

Valencia Road Widening: Wade Road to Mark Road

Final Visual and Aesthetic Resource Report

Pima County Project No. 4RTVMW

Federal Project #STP-PPM-0(230)A

TRACS No. SS975 01C

28 October 2011



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Prepared For

Pima County Department of Transportation

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PURPOSE and METHODOLOGY

Purpose

The purpose of this Visual and Aesthetic Resource Report is to document existing visual resources and visual quality within the proposed Valencia Road Widening: Mark Road to Wade Road project limits, objectively assess potential visual quality impacts that this proposed roadway project may have on the surrounding project area and provide visual impact mitigation strategies for the surrounding project area.

The result of this document is to make design decisions that will improve the visual quality of the proposed project area by identifying coordination efforts, design opportunities and constraints while developing strategies to refine the project design prior to construction.

Methodology

1. *Define the existing project area, setting, and viewshed.* The project is located along Valencia Road from 0.4 miles west of Wade Road to 0.3 miles west of Mark Road, along Wade Road 1700 feet south of Valencia Road and along Camino Verde, 800 feet north of Valencia Road. The project viewshed was determined based on a review of aerial photos from Pima County 2010 spring pictometry color orthophoto imagery, as well as two site visits.
2. *Identify existing landscape visual resources.* This was accomplished by a review of aerial images, a site visit, and a review of findings from the biological assessment team.
3. *Identify viewers and key observation points (KOPs).* Viewers and key observation points (KOPs) were selected based on maps and aeriels of the project area and the surrounding area, then verified in the field during site visits. KOPs were chosen based on potential viewers and the expected visibility of the project area, taking into consideration differences in elevation of viewpoints. If it was discovered during the site visit that the project area was not visible from a place originally thought to be a KOP, no further assessment of the viewpoint was made. These places are noted in this report for completeness.
4. *Analyze and evaluate existing visual conditions from each KOP.* Existing visual conditions at each KOP were evaluated in more detail based on criteria established in the Pima County Roadway Design Manual. This included an on site assessment and ranking of the setting, viewer sensitivity, roadway visibility, and scenic quality. Refer to the Appendix for definitions of the terms and criteria for evaluating each KOP.
5. *Summarize key elements of the proposed design that could impact the visual quality of the project area.* Identification of key elements of the proposed design was based on the project scope of work, information received from the engineering consultant project manager, Robert Brittain, of HDR Engineering, Inc. and a review of preliminary plans and cross sections from the roadway design team. Key elements included those elements proposed to be added to, modified, and removed from the existing roadway.

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6. *Assess visual impact of proposed elements on existing visual conditions.*
This assessment involved a review of photographs previously taken from each KOP and an additional site visit to describe anticipated impacts of the proposed design on the existing visual quality of the project area. With the proposed design changes in mind, roadway visibility and scenic quality were re-evaluated at each KOP and compared to the outcomes from the initial evaluation to determine visual impact of the proposed design.
 7. *Propose mitigation strategies and treatment options based on the results of the Impact Assessment.*
Mitigation strategies and treatment options are design ideas aimed at minimizing the anticipated negative visual impacts of the proposed roadway design. Mitigation strategies address details such as texture and color of materials, the addition of screening elements at strategic locations, and the placement of focal features to guide views.

In creating this report, the following assumptions are being made:

1. *The landscape setting makes a difference.* Project settings differ in their visual quality and the compatibility of any project differs with different landscape settings.
2. *The viewer of the proposed project makes a difference.* Viewer groups differ in visual exposure to a project based on their population and distance. Viewers also differ in their sensitivity but generally agree in their recognitions of whether a particular visual impact is positive or negative.
3. *These visual aspects can be assessed and quantified.* Visual quality, project compatibility and viewer exposure can be evaluated and compared systematically.

(Pima County 2010; Jones 2007)

Note: This report not only assesses the effects of the proposed transportation improvements on existing visual conditions, but also takes into account zoning and land use conditions.

EXISTING VISUAL RESOURCE DESCRIPTION

Project Setting

The project is located in the southwest region of the Greater Tucson Basin and metropolitan area and is composed of broad valleys traversed by ephemeral and intermittent washes, giving rise to mountain ranges of low hills and jagged peaks. The project area slopes gently to the northwest and ranges from 2,477 feet elevation to 2,598 feet. From within the project limits, Red Butte, Golden Gate Mountain and Cat Mountain of the Tucson Mountains are visually prominent to the north, and Black Mountain is visible to the south.

In the project area, Valencia Road consists of one 12-foot wide through lane in each direction with 2-to-4-foot wide paved shoulders for most of its length. The posted speed limit along Valencia Road is 50 mph from Wade Road to Camino Verde and 45 mph from Camino Verde to Mark Road. From the western Pascua Yaqui Reservation limits at Camino Rancho to Mark Road, Valencia Road consists of four lanes with a continuous center turn lane. Several local roads and driveways intersect Valencia Road. Wade Road south of Valencia Road is paved and intersects Valencia Road in a T-intersection. Wade Road north of Valencia Road is unpaved and offset east of the southern leg. Camino Verde intersects Valencia Road from the north, forming a T-intersection, and is the only signalized intersection in the project limits.

The existing right-of-way (R/W) for Valencia Road varies between 150 to 200 feet wide. Much of the R/W is graded and has been cleared of vegetation for approximately 15 to 60 feet from the edge of pavement. An unpaved access road for overhead power lines parallels the south side of Valencia Road, approximately 40 feet from the edge of pavement, for the entire length of the project. No bicycle lanes, curb and gutter, or street lighting exist within the project limits.

Land Use Planning

The project is located in the Southwest Subregion of the Comprehensive Plan. Pima County land use zoning classifications within the surrounding project area are in Figure 1. Of particular note, the following zoning classifications are directly adjacent to the project area: CB-1 (Local Business), CR-4 (Mixed Dwelling Type), GR-1 (Rural Residence), RH (Rural Homestead), SH (Suburban Homestead), and SR (Suburban Ranch). In addition, the Pasqua Yaqui Nation is directly adjacent to the project area as well as state trust land.

Land use is predominately undeveloped land interspersed with medium- to low-density residential properties. The undeveloped lands are under jurisdiction of Arizona State Land Department, BLM and some private. Utility facilities are located throughout the project area.

Washes

The project area is traversed by washes that generally flow from southeast to northwest. Washes in the project area include numerous unnamed ephemeral washes and the ephemeral Black Wash. The unnamed washes join Black Wash, eventually combining with the East Branch Brawley Wash, located approximately 5 miles northwest of the project area.

Vegetation

The project area lies in the Arizona Upland subdivision of Sonoran desertscrub biotic community (Turner and Brown 1994). The project area is characterized by a combination of arid vegetation types associated with desertscrub, xeroriparian, disturbed upland and landscape planting.

Associated trees, shrubs, and cacti in the project area

whitethorn acacia (*Acacia constricta*)
catclaw acacia (*Acacia greggii*)
desertbroom (*Baccharis sarothroides*)
desert hackberry (*Celtis ehrenbergiana*)
jumping cholla (*Cylindropuntia fulgida* var. *fulgida*)
cane cholla (*Cylindropuntia spinosior*)
staghorn cholla (*Cylindropuntia versicolor*)
fishhook barrel cactus (*Ferocactus wislizenii*)
ocotillo (*Fouquieria splendens*)
burroweed (*Isocoma tenuisecta*)
wolfberry (*Lycium* sp.)
blue palo verde (*Parkinsonia florida*)
velvet mesquite (*Prosopis velutina*)
Arizona yucca (*Yucca arizonica*)
soaptree yucca (*Yucca elata*)
creosote bush (*Larrea tridentata*)
Saguaro (*Carnegia gigantea*)
Foothills palo verde (*Parkinsonia microphyllum*)

Existing Visual Resources/Scenic Quality

Foreground

Valencia Road is the most dominant feature of the foreground, including wide shoulders that are cleared of vegetation. Power poles that run parallel to Valencia Road on both sides of the roadway are in contrast to the natural surroundings due to their vertical scale. Casino Del Sol and the Casino Del Sol gas station are also major foreground elements within eastern KOPs. Xeroriparian and desert scrub vegetation are also prominent in the foreground of views to and from the project area. Sheet flow from the roadway increases plant density and is comprised of whitethorn acacia and velvet mesquite that screen views to and from the project roadway.

Middle Ground

Xeroriparian and desert scrub vegetation dominate the middle ground views to and from the project area; scattered areas of low density residential development can be seen in the middle ground. Toward the east end of the project area, Saginaw Hill (2,820 feet) is a more prominent visual feature, as well as Casino Del Sol and the Casino Del Sol gas station.

Background

The Tucson Mountains (4,687 feet), Red Butte (3,004 feet), Black Mountain (3,602 feet), Roskruge (2,828 feet), and Coyote Mountains (6,158 feet) comprise the background views to and from the roadway project area. In addition, the Catalina (9,157 feet), Rincon (8,664 feet), Santa Rita (9,453 feet), and Baboquivari (7,093 feet) mountain ranges can be seen in the distant background of some KOPs. Scattered residential development is slightly noticeable in the background because they are built on surrounding hillsides.

Viewers and Viewing Conditions

Viewers and Viewing Conditions

Viewers of the project area are predominately motorists and bicyclists from the surrounding residential areas travelling the roadway in an east or west direction. The speed limit along this section of Valencia Road is 50 mph from Wade Road to Camino Verde and is 45 mph from Camino Verde to Mark Road, and drivers do not expect to see dramatic or unique scenery while traveling on the roadway, aside from some distant views to hills. The types of viewers accounted for in this report are listed below. Each viewer type will be discussed in more detail within each KOP description.

Viewers

- Valencia Road motorists, bicyclists, and pedestrians
- South Camino Verde motorists, bicyclists, and pedestrians
- Star Valley Community Park users
- Johnson Elementary School students, staff, and faculty
- Local residents
- Casino Del Sol visitors
- Wade Road northbound motorists

VIEWSHED INVENTORY

Key Observation Points (KOPs)

Seven KOPs were chosen based on the identified viewers' proximity and vantage point in relationship to the project area. During the inventory site visit, it was determined that the proposed project area was not visible from two areas originally designated as KOPs; Johnson Elementary School and Star Valley Community Park. Therefore, no further evaluation was made of the visual impact or mitigation strategies from these viewpoints.



View looking west, along Valencia Road, at Wade Road

Key Observation Points [KOPs] Legend

- 1 Valencia Road at Wade Road
- 2 Valencia Road at South Camino Verde
- 3 Valencia Road at Viviana
- 4 Valencia Road at Casino Del Sol
- 5 Ignacio M Baumea Road, northbound
- 6 Johnson Elementary School
- 7 Star Valley Community Park

Pima County Zoning Legend

- CR-4 [Mixed Dwelling Type]
- RH [Rural Homestead]
- GR-1 [Rural Residence]
- SR [Suburban Ranch]
- SH [Suburban Homestead]
- CB-1 [Local Business]

- CR-5 [Multiple Residence Zone]
- CMH-1 [Country Manufactured and Mobile Home]
- SP [Specific Plan]

Jurisdiction Legend

- Pasqua Yaqui Nation

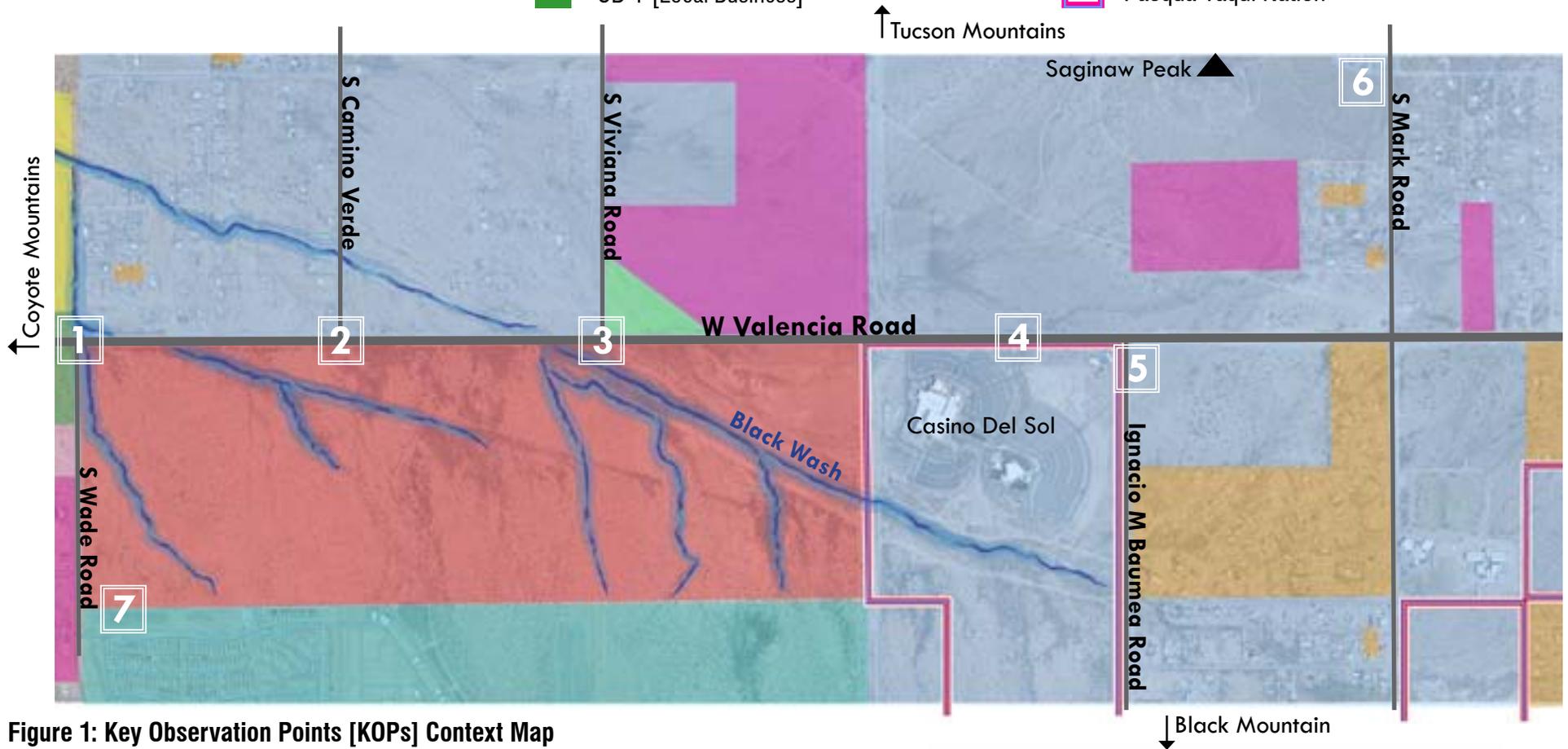


Figure 1: Key Observation Points [KOPs] Context Map

KOP 1 VALENCIA ROAD AT WADE ROAD



[A] Looking east, Valencia Road dominates the foreground.



[B] The hills and mountains in the background are obscured by vegetation in the middle ground.



[C] Looking east along the project area, Valencia Road, white fencing, mailboxes, and power poles are prominent cultural modifications.



KOP 1 ASSESSMENT

Viewers + Viewing Condition

The viewers from this KOP are local and regional motorists, travelling along the project roadway at moderate volume and speed (50 mph). Viewers also include bicyclists and pedestrians. Since all of these viewers are travelling on the project roadway, the project area is highly visible and these viewers have a high level of sensitivity toward changes in the project area.

Setting

Landform

The foreground landform has little change in elevation. Views of hills and mountains in the middle ground and background are obscured by vegetation.

Vegetation

Views are dominated by roadside xeroriparian vegetation as well areas of desertscrub. Both vegetative communities show signs of disturbance.

Color

There are subtle color variations, offering little contrast between the vegetation and surrounding landscape elements. In general colors are muted grays, greens, and browns. However, the frequently blue skies in this region offer a sharp contrast to the vegetation color.

Adjacent Scenery

The surrounding hills and mountains are obscured by foreground vegetation, so they do not enhance the quality of the views from this KOP.

Scarcity/Uniqueness

Similar views are common within the region; therefore, views from this KOP are not unique.

Cultural Modifications

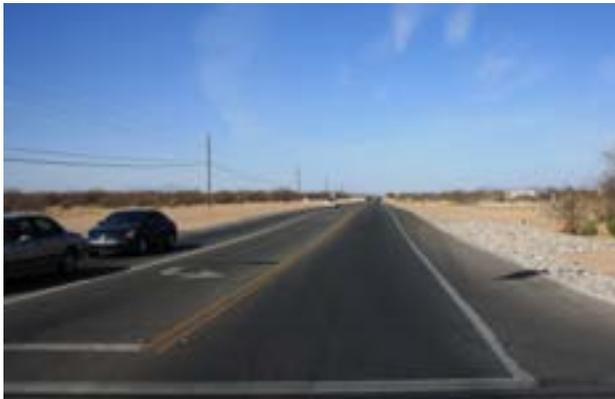
These include Valencia Road, white fencing, mailboxes, power poles, and housing on the distant hillsides. Valencia Road and the cleared right-of-way on both sides of the road are the most dominant features of the viewshed. All cultural modifications present in the project area are in contrast to the natural surroundings.

Scenic Quality Ratings

landform	1
vegetation	1
water	0
color	1
adjacent scenery	1
scarcity/uniqueness	1
cultural modifications	-2
TOTAL	3
Scenic Quality	minimal

Ratings based on Table 5 of *Pima County Roadway Design Manual*. See Appendix A.

KOP 2 VALENCIA ROAD AT SOUTH CAMINO VERDE



[A] A view to the west shows Valencia Road as a dominant foreground element with little visual interest in the middle ground or background.



[B] Looking east, Valencia Road and the traffic lights at the South Camino Verde intersection are the most prominent elements in the view.



[C] At the South Camino Verde intersection, there are clear views of the Tucson Mountains to the north; otherwise, the mountains are obscured by vegetation in the middle ground.



KOP 2 ASSESSMENT

Viewers + Viewing Condition

Viewers from this KOP include regional and local motorists as well as bicyclists and pedestrians. These viewers are travelling at moderate to high volume and low to moderate speed (50 mph). Since they are travelling on Valencia Road, the project area is highly visible and viewer sensitivity to changes in the project area is high.

Setting

Landform

The foreground is dominated by the project roadway. The middle ground landform is flat. Mountains and low hills are somewhat visible in the background.

Vegetation

The vegetative mass is dominated by xeroriparian scrub and desert scrub. Both vegetative communities show signs of disturbance.

Color

There are subtle color variations, offering little contrast between the vegetation and surrounding landscape elements. In general, colors are muted grays, greens, and browns. However, frequently blue skies in this region offer a sharp contrast to the vegetation color.

Adjacent Scenery

From this KOP, there are background views of the Tucson Mountains to the north, Rincon Mountains in the distant east, Black Mountain to the southeast, and the Coyote Mountains to the west. This adjacent scenery only moderately enhances the visual quality from this KOP.

Scarcity/Uniqueness

Views from this KOP are common in the region, so they are not unique.

Cultural Modifications

These include Valencia Road, traffic lights, traffic signs, power poles, and Casino Del Sol. Valencia Road, traffic lights, and traffic signs dominate the foreground. Power poles are prominent due to their vertical profile, which is in contrast to the natural setting. Casino Del Sol is a middle ground element, but has low impact on the viewshed because it is screened by vegetation.



[D] Looking east, the Rincon Mountains are visible in the distant back ground, and Casino Del Sol is obscured by middleground vegetation.

Scenic Quality Ratings

landform	3
vegetation	1
water	0
color	1
adjacent scenery	3
scarcity/uniqueness	1
cultural modifications	-2
TOTAL	7
Scenic Quality	minimal

Ratings based on Table 5 of *Pima County Roadway Design Manual*. See Appendix A.

KOP 3 VALENCIA ROAD, AT VIVIANA



[A] Looking east, Valencia Road and the cleared shoulders dominate the view.



[B] Low hills, including Saginaw Peak and Red Butte can be seen to the northeast.



[C] Looking west, Valencia Road and the cleared shoulders dominate the view. There are no prominent background elements.



KOP 3 ASSESSMENT

Viewers + Viewing Condition

Viewers from this KOP include regional and local motorists as well as bicyclists and pedestrians. These viewers are travelling at moderate to high volume and low to moderate speed (50 mph). Since they are travelling along Valencia Road, their sensitivity to changes in the project area is high.

Setting

Landform

The foreground view is dominated by the low, horizontal roadway and the wide shoulders that have been cleared of vegetation. The middleground is flat with little vertical interest or variation. There are low hills in the background.

Vegetation

The vegetative mass is dominated by xeroriparian scrub and desert scrub. Both vegetative communities show signs of disturbance. The variation in vegetation is attributed to the Black Wash crossing at Valencia near this KOP.

Color

There are subtle color variations offering little contrast between the vegetation and surrounding landscape elements from this KOP. In general, colors are muted grays, greens, and browns.

Adjacent Scenery

The Tucson Mountains and Black Mountain in the background minimally enhance the view from the roadway.

Scarcity/Uniqueness

The view of the mountains minimally enhances the visual quality of the roadway from this KOP, and similar views are fairly common within the region, giving them a low level of uniqueness.

Cultural Modifications

Cultural modifications visible from this KOP include Valencia Road, power poles, mailboxes, Casino Del Sol, and residential development. Valencia Road, power poles and the wide shoulders that have been cleared of vegetation are the most prominent elements of the landscape. Casino Del Sol is visible, but is partially screened by vegetation in the middle ground.



[D] Mailboxes are in contrast to the natural setting but do not greatly detract from the visual quality in comparison to other cultural modifications present in the area. Casino Del Sol in the background is mostly obscured by middle ground vegetation.

Scenic Quality Ratings

landform	3
vegetation	3
water	0
color	3
adjacent scenery	3
scarcity/uniqueness	1
cultural modifications	-1
TOTAL	12
Scenic Quality	common

Ratings based on Table 5 of *Pima County Roadway Design Manual*. See Appendix A.

KOP 4 VALENCIA ROAD AT CASINO DEL SOL



[A] Casino Del Sol is a prominent foreground and middle ground element.



[B] The Casino Del Sol gas station on the south side of Valencia is highly visible, and the majority of the vegetation has been cleared around it.



[C] Low hills are in the middle ground to the north of Valencia Road.



KOP 4 ASSESSMENT

Viewers + Viewing Condition

Viewers from this KOP include regional and local motorists as well as bicyclists and pedestrians. These viewers are travelling at moderate to high volume and low to moderate speed (50 mph). Since they are travelling on Valencia Road, their sensitivity to changes is high.

Setting

Landform

The foreground view is dominated by Valencia Road and the cleared right-of-way. There are some low hills in the middle ground, including Saginaw Peak and Red Butte. To the east, the Rincon Mountains are faintly visible in the background.

Vegetation

The vegetative mass is dominated by xeroriparian scrub and desert scrub. Both vegetative communities show signs of disturbance. There is additional variation in vegetation due to ornamental plantings around Casino Del Sol.

Color

From this KOP there are more color variations from cultural modifications present in the area contrasting the colors of the natural elements of the surrounding landscape.

Adjacent Scenery

Low hills in the middle and background minimally enhance the visual quality from the roadway.

Scarcity/Uniqueness

The views of the hills in the middle ground are unique to the region from this vantage point.

Cultural Modifications

These include Valencia Road, power poles, Casino Del Sol, a gas station, and residential development. Valencia Road, the power poles, Casino Del Sol, and the gas station are the most dominant elements. Their form and color are in high contrast to the natural surroundings of this KOP. Residential development is the least prominent element despite it has been built on the slopes of the surrounding hills.



[D] To the east, some residential development is visible on the hillside of Saginaw Peak but is partially screened by vegetation in the middleground. The Rincon Mountains are visible in the distant background. The power poles are a prominent vertical element.

Scenic Quality Ratings

landform	3
vegetation	3
water	0
color	3
adjacent scenery	3
scarcity/uniqueness	3
cultural modifications	-2
TOTAL	13
Scenic Quality	common

Ratings based on Table 5 of *Pima County Roadway Design Manual*. See Appendix A.

KOP 5 IGNACIO M BAUMEA ROAD, NORTHBOUND



[A] Looking north toward Valencia Road, Ignacio M Baumea Road is the dominant foreground element.



[B] View to the northeast from Ignacio M. Baumea Road, at Valencia Road.



[C] Landscape planting and the gas station on the southwest corner are dominant visual elements.



KOP 5 ASSESSMENT

Viewers + Viewing Condition

Viewers from this KOP include regional and local motorists as well as bicyclists and pedestrians. They are travelling at low to moderate volume and low to moderate speed (45 mph). The project area is moderately visible to these viewers. Most viewers will turn onto Valencia Road making them moderately sensitive to changes in the project area.

Setting

Landform

The foreground is dominated by Ignacio M Baumea Road and creosote flats. There are low hills in the middle ground and background as well as the Tucson Mountains in the background.

Vegetation

The vegetative mass is dominated by creosote flats. There is also ornamental planting along Ignacio M Baumea Road, adding some contrast in vegetation type and density.

Color

There are subtle color variations, offering some contrast between the vegetation and surrounding landscape elements. In general colors are muted grays, greens, and browns. The landscape planting and rock placement as well as the gas station add contrast in color.

Adjacent Scenery

The low hills in the middleground and the mountains in the background do more to enhance to the visual quality at this KOP in comparison to other KOPs due to the fact that there is less vegetative screening adjacent to this viewpoint.

Scarcity/Uniqueness

The mountain views are not dramatic from this KOP, but within the region it is uncommon to see hills of this size in the middle ground, so they do add unique qualities to this viewshed.

Cultural Modifications

These include Ignacio M Baumea, Valencia Road, the gas station, power poles, sidewalks, and signs. Ignacio M Baumea is the most dominant cultural modification in the foreground. The vertical profile of the power poles is in contrast to the natural setting, and they detract from the natural scenic quality.

Scenic Quality Ratings

landform	3
vegetation	3
water	0
color	3
adjacent scenery	3
scarcity/uniqueness	3
cultural modifications	-2
TOTAL	13
Scenic Quality	common

Ratings based on Table 5 of *Pima County Roadway Design Manual*. See Appendix A.

KOP 6 JOHNSON ELEMENTARY

Viewers + Viewing Condition + Setting

Viewers include students, faculty, and staff of Johnson Elementary School. This viewpoint was not evaluated for viewing condition or setting because the project area was not visible from this key observation point and proposed project elements were not seen as affecting the visual quality from this vantage point.



[A] View looking toward the proposed project area from Johnson Elementary School.



Design Manual. See Appendix A.

KOP 7 STAR VALLEY COMMUNITY PARK

Viewers + Viewing Condition + Setting

Viewers from this KOP include residents of the Star Valley Community as well as nearby residential developments. This viewpoint was not evaluated for viewing condition or setting because the project area was not visible from this key observation point and proposed project elements were not seen as affecting the visual quality from this vantage point.



[A] View toward the proposed project area from Star Valley Community Park.



VIEWSHED INVENTORY SUMMARY

Viewshed Inventory Summary

Because of its low, horizontal profile, the proposed project area is not significantly visible from KOPs oriented at a perpendicular viewing angle. More dense vegetation in the area screens views to the project area, decreasing its visibility. Furthermore, viewers from these KOPs have low to moderate sensitivity to changes in the project area, which further reduces the potential impact of the proposed design on existing visual resources. Because there are currently very few roads adjacent to the project area, the quantity of viewers being impacted by changes to the project area is reduced.

For KOPs located directly on Valencia Road (KOPs 1,2,3,4), the existing road significantly impacts the visual quality of the natural surroundings. Elements such as power poles, signs, and street lights have an additional negative visual impact because their vertical character is in high contrast to the low profile of the natural setting. Viewers from these KOPs have a high sensitivity to changes in the project area, which increases the visual impact of the proposed design on existing visual resources.

To summarize, viewers of the project area have a higher sensitivity to changes in the vertical profile of roadway elements, while viewers from the project area have a high sensitivity to changes to both horizontal (roadway width) and vertical elements (power poles, fencing, structure) of the roadway.

Table 1: Scenic Quality Summary

KOP#	1	2	3	4	5
view point	Valencia Road at Wade Road	Valencia Road at South Camino Verde	Valencia Road at Viviana	Valencia Road at Casino Del Sol	Ignacio M Baumea, northbound
landform	1	3	3	3	3
vegetation	1	1	3	3	3
water	0	0	0	0	0
color	1	1	3	3	3
adjacent scenery	1	3	3	3	3
uniqueness	1	1	1	3	3
cultural modification	-2	-2	-1	-2	-2
TOTAL	3	7	12	13	13
SCENIC QUALITY	minimal	minimal	common	common	common

0-11 = minimal
 12-18 = common
 19+ = distinctive

PROPOSED PROJECT DESCRIPTION

The Valencia Road, Mark Road to Wade Road project consists of widening Valencia Road from two (2) to four (4) thru lanes, adding a raised median with openings, and adding paved shoulders to improve safety, increase capacity and tie into the existing roadway section recently constructed to 1,600 feet west of Mark Road. The existing right-of-way varies from 150'-200' and with the exception of drainage and temporary construction easements needed for improvements; no additional right-of-way will be acquired.

The current alignment of the roadway will not be changed and the widening will result in the addition of 24-36 feet of pavement width to the existing roadway. The roadway elevation will be raised two (2) to five (5) feet to accommodate drainage structures. Additional turn lanes will be added to Viviana Road, Mardick Avenue, Camino Verde and Ignacio M Baumea. Wade Road will become a signalized intersection and the Camino Verde signalized intersection will be modified to accommodate new roadway geometry.

A five (5) foot sidewalk, installed nine (9) feet from the edge of pavement, will be added to the south side from the eastern project limit to Camino Verde and to the north side from Camino Verde to Wade Road. Landscape, mitigation and restoration planting and public art will be added to the roadway right-of-way, buffer areas and easements.

Drainage improvements will occur at Black Wash and six other drainages along the roadway. Black Wash will receive a multi-cell box culvert with 10' wide by 5' high cells. All drainage improvements will require clearing vegetation in the wash and installing drop inlets and bank protection. Roadside ditches will be constructed along both sides of the road.

To summarize, major proposed project elements visible to the travelling public are:

- four (4) thru lanes
- 20' raised median
- two (2) 6' paved shoulders on both sides
- 9' buffer areas on both sides of the road
- 5' sidewalks (in the locations described above)
- 4:1 slopes to existing grade, when needed
- Additional turn lanes
- Additional signalized intersections (2)
- Landscape, mitigation and restoration planting
- Public Art (location unknown)
- Drainage improvements (including drop inlets, box culverts, bank protection & handrails)
- Roadside ditches

Refer to Figures 2 & 3 for locations information of proposed project elements.

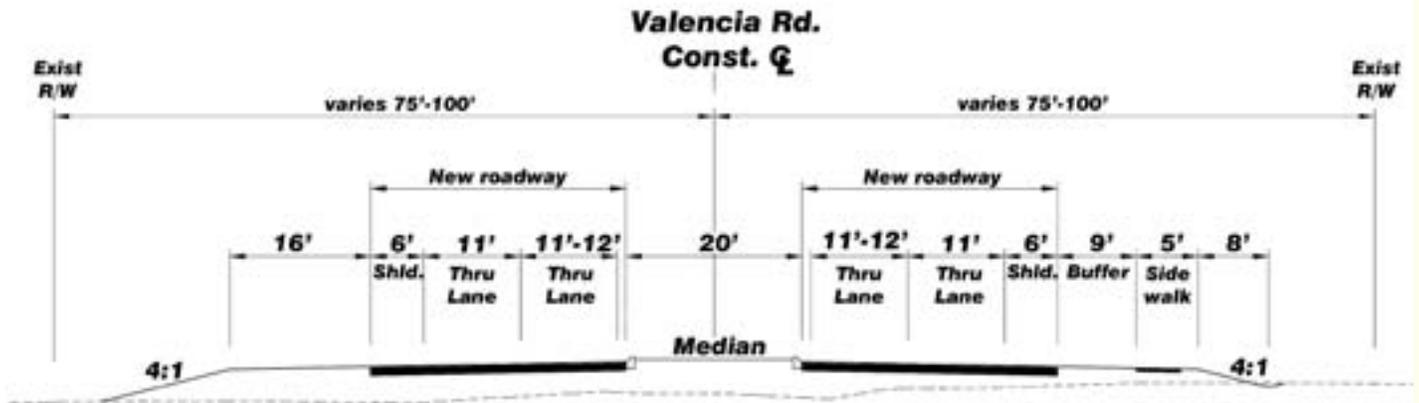


Figure 2: Proposed Roadway Typical Section

(this section shows the sidewalk on the south side; sidewalk is also proposed on the north side, refer to Figure 3, below)

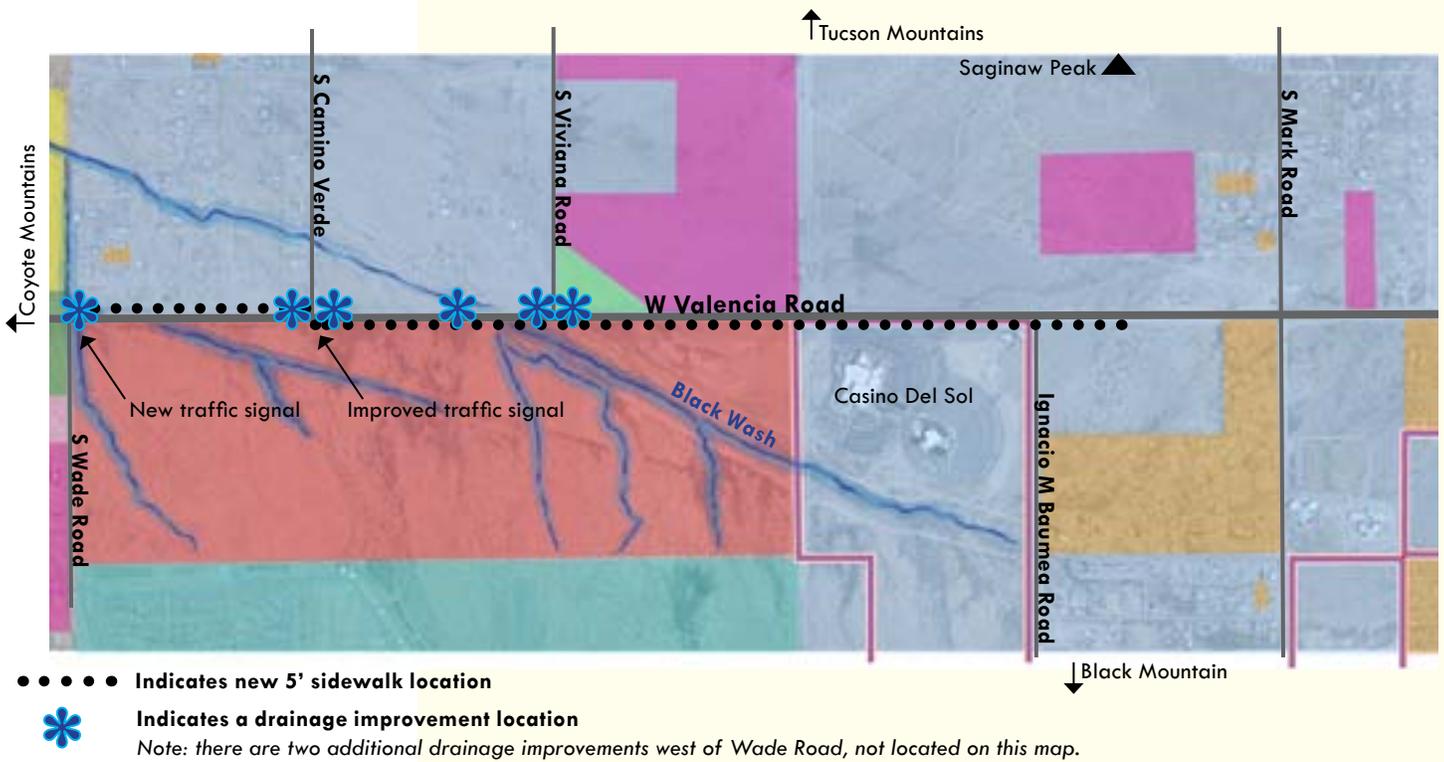


Figure 3: Drainage Improvement, Traffic Signal and Sidewalk Location Map

IMPACT ASSESSMENT

After reviewing the proposed project elements and comparing them to the existing visual resources within the project area, **three** primary visual impacts were identified and mitigation strategies are proposed for these visual impacts.

Affected viewers: Viewers located directly on or adjacent to Valencia Road, within the project limits, will be visually impacted by the proposed project design. Viewers of the roadway from a distance will not be visually impacted by the proposed project design.

Foreground

The dominant elements in the foreground currently are the cleared right-of-way and Valencia Road. The flat topography and minimal vegetation in the foreground of the project area do little to visually mitigate or enhance these elements. The widened roadway will impact the visual setting of the foreground because the proposed roadway width will be approximately three times wider than the existing roadway. However, removing open disturbed soil areas and replacing with new asphalt, sidewalk and medians will, at the least, provide the right of way with a more defined purpose. Elements added to signalized intersections such as additional signal poles, lights and electrical cabinets will impact foreground views intermittently at Camino Verde and Wade Road, where traffic signals are proposed.

Foreground views and viewers along Valencia Road (KOPs 1, 2, 3 and 4) will be most impacted compared to other viewers because these KOPs are most sensitive to a change in roadway width and expanse of pavement. Viewers of the project area from a more perpendicular vantage point (KOPs) do not see the impacts of the widened roadway and are less sensitive to these changes.

In the locations of drainage improvements, particularly KOP 3, viewers will be significantly visually impacted by the cleared vegetation and new concrete drainage culverts, headwalls and bank protection being installed. The overall resulting visual character will be more open and barren than it is currently. Handrail and concrete barrier will also be visible at this and other drainage improvement areas, significantly impacting the visual quality.

Middle Ground

Many middle ground views are screened due to proximity to existing washes and the dense vegetation growing within them. However, drainage improvements will clear much of this vegetation and middle ground views that were not seen previously will be exposed.

Background

The low profile and little elevation change of the proposed roadway will have little to no impact on views to the project area from background views. However, background views from the proposed project, particularly viewers on Valencia Road, will experience moderate but intermittent visual impact due to additional poles and traffic signals at signalized intersections.

MITIGATION STRATEGIES

Visual Impact #1: Roadway Widening (expansion of paved surface)

Widening of the roadway (including additional turn lanes and sidewalks) will have a moderate visual impact to viewers located on and adjacent to the roadway. Despite the fact that the paved surface area will more than double in width from the existing condition, little existing vegetation will need to be removed to accomplish this, as the majority of the existing unpaved right-of-way is currently cleared of vegetation. In addition, the 20' wide, raised median and 9' buffer area at the edges of the roadway will aid to visually interrupt the expanse of added pavement and sidewalks.

Mitigation Strategy #1

Incorporate landscape planting within the raised median and along roadside buffer areas and beyond using species typical of the biotic community that surrounds the project area. Avoid arranging plants in unnaturally straight lines, and place trees in a manner such that they screen undesirable views and frame more desirable views. The plant design, density and spacing of species should emulate the undisturbed natural surroundings as much as possible.

Visual Impact #2: Signalized Intersections

The addition of poles, signals, and associated electrical wiring and cabinets needed to operate the signals will impact the existing landscape, contrasting the existing rural roadside.

Mitigation Strategy #2

Roadway design standards for signalized intersections, as well as the fact that the existing visual resources are not determined to be unique, will limit the mitigation strategies for the placement, type and size of roadway signals used in the project. However, using pole diameters that are as small as structurally possible, limiting the number of poles needed by placing as many signals and signs as possible on a single pole and limiting or securing any loose or dangling wires needed for the signals can all aid in minimizing the visual impact.

Mitigation Strategy #2a

Locating electrical cabinets either underground or in an area where they are less apparent to the travelling public (while maintaining adequate distance to the signal for maintenance), as well as painting the cabinets a color (such as tan or brown) to match the surrounding gravel or soil and strategically locating plant material to screen the electrical boxes (while maintaining access for servicing) can further reduce the negative visual impact.

Visual Impact #3: Drainage Improvements

The clearing of vegetation and addition of concrete culverts, headwalls, handrails and bank protection will visually impact the existing landscape setting and open up middle ground views that may not have been seen previously.

Mitigation Strategy #3a

Bank protection is often created using large (6"-10") rock rip rap. Utilizing a rock color similar to the surrounding soil (e.g. brown, tan) will mitigate the visual impact of the cleared vegetation and help the bank protection material blend into the surroundings.

Mitigation Strategy #3b

Integrating a color pigment into concrete structures and/or staining the concrete in a color similar to the surrounding soil (e.g. brown, tan) will mitigate the visual impact of the reflective, gray/white color of new concrete and help the concrete structures blend into the natural surroundings.

Mitigation Strategy #3c

Painting handrail and other metal structures a color similar to the surroundings (e.g. brown, tan or green) will mitigate the visual impact of these structures being added to the natural landscape and help them to blend into the surroundings.

Mitigation Strategy #3d

Locating the larger sized mitigation tree plantings at the top of wash areas, in addition to increasing the quantity of plantings located around wash areas will mitigate the visual impact of the cleared drainage areas in addition to providing immediate habitat for wildlife species.

REFERENCES

Grant R. Jones, David F. Sorey, and Charles C. Scott. 2007. "Applying Visual Resource Assessment for Highway Planning." In *Landscape Architecture Graphic Standards* (pp.130-139). Hoboken, New Jersey: John Wiley & Sons.

Pima County. 2010. *Pima County Roadway Design Manual*. Tucson, AZ: Pima County.

APPENDIX

Table 5
Sample Scenic Quality Evaluation Chart

Key Factors	Scenic Quality Rating Criteria and Score*		
<i>Landform</i>	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops, or severe surface variations or highly eroded formations including major badlands or dunes, or detail features dominant and exceptionally striking and intriguing. 5	Steep canyons, mesas, buttes, cinder cones, and drumlin, or interesting erosion patterns or variety in size and shape of landforms, or detail features that are interesting though not dominant or exceptional. 3	Low rolling hills, foothills, or flat valley bottoms, or few or no interesting landscape features. 1
<i>Vegetation</i>	A variety of vegetative types as expressed in interesting forms, textures, and patterns. 5	Some variety of vegetation, but only one or two major types. 3	Little or no variety or contrast in vegetation. 1
<i>Water</i>	Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape. 5	Flowing or still, but not dominant in the landscape. 3	Absent or present, but not noticeable. 0
<i>Color</i>	Rich color combinations, variety or vivid color or pleasing contrasts in the soil, rock, vegetation, and water. 5	Some intensity of variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element. 3	Subtle color variations, contrast, or interest, generally mute tones. 1
<i>Influence of Adjacent Scenery</i>	Adjacent scenery that greatly enhances visual quality. 5	Adjacent scenery moderately enhances overall visual quality. 3	Adjacent scenery has little or no influence on overall visual quality. 0
<i>Scarcity</i>	One of a kind, unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc. 5	Distinctive, though somewhat similar to others within the region. 3	Interesting within the setting, but fairly common within the region. 1
<i>Cultural Modifications</i>	Modifications add favorably to visual variety (may include ranching or historic features). 5	Modifications add little or no visual variety to the area. 0	Modifications are extensive and scenic qualities are substantially reduced. -4

***Scenic Quality**

Distinctive = 19 or more

Common = 12 to 18

Minimal = 11 or less