

RECLAMATION

Managing Water in the West

Draft Environmental Assessment

12th Street – Avenue A to Avenue B



**U.S. Department of the Interior
Bureau of Reclamation
Yuma Area Office
Yuma, Arizona**

July 2010

Draft Environmental Assessment

12th Street – Avenue A to Avenue B

City of Yuma, Arizona

Prepared for
United States Department of the Interior
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155 West 14th Street
Yuma, Arizona | 85364

July 2010 | Version 3.0

City of Yuma
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***Draft* Environmental Assessment**
12th Street – Avenue A to Avenue B

Project No. 67332

July 2010
Version 3.0

This draft environmental assessment has been prepared in accordance with provisions and requirements of Title 40 Code of Federal Regulations Parts 1500 et seq. relating to the implementation of the National Environmental Policy Act of 1969.

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1.0 Introduction

This environmental assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the United States (U.S.) Department of the Interior’s Bureau of Reclamation (Reclamation) guidelines. It summarizes the environmental effects of implementation of the 12th Street – Avenue A to Avenue B Project (Proposed Action). The City of Yuma plans to improve and enhance the existing transportation level of service (LOS) within the local community with the Proposed Action.

The project area is located along the east–west midsection line of Section 29 in Township 8 South, Range 23 West (Gila and Salt River Base and Meridian Series United States Geological Survey topographical map), within the Yuma city limits. The Proposed Action would provide a new minor arterial roadway connection by widening and improving 12th Street and by providing a connection between Avenue A and Avenue B through the bridging of the East Main Canal, which currently divides 12th Street west of 14th Avenue. Connections and improvements to existing utilities and infrastructure such as sidewalks, curb and gutter, drainage, and multiuse paths along 12th Street would also be completed as part of this project.

Because a portion of the Proposed Action is located on Reclamation-managed land (the East Main Canal), it is subject to review and determination under NEPA (40 Code of Federal Regulations [C.F.R.] Parts 1500 et seq.) and Reclamation’s *NEPA Handbook* (Reclamation 2000). Reclamation is considering the issuance of a “Right-of-Use” authorization to the city of Yuma, to cross land held in fee or right-of-way (East Main Canal) by Reclamation.

This EA describes the Proposed Action, alternatives to the Proposed Action, and potential impacts related to implementation of the Proposed Action. In addition, it sets forth the consultation and public involvement process used in the preparation of this EA.

Throughout this EA, the term “project limits” is used to represent the construction footprint (area of disturbance), while the term “project area” also includes surrounding land outside of but adjacent to the project limits. The term “project study area” encompasses both the project limits and project area. The term “project vicinity” is used to denote a more expansive landscape context.

1.1 Need for the Proposed Action

The City of Yuma’s Proposed Action is needed to improve the connectivity between Avenue A and Avenue B by:

- increasing east–west transportation capacity along 12th Street across the East Main Canal
- improving emergency service access and alternative routes
- improving multiuse path connectivity and recreational access
- complying with the City of Yuma’s *General Plan* (2002) and *Major Roadway Plan* (2005) and the Yuma Metropolitan Planning Organization’s (YMPO’s) *2006–2029 Regional Transportation Plan* (RTP), which was approved in March 2007

Each of these project needs is discussed in the following subsection.

1.1.1 Improve Connectivity between Avenue A and Avenue B

Currently, 12th Street is discontinuous between Avenue A and Avenue B because no bridge crosses the East Main Canal. As a result, 12th Street does not currently function as a local arterial street because it dead ends at the canal. In the project study area, east–west arterial road crossings of the East Main Canal are limited to 8th Street (which is located ½ mile north of 12th Street) and 16th Street (which is located ½ mile south of 12th Street).

The project improvements would allow 12th Street to function as an arterial road, provide an additional east–west arterial road connection between Avenue A and Avenue B, improve the overall area’s traffic capacity, relieve current traffic congestion, and improve emergency service access. In addition, improvements to sidewalks, sidewalk ramps, and curbs—which would be designed to meet Americans with Disabilities Act standards—would enhance pedestrian mobility along the 12th Street corridor.

The following bullets discuss the proposed project improvements in more detail:

- Increase East–West Transportation Capacity Across the East Main Canal and Yuma
Additional east–west arterial road capacity is needed in the project area (City of Yuma 2005). Currently in the project area, crossings of the East Main Canal are limited to the four-lane arterial roads approximately ½ mile north and south (8th Street and 16th Street, respectively) of 12th Street.

Based on 2007 traffic counts, 8th Street and 16th Street, between Avenue A and Avenue B, carry over 19,000 and 27,000 vehicles per day, respectively. The capacity of such roadways at an acceptable level of service (LOS) D is approximately 35,000 vehicles per day (State of Florida Department of Transportation 2002). LOS is a measure of traffic conditions, with a “report card” system that rates LOS A as free-flowing traffic conditions and LOS F as gridlock.

Approximately 100,000 vehicles per day are projected to cross the East Main Canal in 2029 within the study area. Without a bridge across the canal on 12th Street, 8th and 16th streets would be forced to accommodate all east–west traffic in the project study area (YMPO 2006). Currently, the parallel arterial streets to Avenues A and B are experiencing morning and evening peak hour traffic congestion at the 8th and 16th Street intersections. Without improvements to the existing roads, the future demand would exceed capacity by approximately 30,000 vehicles per day (vpd), making traffic conditions overly congested or with gridlock conditions in the area. Although 16th Street is planned to be widened to six lanes (YMPO 2007), this widening alone would not meet the excess travel demand. With the proposed changes, 12th Street can accommodate over 1,200 vpd during peak hour traffic (City of Yuma 2005). By widening 12th Street to two travel lanes in each direction with a median, or a two-way center turning lane and by building the bridge across the East Main Canal, the projected travel demand exceedance on Avenue A and B would be addressed while increasing the LOS by reducing the projected traffic congestion on 8th Street and 16th Street.

- Improve Emergency Service Access and Alternative Routes
To minimize response times, emergency services, such as fire and police, need less congested and more direct access routes in the area. In the event of an emergency, service vehicles currently use 8th Street or 16th Street to cross the East Main Canal and then double back to reach destinations

along 12th Street. A new 12th Street connection would reduce traffic congestion on 8th Street and 16th Street and provide another East Main Canal crossing opportunity. This would allow emergency services to establish additional shorter routes, thereby improving response times, especially in the areas adjacent to 12th Street.

- **Improve Multiuse Path Connectivity and Recreational Access**

Like arterial road connections in the project area, pedestrian and bicycle connections across the East Main Canal are limited to the bridges at 8th Street and 16th Street, which are separated by 1 mile. Therefore, existing multiuse path connectivity needs improvement to allow access to and from the areas west of the East Main Canal. The proposed improvements to 12th Street would provide additional access to the existing recreational infrastructure, add connections to the existing paths along both banks of the East Main Canal, and provide some of the planned multiuse path enhancements planned in the YMPO RTP of 2007.

- **Comply with Future Transportation Planning Requirements**

The City of Yuma's Capital Improvement Project (CIP) program and the YMPO RTP (City of Yuma 2007) call for the improvements specified in this project. The Proposed Action is CIP # 5.9811, and both the City's *Major Roadway Plan* and the RTP call for a minor arterial road with a minimum of two lanes in each direction and a center turning lane, as was reflected in the initial design for this project. Compliance is the result of increasing capacity along 12th Street and by bridging the canal. However, the initial proposed improvements were modified to one travel lane in each direction with a median or center turning lane as a result of public input. The current roadway design and the component of bridging the East Main Canal would still allow the City to meet planning requirements of offering better service to the community in the study area.

1.2 Purpose of the Proposed Action

The purpose of the proposed improvements to 12th Street is to address the needs identified above while increasing capacity and the LOS. The City of Yuma's 12th Street – Avenue A to Avenue B Project would provide an additional east–west arterial road connection between Avenue A and Avenue B, reduce the area's projected traffic congestion, improve the overall area's traffic capacity, improve emergency service access, improve access to the existing recreational infrastructure, provide better facilities that enhance mobility of the disabled community, and, in general, help the City meet its projected transportation needs and offer better service to the community.

This EA provides information needed by the responsible federal official to determine whether to prepare a finding of no significant impact or prepare a more detailed environmental impact statement.

2.0 Description of the Proposed Action and Alternatives

This section discusses the location of the Proposed Action along 12th Street. It also describes the Proposed Action, No-Action Alternative, and the Eliminated Alternative 1.

2.1 Location

The Proposed Action is located entirely within the city limits of Yuma, along the east–west midsection line of Section 29 in Township 8 South, Range 23 West (Gila and Salt River Base and Meridian Series United States Geological Survey topographical map). 12th Street runs perpendicular to the East Main Canal, which bisects 12th Street between Avenues A and B. The East Main Canal is owned by Reclamation and operated by the Yuma County Water Users Association as part of the Yuma Project’s delivery system. It receives water from the Reclamation’s Main Canal. The East Main Canal is a 24-mile-long canal with flows averaging 450 cubic feet per second. It carries water to the Yuma Auxiliary Project Canal.

12th Street is oriented in an east–west direction and currently ends just west of 14th Avenue to the east and just west of the East Main Canal to the west. 12th Street continues east–west from the East Main Canal. The project vicinity is shown in Figure 2-1.

Currently, 12th Street operates as a two-lane roadway with parking permitted on either side. It consists of a 40-foot-wide paved surface with curbs, gutters, and sidewalks in both directions but this transportation infrastructure is not contiguous. From 21st Drive east to the canal, 12th Street is unpaved and does not have curbs, gutters, and sidewalks. Also, Avenue A has one lane in each direction and a median, while Avenue B is a four-lane, major arterial road that parallels Avenue A in a north–south orientation.

12th Street, Avenue A, and Avenue B are located in a residential area of Yuma. The intersection of 12th Street and Avenue B is controlled by traffic signals. One public school, O. C. Johnson Elementary School, is located on the southwestern corner of 12th Street and Avenue A.

2.2 Alternatives Considered in Detail

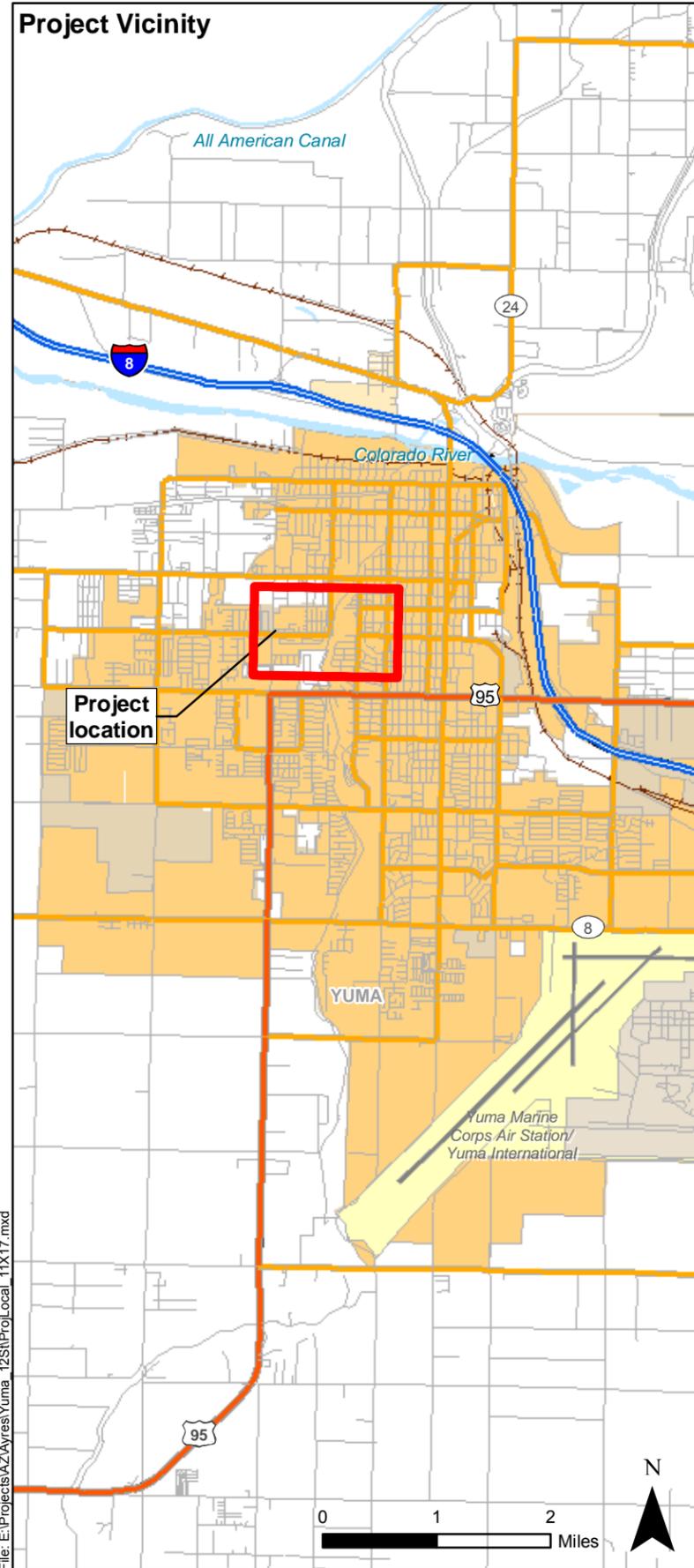
In this section of the EA, an evaluation of the No-Action Alternative and the Proposed Action is presented. An eliminated action alternative is also discussed.

2.2.1 No-Action Alternative

NEPA guidelines require that an EA evaluate the “no-action” alternative in addition to the Proposed Action. The No-Action Alternative provides a basis against which the environmental consequences of the Proposed Action may be compared.

In this EA, the No-Action Alternative assumes no roadway or transportation infrastructure improvements would occur on 12th Street. No bridge would be constructed across the East Main Canal to connect 12th Street, nor would improvements and connections to existing recreational infrastructure or multiuse paths be implemented. No improvements to existing utilities or connections to existing infrastructure would occur; therefore, there would be no ground disturbance or impacts to those resources. In addition, acquisition of residences and subsequent relocations of residents would not occur; therefore, costs associated with these actions would not be required.

Figure 2.1 - Project Vicinity



City of Yuma
12th Street - Avenue A to Avenue B



City of YUMA

 Canal	 Widen to 2 lanes
 Streets	 Construct new bridge
 Project Area	

Project Location



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2.2.2 Proposed Action

Under the Proposed Action, Reclamation, the lead Federal agency, may authorize the City of Yuma to cross land held in fee or right of way for implementation of the City’s proposed 12th Street improvement project. Other components of the Proposed Action are widening 12th Street to two travel lanes with a median or center turning lane, improving connections to surface streets, improving utilities infrastructure, and improving connections to existing recreational multiuse paths and facilities. Information regarding the design of the project is shown in Table 2-1.

Table 2-1. Typical design characteristics of the Proposed Action

Element	Description
12th Street design	
21st Drive to 14th Avenue	Widen 12th Street to two, 12-foot-wide travel lanes, with a 12-foot median or a left/right center turning lane. Widen the bike lane/parkway to 7.5 feet on both sides, with 6-foot-wide sidewalks.
Avenue B to 21st Drive	Widen and improve 12th Street to two, 12-foot-wide travel lanes, with an 18-foot median with a left/right center turning lane. Improve the bike lane/parkway to 7.5 feet on both sides, with 8-foot-wide sidewalks.
14th Avenue to Avenue A	
Bridge design	
Span bridge across East Main Canal	Construct a 106-foot-long, span-type bridge with abutments. The abutments would be supported by drilled shafts placed outside of and adjacent to the canal. The bridge would be constructed with precast, prestressed concrete girders placed directly on the substructure without any interference to canal operations. The structure would be designed in accordance with all requirements of the Yuma County Water Users Association.
Infrastructure design	
Infrastructure/utilities	Construct connections to existing infrastructure such as sidewalks, curbs, and gutters. Construct connections to existing utilities, including water and sewer lines.
Multiuse paths	Provide new access points and construct connections to the multiuse paths along the canal and 12th Street.
Bicycle lanes	Add two 5-foot-wide bicycle lanes to 12th Street with connections to the existing multiuse paths.

Figure 2-2 shows the design of the Proposed Action.

2.2.3 Alternatives Considered but Eliminated

An initial design alternative, referred to as the Eliminated Alternative, included four travel lanes and a median with landscaping. This alternative was presented as the proposed alternative during the July 2008 open house public meeting. Based on comments received, certain design attributes of this alternative did not meet the public’s demand for minimal impacts. Therefore, this alternative was removed from consideration after the initial public comment period and was redesigned. The following is a description of the construction components of this considered but not carried forward for further evaluation.

- Construct an alternative 122.5-foot-long, span bridge with abutments across the East Main Canal. The abutments would be supported by drilled shafts, and no piers or abutments would be placed in the canal. The bridge would be constructed with precast, pre-stressed concrete girders. The

structure would be designed in accordance with all requirements of the Yuma County Water Users Association.

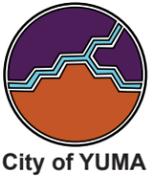
- Widen 12th Street to four 11-foot-wide travel lanes with an 18-foot-wide median. Add two 5-foot-wide bicycle lanes to 12th Street with connections to the existing multiuse paths.
- Connecting Magnolia Avenue to 12th Street.
- Construct connections and improvements to existing infrastructure such as sidewalks, curbs, and gutters and to the existing multiuse paths along the canal and 12th Street.

2.3 Conclusion

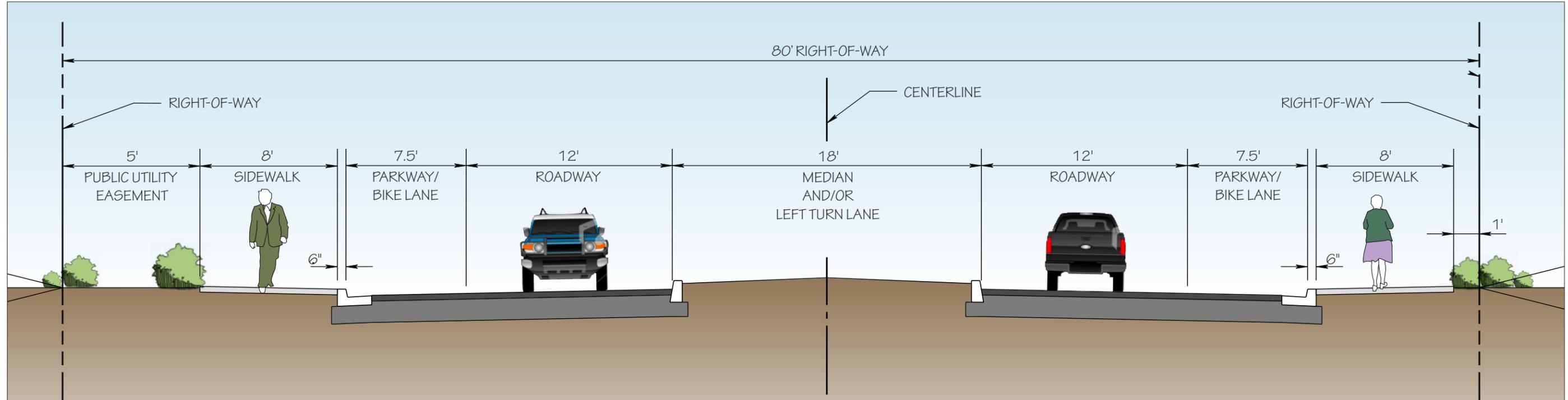
Through the alternatives development and public involvement processes, the Proposed Action and the No-Action Alternative were identified as viable alternatives and carried forward for further study. The Eliminated Alternative was dismissed from further consideration because of a lack of public support. Part 3, *Affected Environment and Environmental Consequences*, contains a discussion of how the Proposed Action and the No-Action Alternative would affect the environmental resources in the project area.

Figure 2-2. Proposed Action design

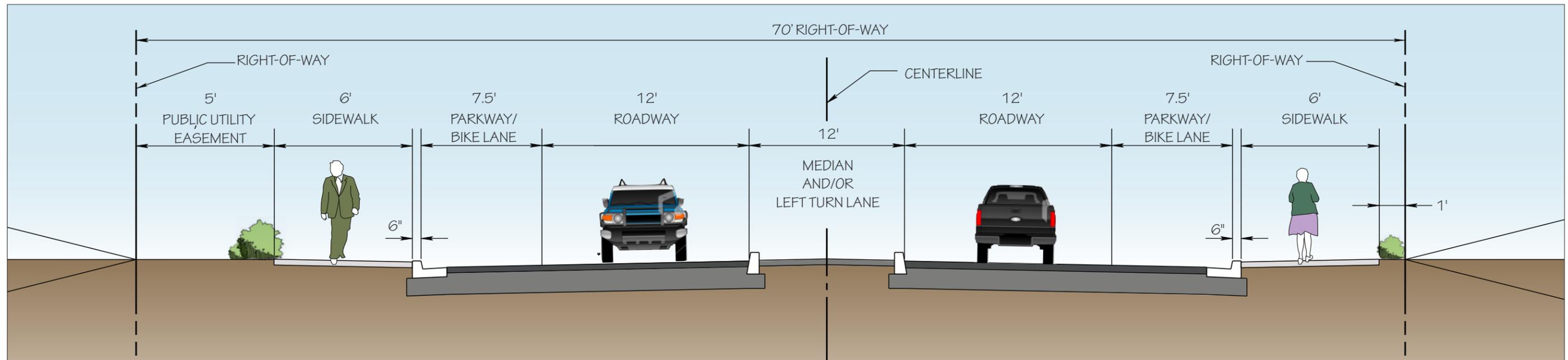
City of Yuma
12th Street – Avenue A to Avenue B



12th Street – Avenue B to 21st Drive and 14th Avenue to Avenue A



12th Street – 21st Drive to 14th Avenue



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3.0 Affected Environment and Environmental Consequences

To comply with Council on Environmental Quality requirements for analytical and concise environmental documents, resources that may be affected by the Proposed Action or that are considered a special concern are described in this part of the EA. An environmental effect, or impact, is defined as any change or alteration to the preexisting condition of the environment produced directly or indirectly by the Proposed Action.

Reclamation evaluated environmental resources in relation to the Proposed Action to determine the potential for both adverse and beneficial effects. Based on the geographic scope of the project, Reclamation determined that the following resources have been eliminated from inclusion because they would not be affected by the Proposed Action:

Prime and Unique Farmland

The project area is designated as an urbanized area and is not defined as prime or unique farmland according to the U.S. Census Bureau; therefore, land meeting this criterion is not subject to consideration under the Farmland Protection Policy Act.

Wild and Scenic Rivers

The Colorado River is the only natural free-flowing water body located near the project study area, but is not listed as a wild and scenic river; therefore, this resource area is not evaluated.

Wetlands/Riparian Zones

Wetlands are areas where the soils are usually inundated with water and riparian areas are found along streams and washes—both support specific vegetation. Since neither of these systems nor supporting vegetation exist in the project area, this resource area is not evaluated.

Reclamation has determined that the following resources have the potential to be affected by the Proposed Action and will be discussed in further detail in this part of the EA.

- aesthetics
- air quality
- biological resources
- cultural resources
- geology and soils
- hazardous and solid waste
- water resources
- land use and ownership
- noise levels
- Indian Trust Assets
- socioeconomics
- environmental justice

In addition to the resources listed above, this part of the EA discusses environmental commitments, irreversible and irretrievable commitment of resources, and cumulative impacts. It also contains a discussion of the No-Action Alternative with regard to each resource area.

3.1 Aesthetics

This section addresses visual resources potentially affected by the Proposed Action. It provides inventories of visual resources in the vicinity and the project study area, including the project scenery or setting, affected sensitive visual resource viewers, and an analysis of the City of Yuma's

metropolitan planning objectives. Included are best management practices (BMPs), or proposed mitigation measures, that would minimize impacts to visual resources.

3.1.1 Affected Environment

The project vicinity of the Proposed Action is located within the Basin and Range Physiographic Province in southwestern Arizona (Brown 1994). The Basin and Range Province is distinguished by isolated, rugged mountain ranges separated by closed desert basins. The local topography of the project area is characterized by broad, flat valleys and sloping plains bisected by the winding Colorado River corridor. Large stands of cottonwoods and willows distinguish the river corridor from the relatively flat surrounding land. The distant Cargo, Muchacho, Chocolate, and Gila Mountain Ranges to the west, north, and east, respectively, provide background character to the natural setting.

The predominant vegetation of the project study area is representative of the Lower Colorado Valley subdivision of the Sonoran Desert (Brown and Lowe 1980). Typically, undeveloped land is characterized by creosotebush/white bursage associations. Developed land typically consists of residential lots and commercial buildings intermixed with cultivated and nonnative vegetation. Agricultural areas surrounding the project area and the river corridor primarily feature fields of citrus trees, vegetables, dates, and alfalfa.

The East Main Canal System provides opportunities for recreational uses and acts as a conduit to existing parks and picnic ramadas. Approximately 2 miles north of the project area, at the terminus of the canal and river corridor, exists the City of Yuma's Gateway and Colorado River Beach Parks. Situated north of the project limits and adjacent to the East Main Canal system are the Carver and Kiwanis Parks. Netwest Park is slightly north of and adjacent to the project area.

Infrastructure and cultural modifications that characterize the visual landscape setting and background character in the project vicinity include 12 kV and 69 kV overhead power distribution lines, and the East Main Canal. Flight operation of the Yuma International Airport and the Navy Air Station which is located within the project vicinity also provide visual character through overhead views of aircraft. The buildings in the project study area provide vertical visual characteristics to the predominantly flat landscape.

The foreground natural viewshed of the project area has been modified by residential development in a relatively flat topography with minimal landscape features or characteristics. The East Main Canal denotes the edge of an upland terrace that rises to the east. Other than that, the project area is relatively flat and slopes gradually to the river corridor to the west.

Viewers that would be affected by the Proposed Action include residents of adjacent homes and recreational users. The land surrounding the project limits along 12th Street contains residential development of various densities. Recreational users of the multiuse paths along the East Main Canal would have views of the bridge structure and roadway.

3.1.2 Environmental Consequences/Impacts

3.1.2.1 Proposed Action

Moderate to high impacts to visual resources are anticipated to occur for most of the project area because of the changes to the existing modified landscape conditions. The Proposed Action would change the visual character by modifying the existing roadway from unpaved to paved, converting

and connecting a minor roadway arterial, and constructing a span bridge. Except for the span bridge, the transportation infrastructure modifications would be at terrain level. These roadway modifications would moderately alter the current visual resources. The Proposed Action would require an existing 69 kV support pole to be moved slightly north of its existing alignment, but this action would not change the visual character in the project area. The primary area of high visual impacts would be the new bridge structure spanning the canal; background and middle ground viewsheds would not be affected. This feature of the Proposed Action would negatively alter the foreground visual character of the canal, especially for recreational users.

During construction, the Proposed Action could negatively affect the visual quality of the project area. Dust and exhaust from equipment would temporarily lower visibility in the project limits, but this condition would end with the completion of construction.

3.1.2.2 No-Action Alternative

With implementation of the No-Action Alternative, no visual resources would be modified or influenced by the Proposed Action; therefore, no impacts to visual resources would result from this alternative.

3.1.3 Best Management Practices

The following BMPs are recommended to mitigate impacts to visual resources under the Proposed Action:

- Design aspects for the transportation and bridge structures would include a “dulled” finish to reduce reflection and minimize the appearance of these new features in the landscape.
- The alignment of 12th Street would follow existing landforms to minimize changes in the landscape.
- Design aspects would mirror existing natural earth tones of the surrounding community to provide visual uniformity.
- Proposed roadway and landscaping would be designed to meet or exceed the City of Yuma’s planning requirements.

3.2 Air Quality

The U.S. Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ) determine the air quality status in designated areas by comparing state or local air quality measurements with the National Ambient Air Quality Standards (NAAQS). Those areas that meet the NAAQS are classified as “attainment areas,” while those that do not meet these standards are classified as “nonattainment areas.” This section evaluates the existing air quality conditions for comparison with impacts from the Proposed Action.

3.2.1 Affected Environment

Because the Proposed Action is located entirely within the city limits of Yuma in a hot and dry environment, visibility is generally good, except for an occasional dust storm. Given the area’s aridity, dust is generated easily and is usually the main source of degraded air quality parameters. The Proposed Action area is located within the Yuma PM₁₀ Nonattainment Area. PM₁₀ is particulate matter with a mean aerodynamic diameter less than or equal to 10 microns. In 1989, 1990, and 1991, the Yuma area exceeded the 24-hour PM₁₀ NAAQS. Because of these air quality violations, ADEQ

completed a State Implementation Plan (SIP) for the Yuma PM₁₀ Nonattainment Area in 1991. Sources of PM₁₀ were determined to be agricultural activity, paved and unpaved road dust, and disturbed areas. These sources are major contributors to PM₁₀ emissions in the Yuma area, which includes the city limits of Yuma, Yuma County, and the city limits of Somerton.

On its Web site (<www.azdeq.gov>), ADEQ describes the current status of the Yuma PM₁₀ Nonattainment Area as follows:

Yuma was classified as a moderate non-attainment area by the Environmental Protection Agency (EPA). A State Implementation Plan (SIP) was sent to the EPA in November of 1991 and a revised SIP was sent to EPA in July of 1994. The control measures in this plan reduced the amount of PM-10 emissions significantly from pre-1991 levels. On August 18, 2002, during a dust storm, Yuma exceeded the established 24-hour average for PM-10 (150 µg/m³) with an average of 170 µg/m³. Studies showed that one-third of the dust came from man-made activities. From this event, it was determined that the highest dust-generating activity came from on-road vehicular travel, the next highest cause was from construction activities (ADEQ 1994).

To be reclassified as being in attainment of the NAAQS, an area must meet the ambient air quality standards for 3 years and develop a plan to demonstrate how it will be able to maintain these standards on a continuing basis. A Yuma area stakeholders group was formed consisting of state, city, county, tribal, and federal agencies. The group also included representatives from law enforcement, agricultural operations, the construction industry, irrigation districts, businesses, and concerned citizens. It developed a Natural Events Action Plan. This plan describes how Yuma will control man-made sources of PM₁₀. This will lessen the impacts that naturally occurring dust storms have on the Yuma area's air quality. The plan also discusses how to teach the public about the health effects of PM₁₀ and informs them of natural dust events that could cause health problems (ADEQ 2004).

To manage and control concentrations of PM₁₀, the following standard practices went into effect in August 2005:

- enactment of a construction site sign ordinance that requires showing dust permits
- development of BMPs for agricultural operations
- enforcement of no trespassing rules on canal roads and speed limits on dirt roads

3.2.2 Environmental Consequences/Impacts

3.2.2.1 Proposed Action

Construction of the Proposed Action would temporarily increase dust emissions during construction. Ground-clearing activities may temporarily create a source of blowing dust that may be exacerbated during periods of high winds. Equipment used during construction activities is usually larger and may increase exhaust emissions in the area. Equipment movement may contribute to increased dust levels. Additionally, construction equipment uses fossil fuels for combustion and this action releases pollutants into the air. Combusted fuel would release byproducts such as carbon monoxide, sulfur dioxide, and other oxides into the ambient air, negatively affecting air quality in the project area.

Although the Proposed Action may cause potentially negative air quality effects during construction, these effects would be temporary in nature and subside after construction.

3.2.2.2 No-Action Alternative

Under the No-Action Alternative, air quality would not be negatively influenced because no construction activity would occur.

3.2.3 Best Management Practices

The following BMPs are recommended to mitigate impacts to air quality resulting from the Proposed Action:

- The City of Yuma should comply with all federal, state, and local dust ordinances, and O2003-49 control ordinance.
- During construction, dust-abatement measures such as watering should be implemented to minimize dust emissions.
- Equipment should be properly maintained to minimize exhaust emissions, and equipment idling would be limited.
- A project information sign and contact phone number for citizens to report dust complaints should be posted at the construction site.

3.3 Biological Resources

This section evaluates impacts from the Proposed Action on natural resources in the project area. Resources include plants and terrestrial and aquatic wildlife species and their habitats.

3.3.1 Affected Environment

The project area is located in the Yuma Desert section of the Sonoran Desert in southwestern Arizona, in the ecotones of the Lower Colorado River Valley. The project area is situated east and approximately 1 mile south of the Colorado River and is located entirely in developed, residential land within city limits. A site visit of the project footprint was conducted on August 17, 2008, to evaluate existing environmental conditions.

3.3.1.1 Climate

The Yuma Desert—Arizona’s southernmost portion of the Sonoran Desert—is very dry, usually receiving less than 3.97 inches (100 millimeters) of rain per year (Brown 1994). This desert is also known for extreme summer temperatures that can reach over 120° Fahrenheit (F). Winter months are milder, with daytime highs averaging about 65° F. Daily temperature variations of 30° to 50° F are common because of the lack of clouds, air moisture, and vegetation cover to mediate the heat. Summer relative humidity readings are low, usually less than 10 percent, reflecting the dry, hot, ambient environment.

The driest month in Yuma is June, with 0.02 inch of precipitation on average. With an average 0.61 inch of precipitation, August is the wettest month. Precipitation usually occurs during the annual monsoon in July through August and in the winter months of December through February. In 2007, average rainfall within in the city limits was 2.95 inches, approximately 1 inch less than the yearly average (NDDC 2008). Because of the high summer temperatures and the scarcity of rainfall; a

limiting resource, habitat succession rates are abnormally slow. In addition, the project limits are at or very near mean sea level (msl).

3.3.1.2 Vegetation

Vegetation in the project vicinity is representative of the Lower Colorado River Valley Subdivision of Sonoran desertscrub and is characterized by broad, alluvial valley floors covered in sparse desert vegetation (Brown 1994). The natural landscape is dominated by creosote bush (*Larrea tridentata*) scrub mixed with white bursage (*Ambrosia dumosa*) at marginal densities on gravelly soils with big galleta grass (*Pleuraphis rigida*) as the primary understory. Cacti species are present but uncommon. The ephemeral washes that bisect the valley floor contain woody xeroriparian species such as blue paloverde (*Cercidium floridum*) and ironwood (*Olneya tesota*) along their margins. Mesquite (*Prosopis glanulosa*) is more common in the terraces that parallel these washes and mark the transition zone to the upland plant community.

In the project area, undisturbed, native vegetation has been replaced with developed land. Cultivated native and nonnative plant species dominate the vegetative character, as well as common Bermuda grass (*Cynodon dactylon*). During the site visit of the project footprint, existing native vegetation consisted of four-winged saltbush (*Atriplex canescens*) and brittle bush (*Encelia farnosa*), which dominated the landscape along the East Main Canal. The age, growth, and density of these plants suggest a recent history of disturbance, probably from current canal maintenance activities. Other than this area, the project limits is largely devoid of vegetation other than cultivated plants found around residences.

3.3.1.3 Noxious Weeds and Invasive Plant Species

Executive Order 13112 of February 3, 1999, requires federal agencies to evaluate the potential for proposed projects to spread or introduce noxious weeds and/or invasive plant species. These nonnative plant species can cause significant changes to ecosystems, upset the ecological balance, and cause economic harm to our nation's agricultural and recreational sectors. Each year, approximately \$23 billion nationwide is lost to the effects of invasive plants on agriculture, industry, recreation, and the environment. An estimated 4,600 acres are invaded daily by invasive plants (Harper-Lore 1999).

During the field visit in August 2008, the project area was surveyed for invasive and/or noxious weeds by a qualified biologist. No state or federally listed noxious and/or invasive plant species were present.

3.3.1.4 Wildlife

The fauna of the project area include a variety of common avian and terrestrial wildlife species. Given the lack of natural habitat to support wildlife species within the project area, species diversity is low and consists of common wildlife. During the site visit, morning doves (*Zenaida macroura*) and rock doves or common pigeons (*Columbia* spp.) were the most dominant avian species. A red-tailed hawk (*Buteo jamaicensis*), a common resident and migrant species, soared above the project area. Although open habitat in the project area is sparse, common mammals seen during the field review include desert cottontail rabbit (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canis lutrans*). Reptile species are represented by western whiptail (*Aspidoscelis tigris*) and zebra-tailed (*Callisaurus draconoides*) lizards.

3.3.1.5 Special-Status Species

Special-status species are those wildlife and plant species that have been listed by federal and/or state agencies as species of concern resulting from many factors, including loss or degradation of supporting habitat or perilously low population numbers. The U.S. Fish and Wildlife Service (USFWS) maintains a list of threatened and endangered wildlife and plant species, as well as species that are candidates or proposed for listing under guidelines of the Endangered Species Act (ESA) of 1973, as amended. In Arizona, the Arizona Game and Fish Department (AGFD) monitors wildlife species of concern (WSC), and the Arizona Department of Agriculture (ADA) provides protection for native plant species under Arizona Native Plant Law (ANPL).

The USFWS Arizona Ecological Services Office requests that information regarding threatened or endangered species for specific projects be obtained from its Web site. The list for Yuma County was obtained and reviewed in preparation of this EA (USFWS 2008). Information was also obtained from AGFD regarding WSC in the project area from the Heritage Data Management System (HDMS). The HDMS includes special-status wildlife and plant species listings for the ESA, WSC, and ANPL protected species found near the project area. The AGFD electronic Project Evaluation Program (PEP) identifies recorded species in the HDMS within 3 miles of the proposed project footprint.

The listed species and their habitat requirements were reviewed for their potential to occur in the project area and to be affected by the Proposed Action. Table 3-1 presents the USFWS list of nine federally listed species that have the potential to occur in the project area, species habitat requirements, and reasons for exclusion from analysis.

Table 3-1. Federally listed species for Yuma County excluded from further analysis and reasons for exclusion

Common name (<i>Scientific name</i>)	Listing status ^a	Habitat requirements	Exclusion justification
Bald eagle – Sonoran Desert population (<i>Haliaeetus leucocephalus</i>)	T	Nests in large trees or cliffs near water (reservoirs, rivers, and streams) with abundant forage Elevation range: varies	No documented nesting or wintering sites occur in or adjacent to project area; species not known to occur
California brown pelican (<i>Pelecanus occidentalis californicus</i>)	Proposed delisted	Coastal land and islands; uncommon transient in lakes and rivers in Arizona Elevation range: varies	Uncommon transient in Arizona near water habitats; species proposed for delisting on February 8, 2008
Lesser long-nosed bat (<i>Leptonycteris curasoae yerbabuena</i>)	E	Mines and rock shelters in Sonoran desert scrub; roost sites usually located near insect foraging areas Elevation range: < 6,000 feet	No roost sites known to occur in project area; no impacts to forage substrate anticipated
Razorback sucker (<i>Xyrauchen texanus</i>)	E	Riverine/lacustrine habitats, generally in slower velocity areas; use backwater and edge habitats Elevation range: < 6,000 feet	Suitable, aquatic habitat not present in project area; species not known to occur

Table 3-1. Federally listed species for Yuma County excluded from further analysis and reasons for exclusion

Common name (<i>Scientific name</i>)	Listing status ^a	Habitat requirements	Exclusion justification
Sonoran pronghorn (<i>Antilocapra Americana sonoriensis</i>)	E	Broad, intermountain alluvial valleys with creosote/bursage scrub and paloverde associations Elevation range: 500 – 2,000 feet	Suitable habitat not present; species not known to occur
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E	Cottonwood/willow and tamarisk associations along rivers and streams Elevation range: < 8,500 feet	Suitable habitat not present; species not known to occur
Yuma clapper rail (<i>Rallus longirostris yumanensis</i>)	E	Freshwater, marsh-type, and brackish water habitats Elevation range: < 4,500 feet	Suitable habitat not present; species not known to occur
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	C	Large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries) Elevation range: < 6,500 feet	Suitable habitat not present; species not known to occur
Flat-tailed horned lizard (<i>Phrynosoma mcallii</i>)	CA	Sandy flats, areas with wind-blown sand with creosote-bursage bush Elevation range: 500 feet	Suitable habitat not present, species not known to occur

Source: U.S. Fish and Wildlife Service, 2008, <www.fws.gov/southwest/es/arizona/Documents/CountyLists/Yuma>

^a E = endangered, T = threatened, C = candidate, CA = conservation agreement

Table 3-2 shows the PEP query results for recorded special-status species in the HDMS that have the potential to occur near the project area.

Table 3-2. Special-status species

Common name (<i>Scientific name</i>)	Listing status ^a	Habitat requirements	Exclusion justification
Western burrowing owl (<i>Athene cunicularia</i>)	SC	Inhabit open deserts, grasslands, and agriculture lands; utilize well-drained soils with gentle slopes as burrows, often near human environments below 10,000 feet	Suitable habitat present; species has potential to occur in the project area
Great egret (<i>Ardea alba</i>)	WSC	Nest in rookeries in trees over 15 feet tall in close proximity to aquatic habitat Elevation range: 100 – 1,500 feet	Suitable habitat not present; species not known to occur
Snowy egret (<i>Egretta thula</i>)	WSC	Marsh-type habitat; ponds, lakes, and rivers Elevation range: < 1,500 feet	Suitable habitat not present; species not known to occur

Source: Arizona Game and Fish Department, 2008

^a SC = species of concern under Endangered Species Act, WSC = wildlife species of concern in Arizona

The USFWS list of protected species in Yuma County, the AGFD PEP results, and special-status species accounts and evaluations are located in Appendix A, *Special-Status Species*.

The only special-status species with the potential to occur in the project area is the Western burrowing owl. The Western burrowing owl was classified as a species of concern under the ESA. Currently, the owl receives protection under the Migratory Bird Treaty Act. Habitat in the project area is not suitable for the other federally listed species or special-status species identified in Tables 3-1 and 3-2 primarily because the project area is developed. Only the Western burrowing owl has a potential to occur in the project area. For this reason, this species will be evaluated in further detail.

Western burrowing owl (*Athene cunicularia*)

The Western burrowing owl is one of the most interesting birds of prey in Arizona and inhabits open areas in deserts, grasslands, rangelands, and land used in conjunction with agriculture. Its species name, *cunicularia*, is Latin for “miner,” in reference to the owl occupying underground burrows as habitat. The owls utilize well-drained soils with gentle slopes and usually sparse vegetation. They often occupy areas near human habitation, such as golf courses, undeveloped lots, and airports, and appear to have a high affinity for nesting along the edges of agricultural land (Dechant et al. 1999). They often select burrows associated with grasslands or habitat with a shallow understory that allows foraging from a short perch. Preferred habitat consists of creosote/white bursage complexes, desert scrub, and agricultural land.

Western burrowing owls are highly adaptive and occupy a variety of burrows excavated by small mammals, often along the edges of active ground squirrel colonies. They are also found in burrows abandoned by other mammals such as badgers, foxes, and coyotes. Because they do not dig their own burrows, the owls also use natural cavities in rocks or fissures created by severe erosion. During migration, Western burrowing owls utilize satellite burrows as shelter and protection from predation. Burrow selection is associated with prey abundance and availability (Conway and Ellis 2004).

Burrowing owls start breeding in March and start to lay clutches of five to seven eggs. The female incubates the eggs and remains in the burrow, being fed by the male through the brooding period. The eggs hatch after an average of 25 days of incubation, and the young fledge from the nest after about a month (Ehrlich et al. 1992). During this time, both parents assist in feeding their young.

Western burrowing owls are opportunistic predators, foraging on a variety of arthropods, lizards, small mammals, and doves or other small birds (Dechant et al. 1999). They may forage in daylight or nocturnally, and appear to be the most active at first light. Active burrows are usually easily to identify because the birds are messy housekeepers, often decorating the outside with prey remains like bones and feathers. The owls often cache their prey in their burrow.

The owl has experienced widespread declines in its range and abundance, primarily due to loss or fragmentation of suitable habitat and the lack of available burrows. Reduction in population is also attributed to the control or extermination of colonial burrowing mammals. Widespread development of open rangelands and agricultural fields in recent times has affected burrowing owl populations. For these reasons, the Arizona Burrowing Owl Working Group developed the *Burrowing Owl Project Clearance Survey Protocol for Landowners* (Appendix A). This management tool is designed to assist recovery of the species.

Population Analysis in the Project Area

In the project area, the Western burrowing owl is known to occur, and suitable habitat exists along the open land associated with the peripherals of the East Main Canal system managed by Reclamation. During the field visit, the project limits were surveyed for the occurrence of burrows suitable for utilization by the owl. No burrows were detected and no owl sightings were recorded. No burrowing mammal colonies were present, nor were other potential burrow sites. Prey sources of reptiles and arthropods were common, and doves were abundant because the canal provides a water source utilized by this prey species.

3.3.2 Environmental Consequences/Impacts

3.3.2.1 Proposed Action

Vegetation

The Proposed Action would have no impact on vegetation in the project area because the area is primarily devoid of vegetation within the project footprint. The land in the project area is developed, and what native vegetation was once present has been replaced with cultivated plant species.

During the field visit, the project area was surveyed for invasive or noxious weeds; none were recorded. For this reason, this project would not promote the establishment of invasive or noxious weeds.

Wildlife

The Proposed Action would have little effect on the common wildlife in the area. Wildlife does exist in the project area; however, because of the ecology of the wildlife species and nature of the construction project activities and methods, the wildlife in the area would naturally avoid the construction area. With the implementation of mitigation measures and BMPs, this project would have a minimal effect on wildlife.

Special-Status Species

The Proposed Action would have no potential effects on any federally listed species because such species are not known to occur in the project area, and/or habitat to support the species does not exist. The Proposed Action may have direct and indirect impacts to the Western burrowing owl, a federally protected species of concern. The Proposed Action would have no effect on any other listed special-status species or required habitat because such species are not known to occur in the project area and because habitat to support special-status species does not exist the project area.

Western burrowing owl

In the project area, the Western burrowing owl is known to occur in land along the East Main Canal and may experience short-term effects to nesting and foraging habitat from construction activities associated with the Proposed Action. Bridge construction would disturb vegetation within the construction footprint. In addition, the Western burrowing owl may be directly and indirectly affected by proposed bridge construction activities. The potential for direct mortality exists if an owl remains in its burrow and is crushed by equipment associated with this project, especially during breeding and brooding when the female remains in the burrow. Construction may directly affect the owl's forage source of burrowing mammals under the same scenario.

The Proposed Action may indirectly affect the owl if construction activities remove burrows from potential utilization for shelter or cover or disturb land for burrowing mammals, a source of prey as well as burrows. This would indirectly affect the recovery of the species.

With the implementation of mitigation measures and BMPs, this project would have minimal direct or indirect effects on the Western burrowing owl.

3.3.2.2 No-Action Alternative

Under the No-Action Alternative, biological resources would not be negatively influenced because no construction activities would occur.

3.3.3 Best Management Practices

The following BMPs are recommended to mitigate impacts to biological resources under the Proposed Action:

- All disturbed soils that would not be landscaped or otherwise permanently stabilized by construction would be seeded using species native to the project vicinity.
- To prevent the introduction of invasive species seeds, all earth moving and hauling equipment should be cleaned free of dirt and debris at the contractor's storage facility prior to entering the construction site.
- If personnel involved with the construction of the project were to encounter any federal, state, or special-status species, work would stop and the Reclamation environmental office would be contacted immediately at (928) 343-8100.
- The City of Yuma should employ a biologist to complete a preconstruction survey for Western burrowing owls in accordance with the *Burrowing Owl Project Clearance Survey Protocol for Landowners* within 90 days prior to construction activities. The biologist should possess a Western burrowing owl survey protocol training certificate issued by the Arizona Game and Fish Department. In general, if Western burrowing owls and/or active burrows are identified during the preconstruction surveys or during construction, no construction activities should take place within 100 feet of any active burrow. If the burrow is within 100 feet of an active construction site, construction should cease until the owl can be removed by an authorized agent.

3.4 Cultural Resources

An initial assessment of cultural resources was completed for this project to comply with NEPA and the National Historic Preservation Act (NHPA) of 1966, as amended. The project involves bridging the East Main Canal, which is owned by Reclamation. Because of this federal involvement, the undertaking is subject to Section 106 of the NHPA. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and afford the State Historic Preservation Office (SHPO) and other interested parties the opportunity to comment on such undertakings.

Historic properties include prehistoric and historic districts, sites, buildings, structures, or objects included in or eligible for inclusion in the National Register of Historic Places (National Register). Historic properties may be eligible for nomination to the National Register if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of the following criteria:

- Criterion A – be associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B – be associated with the lives of persons significant in our past
- Criterion C – embody the distinctive characteristics of a type, period, or method of construction; or represent the work of a master; or possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction
- Criterion D – have yielded, or may be likely to yield, information important in prehistory or history

The area of potential effect (APE) includes the project study area as defined in Part 1.0, *Introduction*, which encompasses both the project limits (i.e., the construction footprint/area of disturbance) and the project area (i.e., surrounding land outside of but adjacent to the project limits). The project study area generally includes the current 12th Street corridor from Avenue A to Avenue B. As the project advances, the project APE may require revisions.

An executed programmatic agreement (PA) regarding management of the Yuma Irrigation Project (YIP) was developed among Reclamation, the Arizona SHPO, the California SHPO, Yuma County Water Users Association, Unit “B” Water Irrigation and Drainage District, Bard Water District, and Imperial Irrigation District (refer to Appendix B, *Cultural Resource Information*).

3.4.1 Affected Environment

A Class I records search was conducted on February 11, 2009, to support the Proposed Action. The records search examined the APE as well as a 1-mile buffer. The results indicated that the APE has not been previously surveyed for cultural resources. The search yielded 10 previous projects (Table 3-3), 4 archaeological/historical sites (Table 3-4), and 167 historic buildings or structures (Appendix B, *Cultural Resource Information*) within the 1-mile buffer around the APE. Data were unavailable for one previous survey: BLM-050-92-54.

Twenty-two of the historic buildings or structures are individually listed on the National Register as a part of the Yuma Multiple Resource Area (MRA). Eighty-three historic buildings or structures are listed as contributing elements of the Century Heights Conservancy Residential Historic District; this district was listed on the National Register in October 1988. Of the remaining historic buildings or structures, 52 are noncontributing elements to the overall eligibility of the Century Heights Conservancy Residential Historic District and 10 were not evaluated for National Register eligibility. Note that the Century Heights Conservancy Residential Historic District lies within the Yuma MRA.

Table 3-3. Previous projects identified within 1 mile of the area of potential effects

Project number	Description
BLM-050-97-25	Dredging activities
BLM-050-92-54	No information available
1996-197.ASM	Yuma East Main Canal (pedestrian and bike pathway)
1992-151.ASM	Yuma: 12th Street Waterline
2000-808.ASM	SBA Yuma Cellular Tower 2
2001-153.ASM	32nd Street-Arizona Avenue
1995-382.ASM	MCAS Yuma Historical and Archaeological Resources Protection Plan
67-I.SHPO	Yuma Multiple Resource Area
247-I.SHPO	Yuma Century Heights Conservancy Residential Historic District
4399-R/35-I.SHPO	Survey of US 95 and Interstate 8 (Business Road) near Yuma

As a result of the previous surveys, one site (AZ X:6:65 [ASM]) has been previously noted within the APE. This site is the historic East Main Canal, which is summarized in Table 3-4.

Table 3-4. Sites identified within 1 mile of the area of potential effects

No.	Site number	Site name	Site type	National Register ^a eligibility (Criterion)
1	AZ FF:9:17 (ASM)	State Route 80	Road	Eligible (D)
2	AZ X:6:65 (ASM); AZ X:5:8 (ASM)	East Main Canal	Canal	Eligible (A, C)
3	AZ X:6:71 (ASM); AZSITE number 14398	None	Foundations of ten dwellings and one commercial building	Noncontributing element(s) of the Century Heights Conservancy District
4	AZ X:6:87 (ASM)	Thacker Lateral Canal	Canal	Not eligible

^a National Register of Historic Places

3.4.2 Environmental Consequences/Impacts

3.4.2.1 Proposed Action

The use of federal funds and Reclamation permit(s) for this undertaking requires compliance with Section 106 of the NHPA. Section 106 requires that the City of Yuma take into account the effects of their undertaking on historic properties and afford the SHPO and other interested parties a reasonable opportunity to comment.

To date, the East Main Canal is the only identified cultural resource located within the APE. In 1992, Reclamation conducted a sample inventory of the features constituting the YIP to record a representative sample of features sufficient to assess the National Register eligibility of the system.

This resulted in concurrence between Reclamation and the Arizona SHPO that the YIP as a whole is National Register eligible under Criteria A and C. Sixty-three features recorded during the sample inventory were found to be contributing elements to the eligibility of the system. One of the features is the East Main Canal. The East Main Canal feature itself would not be affected, but the canal banks would be used to support the span-type bridge structure and approaches. The executed PA regarding YIP management stipulates that the portion of the East Main Canal within the APE that would be affected by the Proposed Action must be documented and photographed before and after construction using a standardized form developed by Reclamation (refer to the *Programmatic Agreement* located in Appendix B, *Cultural Resource Information*, for further details).

3.4.2.2 No-Action Alternative

Under the No-Action Alternative, no project-related adverse effects would affect any archaeological or historic sites located within the project APE because ground disturbing activities that may affect these resources would not occur.

3.4.3 Best Management Practices

The following BMPs are recommended:

- Because the project area has undergone previous disturbance, Reclamation determined that a cultural resources survey is not required. The SHPO concurred with this determination (Collins [SHPO] to Dale [Reclamation] signed April 10, 2010) (Appendix B). As stipulated in the YIP PA, the portion of site AZ X:6:65 (ASM), a historic canal, within the APE will be photographed and documented prior to construction.
- The City of Yuma should consult with Reclamation’s Yuma Area Office Environmental Manager at least 10 days prior to the start of construction in order to ensure proper documentation of the East Main Canal is carried out in accordance with the YIP PA.
- If previously unidentified cultural resources were to be discovered during construction of the project, the contractor should stop work and notify the Reclamation Environmental Manager immediately at (928) 343-8100 and should take all reasonable steps to secure the preservation of those resources.

3.5 Geology and Soils

This section describes the geology and soil types in the project area that may be influenced by the Proposed Action.

3.5.1 Affected Environment

The geology of the project area consists primarily of alluvial deposits of sand, silt, and gravel resulting from past depositional activities in the Colorado River Basin. The bedrock is located at depths more than 3,000 feet below present-day ground level and consists primarily of granite, schist, and conglomerates.

The three main soil classifications in the project area are identified as Holtville clay, Rosita sand, and Superstition sand. A soil map depicting these soils in conjunction with the project footprint is located in Appendix C, *Soil Survey Map*. Holtville clay soils are well-drained soils found in floodplains between 80 to 600 feet above msl. Parent material consists of mixed alluvium with slopes of less than

1 percent. Typical profile consists of clays from 0 to 23 inches and stratified, silt-clay loam from 23 to 80 inches. This soil has a moderately low to moderately high capacity for water retention.

Rosita soils are deep and somewhat excessively drained. Typically, Rosita soils occur on sand dunes with slopes of 0 to 2 percent. These soils have low available water capacity and rapid permeability, making surface runoff slow with a slight chance of erosion. The typical profile is sand from 0 to 60 inches.

Superstition sand soils are deep and somewhat excessively drained. Typically, they have light brown loamy sand and subsurface layers about 23 inches thick and occur on terraces and mesas with slopes of 0 to 2 percent. These soils usually have sand containing carbonate, making this soil moderately alkaline. Superstition sand soils have slow surface runoff with a slight chance of erosion. However, aeolian erosion can be severe, when occurring. Typical profile is sand from 0 to 60 inches.

The project vicinity is located within the Zone 4 seismic hazard area as determined by the U.S. Geological Survey. The Yuma region has the greatest risk of earthquake-induced ground shaking within Arizona (City of Yuma 2002). This threat is due to the proximity of the San Andreas Fault system that runs through California. The project area is roughly 40 miles east of the primary San Andreas Fault and slightly north of the Algodones Fault. The Algodones Fault roughly passes through Yuma Valley, within 6 miles of the city of Yuma to the south. It can be traced over a distance of 310 miles, from the Salton Sea Trough south to the Sea of Cortez. The Algodones Fault appears to be a continuation of the San Andreas Fault.

3.5.2 Environmental Consequences/Impacts

3.5.2.1 Proposed Action

The Proposed Action may have short-term direct and indirect effects to the local soil composition. Ground disturbance by construction activities could potentially result in negative effects to soil properties in the project area and may increase the potential of soil erosion. However, because the natural alluvial soil composition would help minimize the risk of soil erosion, impacts may be reduced through the use of standard erosion control devices. There are no apparent obstacles with respect to topography, soil type, and geology. Although there is a potential for seismic activity in the project area, the potential for surface rupture is minimal because of the surface sand thickness.

3.5.2.2 No-Action Alternative

Implementation of the No-Action Alternative would not affect or change the local geology or soil properties in the area because ground disturbing activities that may affect these resources would not occur.

3.5.3 Best Management Practices

The following BMP is recommended to mitigate impacts to geology and soil resources under the Proposed Action:

- Disturbed soils should be compacted tightly in order to prevent any excess erosion.
- The design of the structures should account for the known seismic hazards.

3.6 Hazardous and Solid Waste

This section describes and identifies hazardous materials and solid waste that have the potential to occur in the project area that may be affected by the Proposed Action.

3.6.1 Affected Environment

Most of the regulations for the management of materials that are considered hazardous for the human environment are governed by the Occupational Safety and Health Administration (OSHA). OSHA provides guidance regarding handling hazardous and flammable liquids and gases, storing these materials, and providing employee education and awareness programs.

3.6.2 Environmental Consequences/Impacts

3.6.2.1 Proposed Action

Construction of the Proposed Action would create relatively small quantities of construction waste that would require appropriate disposal. Surface contamination could occur from accidental spills of petroleum-based products, as well as other potentially hazardous materials used during construction. This potential would be reduced by implementing good housekeeping practices and providing prompt attention to minimize a spill, should it occur. Although spills are not anticipated, they can easily be mediated through the implementation of a site-specific contingency plan.

Nonhazardous solid waste is generally described as biodegradable materials such as food, garbage, recyclable materials, construction and demolition waste, wood, etc. Implementation of the Proposed Project would require similar types of solid waste materials for construction and create solid waste by-products.

3.6.2.2 No-Action Alternative

Implementation of the No-Action Alternative would not create any ground disturbing activities that may affect hazardous materials in the area nor produce solid waste that may be the byproduct of construction activity. Therefore, there would be no change to existing conditions.

3.6.3 Best Management Practices

The following BMPs are recommended to mitigate any potential effects on hazardous or solid waste associated with the Proposed Action:

- A site-specific contingency spill plan should be developed and implemented. The plan should consist of reporting guidelines in the event of a spill, good housekeeping techniques, and employee training in the use of required equipment and proper handling of potentially hazardous materials.
- If previously unidentified or suspected hazardous materials are discovered or encountered during construction along the East Main Canal, construction activities in the area should stop and the Yuma County Water Users Association should be contacted as outlined in the plan.
- Construction equipment should be refueled in designated areas only in accordance with the Stormwater Pollution Prevention Plan (SWPPP).
- General housekeeping techniques and routine construction refuse management and re-cycling would minimize impacts to resources.

- If previously unidentified or suspected hazardous materials are discovered or encountered during construction

3.7 Water Resources

This section discusses the surface and groundwater resources in the project area that may be affected by implementation of the Proposed Action.

3.7.1 Affected Environment

The project area is located in the Colorado-Lower Gila River watershed and contains the lower portion of the Colorado River and the Lower Gila River commencing below the Gila River Painted Rock Dam drainage area.

3.7.1.1 Surface Water

The project area receives surface water primarily from the Lower Colorado River. Colorado River water allocations are based on a complex set of federal regulations and laws known as the “Law of the River.” This document defines the water users and water allocations for these downstream users through legal agreements (Colorado River Commission of Nevada 2006). Reclamation controls water releases and operates the dams along the lower Colorado River based on the allocations for downstream water user requirements. The water releases from the dams include water delivered to Mexico and the three lower basin U.S. states: Arizona, California, and Nevada.

Besides the Lower Colorado River, Reclamation’s Main Canal water delivery system is in the project vicinity and contains the East Main Canal conveyance system, which crosses the project area. Water from the All American Canal is diverted into the East Main Canal for delivery to the Valley Division, a conduit to supply and irrigate land south of Yuma to the border with Mexico.

3.7.1.2 Groundwater

Water from rainfall eventually seeps into the ground and occupies the interstices of soil layers and slowly migrates to underground conveyances called aquifers. A few of these large gravel aquifers, collectively known as the Yuma Basin, underlie the project study area. The level from the top of the soil to the top of the water deposit is known as the water table depth. In the Yuma Basin, these water table depths average 80 feet in the valley and have a range from a few feet to more than 800 feet on the mesas (Arizona Department of Water Resources [ADWR] 1998). These high water table levels are attributed to the proximity to the Colorado River system and irrigated agricultural land use in the Yuma Valley located in the project area.

Groundwater is generally obtained through wells and pumped to the surface; it is the secondary source for drinking water.

3.7.1.3 Water Quality

Surface water is the primary source of drinking water, and is usually of better quality than the salt- and nitrate-laden groundwater that is harder to treat. Within the project study area, the City of Yuma treats and supplies thousands of gallons of Colorado River water per day for consumption (Yuma County 2006).

ADEQ conducted a baseline study to assess the groundwater quality of the Yuma Groundwater Basin (YGB) in 1994. This study found that the groundwater displayed characteristics of other wells

sampled in this basin and that it did not contain negative dominant water chemistry. ADWR concluded that the YGB groundwater is chemically similar to the Colorado River water. The data collected and analyzed of the YGB water supported drinking water usages; however, residents may prefer to use treated water for consumption (ADWR 1998).

3.7.1.4 Jurisdictional Waters

The U.S. Army Corps of Engineers regulates potential impacts to waters of the United States, also known as jurisdictional waters. The East Main Canal is the only potential jurisdictional water identified in the project area.

3.7.2 Environmental Consequences/Impacts

3.7.2.1 Proposed Action

The Proposed Action's impacts on water resources are anticipated to be minimal, with little to no changes to the local area drainage patterns. Project components would require use of water resources during construction; however, this demand would be removed upon completion of construction. Potential impacts to surface water could include water quality degradation. Although highly unlikely, spills from construction activities could migrate into surface water conduits or infiltrate the groundwater, contaminating the source. If a spill were to occur, the impacts to water resources could be minimized with immediate response and clean-up procedures.

No construction components of the Proposed Action would affect waters of the United States, which are jurisdictional and regulated by the U.S. Army Corps of Engineers. The span bridge is designed to cross the East Main Canal without contacting the canal water.

3.7.2.2 No-Action Alternative

Implementation of the No-Action Alternative would not entail any construction activity; therefore, no impacts to surface water, groundwater, water quality, or jurisdictional waters would occur.

3.7.3 Best Management Practices

The following BMPS are designed to minimize any potential effects to water resources under the Proposed Action:

- The development and implementation of a project-specific SWPPP would reduce potential negative effects to water resources.
- During construction, no refueling equipment should be permitted within 100 feet of the East Main Canal or any other surface water drainage or conveyance system.
- The City of Yuma should provide provisions for immediate spill response, and provide containment kits for petroleum-based products such as oils, solvents, or other chemicals.
- The City of Yuma should ensure that chemicals and petroleum products are disposed of properly to prevent products from entering surface water or groundwater.
- Fill materials would come from a known clean source.

3.8 Land Use and Ownership

The study area for the land use inventory and analysis encompasses 0.25 mile surrounding the proposed project limits. The analysis describes direct effects to land use and compares those potential project effects with applicable municipal planning documents for conformity.

3.8.1 Affected Environment

Land use in the study area is approximately 93 percent residential, ranging from low-density single-family development to high-density apartments, town homes, and trailer parks. Additional land uses in the study area include public (O. C. Johnson Elementary School and detention basins), active recreation (multiuse trails, Netwest Park), passive recreation (bird watching), commercial, light industrial, and utility infrastructure (Reclamation's East Main Canal). The study area is largely built out, and is characterized by established residential neighborhoods. Figure 3-1 depicts land use in the study area.

Land owners in the study area consist of Reclamation, the City of Yuma, and private entities. Reclamation has jurisdiction over the East Main Canal. The City of Yuma owns the right-of-way along Avenues A and B, 12th Street, certain detention basins, and other major cross streets. The remaining land in the study area is privately owned.

The study area is addressed in four municipal planning documents: the *City of Yuma 2002 General Plan*, the *City of Yuma's Major Roadway Plan* (2005), the YMPO RTP (2007), and the *Yuma County 2010 Comprehensive Plan* (2006).

The study area is also addressed in the *Yuma County-City of Yuma Joint Land Use Plan* (City of Yuma 2005a). The JLUP is reflected in both the *City of Yuma 2002 General Plan* and the *Yuma County 2010 Comprehensive Plan*. Planned land use largely conforms to the existing uses: a mixture of low-, medium-, and high-density residential accompanied by some open space and public land. In both the *City of Yuma 2002 General Plan* and the *2010 Comprehensive Plan*, 12th Street within the project limits are planned as five-lane roads.

The *City of Yuma's Major Roadway Plan* shows 12th Street as a minor arterial street—defined as a minimum four-lane street with bike lanes and medians that accommodates longer trips within the community and does not usually enter identifiable neighborhoods. The plan also identifies the need to connect 12th Street over the East Main Canal. In the RTP, 12th Street is shown as a future urban collector street, connecting Avenues A and B, with the recommendation to widen to five lanes and add bike lanes. This project is also recommended for the 2007–2011 time frame within the RTP.

3.8.2 Environmental Consequences/Impacts

3.8.2.1 Proposed Action

The Proposed Action would directly affect adjacent land use by permanently converting residential and open space parcels into a transportation facility. However, the conversion of 2.07 acres of residential property from Magnolia Village, and the 1.77 acres of land in the Thomas Addition, and of 0.17 acres of open space from Netwest Park would not likely change the residential character of the area. Netwest Park would continue functioning as a park by providing the level of recreational amenities to the community.

Because 12th Street is shown in the four municipal plans as a future arterial or collector street with at least four lanes, the Proposed Action conforms to the intent of these plans by increasing east/west capacity along 12th Street. In addition, the project conforms to the *City of Yuma's Major Roadway Plan* by providing connectivity to Avenues A and B by bridging the East Main Canal. Finally, the project would maintain the connectivity of the multiuse paths that border the East Main Canal—the paths would remain part of the urban linear park system as designated in the *City of Yuma 2002 General Plan*.

3.8.2.2 No-Action Alternative

Under the No-Action Alternative, no new right-of-way would be acquired and no changes in land use would occur. Therefore, the No-Action Alternative would not affect land use in the project area. However, 12th Street would remain disconnected by the East Main Canal, which would not allow connectivity or increase capacity of the traffic flow between Avenues A and B, nor would it relieve current traffic congestion. Therefore, the No-Action Alternative would not conform to applicable planning documents.

3.8.3 Best Management Practices

No BMPs are proposed to mitigate impacts to land use and ownership.

3.9 Noise Levels

A qualitative noise evaluation was conducted for the Proposed Action. The qualitative evaluation considered the relative changes in traffic volumes, roadway configuration, and estimated noise levels for the existing condition and the future condition with the Proposed Action. No noise modeling or ambient noise measurements were conducted for this evaluation because it is locally funded and a previous noise study in the project area is valid (City of Yuma 2007). The evaluation was based on available information and standard properties of environmental noise. This project is planned to be constructed with local funding. Should the anticipated funding source change to include state or federal funding, then a complete noise analysis with modeling would need to be conducted.

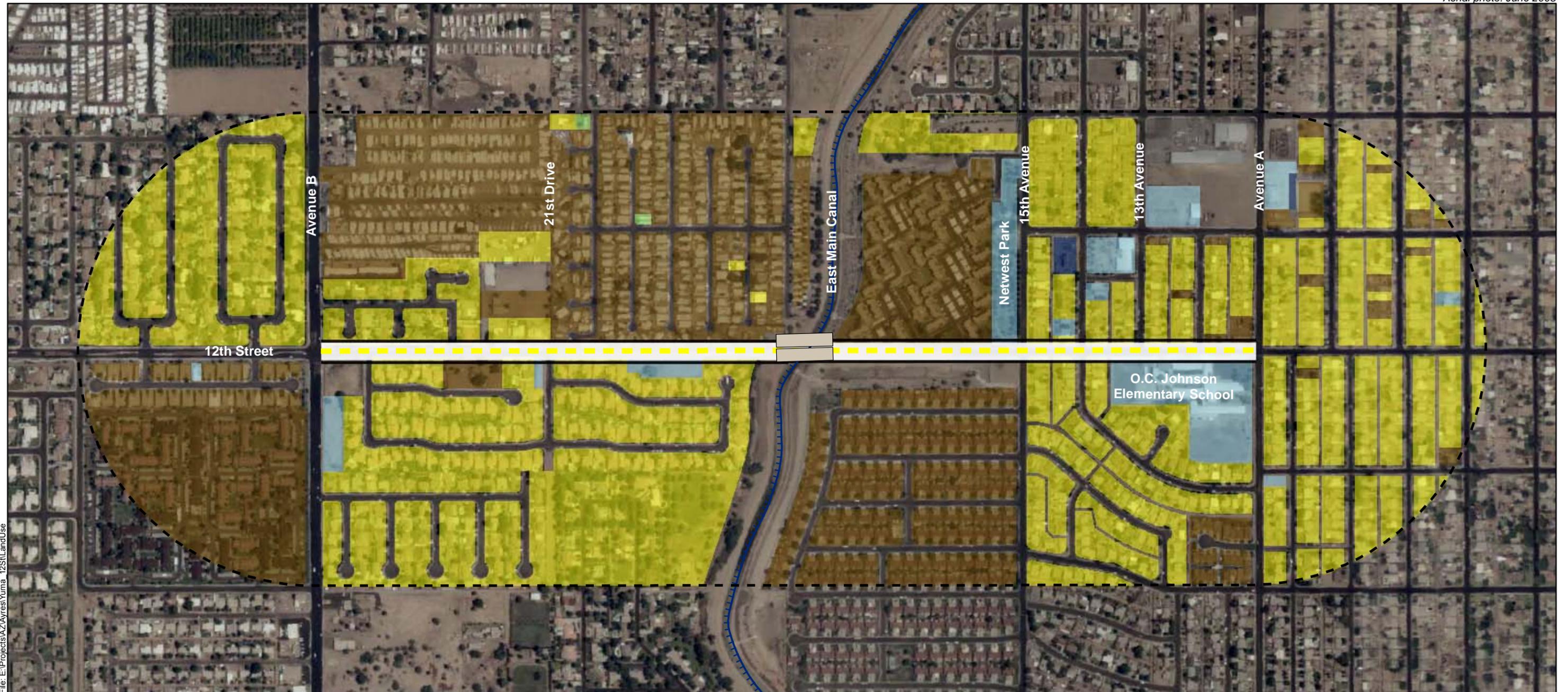
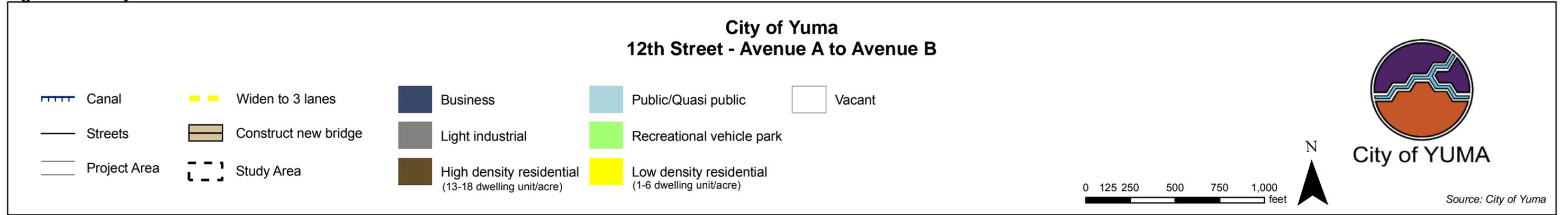
3.9.1 Affected Environment

3.9.1.1 Noise-Sensitive Land Uses

Existing land uses along the 12th Street corridor between Avenue A and Avenue B consist of single-family homes, multifamily homes, a mobile-home complex, a park, and a school. All of these land uses are considered noise-sensitive and are included in the category of land uses eligible for noise abatement under federal regulations and state guidelines. The corridor is fully developed, with no undeveloped parcels of land adjacent to the 12th Street alignment.

Currently, 12th Street is discontinuous between Avenues A and B, with the East Main Canal bisecting 12th Street with no bridge access across the canal. The existing 12th Street runs from Avenue B on the western end of the project area to approximately 0.25 mile to the east to connect with 21st Drive. On the eastern end of the project area, 12th Street runs from Avenue A, the eastern project limit, to approximately 0.38-mile to the west to connect, just past 14th Avenue, with the apartment complex between Netwest Park and the East Main Canal. The 0.38-mile corridor between the two sections of roadway is currently reserved for the future roadway.

Figure 3.1 - Project Area Land Use



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3.9.1.2 Existing Noise Sources

The primary noise source in the project area is traffic on the existing sections of 12th Street and on Avenues A and B, the adjacent arterial roads. Because the existing road is discontinuous, existing noise levels vary throughout the corridor, with higher noise levels in the western and eastern portions of the corridor near the adjacent arterial roads, and lower noise levels in the center of the corridor. Based on existing traffic volumes in the project area cited in the City of Yuma's *Neighborhood Traffic Study* estimated noise levels in the project area range from 55 to 60 decibels (dBA) in the eastern and western ends of the project area, and from 50 to 55 dBA in the central portion of the project area (City of Yuma 2007).

3.9.2 Environmental Consequences/Impacts

3.9.2.1 Proposed Action

Construction Noise

Temporary noise impacts may be experienced during the construction of any part of the Proposed Action. Data on this project's construction schedule and equipment use is not available; therefore, certain assumptions were made to predict the approximate noise levels at the right-of-way line. These predictions are based on the loudest equipment expected to be used during each construction stage of a typical roadway project. Data on construction equipment noise are available from the U.S. Department of Transportation's *Highway Construction Noise: Measurement, Prediction and Mitigation* (1977).

Preliminary estimates of construction noise range from 85 to 95 dBA at the right-of-way line, with the highest noise levels occurring during the grading/earthwork phase of construction, which usually occurs early in the construction process. The results of the preliminary estimates indicate that sensitive receivers could be affected by construction noise since they are immediately adjacent to the right-of-way.

Future Noise Levels

Traffic projections from YMPO show that traffic volumes near the project area are expected to double over the next 20 years. East–west travel demand on 8th Street and 16th Street, the arterial roads 0.5 mile to the north and south of 12th Street, respectively, is projected to increase from 46,000 vehicles per day in 2007 to over 100,000 vehicles per day in 2029. The planned bridge crossing and roadway improvements to 12th Street are expected to accommodate some of that future travel demand across the East Main Canal between Avenues A and B. Assuming that the improved 12th Street would accommodate 25 to 30 percent of the future travel demand, the future traffic volumes on 12th Street would range from 25,000 to 30,000 vehicles per day.

Using the Federal Highway Administration-approved TNM 2.5 Look-up Tables, along with available information and standard assumptions, the future noise levels are estimated to range from 60 to 65 dBA at the existing residences along the improved 12th Street. Most of the residences currently have privacy walls along the 12th Street right-of-way, which would effectively reduce noise levels at the properties (USDT 1995).

3.9.2.2 No-Action Alternative

Implementation of the No-Action Alternative would not change the existing noise levels in the project area; therefore, no impacts or changes the existing ambient noise levels would occur.

3.9.3 Best Management Practices

Based on the estimated future noise levels along the improved 12th Street, noise abatement would not be warranted; however, during all construction phases, hours of operation limits would be warranted. This assumption is based on estimated noise levels, without actual noise modeling completed for this project.

- Construction equipment should be permitted to operating prior from 0700 hours to 1700 hours
- No construction equipment should be permitted to operate on weekends without prior approvals

3.10 Indian Trust Assets

It is Reclamation policy to protect Indian Trust Assets (ITAs), whenever possible, from adverse impacts caused by its programs and activities. ITAs are legal asset interests held in trust by the federal government for Indian Tribes or individuals. Types of actions that could affect ITAs include interference with the exercise of a reserved water right, degradation of water quality where there is no water right, impacts to fish and wildlife where there is a hunting or fishing right, and increased noise levels near a land asset where such an increase adversely affects use of the reserved land.

3.10.1 Affected Environment

No ITAs have been identified within the project study area.

3.10.2 Environmental Consequences/Impacts

Because no ITAs have been identified within the project study area, the Proposed Action would have not impact ITAs.

3.11 Socioeconomics

This section describes the demographic, economic, and social characteristics in the project study area and potential changes that may result from the Proposed Action. For this evaluation, census block data for the area adjacent to the project footprint was reviewed.

3.11.1 Affected Environment

The demographic and economic characteristics of Yuma County, the city of Yuma, and the project area are presented below in Table 3-5. These data were obtained from the 2000 U.S. Census.

Table 3-5. Demographic data

Geographic area	Race/Ethnicity						
	White	African American	Native American	Asian	Pacific Islander	Other ^a	Hispanic
Yuma County	68.4	2.2	1.7	0.8	0.1	26.8	50.5
City of Yuma	69.1	3.2	1.6	1.3	0.2	24.7	45.2
Project Area	71.4	1.3	2.5	1.6	0.0	23.2	42.3

Source: U.S. Census Bureau (2000)

^a Other is intended to capture responses from people of more than one race.

In 2000, Yuma County had a population of 160,026, with a population density of 29 persons per square mile (U.S. Census Bureau 2000). Yuma County’s workforce consists of 71,586 persons supporting major industries such as agriculture, military, manufacturing, public utilities, and government. In 1999, Yuma County’s annual median household income was \$33,182, almost \$9,000 less than the U.S. median (U.S. Census Bureau 2000).

The city of Yuma encompasses over 110 square miles. In 2000, it contained a population of 77,515, with a population density of 705 persons per square mile (U.S. Census Bureau 2000). According to the 2007 American Community Survey, the city of Yuma has a labor force of 43,516 persons. Major industries include agriculture, border commerce, government, manufacturing, military (aerospace and defense testing), public utilities, and transportation services such as freight (U.S. Census Bureau 2007).

As discussed in Section 3.8, *Land Use and Ownership*, the project study area is 93 percent residential and is characterized by established neighborhoods, including Magnolia Village, Country Meadows, Rio Santa Fe, Sunset Mesa, and the Thomas Addition. The O. C. Johnson Elementary School serves these neighborhoods as both a school and a community center. Other community services include Netwest Park and multiuse paths along the East Main Canal.

3.11.2 Environmental Consequences/Impacts

3.11.2.1 Proposed Action

As part of the Proposed Action, the City of Yuma would acquire new right-of-way to widen 12th Street and construct a detention basin west of the canal. The majority of the new right-of-way to be acquired is located north of 12th Street within established neighborhoods¹. The Proposed Action would result in approximately 15 full acquisitions and 9 partial acquisitions² from Magnolia Village (north of 12th Street between 21st Drive and Magnolia Avenue) and approximately 10 full acquisitions from the Thomas Addition (north of 12th Street between 14th Avenue and Avenue A. All of the acquisitions would be residential.

¹ The City of Yuma Real Estate Group is currently in the process of determining exactly which properties will need to be acquired for the Proposed Action.

² A full acquisition would be required if construction affected the residence or business on the property, or if construction would remove all access to the property. A partial acquisition would be required if construction affected the property, but did not affect the residence or business.

Based on an average median household size of 2.7 residents per household³ for the project study area, the 25 full acquisitions would displace approximately 68 residents, approximately 1.7 percent of the population of the project area. It is unlikely that the new right-of-way or displacements would change the demographics of the project area.

Access would be removed from several streets east of the canal. Currently, these streets intersect 12th Street; the project would remove these points of access and create cul-de-sacs. Therefore, permanent changes and removal of access would result from the project. Displacements and changes in access are further discussed in Section 3.12, *Environmental Justice*.

Additional effects associated with construction of transportation projects include temporary increases in population due to project personnel arriving to work on construction and the economic stimulus this population would provide. Typically, the impacts on existing social structures and economic activities associated with transportation improvement projects such as this are temporary in nature, usually lasting the duration of the construction project. Socioeconomic issues associated with construction include potential effects to the local economy from the influx of workers, consumptive use of products for construction, and compensation for right-of-way acquisitions. Construction-related impacts generally have an effect for the duration of the construction period. The influx of construction workers would require accommodations, food, supplies, gasoline, and other consumables. Because none of these services are available in the project area, any economic benefits from the influx of construction workers would occur outside of the project area.

Benefits from the Proposed Action include improved access for motorists, including emergency service providers, traveling between Avenues B and A. In addition, emergency service vehicles would experience improved access to Magnolia Village through the new dedicated driveway on 12th Street.

3.11.2.2 No-Action Alternative

Under the No-Action Alternative, no new right-of-way would be acquired and no changes in land use would occur. Therefore, the No-Action Alternative would not affect socioeconomics in the project area.

3.11.3 Best Management Practices

No BMPs are proposed to mitigate impacts to demographic, economic, and social characteristics in the project study.

3.12 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Executive Order 12898 directs that federal programs, policies, and activities not have a disproportionately high and adverse human health or environmental effect on minority and low-income populations.

³ The average household size is based on 5,832 residents and 2,144 occupied housing units in the project study area (U.S. Census Bureau 2000).

3.12.1 Affected Environment

This portion of the environmental justice analysis consists of two steps: (1) determining the study area and (2) identifying minority and low-income populations (protected populations) within the study area. Because the potential effects on adjacent populations would be geographically limited to the project area, the study area consists of the census block groups that border the project limits along 12th Street between Avenues A and B. These block groups are illustrated in Figure 3-2 and are listed, along with relevant minority and income data, in Table 3-6.

The second step, identifying minority and low-income populations, requires a review of census data for at least one of the following criteria:

- The minority population of the study area exceeds 50 percent.
- The low-income population of the study area exceeds 50 percent
- The minority population percentage of the study area is meaningfully greater than the minority population percentage in the community of comparison.
- The low-income population percentage of the study area is meaningfully greater than the minority population percentage in the community of comparison.

For this analysis, meaningfully greater is defined as 50 percent, and the city of Yuma is the community of comparison. The city is a more appropriate community of comparison than Yuma County because the study area is part of an urban settlement pattern, like the city of Yuma. Yuma County is more rural and would not accurately compare with the study area.

Table 3-6. Low-income and minority populations

Area	Low-income percentage	Low-income status	Minority percentage	Minority status
<i>Community of comparison</i>				
City of Yuma	14.7	— ^a	52.0	—
<i>Study area census tract block group</i>				
Census tract 5, Block group 2	40.3	Yes	53.9	Yes
Census tract 5, Block group 5	5.4	No	25.7	No
Census tract 6, Block group 4	20.4	No	57.9	Yes
Census tract 6, Block group 5	18.3	No	52.0	Yes

^a not applicable

The primary cohort of the minority population within the project area is Hispanic. Three of the block groups contain protected populations (Figure 3-2). The only block group without protected populations is census tract 5, block group 5, located south of 12th Street between Avenue B and the canal.

3.12.2 Environmental Consequences/Impacts

3.12.2.1 Proposed Action

As part of the Proposed Action, the City of Yuma would acquire new right-of-way to widen 12th Street and construct a detention basin west of the canal⁴. The majority of the new right-of-way to be acquired is located north of 12th Street, within the block groups that have protected populations. The Proposed Action would result in approximately 15 full acquisitions and 9 partial acquisitions⁵ from Magnolia Village (north of 12th Street between 21st Drive and Magnolia Avenue) and approximately 10 full acquisitions from the Thomas Addition (north of 12th Street between 14th Avenue and Avenue A. All of the acquisitions would be residential.

Based on an average median household size of 2.7 residents per household⁶ for the study area, the 25 full acquisitions would displace approximately 68 residents. Displacement—relocating people from their homes or businesses—is considered a high and adverse impact.

Other effects from the Proposed Action, such as traffic delays related to construction, are considered minor and temporary. Additional permanent impacts include removing access to 12th Street from southbound 12th Avenue and northbound 11th Avenue. Cul de sacs would replace the intersections at these two locations and remove access to 12th Street for residents and motorists.

All of the displacements would occur north of 12th Street within minority and/or low-income block groups (census tract 5, block group 2 and census tract 6, block group 4). No displacements or changes in access would occur in the remaining (non-minority and non-low-income) block group (census tract 5, block group 5). The displacements and changes in access would affect minority and low-income populations appreciably greater than the general population and, therefore, would be disproportionately high and adverse.

The City of Yuma implemented a public involvement process to encourage potentially affected residents to participate, provide feedback on the project, and identify issues of concern. The public involvement process is further discussed in Section 4.0, *Consultation, Coordination, and Public Involvement*. Adjacent residents, including minority and low-income populations, were provided opportunities for meaningful participation in the public involvement process through invitations to one neighborhood-specific meeting and two public meetings.

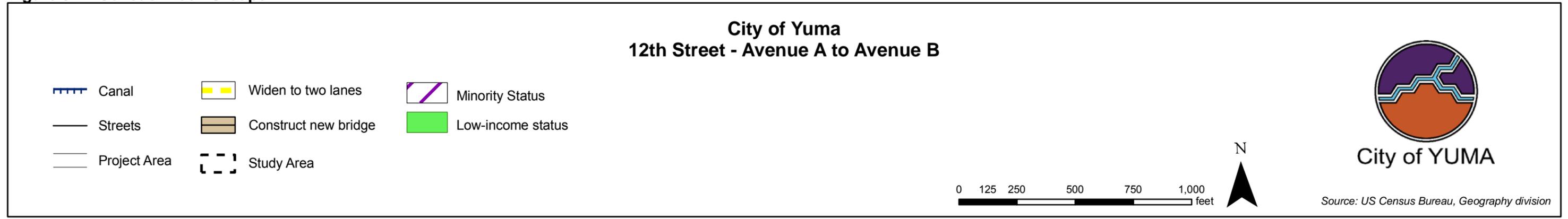
In March 2008, the City of Yuma met with Magnolia Village residents. Residents inquired about the appraisal and acquisition processes and requested that a block wall be built along the southern village boundary to block construction and traffic noise. Residents also expressed concern about improved access for emergency service vehicles; the project would provide a dedicated fire department access point at the 12th Street and Myrtle Avenue intersection. Another suggestion was to wall off the detention basin from the neighborhood to prevent criminal activity.

⁴ The City of Yuma Real Estate Group is currently in the process of determining exactly which properties will need to be acquired for the Proposed Action and whether or not property will be acquired specifically for the detention basin.

⁵ A full acquisition would be required if construction affected the residence or business on the property, or if construction would remove all access to the property. A partial acquisition would be required if construction affected the property, but did not affect the residence or business.

⁶ The average household size is based on 5,832 residents and 2,144 occupied housing units in the study area (U.S. Census Bureau 2000).

Figure 3.2 - Census Block Groups



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The invitations and media advertisements for the public meetings were printed in English and Spanish and were placed in Spanish-language newspapers. In addition, a translator was present for the presentations and to help attendees comment on the project. For the convenience of residents, the July 2008 public meeting was held within the project study area at the O. C. Johnson Elementary School. The majority of residents expressed opposition to the project as proposed at this meeting. The July 2008 design called for a five-lane road and 45 full acquisitions. People who commented stated that their primary concern was that the increased traffic capacity of 12th Street would adversely affect the residential neighborhoods, pedestrians, and the O. C. Johnson Elementary School.

Resident feedback from the first public meeting indicated a need to revise the preliminary design plans and a need for more public involvement. At the direction of the City of Yuma Staff, the consultant team prepared preliminary design that reduced the five lanes to three lanes. The revised preliminary design plan was presented to the Yuma City Council in an open round table discussion on October 14, 2009. The City of Yuma provided a second opportunity for residents to comment on the project and see the revised design at the November 2008 public open house, held at City Hall. Again, people who commented expressed concern about increased traffic and displacements. While the revised design reduced the number of displacements in census block groups with protected populations, the impacts overall remain disproportionately high and adverse.

At the beginning of the acquisition process, the City of Yuma would prepare an acquisition-stage relocation plan to identify the specific needs and desires of the displaced residents. The City of Yuma would conduct all property acquisition in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended (Uniform Act). Owners of properties to be acquired would be eligible for payments provided under the Uniform Act. The purpose of Uniform Act is to provide displaced persons with fair, equitable treatment and protection from disproportionate injury by projects designed to benefit the public as a whole. Individuals, families, and businesses displaced by implementation of this project would be eligible for relocation advisory services and payments. Under this law, property owners would be paid the fair market value of real property acquired for new project right-of-way. Property affected by the project would be appraised by an independent appraiser to determine its fair market value. Owners would be offered compensation accordingly. Property improvements (for example, fences, sheds, and decks) displaced by the project may be relocated on the property, provided they would be legally located.

In addition, all persons that would be permanently displaced from their homes would be offered the relocation assistance benefits provided for in the Uniform Act. This assistance would include personal services to assist residents in locating housing, money to pay for the cost of moving personal property from acquired dwellings, and housing payments to assist in the cost of either renting or purchasing decent, safe, and sanitary housing. If no replacement housing is available, last-resort housing would be provided as required by the Uniform Act.

3.12.2.2 No-Action Alternative

Under the No-Action Alternative, no new right-of-way would be acquired and no displacements would occur. Therefore, the No-Action Alternative would not affect protected populations in the project area.

3.12.3 Best Management Practices

The following BMPs are recommended to address impacts on protected populations:

- At the beginning of the property acquisition process, the City of Yuma would prepare an acquisition-stage relocation plan to identify the specific needs and desires of the displaced residents.
- The City of Yuma would conduct all property acquisition in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended.
- The City of Yuma would develop the detention basin as a multiuse facility: a basin and park. This facility would be walled into the neighborhood for added value to the community.

3.13 Environmental Commitments

Potential adverse affects associated with implementation and construction of the Proposed Action would be minimized by use of effective BMPs. The following BMPs are recommended:

- Design aspects for the transportation and bridge structures would include a “dulled” finish to reduce reflection and minimize the appearance of these new features in the landscape.
- The alignment of 12th Street would follow existing landforms to minimize changes in the landscape.
- Design aspects would mirror existing natural earth tones of the surrounding community to provide visual uniformity.
- Proposed landscaping would be designed to meet or exceed the City of Yuma’s planning requirements.
- The contractor should comply with all federal, state, and local dust ordinances, including the City of Yuma dust control ordinance.
- During construction, dust-abatement measures such as watering should be implemented to minimize dust emissions.
- Equipment should be properly maintained to minimize exhaust emissions, and equipment idling should be limited.
- A project information sign and contact phone number for citizens to report dust complaints should be posted at the construction site.
- The development and implementation of a project-specific SWPPP would reduce potential negative effects to water resources.
- During construction, no refueling equipment should be permitted within 100 feet of the East Main Canal or any other surface water drainage or conveyance system.
- The contractor should provide provisions for immediate spill response, and provide containment kits for petroleum-based products such as oils, solvents, or other chemicals.
- The contractor should ensure that chemicals and petroleum products are disposed of properly to prevent products from entering surface water or groundwater.
- Fill materials would come from a known clean source.
- Generation of PM₁₀ emissions would be reduced by using methods prescribed by ADEQ.
- All disturbed soils that would not be landscaped or otherwise permanently stabilized by construction would be seeded using species native to the project vicinity.
- To prevent the introduction of invasive species seeds, all earth moving and hauling equipment should be cleaned free of dirt and debris at the contractor’s storage facility prior to entering the construction site.

- If personnel involved with the construction of the project were to encounter any federal, state, or special-status species, work would stop and the Reclamation environmental office would be contacted immediately at (928) 343-8100.
- The contractor should employ a biologist to complete a preconstruction survey for Western burrowing owls in accordance with the *Burrowing Owl Project Clearance Survey Protocol for Landowners* within 90 days prior to construction activities. The biologist should possess a Western burrowing owl survey protocol training certificate issued by the Arizona Game and Fish Department. In general, if Western burrowing owls and/or active burrows are identified during the preconstruction surveys or during construction, no construction activities should take place within 100 feet of any active burrow. If the burrow is within 100 feet of an active construction site, construction should cease until the owl can be removed by an authorized agent.
- Notify Reclamation’s Yuma Area Office at least 10 days prior to the start of construction. Reclamation would coordinate with the water user organizations and ensure that the East Main Canal documentation is carried out in accordance with the YIP PA.
- If previously unidentified cultural resources were to be discovered during construction of the project, the contractor should stop work and notify the Reclamation Environmental Manager immediately at (928) 343-8100 and should take all reasonable steps to secure the preservation of those resources.
- A site-specific contingency spill plan should be developed and implemented. The plan should consist of reporting guidelines in the event of a spill, good housekeeping techniques, and employee training in the use of required equipment and proper handling of potentially hazardous materials.
- If previously unidentified or suspected hazardous materials are discovered or encountered during construction, the contractor should stop work and notify the Reclamation Environmental Manager immediately at (928) 343-8100 as outlined in the plan.
- Construction equipment should be refueled in designated areas only in accordance with the SWPPP.
- General housekeeping techniques and routine construction refuse management and recycling would minimize impacts to resources.
- Construction equipment should be permitted to operate only from 7 a.m. to 5 p.m.
- No construction equipment should be permitted to operate on weekends without prior approvals.
- At the beginning of the property acquisition process, the City of Yuma would prepare an acquisition-stage relocation plan to identify the specific needs and desires of the displaced residents.
- The City of Yuma would conduct all property acquisition in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended.
- The City of Yuma would develop the detention basin as a multiuse facility: a basin and park. This facility would be walled into the neighborhood for added value to the community.

3.14 Irreversible and Irrecoverable Commitments of Resources

In accordance with NEPA guidelines, a discussion of any irreversible or irretrievable environmental resource commitments associated with the implementation of the Proposed Action should be included in the environmental document. Irreversible or irretrievable resource commitments are related to the use of nonrenewable resources and the effects of the loss of these resources on future generations.

Irreversible commitments are those actions that affect or destroy a renewable resource, such as energy and minerals or natural resources such as wetlands and/or wildlife habitat, as part of the project. Irretrievable commitments are those actions that affect the value or use of a resource that cannot be restored by the project.

Components of the Proposed Action would not remove, destroy, or affect renewable resources. Soils may be required for use as fill during construction; however, soils used would be acquired from clean sources that were set aside for use as fill in this manner.

Components of the Proposed Action would require the irretrievable consumptive use of fossil fuels (i.e., gasoline, diesel fuel, solvents, and oils) during construction of the project. Other components would require the use of nonrenewable resources such as wood, asphalt, cement, steel as construction materials. The commitment of these resources would be temporary, and would terminate upon completion of construction.

3.15 Cumulative Impacts

Council on Environmental Quality (CEQ) regulations define cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other action.” Cumulative impacts include the total effect on a natural resource, ecosystem, or human community resulting from actions of federal, nonfederal, public, and/or private entities. Cumulative impacts may also include the effects of natural processes and/or natural events and can also be beneficial to the resources.

This Proposed Action would have both negative and beneficial cumulative impacts to the project area and surrounding community. Negative cumulative impacts may result from the implementation of other actions in the project study area from future, nonfederal land-use planning and transportation infrastructure planning components as identified in the following planning documents.

- *City of Yuma 2002 General Plan*
- *City of Yuma Major Roadway Plan*
- *City of Yuma’s FY 2009–FY2018 Capital Improvement Program*
- *YMPO 2006–2029 Regional Transportation Plan*
- *City of Yuma/Yuma County Joint Land Use Plan*
- *Yuma County 2010 Comprehensive Plan*

Components of these planning documents, when implemented, will also require the use of natural resources, and this demand may affect the future supply of these resources. Additionally, implementation of the other transportation infrastructure improvement projects in the project area will also affect the same community area with transportation infrastructure improvements and the potential of additional property acquisitions. When combined with the Proposed Action, these future actions may have a significantly lasting negative impact to the human environments, with relocations and the economic and physical hardships associated with these actions.

For this Proposed Action, cumulative impacts would also be beneficial. The Proposed Action, along with the implementation of other transportation plans mentioned above, would benefit the community

in the project area by improving and increasing the available transportation infrastructure capacity. It would also create more efficient response times from public service agencies, such as fire and police departments, because they would have additional accesses to serve the community. Additionally, transportation infrastructure improvement projects benefit the local communities as a whole by increasing the economic value of the properties within these affected communities. An upgraded transportation system improves the value and quality of life in the human environments in these communities.

4.0 Consultation, Coordination, and Public Involvement

During preparation of the EA, agency and public involvement efforts were conducted to inform stakeholders and the public about the Proposed Action and to obtain input on the proposed alternatives and environmental issues.

4.1 Consultation and Coordination

The Study Team prepared and distributed an agency scoping letter to agency representatives who may have an interest in the study. The letters were mailed to agency representatives on June 25, 2008. Project agency and stakeholder correspondence is included in Appendix D, *Agency Correspondence*. The following stakeholders were contacted during the scoping process of the EA.

- USFWS, Arizona Ecological Services Office, Phoenix, Arizona
- U.S. Department of the Interior's Bureau of Land Management, Yuma Area Field Office, Yuma Arizona
- Quechan Indian Tribe, Yuma, Arizona
- Cocopah Indian Tribe, Somerton, Arizona
- AGFD Habitat Branch, Project Evaluation Program, Phoenix, Arizona
- Yuma Metropolitan Planning Organization, Yuma, Arizona
- Yuma County Water Users Association, Yuma, Arizona

The following special interest group was contacted:

- Yuma Audubon Society, Yuma, Arizona

The following responses were received and are included in Appendix D, *Agency Correspondence*.

- Quechan Indian Tribe, Yuma, Arizona; responded by wanting to be informed if any artifacts were discovered during the implementation of the Proposed Action
- AGFD Project Evaluation Program; responded with a list of sensitive species that could occur within the project area

All of the agencies were given the opportunity to comment and provide input on this Draft EA. All input received to date has been addressed in the preparation of this document. The following measures were incorporated to address these comments:

- A BMP was added for Reclamation to inform all interested Native American communities if any artifacts were discovered during the implementation of the Proposed Action.
- A BMP was added to inform the City of Yuma of the potential impacts to a State of Arizona special-status species.

4.2 Public Scoping Meeting

The public scoping process included a public scoping meeting held on July 15, 2008, at the O. C. Johnson School Cafeteria (1201 W. 12th Street, Yuma), with approximately 120 people in attendance. The purpose of the public scoping meeting was to provide information about the study, present the alternatives under consideration (including the No-Action Alternative), and provide an

opportunity for members of the public to ask questions and make comments. A summary of the comments received from the July 14, 2008 public scoping meeting are included in Appendix E, *Public Involvement*.

The meeting was advertised in:

- *The Yuma Sun*, on July 1 and 8, 2008
- *Bajo El Sol*, on July 4 and 11, 2008

The Study Team prepared and distributed an informational flier/door hanger to interested parties, residents, and businesses within the project study area. The flier was distributed to approximately 900 homes and businesses in early July 2008. The flier included a study description, study boundary, information about how the public can participate, the meeting location, and contact information. The flier was bilingual, including the same information in English and Spanish.

A media release introducing the project and announcing the public meeting was prepared by the City of Yuma and issued on July 14, 2008, to local and regional newspapers, local municipal television stations, and radio outlets. The media release was also posted to the City's Web site at www.ci.yuma.az.us/news_9896.htm.

A summary of the comments received at the July 2008 public scoping meeting primarily addressed concerns related to decreasing property values, increasing traffic volumes, pedestrian and bicyclist safety, access to the O. C. Johnson School, and property acquisition. Most meeting attendees were opposed to the five-lane alternative, and voiced concerns about the resulting increase in traffic on 12th Street. Attendees felt an increase in traffic and vehicular speed would lead to decreased safety conditions for the surrounding neighborhood and adjacent school. Attendees also raised concerns about potential noise from the increased traffic. Suggestions were made requesting the City to study parallel streets for improvements to facilitate cross-town traffic movements. Attendees also noted the cost of the project as a concern, suggesting other outstanding projects be completed prior to the 12th Street improvements. Another concern was the right-of-way needed to complete a five-lane roadway. Many who provided comments related to this subject were opposed to acquisitions of their property and were concerned about the value of their homes if the project were built. In addition, concerns were raised regarding partial right-of-way takes and the potential impact on property values. Attendees in favor of the proposed project noted the need for an improved road to meet travel demand.

4.3 Public Open House

One public open house was held on November 17, 2008, at the City of Yuma's Council Chambers (City Hall, One City Plaza, Yuma), with approximately 55 people in attendance. The purpose of the open house was to update the public regarding the study, present the revised alternative, and provide an opportunity for members of the public to ask questions and make comments.

The meeting was advertised in:

- *The Yuma Sun*, on November 5 and 12, 2008
- *Bajo El Sol*, on November 7 and 14, 2008

The Study Team prepared and distributed an invitation postcard to interested parties, residents, and businesses within the project study area. The flier was distributed to approximately 1,000 homes and businesses, including attendees of the July 2008 public scoping. The postcard included a description of the revised alternative and the purpose of the open house, a description of the study boundary, information about how the public could participate, meeting location, and contact information. The postcard was bilingual, including the same information in English and Spanish.

A media release announcing the public open house was prepared by the City of Yuma and issued on November 13, 2008, to local and regional newspapers, local municipal television stations, and radio outlets. The media release was also posted to the City’s Web site at <www.ci.yuma.az.us/news_11738.htm>.

Comments received during the November 2008 open house mainly addressed the revised 12th Street design. Concerns raised included the potential increase in traffic, decrease in safety, and adverse effects on quality of life. Alternative parallel streets were recommended for roadway improvement instead of 12th Street. One attendee noted concern over property impacts and the acquisition of homes along the proposed alignment. Additionally, support for the project was expressed at the meeting. Summaries of the specific comments received during and after the open house are shown in Table 4-1.

Table 4-1. Comments received at November 2008 open house

Open house attendee?	Name	Comments
Yes	Sandra Reyes	My family and I have lived here for 11 years and this change concerns and worries me because the traffic will worsen and it will become dangerous for children, including my three girls that walk to school. To leave our yard will be a bigger problem with the traffic and more dangerous. I am against this project. <i>(translated from Spanish)</i>
No	Edcardo Rodriguez	I myself and my family have lived at the following address XXXX S. 14th Street ^a for 12 years and one of the reasons we chose to live there was because of the light traffic and quality of life as safely walking to school and playing in the park. I am against this project because there will be an increase in high speed traffic and will be dangerous for our kids.
Yes	Robert Wright	If City staff would look at the City history, they will see 1st Street, 8th Street, 16th Street, 24th Street and 32nd Street are major roads. 12th never was expected to be a major road. Please pay the design people, roll up the plans and forget them. City staff should use their time on extending 8th Street to the mall. This is a shorter road. Police and fire besides just the City of Yuma would use this new access to the mall. Currently, traffic is almost at grid lock during the winter. 8th Street would take a greater load off of 16th Street. This 12th Street project does not reduce traffic on 16th Street. Avenue B, is faster than Avenue A so the people in the Valley already don't use Avenue A. Valley drivers are looking for a quick way across town east/west, 8th Street would answer this problem. Please don't waste any more money on this project just to save face. FYI...3rd Street is not set-up as a cross town roadway either.

Table 4-1. Comments received at November 2008 open house

Open house attendee?	Name	Comments
Yes	Steve Miller	I would like to know how this is going to improve traffic without making Avenue A to 5 lanes in this area? How does this fix the traffic problem on Avenue A? This will add more traffic without correcting the problem of Avenue A. Why can they not just put a 2-lane bridge over the canal to match the current street without taking all the homes.
Yes	Jack Sears	Need printout of the map of 12th Street that includes all of the properties that back-up from Magnolia Village to 12th Street. Please.
Yes	Bernard Fischer	We live at XXXX S. Franklin. ^a According to your map, the wall will be about 10 feet from our house. This will affect the value of our property. We feel you should take all or none of the property because it will hurt the value of the property.
Not available	Not available	Why are we spending money to build a bridge and road that will not facilitate cross valley traffic. We need to push 8th Street through to the East! This will take pressure off of 16th Street and allow cross town access.

^a exact address provided by commenter is not shown in this table

The public was given the opportunity to submit questions or comments and provide input on this Draft EA. All input received to date has been addressed to the extent possible in the preparation of this document. This input would be further considered during the final design stages (if an action alternative were selected).

4.4 Comment Period and Public Hearing

Agencies and members of the public are invited to review and comment on this Draft EA. The comment period will last 30 days. Comments received during the comment period will be considered in the final decision.

The Draft EA is available for review at the following locations:

Bureau of Reclamation
 Yuma Area Office
 7301 Calle Agua Salada
 Yuma, AZ 85364
 Phone: (800) 433-8464

Yuma County Library
 2951 S 21st Dr
 Yuma AZ 85364
 Phone: (928) 782-1871

For more information, please contact:

Ms. Jill S. Dale, Manager
Environmental Planning and Compliance Office
Bureau of Reclamation Yuma Area Office
7301 Calle Agua Salada
Yuma, AZ 85364
Phone: (800) 433-8464
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The following were major contributors in the preparation of this document:

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7.0 List of Acronyms and Abbreviations

ADA	Arizona Department of Agriculture
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
ADA	Americans with Disabilities Act
AGFD	Arizona Game and Fish Department
AMSL	Above Mean Sea Level
ANPL	Arizona Native Plant Law
APE	Area of Potential Affect
AZPDES	Arizona Pollutant Discharge Elimination System
BIA	United States Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practices
CIP	Capitol Improvement Plan
CFR	Code of Federal Regulations
CEQ	Council on Environmental Quality
CWA	Clean Water Act
dBA	Decibels
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
HPT	Historic Preservation Team
ITA	Indian Trust Assets
LOS	Level of Service
MBTA	Migratory Bird Treat Act
MP	Milepost
MRA	Yuma Multiple Resource Area
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health
PA	Programmatic Agreement
PEP	Project Evaluation Program
PM	Particulate Matter

Reclamation	Bureau of Reclamation
R/W	Right-of-way
RTP	Regional Transportation Plan
SHPO	State Historic Preservation Office
SIP	Statewide Implementation Plan
SWPPP	Storm Water Pollution Prevention Plan
TNM	Traffic Noise Model
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Services
USGS	United States Geological Service
YGB	Yuma Groundwater Basin
YIP	Yuma Irrigation Project
YMPO	Yuma Metropolitan Planning Organization

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Appendix A. Special-Status Species

**U.S. Fish and Wildlife Service Federally Listed Species Report
for the
City of Yuma's 12th Street – Avenue A to Avenue B Improvement Project**

This report evaluates the potential of federally listed threatened and/or endangered species to be affected by the Proposed Action or to occur within the project area for the City of Yuma's 12th Street – Avenue A to Avenue B Improvement Project. The Proposed Action consists of widening 12th Street between Avenue A and Avenue B and constructing a new bridge over the East Main Canal.

The U.S. Fish and Wildlife Service (USFWS) Arizona Ecological Services Office was contacted, and it provided the following listed species that may occur in Yuma County, Arizona.¹

- Bald eagle (*Haliaeetus leucocephalus*)
- California brown pelican (*Pelecanus occidentalis californicus*)
- Lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*)
- Razorback sucker (*Xyrauchen texanus*)
- Sonoran pronghorn (*Antilocapra Americana sonoriensis*)
- Southwestern willow flycatcher (*Empidonax traillii extimus*)
- Yuma clapper rail (*Rallus longirostris yumanensis*)
- Yellow-billed cuckoo (*Coccyzus americanus*)
- Flat-tailed horned lizard (*Phrynosoma mcallii*)

The following section evaluates the potential of the Proposed Action to affect federally listed species and their habitats.

Bald eagle (*Haliaeetus leucocephalus*) – Sonoran Desert population

Status. The species was listed as threatened (60 *Federal Register* 35999) on July 12, 1995, without critical habitat. On August 9, 2007, USFWS delisted the bald eagle (*Haliaeetus leucocephalus*), which had been listed as “threatened” under the Endangered Species Act (ESA) of 1973. Although delisted, bald eagles are still protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. These Acts define measures to minimize disturbance to the bald eagle resulting from human activities, and a definition of “disturbed” was provided by the Bald and Golden Eagle Protection Act (50 Code of Federal Regulations Part 22). In addition, the Arizona Ecological Services Office relisted the Arizona population as a distinct population segment and requested that this population still receive listing and subsequent protection under the ESA. This decision is still pending.

Species description. The bald eagle is a large bird of prey (raptor) that is approximately 3 feet long, with a 6-foot-plus wingspan. Its body color is dark and brownish-black. The bald eagle has a hooked, yellow bill, yellow unfeathered legs, a white tail and neck, and a highly distinguishable white head.

¹ U.S. Fish and Wildlife Service, 2008, <www.fws.gov/southwest/es/arizona/Documents/CountyLists/Yuma>

Juveniles are mostly dark without the characteristic white head. It primarily eats fish but can forage on small mammals, waterfowl, and carrion (USFWS 2007a).

Habitat. The bald eagle is found along coasts, lakes, streams, and rivers, and close to forage sources. Nesting sites are usually near water and isolated high in cliffs and trees with surrounding views.

Range. Historically, bald eagles ranged throughout the continental United States, Canada, and northern Mexico. Little information is available regarding their historic distribution in Arizona. Currently, bald eagle nesting populations are increasing throughout the United States, with the largest populations in Alaska, the Great Lakes area, and coastal land in the Southeast. In Arizona, known breeding pairs are located along the upper Salt, Verde, Gila, Bill Williams, Agua Fria, San Pedro, and San Francisco rivers and Tonto and Canyon creeks. In 2007, there were over 50 documented territories with over 30 breeding pairs. Bald eagles migrate and winter throughout Arizona with wintering numbers exceeding 300 birds a year (Arizona Game and Fish Department [AGFD] 2007).

Reasons for decline. The bald eagle is threatened because of reproductive failures associated with pesticide use, primarily DDT, and because of previous unrestricted killings by humans. Current threats include habitat loss, human encroachment on nesting sites, limiting nest success, loss of forage sources, and heavy metal content in prey (USFWS 2007a).

Determination of project-related conflicts. Vegetation in the project area does not contain suitable aquatic habitat to support the species, which is not known to occur in the project vicinity or area. Therefore, the bald eagle will not be affected by the Proposed Action.

California brown pelican (*Pelecanus occidentalis californicus*)

Status. The California brown pelican was listed as endangered (35 *Federal Register* 16047) on October 13, 1970, without critical habitat. On August 9, 2007, USFWS proposed delisting the California brown pelican.

Species description. It is a large water bird, up to 8 pounds in weight, with webbed feet, a 3-foot length, a 6-foot-plus wingspan, and a long bill with a pouch underneath. Adults have a white head and neck with a silvery upper body color and a brownish-black breast and belly. The California brown pelican dives from above to forage, catching prey in its pouch. It primarily eats fish of various sizes (USFWS 2008).

Habitat. The California brown pelican is found primarily along coastal areas, with nesting occurring on islands or isolated land features, always close to forage sources.

Range. Historically, it occurs along coastal areas throughout the Pacific Northwest. Currently, brown pelicans are found in coastal areas along the Pacific Ocean and along the Sea of Cortez in Mexico. In Arizona, the California brown pelican is an occasional migrant, particularly on the lower Colorado River coming inland from California or coming north from the Sea of Cortez. It is found here in lower elevations along rivers and lakes. Currently, a few migrants are found along the Lower Colorado River and Tempe Town Lake. California brown pelicans are known for wandering, especially post-breeding wandering, which explains these occasional occurrences away from traditional habitat (USFWS 1983a).

Reasons for decline. The California brown pelican is threatened because of reproductive failures associated with pesticide use and previous unrestricted killings by humans. Current threats include habitat loss and degradation, deaths caused by human influences, and loss of forage sources (USFWS 2008).

Determination of project-related conflicts. Vegetation in the project area does not contain suitable aquatic habitat to support the species, which is not known to occur in the project vicinity or area. Therefore, the California brown pelican will not be affected by the Proposed Action.

Lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*)

Status. Listed as endangered (53 *Federal Register* 38456) on September 30, 1988, without critical habitat.

Species description. The lesser long-nosed bat is a medium-sized bat with a body approximately 3 to 4 inches in length with a minute tail. The body has pale grey coloration above and cinnamon brown underneath. The characteristic elongated nose has a small nose leaf on its tip (AGFD 2005).

Habitat. Lesser long-nosed bats forage exclusively on plant nectar and pollen. The bat roosts in caves or cave-like structures in communities and forages primarily on flowering cacti and agaves. The bat's presence appears to be largely dependent on the seasonal flowering cycles of columnar cacti and paniculate agave (USFWS 2007b). Pregnant females appear in Arizona in late April and July to congregate at roosting sites within caves, mineshafts, and tunnels. They form maternity colonies where they rear their young between May and July. Males arrive sometime in July once the saguaro and organ pipe cactus are in full bloom. The bat is known to travel long distances (20 to 40 miles) from its roosting site to feeding areas (USFWS 2007b).

Range. The bat's range extends from Guatemala and El Salvador northward to south-central and southeastern Arizona and southwestern New Mexico. In Arizona, its range extends from the Picacho Mountains southwest to the Agua Dulce Mountains and southeast to the Gallup and Chiricahua mountains and to Mexico (AGFD 2005).

Reasons for decline. The lesser long-nosed bat is threatened primarily because of a loss of foraging habitat resulting from cattle grazing and unrestricted agave and cacti harvesting. The bat's population may be vulnerable because many individuals utilize the same communal roost sites, and the loss of these cave sites affects many individuals (USFWS 2007b).

Determination of project-related conflicts. Vegetation in the project area does not contain suitable habitat to support the species, which is not known to occur in the project area. No known caves, mineshafts, or tunnels are located within the project vicinity or area. Therefore, the lesser long-nosed bat will not be affected by the Proposed Action.

Razorback sucker (*Xyrauchen texanus*)

Status. The razorback sucker was federally listed as "endangered" under a final rule published on October 23, 1991 (56 *Federal Register* 54957). Recovery goals are outlined in the 1998 recovery plan

and a 2002 supplement (USFWS 1998; 2002a). The final rule for determination of critical habitat was published on March 21, 1994 (59 *Federal Register* 13374), and became effective on April 20, 1994.

Species description. The razorback sucker is a long-lived fish of the sucker family distinguished by a large keel on its back. Razorback suckers have subterminal mouths with pronounced, fleshy lips. Coloration varies, but the razorback sucker is usually dark brown above the ventral line and yellowish tan beneath. Razorback suckers vary in size, depending on life cycle stage. Mature adults can live 30 to 40 years and reach over 2 to 3 feet in length (Minckley 1973).

Habitat. Adult razorback sucker habitat utilization can vary depending on season, temperature, and location (Minckley 1983). It prefers rivers with strong, uniform currents over sandy bottoms, but it is also found in eddies and backwaters adjacent to river channels, concentrating in deep waters near cut banks for cover and forage (Minckley 1983). Subadult and young razorback suckers use eddies, pools, backwaters, and other slow water habitats, and utilize vegetation and substrate for forage and cover (Marsh and Minckley 1989) Razorback suckers are considered sexually mature at age 4 and feed primarily on algae, insect larvae, plankton, and detritus (Minckley 1973).

Range. Razorback suckers utilize a variety of microenvironments within large streams and rivers situated at low to intermediate elevations in the Colorado and San Francisco river systems. Within Arizona, the razorback sucker historically occurred in the Lower Colorado, Gila, Salt, Verde, and San Pedro rivers. Currently, Lakes Mohave and Mead contain the last remnant populations in the Lower Colorado river system (Marsh and Minckley 1989).

Reasons for decline. Major changes in species composition have occurred because of the introduction of numerous nonnative fishes, many of which have thrived because of human-induced changes to the natural riverine system (Minckley 1991). Threats to the species include in-stream flow regulation, habitat modification, competition with and predation by nonnative fish species, pesticides, and other water pollutants (USFWS 2002a).

Determination of project-related conflicts. It has been determined that the Proposed Action will not affect the razorback sucker because suitable aquatic habitat does not exist in the project area other than the East Main Canal and the razorback sucker is not known to occur in the project area.

Sonoran pronghorn (*Antilocapra americana sonoriensis*)

Status. The Sonoran pronghorn was listed as endangered (32 *Federal Register* 4001) on March 11, 1967, without critical habitat.

Species description. Sonoran pronghorns are long-legged, somewhat small-bodied hoofed mammals with tan colored upperparts. They are distinguished by two, parallel white bands on their necks. The males have two black cheek patches and both sexes have horns (USFWS 2003a)

Habitat. They are found primarily in Sonoran desert scrub communities containing creosote bush and white bursage communities in broad, alluvial valleys separated by block-faulted mountains.

Range. Historically, Sonoran pronghorns occurred in southwestern Arizona, south of the Bill Williams River and west of the Santa Cruz River. Three populations exist in Arizona and Northern

Mexico but are geographically isolated. Currently in Arizona, they are restricted to the extreme southwestern portions of the state, west of Yuma Valley and east of Avra Valley (USFWS 2003a).

Reasons for decline. Threats include habitat loss and degradation by conversion to agriculture and other development. Populations are isolated by roads, fences, canals, train tracks, and other linear barriers that prevent population movements and hinder genetic transfer amongst existing populations (USFWS 2003a).

Determination of project-related conflicts. Suitable habitat to support the species does not occur in the project vicinity or area, nor is the species known to occur. Therefore, the Sonoran pronghorn will not be affected by the Proposed Action.

Southwestern willow flycatcher (*Empidonax traillii extimus*)

Status. The Southwestern willow flycatcher (SWFL) was listed as endangered in 1995 (USFWS 1995). In August 2002, the Final Recovery Plan for the SWFL was completed by USFWS (USFWS 2002b). Subsequently, the Final Rule of designated critical habitat was published in October 2005 by USFWS, resulting in the redesignation of 737 miles of riparian habitat critical for the recovery of the SWFL (USFWS 2005).

Species description. The SWFL is one of four recognized subspecies of the willow flycatcher and is genetically distinct from the other three subspecies. This grayish-green passerine is 5.7 inches in length with a pale yellowish body and visible white wing bars.

Habitat. The SWFL is a riparian obligate breeding in the summer along rivers, streams, and wetlands (USFWS 2002b). In Arizona, the SWFL begins nesting in May and continues through July, often having several clutches during the breeding season (McKernan and Braden 2001). Species-specific habitat requirements consist of woody riparian areas between 0.25 acre and 175 acres where tree and shrub species are typically 6 to 98 feet or more in height, with dense foliage within the first 10 to 13 feet above the ground in addition to high canopy foliage. Typically, there are openings of water or shorter vegetation within the foliage, creating a mosaic of density (USFWS 2002b).

Range. The SWFL is a neotropical migrant that breeds during the summer in riparian habitats in the southwestern United States, including southern Nevada, Arizona, southern Utah, southern California, New Mexico, and southwestern Colorado. It winters in Central America (Sogge et al. 1997). These habitats are usually found below 8,500 feet in elevation (USFWS 2006a).

Reasons for decline. The SWFL was listed as endangered primarily because of riparian habitat reduction and degradation as a result of agriculture and residential development. Other factors that affect the species vulnerability and decline are: fragmentation and low numbers of existing populations, predation, brood parasitism by cowbirds, and other naturally occurring events such as floods and fires that remove suitable habitat (USFWS 2002b).

Determination of project-related conflicts. The project area does not contain the constituent elements of breeding or nesting habitat for the SWFL, and the SWFL is not known to occur in the project area. Therefore, the project will not affect the SWFL.

Yuma clapper rail (*Rallus longirostris yumanensis*)

Status. The Yuma clapper rail (YCR) was listed as endangered under legislation enacted in March 1967 (Public Law 89-669). In 1983, the Final Recovery Plan was completed (USFWS 1983b). Critical habitat has not yet been designated for the species.

Species description. The YCR is a 14- to 16-inch-long marsh bird with a curved-down beak. Its coloration is slate brown above, light cinnamon underneath, with tan-colored barred flanks.

Habitat. In general, the YCR inhabits freshwater or brackish marshes and areas along streams below 4,500 feet mean sea level. Shallow waters near uplands consisting of dense stands of cattails, sedges, bulrushes, and other wetland vegetation are preferred habitat (USFWS 1983b). Habitat requirements include wet substructures such as mudflats, sandbars, or slough bottoms. Preferred nest sites are in upland areas dominated by mature herbaceous or woody vegetation at least 15 inches in height. Nests are often located at the base of a shrub or on dry hummocks. Introduced crayfish have become their common food (Haynes and Schuetze 1997). They also feed on fish, frogs, freshwater clams, shrimp, spiders, crickets, grasshoppers, water beetles, dragonflies, aquatic plant fruits and seeds, bird eggs, and crustaceans.

Range. Typically, the YCR is a migratory species that appears in Arizona from mid-April to mid-September (USFWS 1983b). Currently, the YCR is found along the Lower Colorado River system, from Lake Mead south to Mexico; on the Gila and Salt river system upstream to the confluence with the Verde River; at Picacho Reservoir; and at the confluence of Tonto Creek Basin and Roosevelt Lake (USFWS 2006b).

Reasons for decline. Species decline is primarily due to destruction and modification of marsh/wetland habitat resulting from stream channelization, bank stabilization, water impoundments, and flooding/drying of marshes (Tacha and Braun 1994).

Determination of project-related conflicts. The project area does not contain marsh-type or suitable habitat; therefore, the Proposed Action will not affect the YCR.

Yellow-billed cuckoo (*Coccyzus americanus*)

Status. The yellow-billed cuckoo is a candidate species, listed as a distinct population segment west of the Rocky Mountains on July 25, 2001 (66 *Federal Register* 38611).

Species description. The yellow-billed cuckoo is a medium-sized bird that is approximately 12 inches in length and weighs approximately 60 grams. The species has a slender, long-tailed profile, with a fairly stout and slightly down-curved bill that is blue-black, except for yellow on the base of the mandible. The plumage is grayish-brown above and white below, with red primary flight feathers. A bold black-and-white pattern encompasses the tail feathers. Adults have a yellow eye-ring and short bluish-gray legs. Yellow-billed cuckoos are known for their “knocker” call, which is a harsh, rattled series of notes (Johnson et al. 2005).

Habitat. Cuckoo habitat includes large blocks of riparian habitat consisting dominantly of willow and cottonwood, as well as tamarisk, mesquite, or other broad-leafed riparian trees at elevations less than 6,500 feet above mean sea level. Typical suitable habitat includes, at a minimum, 25 acres of broadleaf riparian forest with at least 2.5 acres of dense nesting habitat per pair. Marginal habitat is a minimum of 10 acres of broad-leafed forest and at least 1.25 acres of dense nesting habitat. The yellow-billed cuckoo preferentially nests in willow or mesquite thickets, located between 4 to 30 feet above the ground. Yellow-billed cuckoos migrate to Arizona during their breeding season, arriving in

the first week of June and typically departing by late August or early September (Corman and Magill 2000). Food prey consists mainly of large insects such as grasshoppers, cicadas, katydids, and hairy caterpillars, but the yellow-billed cuckoo will also resort to eating bird eggs, frogs, lizards, ants, beetles, wasps, flies, berries, and fruit.

Range. Historically, this species bred throughout the western United States and southern British Columbia, but now occurs only in diminished numbers within this range. In Arizona, the distribution lies primarily below the Mogollon Rim in the Colorado River and Gila River drainages, and is concentrated mainly in the Upper Santa Cruz, San Pedro, Verde, Bill Williams, and Gila river drainages of central and southeastern Arizona. Wintering grounds are believed to be in Central and South America (Corman and Magill 2000).

Reasons for decline. Species decline is primarily due to destruction and modification of riparian forests and galleries large enough to support breeding territories. In Arizona, threats include degradation and loss of riparian habitat from vegetation clearing, stream diversion, water management, agriculture, urbanization, overgrazing, and recreation (Johnson et al. 2005).

Determination of project-related conflicts. The project area does not contain riparian galleries or suitable habitats. Therefore, the Proposed Action will not affect the yellow-billed cuckoo.

Flat-tailed horned lizard (*Phrynosoma mcallii*)

Status. The flat-tailed horned lizard was reinstated as a “proposed for listing” species on August 30, 2005 (66 *Federal Register* 38611). A conservation agreement was finalized in May 1977.

Species description. The flat-tailed horned lizard has a flattened body shape, as do other horny lizard species, and is distinguished by a dark, vertebral stripe, no external ear openings, and a long, broad flattened tail. It ranges in color from pale gray to light rusty brown dorsally, with an unspotted whitish or cream-colored underbelly (USFWS 2003b).

Habitat. It occurs entirely within the Lower Colorado Valley Subdivision of the Sonoran desert scrub habitat at elevations from 0 to 1,600 feet above mean sea level. In Arizona, populations only occur below 500 feet above mean sea level, and they are associated with the creosote-white bursage series of the desert scrub habitat, usually more abundant in sandy flats with galleta grass.

Range. Historically, the flat-tailed horned lizard was common throughout California, Baja California, and Arizona. In Arizona, the distribution lies primarily in the southwestern portion of the state, including Yuma Valley, but it is assumed to be absent within the city limits of Yuma.

Reasons for decline. Species decline is primarily due to destruction and modification of native desert scrub habitat to agriculture land, loss of forage sources, and direct mortality resulting from unauthorized off-road vehicular travel (USFWS 2003b).

Determination of project related conflicts. The project area does not contain native, undisturbed desert scrub habitat. Therefore, the Proposed Project will not affect the flat-tailed horned lizard.

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Appendix B. Cultural Resource Information

Historic Property Inventory for the City of Yuma 12th Street Improvement Project

Table B-1. Historic buildings or structures within 1 mile of the area of potential effects and National Register eligibility analysis

No.	Address	Name	National Register ^a eligibility
1	115 W. 4th Street	Frank Delgado Home	Contributing element of the Century Heights Conservancy Residential Historic District; listed on National Register on 10/11/88; AZSITE number 42585
2	128–130 W. 5th Street	None	Evaluated in 1986, but no recommendation offered; falls within the Century Heights Conservancy District; AZSITE number 42644
3	129 W. 4th Street	Mexican Consulate	Listed on National Register on 12/7/82 – Yuma MRA ^b ; contributing element of the Century Heights Conservancy Residential Historic District and listed on National Register on 10/11/88; evaluated in 1984 – roof burned and destroyed and is being rebuilt
4	141–173 W. 5th Street	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
5	164 W. 5th Street	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
6	201 W. 6th Street	Roosevelt School	Listed on National Register on 12/7/82 – Yuma MRA; AZSITE number 46822
7	201 S. Orange Avenue	Jennie’s Market	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
8	209 S. Orange Avenue	Peter B. Hodges Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; evaluated in 1984 – northeastern corner of roof is damaged, sound structure but not well-maintained
9	210 W. 7th Street	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
10	214 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
11	234–238 W. 5th Street/ 482–488 S. 2nd Avenue	Shorey/Idylwild Apartments	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
12	242 W. 5th Street	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42637
13	243 W. 6th Street	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42509
14	257–267 W. 5th Street	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42613

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No.	Address	Name	National Register ^a eligibility
15	285 W. 5th Street A-C	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
16	406 S. 2nd Avenue	Fredley Apartments	Listed on National Register on 12/7/82 – Yuma MRA; AZSITE number 46839
17	440 S. 1st Avenue	Donald McIntyre Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
18	441 S. 2nd Avenue	Caruthers Home	Listed on the National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
19	444 S. 3rd Avenue	Frank Stanley Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
20	450 S. 2nd Avenue	Jennie Polhamus/ Agnes Hodges Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42574
21	450 S. 3rd Avenue	Jenny Kent Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 46846
22	450 S. 4th Avenue	Fourth Avenue Junior High School	Listed on National Register on 12/7/82 – Yuma MRA; evaluated in 1984, stated it was well-maintained; AZSITE number 46823
23	453 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42578
24	457 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
25	458 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42639
26	458 S. 3rd Avenue	None	Not evaluated; falls within the Century Heights Conservancy District; AZSITE number 42634
27	458 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
28	464 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42638
29	464–466 S. 1st Avenue	Dolores Redondo Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42583

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No.	Address	Name	National Register ^a eligibility
30	465 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42642
31	466–476 S. 2nd Avenue	Shorey Apartments	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
32	468 S. Orange Avenue	Allen B. Ming Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 46847
33	472 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
34	475 S. 2nd Avenue	Balsz House	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; evaluated in 1984 – needs new roof and better maintenance; AZSITE number 46837
35	477 S. Orange Avenue	Bert Cawley Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
36	481 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42635
37	481–485 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
38	482 S. Orange Avenue / 482 S. 3rd Avenue	Marable, George House	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; assessment in 1984 – house is deteriorating fast, no improvements; AZSITE number 46848
39	489 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42636
40	491–493 S. 2nd Avenue	Neahr Duplex	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
41	492 S. 1st Avenue	Conrad Molina Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
42	502 S. Orange Avenue	Frank S. Ming Apartments	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42536
43	502–564 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42627

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No.	Address	Name	National Register ^a eligibility
44	504–512 5th Street/ 201–239 S. 2nd Avenue	Sturms Apartments	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
45	506–508 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42537
46	517 S. Orange Avenue	Noriega Duplex	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
47	519 S. 1st Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42566
48	519 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
49	520 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
50	520 S. Orange Avenue	Juan Zavala Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42538
51	521 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42632
52	524 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42615
53	524–526 S. Orange Avenue	Stoffela Apartments	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42539
54	527 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42546
55	531 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
56	531 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
57	535 S. 1st Avenue	Ellis Lodging House	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42630
58	535 S. Orange Avenue	George Downey Rental	Individually significant; evaluated as part of Century Heights Conservancy District; AZSITE number 42545
59	536 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42605

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No.	Address	Name	National Register ^a eligibility
60	537 S. 4th Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
61	539 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42624
62	539–543 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42610
63	540 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
64	541 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
65	541 S. 4th Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42604
66	542 S. Orange Avenue	Emil C. Egar, Sr.	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
67	543 S. 4th Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
68	544 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42550
69	545 S. 1st Avenue	None	Not evaluated; falls within the Century Heights Conservancy District; AZSITE number 42564
70	545 S. 4th Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42534
71	551 S. 1st Avenue	None	Not evaluated; falls within the Century Heights Conservancy District; AZSITE number 42630
72	551 S. 2nd Avenue	Hodges rental	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42555
73	553 S. 4th Avenue	Double Roof House	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; assessment in 1984 – exterior is deteriorated badly and building is not maintained; AZSITE number 46842
74	556 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42616

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No.	Address	Name	National Register ^a eligibility
75	556 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
76	557 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
77	557 S. 4th Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42603
78	558 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
79	558–560 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
80	559 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
81	561 S. 4th Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42531
82	563 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42629
83	564–566 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
84	565 S. 1st Avenue	None	Not evaluated; falls within the Century Heights Conservancy District; AZSITE number 42561
85	565 S. 4th Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42602
86	566–568 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
87	568 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
88	568A S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42628
89	569 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42622
90	572 S. 1st Avenue	E. B. Jackson Home (duplex)	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE numbers 42557 and 46845

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No.	Address	Name	National Register ^a eligibility
91	572–576 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42617
92	573 S. 1st Avenue	W. Baird Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42560
93	577 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42562
94	577 S. 4th Avenue	Ted Larkin Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42530
95	581 S. 1st Avenue	E. A. Freeman Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42559
96	583–585 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
97	584 S. Orange Avenue	O. C. Johnson Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
98	589–599 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
99	590 S. Orange Avenue	John Herbert Underhill Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
100	591–593 S. 1st Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
101	593 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
102	593 S. 4th Avenue	Harry Goldsmith Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42529
103	598 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42620
104	600 S. 5th Avenue	Smith, J. Homer, House	Listed on National Register on 12/7/82 – Yuma MRA; evaluated in 1984 – maintenance is consistent; AZSITE number 46849
105	600 S. 1st Avenue	Stoffela rental	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42525

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No.	Address	Name	National Register ^a eligibility
106	600 S. Orange Avenue	Bert Caudry Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
107	601 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
108	602 S. 2nd Avenue	Henry Levy House	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy District
109	604 S. 1st Avenue	Stoffela rental	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42524
110	608 S. 1st Avenue	Stoffela rental	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42523
111	609 S. Orange Avenue	E. P. Clark Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
112	610 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
113	611 S. 2nd Avenue	Lagendorf Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
114	616 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42599
115	618 S. Orange Avenue	Maurice Schwartz Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
116	620 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42507
117	621 S. 2nd Avenue	A. L. Logan Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42511
118	625 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
119	627 S. Orange Avenue	Harry Brownstetter Home	Listed on the National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
120	627–629 S. 2nd Avenue	W. O. Harris Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42512

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No.	Address	Name	National Register ^a eligibility
121	628 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
122	628 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42506
123	628 S. Orange Avenue	Allen J. Eddy/ E. H. Tobias Home	Noncontributing element of the Century Heights Conservancy Residential Historic District
124	630 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
125	632 S. 1st Avenue	George Jones Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42522
126	632 S. 2nd Avenue	Arthur Godfrey Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42505
127	633 S. Orange Avenue	Charles E. Potter Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
128	640 S. 1st Avenue	Joseph Dunbar Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42521
129	640 S. Orange Avenue	Jim Chappell Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
130	641 S. 1st Avenue	Alfred Griffin Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
131	642–644 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
132	637 S. 2nd Avenue	St. Paul’s Episcopal Church	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42513
133	643 S. 2nd Avenue	Episcopal Parish Hall	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42514
134	643 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
135	648–650 S. Orange Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
136	649 S. Orange Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District

(continued on next page)

No.	Address	Name	National Register ^a eligibility
137	652 S. 2nd Avenue	J. T. Russell/ A.O. Williamson Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE numbers 46832 and 42504
138	653–655 S. 1st Avenue	Alfred Griffin, Jr. Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42527
139	658 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
140	660 S. 1st Avenue	Carmelita Mayhew Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42520
141	660 S. Orange Avenue	Isaac Polhamus, Jr. Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
142	661 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
143	661–663 S. Orange Avenue	Paul Moretti Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
144	665 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42515
145	668 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42597
146	668 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
147	669 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42601
148	671 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
149	671–781 S. 1st Avenue	Double Roof Apartments	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
150	672 S. 2nd Avenue	Frank and Ed Hodges Rental	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42502
151	676 S. 1st Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District
152	676 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
153	681 S. 2nd Avenue	None	Noncontributing element of the Century Heights Conservancy Residential Historic District; AZSITE number 42595

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No.	Address	Name	National Register ^a eligibility
154	684 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
155	684 S. 2nd Avenue	None	Not evaluated; falls within the Century Heights Conservancy District; AZSITE number 42500
156	686–688 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42499
157	691 S. 2nd Avenue	Norma E. Morrow Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42516
158	700 S. 2nd Avenue	Frank Ewing Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE numbers 46831 and 42498; evaluated in 1984 – no changes, maintenance of building is excellent
159	712 S. 2nd Avenue	Ruth Ewing Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE numbers 46834 and 42497
160	715–721 S. 2nd Avenue	James H. Gordon Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
161	729 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
162	729 S. 2nd Avenue	None	Not evaluated; falls within the Century Heights Conservancy District; AZSITE number 42518
163	734 S. 2nd Avenue	Clara Smith Riley Home	Listed on National Register on 12/7/82 – Yuma MRA; contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE numbers 46833 and 42496
164	743 S. 2nd Avenue	W. F. Timmons Home	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88; AZSITE number 42519
165	748 S. 2nd Avenue	None	Contributing element of the Century Heights Conservancy Residential Historic District – listed on National Register on 10/11/88
166	837 S. 2nd Avenue	Robertson, Peter T., House	Evaluated in 1984 – vacant but no vandalism; AZSITE number 46835
167	South 6th Avenue and 13th Street	San Carlos Apartments – part of the Armory Park Historic Residential District	Not evaluated; AZSITE number 42706

^a National Register of Historic Places

^b Multiple Resource Area

ENV-3.00 OFFICE OF HISTORIC PRESERVATION
2010 - 0531 (78044)
(rating on back)



United States Department of the Interior



BUREAU OF RECLAMATION

Yuma Area Office
7301 Calle Agua Salada
Yuma, Arizona 85364

IN REPLY REFER TO:
YAO-7210
ENV-3.00

RECEIVED

APR 15 2010

ARIZONA STATE PARKS/S.N.P.

CERTIFIED MAIL-RETURN RECEIPT REQUESTED (70070220000447545762)

Mr. James Garrison
State Historic Preservation Officer
Arizona State Parks
1300 West Washington Street
Phoenix, AZ 85007

APR 13 2010

Subject: City of Yuma (City) 12th Street Project (Project) – Yuma County, Arizona

Dear Mr. Garrison:

The Bureau of Reclamation is proposing to issue the City "Right-of-Use" authorization to cross land held in fee or as right-of-way (East Main Canal (Canal)) by Reclamation because a portion of the proposed Project is on Reclamation managed land (the Canal). It is subject to review and determination under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act. Reclamation requests your concurrence with a finding of No Adverse Affect for this undertaking.

The Project is within the City limits, along the east-west midsection line of Section 29 in Township 8 South, Range 23 West, Gila and Salt River Base and Meridian. Twelfth Street is oriented in an east-west direction and runs perpendicular to the Canal, which bisects 12th Street between Avenues A and B. The Canal is owned by Reclamation and operated by the Yuma County Water Users Association as part of the Project's delivery system. Currently, 12th Street ends just west of 14th Avenue to the east and just west of the Canal to the west and continues east-west from the Canal. The Project area is shown in the enclosed Figures 1 and 2.

The City proposes to construct and maintain a bridge across the Canal (over and across land administered by Reclamation) in order to improve the connectivity between Avenues A and B. Other components of the proposed Project are to widen 12th Street to two travel lanes with a median or center turning lane to improve connections to surface streets, utilities infrastructure, and connections to existing recreational multiuse paths and facilities between Avenues A and B, approximately 1 mile in length.

Project Background

Currently, 12th Street is discontinuous between Avenues A and B because no bridge crosses the Canal. As a result, 12th Street does not currently function as a local arterial street because it dead ends at the Canal. In the Project study area, east-west arterial road crossings of the Canal are limited to 8th Street (located 1/2 mile north of 12th Street) and 16th Street (located 1/2 mile south of 12th Street).

The Project improvements would allow 12th Street to function as an arterial road, provide an additional east-west arterial road connection between Avenues A and B, improve the overall area's traffic capacity, relieve current traffic congestion, and improve emergency service access. In addition, improvements to sidewalks, sidewalk ramps, and curbs—which would be designed to meet Americans with Disabilities Act standards—would enhance pedestrian mobility along the 12th Street corridor.

Additionally, 12th Street operates as a two-lane roadway with parking permitted on either side. It consists of a 40-foot-wide paved surface with curbs, gutters, and sidewalks in both directions but this transportation infrastructure is not contiguous. From 21st Drive east to the Canal, 12th Street is unpaved and does not have curbs, gutters, or sidewalks. Also, Avenue A has one lane in each direction and a median, while Avenue B is a four-lane, major arterial road that parallels Avenue A in a north-south orientation. Twelfth Street, Avenues A and B are located in a residential area of Yuma.

All of the work will be conducted in areas that have been previously disturbed. Existing roads will be used to access work areas.

Identification of Historic Properties and Effects

The area of potential effect (APE) includes the current 12th Street corridor from Avenue A to Avenue B. The existing road (1 mile in length) in this area will be repaved and repaired and a bridge will be constructed spanning the Canal (see Figures 1 and 2). All of the construction will be in the same footprint as the original corridor. The new road improvements would consist of a 62-foot wide road crossing over the Canal and a width of 78-feet set for the other sections of the road.

A Class I records search was conducted on February 11, 2009. The records search examined the APE as well as a 1-mile buffer around the APE. The search identified 4 archaeological/historic sites, 10 previous projects, and 167 historic buildings or structures within a 1-mile buffer around the Project footprint (see enclosed Class I document, Tables 1, 2, &3).

Twenty-two of the historic buildings or structures are individually listed on the National Register of Historical Places (NRHP) as a part of the Yuma Multiple Resource Area. Eighty-three historic buildings or structures are listed as contributing elements of the Century Heights Conservancy Residential Historic District (Historic District); this district was listed on the NRHP in October 1988. Of the remaining historic buildings or structures, 52 are non-contributing elements of the overall eligible Historic District and 10 were not evaluated for NRHP eligibility.

Of the 167 historic buildings or structures listed on the NRHP, none are located within and/or immediately adjacent to the APE. These structures are also nearly a mile from the Project area; thus, the current Project area cannot be seen from the Historic District.

As a result of the previous surveys, one site (AZ X:6:65 [ASM]) has been previously noted within the APE. This site is the historic Canal; this feature is summarized in Table 2 of the enclosed Class I document. The Canal feature itself would not be impacted by the proposed construction, but the Canal banks would be used to support the span-type bridge structure and approaches (see enclosed photos). The executed Programmatic Agreement (PA) includes the Canal. Prior to any construction, the portion of the Canal within the Project area will be documented and photographed per the PA stipulations.

A small lateral canal shown in the enclosed Figure 3, west side of the Canal (Yuma Metropolitan Planning Organization aerial map) is no longer present. The lateral canal was removed in the mid to late 1980's as a result of residential development by the City.

Assessment of Effects

There is one historic property within the APE, the Canal; it will not be adversely affected by the Project. One other property was once within the Project APE; it has been destroyed by earlier home construction.

Pursuant to the Project PA, Reclamation will coordinate with the City and ensure that documentation is completed prior to any construction activity at the Canal. Given this letter's information and enclosed documentation, Reclamation requests your concurrence with a finding of No Adverse Affect for this undertaking.

Should you have any questions or comments, please contact Archeologist, Mr. Mark C. Slaughter at telephone No. 702-293-8143 or email: mslaught@usbr.gov or Environmental Protection Specialist, Mr. Julian DeSantiago, at 928-343-8259 or email: jdesantiago@usbr.gov.

Sincerely,



Jill S. Dale
Environmental Planning & Compliance
Group Manager

Enclosures

CONCUR

no adverse effect

William Collins 4/20/10
ARIZONA STATE HISTORIC PRESERVATION OFFICER
ARIZONA STATE PARKS BOARD

**PROGRAMMATIC AGREEMENT
AMONG
THE US BUREAU OF RECLAMATION
ARIZONA STATE HISTORIC PRESERVATION OFFICE
CALIFORNIA STATE HISTORIC PRESERVATION OFFICE
AND
YUMA COUNTY WATER USERS ASSOCIATION
UNIT “B” WATER IRRIGATION AND DRAINAGE DISTRICT
BARD WATER DISTRICT
IMPERIAL IRRIGATION DISTRICT**

**REGARDING
MANAGEMENT OF THE YUMA IRRIGATION PROJECT**

WHEREAS, the United States Bureau of Reclamation (Reclamation), administers federal lands and rights-of- way within the Valley Division, the Bard and Indian Units of the Reservation Division, and the Unit “B” District of the Yuma Auxiliary Division, which are all units of the Yuma Irrigation Project (YIP), a historic irrigation system located in Imperial County, California and Yuma County, Arizona (See vicinity map in Appendix A); and

WHEREAS, the Yuma County Water Users Association, the Bard Water District, and the Unit “B” irrigation and Drainage District (Water Users) manage these administrative units, in consultation with Reclamation, and in accordance with separate contractual agreements that transfer the care, operation and routine maintenance of the YIP from the Federal government to the Water Users; and

WHEREAS, under agreement with the Federal government, the Imperial Irrigation District, adjacent to and west of the YIP, is responsible for the maintenance of certain historic features at Laguna Dam that are part of the YIP, and is therefore included in this Agreement as a Water User; and

WHEREAS, Reclamation has determined that future maintenance and operations of, and needed repairs and upgrades to, the YIP may have an effect upon the historic irrigation system and has consulted with the Advisory Council on Historic Preservation (ACHP), the California Office of Historic Preservation and the Arizona State Historic Preservation Office (SHPOs), pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C 470f); and

WHEREAS, Reclamation has conducted a sample inventory of the features constituting the YIP and has determined in consultation with the SHPOs that: 1) the sample survey is sufficient to characterize the nature, extent and integrity of the YIP as a whole; and 2) the YIP is eligible for listing on the National Register of Historic Places under 36 CFR 60.4 (a) and (c); and

WHEREAS, the City of Yuma, Yuma County (Arizona), Imperial County (California), the Arizona Historical Society, Arizona State Parks, and the Bureau of Indian Affairs have been consulted and have been invited to concur with this agreement; and

WHEREAS, the Fort Yuma-Quechan Tribe and the Cocopah Indian Tribe have been consulted about properties of religious and cultural significance that may be affected, and invited to concur with this agreement; and

WHEREAS, the parties agree that consultation on future undertakings affecting the YIP would benefit from the flexibility provided for under 36 CFR Part C, Section 800.14 (b), and wish to enter into this Programmatic Agreement (PA) in order to facilitate those consultations;

NOW THEREFORE, Reclamation, the SHPOs and the Water Users agree that future undertakings affecting the Yuma Irrigation Project shall be administered in accordance with the following stipulations to satisfy Reclamation's Section 106 responsibilities for these undertakings.

STIPULATIONS

I. Introduction

- A. The Yuma Irrigation Project is an extensive irrigation system that transports water from the Colorado River to users in Yuma County, Arizona, and Imperial County, California. Construction of the irrigation system began in 1904 as the inaugural project for the newly created U.S. Reclamation Service, later the Bureau of Reclamation. The YIP became a model of irrigation planning and development and produced technological innovations of national and international importance. Over the years, multiple development phases expanded the reach of irrigation across the Colorado River flood plain, producing the dams, canals, laterals, siphons, pump houses and other features that are part of the system today. Tens of thousands of acres have been brought under cultivation because of the YIP. The communities of Yuma, Gadsden, Somerton and San Luis, Arizona; and Winterhaven, California owe their modern existence to the irrigation project.
- B. Reclamation is responsible for administering the YIP and holds title to its land and facilities. Through a series of operation and maintenance agreements, however, the Water Users have been given responsibility for the day to day management needed to ensure water delivery. Hundreds of undertakings relating to the operation, maintenance and repair/replacement of features associated with the YIP are anticipated in the coming years as both Reclamation and the Water Users take steps to increase the system's efficiency and longevity. As a result, the integrity of the features that make up this historic irrigation system is in danger of being compromised through multiple individual undertakings that will, cumulatively, affect the YIP as a whole. Reclamation and the consulting parties have entered into this agreement in anticipation of these effects.

II. Area of Potential Effects

For the purposes of this PA, the Area of Potential Effects (APE) is the federal lands and rights-of-way that together comprise the Yuma Irrigation Project as defined in legal land records on file at the U.S. Bureau of Reclamation, Yuma Area Office, Yuma, Arizona. This agreement is limited to undertakings that may affect the historic irrigation features located on these federal lands and rights-of-way.

III. Identification and Evaluation

- A. Reclamation conducted a sample inventory of the features constituting the YIP, which was reported in 1992 and updated in 1999 (“The Historic Yuma Project: History, Resources Overview, and Assessment,” Bureau of Reclamation, Denver, Colorado) and is attached herein by reference (YIP inventory report). The purpose of the inventory was to record a representative sample of features sufficient to assess the National Register eligibility of the YIP. This effort was carried out as part of Reclamation’s responsibilities under Section 110 of the National Historic Preservation Act. Together, these studies describe 125 features, organized into features types and subtypes, and provide the historic context needed to interpret the historical contribution of these features to the YIP.
- B. Reclamation, in consultation with the SHPOs, has determined that five features or feature complexes are individually eligible for listing to the National Register of Historic Places under 36 CFR 60.4 (a) and (c). These properties are listed in Appendix B 1.
- C. Reclamation and the SHPOs concur that the YIP as a whole is eligible for listing to the National Register under 36 CFR 60.4 (a) and (c). Sixty-three of the features recorded during the sample inventory were found to be contributing elements to the eligibility of the system. Three of these, the Bard Experimental Farm, the Reservation Levee and the Mohave Canal Bridge, have lost their integrity since they were recorded, and are excluded from this PA. Wooden Bridge 4-IMP-6826, located below the Headgate at the Reservation Main Canal, is maintained under separate agreement with Imperial County, California, and is excluded from this PA. Nine of the remaining 59 features are associated with the Gila Project, and because they are not maintained by the Water Users, these features are also excluded from this PA. The 50 contributing features are presented in Appendix B 2 and B 3, as further described in Stipulation V.
- D. A master map showing in blue the location of all 55 individually eligible and contributing features is attached as Appendix C. In addition, Reclamation has prepared copies of the original inventory records describing and locating each individually eligible or contributing feature and has delivered these records to the Water Users for their information.

- E. Within one year of the execution of this PA, Reclamation will revisit the features listed in Appendices B 1-3 for the purposes of updating information on their integrity, description and map location and will make any needed changes to the feature inventory records. Reclamation, in consultation with the appropriate SHPO, shall also determine if any of the features have lost their integrity and are no longer eligible for listing to the National Register, either individually or as contributing elements to the YIP. Any features found not to be National Register eligible will be removed from Appendices B 1-3 and from the master map attached as Appendix C. Reclamation shall distribute all updated feature information, as well as any revisions made to Appendices B 1-3 and the master map in Appendix C, to the parties of this agreement for their records.

IV. Supplementary Identification and Evaluation

- A. Reclamation previously determined, in consultation with the SHPOs, that 36 features identified in the YIP inventory report did not meet the criteria for National Register eligibility because they were not 50 years old or older at the time of recording. The eligibility status of these features is currently undetermined, although Reclamation and the SHPOs understood that these features may become eligible in time. Fifteen of these undetermined features are associated with the Gila Project, however, and because they are not maintained by the Water Users, these features are excluded from this PA. The 21 remaining unevaluated YIP features are listed in Appendix B 4. The master map attached as Appendix C also shows in white the location of all 21 unevaluated features. Reclamation has prepared copies of the original inventory records describing and locating each unevaluated feature and has delivered these records to the Water Users for their information.
1. Within one year of the execution of this PA, Reclamation will revisit the features listed in Appendix B 4 for the purposes of updating information on their integrity, description and location. In consultation with the appropriate SHPO, Reclamation will reevaluate the National Register eligibility of all features listed in Appendix B 4.
 2. Reclamation will transfer any such features determined to be National Register eligible from Appendix B 4 to the appropriate list of features subject to treatment in Appendix B 1-3 and amend the master map attached as Appendix C accordingly. Any features determined not to be National Register eligible will not require further consideration under this PA. Any feature that remains undetermined because it is not 50 years old or older will not require further consideration under this PA, unless it can be demonstrated that it meets the National Register criteria consideration under 36 CFR 60.4. In this case, Reclamation will transfer the feature to the appropriate list of features subject to treatment in Appendix B 1-3. Reclamation will provide SHPO with a revised master map and appendices once the reevaluation has been completed.

3. In the interim, should either the Water Users or Reclamation propose any undertaking not specifically exempted from treatment under Stipulation VI, which may have an adverse effect on any feature listed in Appendix B 4, the following procedures will apply.
 - a. If a Water User proposes the undertaking, it will notify Reclamation's Yuma Area Office (YAO) prior to construction. Reclamation shall consult with the appropriate SHPO to determine the National Register eligibility of the feature. If the SHPO does not respond within 30 days, Reclamation will assume concurrence with its eligibility recommendation. Reclamation will place any features determined to be National Register eligible in the appropriate list of features subject to treatment in Appendix B 1-3. Treatment will be carried out in accordance with Stipulation V.
 - b. If Reclamation proposes the undertaking, it will notify the relevant Water User, and consult with the appropriate SHPO to determine the National Register eligibility of the feature. If the SHPO does not respond within 30 days, Reclamation will assume concurrence with its eligibility recommendation. Reclamation will place any features determined to be National Register eligible in the appropriate list of features subject to treatment in Appendix B 1-3. Treatment will be carried out in accordance with Stipulation V.
- B. Sample survey has been completed; however, not all historic features warranting preservation have been identified. Within one year of the execution of this PA, Reclamation will consult with the Water Users to identify all remaining rare and unique features, including, but not limited to, those made of wood, and all concrete features constructed by the Civilian Conservation Corps.
 1. Reclamation will arrange to identify and record these features using forms and field recording methods consistent with those used in preparing the YIP inventory report.
 2. Reclamation will assign the features to types using the property and sub-property type definitions contained in the YIP inventory report.
 3. Reclamation will determine the National Register eligibility of these features, in consultation with the appropriate SHPO.
 4. Reclamation will add any such features determined to be National Register eligible to the appropriate list of features subject to treatment in Appendix B 1-3 as warranted and amend the master map attached as Appendix C accordingly.

- C. In the future, Reclamation will determine whether there are features or feature types associated with the YIP that are not represented, or are significantly underrepresented, in the YIP inventory report.
1. Should Reclamation determine that such features or features types exist, Reclamation will record these features through additional inventory conducted by a cultural resources professional meeting the qualifications contained in the Secretary of the Interior's Professional Qualifications as described in Appendix A of 36 CFR 61. Reclamation will ensure that an inventory report is prepared describing the features and their historic contextual relationship to the YIP.
 2. Reclamation will assign the features to types using the property and sub-property type definitions contained in the YIP inventory report. If necessary, Reclamation will define new property types.
 3. Reclamation will determine the National Register eligibility of these features in consultation with the appropriate SHPO.
 4. Any features found to be National Register eligible will be added to the appropriate list of features subject to treatment in Appendix B 1-3.

V. Treatment

- A. In all cases Reclamation and the Water Users will seek to avoid adversely affecting the features listed in Appendix B 1-3. If either Reclamation or the Water Users propose an undertaking that involves one or more of these features, and the undertaking is not specifically exempted from treatment under Stipulation VI below, then the undertaking will be considered to have an adverse effect and will be subject to treatment in accordance with this Stipulation. All treatment shall be conducted following the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation or the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, as applicable. Reclamation will ensure that treatment is carried out in accordance with the following treatment protocol.
- B. Individually Eligible Historic Properties listed in Appendix B 1
1. For features listed in Appendix B 1, Reclamation will consult with the appropriate SHPO concerning treatment.
 2. Reclamation will prepare a treatment plan that outlines measures to mitigate adverse effects.

3. At a minimum, treatment will include, but is not limited to, Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation. Reclamation will consult with the appropriate SHPO and the National Park Service to determine the level of HABS/HAER documentation. Treatment may also include the preparation of materials designed for public outreach and education such as signage and information kiosks, documentary videos, brochures and other printed text. Collection of structural components including historic gates or CCC stamps for future public exhibits may also be appropriate.
4. Treatment, analysis and report preparation will be conducted by a cultural resources professional meeting the requirements of the Secretary of the Interior's Professional Qualification Standards as described in Appendix A of 36 CFR 61.
5. Reclamation will ensure that a draft report, plan, or other documentation required under the treatment plan is prepared and will submit the draft to the appropriate SHPO for 30 day review prior to construction. Reclamation will at the same time, make the draft available to the public for review upon request. If the SHPO does not respond within 30 days, Reclamation will assume the SHPO has no objection to the draft. In finalizing the draft, Reclamation will take into account any comments it receives from the public and the appropriate SHPO within the 30 day review period.
6. Reclamation will ensure that all field documentation required under the treatment plan is completed prior to the undertaking. Upon Reclamation approval, the undertaking may begin
7. Reclamation will ensure that a final report, plan or related documentation is prepared within 12 months of the end of field work and will distribute the document to the signatories and concurring parties to this PA.
8. Procedures:
 - a. If a Water User proposes an undertaking that may adversely affect a feature that is listed in Appendix B 1 as individually eligible, and the undertaking is not specifically exempted from treatment under Stipulation VI, the Water User will notify Reclamation's YAO early in the planning process. Reclamation will prepare a treatment plan and follow the treatment steps in this Stipulation.
 - b. If Reclamation proposes an undertaking that may adversely affect a feature that is listed in Appendix B 1 as individually eligible, and the undertaking is not specifically exempted from treatment under Stipulation VI, then it will notify the appropriate Water User about the project, prepare a treatment plan and follow the treatment steps in this Stipulation.

- C. Contributing Historic Properties listed in Appendix B 2 as belonging to one of the following property types and subtypes as defined in the YIP inventory report.

Type and Subtype (offset)

Water Delivery/Storage Features

Containment/Diversion Structures

Miscellaneous Structures (bridges)

Support features

Power features

Settlement features

Construction features

1. For features that are listed in Appendix B 2, Reclamation will conduct, as warranted, HABS/HAER Level II recording and archival research, or archaeological investigation and archival research, resulting in a professional quality report.
2. Treatment, analysis, and report preparation will be conducted by a cultural resources professional meeting requirements of the Secretary of the Interior's Professional Qualification Standards as described in Appendix A of 36 CFR 61.
3. Reclamation will ensure that any field documentation required for treatment is completed prior to the undertaking.
4. Upon Reclamation approval, the undertaking may begin.
5. Consultation between Reclamation and SHPO prior to treatment will not be required, but may occur if Reclamation requests SHPO input or technical assistance.
6. Reclamation will distribute copies of all reports to the signatories and concurring parties to this PA.
7. Procedures:
 - a. If a Water User proposes an undertaking that may adversely affect a feature listed in Appendix B 2, and the undertaking is not specifically exempted from treatment under Stipulation VI, the Water User will notify Reclamation's YAO early in the planning process. Reclamation will conduct treatment following the steps in this Stipulation.
 - b. If Reclamation proposes an undertaking that may adversely affect a feature that is listed in Appendix B 2, and the undertaking is not specifically exempted from treatment under Stipulation VI, then it will

notify the appropriate Water User about the project and conduct treatment following the steps in this Stipulation.

- D. Contributing Historic Properties listed in Appendix B 3 as belonging to one of the following property types and subtypes as defined in the YIP inventory report.

Type and Subtype (offset)

Water Delivery/Storage Features

- Conveyance structures/canals and laterals
- Conveyance structures/siphons
- Conveyance structures/flumes and tunnels
- Regulating structures (headworks/turnouts/check structures)
- Water measurement structures
- Protective structures (waterways, levees, spillways)

1. For features that are listed in Appendix B 3, Reclamation will ensure that all features are recorded and photo documented before construction begins and photo documented after construction is finished using a standardized form developed by Reclamation within 30 days of the execution of this agreement. Photographs will be taken using standard 35 mm color film with an ASA no greater than 400. Images may also be taken using digital color photography using a camera with at least 3 mega pixels to be saved in a TIFF file format at a minimum of 300 dpi. A copy of the photographs, printed on standard photographic paper, will be attached to the recording form.
2. The recording form will at a minimum include information on the nature of the undertaking, location of the undertaking, description of the feature, the date of the undertaking, and the name and organization of the recording personnel.
3. The form and photo documentation will be completed by either the Water Users or designated Reclamation staff and archived by Reclamation. Upon request, Reclamation will make copies of the documentation available to the SHPO for review.
4. No SHPO consultation will be required prior to the undertaking.
5. The undertaking may begin as soon as either the Water Users or Reclamation completes the field documentation required under this stipulation.
6. Procedures:
 - a. If a Water User proposes an undertaking that may adversely affect a feature listed in Appendix B 3, and the undertaking is not specifically exempted from treatment under Stipulation VI, then the Water User will notify Reclamation's YAO about the project early in planning process.

Reclamation will coordinate with the Water User and ensure that recording is carried out following the requirements in this Stipulation.

- b. If Reclamation proposes an undertaking that may adversely affect a feature identified as belonging to any one of the feature types listed in Appendix B 3, and the undertaking is not specifically exempted from treatment under Stipulation VI, then it will notify the appropriate Water User of its plans and ensure that recording is carried out following the requirements in this Stipulation.

VI. Treatment Exemptions

The routine operation, maintenance and repair activities listed in Appendix D will have no adverse effect to any of the features included in Appendix B 1-3. These activities are therefore exempted from the treatment provisions in Stipulation V.

VII. Emergency Situations

- A. Emergency situations, defined as unanticipated failures of equipment or facilities resulting in the release of water and or loss of power generation, may arise requiring an immediate response by Reclamation and/or the Water Users in order to protect health, safety and property.
- B. If either Reclamation or the Water Users determine that an emergency situation exists involving any of the features listed in Appendix B 1-4, then the requirements of this PA are automatically waived for those features.
- C. In such instance, Reclamation will prepare a report describing the emergency, the steps taken to resolve the emergency, and a damage assessment of any adverse effects that may have occurred to the features as a result of the emergency. The report will be sent to the SHPOs and the Water Users for their review and comment.
- D. Should either the Water Users or Reclamation propose follow-up repairs to any feature listed in Appendix B 1-4 at the conclusion of the emergency, and those repairs may cause additional effects, then the Water Users or Reclamation shall follow the provisions for treatment under Stipulation V. B.,C., or D, as appropriate.

VIII. Undertakings Taking Place on Tribal Land

Should either the Bard Water District or Reclamation propose an undertaking that is located on Quechan tribal land but is outside the federal property associated with the YIP, that undertaking shall be subject to the requirements of 36 CFR 800 separate from the terms of this PA. This includes proposed undertakings that are related to, or part of, the operation, maintenance, repairs or upgrades to the YIP.

IX. Human Remains

- A. Human remains encountered in an archaeological context anywhere within the APE by either the Water Users or Reclamation personnel, either through treatment in Stipulation V or through unanticipated discovery in Stipulation X, shall be reported immediately to the Reclamation's YAO.
- B. Reclamation shall ensure that all construction in the vicinity of the human remains shall cease and measures are taken to secure and protect the human remains and any associated grave goods from further disturbance.
- C. Reclamation shall ensure that the remains are evaluated by a cultural resources professional meeting the requirements of the Secretary of the Interior's Professional Qualification Standards as described in Appendix A of 36 CFR 61.
- D. If the remains are determined to be Native American, Reclamation will consult with the Fort Yuma-Quechan Tribe, the Cocopah Indian Tribe and other appropriate Indian communities in accordance with 43 CFR Part 10, the regulations implementing the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et seq.)
- E. If the remains are determined not to be Native American, Reclamation will consult with the appropriate SHPO pursuant to 36 CFR 800.4 through 800.6 regarding eligibility and treatment of effect.

X. Unanticipated Discoveries

Because of the intensive and extensive nature of ground disturbance associated with the construction and operation of the YIP over the past one hundred years, the chances of encountering intact archaeological or historical sites adjacent to or underneath the irrigation features is remote. Unanticipated discoveries, however, may occur.

- A. For the purposes of this PA, an unanticipated discovery may occur when:
 - 1. A previously unknown archaeological site, of historic or prehistoric age, is encountered during construction anywhere within the APE.
 - 2. An unknown element of a recorded historic feature listed in Appendix B 1-3 is revealed during construction anywhere within the APE.
- B. If either of the above scenarios occurs, Reclamation shall ensure that:
 - 1. Construction in the vicinity of the discovery ceases.
 - 2. The discovery location is secured from further harm.

3. Reclamation cultural resources staff and Water Users are immediately notified of the discovery.
4. A cultural resources professional meeting the requirements of the Secretary of the Interior's Professional Qualification Standards as described in Appendix A of 36 CFR 61 assesses the discovery to determine its nature, extent and condition.
5. Reclamation will then consult with the appropriate SHPO to determine eligibility and effect within 72 hours of the discovery. If the discovery is prehistoric in age, the Reclamation will also consult concurrently with the tribes. If either the SHPO or any of the tribes do not respond within 72 hours, Reclamation will make a determination of eligibility in accordance with 36 CFR Part 60.4.
6. Upon determining that the discovery is National Register eligible, Reclamation will proceed with an expedited treatment program to recover information on the historic property that includes, but is not limited to, its identity, age, use history, and method of construction, as appropriate. Reclamation will ensure that treatment, analysis and report preparation is conducted by a cultural resources professional meeting the requirements of the Secretary of the Interior's Professional Qualification Standards as described in Appendix A of 36 CFR 61.
7. All fieldwork related to expedited treatment will be completed within 72 hours of commencement, unless Reclamation and the appropriate SHPO agree that because of the size or complexity of the discovery, additional time for treatment, to be specified, is warranted. Once fieldwork is completed, construction may resume upon Reclamation approval. Subsequent analysis and report production will be completed within six months.
8. Reclamation will submit a draft report to the appropriate SHPO for review and comment. Final copies of treatment reports will be distributed to the SHPO and all other signatories and concurring parties.

XI Annual Orientation

Within 60 days of the execution of this PA, and annually thereafter, Reclamation shall provide orientation to its staff and the personnel from the Water Users on how to comply with the provisions of this PA. This training may included, but is not limited to, a review of how to use the PA and its appendices, a review of the treatment protocols and the photo-documentation procedures required under Stipulation V.D.1, as well as a review of the procedures for discovery of archaeological sites and human graves.

XII. Amendments

Any signatory to this PA may request that it be amended, whereupon the parties will consult to reach a consensus on the proposed amendment. Where no consensus can be reached, the agreement will not be amended.

XIII. Termination

- A. Any signatory to this PA may terminate it by providing thirty (30) days notice to the other parties, provided that the signatories and concurring parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.
- B. In the event of termination, Reclamation shall comply with 36 CFR Part 800 with regard to individual undertakings covered by this PA or with regard to all remaining actions under this PA.

XIV. Dispute Resolution

- A. Should any party to this PA object in writing to Reclamation regarding any action carried out or proposed with respect to the undertaking or implementation of this agreement, the agency shall consult with the objecting party to resolve the objection. If Reclamation determines that the objection cannot be resolved, Reclamation shall request the assistance of the ACHP and shall forward all documentation relevant to the objection to the ACHP. Within 30 days after receipt of all pertinent documentation the ACHP will either:
 - 1. Provide Reclamation with recommendations, which Reclamation will take into account in reaching a final decision regarding the dispute; or
 - 2. Notify Reclamation that the objection will be referred for comments pursuant to 36 CFR 800.7(a)(4), and proceed to refer the objection and comment. Reclamation shall take the resulting comment into account in accordance with 36 CFR 800.7(c)(4).
- B. Any recommendation or comment provided by the ACHP will be understood to pertain only to the subject of the dispute. Reclamation's responsibility to carry out all actions under this PA that are not subjects of the dispute will remain unchanged.

XV. Periodic Review

- A. Every three years following the execution of this PA, Reclamation, the Water Users, the SHPOs and the tribes will meet to evaluate the effectiveness of the PA. At that time, the parties will discuss whether or not the PA is functioning as

intended and whether the PA needs to be amended to correct and improve its effectiveness.

- B. Reclamation will then submit a report to the ACHP along with any recommended changes to the PA, requesting the ACHP's comments.
- C. Any amendments will be referred to the signatory parties for approval in accordance with Stipulation XII.

XVI. State of Arizona Contracting Requirements

The state of Arizona requires that the following stipulations be included in all Programmatic Agreements entered into pursuant to the federal regulations under 36 CFR 800.14. These stipulations apply to the whole of the agreement and to all of the signatories to the PA.

A. Non-discrimination

The parties agree to comply with all applicable federal or state laws relating to equal opportunity and non-discrimination.

B. Conflict of Interest

The State of Arizona may terminate this agreement upon finding that a State employee that was significantly involved in the creation of this agreement is, at the time the agreement is in effect but no later than three years after its termination, an employee or consultant to any other party in the agreement.

C. Non-availability of Funds

This agreement shall be subject to available funding, and nothing in this agreement shall bind any party to expenditures in excess of funds appropriated and allocated for the purposes outline in this agreement.

D. Arbitration

The parties agree to utilize any arbitration that is required under applicable court rules.

Reference:

1992 (Revised1999)

Pfaff, Christine, Rolla L. Queen, and David Clark
The Historic Yuma Project: History, Resources Overview, and Assessment. On file at the Bureau of Reclamation, Lower Colorado River Regional Office, Boulder City, Nevada.

Execution and implementation of this PA is evidence that Reclamation has satisfied its Section 106 responsibilities for all individual undertakings within the Yuma Irrigation Project.

U.S. BUREAU OF RECLAMATION

By: Jim Cherry Date: Nov. 24, 2006

ARIZONA STATE HISTORIC PRESERVATION OFFICER

By: James Garrison Date: 27 December 2006

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By: Milford Wayne Donaldson Date: 21 FEB 2007
Milford Wayne Donaldson FALA

YUMA COUNTY WATER USERS ASSOCIATION

By: Paul Rife Date: 12/26/2006
ADMINISTRATOR

BARD WATER DISTRICT

By: Ron Deema Date: 12/19/06

UNIT "B" WATER IRRIGATION AND DRAINAGE DISTRICT

By: Christie Date: 1-9-07

IMPERIAL IRRIGATION DISTRICT

By: Charles J. Hosken

Date: 1/4/07

CONCUR:

BUREAU OF INDIAN AFFAIRS

By: Allen J. Caspach

Date: 1-18-07

FORT YUMA-QUECHAN TRIBE

By: _____

Date: _____

COCOPA INDIAN TRIBE

By: _____

Date: _____

ARIZONA STATE PARKS

By: Gayle Zuni

Date: 12/27/06

ARIZONA HISTORICAL SOCIETY

By: _____

Date: _____

YUMA COUNTY, ARIZONA

By: _____

Date: _____

CITY OF YUMA, ARIZONA

By: _____

Date: _____

IMPERIAL COUNTY, CALIFORNIA

By: _____

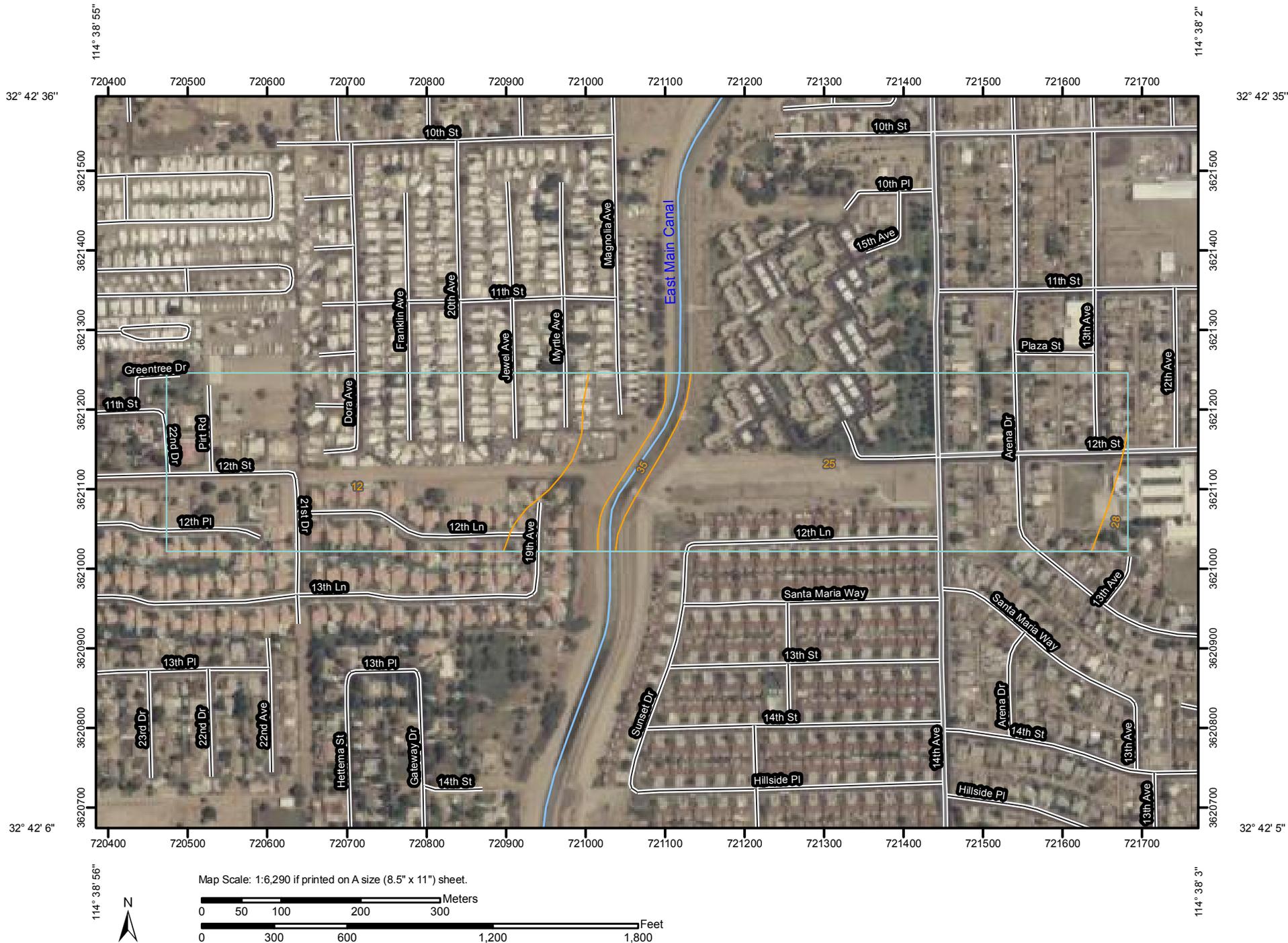
Date: _____

APPENDICES

- A. Vicinity map of the Yuma Irrigation Project area
- B. List of eligible, contributing and unevaluated Features
- C. Master Map of eligible, contributing and unevaluated features.
- D. List of treatment exemptions

Appendix C. Soil Survey Map

Soil Map—Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

 Very Stony Spot

 Wet Spot

 Other

Special Line Features

-  Gully
-  Short Steep Slope
-  Other

Political Features

 Cities

Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:6,290 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California
 Survey Area Data: Version 7, Sep 12, 2008

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
12	Holtville clay	27.2	40.6%
25	Rositas sand	37.4	55.8%
28	Superstition sand	0.8	1.1%
35	Water	1.6	2.4%
Totals for Area of Interest		66.9	100.0%

Appendix D. Agency Correspondence

**12th Street - Avenue A to Avenue B Project
Agency Scoping Letter Recipients**

Agency	Name	Title/Department	Address	City	State	Zip	Date sent	Received comment?
Yuma School District O. C. Johnson School	Mr. Jose Cazares	Principal	1201 W. 12th Street	Yuma	AZ	85364	6/26/2008	No
Western Arizona Council of Governments	Mr. Brian Babiers	Director	224 S. 3rd Avenue	Yuma	AZ	85364	6/26/2008	No
Arizona Game and Fish Department Habitat Branch	Ms. Rebecca Davidson	Project Evaluation Program Supervisor	5000 W. Carefree Highway	Phoenix	AZ	85086	6/26/2008	Yes
U.S. Fish and Wildlife Service Phoenix Main Office	Mr. Steve Spangle	Field Supervisor	2321 W. Royal Palm Road, Suite 103	Phoenix	AZ	85021	6/26/2008	No
U.S. Army Corps of Engineers	Ms. Kim Gavigan	Chief	3636 N. Central Avenue, Suite 900	Phoenix	AZ	85012- 1939	6/26/2008	No
Center for Biological Diversity	Dr. Robin Silver	Center for Biological Diversity	P.O. Box 36265	Phoenix	AZ	85067	6/26/2008	No
Yuma County Water Users Association	Ms. Roberta Orman	Engineering	P.O. Box 5775	Yuma	AZ	85366 -5775	6/26/2008	No
U.S. Bureau of Land Management, Yuma	Mr. Todd Shoaff	Field Manager	2555 E. Gila Ridge Road	Yuma	AZ	85365	6/26/2008	No
Yuma Metropolitan Planning Organization	Mr. Mark Luckie	Executive Director	502 S. Orange Street	Yuma	AZ	85364	6/26/2008	No
U.S. Bureau of Reclamation	Mr. Julian DeSantiago	Environmental Protection Specialist	7301 Calle Agua Salada	Yuma	AZ	85364	6/26/2008	Yes
Yuma Audubon Society	Mr. Cary Meister	Conservation Chair	P.O. Box 6395	Yuma	AZ	85366	6/26/2008	No
Cocopah Indian Tribe	Ms. H. Jill McCormick	Cultural Resource Manager	15th and Avenue G	Somerton	AZ	85350	6/26/2008	No
Quechan Tribal Historic Preservation Office Ft. Yuma-Quechan Indian Tribe	Ms. Bridget Nash	Ft. Yuma-Quechan Indian Tribe	P.O. Box 1899	Yuma	AZ	85366	6/26/2008	Yes



QUECHAN INDIAN TRIBE
Ft. Yuma Indian Reservation

P.O. Box 1899
Yuma, Arizona 85366-1899
Phone (760) 572-0213
Fax (760) 572-2102

HDR
RECEIVED
JUL 17 2008
PROJ: _____
FILE: _____
DIST: _____

July 14, 2008

HDR Engineering, Inc.
Mr. Kevin Grove
3200 East Camelback Rd, Suite 350
Phoenix, AZ 85018

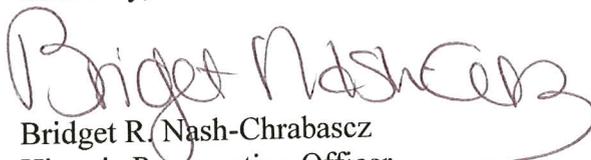
Dear Mr. Grove,

Thank you for notifying us of the proposed transportation improvements to 12th Street in the City of Yuma.

We have reviewed the areas in which the project is to occur and have determined that there is a possibility that cultural resources affiliated with the Tribe will be impacted. However, due to the fact that the project area is already heavily disturbed, the Cultural Committee asks that my office be kept updated on the project and that in the event that any resources are located subsurface, that my office be notified immediately.

Again, we thank you for your notification. If you need any further information or have any questions, please contact me at (760) 572-2423.

Sincerely,


Bridget R. Nash-Chrabasz
Historic Preservation Officer



QUECHAN INDIAN TRIBE
Fort Yuma Indian Reservation

P.O. Box 1899
YUMA, ARIZONA 85366-1899
Phone: (760) 572-0213



U.S. POSTAGE
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|| FP0594829 JMC01 02CD214F ||

HDR Engineering, Inc.
Mr. Kevin Grove
3200 E Camelback Rd, Ste 350
Phoenix, AZ

850 154 2333

85018

Appendix E. Public Involvement

City of Yuma 12th Street Improvement Project
Public Comments

	Open House Attendee	Name	Comments
1	Y	Steve Miller	What is the Cost to Expand 8th and 16th Streets. This puts a major roadway in a neighborhood Why? Traffic will be improved if expand 16th St and 8th St.
2	Y	Fred Orcutt	Build 12th Street Across Canal ASAP. Make it 4 lanes with median
3	Y	Carmen Faucon	What plans do you have for assisting individuals who currently are in the process of selling their homes? What are your timelines? I do not believe I will be able to sell this home given the current situation. Will you be buying ours?
4	Y	Floyd Wooldridge	I do not believe this is the solution to the traffic problem. I think you will only generate more problems. There are too many families that will be affected by adding a 5 lane highway through their back yards. I see speeding, accidents, crime. You will destroy our homes and lives to save 5 minutes. You are wrong. Find alternative plans, widen 8th St. Please do not destroy my home and my life.
5	Y	Paul Lightner	Need to extend to 4th Avenue.
6	Y	Mrs. Culpepper	I think your plan is very good. I see a lot of positives with this plan. Good Luck. (P.S. your info to the community was wonderful)
7	Y	Sandy Fisher	Our Concern is all that traffic at the school. Is it possible to build an overhead ramp across Ave A & maybe at 12th Street so kids aren't crossing in front of all that traffic. 8th St & 16th St are already big thoroughfares - why not add a lane or two to one of them? We live in townhouses backing to retention basin & our concerns are noise & height of wall that will be built. Where does traffic go when they reach Ave A? Back to 8th or 16th?
8	Y	Michael Hensley	When will it be determined on the acquisition of property, if it will be partial purchase or purchase of the whole property? I live on the east side of Ave A and the plan shows cutting through my back yard and swimming pool. A partial purchase would leave me without a pool and essentially without a backyard. This devalues the property greatly and re-sale would be difficult. Others are probably in the same situation. Is the City prepared to buy complete lots.
9	Y	Randy Thompson	One of the claims as stated on one of the boards stated "Provide additional Emergency Service Access" As an employee of the City that responds to emergency calls I question the raised medians. They have already been installed on 24th St from 15th Ave to Ave B. When responding to calls the PD, YFD and Rural Metro units are often forced to drive into on coming traffic which puts my life in danger, so the question is Why?
10	Y	Gengea McDemooy	We do not need raised landscaped medians - put more in the bike safety. How is this going to effect the 12th St. Project off Magnolia Senior Park Area?
11	Y	David Ager	What accommodations are being made for the daily foot traffic of the children who go to and from the Boys & Girls Club to O.C. Johnson School year around? This foot traffic occurs prior to the school day and after school. Also during the summer this foot traffic happens twice a day for the free breakfast & lunch meals provided to the community. A highlighted signal school crossing must be put into the plan. This needs to include traffic control lights since there is no crossing guard provided at all times. There should be a signal at Ave A & 12th St & Ave A and some sort of crossing at 13th Ave which is the path taken by the children if no crossing is provided who is going to be held responsible for the traffic loss of like that will ensue.

City of Yuma 12th Street Improvement Project
Public Comments

	Open House Attendee	Name	Comments
12	Y	Judi Lacy	Why do you think driving 4 blocks out of the way will alleviate traffic? You will open the flood gates for all kinds of riff-raff to come easily into a very private and quiet neighborhood. Why 5 lanes? When did this project become 5 lanes? Why cant I find info referring to at 5 lane project? We bought this property as a retirement investment. Now that we are close to retiring, this project no longer leaves us with a desirable home for a growing family. The pollution alone from 5 lanes of traffic makes my home totally undesirable as a human dwelling.
13	Y	P Martell	We have delayed too long already - do it before it gets more expensive - concentrate on the bridge then be concerned about the widening of the street. Ave B & 16th St one of the most accident prone intersections in the City. This would help ease the situation.
14	Y	P Wooldridge	Do not open 12th St. you will endanger many lives & destroy our homes.
15	N	Nancy Bretag	Supports the project. The project has been needed for a long time. Many may not like change but this is something should have been done almost 20 years ago.
16	N	John Colvin	I'll trade you those expensive & self defeating raised medians so you spend the money on a good bridge across the EMC. The bridge should be wide enough for vehicle traffic with a passing lane. Pedestrian path and much needed bike lane if 12th St. isn't cluttered with a raised median. Sorry I couldn't make the info session but I felt obligated to send 2 sense worth; thanks for lessening.
17	Y	General Comments Posted on White Board	Are Funds Available Yet? This is not needed, why spend the money. Why destroy residential neighborhoods? Why 5 lanes Everybody in these communities know how to get home. 5 lanes every 1/2 Mile? Weight Limits?
18	Y	General Comments Posted on White Board	Landscape medians - Do not Need. At what price does the City wish to buy land? Today's Prices? How do displaced persons pay for new Homes? Particularly in Mobile Parks 55+ Who are now mortgage free?
19	Y	Gene Dalbey	Mail Comments & Responses to all in the area! Website Info
20	Y	General Comments Posted on White Board	I Saw this coming, but need a traffic signal light at 21St & 12th, No more raised medians Please. Should have taken questions from the floor. We don't need more traffic going down 12St on Ave A because of the safety of our kids.
21	Y	Patty Wooldridge	We live in Green Tree estates off B and 11th this is a very secluded neighborhood with about 21 houses. We all love our quite neighborhood and shake with fear at what a 5 lane super highway will do to us not to mention the other hundreds of people in the path. You have 16th and 8th Street 1/2 mile away that could be improved. I don't understand how people would think that it would save us time and or money or family happiness by creating a 5 lane freeway into our neighborhood. Saving 3 or 4 minutes is not worth it. I feel very strongly we don't want a 5 lane road on 12th St. On any given morning or evening you can drive down 12th St and see families taking their dogs for walks or children walking with their parents down the canal bank. This is favorite walking path for many of us. Is creating a dangerous place to live worth saving 3 or 4 minutes of driving to satisfy a old plan the City has. My answer is no.

City of Yuma 12th Street Improvement Project
Public Comments

	Open House Attendee	Name	Comments
22	Y	Layl Laird	I own a home in Country Meadows on 13th Lane. The 12th St. project would limit the access to my home and lessen the property value. This is not the growth area of Yuma, 24th to 32nd is where the growth is taking place. The news media reports budget cuts to many city projects and this is an unnecessary expense. This was an attempt to "sell" the home owners since the general population does not want it. The City has cleared the 4 corners at Ave A and 16th St's. Finish that project and see there is any benefit to 16th before starting another costly project.
23	N	Vern Marshall	I live a block south of 12th St. In Rancho Sereno. I use 12th St. every day. I am no engineer, but like everyone else, I do have an opinion. Why do a five-lane connection between two lanes east of Ave A and West of Ave B? Three lanes (with bike lanes) probably makes sense - but not five lanes! Everyone seems to want easy traffic like August in February. It isn't going to happen. Yuma can't afford to furnish a Cadillac for a Chevy Need.
24	N	Habib Rathle	I strongly oppose widening 12th Street and linking it with a bridge across the canal. 1st, The price of oil is bound to go up further over the next 10 years, even after a temporary drop, because the earth has finite resources. People are already driving less. 2nd The trend is for smaller cars, therefore less congestion on the streets. 3rd, As a tax payer I think the cost is higher than having more bike lanes and more public transportation. 4th, Wider roads mean more traffic, more pollution, more global warming. 5th, The kids going to OC Johnson school will be at a higher risk of injury or death.
25	Y	David Ager (Note 2nd Entry)	I have two concerns regarding the meeting on Tuesday. 1st the "public" meeting was more of a here's the information, live with it meeting. By not allowing public comments you did a disservice to the community who is supposed benefit from the project. Why not accept public comments? 2nd You withheld vital information by not telling all of the truth in the fact that you are going to change 12th St. from Ave A to 4th Ave from residential to a thoroughfare from 25mph to 35mph & re-signing the street & stop signs.
26	N	Elizabeth Kennett	I was unable to attend the meeting on Tuesday night regarding the proposed 12th Street crossing, so I was unable to provide you with my comments. I live in the Country Meadows subdivision, and I am utterly opposed to this excessive and wasteful project. 5 lanes of traffic is nonsensical. Nowhere is 12th St. a 5 lane road. I would consider supporting an amended 3 lane proposal. I am particularly interested in the your NEPA, cultural and ESA compliance activities. Please consider this a request to be included in all scoping activities that the City of Yuma engages in.
27	Y	Anne Laporte	I don't support the project. My house will be taken as part of this unnecessary project.
28	N	Harold Reinbold	27 homes gone! 5 lane road to handle what? You run into a school plus another widening. Dead lock at 12th and A. Can't turn left to 8th St. (be there all day). Go right on 14th to 16th spend another day there at a light... Nobody is going to get in that mess.... 20mil for a few cars I can't believe they are even Thinking of this. I have a beautiful home, yard, etc. Now this storybook road is going to devastate the whole area!
29	Y	Everett & Judy Lacy	The city's proposed " Golden Mile "on the surface does not seem to accomplish much. Moving from three lanes on the west side of Ave B, where you have a mere trickle of traffic, to five lanes on the east makes very little sense in my mind. Additionally putting in five lanes with intended purpose of improving traffic flow, only to slow it down to a 15MPH school zone is sheer folly. Now, of course that school zone will only be active in the fall and spring, but doesn't that coincide with our increase in traffic here in Yuma? Another component of this project that I question is the fact that apparently there was no serious consideration to burying the power lines along 12th street,(this came as quite a surprise to me). I've often mentioned to Larry Nelson that this town could be turned into a mini Palm Springs if we could just get ahead of the "power curve". , We intended to sell our home in the next couple of years. If this project gets final approval it effectively puts us on hold. I have no doubt that the value would seriously compromised by this type of project.

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	Open House Attendee	Name	Comments
30		Fred Higginbotham	1) I do not believe this project to be an overall benefit to the taxpayers of Yuma commensurate to the price tag. 2) Right of way plus construction costs would best serve all of us if it addresses future growth needs. I am in favor of a western/southern highway or freeway loop around Yuma, for example.3) I understand the traffic engineer's analysis about the need to serve residents with east-west connections but I find the entire 12th Street corridor lacking. I drove the stretch between A and 4th Ave and don't see how you can dump two lanes of traffic into that stretch without fixing it at the same time. 4) The lack of busing at OC Johnson is not the city's problem, the reality of the situation is that this a pedestrian, bicycle and drop-off area. Neighbors are sensitive to the disruption to their neighborhood, and school zones across well-traveled routes don't effectively move traffic. 5) I would be open to the idea of 2-lane roadway or 2-lane with median connection between A and B. given the current state of 12th between A and 4th would serve as an option for immediate neighbors and an alternative for emergency vehicles while still encouraging most "through" traffic to use the wider 8th or 16th St's.
31	N	Mary Ellen Mundell	(Phone Conversation) - Was unable to attend the public meeting held on the 15th but wanted more information. Her house would currently be affected by the project and is concerned about the timing and if her entire property would be purchased. She is retiring in 2 to 3 years and would be willing to sell the entire house to the City if the price was a fair market price.
32		Carnell Kaluger	I am not interested in having 12th St widened. I think it would ruin many fine neighborhoods. It would displace too many families. It is not worth it. Thank you for giving me the opportunity to give my opinion.
33	Y	Del & Kay Cave	Your Meeting on July 15th was not very informative & the place was to small. You should have given the same presentation you gave to the City council work session. The project is to costly for what we are going to get out of it. It is to disruptive to both the City & the residents. Does not solve any problems. It would be to big an impact on O.C. Johnson School (It will create to big a traffic intersection at Ave A & 12th. My wife & I are against this project
34		Allen & Patricia Andrews	We, Allen and Patricia Andrews, firmly oppose your proposed 12th Street Improvement" Plan. As residents and owners at Galahad Manor at 12th Street and Avenue B, we understand it is only a matter of time before westward "improvements" reach Avenues B and C. 1. Were open house meetings/public hearings conducted when the 12th St. "Improvement" Plan was drafted within the following plans? * 2005 Major Roadways Plan * Yuma Metropolitan Planning Organization 2026 Regional Transportation Plan? Why isn't the traffic congestion problem being solved by building overpasses rather than restructuring residential areas? Your proposed plan would uproot families and force them to sell their homes/property at right-of-way acquisition value. Furthermore, Galahad Manor owners can expect a drop in property values, which we, a Townhouse Owners Association, have labored very hard not only to preserve, but to improve. Let it be heard that we oppose your so-called improvements. We vote NO to them, and to the officials who support them
35	Y	Deborah L. Branton	I live on 13 th Lane and was glad to be included in the information process about the proposed 12 th Street Improvement Project. However, I looked at it as nothing more then that. Me receiving information... I feel this project will not be turned off because once again the City of Yuma feels confident it knows what is best for the people. I don't see 12 th Street as a magic carpet that will clear congestion in Yuma. The fact that we have this grandiose plan of 5 lanes just floors me. The City is creating a one mile stretch that feeds from and back into 2. I think it will be a nightmare. I also have concerns about how I get out of where I live. The only way is via 12 th Street. In my case this isn't an issue of "not in my back yard". I just think the beast is too big. Why do you need so many lanes? It's primarily a residential area. I prefer fewer lanes so the 25 mph zone can be kept. The folks around OC Johnson are up in arms and they have every right to be. They feel safe right now and that sense of security is being taken from them. I think some of the neighborhoods affected by this have residents of modest income and that makes them a target. I spoke with a number of people at the meeting who have planned their retirements very carefully onl

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	Open House Attendee	Name	Comments
36	Y	David Schuman	(Letter To Yuma Sun) Reasons why I believe this project should meet the same fate as the erstwhile 20th Street one: There isn't suitable demand yet. Finish what you start. We have five east/west arteries 1st, 8th, 16th 24th & 32nd and we have two north/south arteries (4th and Ave B). The color glossy announcement of the 12th St. Project offers a goal: "Improve traffic flow and create cross-town connections. "putting 12th St over the canal doesn't do this. Completing Arizona and Ave A from 40th to 1st does. To enhance east/west mobility, resources can be better allocated by finishing 32nd St. upgrades, and by putting 8th St through to connect with coming attractions near Yuma Palms. 12th St runs right by a school. Yes, 16th St does, too; but it's always been a boundary line fro Alice Byrne. 12th is not a boundary line for O.C. Johnson; on the contrary - brining more traffic by it should raise considerable safety concerns. When eastbound traffic comes up from the valley to Ave A, where is it? Vehicles will either create a bottleneck at Ave A or they will empty into the residential area. Again, its a road to nowhere. Please shelve the project for now. Save money. Save neighborhoods. Save the tax base. Save resources. And potent
37	Y	Carlos Ortiz	Owns property at 1206 S. 11th Avenue that would be a total purchase if the project were to move forward as currently planned. They support the need for the project and have no major objections at this time.
38	-	General Comments from Letters from Editor (Yuma Sun)	This is the stupidest waste of precious Capital improvement dollars there is. ANY one who has driven a full thirty seconds in this town knows that there is no such THING as traffic north of 16th Street. This is a cop out, it lets the City look like it's doing something about traffic while just not making any waves.
39	-	General Comments from Letters from Editor (Yuma Sun)	Actually, the time was right for bringing 12th St across the canal to Avenue A back in the 60's, which was the first time that I had known it to be brought up. It still wouldn't be a bad idea as it was proposed in the 60's, to just bring it across and up the hill as a two lane normal street. Hardly anyone would really notice the difference except for the people that would use it to bypass 16th St. There would be no need to buy property that is developed or even add additional traffic control. The bad part of today's concept is that you need to make it a freeway sized road that empties into a traffic funnel.
40	-	General Comments from Letters from Editor (Yuma Sun)	A small bridge to carry two lanes is an appropriate concept, but the City Council has approved a budget and a CIP to destroy the neighborhood.
41	-	General Comments from Letters from Editor (Yuma Sun)	I hate it, although a bridge with TWO lanes may be a wonderful alternative as long as it doesn't destroy any homes.

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	Open House Attendee	Name	Comments
42	-	General Comments from Letters from Editor (Yuma Sun)	I hate the 12th St. Project, I seriously hope that enough of the public is heard and they cease design on this project. They are already wasting time investigating and researching a project that is NOT wanted, stop the funds going down the drains on a pointless project and rear it in a direction that will be utilized. Adding traffic at a higher speed does compromise the safety of the children that walk to school at OC Johnson. Terrible Idea, there are better alternatives, there are better roads to attract traffic to unfortunately 12th St. is not one of them. Also, People will lose their homes at minimal value, how fair is that?
43	Y	Lance Vander Zyl	<p><u>Traffic flow & routing:</u> The proposed 12th St. extension is not needed at this time. The ex. East/west arteries of 8th, 16th, 24th & 32nd need to be improved first. Yuma valley growth is occurring in the southwest part of town & is clearly bounded on the north by 16th crossing Ave's B,C,& D. A 12th St connection lends little to southwest Yuma valley growth. Improvements on the ex. east/west arteries, bounded by 16th on the north more directly accommodates that SW valley growth pattern. The 12th St. proposal provides little improvement since it is north of the area of growth and actually feeds into already older more mature developed parts of Yuma that have little potential for future expansion and growth.</p> <p><u>Social & Economic Impacts:</u> COY estimates about 10mil are needed in acquisition costs for the R/W to accommodate the 12th St. extension and the Magnolia Ave feeder. This does not include the indirect social costs that will be incurred by the elderly and minority persons who comprise the majority of the population that will be negatively affected by the proposed action. The elderly, many who are living on the economic edge with just social security & have no other means of support, will have to incur costs associated w/ relocation which include increased living expenses, increased property taxes, moving costs and so on. There are also potential social & psychological costs to displaced and disrupted persons that pertain to changes in living environment, emotional attachment to their homes & neighborhood, not to mention the negative impact on the neighborhood school that lies adjacent to the pathway of the 12th St. extension. The proposed action serves to do nothing more than shatter & fracture neighborhoods & the lives of the people living there and bring with it increased noise & air pollution, and in a general degradation of the human environment with little or no gain in traffic improvement.</p> <p><u>USBR Environmental Assessment:</u> USBR proposes an environmental assessment (EA) to evaluate the decision to construct a bridge to cross the Yuma East Main Canal with a result of finding of No Significant Impact (FONSI). USBR would limit its analysis to the "edges of the canal bank" However, the decision to construct the bridge, especially with the allied social & economic impacts that would result from the road development is much more profound and is environmentally significant. The proposed 12th St extension is just a small segment of a much larger transportation plan that has page after page of proposed upgrades, extensions & new construction. USBR will have to address environmental concerns time and time again when its federal assets & its decisions are affected by the is plan as it unfolds over the ensuing years. USBR has an obligation to assess the transportation plan as a whole and where it intersects with their interests, evaluate the cumulative effects rather than analyzing it one small "segment" at a time. CEQ regulations (40 CFR 1500-1508) along with numerous court cases through the years provide ample guidance on this matter and are quite clear that a comprehensive analysis is required.</p> <p><u>Summary:</u> Retrofitting roads& plowing through existing neighborhoods is an expensive process both in terms of money and the havoc that it wreaks on the people that are affected. In the case of 12th Street extension little is gained in improved traffic flow. It takes only a couple of minutes to get between 16th St to 8th St. on either Ave A or Ave B and the costs is just not worth purported traffic gains by having a road halfway in between. Slicing up a neighborhood, to include increasing hazards for children that attend the neighborhood school just to save a half mile of driving is not worth the cost.</p>

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	Open House Attendee	Name	Comments
44	Y	Julie & Mark Demyan	The proposal to build 5 lane parkway between Ave A and Ave B will not provide the cross-town traffic relief we are looking for. This project will provide another canal crossing but is not a true cross-town connection. The majority of cross-town traffic patterns & congestion occurs from 16th St & south. If 12th St was 5 lanes from Ave C to the regional mall this would be a true cross-town connection. If you are traveling east or west on 16th St or 8th St why would you turn off either of these streets and travel on 12th St. There are no businesses or commercial areas along the proposed parkway. 12th St west of B and East of A are only 2 lanes, we do not need a 5 lane parkway to connect Ave A to Ave B. This project will provide additional emergency access but also creates new safety concerns with O.C. Johnson. There is no plan to install stop lights at 12th & Ave A. Just because this project has been part of the roadway plan for 20 years doesn't mean we need to build it. The bottom line is that all costs associated with this project outweigh the benefits we will realize. Not a good return on our investment.
45	Y	Scott Donnelly	I was not pleased with the "divide & conquer" strategy used at the public meeting. 2nd, the slide presentation was the same info found on the poster boards. Presentation time could have been spent answering a few questions drawn from a hat. The following reasons are why I'm opposed to the expansion of 12th St. 1) It's far too expensive for a one mile strip of collector road. 2) A 5 lane collector will increase speeding hazard along 12th and near O.C Johnson. 3) The backyard of my house faces 12th St. A 5 lane collector will increase sound/noise pollution. Neither the designer nor the City made any mention about sound abatement strategies/ compensation. 4) Inevitably I suspect 12th St will continue east and unnecessarily cut through and disrupt the neighborhood from 4th Ave to 13th Ave. I disagree with disrupting neighborhoods so a few people who live elsewhere can reduce their drive across town. 5) It was said the expansion was to improve cross-town traffic flow but I've never seen a traffic jam on 8th St, a short 1/2 mile north if one wants to avoid 16th. 6) Address traffic concerns where they exist such as on 24th St and 4th Ave. 7) How will connecting 12th St. across the canal improve cross-town traffic when it terminates
46	Y	Elbert Wall	I found the project well planned and very well presented. It is a good plan and the improvements are needed. However, at this time it is a waste of money and should be shelved pending further planning. This project as currently planned will do nothing to solve any of our traffic problems. It will be a convenience for a few people living between the canal and Ave B, but will dump more traffic onto Ave A, further congesting that street. Traffic will move to 8th or 16th and continue as it does now. Traffic east of Ave A is where the real problem now lies. It is not worth the expenditure or the disruption of many homeowners. If this project were to extend to Ave 3E, then you would have something that I would support. About 30% of the valley residents must travel to the east side would not need to use 16th or 24th. This might avoid expansion of those two streets. I'm serious about this and I feel the City needs to get out ahead of the growth and take care of traffic before it becomes a problem.
47	-	Gary & Cherie Boyle	<p>Certainly general opinion so far would throw this idea under the bus. The Yuma gov. comment has hinted about the extreme cost of this plan and whether the public at large would want this expense. This project like any other is expensive, will disrupt the local home and business owner, and will certainly impact the public (good and/or bad). The public by their very nature will always shut down projects due to expense, disruption and significant change. In my nearly 19 years in Yuma I have always recognized the restrictive east/west transportation corridor due to the geographic layout of Yuma with rail, water distribution, mesa features and the variable layout of Yuma's early development. So what, there still remains an east/west transportation problem and no easy, cheap, short term fix seems apparent to alleviate traffic congestion in our community.</p> <p>The 12th St plan must have been initially identified as a viable alternative, thus the reason for the meetings and comments. This area has been initially identified as having some foundation for improving our east/west transportation corridors, thus the reason for the meetings and comments. The general public often does not possess the foresight to see what is best overall, just what is best for their immediate realm as seen by the meetings and comments. Will this plan follow the 20th St plan of the past, local public opinion said no way, Do Nothing and do it now. Will it follow the Palo Verde St. plan. I hear the same comments from a different group of citizens, it will be expensive, some nice homes will be lost, this is a residential area and other parts of town have a lot of congestion too. Yes we have an east/west transportation limitation, we have met on another plan, the public says no. I wonder if the east/west transportation limitation will continue.</p> <p>The long term plan needs to tie Yuma's west residential populous to the old down town, new center of town Pacific/ US95 area and the interstate. The planned upgrade to 16th will added needed corridor south of the shopping dist if sized and implemented appropriately. An additional corridor is needed north of the shopping dist. helping feed the old downtown, 18 Redondo commerce center and future developments in this area seems apparent. There are limited options to add an east/west corridor in the north region. I would think that 8th and 12th are the only viable options. 1st and 3rd would overwhelm the current downtown development and historic nature of the old downtown. City staff should identify the real need, when the need is best impact the community. Please do not use current cost or public sentiment as abandoning criteria for this plan. Please, allow staff to truly evaluate the best mix of positive impact and overall best financial return. Allow staff in the near present to look at either 12th st plan or identify an alternative plan and incorporate the best alternative into the City's transportation plan, now. Putting off until later also has a cost, inflation seems apparent. The general public opinion concerning change will not b</p>

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48		Linda Hardestry-Jett & Mildred D. Wood	This project is a great concern to me for a number of reasons. Has the City of Yuma investigated the possibility of extending the existing 4-lane 8th St. north of the mall area? This seems to be a smarter, better and more fiscally responsible answer to traffic congestion in Yuma. After all the congestion is largely from mall area traffic trying to go west. So it would make sense to have another east/west entrance and exit for mall traffic which would truly ease the 16th St. problem. The traffic situation from Ave A to Ave B on a wider 12th Street would be even more difficult to manage especially near the school on Ave A. A one mile 4-5 lane street that costs over \$20 million (that estimate is probably low by now) just isn't fiscally responsible.