off-site: Moderate	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 36.60 acres Total conversion of land to a transportation corridor = 36.60 acres
CB7	Split Diamond Interchange with triangular circulating roadway	Floodplain is undelineated on Community.	0.06 acre (3 ephemeral drainages)	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be substantial with the addition of a second bridge and several additional ramps, with the area devoted to ramps larger than the existing condition. The change in view from Casa Blanca Road and SR 587 would be substantial because of the significant increase in ramps and paving. From off-site, the visual change would be moderate because a larger area than existing would be devoted to interchange pavement. From freeway: Substantial From crossroads: Substantial From off-site: Moderate	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing open space/future open space: 54.05 acres Total conversion of land to a transportation corridor = 54.05 acres

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Alternatives and Options Evaluation Matrix - Environmental (Criteria 9-15 of 15)

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ALTERNATIVES and OPTIONS		Environmental Impacts						
		Local Businesses (including impacts on billboards)	Socioeconomic Factors (Environmental Justice, local communities)	Biological Resources	Prime and Unique Farmlands	Archaeological Resources	Traditional Cultural Properties (TCP)	Section 4(f) and Section 6(f)
SR 587/Casa Blanca Road Interchange Options								
CB1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
CB2	Add ramp terminal signals and turn lanes only	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	Farmland soil type conversion to a transportation use: Unique farmland: 8.77 acres.	4 NRHP-eligible resources impacted: GR-598 (unevaluated, D), GR-786 (D), GR-886 (D), GR-931 (D), and prehistoric and historic canal alignments (if present) (D).	TCP 18 would be impacted	Direct use of TCP 18 (not de minimis) No direct use of recreational Section 4(f) properties No impact to Section 6(f) properties
CB3	Add ramp terminal signals, turn lanes, bridge deck rehabilitation, and widening for bike and ped accommodations	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-medium impact	Farmland soil type conversion to a transportation use: Unique farmland: 9.55 acres.	4 NRHP-eligible resources impacted: GR-598 (unevaluated, D), GR-786 (D), GR-886 (D), GR-931 (D), and prehistoric and historic canal alignments (if present) (D).	TCP 18 would be impacted	Direct use of TCP 18 (not de minimis) No direct use of recreational Section 4(f) properties No impact to Section 6(f) properties
CB4	CB3 but with bridge replacement off of the existing alignment	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Unique farmland: 9.00 acres.	4 NRHP-eligible sites impacted: GR-598 (unevaluated, D), GR-786 (D), GR-886 (D), GR-931 (D), and prehistoric and historic canal alignments, if present (D).	TCP 18 would be impacted	Direct use of TCP 18 (Not de minimis) No direct use of recreational Section 4(f) properties No impact to Section 6(f) properties
CB5	Diamond Interchange with 5-legged roundabouts at intersections	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Unique farmland: 17.44 acres.	9 NRHP-eligible and unevaluated resources impacted: GR-598 (unevaluated, D), GR-786 (D), GR-886 (D), GR-931 (D), AZ U:13:16(ASM) (D), AZ U:13:97(ASM) (D), AZ U:13:98(ASM) (D), prehistoric and historic canal alignments (if present), and AZ U:13:96(ASM) and AZ U:13:249(ASM), which are unevaluated (D)	TCP 18 would be impacted	Direct use of TCP 18 (Not de minimis) No direct use of recreational Section 4(f) properties No impact to Section 6(f) properties
CB6	Diamond Interchange with Casa Blanca Road bypass	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Unique farmland: 36.60 acres.	11 NRHP-eligible and unevaluated resources impacted: GR-598 (unevaluated, D), GR-786 (D), GR-886 (D), GR-887 (D), GR-931 (D), AZ U:13:16(ASM) (D), AZ U:13:92(ASM), AZ U:13:97(ASM) (D), AZ U:13:98(ASM) (D), prehistoric and historic canal alignments (if present), and AZ U:13:96(ASM) and AZ U:13:249(ASM), which are unevaluated (D)	TCP 18 would be impacted	Direct use of TCP 18 (Not de minimis) No direct use of recreational Section 4(f) properties No impact to Section 6(f) properties
CB7	Split Diamond Interchange with triangular circulating roadway	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Unique farmland: 54.05 acres.	8 NRHP-eligible and unevaluated resources impacted: GR-598 (unevaluated, D), GR-786 (D), GR-886 (D), GR-931 (A, D), AZ U:13:16(ASM) (D), AZ U:13:97(ASM) (D), AZ U:13:98(ASM) (D), prehistoric and historic canal alignments (if present), and AZ U:13:96(ASM) and AZ U:13:249(ASM), which are unevaluated.	TCP 18 would be impacted	Direct use of TCP 18 (Not de minimis) No direct use of recreational Section 4(f) properties No impact to Section 6(f) properties

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ALTERNATIVES and OPTIONS		Environmental Impacts							
		Floodplain (Acres)	Jurisdictional Waters (Acres)	Water Resources	Noise	Air Quality	Visual	Hazardous Materials	Land Use (Existing and Future)
Gasline Road Grade Separation Options									
GL1	No Build	No impact	No impact	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
GL2	Bridge replacement on current alignment	Floodplain is undelineated on the Community.	0.15 acre (1 ephemeral drainage)	Would impact an unnamed earthen irrigation channel adjacent to the west side of Gasline Road that goes under Gasline Road 300 feet north of I-10. It meets an irrigation canal serving an agricultural field on the east side of Gasline Road. Neither facility would be directly impacted, but would be part of new ADOT easement on each side of Gasline Road. No wells present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be visually similar to the existing; the ramp fill slopes would extend farther in all directions but would be visually similar to the existing slopes. The visual change from Gasline Road would be minor - the bridge would be wider but of similar materials. From off-site, there would be no change because the new bridge would be similar to the existing bridge. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing agriculture/future mixed use: 2.56 acres *Existing open space/future open space: 1.96 acres Total conversion of land to a transportation corridor = 4.52 acres
GL3	Bridge replacement on parallel alignment	Floodplain is undelineated on the Community.	0.20 acre (1 ephemeral drainage)	Would impact the irrigation canal serving an agricultural field on the east side of Gasline Road. The canal would not be directly impacted but would be part of new ADOT easement. The earthen channel west of Gasline Road would not be impacted. No wells present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be visually similar to the existing; the ramp fill slopes would extend farther in all directions but would be visually similar to the existing slopes. The visual change from Gasline Road would be minor - the bridge would be wider but of similar materials. Being on a parallel alignment to the current alignment would not be a noticeable visual change. From off-site, there would be no change because the new bridge would be similar to the existing bridge. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing agriculture/future mixed use: 4.95 acres *Existing open space/future open space: 2.05 acres Total conversion of land to a transportation corridor = 7.00 acres
Seed Farm Road Grade Separation/ Interchange Options									
SF1	No Build	No impact	No impact	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
SF2	Bridge deck rehabilitation with shoulder widening - no interchange	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be wider but would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from Seed Farm Road would be minor - the bridge would be wider but of similar materials. From off-site, the visual change would be minor because the widened bridge would not be discernible from a distance. From freeway: Minor From crossroads: Minor From off-site: Minor	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing agriculture/future mixed use: 2.11 acres Total conversion of land to a transportation corridor = 2.11 acres
SF3	New tight diamond interchange with bridge replacement	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be moderate - a full interchange would be a moderate visual change versus a single overpass bridge with no ramps. The addition of elevated ramps would change views to the east and west and the addition of area devoted to freeway would be larger than the existing. However, the interchange design would be similar to other interchanges on the corridor so would not be out of context. The change in view from Seed Farm Road would be moderate because of the new elevated ramps, widened roadway, and expanded interchange area. From off-site, the visual change would be minor because, although the interchange would be larger in area, the elements would be similar to the existing bridge. From freeway: Substantial From crossroads: Moderate From off-site: Minor	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing agriculture/future mixed use: 24.91 acres Total conversion of land to a transportation corridor = 24.91 acres
SF4	New spread diamond interchange with bridge replacement	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be substantial - a full interchange would be a significant visual change versus a single overpass bridge with no ramps. The addition of elevated ramps would change views to the east and west and the addition of area devoted to freeway is substantially larger than the existing. However, the interchange design would be similar to other interchanges on the corridor so would not be out of context. The change in view from Seed Farm Road would be moderate because of the new elevated ramps, widened roadway, and expanded interchange area. From off-site, the visual change would be minor because, though the interchange would be larger in area, the elements would be similar to the existing bridge. From freeway: Substantial From crossroads: Moderate From off-site: Minor	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing agriculture/future mixed use: 42.82 acres Total conversion of land to a transportation corridor = 42.82 acres
SF5	New spread diamond interchange with widened existing bridge	Floodplain is undelineated on the Community.	No jurisdictional waters present.	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be substantial - a full interchange would be a significant visual change versus a single overpass bridge with no ramps. The addition of elevated ramps would change views to the east and west and the addition of area devoted to freeway is substantially larger than the existing. However, the interchange design would be similar to other interchanges on the corridor so would not be out of context. The change in view from Seed Farm Road would be moderate because of the new elevated ramps, widened roadway, and expanded interchange area. From off-site, the visual change would be minor because, although the interchange would be larger in area, the elements would be similar to the existing bridge. From freeway: Substantial From crossroads: Moderate From off-site: Minor	No specific sites of concern	Community land use category and its conversion to a transportation corridor: *Existing agriculture/future mixed use: 37.27 acres Total conversion of land to a transportation corridor = 37.27 acres

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ALTERNATIVES and OPTIONS		Environmental Impacts						
		Local Businesses (including impacts on billboards)	Socioeconomic Factors (Environmental Justice, local communities)	Biological Resources	Prime and Unique Farmlands	Archaeological Resources	Traditional Cultural Properties (TCP)	Section 4(f) and Section 6(f)
Gasline Road Grade Separation Options								
GL1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
GL2	Bridge replacement on current alignment	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	Farmland soil type conversion to a transportation use: Irrigated Prime farmland: 4.29 acres. Unique farmland: 0.23 acres.	2 NRHP-eligible resources would be impacted if present: 1936 Soil Conservation Service Canals (D)	No TCPs impacted	No direct use of Section 4(f) properties No impact to Section 6(f) properties
GL3	Bridge replacement on parallel alignment	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Irrigated Prime farmland: 5.77 acres. Unique farmland: 1.23 acres.	2 NRHP-eligible resources would be impacted if present: 1936 Soil Conservation Service Canals (D)	No TCPs impacted	No direct use of Section 4(f) properties No impact to Section 6(f) properties
Seed Farm Road Grade Separation/ Interchange Options								
SF1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
SF2	Bridge deck rehabilitation with shoulder widening - no interchange	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	Farmland soil type conversion to a transportation use: Irrigated Prime farmland: 2.11 acres.	2 NRHP-eligible resources would be impacted if present: 1936 Soil Conservation Service Canal and SCIP lateral (D)	No TCPs impacted	No direct use of Section 4(f) properties No impact to Section 6(f) properties
SF3	New tight diamond interchange with bridge replacement	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-medium impact	Farmland soil type conversion to a transportation use: Irrigated Prime farmland: 24.91 acres.	3 NRHP-eligible resources would be impacted if present: 1936 Soil Conservation Service Canals and SCIP lateral (D)	No TCPs impacted	No direct use of Section 4(f) properties No impact to Section 6(f) properties
SF4	New spread diamond interchange with bridge replacement	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Irrigated Prime farmland: 42.82 acres.	3 NRHP-eligible resources would be impacted if present: 1936 Soil Conservation Service Canal and SCIP lateral (D)	No TCPs impacted	No direct use of Section 4(f) properties No impact to Section 6(f) properties
SF5	New spread diamond interchange with widened existing bridge	There are no nearby local businesses; no impact. No billboards impacted.	No direct long-term impacts to residences or residential areas.	Low-medium impact	Farmland soil type conversion to a transportation use: Irrigated Prime farmland: 37.27 acres.	3 NRHP-eligible resources would be impacted if present: 1936 Soil Conservation Service Canals and SCIP lateral (D)	No TCPs impacted	No direct use of Section 4(f) properties No impact to Section 6(f) properties

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ALTERNATIVES and OPTIONS		Environmental Impacts							
		Floodplain (Acres)	Jurisdictional Waters (Acres)	Water Resources	Noise	Air Quality	Visual	Hazardous Materials	Land Use (Existing and Future)
Dirk Lay Road Grade Separation Options									
DL1	No Build	No impact	No impact	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impacts	No impact
DL2	Bridge replacement on current alignment	Floodplain is undelineated on the Community.	No impact	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be a moderate change because the new bridge would be longer than the existing; the ramp fill slopes would extend farther in all directions but would be visually similar to the existing slopes. The visual change from Dirk Lay Road would be minor - the bridge would be wider but of similar materials. From off-site, there would be no change because the widened bridge would not be discernible from a distance. From freeway: Moderate From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: ~Existing open space/future open space: 3.87 acres Total conversion of land to a transportation corridor = 3.87 acres
DL3	Bridge replacement on parallel alignment	Floodplain is undelineated on the Community.	No impact	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be a moderate change because the new bridge would be longer than the existing; the ramp fill slopes would extend farther in all directions but would be visually similar to the existing slopes. The visual change from Dirk Lay Road would be minor - the bridge would be wider and longer but of similar materials. Being on a parallel alignment to the current alignment would not be a noticeable visual change. From off-site, there would be no change because the new bridge would be similar to the existing bridge. From freeway: Moderate From crossroads: Minor From off-site: No change	No specific sites of concern	Community land use category and its conversion to a transportation corridor: ~Existing open space/future open space: 7.96 acres Total conversion of land to a transportation corridor = 7.96 acres
SR 387/SR 187/Pinal Avenue Interchange Options									
PA1	No Build	No impact	No impact	No impact	No impact	No impact	There would be no visual change as viewed from the freeway, cross street, or off-site. From freeway: No change From crossroads: No change From off-site: No change	No impact	No impact
PA2	Shoulder widening & sidewalk on approaches and bridge, add signals	Floodplain is undelineated on the Community.	No impact	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be wider but would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from Pinal Avenue would be minor - the bridge would be wider but of similar materials. The addition of sidewalks would be in context with a typical roadway cross section. From off-site, there would be no change because the widened bridge would not be discernible from a distance. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	No additional easement required in Community; no change in land use.
PA3	Upgrade ramp terminal capacity, shoulder widening & sidewalk on approaches and bridge, add signals	Floodplain is undelineated on the Community.	No impact	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be wider but would be visually similar to the existing; the ramp fill slopes would extend farther out but would be visually similar to the existing slopes. The visual change from Pinal Avenue would be minor - the bridge would be wider but of similar materials. The addition of sidewalks would be in context with a typical roadway cross section. From off-site, there would be no change because the widened bridge would not be discernible from a distance. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	No additional easement required in Community; no change in land use.
PA4	Bridge replacement off of the existing alignment, add signals	Floodplain is undelineated on the Community.	No impact	No canals, irrigation channels, or wells are present; no impact.	No nearby sensitive receptors; no impact.	No nearby sensitive receptors; no impact.	The change in view from the freeway would be minor - the bridge would be visually similar to the existing; the ramp fill slopes would extend farther in all directions but would be visually similar to the existing slopes. The visual change from Pinal Avenue would be minor - the bridge would be wider but of similar materials. The addition of sidewalks would be in context with a typical roadway cross section. Being on a parallel alignment to the current alignment would not be a noticeable visual change. From off-site, there would be no change because the new bridge would be similar to the existing bridge. From freeway: Minor From crossroads: Minor From off-site: No change	No specific sites of concern	No additional easement required in Community; no change in land use.
ADOT FMS and GRTI Fiber Optic Facility Option									
FO	Fiber Optic Installation	Floodplain is undelineated on the Community.	0.67 acres (2 jurisdictional canals, 2 ephemeral canals, and 34 ephemeral drainages)	Construction of the fiber optic line includes conduit trenching and directional drilling within existing ADOT easement from MP 162.5 to MP 186.5. The following irrigation facilities would be impacted: MP 169.7: Westside VA Canal (unnamed on the km2) MP 174.1: Old Canal 13 MP 174.5: Unnamed concrete irrigation channel that ties into Canal 13 MP 177.0: Casa Blanca Canal MP 177.1: Unnamed earthen irrigation channel MP 177.8: Unnamed earthen irrigation channel MP 178.4: Unnamed concrete irrigation channel MP 178.6: Unnamed earthen irrigation channel MP 178.6: Unnamed earthen irrigation channel MP 178.7: Unnamed earthen irrigation channel MP 179.5: Unnamed earthen irrigation channel MP 180.2: Southside Canal MP 180.9: Unnamed earthen irrigation channel MP 180.9: Unnamed earthen irrigation channel None of these water resources would be impacted because they would be avoided; for instance, directional drilling would be able to go under a canal and avoid any impacts.	Underground (no nearby sensitive receptors)	Underground (no nearby sensitive receptors)	The change in view from the freeway would be moderate in some areas caused by the loss of mature trees along the edges of the ROW. New vegetation would not be allowed because of the conflict with the new utilities. In other locations where there is little to no existing vegetation, there would not be a visual change. The change in view from cross streets would be negligible . From off-site, the visual change would be minor because of the loss of mature vegetation. From freeway: No change - Moderate From crossroads: Minor From off-site: Minor	No specific sites of concern	No impact. All fiber optic locations located within existing ADOT easement on the Community.

I-10: SR 202L to SR 387

Alternatives and Options Evaluation Matrix - Environmental (Criteria 9-15 of 15)

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ALTERNATIVES and OPTIONS		Environmental Impacts						
		Local Businesses (including impacts on billboards)	Socioeconomic Factors (Environmental Justice, local communities)	Biological Resources	Prime and Unique Farmlands	Archaeological Resources	Traditional Cultural Properties (TCP)	Section 4(f) and Section 6(f)
Dirk Lay Road Grade Separation Options								
DL1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
DL2	Bridge replacement on current alignment	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	Farmland soil type conversion to a transportation use: Irrigated Prime farmland: 0.85 acres.	2 NRHP-eligible resources would be impacted: AZ U:13:252(ASM)(D) and the Southside Storm Water Channel. The Southside Storm Water Channel was previously mitigated through HAER documentation.	No TCPs impacted	No direct use of Section 4(f) properties No impact to Section 6(f) properties
DL3	Bridge replacement on parallel alignment	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	Farmland soil type conversion to a transportation use: Irrigated Prime farmland: 3.75 acres.	2 NRHP-eligible resources would be impacted: AZ U:13:252(ASM)(D) and the Southside Storm Water Channel. The Southside Storm Water Channel was previously mitigated through HAER documentation.	No TCPs impacted	No direct use of Section 4(f) properties No impact to Section 6(f) properties
SR 387/SR 187/Pinal Avenue Interchange Options								
PA1	No Build	No impact	No impact	No impact	No impact	No impact	No impact	No impact
PA2	Shoulder widening & sidewalk on approaches and bridge, add signals	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low impact	No impact	No archaeological resources would be impacted	No TCPs impacted; however, TCP 35 would be adjacent to the option and would likely require protection in place during construction.	No direct use of Section 4(f) properties No impact to Section 6(f) properties
PA3	Upgrade ramp terminal capacity, shoulder widening & sidewalk on approaches and bridge, add signals	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-medium impact	No impact	No archaeological resources sites would be impacted	No TCPs impacted; however, TCP 35 would be adjacent to the option and would likely require protection in place during construction.	No direct use of Section 4(f) properties No impact to Section 6(f) properties
PA4	Bridge replacement off of the existing alignment, add signals	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low-high impact	No impact	No archaeological resources impacted	Adverse effect to TCP 35	Direct use of Section 4(f) properties (Not de minimis). Drainage box would need to be extended into the quartz outcrop that defines the TCP. No impact to Section 6(f) properties
ADOT FMS and GRTI Fiber Optic Facility Option								
FO	Fiber Optic Installation	There are no nearby local businesses; no impact. No billboards impacted.	There are no nearby residences or residential areas; no impact.	Low Impact. All impacts would be temporary.	No impact. FO located within existing ADOT easement on the Community.	Archaeological resources would be impacted	TCPs would be impacted;	Potential use of Section 4(f) properties No impact to Section 6(f) properties