Cortaro 57 Specific Plan

Cortaro Farms Road @ Camino de Oeste Alignment
Pima County, Arizona

Submitted to:

Pima County Development Services Department (DSD)
Planning Division
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Tucson, Arizona 85701

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April, 2021

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I.A Forward

This Specific Plan (SP) applies to approximately fifty-seven (57) acres of land that will be masterplanned and developed under a unified vision through the joint efforts of three separate ownership interests, namely Cortaro Farms 15, LLC, Tricar Investments, Inc., and Horizon Church, Inc. The primary use envisioned for the Project is that of detached, single-family private residences, together with a small portion of neighborhood-level retail services. Secondary uses may also include garden offices and luxury rental homes. The Specific Plan will ensure that this complement of uses is developed in a coordinated fashion which not only accommodates their individual needs, but which also integrates and leverages them such that they complement and enhance one another. The Specific Plan vehicle also allows for due consideration of existing adjacent development and the provision of appropriate edge and buffering treatments where these existing uses abut the Property.

Toward this objective, the Project will be developed under a comprehensive approach that effectively weaves new residential neighborhoods and neighborhood-level commercial/retail goods and services into the existing urbanized context. It will do so under a consistent aesthetic theme and project identity, thereby fostering a clear sense of place and reinforcing a focused, holistic community image.

I.A.1 Rationale for Using the Specific Plan (SP) Zone

The Specific Plan is the most appropriate entitlement vehicle for the Property for the following reasons:

- It provides flexibility not found in traditional zoning constructs to cohesively integrate the holdings of three separate property owners into a synergistic and functional whole.
- It provides the best construct for the development and regulatory enforcement of customized design and higher aesthetic standards throughout the Project.
- It is the most effective approach for facilitating a mix of housing styles, residential densities, and neighborhood-level retail/commercial, as well as their integration into an interconnected pedestrian, recreational and multi-modal framework.

- It provides a superior construct for developing and implementing a unique project vision, identity, and image.

From a land use perspective, the Subject Property is located within the established and expanding urban context that is the Cortaro Farms Road corridor. The Project represents infill development in every way, in that it is a veritable “hole in the donut” on the south side of Cortaro Farms Road that is bounded by existing residential subdivisions zoned CR-4 and CR-5 to the north, south and southeast. An existing subdivision within the Town of Marana (zoned R-6) adjoins the site to the immediate west.

While lower-density, unsubdivided legacy parcels still remain to the northeast and to the southwest, it is clear that Cortaro Farms Road now represents a major east-west corridor within the larger metropolitan urban matrix, making an increased density of development not only acceptable, but also appropriate for reasons including infrastructural efficiency and the furthering of our community’s multi-modal & transit goals.

With all of the above in mind, the proposed Specific Plan represents a clear, justifiable and quintessential infill opportunity that will integrate and co-exist well within its established/ surrounding residential context.

I.A.2 Physical, Economic, & Environmental Suitability of the SP

The Specific Plan vehicle is wholly suitable for the regulatory administration of this Property. From a physical perspective, it abuts Cortaro Farms Road, a major east-west transportation corridor within the larger metropolitan matrix. This entire segment of the roadway was recently reconstructed to a full four-lane cross-section with landscaped medians, sidewalks and striped bike/ multi-use lanes along both sides of the roadway. This four-lane cross-section extends eastward to Oracle Road and westward to a major interchange with Interstate 10.

Cortaro Farms Road

From an economic standpoint, development of the Property as a quality masterplanned community that offers a variety of housing types and complementary neighborhood-level retail and services will only serve to further strengthen a robust housing market, while providing convenient commercial goods and services to not only its own new residents, but to all of their existing neighbors already in the area. It is key that all new development within this important transportation corridor maintains a high standard that will support a position in the marketplace as a preferred and desirable housing sector.

From a different but no less important economic perspective, the Property will develop largely off of the existing, established framework of public infrastructure already in place, as opposed to necessitating any costly expansion of it. In fact, the only significant public improvement associated with this project, namely the extension of Camino de Oeste from its current dead-end to a new intersection with Cortaro Farms Road, will be designed and

constructed at developer expense. In a community whose historic pattern of sprawl and low-density development has led to chronic difficulties in paying for its public infrastructure, the importance of such infill development and developer-funded construction cannot be minimized. This project will integrate seamlessly and efficiently, over its entire build-out, with the existing infrastructure framework.

From the environmental perspective, the Property contains an appreciable natural floodplain corridor, which will be protected and preserved as an important natural open space amenity for the residents. The site also features a large stand of specimen saguaros, together with a passel of Ironwood trees. While the saguaro community is substantial, it must also be noted that many of its specimens are of significant age and in declining health. The Specific Plan allows for specialized criteria and methodologies that can best deal with the unique characteristics of this particular stand in terms of preservation, transplantation, salvage and/or removal.

Lastly, the Property falls within the Multi-Use Management Area (MUMA) and Special Species Management Area (SSMA) categories of the Maeveen Marie Behan Conservation Lands System (CLS). Full compliance with CLS policies will be achieved through a combination of on-site natural set-asides (the aforementioned floodplain corridor) and off-site mitigation lands.

I.A.3 General Compatibility of the SP with Adjoining Land Uses

The proposed Specific Plan is entirely compatible with its existing adjoining uses. To the north, west, south, southeast, and east are existing residential subdivisions of generally similar character to that which is proposed. This project will integrate nicely into this established residential mix.

Quail Run Elementary School lies immediately north across Cortaro Farms Road. With the extension of Camino de Oeste, a direct transportation link will now be provided to Quail Run from not only the Specific Plan site, but from the thousands of existing homes that already feed the School from the south.

To the northeast and southwest lie lower-density and unsubdivided properties, some of which are occupied with existing residents and some of which are vacant preserves. The redevelopment of these legacy properties is highly unlikely. The Specific Plan is well separated from these by Cortaro Farms Road, and also incorporates appropriate buffers to respect the neighboring lands.

I.B Introduction & Guiding Principles

This Section provides a general overview of the proposed Specific Plan project, its planned development program, and the goals and objectives that guide this SP. The details and specific standards of this program are provided in Section II (Specific Plan Proposal) of this document.

I.B.1 Project Location

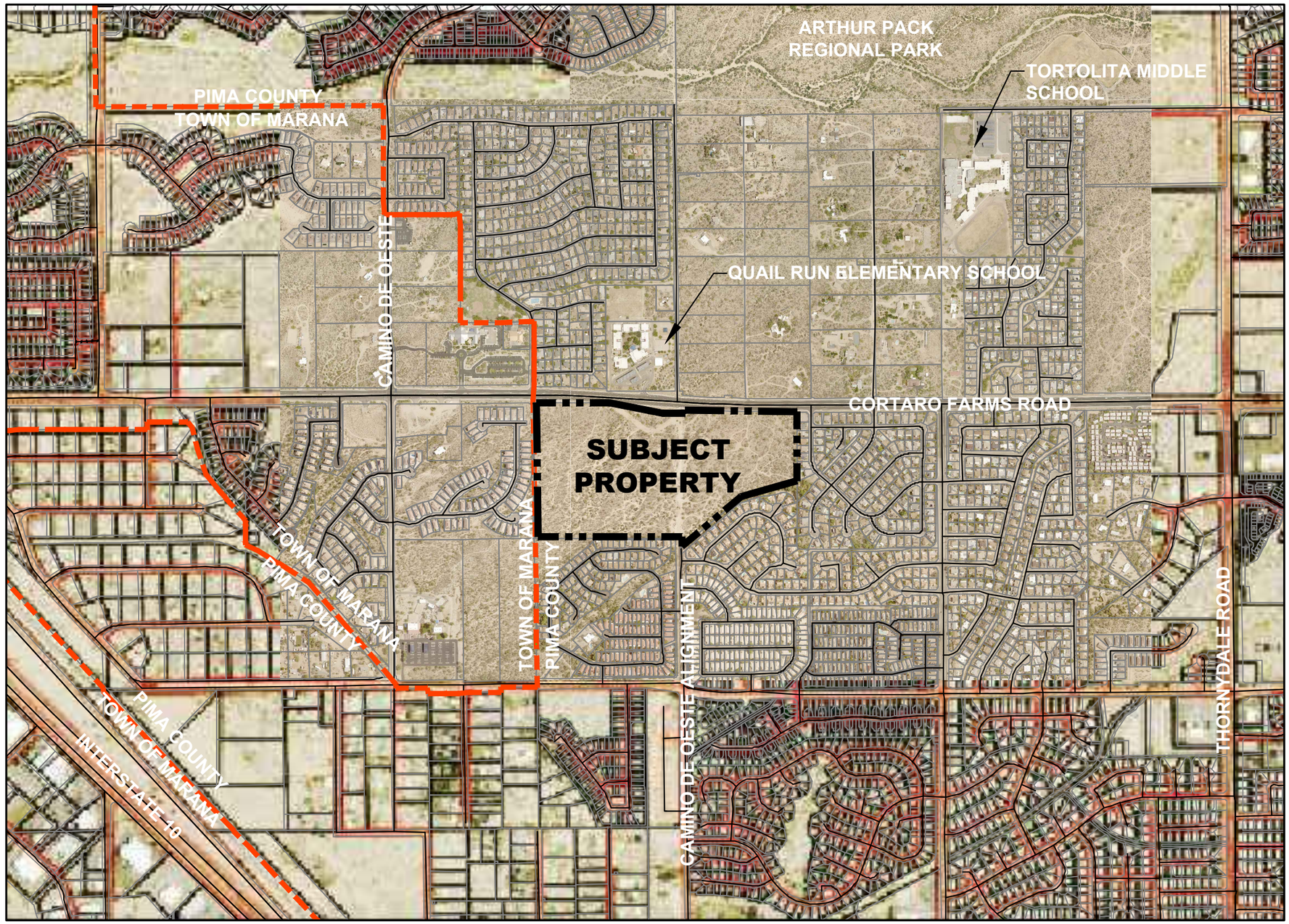
The Specific Plan is comprised of approximately fifty-seven (57) acres of vacant land located on the south side of Cortaro Farms Road, approximately one (1) mile west of Thornydale Road. Ultimately, Camino de Oeste will effectively bisect the Property; it presently dead-ends at the south boundary of the SP, but will be extended northward through it as part of this development program, so as to provide a new connection and intersection with Cortaro Farms Road. See Exhibits I.1 & I.2 for its Regional Location and more detailed Site Location, both of which also illustrate the various nearby uses that define the site's existing context. The Property is presently composed of four (4) tax parcels, these being Nos. 221-16-029D, 221-16-029E, 225-33-059M, and 225-33-059R.

I.B.2 Property Ownership

The Property is owned by three (3) separate entities, namely Cortaro Farms 15, LLC, Tricar Investments, Inc., and Horizon Church, Inc. These owners are working jointly on this Specific Plan so as to provide a common, integrated design and imaging for the site.

I.B.3 Historic and Existing Uses of the Site

The Property is currently vacant. Various portions of it have been disturbed by past activities, including the recent reconstruction of Cortaro Farms Road, wherein a portion of the site was used for construction-staging purposes. The future Camino de Oeste public right-of-way, which will extend northward through the site, has been wholly cleared in a wide swath for the installation of a existing public sewer and water lines. Numerous wildcat paths and trails, apparently used by pedestrians, dirt-bikers or off-road vehicles, also scar the Property. There is evidence of native plant theft, wildcat dumping, vandalism, and homeless encampments. All of these further justify development of the property as a new residential community.



LEGEND

Boundary of Specific Plan
Subject Property

Town/County Limits

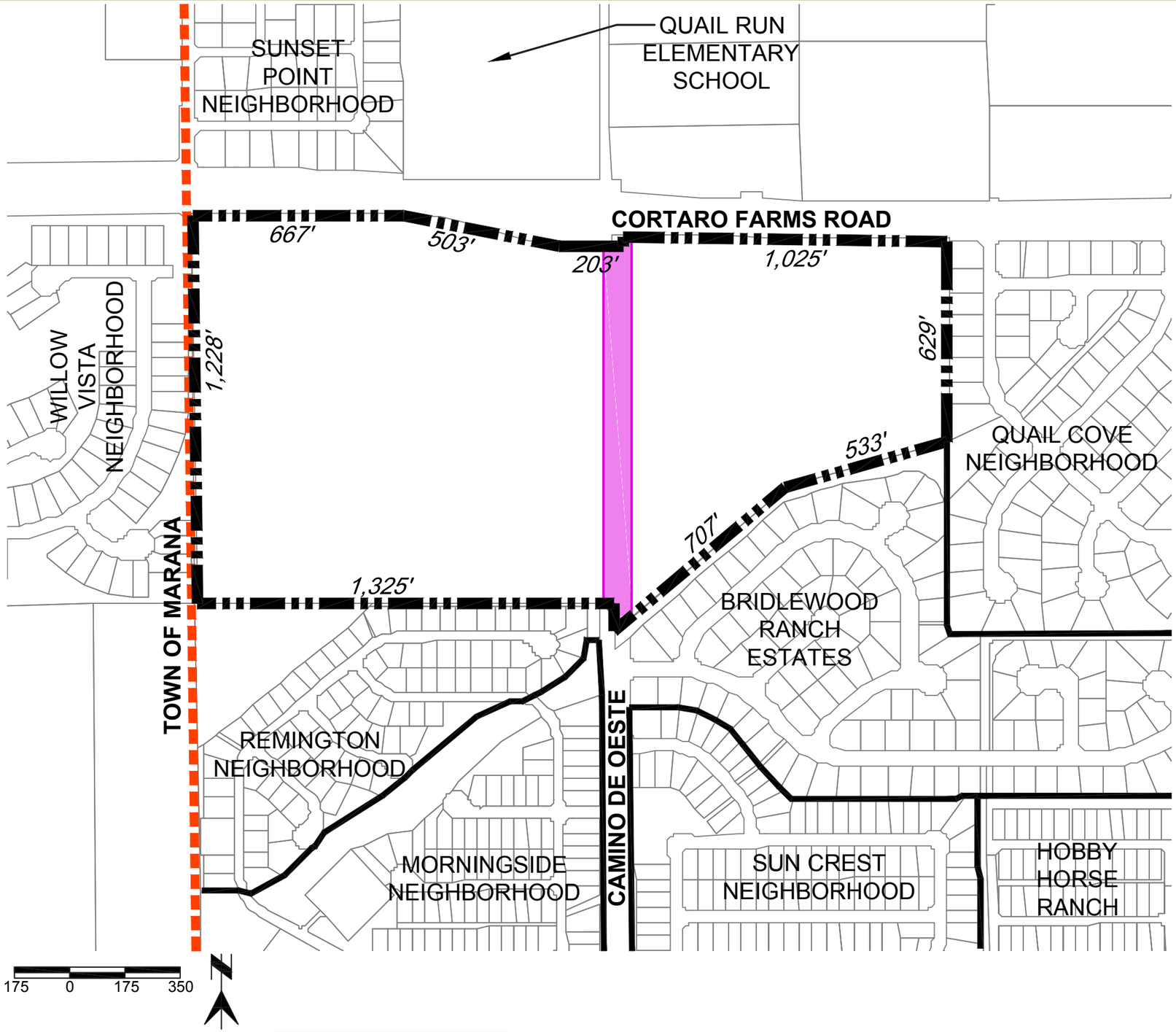
PROJECTS INTERNATIONAL, Inc.
STRATEGIC GUIDANCE
ENTITLEMENT PROCESSES
LOCAL ADVICE & COUNSEL

GRS LANDSCAPE ARCHITECTS, LLC

Baker & Associates Engineering, Inc.

Cortaro 57
SPECIFIC PLAN

REGIONAL LOCATION MAP
Exhibit I.1



LEGEND

- Boundary of Subject Specific Plan
- Town of Marana Limits
- Future 80' Right-of-Way Dedication by this project for extension of Camino de Oeste to new Intersection with Cortaro Farms Road.
- *1,025'* Boundary Dimension, Typ.

I.B.4 General Description of Proposed Project

The proposed project will be primarily composed of detached, single-family residential neighborhoods, together with a small site for neighborhood-level commercial goods and services abutting Cortaro Farms Road (at its future intersection with the extension of Camino de Oeste). Secondary-use options include garden offices and luxury rental homes.

The residential neighborhoods will include small pocket parks to provide for both active and passive recreational activities, special events, and the overall enhancement of the community's social fabric. Street sidewalks will provide linkages to adjacent public streets so as to foster both internal and regional pedestrian connectivity.

Access to the Specific Plan will occur only via Cortaro Farms Road and the new extension of Camino de Oeste through the Property. No vehicular access will occur into any of the adjacent residential neighborhoods.

I.B.5 Project Goals and Standard of Quality

The overarching goal of this Specific Plan is to create an integrated community where the new residential communities and proposed neighborhood-level commercial/retail uses functionally complement and benefit from each other, implementing a consistent level of quality, aesthetics and image for the entire project that knits nicely into the existing matrix of surrounding residential subdivisions. The detailed development concept and regulatory criteria presented in Section II of this document (Specific Plan Proposal) provide the regulatory controls and procedural mechanisms to ensure this overarching goal is achieved.

a. Guiding Objectives

This Specific Plan intends to create a dynamic residential community that carefully integrates its new neighborhoods with those existing ones around it, and which will provide a variety of housing types and styles that will attract a diverse population of active residents, set and maintain a high standard in the Tucson market, meet the full measure of resident needs and preferences, and generally help elevate the local housing market by providing choices that are fresh, exciting, and innovative.

Beyond this, there is the important sub-goal of creating and fostering a truly Living Community, a term which is defined on several levels. First, it means that the community's primary purpose is to serve the lives of its residents. This purpose cannot be achieved by simply constructing a conventional production-home community with cookie-cutter offerings. It is realized by understanding resident needs, preferences, hopes, and expectations, and then by helping implement these through buyer-inspired housing products, floorplans, site amenities, and resident services.

On a second level, the term Living Community stresses the fact that the community itself is an evolving entity. This approach demands input from existing residents and potential buyers on an on-going basis, and the critical evaluation of each completed neighborhood to determine the extent to which it works as intended and/or whether modifications and refinements are needed going forward in subsequent phases. A Living Community naturally adapts and evolves over time to improve itself… and thereby best serves the lives of its residents.

With all of this in mind, the appropriateness and need for this project to proceed under a Specific Plan is clear. A dynamic, evolving community is a combination of: 1) basic principles of high quality and design and that are inviolate and 2) flexible implementation measures that provide for responsiveness to ever-changing market demands. Only the Specific Plan vehicle can strike this balance.

b. Specific Goals, Purpose and Intent of this SP

The specific goals of this Specific Plan (SP) are as follows:

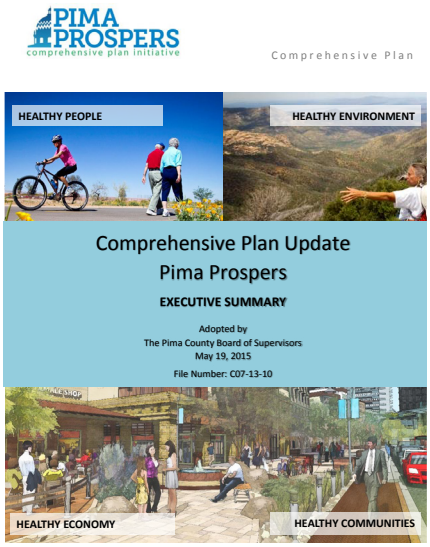
- Ensure a thoughtfully designed and executed residential community with complementary neighborhood-level retail and services that will fit well into its surrounding context,
- Execute a clear and defined project vision and image through quality design and detailing which, by doing so, serves as a notable example of the built environment within the Cortaro Farms Road corridor and in the Tucson community at large,
- Provide for development flexibility going forward and ensure the ability to respond to changing market conditions and preferences within an established regulatory framework,
- Bring the three underlying ownership entities under a single umbrella that ensures a consistent image and level or quality for the entire Property, and thereby avoid development that might otherwise occur in piecemeal, disparate fashion.
- Functionally integrate the Project's internal components as a cohesive whole, but also effectively knit it into the surrounding developed area in a manner that is considerate and respectful of our neighbors.
- Provide Pima County staff with an effective and easily interpreted regulatory tool for managing the on-going review and permitting of the Project over its entire build-out.

I.C Conformance with Pima Prospers

Regulatory direction for this Specific Plan is provided by Pima Prospers (the formal Pima County comprehensive plan), together with higher-level policy guidance by the Arizona Growing Smarter Act and the Smart Growth Network. Further detail is provided below.

I.C.1 Pima Prospers Guiding Land Use & Growth Policies

As already mentioned, the Property is primarily envisioned as a single-family residential community. It's prevailing density and character shall be generally in-keeping with the matrix of residential subdivisions already adjoining and/or nearby to the Site. This primary land use, together with the proposed neighborhood-level commercial/retail component, is justified in light of the established residential context already predominating the area, together with the fact that Cortaro Farms Road (especially in light of its recent reconstruction into a four-lane divided arterial) clearly represents a major east-west transportation corridor within the larger region. This proposed Specific Plan represents quintessential infill development that furthers and conforms with manifold adopted land planning policies and principles; these are discussed in more detail below.



a. Implementation of Pima Prospers (Comprehensive Plan) Policies

The proposed Specific Plan complies with or furthers the Pima Prospers policies discussed below. The pertinent policies are contained in the following two primary Chapters:

- Chapter 3: Use of Land (Land Use, Conservation, Housing & Community Design, and Cultural Resources Elements)
- Chapter 4: Physical Infrastructure Connectivity (Transportation, Water Resources, Wastewater Treatment, Trails, Flood Control & Drainage, and Infrastructure Concurrency Elements)

These are discussed in detail below.

Chapter 3.1 -- Land Use Element

The Land Use Element integrates land-use development strategies with physical infrastructure, human infrastructure, economic development and resource conservation to ensure the long-range viability of the region. The following specific policies apply:

Goal 1: Integrate Land Use strategies with physical infrastructure, human infrastructure, economic development, and resource conservation to ensure long-range viability of the region.

Policy 1. *Promote land use patterns that support healthy people, a healthy environment, and a healthy economy.*

Policy 2. *Provide an appropriate mix of uses that: a) supports a balance of housing, employment, shopping, recreation, and civic uses; b) furthers expansion of economic development goals; c) recognizes the dominant suburban growth pattern within the metropolitan area and the dominant rural growth pattern outside of the metropolitan area; d) promote the integrated and efficient use of public infrastructure and services; and e) conserves, protects and maintains culturally and biologically important lands.*

Policy 4. *Support land uses, densities and intensities appropriate for the urban, suburban and rural areas of the County.*

Policy 5. *Include regulatory floodplains and regulated riparian habitat areas as open space priorities to maintain hydrologic integrity, wildlife corridor connectivity and contiguous open space corridors.*

Policy 6. *Promote a compact form of development in urban and suburban areas where infrastructure is planned or already in place and the market is receptive.*

Policy 8. *Require all mixed-use developments to incorporate design elements for walkability, bikeability, and access to work, school, and public infrastructure.*

The proposed project further diversifies the existing land-use mix of the area by providing for a variety of housing types and densities that are compatible and consistent with their established context, while also integrating desirable neighborhood-level retail goods and services. This mix complements the predominant residential character of the immediate area, while also offering convenient services to all surrounding residents. The Project will ensure appropriate on-site buffering and screening of these neighbors and be of a human scale that visually integrates well with them.

Compact development is achieved by preserving the existing natural floodplain corridor which traverses the property from northeast to southwest, and by accordingly concentrating residential development in the adjacent upland areas. This approach preserves an important regulatory drainage area, while also providing a valuable open-space amenity to on-site residents for walking trails and passive recreation.

With respect to multi-modal connectivity, sidewalks will be provided along all new residential streets and furnish direct linkages to Camino de Oeste and to the existing multi-use/bike paths and sidewalks along Cortaro Farms Road. These linkages provide for connectivity with nearby Quail Run Elementary School, as well as with the important public and private cultural elements in the region. These include the Tucson Audubon Society and Arthur Pack Regional Park & Golf Course, together with the large dedicated public preserve (approximately forty-five acres of Pima County owned lands) at the northwest corner of Cortaro Farms Road and Thornydale Road.

Chapter 3.4 – Environmental Element

The Environmental Element calls for analysis, policies and strategies to address the anticipated effects of implementing the various Pima Prospers plan elements on existing natural resources. Conservation actions are to be encouraged, and the protection of biological resources is considered an essential component of land-use planning. The specific policies outlined in the Environmental Element largely detail the application and administration of the Maeveen Marian Behan Conservation Lands System, which is colloquially referred to as the CLS.

The Project fully implements the goals and intent of the CLS. The site is designated as Multiple Use Management Area (MUMA) and is also subject to the CLS Special-Species Management Area (SSMA) overlay. As mentioned above, this Specific Plan will preserve and set aside the existing regulatory floodplain corridor that bisects the Property; this set-aside represents the Project's on-site contribution towards full compliance with the CLS. Supplemental off-site mitigation lands will satisfy our remaining CLS obligations and be furnished by the developer at the time of future subdivision platting; these will be duly coordinated with the Pima County Office of Sustainability and Conservation.

Chapter 3.5 – Housing and Community Design Element

The Housing and Community Design Element addresses the provision of a wide variety of housing to meet varying needs, access to services and supplies, safe and healthy housing, and fair practices. The following stated goals apply:

Goal 1: *Create livable, viable, multi-generational communities.*

Goal 2: *Maintain a safe and healthy housing stock.*

Goal 8: *Ensure that all development and redevelopment is generally compatible and scale-appropriate.*

Goal 9: *Support quality development at appropriate scales in urban and suburban areas.*

Goal 10: *Ensure that all new development and redevelopment reflects the character and sense of place of the area.*

This Specific Plan ensures density-appropriate residential development and complementary neighborhood-level goods and services along a major public arterial roadway (Cortaro Farms Road) and within a well-established residential setting. Developing the Property under the Specific Plan umbrella is the best method of ensuring a uniform set of standards, design guidelines, and development standards, thereby constituting the best vehicle for achieving a higher overall level of Project quality, aesthetics, and image.

Specific development standards and guidelines are provided in this document to ensure same and to further enhance the established sense of place that is defined by the area's existing residential neighborhoods, and to provide for a variety of housing products at different levels of affordability.

Chapter 4.1 – Transportation Element

The Transportation Element addresses existing and proposed roadways, bicycle and pedestrian routes and correlates with the land use and economic development goals of Pima Prospers. The following policies apply:

Goal 1: Provide a comprehensive and multi-modal transportation system while providing mobility for all users and goods, and all modes of travel including automobile, transit, bicycling, and walking which will reduce carbon emissions.

Policy 1. *Manage traffic congestion and demand through capacity improvements, land use decision, transit service and other comprehensive strategies.*

Policy 3. *Support multi-modal transportation and transit-oriented development to improve mobility and reduce traffic congestion.*

The presently non-existent segment of Camino de Oeste through the Specific Plan site will be constructed with this Project so as to now connect with Cortaro Farms Road. The final specifics and design parameters of this new segment will be determined by the Pima County Department of Transportation (PCDOT) at the time of future engineering.

That being the case, we nonetheless envision a three-lane cross-section with striped shoulders on both sides of the street; the latter will jointly serve as multi-use and bicycle lanes. A separate sidewalk or meandering pedestrian path will also be provided on both sides of this new roadway segment so as to provide multi-modal connectivity to Cortaro Farms Road, where public bike paths and pedestrian sidewalks already exist. These new multi-modal features will further be physically tied to the Project's internal system of sidewalks and bike/pedestrian ways, thereby providing a new network of multi-modal connectivity that knits together the Cortaro Farms Road and Camino de Oeste corridors. This network not only benefits this Project's new residents, but also the thousands of homes and residents living south of the site.

In keeping with Pima County's objective of providing safe streets and access to nearby schools, all new streets within the Project will provide a system of concrete sidewalks that ensure safe walking routes for children to both Camino de Oeste and Cortaro Farms Road. A designated pedestrian crossing of the latter may also be warranted at some time in the future to serve Quail Run Elementary School; this issue is one to be determined via future discussions with the Pima County Department of Transportation (PCDOT) and the Marana Unified School District (MUSD).

A full preliminary Traffic Impact Analysis (TIA) is furnished with this Specific Plan so as to identify, up front, all pertinent traffic-related issues. All new vehicular traffic generated by the Project will be routed directly to Cortaro Farms Road and Camino de Oeste only. No traffic from this project will be directed into any adjacent neighborhood;

Chapter 4.2 – Water Resources Element

While Pima County is not a potable water provider, it does fulfill the role of analyzing known water supply and demand as it pertains to all newly proposed development to determine whether there is negative impact on the overall water supply.

Goal 3: Support efficient water demand management practices and strategies that protect both local and basin-wide water supplies.

Policy 9. *Conduct a Water Resource Impact Assessment on any rezoning that requires a site analysis, which shall include a Water Supply Impact Review, plus information provided by the applicant in a Preliminary Integrated Water Manage Plan (PIWMP).*

The proposed plan amendment site will be served by Tucson Water. It will be evaluated by PCRFCD staff for current and projected groundwater depth and other pertinent factors. Provisions for a Preliminary Integrated Water Management Plan (PIWMP) have been made in this Specific Plan; the PIWMP will detail the project's specific water conservation measures being employed by the Project and will be finalized at the time of future subdivision platting. These measures will include water-harvesting and run-off containment, grey-water systems, and specific site-planning and building construction measures.

Chapter 4.4 – Wastewater Treatment Element

The Wastewater Treatment Element addresses Pima County's responsibilities in designing, managing, and maintaining the public sanitary sewer system.

Goal 1: Efficiently manage and operate the County's wastewater system.

Policy 3. *Encourage growth in areas with or in close proximity to existing infrastructure.*

Policy 4. *Utilize existing right-of-way for the placement and realignment of public sewer systems.*

Policy 5. *Continue to support development of regional economic opportunities and new development through well-planned, infill sewer system capacity expansions.*

With respect to sewer line infrastructure, the Project will connect to existing wastewater conveyance infrastructure already in place. Extensions of the public system into and throughout the subject property will be funded exclusively on a private basis and meet all applicable design, access, and construction parameters of the Pima County Regional Wastewater Reclamation Department.

Chapter 4.8 – Trails Element

The Trails Element addresses implementation of the Pima Regional Trail System Master Plan, which is the County's blueprint of a high-quality, interconnected, multi-modal regional trail system in Eastern Pima County. The following policies apply:

Goal 1: Continue to support the development of a high-quality, integrated and multi-use trail system countywide trail system.

Policy 4. *Continue to require dedication of trails identified in the Pima Regional Trail System Master Plan as a condition of all rezoning approvals.*

Policy 10. *Continue to ensure that Residential Recreation Areas comply with the following: a) available for the use and enjoyment of subdivision residents; b) protect and enhance community health and quality of life; and c) meet minimum standards for safety and efficacy.*

This Specific Plan details the Regional Trail System Trail Master Plan as it applies to the Property. Any special easements or points of connectivity necessary to implement the Master Plan will be furnished accordingly at the time of future subdivision platting.

On-site recreation will be provided through neighborhood parks, small private recreation areas, and a limited system of walking trails within a planned corridor being set-aside as natural area. Supplemental in-lieu fees, if applicable, will also be paid by the developer towards public park improvements throughout the region as mandated by ordinance.

Chapter 4.9 – Flood Control and Drainage Element

The Flood Control and Drainage Element articulates County responsibilities, through the Pima County Regional Flood Control District (RFCD), for overall floodplain management, administration of all requirements pertaining to the National Flood Insurance Program, and to review and regulate all proposed private development for conformance with Floodplain Ordinance requirements.

Goal 1: Minimize flood and erosion damages for all County residents, property and infrastructure.

Policy 1. *Continue to monitor, control and manage natural resources to minimize flood and erosion damages by implementing the Floodplain Management Ordinance and addressing the impact of new development on flooding, erosion and riparian habitat.*

Policy 3. *Preserve washes with a base flood peak discharge equal to or greater than 100 cfs in their natural condition.*

Goal 2: Manage stormwater to protect lives and property, to reduce flood risk and to assure no adverse impact to adjacent or downstream properties.

Policy 1. *Require new development to comply with all applicable requirements of the Floodplain Management Ordinance addressing the impact of development on flooding, erosion and riparian habitat.*

Policy 2. *Require all new development to comply with all applicable provisions establishing minimum standards for site grading, drainage and design.*

All surface drainage and hydrologic design will proceed in full conformance and coordination with the Pima County Regional Flood Control District (PCRFCD), both during the Specific Plan (rezoning) process and during future residential subdivision platting. All vehicular drainage crossings and any pedestrian trails will proceed in close coordination with RFCD staff and with the Pima County Office of Sustainability and Conservation. All such resources will be treated in accordance with adopted preservation policies found in the CLS and in those related ordinances enforced by the District.

Chapter 4.10 – Infrastructure Concurrency Element

This Element describes the on-going administration of the Pima County Concurrency Management System so as to ensure that public infrastructure improvements are keeping pace with new development and to ensure that new development makes its fair-share contribution to needed infrastructure improvements.

Goal 1: Update and expand the existing Concurrency Management System which guides development to areas with in-place or planned infrastructure.

Policy 2. *Ensure that the Concurrency Management System review for all rezonings and specific plans includes an evaluation of: a) wastewater treatment capacity; b) flood control infrastructure and drainage capacity; c) potable water supply infrastructure and capacity; d) transportation infrastructure and capacity; e) parks and recreation, f) school capacity impacts; and g) cost of development.*

Policy 3. *Require that needed infrastructure improvements be provided concurrently with development.*

Existing or planned public infrastructure necessary to serve the Specific Plan is already in place, with the exception of Camino de Oeste, which presently dead-ends at the south boundary of the Property. This street is a designated Collector on the Pima County Major Streets and Routes Plan (MSRP). Concurrency requirements will require that this last segment of Camino de Oeste be constructed in conjunction this Specific Plan. The developer will satisfy this obligation by providing for the actual construction of this remaining roadway segment, or by providing a fair-share financial contribution as determined by the Department of Transportation (PCDOT).

b. Implementation of Growing Smarter Act

The proposed Specific Plan also helps implement multiple principles embodied in the original Arizona Growing Smarter Act that was first signed into law by the Arizona State Legislature in 1998. The Act mandated that all Arizona communities and counties formulate and adopt their own comprehensive plan to ensure more intelligent, coordinated growth going forward. To guide such efforts on a national basis, a set of Smart Growth Principles has been formulated by the Smart Growth Network (SGN). These are individually discussed below:

<u>Foster a Mix of Land Uses</u>

Given the emerging urbanization already generally ongoing in the area, considering the four-lane arterial nature of Cortaro Farms Road, and taking into account the Property's immediate context of existing single-family neighborhoods, the site is best developed primarily as a similar single-family residential subdivision that fits with its immediate neighbors. That being said, however, neighborhood-level commercial/retail is not only an appropriate component, but a needed one to provide convenient goods and/or services to the immediate population. The "mix of land uses" objective is thereby served, especially when considering the existing elementary school immediately across the street, the nearby public preserves that extend from Cortaro Farms Road all the way northward to the Audubon Society and Arthur Pack Park, and the major activity center that exists no more than a mile west at the interchange of Cortaro Farms Road and Interstate 10.

Take Advantage of Compact Building Design

The Project will locate its proposed single-family residential units in a compact spatial arrangement that affords the opportunity for efficient on-site infrastructure while, at the same time, establishing an important open space corridor element that is valuable from a preservation, wildlife and amenity perspective. Towards this end, the existing unnamed drainage corridor and associated floodplain that traverses the western portion of the Site will be set-aside as a preserved natural area. The clustering of development shall occur uses in the upland areas of the Property.

Create a Range of Housing Opportunities and Choices

The single-family residential portion of this Specific Plan will afford a variety of housing styles, floorplans and neighborhood feel. In addition, the Plan allows for secondary residential uses such as luxury rental homes. This structure furthers the objective of providing housing options that serve different sectors of the market and which provide the resident with different lifestyle experiences.

Foster Distinctive, Attractive Communities with a Strong Sense of Place

A Specific Plan is the best vehicle for implementing this objective, in that it mandates a clear framework of integrated design guidelines and development standards across the entire Project. This framework results in a consistent level of overall aesthetic quality and attractiveness, as well as a uniform and distinctive image that gives the Project its own unique identity while still integrating easily into the established context of homes.

Multi-Modal Transportation Opportunities

Further expansion of residential development throughout the Cortaro Farms Road transportation corridor will clearly contribute to our community's larger regional opportunities for multi-modal transportation. The corridor extends from Interstate 10 eastward to Oracle Road, along its path intersecting with several major north-south corridors, including Thornydale Road, La Cholla Boulevard, and La Canada Drive. The continued growth in population within this corridor builds growing demand for enhanced transit and multi-modal offerings in the future.

Rational Infrastructure Expansion and Improvements

Intelligent and efficient growth demands the intelligent and efficient use of established, existing public infrastructure rather than the continued outward expansion of it. The proposed Specific Plan will be served wholly by the site-convenient public utility infrastructure already adjoining the property. The developer will also make their fair share contribution, in the form of construction

and/or financial commitments, to provide for the completion of Camino de Oeste, through the Project acreage, to its planned new intersection with Cortaro Farms Road.

Conservation/Preservation of Natural Resources and Open Space

As discussed earlier, the entire Specific Plan falls within the Multiple Use Management Area (MUMA) classification of the Conservation Lands System (CLS) and is also subject to its Special-Species Management Area (SSMA) overlay, thereby increasing the CLS's established conservation and mitigation goals. The site's diagonal drainage corridor will be preserved as a natural open space amenity; this will represent a significant on-site contribution towards full CLS compliance. Suitable off-site habitat, acceptable to the Pima County Office of Sustainability & Conservation, will also be provided to fully meet the CLS's mitigation thresholds.

I.C.2 Existing & Proposed Pima Prospers Designations

The current comprehensive plan designation for the majority of the subject Property is Low Intensity Urban (LIU) 0.3. The easternmost seventeen (17) acres of the site is designated as Medium Intensity Urban (MIU), which is the result of an approved amendment to the comprehensive plan under Case No. Co7-08-08. The applicant's original request in that case was for Multi-Functional Corridor (MFC), which was in line with their intentions to pursue commercial and other non-residential uses. That request was ultimately modified to MIU when the applicant agreed to scale back their plans and instead proceed with an assisted living facility.

Rezoning Policy RP-120 was adopted in conjunction with the above MIU approval on the eastern 17 acres, that made it subject to the following:

1. A letter of intent to serve from a water service provider shall be submitted as part of any subsequent rezoning application. If the letter of intent to serve is from a service provider other than Tucson Water, the applicant will provide document as to why Tucson Water is unable to provide service.
2. Compliance with the Conservation Lands System (CLS) will be achieved to the greatest extent possible. On-site mitigation may occur anywhere on the site and will include open space on the north, east, and south portions of the property, with a minimum width of 125' of open space on the east and the south.
3. Future rezoning will be restricted to TR (Transitional Zone).

The above policies affect only to the eastern 17 acres of the overall Specific Plan property. Yet, for all intents and purposes, the bulk of their purpose will be realized over the entire fifty-seven (57) acres of this development:

- Tucson Water will service the entire SP site; same is described further in Sec. II-F.2 of this document,
- The Specific Plan will fully comply with the Conservation Lands System through a combination of on-site natural area set-asides and off-site mitigation lands.

- The 125' setback will not be maintained with the proposed Specific Plan. This setback dimension was promulgated under an originally proposed non-residential use. This Specific Plan proposes residential uses on these same lands, together with sufficient setbacks and buffering of the adjacent/existing residential neighborhoods.
- The new zoning designation for the entire Specific Plan property will be SP, not TR. The eastern 17 acres was originally targeted for non-residential uses. The TR zone restriction was therefore applied so as to limit these non-residential uses to only those lesser intensive ones permitted under the TR zoning category. The proposed Specific Plan intends uses that are less intensive than those permitted in TR.

The requested comprehensive plan designation for this Specific Plan property is Planned Development Community (PDC), which is a category reserved exclusively for masterplanned projects promulgated under Section 18.90 of the Zoning Code.

I.C.3 Applicable Overlay Zones & Special-Area Policies

At the time of this submittal, no Special-Area policies apply, or are proposed or anticipated, in conjunction with this Specific Plan. On-going discussions with staff and stakeholders will occur throughout the rezoning process, which may result in such Policies being promulgated and refined as circumstances warrant.

I.D Community Issues & Benefits

This Specific Plan will result in significant community benefits to the immediate area, the Cortaro Farms Road Corridor, and the region at large.

I.D.1 Benefits to the Community

This Specific Plan facilitates the following direct benefits to the community:

- It embodies responsible infill development within an already-urbanized context that will integrate, both functionally and aesthetically, with the established complement of residential neighborhoods in the area.
- It ensures a quality of development, consistent aesthetic, and uniform imaging for the entire Project that can only serve to enhance the overall appearance of the area and the property values of its entire surroundings.
- It brings the existing three underlying property owners under this single, consistent framework, thereby avoiding the prospect of uncoordinated, disparate development that might otherwise occur if each proceeded independently.
- It will be served almost entirely off of existing public infrastructure already in place. The only infrastructure "expansion" involved is the sorely needed extension of Camino de Oeste through the Property to its intersection with Cortaro Farms Road. This last segment has been identified on the adopted Major Streets and Routes Plan (MSRP) for decades and will be constructed by the developer in conjunction with this Project.

- Completion of Camino de Oeste as described above opens up direct access to Cortaro Farms Road for the thousands of homes that exist to the south but which had to, heretofore, use circuitous routes to travel northward. Overall access and circulation will be greatly enhanced for all concerned.
- The same circulation benefits accrue to the Marana Unified School District, in that its bus routing will now be far more efficient, and to all of the hundreds of existing families with children attending Quail Canyon Elementary school north of the Site.

I.D.2 Public Participation & Neighborhood Outreach Program

So as to ensure substantive input and feedback during the rezoning process, this Specific Plan will proceed with on-going discussions and interactions with affected neighborhoods, homeowner association leaders, and other stakeholders such as the Coalition for Sonoran Desert Protection. Issues that arise during these interactions will be addressed in good faith between the parties and reflected as appropriate within the final Specific Plan document.

Section II :
Specific Plan Land-Use Proposal

II.A Proposed Specific Plan Overview

This Property will be planned and developed under a comprehensive, unified vision through the joint efforts of the three underlying property owners. It represents a definitive infill project, in that it is located within an already urbanized transportation corridor, is adjoined by existing residential development on nearly all sides, and is readily served by existing transportation and utility infrastructure.

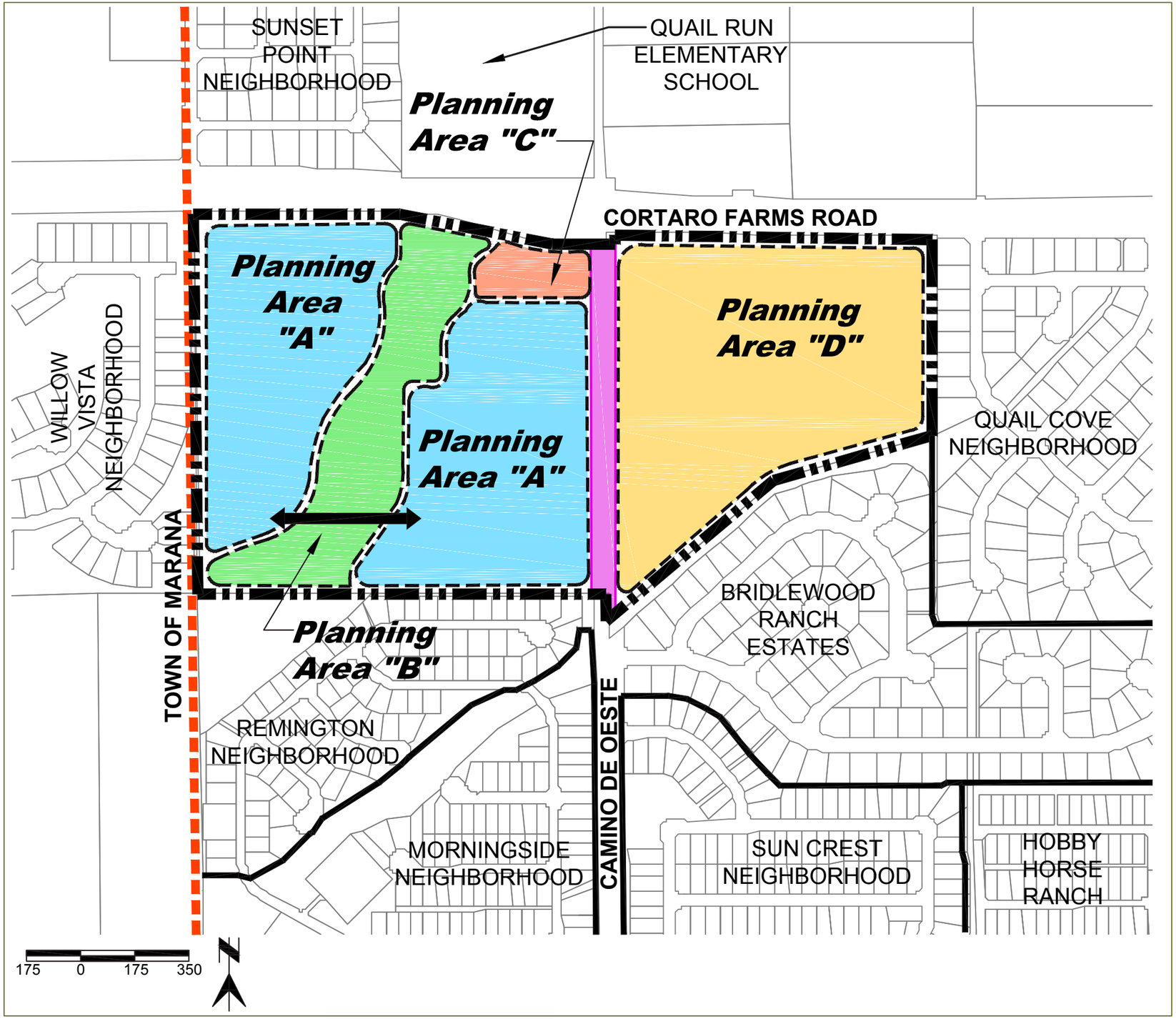
The Project is primarily a residential community of similar type and character to those already abutting it, together with a small commercial site for neighborhood-appropriate retail goods and services. Potential secondary uses within the Specific Plan include garden or medical offices (within the commercial site) and luxury rental homes. This document will ensure these various uses are designed and developed in a coordinated fashion which not only accommodates their respective individual needs, but which also integrates and leverages them such that they complement and enhance one another, and assimilates them into the surrounding development matrix with appropriate buffering of existing development. In doing so, it will implement a consistent aesthetic theme and project identity so as to foster a clear sense of place and promote a focused, holistic community image.

The Project will protect and set-aside a large natural floodplain corridor for both post-development drainage and as an important community amenity. Each residential block will be anchored around its own neighborhood park, providing a distinct node for both active and passive recreational activities and special events, all toward the enhancement of the community's overall social fabric. Pedestrian connectivity will be implemented between these nodes and a small nature trail routed within the preserved floodplain corridor.

Exhibit II.1 illustrates the overall schematic concept for the project, as well as the specific Planning Areas (PA's) that collectively define this Specific Plan to accommodate its above major uses. Table II.1 provides a breakdown of the various PA's, their primary/secondary uses, and their associated acreages and density ranges. Appendix "A" includes two site plan concepts that depict potential build-out scenarios for the Project. Please note that these are provided for illustrative purposes only, since the exact specifics as to lot product, final commercial/retail tenants, etc. cannot be determined with certainty until the time of future market forces and subdivision platting. Changing market conditions and buyer preferences over time will surely result in minor refinements to the ultimate build-out program. Such market forces speak to the need for flexibility and support the various *Living Community* principles described in Section I.B.5.a of this document. It also amplifies the appropriateness of using a Specific Plan to guide the development of this particular Property.

II.A.1 Major Land Uses and Facilities

The residential areas within the Specific Plan will provide for a variety of market-rate choices, including traditional single-family detached units, single-family attached units, and luxury-home rental options. Densities and price points will vary, as will the size and character of the residences offered. The Plan will provide built-in flexibility within each particular residential



LEGEND

- Boundary of Subject Specific Plan
- Planning Area Boundaries
- 80' Right-of-Way Dedication by this project for extension of Camino de Oeste
- Town of Marana Boundary
- Planning Area "A": Primary Use is Residential (Single-Family, Detached Homes)
- Planning Area "B": Primary Use is Natural Open Space
- Planning Area "C": Primary Use is Neighborhood-Level Commercial / Retail Goods & Services
- Planning Area "D": Primary Use is Residential (Single-Family Detached Homes or Luxury Rental Homes)
- Street Crossing of Natural Area; no more than one (1) allowed

Planning Area so that the developer can respond to changing market conditions in a timely manner, while still preserving the original intent and guiding vision of the Project. Within all areas of residential land uses, neighborhood mini-parks and functional open spaces will be suitably integrated. The specific development standards and regulations for the various residential options are detailed in Sections II.B.2.a below.

This Specific Plan provides for a carefully prescribed commercial/non-residential site at the Project's major intersection of Cortaro Farms Road with Camino de Oeste. The particular non-residential uses allowed have been limited to a small set that will complement the proposed residential development and provide its residents with the types of localized goods and services that would be needed and patronized by them, as well as by their existing neighbors, on a regular basis. The specific development standards and regulations for this commercial/non-residential site are detailed in Section II.B.2.b below.

Both natural and functional open space are provided throughout the Specific Plan. Functional open spaces occur in the form of active and passive use areas, pedestrian circulation routes, and areas which have been contoured and landscaped to accommodate routine project engineering needs. These areas include residential common areas, neighborhood mini-parks, pedestrian circulation routes, landscape buffers, nature trails or walking paths, and areas which have been landscaped after necessary project grading.

Natural open space is that which is formally delineated and set aside so as to preserve the Site's natural floodplain corridor and its associated wildlife movement. Such areas can also feature carefully and sensitively routed nature trails that avoid disturbance of important natural elements. As these areas will be preserved in place, they shall not contribute to the developable acreage of the residential components nor be included in any density-related calculations. The specific development standards and regulations for natural and functional open space areas are detailed in Section II.B.2.c below.

II.A.2 Compatibility with Adjoining Land Uses

The proposed Specific Plan is quintessential infill development, in that it will wholly "fill in" a very large portion of contiguous vacant land on the south side of Cortaro Farms Road that is already surrounded by long-standing single-family residential subdivisions. In this respect, the primary single-family component that typifies the majority of the Plan property is already inherently compatible with its established surroundings. Appropriate perimeter setbacks and buffering will be effectuated to considerately and respectfully insert the proposed Project into this established residential matrix.

The proposed Plan will not only complement the area's existing residential mix, but also provide a new, neighborhood-level commercial component that will bring appropriately scaled and convenient goods and services to all residents in the area. The Project brings the ancillary benefit of improved transportation connectivity with Cortaro Farms Road for the thousands of existing homes located south of the Site. This is achieved through the Project's construction of the final segment of Camino de Oeste needed to reach this major east-west arterial corridor. This Camino de Oeste extension further provides a new direct route to Quail Run Elementary School (located on the north side of Cortaro Farms Road) for the many

Table II.1 Land Use Breakdown by Planning Area

Planning Area	Primary Land Use	Secondary Land Uses	Net Acreage	Net Density Range (Du/Ac)
A	Single-Family Detached Residential	Attached Single-Family Residential	25.3	3.5 - 8.0
B	Natural Open Space	Functional Open Space, Drainage Appurtenances, Street Crossing	8.7	NA
C	Neighborhood-Level Commercial Goods and Services	Garden Offices (Medical and General)	1.4	NA
D	Single-Family Detached Residential	Multi-Family (Rental Homes)	20.4	3.5 – 12.0

families living to the south and eliminates their current circuitous routes to the School. The Marana Unified School District (MUSD) also anticipates benefits in more efficient bus routing to serve these same families.

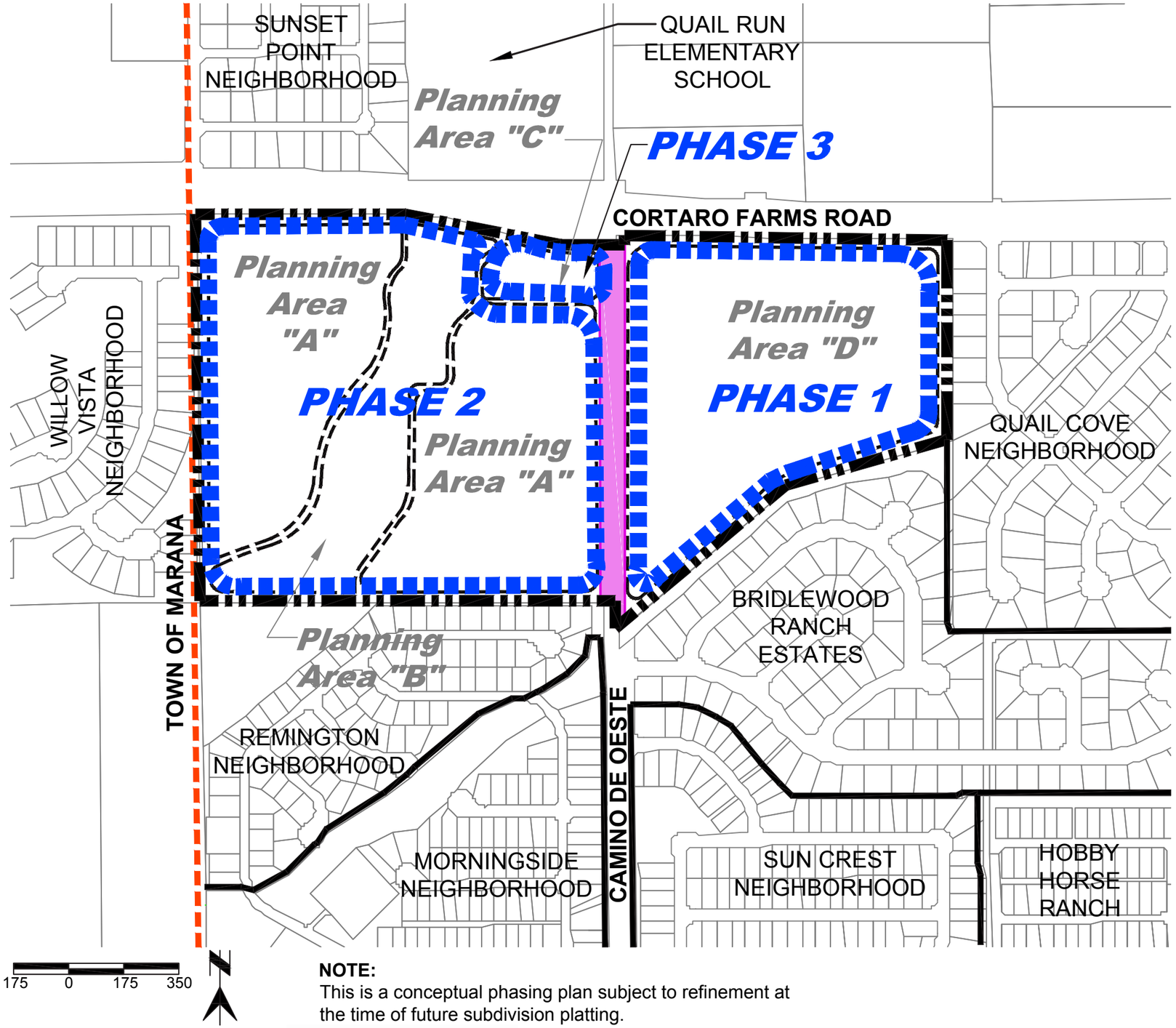
To even further enhance this new School connectivity, the Project's s interior subdivision streets will implement appropriate safe-street principles so as to ensure safe and efficient walking and bicycling routes from its homes to Cortaro Farms Road and to the new Camino de Oeste extension, the latter of which will feature paved shoulders for bicycling and a new pedestrian path on both sides of the roadway.

All in all, this Specific Plan represents an innovative, creative, and integrated addition to the existing development framework already in place and will further enhance the quality and desirability of both the immediate area and of the larger Cortaro Farms Road corridor.

II.A.3 Anticipated Phasing

Development phasing of the Specific Plan will generally proceed as follows:

- The Camino de Oeste public street extension (to its new intersection with Cortaro Farms Road) will be constructed as part of initial site improvements. We anticipate a three-lane cross-section, together with paved shoulders (multi-use/bike lanes) and a meandering pedestrian path along both sides of the street.
- Residential development will begin with Planning Area "D" and generally proceed from east to west across the Specific Plan, subject to market demand and absorption. This phasing program is largely driven by the current availability of Tucson Water service and the most logical incremental expansion of their service area.



NOTE:
This is a conceptual phasing plan subject to refinement at the time of future subdivision platting.

LEGEND

- Boundary of Subject Specific Plan
- Phasing Boundaries
- 80' Right-of-Way Dedication by this project for extension of Camino de Oeste
- Town of Marana Boundary

NOTE:

This Plan illustrates a general phasing program. Individual phases may be developed in their entirety or in sub-phases. Modifications to phasing are allowed at the time of final development.

- Planning Area “B” (the preserved natural floodplain corridor) will be formally delineated and established in conjunction with subdivision platting of Planning Area “A”, including the provision therein of drainage appurtenances (required detention basins) and nature trails. Connectivity will be ensured between the nature trails and the new pedestrian paths, sidewalks, etc. provided within the adjacent Planning Area “A” residential neighborhoods.
- Planning Area “C” will be developed based upon market forces and interest by appropriate “best fit” neighborhood-level tenants that. It will likely not be occupied until some time after the populating of Planning Area “A” with sufficient residents.
- The anticipated total build-out timeframe for the residential Planning Areas is estimated at three (3) to five (5) years, depending upon market absorption.

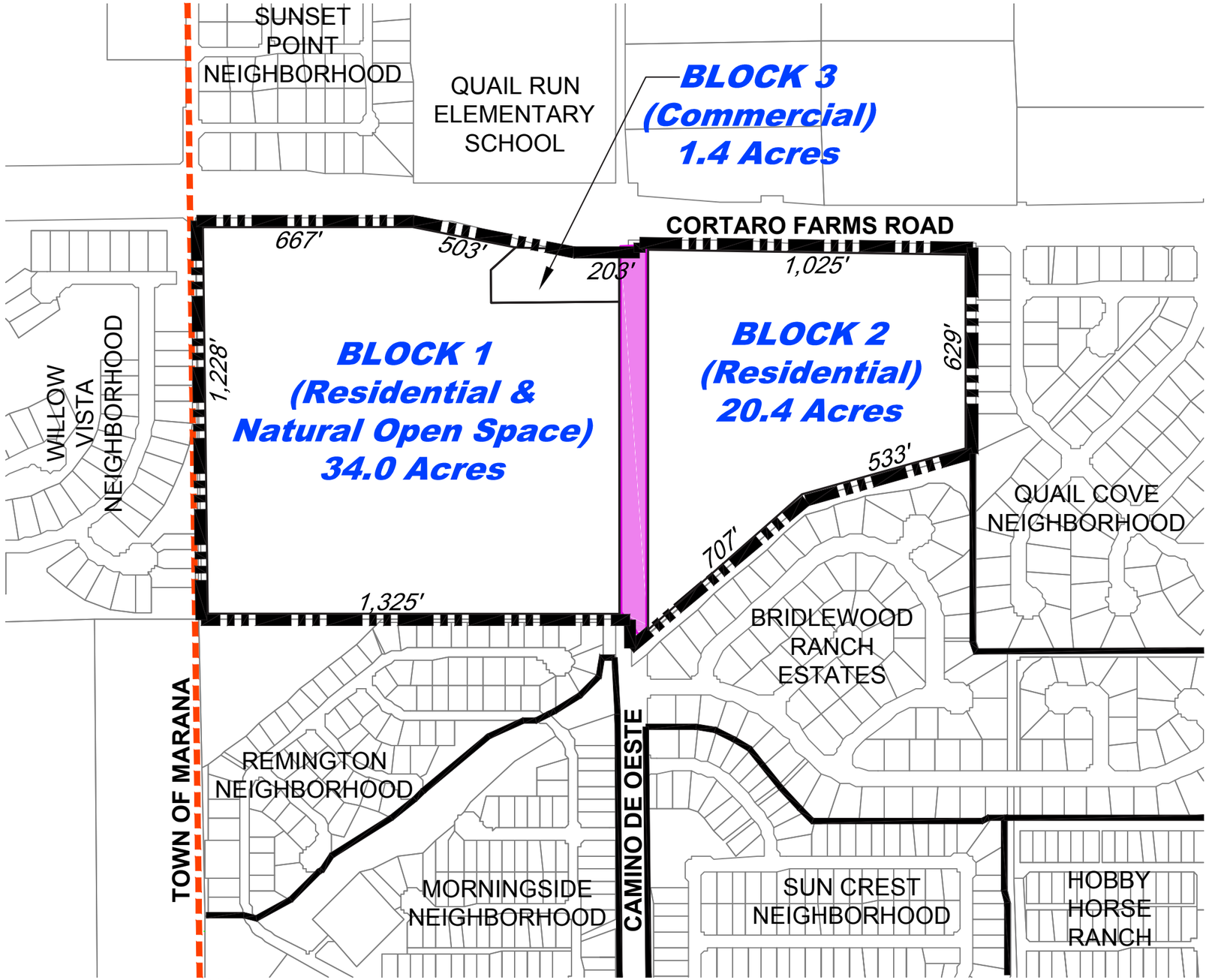
II.A.4 Subdivision Block Platting & Public Right-of-Way Dedication

A block plat will likely be filed for the entire Specific Plan area and will be based on the various Planning Areas illustrated on Exhibit II.1 (Specific Plan Masterplan). The block plat will also dedicate the aforementioned natural floodplain corridor (Planning Area “B”) as a formal natural-area set-aside, as well as dedicate the public right-of-way for the Camino de Oeste extension to Cortaro Farms Road. This new portion of Camino de Oeste is shown as a *Collector* on the Pima County Major Streets and Routes Plan (MSRP), with an associated eighty foot (80’) right-of-way width. Lastly, the block plat may also incorporate the actual lotting, street layout, and common-area delineations for certain first-phase residential Planning Areas.

II.A.5 Maintenance Responsibilities

Maintenance responsibilities within the Specific Plan will be apportioned as follows:

- The new segment of Camino de Oeste will be a dedicated public street. Maintenance of it will be the responsibility of Pima County after inspection and acceptance of the initial construction by the developer.
- Maintenance responsibilities for all new public streets located within residential Planning Areas “A” and “D” shall be that of Pima County after acceptance of the initial construction by developer.
- Maintenance responsibilities of all common areas, pedestrian paths, neighborhood mini-parks, nature trails, landscape borders/buffers, etc. within residential Planning Areas “A”, “B” and “D” shall be that of a designated private homeowners association (either a master HOA for the entire Specific Plan, or individual HOA’s for each neighborhood).
- Maintenance responsibility for all public utilities shall be that of the servicing utility company.
- Maintenance responsibility for any private utilities and/or irrigation improvements shall be that of the appropriate private homeowners association (HOA).
- Maintenance of all site improvements, parking areas, and landscape borders/buffers in Planning Area “C” shall be that of the developer.



NOTE:
This is a conceptual block plat depiction subject to refinement at the time of future platting. All acreages are approximate.

LEGEND

Boundary of Subject Specific Plan

80' Right-of-Way Dedication by this project for extension of Camino de Oeste

NOTE:

The initial block plat may include blocks or portions thereof that are fully subdivided for residential development.

PROJECTS INTERNATIONAL, Inc.
STRATEGIC GUIDANCE
ENTITLEMENT PROCESSES
LOCAL ADVICE & COUNSEL

GRS LANDSCAPE ARCHITECTS, LLC

Baker & Associates Engineering, Inc.

Cortaro 57
SPECIFIC PLAN

CONCEPTUAL BLOCK PLAT
Exhibit II.3

II.A.6 Financial Assurances

In conjunction with recordation of the Specific Plan's Block Plat, the owner/developer shall submit a form of financial assurances for review and approval by Pima County to cover the completion of public improvements. The form of assurances submitted can be a performance bond, third-party trust, development agreement, or other suitable financial instrument that covers all applicable on-site and off-site improvements that may be necessary to serve the Specific Plan or to mitigate its impacts upon existing public infrastructure.

The owner/developer shall execute and record a separate disclaimer, in a form acceptable to Pima County, to waive any Proposition 207 rights to future claims and against the County vis-à-vis zoning conditions and amendments in conformance with A.R.S. Section 12-1134(I).

II.B. Land Use Regulations

II.B.1 Establishment of Pima County Base Zonings for the Specific Plan

The Specific Plan will be developed under a series of designated Base Zonings, dependent upon each particular Planning Area and its envisioned uses. The Base Zoning designation for each Planning Area is provided in the respective discussions below.

Refer to Exhibit II.1 (Framework Plan) for the location and configuration of each referenced Planning Area. Table II.1 has also been provided to summarize the major and secondary land uses of Planning Areas A through D discussed below.

a. Planning Area "A"

Planning Area A's primary use is single-family detached residential homes under a range of lot sizes. Residential uses developed within Planning Area A shall follow the standards as outlined in Section II.B.2.a (Single-Family Residential Uses) of this Specific Plan. The Pima County Base Zoning designation for Planning Area A is CR-5 (Residential).

b. Planning Area "B"

Planning Area B's primary use is natural open space. Drainage related appurtenances, natural trails, and a single street crossing are also allowed. Uses within Planning Area B shall accord with the standards outline in Section II.B.2.c (Natural and Functional Open Space) of this Specific Plan document. There shall be no designated Base Zoning for Planning Area B; only Section 18.07 (General Regulations & Exceptions) shall control beyond the particulars outlined in this Specific Plan.

c. Planning Area "C"

Planning Area C's primary use is commercial/retail goods and services of a neighborhood-appropriate scale. Uses developed within Planning Area C shall accord with the standards as outlined in Section II.B.2.b (Neighborhood Commercial Goods & Services) of this Specific Plan document. The designated Base Zoning for Planning Area C is CB-1 (Business).

d. Planning Area "D"

Planning Area D's primary use is single-family residential homes. Product offerings are similar to those of Planning Area A. The secondary use of luxury rental homes is also allowed. Planning Area "D" shall therefore accord with the standards as outlined in Section II.B.2.a for Single-Family Residential Uses or Multi-Family Residential Use, dependent upon the final selected land use. The designated Base Zoning for Planning Area D is TR (Transitional).

e. Camino De Oeste Roadway Dedication

The eighty-foot (80') Camino de Oeste eighty-foot right-of-way corridor that will be dedicated in conjunction with this Specific Plan falls outside of the above Planning Areas. It will be the property of Pima County and is not subject to any of the standards or regulations contained herein.

II.B.2 Development Standards

The following sections provide the particular developments standards for residential uses, non-residential uses, and natural/functional open space within this Specific Plan.

II.B.2.a. Residential Uses

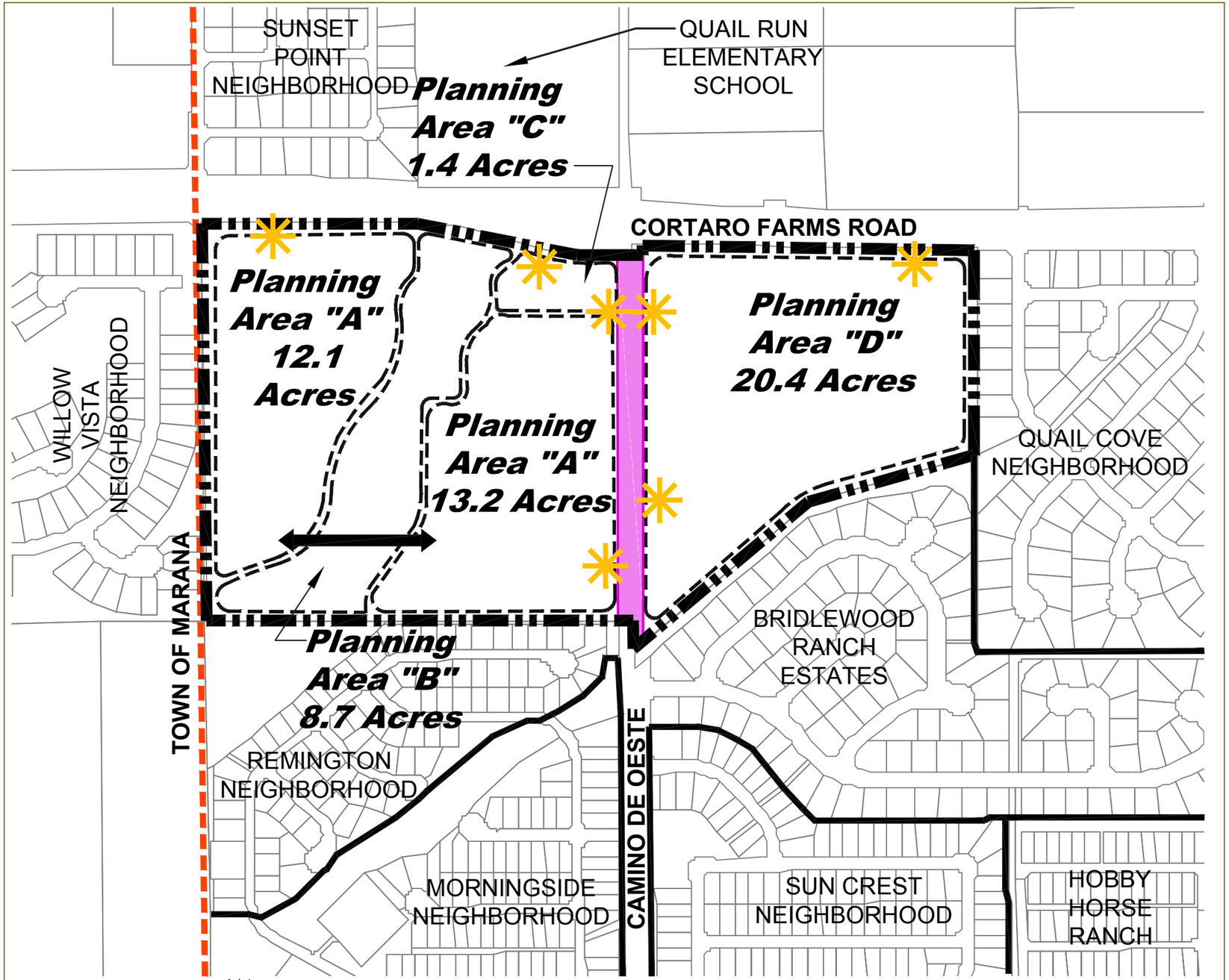
The intent of the residential areas within this Specific Plan (Areas "A" and "D") is to allow for a variety of product types and densities in order to create a diverse mix of housing opportunities at different price points. The Plan provides the basic framework for the residential development of each Planning Area, while still providing flexibility to respond to future market conditions. Single-family housing variety across Planning Areas "A" and "D" may include traditional single-family detached homes, or single-family attached units on individual lots. These housing options will ensure a diversity in offerings and visual aesthetics, as well as accommodate varying age groups, income levels, and lifestyles. Multi-family residential is allowed within Planning Area "D", specifically in the form of detached or attached rental homes in a clustered or auto-court arrangement. With the above in mind, the following regulations shall apply to planning areas or portions of planning areas that are developed for residential use.

II.B.2.a.1. Applicable Planning Districts & Permitted Uses

These development standards apply to Planning Areas "A" and "D".

II.B.2.a.1.a. Permitted & Accessory Uses

Permitted uses within Planning Area "A" are those prescribed under Chapter 18.29 (CR-5 Zoning). The primary planned use is single-family detached or attached residences on individual lots. Related accessory uses within Planning Area "A" are guest houses, home occupations, neighborhood parks and recreation centers, farmers markets, and neighborhood special events.



NOTE:
This is a conceptual plan subject to refinement at the time of future subdivision platting. All acreages shown are approximate.

LEGEND

- Boundary of Subject Specific Plan
- Planning Area Boundaries
- 80' Right-of-Way Dedication by this project for extension of Camino de Oeste
- Town of Marana Boundary
- "A" — Planning Area "A": Primary Use is Residential (Single-Family, Detached Homes)
- "B" — Planning Area "B": Primary Use is Natural Open Space
- "C" — Planning Area "C": Primary Use is Neighborhood-Level Commercial / Retail Goods & Services
- "D" — Planning Area "D": Primary Use is Residential (Single-Family Detached Homes or Luxury Rental Homes)
- Access Points to Public Streets
- Street Crossing of Natural Area; no more than one (1) allowed

Permitted uses within Planning Area "D" are those prescribed under Chapter 18.43 (TR Zoning). The primary planned use is single-family detached or attached residences on individual lots, as well as multi-family units in the form of detached or attached rental homes in a clustered or auto-court arrangement. Related accessory uses within Planning Area "D" are guest houses, home occupations, neighborhood parks and recreation centers, farmers markets, and neighborhood special events.

II.B.2.a.1.b. Prohibited Uses

Group-home care facilities and adult-care facilities will be expressly prohibited by private Covenants, Conditions & Restrictions (CC&R's).

II.B.2.a.2. Development Regulations & Densities

Residential density minimums and maximums for Planning Areas "A" and "D" are presented in Table II.1 above.

Three (3) residential land use categories are outlined within this Specific Plan: 1) Single-Family Detached; 2) Single-Family Attached; and 3) Multi-Family Residential. These three (3) categories will be the foundation of the regulatory development standards for the residential land uses within the Project. Each residential land use category has its own development standards to allow for design flexibility within each category, while still maintaining minimum standards that are compatible and complementary throughout the overall Project.

(1) Single-Family Detached:
- a. Maximum Density: 8 RAC
- b. Minimum Lot Size: 4,000 sq. ft.
- c. Maximum Lot Coverage: 75%
- d. Maximum Building Height: 2 stories/30 feet
- e. Setbacks:
- 1. i. Front Yard:
  - 2. (i) Main Structure: 5 feet
  - 3. (ii) Front Entry Garage: 18 feet from back of sidewalk
  - 4. (iii) Side Entry Garage: 10 feet

ii. Side Yard:

- (i) 4 feet
- (ii) (ii) Minimum distance between buildings: 10 feet
- (iii) (iii) Side Yard Adjacent to Street: 5 feet
- (iv) Accessory Structures: Per Building Codes Title 15

iii. Rear Yards:
- (i) Main structure: 5 feet to primary structure
- (ii) Accessory Structures: 0 feet

(2) Single-Family Attached (Includes Clustered or Auto-Court Products):
- a. Maximum Density: 10 RAC

b. Minimum Lot Size: 1,500 sq. ft.
c. Maximum Lot Coverage: 85%
d. Maximum Building Height: 2 stories /30 feet
e. Setbacks:

i. Front Yard:
(i) Main Structure: 5 feet
(ii) Front Entry Garage: 18 feet from back of sidewalk
ii. Side Yard:
(i) 0 feet
(ii) Minimum distance between buildings: 10 feet
(iii) Side Yard Adjacent to Street: 5 feet
(iv) Accessory Structures: Per Building Codes Title 15
iii. Rear Yards:
(i) Main structure: 5 feet to primary structure
(ii) Accessory Structures: 0 feet

(3) Multi-Family:
a. Minimum Site Area: 1 acre
b. Maximum Density: 12 RAC
c. Minimum Lot Size: None
d. Maximum Lot Coverage: None
e. Maximum Building Height: 2 stories /34 feet
f. Minimum Building Setback:
i. To Streets: 10 feet
ii. To Adjacent Residential Development: 40 feet
iii. To Adjacent Non-Residential Development: 10 feet
g. Minimum Distance Between Buildings: 6 feet
h. Minimum Functional Open Space: 10% of the site excluding parking areas and driveways

II.B.2.a.3. Diversity in Product Type

The Project will include a variety of housing products and architectural styles in keeping with the above standards so as to create a dynamic and distinctive community within the Cortaro Farms Road Corridor. This product mix creates a spectrum of housing options for both homebuyers and renters, while satisfying their varying interests, needs and income levels. Consistent with this approach, Planning Areas “A” and “D” are allowed to feature more than one potential residential use as identified for each in Section II.B.2.a and Table II.1.

II.B.2.a.4. Streetscape & Garage Treatments

The primary entrances into the Project will be taken only from Cortaro Farms Road and the new Camino de Oeste extension; no vehicular connectivity is proposed to or through any existing adjacent neighborhood. New public streets within each residential Planning Area will feature detached sidewalks on both sides. As these streets will be per Pima County Department of Transportation (PCDOT) standards, street trees for pedestrian shading shall be located outside of the designated rights-of-way.

To guard against garage dominance and in order to ensure visual interest of the residential streetscapes, a minimum twenty-five percent (25%) of all new subdivision lots will feature some form of alternative facade configuration, such as recessed front-door entries, staggered garage setbacks, private drive entry garages, or private courtyard projections beyond the garage face.

II.B.2.a.5. Guest House Provisions

One (1) detached guest house or interior private suite living quarters will be allowed on any single lot of 4,000 square feet or greater in area. If a detached guest house, it can feature its own kitchen and bathroom, shall conform with the adopted guest-house definition per Code Chapter 18.03.020, and shall accord with the development standards for accessory structures provided above in Section II.B.2.a.2. If a private interior suite is provided within the main residence, it can again feature its own kitchen and bathroom, a separate entrance, and may also be located above a garage with a combined height not to exceed 28'. While separate kitchens are allowed per the above, separate utility meters will not be permitted for the guest house/private suite and the main residence.

II.B.2.a.6. Lighting

All outdoor lighting shall comply with the Pima County Outdoor Lighting Code (OLC). Street lighting is not required for any new public or private streets, including the Camino de Oeste extension and local neighborhood streets. Lighting may be integrated at the discretion of the Developer, subject to OLC compliance. In addition, lighting is allowed within the Specific Plan to illuminate common areas, residential lots, multi-family sites, and landscape accent lighting in accordance with the OLC.

II.B.2.a.7. Parking Provisions (On-Street/Off-Street)

Residential Planning Areas and portions thereof within this Specific Plan will comply with the standard off-street parking requirements as prescribed in Chapter 18.75 (Off-Street Parking & Loading) of the Zoning Code.

II.B.2.a.8. Trash Collection and Recycling

The specific method of solid waste (trash) and recycling collection will depend on the specific type of residential development and the particular housing units built. Individual curb-side service will be provided in the neighborhood rights-of-way or in alleyways (if provided). If curb-side pick-up is not possible due to truck maneuvering constraints, a common area for collection will be provided. Further collection particulars are as follows:

(1) Residential Single-Family Detached/Attached: standard curb-side Automatic Plastic Containers (APC) rollaways will be utilized; APC's will be stored within the garage or behind a side or rear yard screen wall or fence.
(2) Residential Multi-Family: standard curb-side service for APC's will be allowed; APC storage will be within garages or within centralized trash containers in screened enclosures. At the developer's discretion, shared trash and recycle dumpsters within screened enclosures may be provided for resident use.

(3) In the event that the spatial or pull-through or turnaround requirements for APC's cannot be met due to maneuvering constraints, then centralized trash container(s) within screened enclosures will be provided. Where provided, such centralized trash containers will be located no more than 300' from any residence. Centralized trash enclosures shall be screened on three sides by a solid wall and an opaque, decorative gate on the access side. Centralized trash enclosure walls shall have a minimum height of 8'.

II.B.2.a.9. Pedestrian/Bike Circulation and Connectivity

The pedestrian circulation network for residential land uses is comprised of new public sidewalks, pedestrian paths and trails, and bike-friendly neighborhood streets. These circulation elements will accommodate both pedestrians and bicyclists and will connect to the public sidewalks and multi-use lanes on the adjacent public arterials (Cortaro Farms Road, the new Camino de Oeste extension). As such, they promote safe-street principles.

Pedestrian paths may be constructed of concrete, stabilized decomposed granite, pervious concrete, permeable pavers, concrete pavers, reclaimed asphalt or other materials which meet the intent of this Section. Pedestrian elements that occur within residential areas shall further consider the following design principles to enhance connectivity:

- Pedestrian connections will be provided from neighborhoods to nearby commercial/retail parking areas (i.e. Planning Area "C") via striped pedestrian crosswalks.
- Connections will be made to the commercial/retail parking lots from the closest public sidewalk adjacent to the Planning Area "C".
- When a designated residential pedestrian route crosses a street or commercial driveway, the route will be clearly visible to pedestrians and motorists through the use of: 1) a change in paving material, paving height or paving color; 2) a painted crosswalk; or 3) signage.

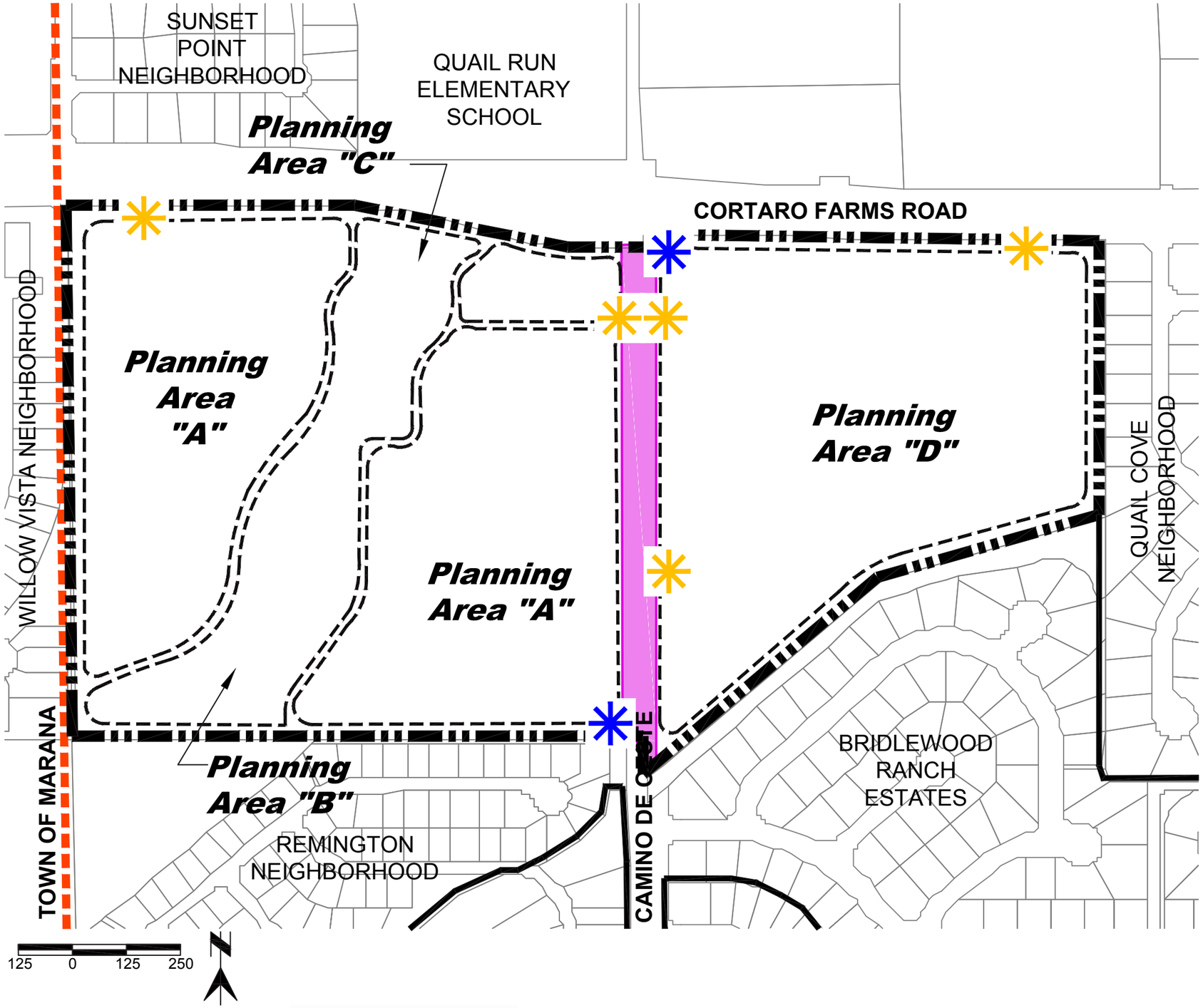
II.B.2.a.10. Signage

Pima County Sign Standards (Chapter 18.79 of the Zoning Code) will apply to the entire Specific Plan. However, the following modifications to same are made:

(1) Subdivision Entry Monuments

Entry monumentation is an essential design element for the project. Uniform design of monuments shall provide visual continuity throughout all phases of residential development and establish a distinct identity, image and sense of place for the community. In addition to informing and directing residents, all entry monuments shall be designed to be generally consistent with the materials, color, size and scale of adjacent community elements.

(1) Primary and secondary subdivision or multi-family entry monuments shall be provided at the locations shown on Exhibits II.5.a and as conceptually illustrated on Exhibit II.5.b. These monuments shall meet the subdivision-entry standards of Code Section 18.79.080.F, but shall not be limited to the total of two (2) prescribed therein. The total number allowed shall be one (1) per each of the primary or secondary locations shown on Exhibit II.5.a. Forms, colors, materials and textures used in both primary and secondary entry monuments shall complement the overall character and aesthetics of the Project.



LEGEND

- Boundary of Subject Specific Plan
- Planning Area Boundaries
- 80' Right-of-Way Dedication by this project for extension of Camino de Oeste
- Town of Marana Boundary
- Primary Entry Monuments
- Secondary Entry Monuments

NOTE:

See Exhibit II.5.B for Monument Concepts

Examples of Primary Monuments

1. Utilize a variety of textures and finishes that are consistent throughout the monumentation
2. Include the name of the development
3. Are a stand alone feature
4. Include landscape to enhance the monumentation

Examples of Secondary Monuments

- Utilize the same texture and finish palette as the Primary Monuments
- May or may not include the name of the development
- May consist of an enhanced wall treatment on a subdivision wall or be a stand alone feature
- Include landscape to enhance the monumentation

MONUMENT CONCEPTS
Exhibit II.5B

(2) A series of wayfinding signs shall be implemented, at the developer's discretion, throughout the Project to assist directing pedestrian traffic to shared community elements such as neighborhood parks, nature trails, walking paths.

(2) Materials / Color Scheme

Consistency will be maintained between building style and signage design. Color schemes and graphic schemes for signage should clearly relate to the established color and material palette of community structures so as to achieve an overall consistent sense of identity and aesthetics.

II.B.2.a.11. Landscape Requirements and Perimeter Buffering

The following landscape elements, principles and particulars govern residential areas.

II.B.2.a.11.a. Landscape Concept & Plant Palette

This Specific Plan establishes base performance criteria for the project to address requirements established by Chapter 18.73 (Landscaping, Buffering and Screening Standards) of the Zoning Code. The Project is intended to meet or exceed these base performance criteria, with certain modifications of Code requirements applying where existing site conditions and specialized design criteria necessitate such design flexibility.

The Project will implement a regionally adapted and native plant palette through the entire Specific Plan that will feature varying textures, colors and forms of plant material so as to create an inviting environment for residents and visitors. The landscape design will reinforce vehicular and pedestrian circulation routes throughout the Property by highlighting primary circulation routes and key entry points to all Project facilities and amenities.

Trees will be placed strategically along new subdivision streets (but outside of the right-of-way per PCDOT preferences) so as to provide shade for pedestrians, while still allowing visibility for way-finding and signage to all subdivision facilities and path/trail amenities. In graded and revegetated areas, a mix of desert shrubs and wildflowers will be used along with nursery stock to minimize erosion. And enhance the ground-story. These areas will be maintained as a naturalistic environment. Surface drainage and stormflows will be captured within landscape areas for passive water-harvesting whenever practical.

A low water use irrigation system will be utilized for all landscape areas. The system will incorporate an automatic controller, flow sensing valves, rain shut-off capability, and will also be metered separately to monitor water usage throughout the Specific Plan area.

II.B.2.a.11.b. Perimeter Screening Requirements

All residential Planning Areas will comply with the following landscaping and screening requirements:

(1) Street landscape borders along Cortaro Farms Road and Camino de Oeste shall be a minimum of twenty (20) feet along the right of way. A minimum of one (1) tree and ten (10) shrub and/or accents per forty (40) linear border shall be required along these street frontages. Screening may be accomplished with existing vegetation if preserved in place, supplemental/salvaged vegetation, nursery stock, or berms and/or walls. Residential lots along Cortaro Farms Road or Camino de Oeste shall include a screen wall with a minimum height of five (5) feet. Screen walls may have offsets or similar design features that encroach a maximum of two (2) feet into the landscape buffer. Final details of the above are subject to compliance with all applicable sight visibility triangle (SVT) requirements.

(2) Buffering of Adjacent Existing Neighborhoods: Exhibits II.6.a, II.6.b and II.6.c provide a schematic plan and typical cross-sections along the existing residential neighborhoods that abut the Project (Willow Vista, Remington, Bridlewood Ranch, Quail Cove). These landscape areas vary in width, depending upon accompanying drainage needs, but in all cases provide a minimum of twenty feet (20') of stand-alone landscape border. This, combined with the adjoining drainage channels, provide substantial setbacks that meet or exceed any given to the subject Property by the adjoining subdivisions.

(3) Local neighborhood streets shall integrate street trees behind the sidewalks where feasible and be outside of sight visibility triangles.

(4) Residential lots shall have a minimum of one (1) tree or saguaro cactus in the front yard of each lot along the neighborhood street. For corner lots, a minimum of one (1) tree or saguaro cactus shall be located in the side yard of the lot.

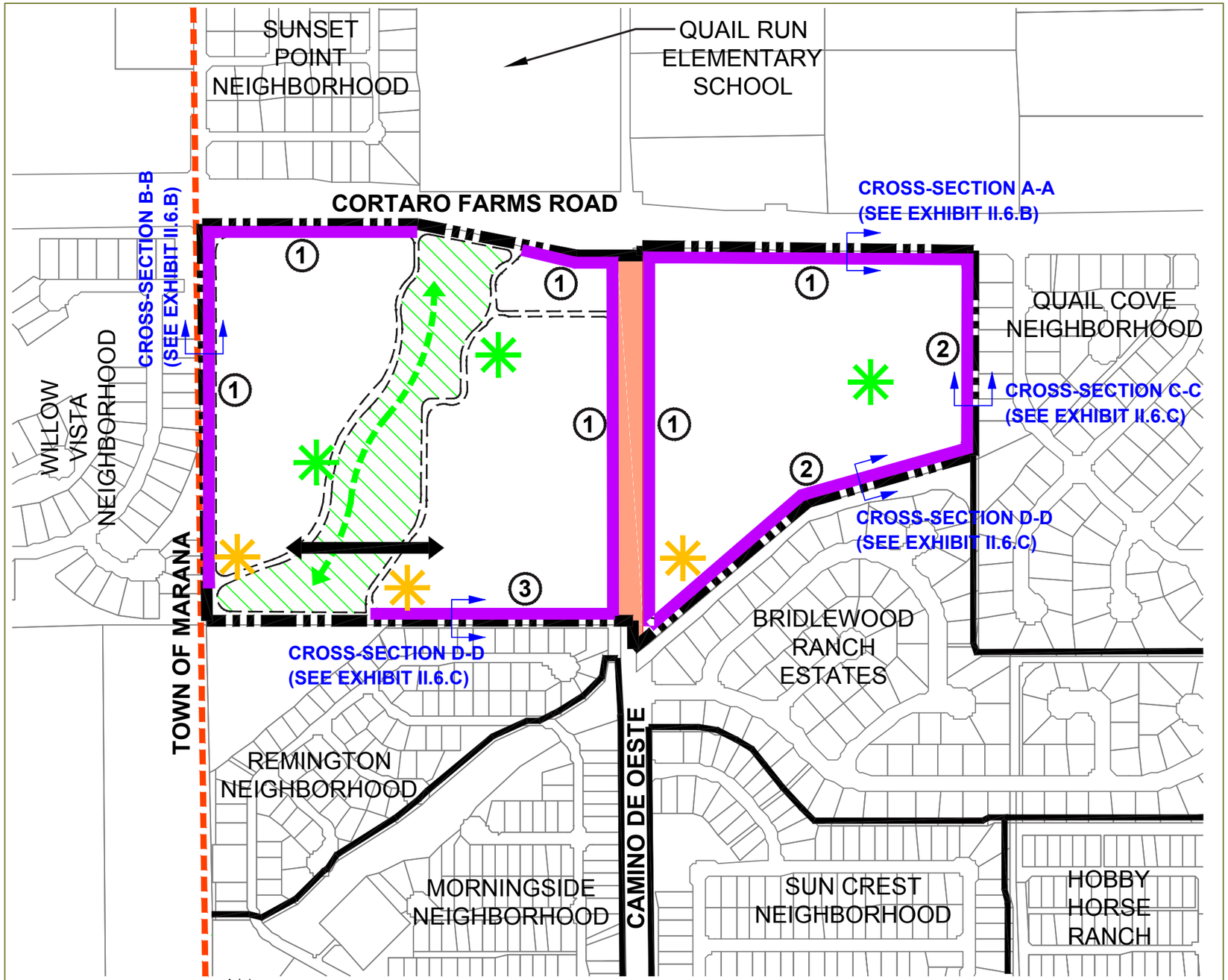
(5) Any clustered parking areas within residential or non-residential areas shall have one (1) tree per four (4) parking spaces, to be located along the perimeter of the parking area or within landscape islands. Screening of any such clustered parking areas along Cortaro Farms Road or Camino de Oeste shall have a landscape or screen wall element of minimum thirty inches (30") in height.

(6) Tree and shrub substitution ratio shall be as follows: 1 tree or saguaro cactus is equivalent to ten (10) shrubs and/or accent plants.

(7) Where a Planning Area "A" abuts natural open space, a neighborhood park, and/or a local neighborhood street, a landscape border is not required.

(8) A minimum landscape border of fifteen feet (15') shall be provided within the neighborhood commercial/retail area (Planning Area "C") where it abuts any neighborhood street or adjacent residential use.

(9) Private irrigation and associated sleeves, as well general utility sleeves, are allowed in public and private street rights-of-way. Those located within public rights-of-way shall be subject to a license agreement executed with Pima County. Sleeve locations shall be stamped on street curbs in an easily visible manner.



NOTE:
This is a conceptual plan subject to refinement at the time of future platting.

LEGEND

- Boundary of Subject Specific Plan
- Town of Marana Boundary
- Camino de Oeste Alignment
- Planning Area Boundaries
- Street Crossing of Natural Area
- Recreation Area / Neighborhood Park
- Landscaped Detention / Retention Basin
- Preserved Natural Drainage Corridor
- Nature Trail within Natural Corridor (final routing to be determined at time of subdivision platting)
- Landscape Buffers:
  - (1) Twenty foot (20') buffer width
  - (2) Maximum forty foot (40') wide corridor / setback comprised of a drainage channel and adjoining parallel landscape buffer; the respective widths of these to be determined at time of final design and subdivision platting. Plantings to also be provided in channel bottom to the extent allowed by the Regional Flood Control District (RFCD)
  - (3) Maximum sixty foot (60') wide corridor / setback comprised of a drainage channel and adjoining parallel landscape buffer; the respective widths of these to be determined at time of final design and subdivision platting. Plantings to also be provided in channel bottom to the extent allowed by the Regional Flood Control District (RFCD)
- Location and orientation of landscape buffer cross-section illustrations; see Exhibits II.6.B and II.6.C.

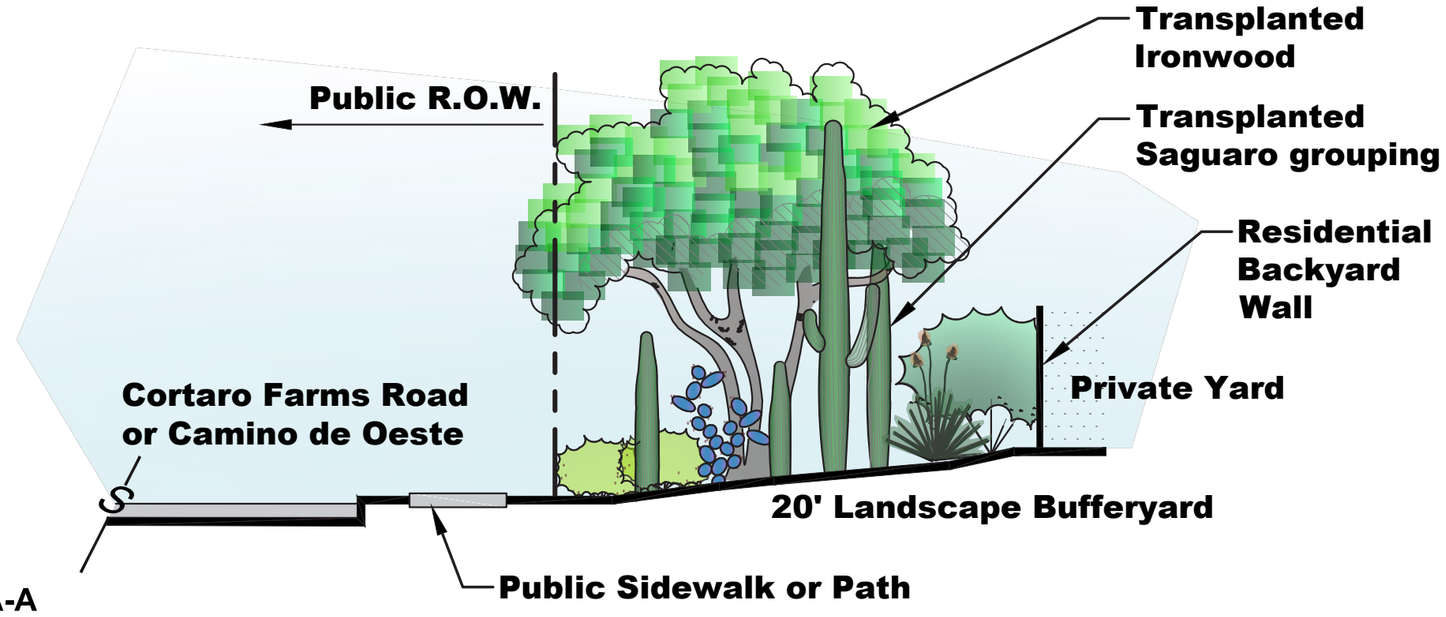
PROJECTS INTERNATIONAL, Inc.
STRATEGIC GUIDANCE
ENTITLEMENT PROCESSES
LOCAL ADVICE & COUNSEL

GRS LANDSCAPE ARCHITECTS, LLC

Baker & Associates Engineering, Inc.

Cortaro 57
SPECIFIC PLAN

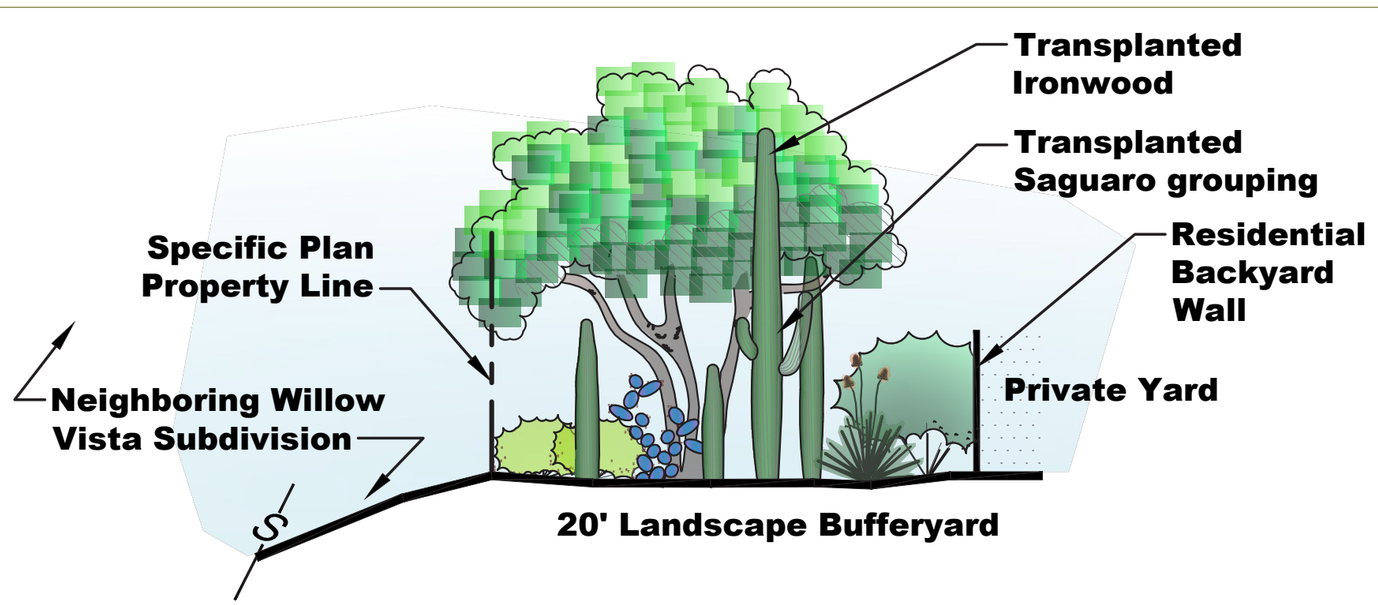
PRIMARY LANDSCAPE ELEMENTS
Exhibit II.6.A



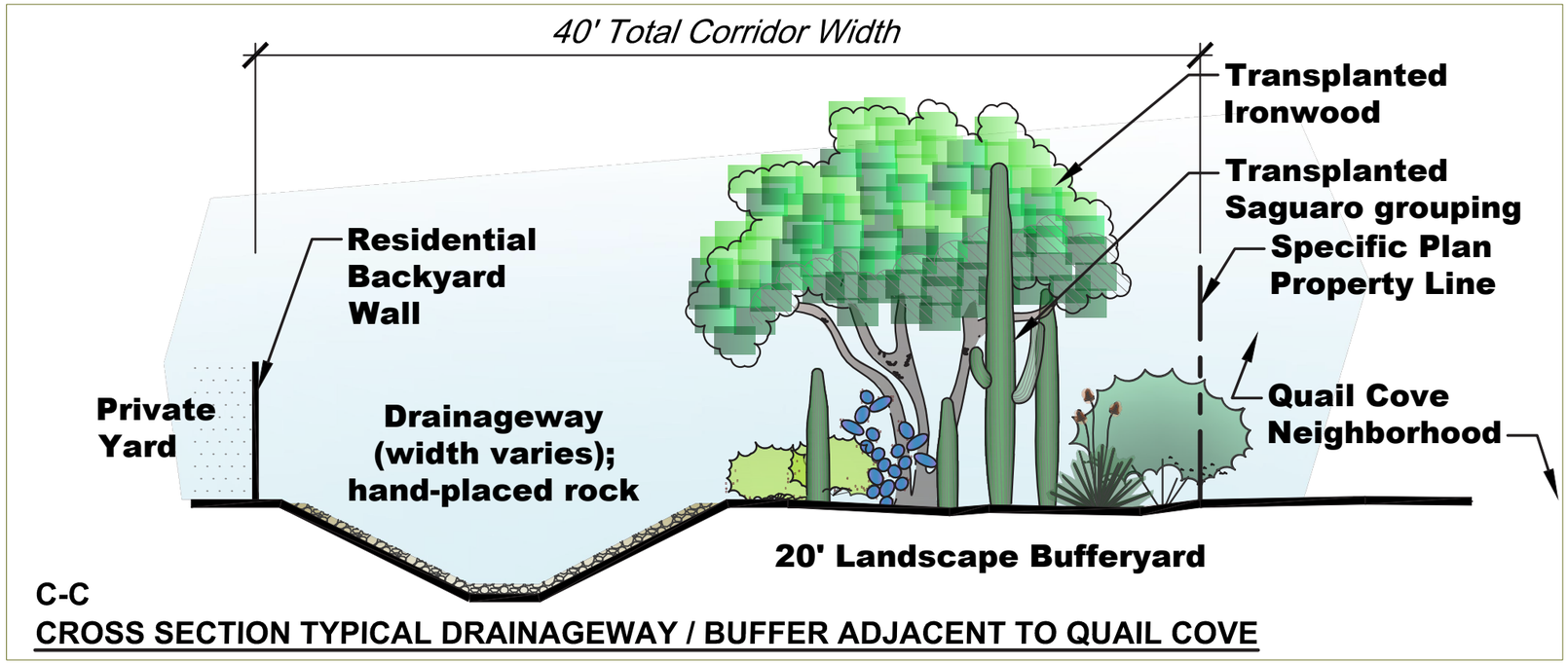
CROSS SECTION TYPICAL LANDSCAPE BUFFER ALONG MAJOR PUBLIC STREETS

LANDSCAPE BUFFER GUIDING APPROACH:

Where possible, landscape borders will preserve existing vegetation in place. In those areas where preservation is not possible, the landscape borders will highlight transplanted Saguaro groupings and transplanted Ironwood trees. Understory plantings will be from a drought-tolerant, desert plant palette, utilizing species found on-site, wherever possible. Plant densities will mimic the natural desert, with enhancements to provide more effective screening and an aesthetic border.



CROSS SECTION TYPICAL LANDSCAPE BUFFER ADJACENT TO WILLOW VISTA

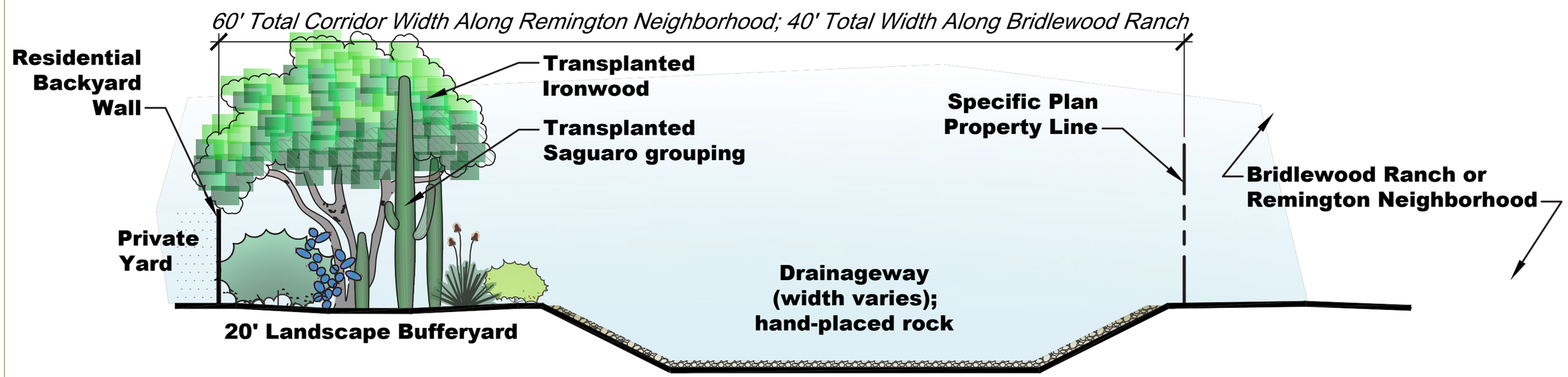


C-C

CROSS SECTION TYPICAL DRAINAGEWAY / BUFFER ADJACENT TO QUAIL COVE

LANDSCAPE BUFFER GUIDING APPROACH:

Where possible, landscape borders will preserve existing vegetation in place. In those areas where preservation is not possible, the landscape borders will highlight transplanted Saguaro groupings and transplanted Ironwood trees. Understory plantings will be from a drought-tolerant, desert plant palette, utilizing species found on-site, wherever possible. Plant densities will mimic the natural desert, with enhancements to provide more effective screening and an aesthetic border.



D-D

CROSS SECTION TYPICAL BUFFER / DRAINAGEWAY ADJACENT TO BRIDLEWOOD RANCH ESTATES & REMINGTON NEIGHBORHOOD

II.B.2.a.11.c. Native Plant Preservation & Salvage

Due to the certain unique aspects of the Property's existing Saguaro and Ironwood plant community, the declining health characteristics of many of the aged Saguaros, and the challenges of successfully salvaging and transplanting such specimens, this Specific Plan will effectuate a customized salvage and transplantation program to satisfy the intent of Chapter 18.72 (Native Plant Preservation) of the County Zoning Code. The applicable regulatory standards and approach for this effort are described in detail in Section II.E (Native Plant Preservation Program) of this Specific Plan document.

II.B.2.a.11.d. Water Harvesting Provisions

Active and passive rainwater harvesting features will be detailed on the tentative subdivision plats, engineering plans, and landscape plans submitted for each new residential neighborhood within this Specific Plan. Such features can include, but not be limited to, curb cuts to direct street surface drainage into landscaped areas, depressed landscape areas that provide micro-basins, flush curbs, minimally compacted landscape areas, and pervious/semi-pervious pavers. No separate or stand-alone rainwater harvesting plans are required.

II.B.2.a.12. School Capacity Considerations

Coordination has been completed with the Marana Unified School District (MUSD) to determine the anticipated student population being generated by the Specific Plan at full build-out, as well as its impacts upon school capacity. MUSD's capacity analysis is provided in Exhibit II.10. Per same, the three District schools serving this site (Quail Run Elementary, Tortolita Middle, and Mountain View High School) are all well under capacity and can readily absorb the anticipated student population generated by the Project. The developer will anticipate in MUSD's voluntary roof-top contribution program with the sale of each individual residential lot.

II.B.2.b. Development Standards: Non-Residential Uses

This Specific Plan features a small commercial site (Planning Area "C") with limited options for neighborhood-appropriate retail goods and services. It is highly possible that this commercial site will be developed after residents are already in place within Planning Area "A", so special care is required to ensure that the ultimate commercial or office uses in Planning Area "C" are integrated carefully and considerately within an established residential context. The following regulations and development standards shall apply.

II.B.2.b.1. Applicable Planning Areas & Permitted Uses

Non-residential uses are allowed in Planning Area "C" only.

II.B.2.b.1.a. Permitted & Accessory Uses

Permitted uses are generally those found in Chapter 18.43.030.A & B (Local Business) of the Zoning Code. However, the intent here is to allow only those types of lesser-intensive

MARANA
UNIFIED SCHOOL DISTRICT

January 25, 2021

Mr. Jim Portner
PROJECTS INTERNATIONAL, INC.
10836 E. Armada Lane
Tucson, AZ 85749

RE: Rezoning of Property on E. Cortaro Farms Road near the Camino de Oeste Alignment, Cortaro 57 Specific Plan

Dear Mr. Portner,

Thank you for informing us of the 57-acre property on which ACM Ventures, LLC is proceeding with a rezoning application to Pima County. Based upon the ACM proposal, we understand that the site could be developed into approximately 250 single family homes directly south of Quail Run Elementary.
Marana Unified School District currently uses a factor of .25 students per home for elementary and .1 students per home for secondary. The conceptual design of 250 homes could generate about 63 elementary and 25 secondary students.

These future potential students can be supported by the following schools with their current enrollment/capacity numbers shown; Quail Run Elementary School (551/703), Tortolita Middle School (577/1234), and Mountain View High School (1867/2257). All schools have capacity for the impact this proposed development may have on our student population under current conditions.

Thank you for supporting the development of quality homes and businesses in our community. Marana Unified School District knows that one of the keys to the continued success of our wonderful community is the quality of our children's education. This belief is held so strongly that we have multiple developers providing the school district with rooftop impact development fees. The district uses these funds to ensure that necessary infrastructure is in place to support growth and maintain an inspiring education for every child. Voluntary developer participation in this process is an invaluable investment in our community. Please contact the Marana Schools Finance Office at 520-682-4756 to learn more about participation.

Please contact Dan Contorno at 520-682-4756, or myself at 520-616-4521 if you have any further questions.

Sincerely,

R Federico

Russell Federico, M.Ed.
Executive Director of Bond and Capital Projects
Marana Unified School District

MUSD CAPACITY ANALYSIS
Exhibit II.10

uses and retail goods & services that will integrate well with the immediate residential neighborhoods and be utilized by them on a regular basis. Best examples include bakeries, cafes, coffee shops, automated carwash, professional offices, and medical offices or clinics. An extensive list of voluntarily prohibited uses has been provided below to help facilitate the above intent.

II.B.2.b.1.b. Prohibited Uses

The following uses normally permitted by Chapter 18.43.030.B are expressly prohibited and are listed here by their associated numbering in the Code:

7. auto mechanical repair
8. auto parking lot
10. automobile lubrication and oil-change operation
11. auto tire store
17. billiard/pool hall
41. garage, for public storage
42. gasoline service station
46. hotel
53. large-scale retail establishment
60. mechanical and electronic games arcade
88. shopping center; neighborhood
90. shopping center, regional
93. station, bus or stage
98. theatre
102. trailer rental
108. water, telephone, or telegraph distribution station
109. wholesale of oil

While not specifically enumerated in Chapter 18.43.030.B, a convenience store with multiple fuel pumps and canopy is also voluntarily precluded from Planning Area “C”. While this use might provide a variety of desirables to the nearby residences, its traffic intensity is viewed as inappropriate for the neighborhood-appropriate concept being sought here.

II.B.2.b.2. Neighborhood Commercial Concept

Exhibit II.8 provides a pictorial of commercial/retail/office offerings that fit the principles and the desired look and feel of Planning Area “C”. There is no guarantee that any of these individual users will ultimately occupy the Site; these examples are provided for a sense of character only. As articulated above, the intent here is to provide neighborhood-appropriate retail goods and services that are complementary to the new Specific Plan communities, as well as to the existing residential subdivisions already established in the surrounding area. While traffic from a major arterial such as Cortaro Farms Road will always be a significant part of any businesses at this location, the desire here is to provide ones that will optimally derive a material part of their customer base and revenue from the more immediate residents, with a significant amount of their arriving traffic being pedestrians living nearby.

NEIGHBORHOOD COMMERCIAL/ OFFICE CHARACTER

Exhibit II.8

II.B.2.b.3. Site Development Criteria

(1) Minimum Lot Area: None
(2) Minimum Lot Width: None
(3) Separation Between Buildings: Per Building Code
(4) Maximum Building Height: 2 stories/30 feet (30')
(5) Minimum Building Setback Along Adjacent Public Streets: 30 feet
(6) Minimum Landscape Border Along Adjacent Neighborhood Street or Residential Development: 15 feet*
(7) Maximum Lot Coverage: None
(8) Setbacks and buffers along the Cortaro Farms Road frontage will conform with applicable Scenic Route requirements per the County's Major Streets and Routes Plan

Note:
* Minimum Landscape Border refers to the perimeter of Planning Area "C" only, not to individual buildings, tenants or sub-parcels within it.

II.B.2.b.4. Parking Requirements

Motor Vehicle and Bicycle Parking requirements of Zoning Code Chapter 18.75 (Off-Street Parking and Loading) will apply, with the following exception to encourage alternative transportation: the cumulative vehicle requirements at full build-out, as calculated for all individual uses or tenants, may be reduced by 20% of the parking spaces normally required.

II.B.2.b.5. Off-Street Loading Criteria

Planning Area "C" will comply with the off-street loading requirements contained in Chapter 18.75 of the Zoning Code, with the following exceptions:

(1) No designated loading spaces are required for businesses of 2,500 square feet or less of GFA. Loading spaces provided for businesses of more than 2,500 GFA may be reduced in size to accommodate a van or small panel truck and shall be a minimum of 8.5' x 23'.
(2) Two or more principal uses within Planning Area "C" may treated as a single project and so may share designated loading spaces. No loading zone shall be larger than 12'x35'. An overhead clearance of fifteen (15) feet shall be provided.

II.B.2.b.6. Landscape Requirements

As mentioned above, in terms of timing, it is highly possible that Planning Area "C" will be developed after adjoining residents are already in place within Planning Area "A". The following landscape requirements shall therefore apply to Planning Area "C" to help ensure an appropriate juxtaposition of any new retail/office uses with existing residences.

(1) Landscape Concepts and Plant Palette

The landscape concept and plant palette for this non-residential area shall be consistent with that as articulated above in Section II.B.2.a.11.a of this Specific Plan.

(2) Screening Requirements & Standards

A minimum twenty foot (20') wide landscape border will be provided along both Cortaro Farms Road and Camino de Oeste. A minimum fifteen foot (15') wide landscape border will be provided where Planning Area "C" abuts an adjacent neighborhood street or residential lots. Screening of any clustered parking along Cortaro Farms Road, Camino de Oeste, an adjacent neighborhood street, or adjacent to residential lots shall have a landscape or screen wall element of minimum thirty inches (30") in height. Any drive-thru facilities adjoining a neighborhood street or adjacent residential lots shall also require the same thirty inch (30') screening element. Screenwalls may be located within prescribed landscape borders.

(3) Functional Open Space Standards

Functional Open Space (FOS) will be provided within this non-residential planning area through a combination of outdoor seating areas, covered patios, or connections to nearby trails/pathways/sidewalks within adjacent residential neighborhoods. A total of 2% of the total Planning Area will be required to be set aside as FOS. For more information regarding functional open space particulars, refer to Section III.B.2.c of this Specific Plan.

(4) Water Harvesting Provisions

Development within Planning Area "C" will integrate passive water harvesting features. Such features can include, but not be limited to, curb cuts to direct pavement surface drainage into landscaped areas, depressed landscape areas that provide micro-basins, flush curbs, minimally compacted landscape areas, and pervious/ semi-pervious pavers. No separate or stand-alone rainwater harvesting plans are required; water-harvesting features will be detailed on the project's engineering and landscape construction drawings.

II.B.2.b.7. Lighting

All outdoor lighting shall comply with the Pima County Outdoor Lighting Code (OLC). Lighting is allowed within parking areas, along pedestrian routes, and attendant to non-residential signage using full cut off lights. Landscape accent lighting is permitted.

II.B.2.b.8. Trash, Recycling, Loading Operations & Screening

Trash and recycle collection will be allowed between 7:00 am and 7:00 pm only.
Loading and delivery docks, if facing residential neighborhoods, will be screened with walls that are a minimum of six feet (6') height and which are designed to prevent unreasonable light, noise and visual impact on such residential neighborhoods. Solid waste & recycling enclosures will be located within a walled and gated enclosure of minimum six feet (6') height. All such screenwalls or waste/recycling enclosures shall generally match the predominant color and materials palette of the buildings within the Planning Area.

II.B.2.b.9. Signage and Monumentation

The signage of Planning Area "C" shall further the identity and image of the Specific Plan, be consistent in character with the monuments used at residential subdivision entries. Signage shall accord with the following

(1) Free-Standing Signs

A single (1) free-standing sign shall be allowed at the Planning Area's lone access driveway onto Cortaro Farms Road. It shall be in accordance with Chapter 18.79 (Sign Standards) of the Zoning Code, with the following modification to Sub-Chapter 18.79.080.D: the maximum sign copy area is seventy-five (75) square feet.

(2) Building Entryway and Wall Signs

Building entry signs and wall signs shall accord with Sub-Sections 18.79.080.B & H of the Zoning Code.

(3) Wayfinding

A series of small wayfinding sings, as needed, shall be implemented within Planning Area "C" to assist directing vehicular traffic, and to guide pedestrian traffic from adjacent residential areas.

(4) Materials/Color Scheme

A general aesthetic consistency between commercial building style and sign design shall be provided. Color schemes for signage are allowed to vary from one another for aesthetic interest, but must still generally relate to other signs, graphics and building color schemes in the vicinity.

II.B.2.c. Development Standards: Natural and Functional Open Space

Natural and functional open space elements are provided throughout all Planning Areas of this Specific Plan. This Section provides their standards and regulatory parameters, and distinguishes between natural and man-made elements accordingly.

II.B.2.c.1. Applicable Planning Areas & Permitted Uses

While the standards and provisions of this Section apply to all Planning Areas, particular emphasis is given to Planning Area "B", since the majority of this Area will be set-aside as undisturbed, natural open space to protect and preserve an existing floodplain corridor. That being said, man-made functional open space elements (FOS) also represent a key part of the entire Project, providing both active and passive experiences for all residents.

II.B.2.C.1.a. Permitted & Accessory Uses

The primary use and purpose of Planning Area "B" is natural, undisturbed open space. Accessory uses within Planning Area "B" are: 1) graded and landscaped detention/ retention basins; 2) their associated inlet and outlet structures; 3) a single road crossing by a neighborhood street so as to connect residential neighborhoods within Planning Area "A"; and 4) nature trails (4' width maximum) carefully routed within the natural area so as to avoid disturbance of any tree specimens or significant shrubs.

Permitted open space uses within Planning Area "A", "C" and "D" are all of the man-made variety and formally comprise Functional Open Space (FOS). Functional Open Space (FOS) is that which provides passive and active recreation opportunities, and includes elements such as neighborhood mini-parks, trailheads to Planning Area "B" nature trails, landscaped detention/retention basins and drainage channels, shared common areas, and perimeter landscape buffers of existing adjacent neighborhoods. FOS calculations will be provided at the time of future final design and subdivision platting.

II.B.2.C.1.b.Prohibited Uses

Prohibited uses with respect to open space apply only to Planning Area "B". In that this corridor is designated primarily a natural-area set-aside, all uses other than those certain Accessory ones enumerated in Section II.B.2.C.1.a immediately above (e.g. landscaped detention basins, the road crossing) shall be expressly prohibited.

II.B.2.C.2 Neighborhood Mini-Park Provisions

Neighborhood mini-parks will be provided within the Planning Areas "A" and "D" (refer to prior Exhibit II.6.a for neighborhood park conceptual locations). A minimum of three (3) mini-parks will be provided to serve the residents of these two Planning Areas; these may be integrated with drainage basins in joint-use fashion, if feasible, subject to ensuring appropriate safety considerations for all users.

Each mini park will each provide a minimum of one-third of an acre (14,375 SF) of landscaped park area. Each mini-park will include the following minimum amenities:

(1) Play features such as swings and/or active play elements for age 3-5 and 5-12 (ADA accessible)
(2) 2 Benches
(3) 1 Ramada
(4) Durable ground treatments such as turf, decomposed granite, or rubberized surfacing in play areas.

Formal Recreation Area Plans (RAP's) for all neighborhood parks will be provided per Pima County Natural Resources, Parks & Recreation standards at the time of future subdivision platting or site development plan filings. All such parks shall be privately maintained.

II.B.2.C.3 Trail and Pathway Provisions

Pedestrian pathway and trail elements will be provided in accordance with the following:

(1) Pedestrian connectivity shall be provided between the residential areas, neighborhood mini-parks, and open spaces. Sidewalks will be provided on all neighborhood streets and will generally occur on both sides, but may occur only one side when the other is not fronted with residential lots or where other site conditions do not warrant the continuation of a double sidewalks. All sidewalks will be paved and be a minimum of five (5) feet in width.

(2) Supplemental pedestrian trails within landscaped common areas, when provided, will have a minimum width of four (4) feet and may be paved or compacted natural surface. Trails shall further provide linkages within residential Planning Areas "A" and "D" to their sidewalk systems, common areas, and neighborhood mini-parks. Passive recreational amenities such as seating and small shade structures are encouraged, but not required.

(3) Nature trails within Planning Area "B" shall be no more than four feet (4') wide and shall be circuitously routed as necessary within the natural area so as to not disturb or require the removal of any significant trees, shrubs, or ground-story groupings of vegetation. Asphalt or concrete surfacing is not allowed for nature trails.

II.B.2.C.4 Open Space Relationship to Common Areas

Private common areas within the various residential neighborhoods will function as open space areas that generally provide for active or passive open space, or which incorporate basic common elements and services to all residents of the neighborhood. Common areas can incorporate the neighborhood's mini-park, drainage and perimeter buffer areas, and landscape areas adjacent to street rights-of-way. All common areas within residential neighborhoods will be owned and maintained by the respective homeowners association of that particular subdivision.

II.B.2.C.5 Maintenance Responsibilities

All natural open space (NOS) and functional open space (FOS) within Planning Areas "A" and "D" will be owned and maintained by either a Master Homeowners Association for the entire Specific Plan, or by individual HOA's within each residential neighborhood.

II.B.2.C.6. Contribution to Conservation Lands System (CLS) Compliance

The natural, undisturbed portion of Planning Area "B" shall constitute this Specific Plan's on-site contribution toward compliance with the Conservation Lands System (CLS). The final acreage of this on-site contribution shall be calculated at the time of future subdivision platting. Nature trails within Planning Area "B" can be included in the total on-site set-aside figure, as long as they are routed in accordance with Section II.B.2.c.3 above. Based upon the final on-site natural acreage figure, the Pima County Office of Conservation and Sustainability shall promulgate the total acreage of off-site mitigation lands required to achieve the Project's full CLS compliance.

II.C Transportation Infrastructure

A preliminary traffic impact analysis has been prepared for this Specific Plan by M. Esparza Engineering, LLC (MEE). This preliminary report is a companion document to this Specific Plan and is contained in Appendix B. The narrative below summarizes the particulars and findings of the report so as to provide a capsulized version of the Project's traffic-related particulars and impacts. Readers desiring more in-depth traffic and transportation detail are directed to Appendix B. A full TIA, in conformance with Pima County Department of Transportation (PCDOT) standards, will be furnished in conjunction with future subdivision platting of the Specific Plan area. This is the appropriate timing for a full TIA, in that this is when final lot yields and other pertinent development specifics are known.

II.C.1 Traffic Impact Analysis (TIA) Summary of Impacts

The MEE traffic study projected and evaluated the immediate transportation system in both the pre-development and post-development (i.e. ultimate build-out) condition. This analysis assessed the operations of Cortaro Farms Road and Camino de Oeste in the post-development condition, where the latter is extended in conjunction with this Project and creates a new intersection with Cortaro Farms Road. The study also touches upon related issues such as the proximity of Quail Run Elementary School and the potential for increased pedestrian crossings.

a. Scope of Traffic Study & Methodology

The traffic study's scope and methodology was structured to achieve the following objectives:

- Evaluate the current and future operational characteristics of the adjacent roadway network surrounding the Specific Plan site.
- Conservatively estimate the traffic generation associated with the proposed Specific Plan and assign that traffic to the adjacent roadway system. Approaching things conservatively at this stage assures that the proverbial worst-case scenario has been contemplated and that any future changes will result in a lessening, rather than an increase, in anticipated impacts.
- Analyze future traffic operations at the new intersection being created when Camino de Oeste is extended to meet Cortaro Farms Road.
- Examine the potential need for any improvements, such as deceleration and/or dedicated turn lanes, on the adjacent public streets.
- Discuss the proximity of Quail Run Elementary School and any related issues that emerge from development of the Specific Plan property and the extension of Camino de Oeste to a connection with Cortaro Farms Road.

b. Traffic/Transportation Impacts of Proposed Build-out

At full build-out (estimated at 3-5 years), the proposed Specific Plan is projected to add a total of approximately 4,722 weekday vehicle trips per day (VTPD) to the transportation system, with 505 trips occurring during the AM peak hour and 340 trips during the PM peak hour.

These trips are effectively split at 50% (2,361) being incoming trips and 50% (2,361) being outgoing trips. This total reflects a maximum-case development scenario for the overall Property, and has conservatively contemplated the highest potential trip generators for the future commercial block (Planning Area "C"), together with the development of rental homes in Planning Area "D" instead of detached single-family residences. As such, the ultimate trip-generation for the overall Project may be significantly less than the above, depending on the final neighborhood-commercial end users, together with the likelihood that Planning Area "D" may very well be developed with conventional single-family residences rather than rental homes. Nonetheless, this conservative approach is appropriate so that the worst-case alternative is fully contemplated.

All intersections within the surrounding study area currently operate at an adequate level of service (LOS) and are expected to continue to do so with the new traffic from the project.

c. Public Transit Considerations

No Sun Tran routes currently serve Cortaro Farms Road. The nearest public transit is Sun Shuttle Route #412, which serves the Thornydale Road corridor one (1) mile to the east. The continued development and associated increase in population along Cortaro Farms Road will help raise demand levels to where Sun Tran service can ultimately be justified.

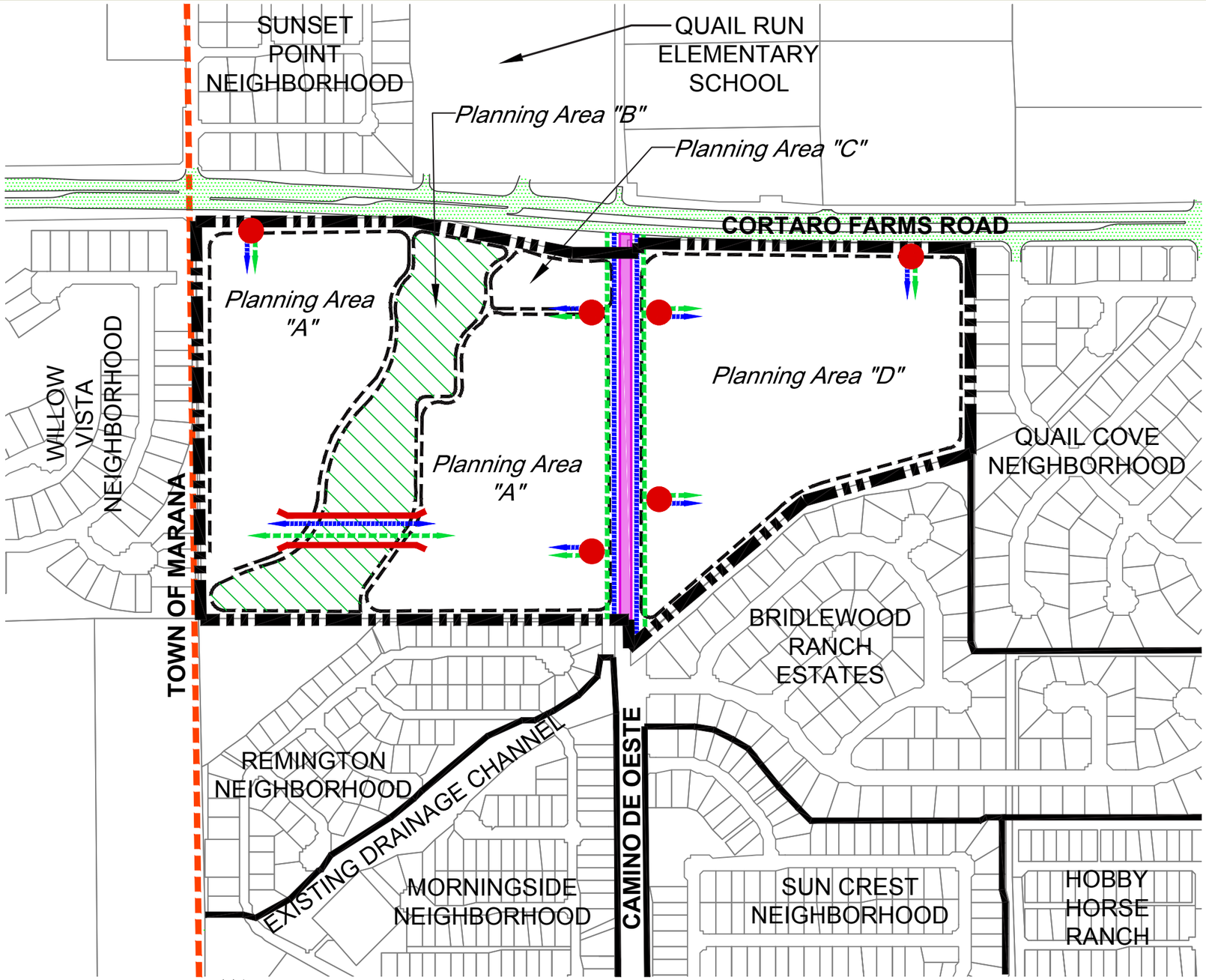
d. Multi-Modal Considerations, Impacts & Benefits

Sidewalks and striped multi-use/bike lanes already exist along both sides of Cortaro Farms Road. Pedestrian paths will be provided along the extended section of Camino de Oeste (a designated *Major Streets and Routes [MS&R]* collector) that will be completed in conjunction with this Specific Plan, thereby generally enhancing connectivity with the Cortaro Farms Road corridor. We also anticipate that PCDOT requirements for this *MS&R* street will include paved shoulders; these can double as multi-use and bicycle lanes. All of these improvements enhance multi-modal connectivity throughout the surrounding area and provide a new, direct linkage between Cortaro Farms Road and the thousands of existing residences to the immediate south.

II.C.2 Transportation Improvements & TIA Recommended Modifications

a. Camino de Oeste Extension

As already mentioned several times, this Specific Plan will extend Camino de Oeste (CDO) northward to create a new intersection with Cortaro Farms Road. It is expected that his connection will be a T-intersection, in that no median opening currently exists within Cortaro Farms Road at this specific location, and none is envisioned or being requested. It is anticipated that the new CDO segment will have a three-lane cross-section with a continuous left turn lane, paved shoulders, and pedestrian paths (perhaps meandering asphalt as opposed to concrete sidewalks) on both sides of the street. The aforementioned center turn-lane will transition just before the Cortaro Farms Road intersection since (without a median opening) only right-turns will be allowed onto this arterial. Final details as to all of the above will be determined with PCDOT at the time of future tentative platting and final design.



NOTE:
This is a conceptual plan subject to refinement at the time of future subdivision platting.

LEGEND

- Boundary of Subject Specific Plan
- Planning Area Boundaries
- Town of Marana Boundary
- Preserved Natural Drainage Corridor
- Existing Pavement and Median in Cortaro Farms Road
- New 3-lane roadway for Camino de Oeste extension with this Specific Plan
- Paved shoulder for multi-use / bike lane; both sides of Camino de Oeste; bike-friendly on-site subdivision streets
- Pedestrian path or sidewalk; both sides of Camino de Oeste and on-site subdivision streets
- Roadway crossing of natural area with bike & pedestrian connectivity within Planning Area "A"
- Subdivision access points with bike & pedestrian connectivity to on-site public streets

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Cortaro 57
SPECIFIC PLAN

PEDESTRIAN / BIKE CONNECTIVITY
Exhibit II.9

b. Traffic-Control Measures

Based upon the preliminary traffic study, it is possible that an eastbound right-turn deceleration lane may be required on the south side of Cortaro Farms Road (along the Project's frontage) to safely effectuate southbound right turns into the driveway entry for Planning Area "C" (the proposed commercial/retail/office site) and southbound onto the new Camino de Oeste extension. Final determination as to whether such a dedicated right-turn lane will ultimately be required, along with any associated storage length, can only be determined when specific end users are known. We anticipate these specifics will be finalized when the aforementioned full Traffic Impact Assessment (TIA) is completed at the time of future subdivision platting and when particular commercial/retail/office tenants are identified.

All access into and out of the Specific Plan off of Cortaro Farms Road shall be right-in/right-out only. Access into and out of the Project from the Camino de Oeste extension shall be unrestricted in terms of turning movements.

c. Signalization Considerations

Based upon the existing background traffic and the additional vehicle trips resulting from the proposed Project, no new traffic signal appears warranted at the Cortaro Farms Road/ Camino de Oeste intersection. This is due, in large part, to the fact that this is anticipated as a T-intersection, where only right-turns will be allowed.

d. Quail Run Elementary School Issue

Quail Run Elementary School is located on the north side of Cortaro Farms Road, directly across the street from this Specific Plan. The aforementioned extension of Camino de Oeste to a new intersection with Cortaro Farms Road raises the following issues:

5. All of the existing residences south of the Specific Plan will now have a direct vehicular, pedestrian and bicycle route approaching the School.
6. The proposed neighborhood-level commercial goods and services contemplated in this Specific Plan within Planning Area "C" may comprise an attractive destination for school students. The ultimate degree of appeal in this regard is dependent, of course, on the final end-users. A coffee or donut shop, for example, would be more attractive than medical offices.

Nonetheless, and even without final end-users identified in Planning Area "C", the above points raise the possibility of a designated pedestrian crossing. As the impetus for such a crossing arises not only out of this Specific Plan, but also as a result of increased traffic anticipated from the more than one thousand existing homes to the south, this issue is one that must be discussed in conjunction with both the Pima County Department of Transportation (PCDOT) and the Marana Unified School District (MUSD) at the time of future subdivision platting and actual site development.

II.C.3 Typical Cross-Sections for Subdivision Public Streets

All subdivision streets within this Specific Plan's single-family residential neighborhoods will be public and be designed and constructed in accordance with PCDOT standards. Final specifics as to pavement widths, cross-sectional features, and provisions for on-street parking will be detailed at the time of future tentative platting for each residential block.

Streets or parking area access lanes (PAAL's) in conjunction with multi-family/rental homes (if developed within Planning Area "D") will be constructed to private street standards and be privately maintained.

II.D Conceptual Drainage Solution and Associated Improvements

II.D.1 Master Drainage Plan

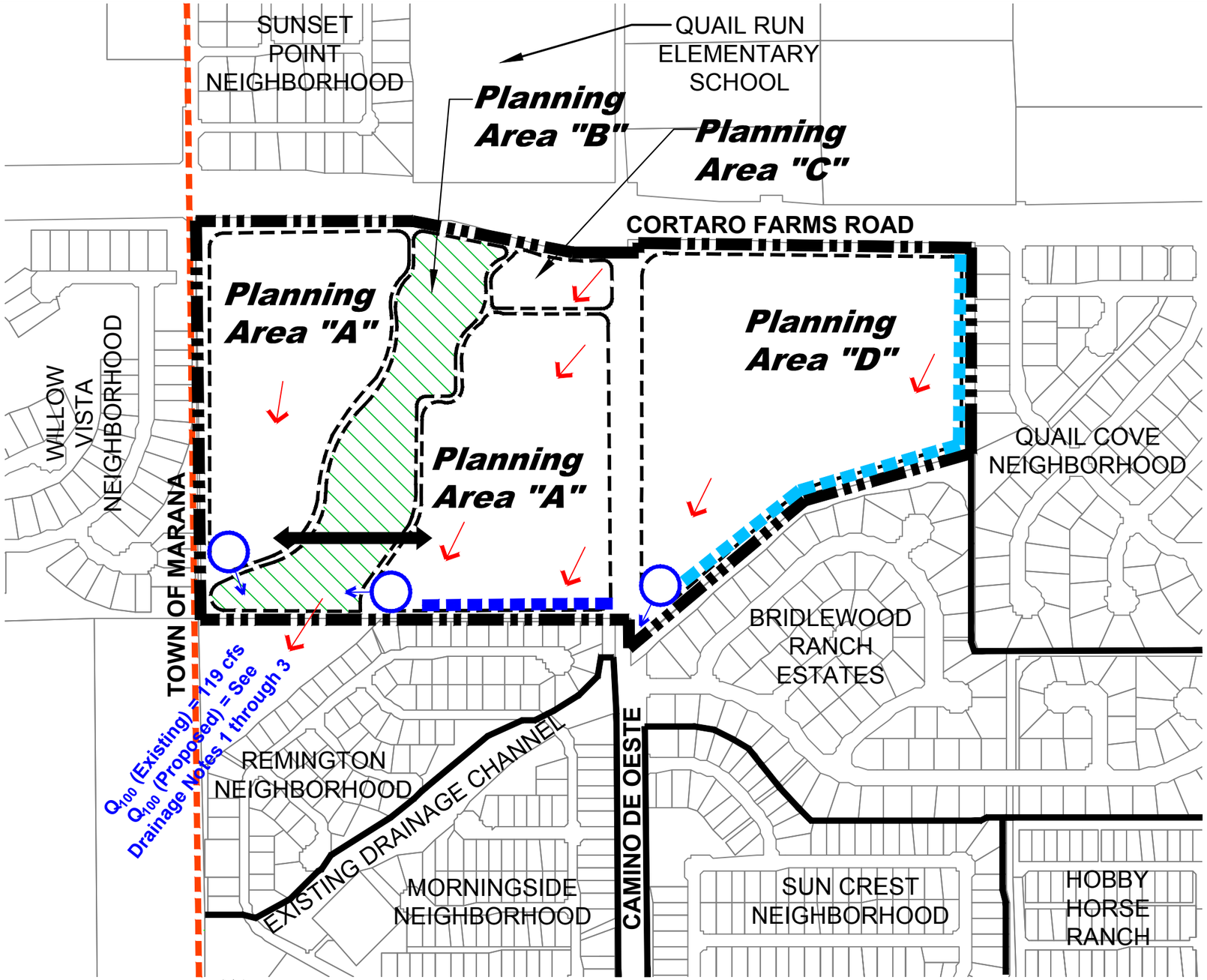
The entire Specific Plan is located within a designated critical basin. Post-development outflows generated by each developed Planning Area must achieve a minimum reduction of ten percent (10%), as prescribed by the Pima County Floodplain Ordinance, over the pre-developed conditions for the 2-year, 10-year and 100-year storm events. Exhibit II.10 provides the post-development master drainage schematic for the Project.

In general, incoming offsite drainage flows will have minor impacts upon the planned residential neighborhoods. By far the largest incoming flow (approximately 350 cfs) enters the property via four (4) 4' x 8' RCBC's beneath Cortaro Farms Road and proceeds directly into Planning Area "B". This Area is designated as a preserved natural wash corridor by the Specific Plan. This flow will be conveyed through the Site via the existing natural channel within Planning Area "B".

The other incoming flows to the Plan site are comparatively small (ranging from 10 to 32 cfs) and can be considered routine in terms of incorporating them into the Project's drainage design.

Given the overall size of this Project, the anticipated length of its build-out (3-5 years), and the changes in market preference that often occur over time, detailed lot planning is wholly conceptual at this point and will not be fully finalized until the time of future subdivision platting. As such, the hydrologic analysis and master drainage plan presented in Exhibit II.10 is similarly conceptual. At the same time, the findings and approach presented herein represent a reliable schematic of the Project's post-development major drainage features.

With all of the above in mind then, Planning Areas "A", "C" and "D" will be developed such that drainage generated within each new neighborhoods or commercial site will be directed to the interior residential streets, and from there conveyed to new perimeter channels and utlimately to strategically located retention/retention basins. The channels and basins will be sized accordingly so as to accommodate all post-development flows and to achieve the aforementioned 10% critical-basin discharge reduction.



NOTE:
This is a conceptual plan subject to refinement at the time of future subdivision platting.

LEGEND

- Boundary of Subject Specific Plan
- Planning Area Boundaries
- Town of Marana Boundary
- Preserved Natural Drainage Corridor
- Maximum forty foot (40') wide corridor comprised of a drainage channel and parallel landscape buffer; respective widths of both to be determined at time of final design and subdivision platting. Planting in channel bottom possible to the extent allowed by the Regional Flood Control District (RFCD)
- Maximum sixty foot (60') wide corridor comprised of a drainage channel and parallel landscape buffer; respective widths of both to be determined at time of final design and subdivision platting. Planting in channel bottom possible to the extent allowed by the Regional Flood Control District (RFCD)
- Detention / retention basin with direction of discharge flow
- Predominant direction of post-development surface flows
- Street Crossing of Natural Area; no more than one (1) allowed

DRAINAGE NOTES

1. This Specific Plan is located within a designated critical basin. Post-development outflows generated by each developed Planning Area shall reflect a minimum reduction of ten percent (10%), as prescribed by the Pima County Floodplain Ordinance, over the pre-developed condition.
2. Final post-development exiting flows, together with final volumes and capacities of proposed detention/retention basins, will be determined and demonstrated at the time of future subdivision platting. A full Drainage Report per Regional Flood Control District (RFCD) standards shall be submitted at that time and be subject to RFCD review and approval.
3. Some form of conveyance across or beneath Camino de Oeste will be required to conduct the basin discharge from Planning Area "D" to the existing channel that bisects the downstream Remington & Morningside neighborhoods. The method of conveyance will be jointly determined with RFCD and PCDOT during final engineering design of the Camino de Oeste extension to Cortaro Farms Road. The particulars of the conveyance method will be detailed in the aforementioned full Drainage Report.

II.D.2 Post-Development Outfall Locations Existing the Specific Plan

Post-development flows exiting the Specific Plan occur in two primary outfall locations (see Exhibit II.10):

1. At the southern terminus of Planning Area "B" (the preserved natural wash corridor), where the existing natural channel exits the Property and continues off-site in a southwesterly direction. Two (2) detention basins within adjacent Planning Area "A" will outlet into this same channel, but do so in metered fashion. These basins will be sized to ensure that the outflows from Planning Area "A" satisfy the 10% critical-basin reduction requirement.
2. At the proposed basin in the southwest corner of Planning Area "D" adjacent to Camino de Oeste. This basin will outlet to the southwest, where its flow will ultimate be conveyed to the existing drainage channel that presently bisects the downstream Remington and Morningside residential neighborhoods. The method of conveyance across or beneath Camino de Oeste will be jointly determined in conjunction with RFCD and PCDOT during final engineering design of the Camino de Oeste extension to Cortaro Farms Road.

II.D.3 Retention/Detention Requirements & Provisions

As mentioned above, the critical-basin designation of the entire Specific Plan site requires a minimum 10% reduction over the pre-development condition for the 2-year, 10-year and 100-year storm events. The detention basins discussed above shall effectuate these statutory reductions. First-flush retention will also be provided in all new basins.

II.E Project Landscape Program & Native Plant Preservation

II.E.1 Proposed Landscape Concept: Major Components & Features

Exhibit II.8 provides a simplified framework of the overall Project's major landscape elements and features. The Project's landscape palette and principles shall accord with those parameters outlined in Section II.B.2.m of this document so as to provide a consistent and unified character throughout the entire Specific Plan. Final design detail of all landscape areas will be provided on formal Landscape Plans submitted in conjunction with future subdivision plats and development plans for review and approval by Pima County.

II.E.2 Native Plant Inventory Findings

A complete inventory of saguaros and ironwood trees has been completed as part of this Specific Plan's preparation and is provided in Appendix C. The inventory focused on these two species alone because the set-aside methodology, as allowed per Chapter 18.72 (Native Plant Preservation) of the Zoning Code will be utilized on this Project. The set-aside

percentage calculation shall contemplate substantial off-site mitigation lands being provided for Conservation Lands System (CLS) compliance; we anticipate the final set-aside calculation shall be a minimum of three hundred percent (300%) of the developed acreage.

The Project Site contains saguaro and ironwood specimens at densities which are slightly higher than those found in the typical desert environment. Each specimen has been inventoried, located by GPS, and assessed in terms of condition (viability) and transplantability (see Appendix C for individual specimen evaluations).

II.E.3 General Condition & Health of On-Site Plant Community

In general terms, the overall health of the saguaro and ironwood community on the property is good. The one significant qualifier to this statement pertains to the larger saguaro specimens (those more than eighteen feet [18'] in height) on the property. As found during the aforementioned inventory, many of these specimens are aged and in decline. In fact, the Site already contains numerous older saguaros that have expired, wholly collapsed in place or are currently leaning or decaying. With this factor in mind, specialized criteria and procedures for the treatment of the larger saguaro specimens are needed. These are described more full in Section II.E.4 immediately below.

II.E.4 Proposed Salvage & Transplantation Program

All saguaros under eighteen feet (18') in height, together with all Ironwood trees, will be addressed in accordance with Chapter 18.72 (Native Plant Preservation) of the Zoning Code through a combination of on-site preservation and/or salvage, together with the off-site mitigation provisions prescribed within Chapter 18.72.090.B. Smaller cacti and succulents on the property not being salvaged and transplanted will be offered to the public through coordination with a local conservation organization, such as the Tucson Cactus and Succulent Society. An advanced notice period shall be provided prior to the commencement of grading activity, during which time interested individuals will be permitted to enter the Property (under suitable liability waivers) to remove specimens of interest.

Saguaros eighteen feet (18') or taller will also be generally addressed in accordance with Chapter 18.72 mitigation provisions, but additional discussion of these specimens is appropriate due to their greater aesthetic and environmental value.

The Specific Plan site contains a significant number of saguaros in this size category, many of which feature multiple arms. The aforementioned health issues of some of these notwithstanding, all of these specimens represent substantial difficulties when it comes to their successful transplantation and prospects for subsequent survival. These difficulties stem from the prodigious weights involved, together with structural issues and the pragmatic mechanical limitations of physically unearthing and then safely transporting and ultimately replanting each specimen in intact fashion.

Moving and transplanting saguaros of any significant size is challenging due to factors such as access, slopes, soil instability, and pronounced leaning due to structural deficiencies. These manifold factors are amplified greatly with larger specimens and further undermine the overall

prospects for success and survival. Preserving all, or even most, of these larger saguaros in place is simply not a practical option, in that it would essentially render the entire property unusable. While this may be desirable to some environmental enthusiasts, it represents an unrealistic and improper hardship on a private landowner and is not consistent with the intent and purpose of Chapter 18.72.

Based upon the inventory and assessment work completed to date, we know that the Specific Plan property contains one hundred forty-one (141) Saguaros that are 18' or more in height. Of these, approximately fifty percent (50%) are more than twenty-five feet (25') tall. The breakdown of these specimens is as follows:

- Twelve (12) can be preserved in place.
- Six (6) can be salvaged and transplanted.
- Thirty-nine (39) are non-viable. These specimens are already declining and in some stage of dying, are significantly diseased, or have severe structural deficiencies that will ultimately lead to collapse
- Thirty-nine (39) are generally healthy but non–movable for deficiencies other than sheer size. These specimens are already leaning and/or a collapsing hazard, or sit on slopes or in areas that preclude any physical access or handling by industry best practices and available salvage technology.
- Forty-five (45) are healthy, but not moveable because of sheer size alone, their immense weight, and the mechanical limitations of currently available salvage equipment and technology.

At the time of future subdivision platting and the preparation of final Native Plant Preservation Ordinance (NPPO) plans, a joint field-walk will be conducted by the project landscape architect and a local expert in saguaro salvage and relocation. This field-walk will determine whether any additional specimens, beyond the number identified above, might represent realistic prospects for successful salvage and transplantation.

With respect to the above breakdown, it is the last two categories of immovable giant saguaros (84 in total) which can be acknowledged as suitable for a specialized mitigation program. This Specific Plan proposes that a targeted off-site property of significant environmental and habitat value be used as mitigation for these giant specimens.

We have completed a field-sampling inventory of the "Primavera" parcel located in Cochie Canyon (Tax Parcel Nos. 218-09-002B & C). Three (3) representative areas (totaling 1.2 acres) were sampled to ensure an unbiased assessment that was truly representative of the overall property. This sampling yielded the following results:

- a density of 49.2 saguaros per acre that are less than 18' tall
- a density of 10.2 saguaros per acre that 18'-25' tall
- a density of 35.0 saguaros per acre that are greater than 25' tall

Given the above, and if concerned only with a plant-for-plant replacement, furnishing two (2) acres of the above lands as additional off-site mitigation would constitute a 1:1 matching of the identified eight-four (84) large saguaros. Furnishing 5.6 acres would achieve a 3:1 replacement ratio.

Far beyond this simple plant-for-plant focus, however, furnishing such mitigation lands would also provide the tremendous manifold benefits of many smaller saguaros, ironwood trees, palo verde trees, and generally intact, high-quality habit that is contiguous with already preserved lands. Furthermore, it has no presence of dumping, homeless, vandalism, or plant theft, all of which are occurring presently on the Specific Plan property.

Given the dismal success/survival rate that results from moving large saguaros (20% success *at best*), it is clear that monies involved in any such efforts are better channeled in the community interest toward the purchase and dedication of additional off-site mitigation lands like those described above.

This Specific Plan stipulates that the off-site mitigation lands furnished to compensate for the eighty-four (84) giant saguaros on this property must:

- Be in addition to those off-site mitigation lands being already set-aside to satisfy the 4:1 Conservation Lands System (CLS) mitigation requirement for this Specific Plan.
- Be found acceptable by the Pima County Office of Conservation and Sustainability.
- Be contiguous with existing public preserves, or deemed of special value for targeted preservation areas (e.g. within a designated wildlife corridor).
- Possess significantly less (ideally none) of the negative qualities of the Specific Plan property (e.g. dumping, vandalism, homeless encampments)
- Be a contiguous parcel of not more than ten (10) acres in total size

The above approach provides far greater net benefit to the community than any salvage & transplantation model ever could, or more than any plant-for-plant ratio program.

Implementing the above requires the following modification to Chapter 18.72: 1) Footnote Nos. 1, 2 & 4 beneath Table 18.72.090-1 are hereby eliminated.

II.F Proposed Utility Infrastructure

From a utility standpoint, this Specific Plan represents the quintessential infill project. Extensive utility infrastructure sufficient to serve the entire Specific Plan already exists proximate to the Property, much of which is located within the Cortaro Farms Road right-of-way and the future right-of-way dedication for the Camino de Oeste extension. Exhibit II.11 depicts the points of connection for the Project's public sewers and potable water.

II.F.1 Public Sewer System Connections

The Specific Plan will be served by two separate existing 8" public sewer lines, both of which are maintained by the Pima County Regional Wastewater Reclamation District (RWRD):

SUNSET POINT NEIGHBORHOOD

QUAIL RUN ELEMENTARY SCHOOL

CORTARO FARMS ROAD

WILLOW VISTA NEIGHBORHOOD

TOWN OF MARANA

REMINGTON NEIGHBORHOOD

QUAIL COVE NEIGHBORHOOD

BRIDLEWOOD RANCH ESTATES

Planning Area "A"

Planning Area "B"

Planning Area "C"

Planning Area "D"

EX. MH #5214-34
EX. MH #4163-24
EX. MH #4783-20
EX. MH #4163-22
EX. MH #4163-23
EX. MH #6150-01
EX. MH #6867-05
EX. MH #6867-06
EX. MH #6771-12
14" FORCE MAIN
EX. MH #2628-11
EX. MH #2628-10
SEWER #G-89-076
EX. MH #5213-01
EX. MH #6771-11
EX. MH #2628-09
EX. MH #2628-08
EX. MH #2628-07
EX. MH #2628-06
EX. MH #2628-12
EX. MH #2628-13
EX. MH #6771-10
EX. MH #6771-09
EX. MH #1728-17
SEWER #G-79-121
EX. MH #6771-03
EX. MH #4648*04
EX. MH #4648-15
EX. MH #1728-16
EX. MH #4648-14
EX. MH #4648-13
EX. MH #4648-02
EX. MH #4648-01
EX. MH #1728-15
EX. MH #4648-03
EX. MH #4648-17
EX. MH #4648-18

8" S
18" S
15" S

125 0 125 250

NOTE:
This is a conceptual depiction subject to refinement at the time of future platting.

LEGEND

- Boundary of Subject Specific Plan
- 8" S — Existing Pima County / RWRD Public Sewer, Flow Direction, Manhole Number & Line Size
- Proposed point of connection to existing public sewer
- Existing Tucson Water Public Reclaimed Water Line
- Existing Tucson Water Public Water Line
- Proposed point of connection to existing potable water line

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Cortaro 57
SPECIFIC PLAN

PROPOSED CONNECTIONS TO PUBLIC SEWERS & WATER MAINS
Exhibit II.11

1. The western portion of Planning Area "A" (residential) will drain by gravity to the south/ southwest and ultimately connect to the existing public sewer No. G-2015-067 beneath Willow Wind Place in the adjacent Willow Vista neighborhood. Although this subdivision lies within the Town of Marana, its sewers are RWRD's and its common areas are dedicated as easement areas for all utilities, including public sewers. A short off-site public sewer extension shall be required from the west boundary of the Specific Plan across the Willow Vista common area to the aforementioned manhole in Willow Wind Place.
2. The eastern portion of Planning Area "A", Planning Area "C", and Planning Area "D" (residential) will drain by gravity and ultimately connect to the existing public Sewer No. G-79-121/G-89-076 located within the future right-of-way of the Camino de Oeste extension.

Both of the above existing sewer lines have system capacity to accommodate the build-out of the Specific Plan project.

II.F.2 Public Potable Water System Connections

The entire Specific Plan property will ultimately be served by Tucson Water (TW). The qualifier "ultimately" is used because TW's granting of service will occur in stages. A will-serve letter has already been obtained for the acreage east of Camino de Oeste (Planning Area "D") and is provided in Appendix D.

Tucson Water has clear criteria for the acceptance of properties into their system, two of which require: 1) that their existing franchise area mapping shows a property as abutting their service area on a minimum of three (3) sides; and 2) that a newly added parcel be no more than twenty (20) acres in size. Through a series of steps and service-area mapping updates, the entire Specific Plan will ultimately be brought into the TW service area and a series of individual will-serve letters will be incrementally issued by the provider. The owner/developer is currently engaged in this sequential process.

II.F.3 Dry Utilities Masterplan

All dry utilities are all project-convenient to the Specific Plan and are easily extended to service it:

- Tucson Electric Power (TEP) has an existing facilities in Cortaro Farms Road and in all of the existing surrounding neighborhoods.
- Southwest Gas Corporation has high pressure natural gas line in Cortaro Farms Road; gas service also exists in the adjacent residential neighborhoods.
- Cable television and telecommunications infrastructure surrounds the property.

II.F.4 Phasing of Utility Infrastructure, Upgrades, Augmentations

It is anticipated that residential development will commence with Planning Area "D" and proceed from east to west across the Specific Plan. This approach plays off of the extension of Camino de Oeste to Cortaro Farms Road, which will be completed at the onset of project

construction. Residential development will conclude with Planning Area "A". Planning Area "C" (neighborhood commercial/retail) will occur somewhere along that continuum based solely on market demand. Attendant utility infrastructure will be sequentially constructed per the above development program.

II.F.5 Maintenance Responsibilities for Utility Infrastructure

Potable water will be owned, operated and maintained by Tucson Water. Public sewers will be owned, operated and maintained by RWRD. Dry utilities will be owned, operated and maintained by their respective service providers.

II.G Conservation Measures & Considerations

II.G.1 Conservation/Sustainability Standards

The Specific Plan promotes a variety of conservation and sustainability principles. These are discussed individually below.

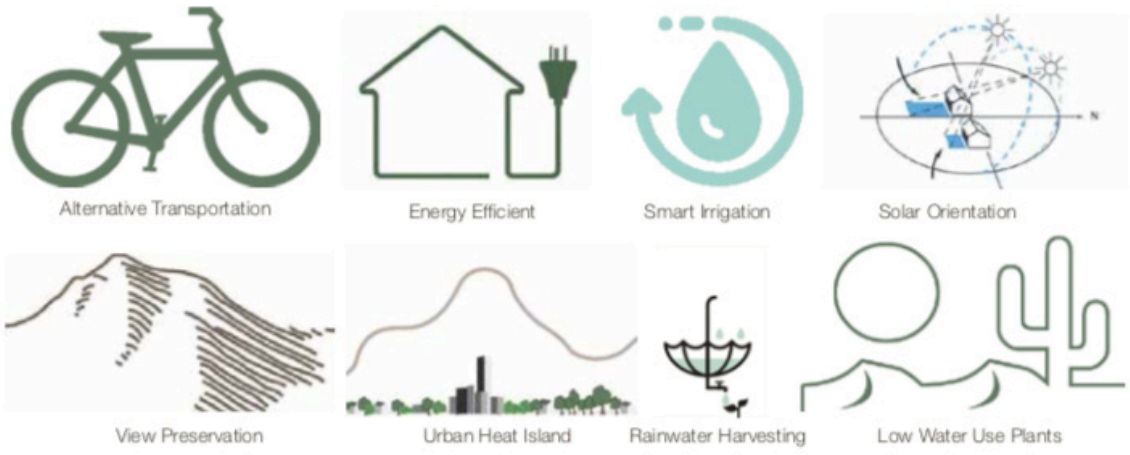


Exhibit II.12: Energy & Water Conservation Measures

a. Residential Structures & Neighborhood Features

Sustainable, energy-conscious design and alternative power generation appurtenances are allowed, such as cool roofs, solar panels, and roof decks (these shall be considered exclusive of building height). Neighborhood wide conservation standards will be accomplished via low water use plants, efficient "smart" irrigation systems, and rainwater harvesting.

From the neighborhood design perspective, residential neighborhoods will feature the following characteristics that promote overall sustainability:

- Single-family housing options that include clusters of smaller and pocketed lots that provide for significantly increased densities and for the associated superior efficiency in the overall use of land.
- From the perspective of energy efficiency, application of the HERS (Home Energy Rating System) index is encouraged to determine a specific energy score for each model home. These HERS scores are then compared to the annual energy costs of more conventional or average homes in the market, thereby affording the buyer a detailed estimated utility cost.
- An array of housing choices and design options for consumers, thereby fostering increased visual variety, aesthetics, and individuality, all of which contribute to enhanced social fabric and neighborhood aesthetics.
- Avoiding uniformity in both design and the spatial placement of residential units on individual lots. This creates a streetscape with greater variety and with unique and varying negative spaces in each front yard, providing the homeowner with opportunities for more individualized landscaping and front yard amenities.

From the water conservation perspective, the following are relevant:

- Native or regionally adapted plants will comprise the overall landscape palette, stressing low water use specimens in suitable locations to achieve significant water conservation. The overall palette will focus on zoning appropriate plants and long-term durability and viability of the entire planting mix.
- A low water use irrigation system will be utilized for all landscape areas. The system will incorporate an automatic smart controller, flow sensing valves, rain shut-off capability, and will also be metered separately to monitor water usage throughout the various Planning Areas. The system will include an enviro-transpiration module to enhance its ability to connect with local weather stations and thereby automatically adjust for seasonal weather changes. The use of a smart irrigation system will provide superior performance to maximize water conservation.
- Rainwater harvesting techniques will be implemented where feasible to supplement the irrigated and non-irrigated landscape areas. Passive water harvesting features will include curb cuts, flush curbs, recessed planting areas, minimized compaction of planting areas, and pervious/semi-pervious pavers.

b. Overall Site Improvements & Amenities

The Specific Plan will encourage walkable neighborhoods and pedestrian/bike connectivity to adjacent public arterial streets. The integration of neighborhood pedestrian routes, nature trails, concrete sidewalks, bicycle ways and mini-parks will activate the community and encourage social interaction and recreational pursuits. This serves to maximize the active and passive spaces within each neighborhood, while leveraging the potential for meaningful connectivity to outlying public preserves and recreational opportunities in the surrounding region.

II.G.2 Heat Island Considerations and Mitigation Measures

Specific heat island mitigation measures will include a combination of strategies. The preserved natural floodplain corridor (Planning Area "B") will provide a significant heat island mitigating element for the entire project. In addition, new neighborhood parks and landscaped common areas, perimeter landscape buffers, and revegetated detention/ retention basins and drainage channels will provide cooler green components. Walkways, pathways and inorganic ground-covering landscape materials will be limited to lighter colors so as to minimize heat absorption and maintain comfortable pedestrian surfaces.

II.G.3 Self-Certification of Conservation & Sustainability Measures

Concurrent and included with the submittal of future subdivision plats and site development package (SDP's) to the Pima County Development Services Department (DSD), or with the submittal of architectural plans to PDSD for building permits, the owner/ developer (or their appropriate design professional) shall submit a letter detailing the particular measures employed in final design to:

1) promote the above Conservation and Heat Island Measures described above in Sections II.G.1 and II.G.2
2) explain how the plat or development plan contributes towards the above sustainability principles outlined in this document.

The self-certification letter(s) accompanying a future tentative subdivision plat or SDP submittals to DSD shall describe the particular measures employed, and the results attained (quantifying same, where possible), toward furthering the following:

1) the landscape-related Potable Water Conservation Standards found in Section II.G.1; and
2) applicable Heat Island Considerations & Mitigation Measures per Section II.G.2

The self-certification letter(s) accompanying future architectural plan submittals to PDSD for building permits shall describe the particular measures being employed to further the building-related energy efficiency provisions found in Section II.G.1.a.

II.H Architectural Standards and Design Guidelines

The Specific Plan will have a unified image and identity through the use of defined theming principles and a consistent vocabulary in color, materials, and form. The residential and neighborhood-commercial components will be designed and constructed as an integrated whole, both functionally and aesthetically, so as to achieve the unique project identity alluded to earlier in this document and to provide a further contribution to high-quality residential and mixed-used development within the Cortaro Farms Road corridor.

II.H.1 Residential Architectural Design Concept & Building Elevations

Residences within the Specific Plan will provide a clean, indigenous architectural style and feature a variety of house elevations and color & material schemes. Specific aesthetic

ARCHITECTURE DESIGN INTENT
Exhibit II.13

MENU OF RESIDENTIAL ARCHITECTURAL FEATURES
Exhibit II.14

1. Gable End Trim Details

2. Gable End Window Detail with Corbels

3. Shuttered Window

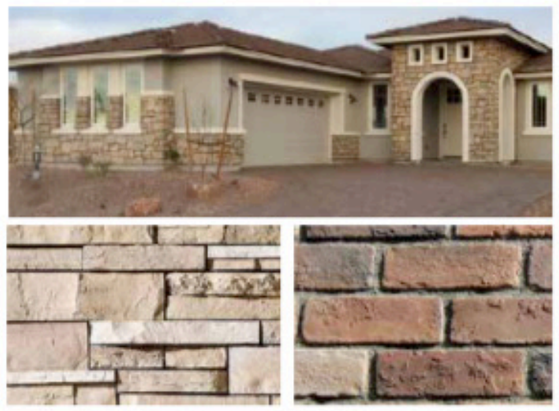
4. Window Casing Detail

5. Window Header & Sill Detail

6. Decorative Garage Door

7. Roof Material

8. Entry Courtyard/Portches



9. Masonry Elements

10. Wrought Iron Details

elements may include, but are not limited to, a variety of homestyles within a single streetscape, varying front yard setbacks, recessed garages, side-loaded garages, courtyards, and covered terraces. Enhanced elevations will be achieved through the use of pop-outs, cornices, window treatments, porches, varying roofing materials and landscaping. Alternative accent materials will be used for posts and columns and will include stone, brick, tile or wood depending on buyer preferences.

While home designs naturally evolve over time and the examples shown here will be refined in accordance with market preferences, they are provided to demonstrate a certain standard of quality and character that will typify the planned neighborhoods throughout the Project.

In order to ensure a diverse streetscape, a minimum of three (3) architectural features from a Menu of Architectural Features (see Exhibit II.14) will be included in each home. In addition, the following architectural guidelines and design objectives will apply:

1) Emphasizing articulated building massing.
2) Emphasizing front, side and rear elevations that maintain a high aesthetic quality and which relate strongly to the streetscape and any adjacent open spaces.
3) Modifying certain models for street-corner conditions and providing architectural features and elevations for all sides of the residence when directly adjacent to public streets, neighborhood parks and/or open space (whether functional or natural).
4) Offer alternative garage configurations, such as recessed or side-loaded arrangements.
5) Utilizing authentic materials and accent colors that go beyond traditional muted earth tones so as to reinforce an overall community identity, character, and appeal.

II.H.2 Building Materials & Color Palette

The overall residential architectural and neighborhood theming of the Specific Plan will include five-sided architecture that is a reflection of contemporary Southwest design. The basic objective is to achieve a certain timeless quality that, while contemporary, still reflects Tucson's heritage and personality.

This approach responds to climatic conditions and promotes an architecture that focuses on the qualities of surface treatment, color, light & shadow, massing and building form, and negative space as it relates to the outdoor environment. Fundamental architectural elements will include the effective use of massing, intersecting wall planes, strong accent colors, bold building forms, shade & shadow, and the interplay of light so as to create distinctive homestyles while ensuring pedestrian-scaled spaces.

Residences will break up large masses vertically and horizontally. All two-story structures will incorporate a recognizable base, middle component, and cap through the use of changes in material, architectural accents, other appropriate features. Strongest emphasis will be placed on the pedestrian level through the use of traditional materials, textures and increased building articulation.

Building materials used to further the above will be trendstone CMU, light sandblasted integral color CMU, juicy-joint constructed CMU, stucco, cast-in-place concrete, decorative

hardscape, and complementary amenity packages. To allow for the innovative use of materials and advancements in technology, materials other than those on the above list may be used, in so far as they are consistent with the same basic architectural principles and aesthetics established here.

II.H.3 Architectural Review & Self-Certification

Given the architectural character and detail presented in this Specific Plan document, no separate or subsequent architectural review process is required for the Project. The only protocol that will apply in this regard is the substantial conformance of the ultimate residences and structures with the aesthetics, architectural concept, building elevations, colors, and materials presented herein. The architect of record shall, at the time of submittal for building permits to the Development Services Department (DSD), submit an accompanying sealed letter certifying this substantial conformance and describing how the principles of above Section II.H are furthered.

II.I Interpretation/Modification of Specific Plan Regulations

Section II (Land Use Proposal) of this Specific Plan, together with the particular Land Use Regulations presented Section II.B, have been structured to provide for clear interpretation and application by Pima County in regulating a specialized land use and zoning framework for the Property. In the event that supplemental Specific Plan changes or interpretations become necessary in the future, they shall proceed in accordance with the parameters below.

II.I.1 General Administration & Interpretation Authority

This Specific Plan will not result in the modification or change of any existing Pima County adopted building code or other ordinances, except those portions of the Zoning Code that may be superseded by this document, particularly within Section II.B.2 (Development Standards) and II.E (Proposed Landscape Treatment and Native Plant Program).

The Specific Plan shall be generally administered under the authority of the Pima County Planning Official and the Pima County Chief Zoning Inspector within the Development Services Department (DSD). Whenever a conflict arises between this Specific Plan and the Zoning Code, the Specific Plan shall control. When the Specific Plan does not specifically address a particular topic, the Zoning Code shall control.

II.I.2 Amendments to the Specific Plan

The Planning Official or Chief Zoning Inspector may administratively approve minor changes to land use and to the specialized land use regulations and development standards set forth in this Specific Plan, provided such changes are not in conflict with the overall intent, goals and objectives of the Project as presented herein.

a. Criteria for Minor Amendments & Associated Process

The following shall be considered minor changes that fall within the administrative purview of the Pima County Planning Official or Chief Zoning Inspector:

- Addition of new information to the Specific Plan, maps, or text that do not materially alter the effect of any regulation, development standard, or guideline herein.
- Changes to the public or private infrastructure as presented herein as necessary to properly serve the Project and which do not significantly increase the development capacity of the Project nor alter the guiding goals and objectives of same.
- The addition of permitted uses that may not be specifically listed in Sections II.A.1 and II.B.2 of this document, but which are determined to be sufficiently similar in type and nature to those explicitly listed as permitted and which are judged to be compatible with the Property's surrounding developed context.
- Adjustments to the Development Standards in Sections II.B.2 of this document that are not harmful to the interests of the larger community or to adjacent neighborhoods, or which are not explicitly stated in the Specific Plan, but which are consistent with the guiding goals and objectives of the project and which do not create any public health or safety issues.
- Modifications to Section II.G (Conservation Measures & Considerations) or Section II.H (Architectural Standards & Design Guidelines) which do not diverge materially from the guiding principles outlined in those enumerated Sections.
- Adjustments to any aspect of Section II of this Specific Plan that is required in order to comply with changes in local, state or federal safety and/or health codes.

b. Criteria for Major Amendments & Associated Process

Major amendments to the Specific Plan shall be only those changes or modifications that materially alter the guiding goals and objectives of this Specific Plan, or which represent an increase in density or land use intensity that exceeds that outlined herein, or which are found to be unsupported by the principles as originally written in the document. The Pima County Planning Official will determine if a proposed amendment would result in a substantial change per the criteria established in Zoning Code Section 18.91 (Rezoning Procedures). Major amendments to the Specific Plan shall be processed in accordance with the procedures outlined in same Section 18.91.

Section III : Site Analysis

III.A Land Uses and Existing Zoning

1. Site Location and Regional Context

The subject Specific Plan property is four (4) contiguous parcels within the SE ¼ of Section 25, T12S, R12E and the SW ¼ of Section 30, T12S, R13E, being more particularly located on the south side of Cortaro Farms Road, approximately one (1) mile west of Thornydale Road. The site is comprised of Assessors Parcel Nos. 221-16-029D, 221-16-029E, 225-33-059M & 225-33-059R, which are under the ownership of three (3) different entities. It totals 57.6 acres in gross area.

The Property sits within an already urbanized context. Cortaro Farms Road is a major east-west transportation corridor and a designated major & scenic route on the County's Major Streets & Routes Plan (MSRP). The Camino de Oeste alignment bisects the property. An eighty foot (80') public right-of-way will be dedicated with the Project to accommodate this MSRP-designated collector street.

2. Existing On-Site Land Uses

The site is vacant. Large areas of it have been graded and cleared of vegetation to install public sewer and water lines within the aforementioned Camino de Oeste alignment. There is also significant evidence of vandalism, illegal dumping, native plant theft, and homeless occupation. The remainder of the site is natural desert. See Exhibit III.1 and III.2 for additional site information and site context.

3. Existing Easements or Encumbrances

A number of easements exist on the property. The location and details of same are provided on Exhibit III.3. None of these easements hinder development of the property as intended and all will be accommodated without alteration. The majority of these easements lie within the aforementioned future eighty foot (80') public right-of-way dedication for Camino de Oeste.

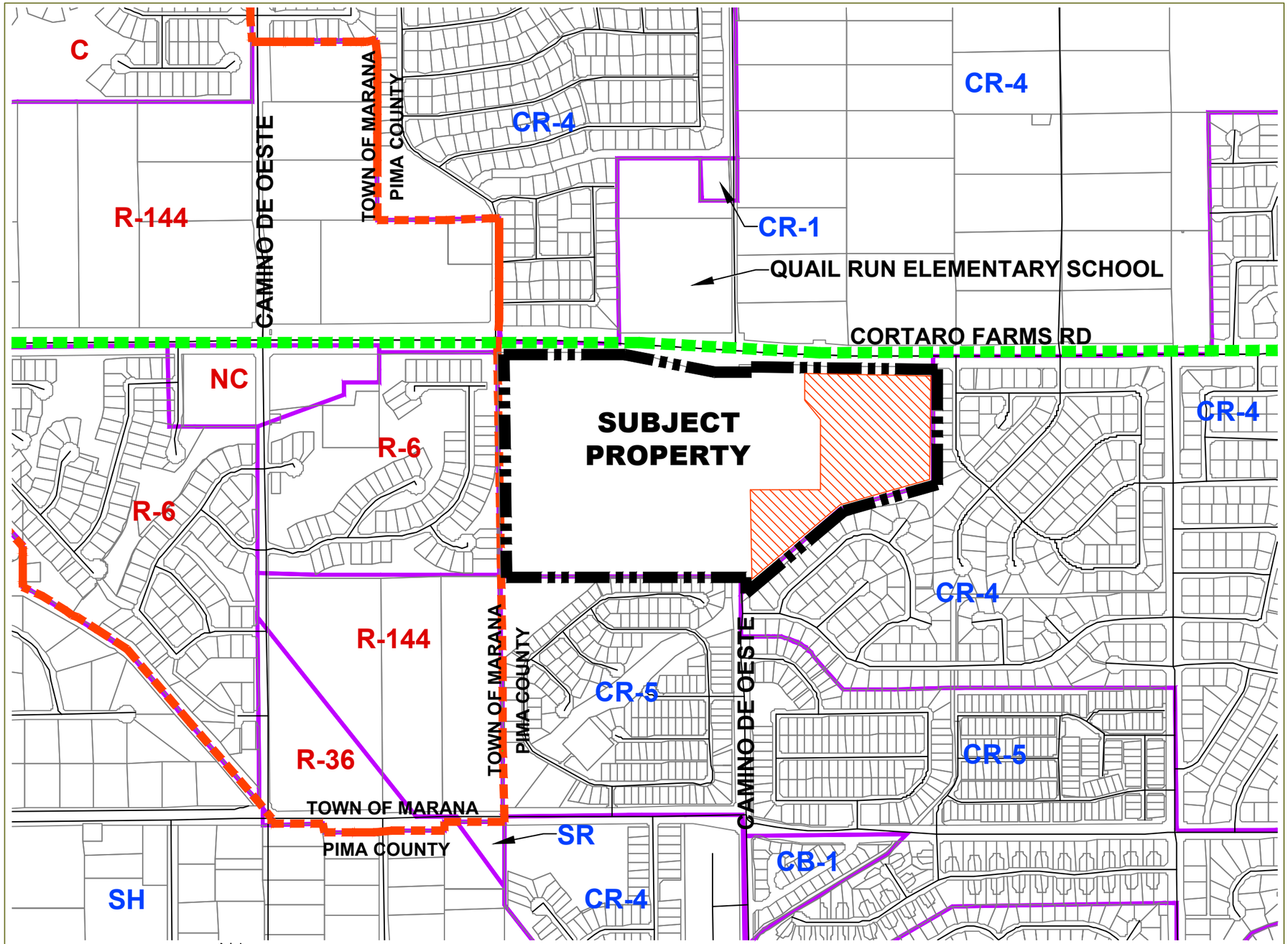
4. Comprehensive Plan Designations On-Site & Surrounding

The Specific Plan site is a combination of MIU (Medium Intensity Urban) and Low Intensity Urban (LIU) 0.3. The majority of the surrounding properties are designated MIU, with some to the northeast (across Cortaro Farms Road) being LIU 0.3:

To the North:	MIU & LIU 0.3
To the South:	MIU
To the East:	MIU
To the West:	Town of Marana R-6 Zoning (Existing Subdivision)

One (1) Rezoning Policy (RP-120) applies to the eastern fifteen (15) acres of the Property; refer to Exhibit III.1 for location of same. This Rezoning Policy is discussed in detail in Section I.C.2 of this Specific Plan document.

No (0) Special-Area Policies apply to the site.



LEGEND

- Boundary of Subject Comprehensive Plan Amendment Request
- Town/County Limits
- CR-4 — Existing Pima County Zoning, typ.
- R-6 — Existing Town of Marana Zoning, typ.
- Zoning Boundaries
- Rezoning Policy RP-120
- Designated Scenic Route

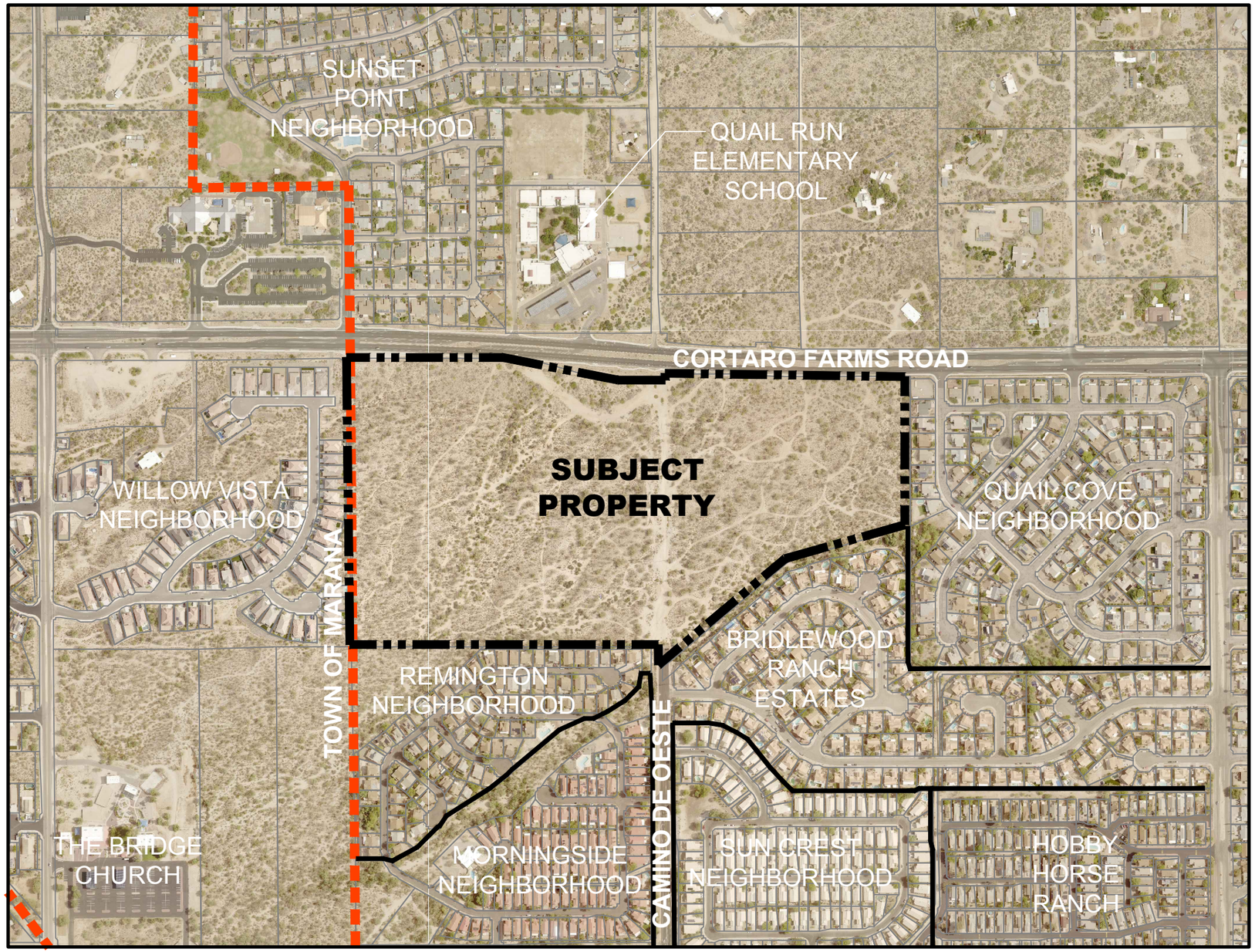
PROJECTS INTERNATIONAL, Inc.
STRATEGIC GUIDANCE
ENTITLEMENT PROCESSES
LOCAL ADVICE & COUNSEL

GRS LANDSCAPE ARCHITECTS, LLC

Baker & Associates Engineering, Inc.

Cortaro 57
SPECIFIC PLAN

EXISTING ZONING & OVERLAY ZONES
Exhibit III.1



LEGEND

Boundary of Subject Specific Plan Request

Town of Marana Boundary

PROJECTS INTERNATIONAL, Inc.
STRATEGIC GUIDANCE
ENTITLEMENT PROCESSES
LOCAL ADVICE & COUNSEL

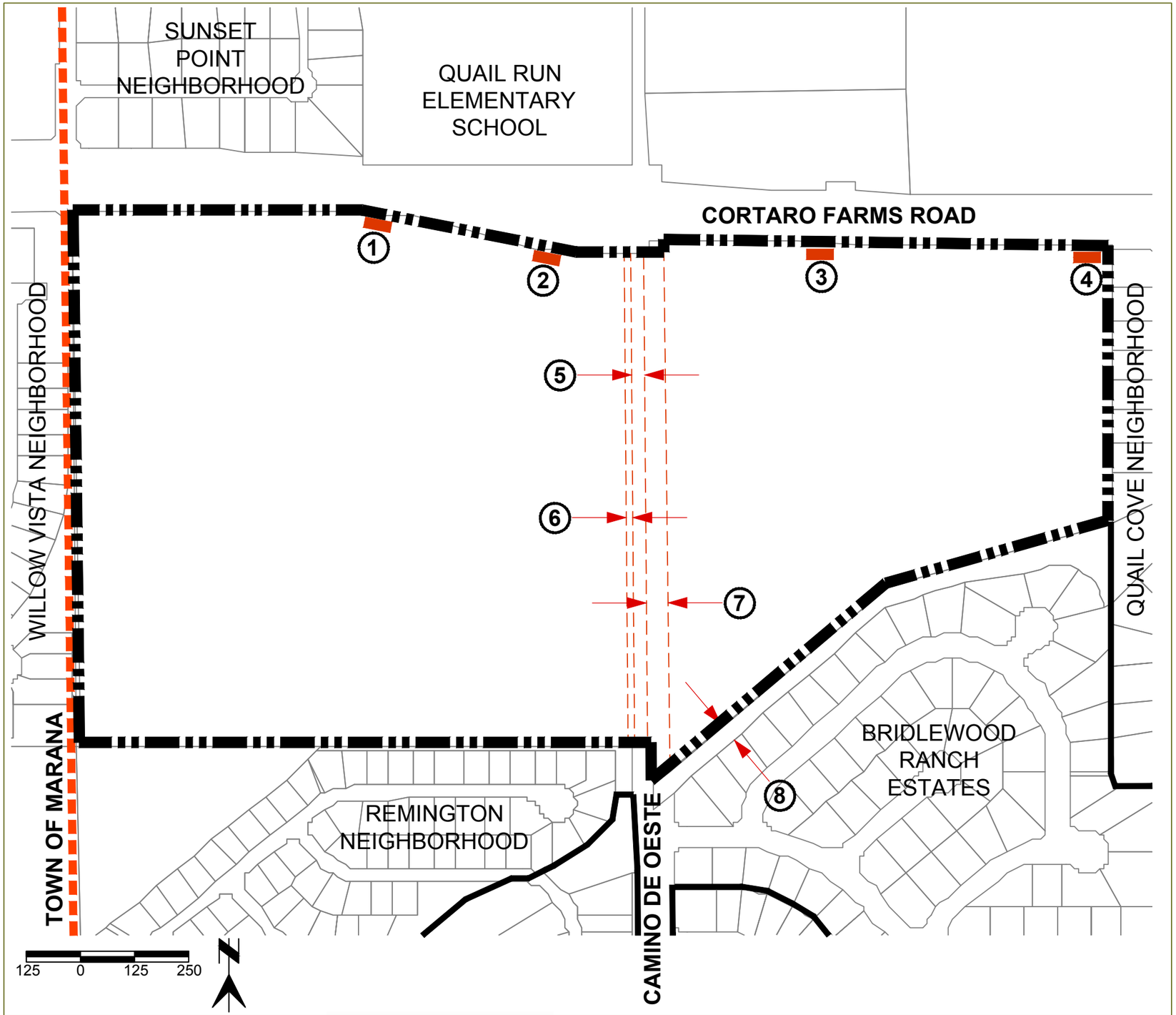
GRS LANDSCAPE ARCHITECTS, LLC

Baker & Associates Engineering, Inc.

Cortaro 57
SPECIFIC PLAN

SURROUNDING CONTEXT

Exhibit III.2



LEGEND

Boundary of Subject Specific Plan

Town of Marana Boundary

1 Rectangular easements of various dimensions; see detail below.

5 Linear easements; see detail below.

1. Thirty foot (30') by sixty-five (65') public drainage easement to accommodate culvert outlets beneath Cortaro Farms Road; Sequence # 20162280558
2. Thirty foot (30') by one hundred six foot (106') public drainage easement to accommodate culvert outlets beneath Cortaro Farms Road; Sequence # 20162280558
3. Twenty-five foot (25') by eighty-five foot (85') public drainage easement to accommodate culvert outlets beneath Cortaro Farms Road; Sequence # 20162140520
4. Twenty foot (20') by eighty-five foot (85') public drainage easement to accommodate culvert outlets beneath Cortaro Farms Road; Sequence # 20162140520
5. Thirty foot (30') public sewer easement, Dkt. 5192 @ P. 95 & Dkt. 6009 @ P. 853; overlaid with a ten foot (10') wide communications easement (Dkt. 5872 @ P. 143) over the western ten feet (10') of the above thirty foot strip
6. Fifteen foot (15') public waterline easement; Dkt. 7979 @ P. 1471
7. Forty-five foot (45') private ingress / egress and utility easement, Dkt. 13224 @ P. 2577; overlaid with a fifteen foot (15') public waterline easement (Dkt. 8509 @ P. 519) over the western fifteen feet (15') of the above forty-five foot wide strip
8. Off-site (but adjacent to) this Specific Plan: twenty-two foot (22') wide public dedication to Pima County, for drainage purposes, by the final plat for Bridlewood Ranch Estates (Bk. 39 @ P. 30 of Maps & Plats)

EASEMENT NOTES

1. Numbered Items 1 through 4 above will remain in place and accommodated with the final design and subdivision platting of this Specific Plan.
2. Numbered Items 5 through 7 above fall almost entirely within the eighty foot (80') wide right-of-way dedication for Camino de Oeste that will be made in conjunction with this Specific Plan. Those small (5' wide) portions of these easements that fall outside of the eighty foot (80') Camino de Oeste right-of-way will be accommodated within twenty foot (20') landscape buffers that are planned on both sides of this new public street.
3. Numbered Item 8 above will be expanded on-site and mirrored with a complementary drainage area and north channel bank by this Specific Plan.

5. Surrounding Land Uses

Refer to Exhibit III.2 for an aerial photo depiction of site context. The properties surrounding the subject site are as follows:

To the North:	Developed Residential Subdivision zoned CR-4, Quail Run Elementary School, Unsubdivided Residential Properties zoned SR
To the South:	Developed Residential Subdivisions zoned CR-4, CR-5
To the East:	Developed Residential Subdivision zoned CR-4
To the West:	Developed Residential Subdivision zoned Town of Marana R-6

6. Pending Rezonings, Plats & Development Plans

The surrounding area is characterized largely by recorded plats and developed residential subdivisions, together with unsubdivided residential properties.

The only pending project anywhere in the vicinity lies one-quarter (1/4) mile to the south, at the southeast corner of Magee Road and Camino de Oeste. This property is platted for single-family residences as “Oeste Lomas” per Bk. 62 @ Pg. 38 of Maps & Plats, but to date has never been constructed. No timetable for its development is known.

III.B. Topography

1. Topographic Characteristics

The Specific Plan site is comprised of several shallow parallel ridges and is characterized by a gentle downward slope from the north/northeast to the south/southwest. There is one (1) regulatory floodplain with a well-defined wash that traverses the westernmost portion of the Property. See Exhibit III.4 for existing-conditions topography.

a. Restricted Peaks & Ridges

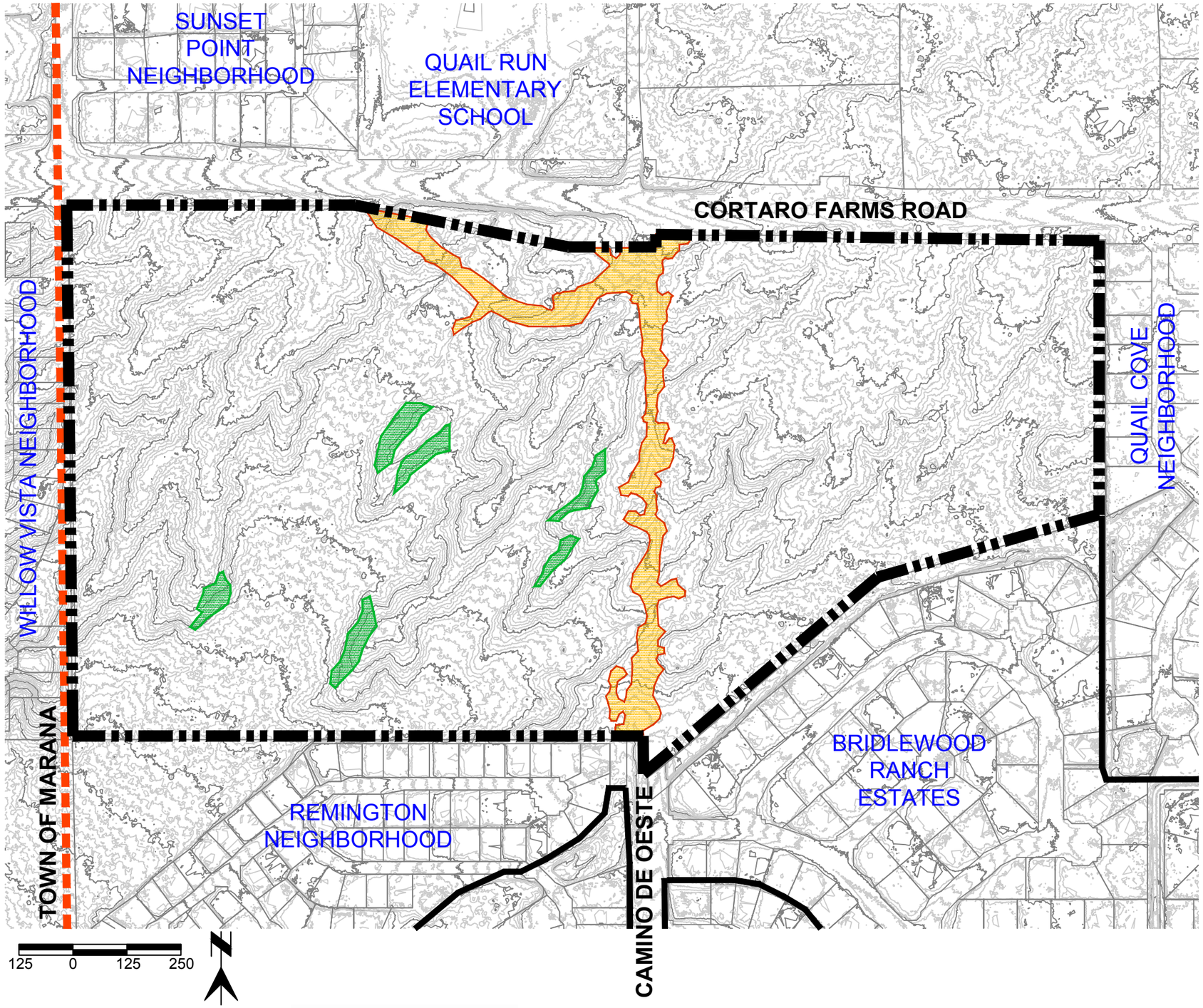
There are no restricted peaks or ridges on the property.

b. Rock Outcroppings, etc.

There are no rock outcroppings, etc. on the subject property.

c. Slope of 15% or Greater

The rezoning site contains some slopes of 15% or greater; these have been mapped on Exhibit III.4. With this being the case, the property is technically subject to the Hillside Development Overlay Zone (HDZ) ordinance (Sec. 18.61).



LEGEND

- Boundary of Subject Specific Plan
- Existing Condition Topographic Contour (1' Interval); darker / bolder lines are 5' interval
- Areas of prior disturbance and clearing / removal of vegetation
- Existing slivers of 15% or greater slopes as defined by Site Analysis Checklist

Average Cross Slope Calculations

The average cross-slope calculation for the subject property, in accordance with Chapter 18.61 (Hillside Development Zone), is as follows:

$$\frac{\text{(1' Contour Interval) x (101,575 Total Length of Contours) x (0.0023 Conversion)}}{\text{(57.65 AC Total Site Area)}}$$

The resultant Average Cross Slope (ACS) = 4.05%

Source of Topography:
Private Flight for this Project

Given that: 1) the aforementioned 15% slopes on this particular site are non-contiguous slivers rather than of any material size; 2) a large portion of them fall within a floodplain corridor that will be preserved as natural area with this Project; 3) all are unremarkable and possess no special aesthetic or habitat value; and 4) the overall Site's average cross-slope is a meager 4.05%, this Specific Plan incorporates, by this reference, a modification of the normal grading limitations enumerated in Grading Requirements Table 18.61.054-1 so as to allow Planning Area "A" of this Specific Plan to be 100% mass graded and developed as intended, without the need for a separate application and/or approval by the Design Review Committee (DRC).

d. Other Significant Topographic Features

There are no other significant or remarkable topographic features on the property.

e. Existing Grading and/or Ground Disturbance

The site is a combination of natural desert, together with significant prior grading and disturbance for utility lines, evidence of illegal dumping and homeless encampments, and significant theft of native plants. The limits of disturbance are illustrated on Exhibit III.4.

2. PreDevelopment Average CrossSlope

The average cross-slope calculation for the subject property, in accordance with Chapter 18.61 (Hillside Development Zone), is as follows:

$$\frac{\text{(1' Contour Interval) x (101,575' Total Length of Contours) x (0.0023 Conversion Factor)}}{\text{(57.65 AC Total Site Area Gross Acreage)}}$$

The resultant Average Cross Slope (ACS) = 4.05%.

III.C Hydrology

The findings of a preliminary drainage assessment of the Specific Plan property are presented below.

1. Off-Site Watersheds & Hydrology

Exhibit III.5 illustrates the off-site watersheds draining into the subject site, along with their respective acreages, points of concentration, and 100-year discharges into the Site. The upstream watersheds are rather limited in size; only one (1) of them produces a regulatory flow. This enters the subject Site via a three (3) 4' x 8' RCBC's beneath Cortaro Farms Road.

2. On-Site Hydrology

The Specific Plan site is largely native desert. Areas of disturbance and clearing exist from the past installation of public water and sewer mains. There is also evidence of illegal dumping, homeless encampments, native plant theft, and illegal dumping. Refer to Exhibit III.6 in support of the following:

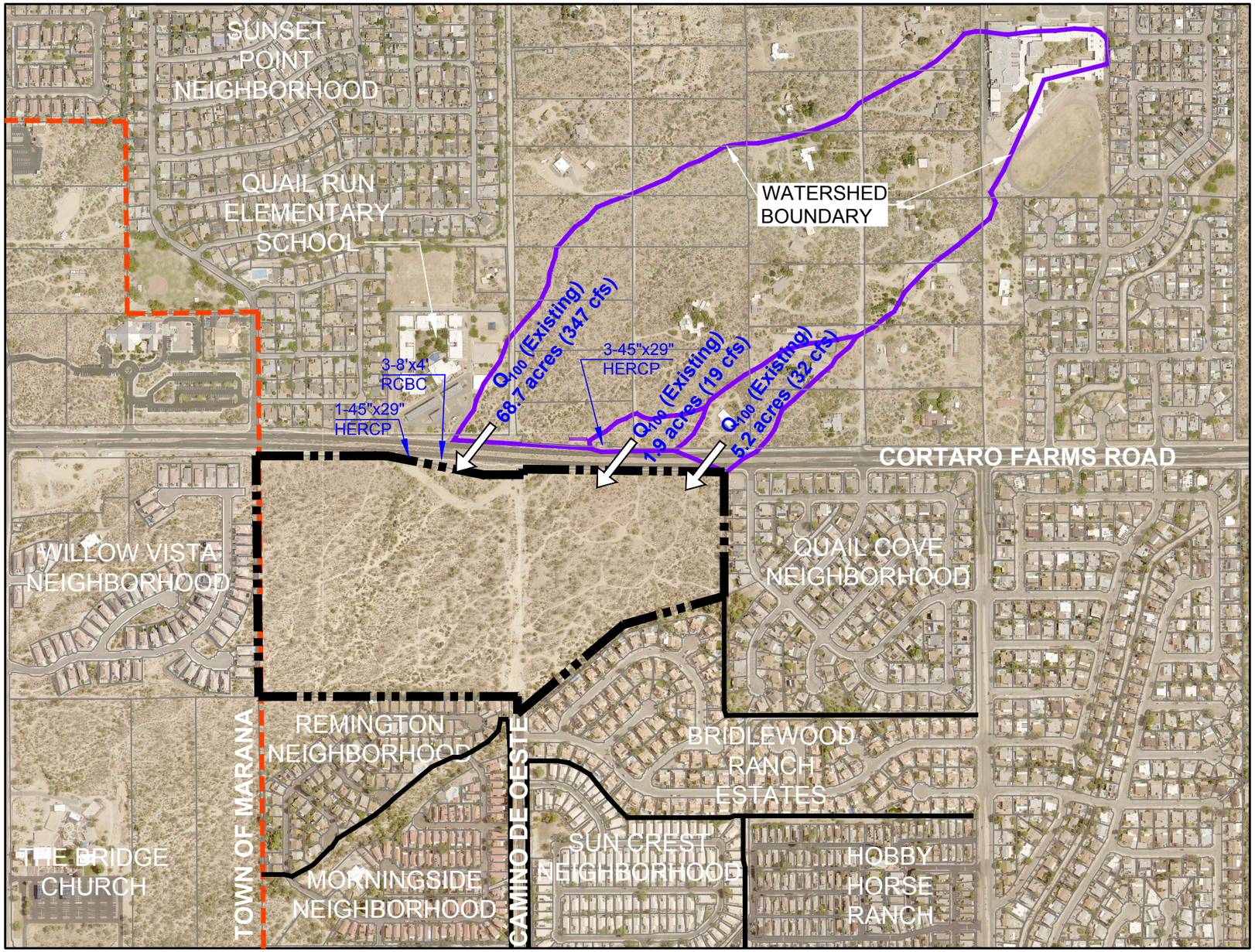
a. Flood Control Resource Areas.

Flood control resources include site topography prepared for this Property, the Pima County Regional Flood Control District website, Pima County MapGuide (GIS), City of Tucson Drainage Manual, and the FEMA Maps website.

Hydrologic Computation Procedures. The Pima County hydrologic computation procedure, as presented within the "PC-HYDRO User Guide" (Arroyo Engineering, March 2007), was used to compute the peak discharges. PC-Hydro, Version 6.1, was used to estimate the flows affecting this site. PC-Hydro is a web-based computer program developed per the Pima County Hydrology Procedures, which uses a Rational Method based algorithm and utilizes rainfall depth information from the intensity-duration-frequency data from NOAA Precipitation Atlas 14 of the Western United States (Volume I, Version 4, NOAA National Weather Service, Silver Spring, Maryland; G. M. Bonnin, et al., 2006). Specific watershed parameters were estimated per the Pima County Hydrology Procedures and based on local topography, recent aerial photography, and field verification.

Hydrologic soil groups (HSG) for the existing and proposed condition drainage areas were determined from the Pima County Mapguide Map, which is a GIS system that includes various digital mapping layers for Pima County, Arizona. Soils information for this report is based off of the NRCS (Natural Resources Conservation Services) line work within Pima County Mapguide Map, effective October 1, 2016.

PC-Hydro computations, similar to the Rational Method, assume that rainfall is uniformly distributed over the entire watershed, uniform rainfall intensity



LEGEND

- Boundary of Subject Specific Plan Request
- Town of Marana Boundary
- Off-site Watershed boundary, Typ.
- Existing 100-year point of concentration entering property
- RCBC — Indicates Reinforced Concrete Box Culvert
- HERCP — Indicates Horizontal Elliptical Reinforced Concrete Pipe

SUNSET POINT NEIGHBORHOOD

QUAIL RUN ELEMENTARY SCHOOL

Q_{100}=10 cfs

Q_{100}=347 cfs

Q_{100}=19 cfs

Q_{100}=32 cfs

CORTARO FARMS ROAD

WILLOW VISTA NEIGHBORHOOD

23 CFS / 3.65 AC

25' EHSB

26 CFS / 4.02 AC

100-YEAR FLOODPLAIN

32 CFS / 10.45 AC

QUAIL COVE NEIGHBORHOOD

92 CFS / 18.60 AC

374 CFS

TOWN OF MARANA

119 CFS / 20.30 AC

REMINGTON NEIGHBORHOOD

CAMINO DE OESTE

BRIDLEWOOD RANCH ESTATES

125 0 125 250

LEGEND

- Boundary of Subject Specific Plan
- Existing Condition Topographic Contour (1' Interval); darker / bolder lines are 5' interval
- Q_{100}=32 cfs — Incoming existing Q_{100} quantities
- On-Site Watershed Boundart
- 92 CFS / 18.60 AC — Exiting existing Q_{100} quantities
- On-Site regulatory floodplains
- Existing 25' erosion hazard setbacks

occurs with a duration of at least the time of concentration, the peak rate of runoff is proportional to rainfall intensity and rainfall depth averaged over the time period is equal to the time of concentration, the return period of the runoff event is the same as the return period of the precipitation event, and that channel storage is negligible. It is noted that the Pima County Hydrology Procedure as presented in PC-Hydro can be used for watersheds up to 10 square miles, with further notation that it tends to be valid for watersheds with homogenous areas up to 1 square mile (Arroyo Engineering, March 2007).

b. Concentration Points & 100-year Discharges

Multiple on-site watersheds exist on the Property and are delineated on Exhibit III.6 along with their respective acreages and 100-year discharges.

c. FEMA-Designated Floodplains.

The Project area falls within FEMA FIRM Panel 1655, Map Number 04019C1655L, with a revision date of June 16, 2011. As shown on the map and on the Pima County Regional Flood Control GIS FEMA mapping, the project site is within Zone "X" (Unshaded). This category is defined as an area of 0.2% annual chance of flood, areas of 1% annual chance flood with average depths of less than 1 foot, or with drainage areas less than 1 square mile; together with areas protected by levees from 1% annual chance of flood.

d. Regulatory Floodplain Delineations.

One (1) regulatory floodplain traverses the western portion of the Site; it is depicted on Exhibit III.6, along with its associated Erosion Hazard Setbacks (EHS's).

e. Determination of Regulatory Sheet Flood Areas.

No regulatory sheet flood areas affect this site.

f. Lakes, Ponds, Wetlands, etc.

There are no lakes, ponds, wetlands, springs, or other sources of perennial surface water on this site.

g. Erosion Hazard Setbacks (EHS)

A 25' Erosion Hazard Setback (EHS) is associated with the sole regulatory floodplain and is delineated on Exhibit III.6.

h. Pima County Regulated Habitat

There is no Pima County Regulated Riparian Habitat within the project site.

i. Flow Arrows for Non-regulatory Flows

Directional surface-flow arrows are provided on Exhibit III.6.

j. Existing Drainage Easements.

Four (4) rectangular drainage easements exist on this Site along its northern boundary. These were established in conjunction with the recent reconstruction of Cortaro Farms Road and contain rip-rap aprons to accommodate flows entering the site from the public right-of-way. Exhibit III.4 above provides easement locations and details. All of these will be suitably accommodated with the proposed development of the Specific Plan.

k. Existing Drainage Infrastructure.

The only existing drainage infrastructure in place lies off-site of the subject property, per the following:

- The aforementioned three (3) 4' x 8' RCBC's beneath Cortaro Farms Road,
- A 45" x 29" horizontal elliptical concrete reinforced pipe (HERCP), also beneath Cortaro Farms Road, and
- A 22' wide dedication to Pima County along the north boundary of the adjacent Bridlewood Ranch Estates (adjoining the subject Site along its southeast boundary). This 22' dedicated corridor accepts and conveys sheet flow from the subject Property.

3. Hydrology

The subject property is primarily natural desert, together with various areas of disturbance as described above. The existing site drainage is nominal, with only one (1) regulatory floodplain. This floodplain corridor will be accommodated as a natural set-aside with the proposed development of this Specific Plan. Refer to Exhibit III.6 for the following:

a. Features of the Watersheds That May be Affected.

Vegetation across the site is composed of desert brush and local cacti, with an approximate cover density of 30%. Soils across the site are comprised of two soil types: 1) Anthony gravelly sandy loam complex soils with 1 – 3 percent slopes, which is classified as hydrologic soil group (HSG) A; and 2) rough broken land-Palos Verdes complex soils with 0-60 percent slopes, which are classified as hydrologic soil group (HSG) C.

Storm runoff enters the subject property from the north along Cortaro Farms Road and exits the Site to the south and southwest. On-site drainage is divided into multiple watersheds, the primary one of which is a regulatory floodplain that exits the site along its southern boundary near its southwest corner. This exiting flow discharges into undisturbed common area within the

downstream Remington residential neighborhood, then subsequently enters the County-owned natural property further to the southwest.

Per the Pima County Regional Flood Control District (PCRFCD) Critical Basins within Unincorporated Pima County Map with an effective date of 3/15/2007, the subject property lies within the Tortolita Critical Basin. As such, and as a requirement of the current PCRFCD Design Standards for Stormwater Detention and Retention, new developments must demonstrate appropriate measures to reduce post-development runoff rates to 90% of pre-developed peak discharge rates at the project boundaries for the 2-, 10-, and 100-year storm runoff events.

Per the development program for this Project described in Section II of this Specific Plan document, together with the Framework Plan (Exhibit II.1) and Conceptual Master Drainage Plan (Exhibit II.12) therein, retention/detention basins are proposed for the Project as a method to reduce post-development peak discharge rates per the above Pima County critical-basin design standards. The retention/detention basins will be equipped with storage volume and outlet structures consisting of appropriate weir and/or pipe outlet configurations so as to achieve the appropriately reduced site outfall discharge rates. All basins will also provide first-flush retention.

b. Acreages and 100-year Peak Discharges of Upstream Watersheds.

The boundary of the offsite watersheds contributing rainfall runoff to the subject site and their respective acreages are shown on Exhibit III.5. Offsite watersheds affecting this site parcel extend to the northeast and are relatively small in area.

c. Methodology Used to Determine EHS's.

Per established Pima County hydrology procedures, erosion hazard setbacks (EHS's) extend from the top of bank or edge of regulatory floodplain. The 100-year peak discharge of this particular floodplain requires a twenty-five foot (25') EHS; this has been shown on Exhibit III.6 from the edge of the floodplain.

d. Methodology Used to Determine 100-year Floodplains.

The on-site 100-year floodplain was promulgated per the Pima County Hydro program, version 6.0. for watersheds less than one square mile in area.

III.D Biological Impacts

1. Conservation Lands System

The majority of the Specific Plan site falls within the Maeveen Marie Behan Conservation Lands System (MMBCLS); see Exhibit III.7. Approximately 46.2 acres fall within Multiple Use Management Area (MUMA); approximately 51.1 acres are Special Species Management Area (SSMA). There is no Important Riparian Area (IRA) on the site.

2. Priority Conservation Areas

There are no Critical Landscape Linkages on or near this property.

a. Pima Pineapple Cactus

No portion of the site is designated as Priority Conservation Area (PCA) for the Pima Pineapple Cactus.

b. Needle-Spined Pineapple Cactus

No portion of the site is designated as Priority Conservation Area (PCA) for the Needle-spined Pineapple Cactus.

c. Cactus Ferruginous Pygmy Owl and Burrowing Owl

The entire site is designated as part of Priority Conservation Area PCA-1 for the Cactus Ferruginous Pygmy Owl, as are all of the surrounding developed residential subdivisions.

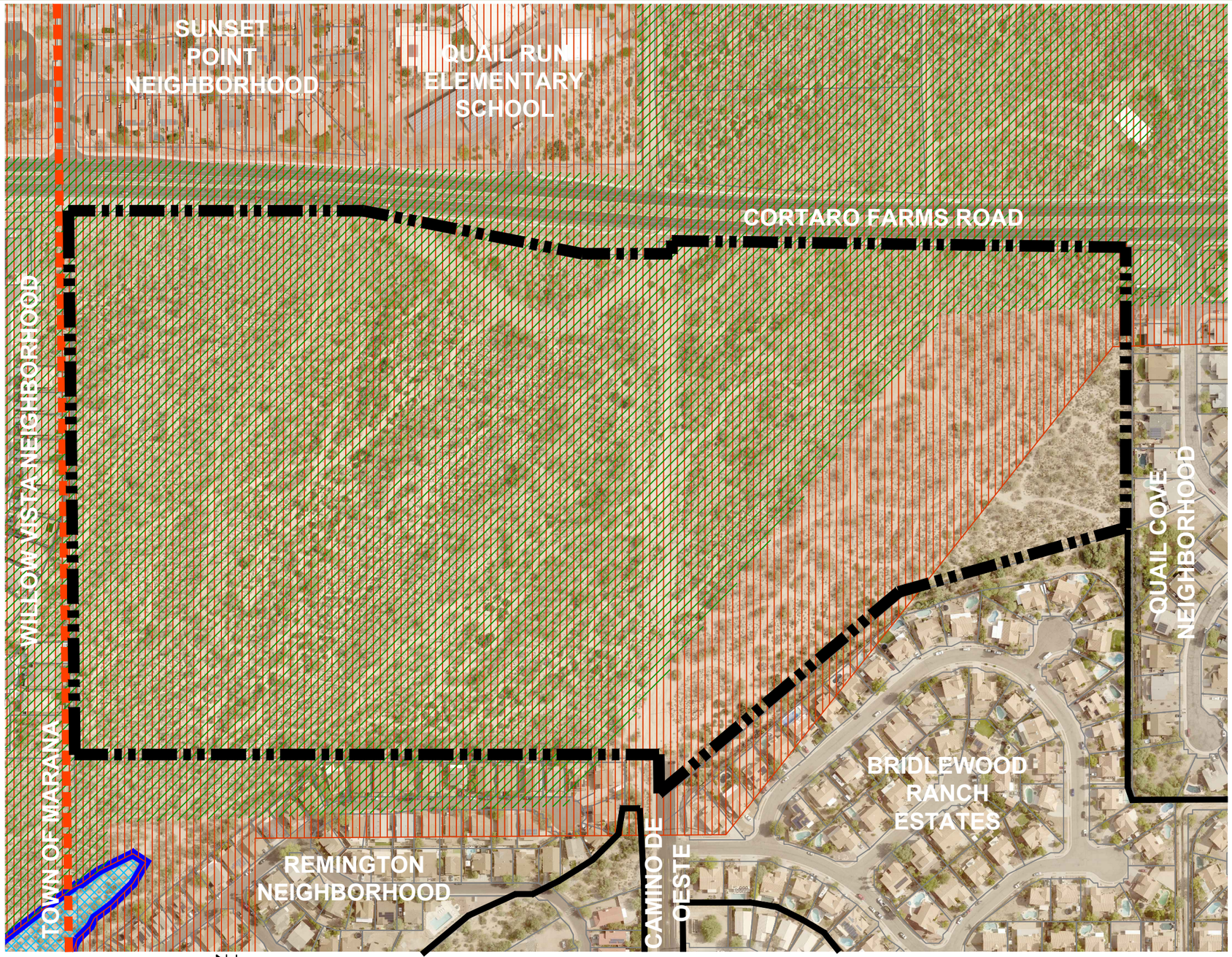
No portion of the site is designated as Priority Conservation Area (PCA) for the Western Burrowing Owl.

3. Saguaro and Ironwoods Inventory

The subject Specific Plan property has already been field surveyed for Saguaro Cactus (Carnegia gigantea) and Ironwood trees (Olneya Tesota). Their numbers preclude clear mapping on a single exhibit. As an alternative, the entire field inventory is included in Appendix C of this Specific Plan.

4. Habitat Protection/Community Open Space

The property is not designated for special habitat protection (other than by the Conservation Lands System) or for open space acquisition by Pima County.



125 0 125 250

NOTE:
This is a conceptual block plat depiction subject to refinement at the time of future platting. All acreages are approximate.

LEGEND

Boundary of Subject Specific Plan

Majority of site falls within the Multiple Use Management Area (MUMA) and Special Species Management Area (SSMA) CLS Designations. (Approximately 51.1 AC)

Multiple Use Management Area (MUMA) and Special Species Management Area (SSMA) (Approx 46.1 AC)

Special Species Management Area (SSMA) only (Approx 51.1 AC)

Important Riparian Area; occurs off-site only. There is none located within the subject Specific Plan.

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ENTITLEMENT PROCESSES
LOCAL ADVICE & COUNSEL

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Baker & Associates Engineering, Inc.

Cortaro 57
SPECIFIC PLAN

PIMA COUNTY CONSERVATION LANDS SYSTEM
Exhibit III.7

III.E Transportation

The subject property is located on the south side of Cortaro Farms Road, approximately one (1) mile west of Thornydale Road. It is bisected by the Camino de Oeste alignment as shown on the adopted Major Streets & Scenic Routes Plan.

1. Preliminary Traffic Study

   In lieu of the normal Transportation inventory sections as prescribed by Pima County's adopted Site Analysis Checklist, we have prepared a complete Preliminary Traffic Study to support this Specific Plan; it is provided in Appendix B of this document. The Study addresses both existing conditions, as well as a conservative, worst-case projection of project impacts at full build-out.

2. Existing Public Streets and Distances to Driveways & Intersections

   Nearby private driveways and public street intersections in the vicinity of the subject Property have been illustrated on Exhibit III.8 (Adjacent Driveways & Street Intersections).

3. Existing & Planned Transit Routes

   Sun Tran has no regular bus routes serving the project site and surrounding vicinity. There are three (3) Sun Shuttle routes and one (1) Express route serving the general area; please refer to Exhibit III.9 (Public Transit). To provide further multi-modal information, Exhibit III.10 (Designated Bicycle Routes) has also been provided.

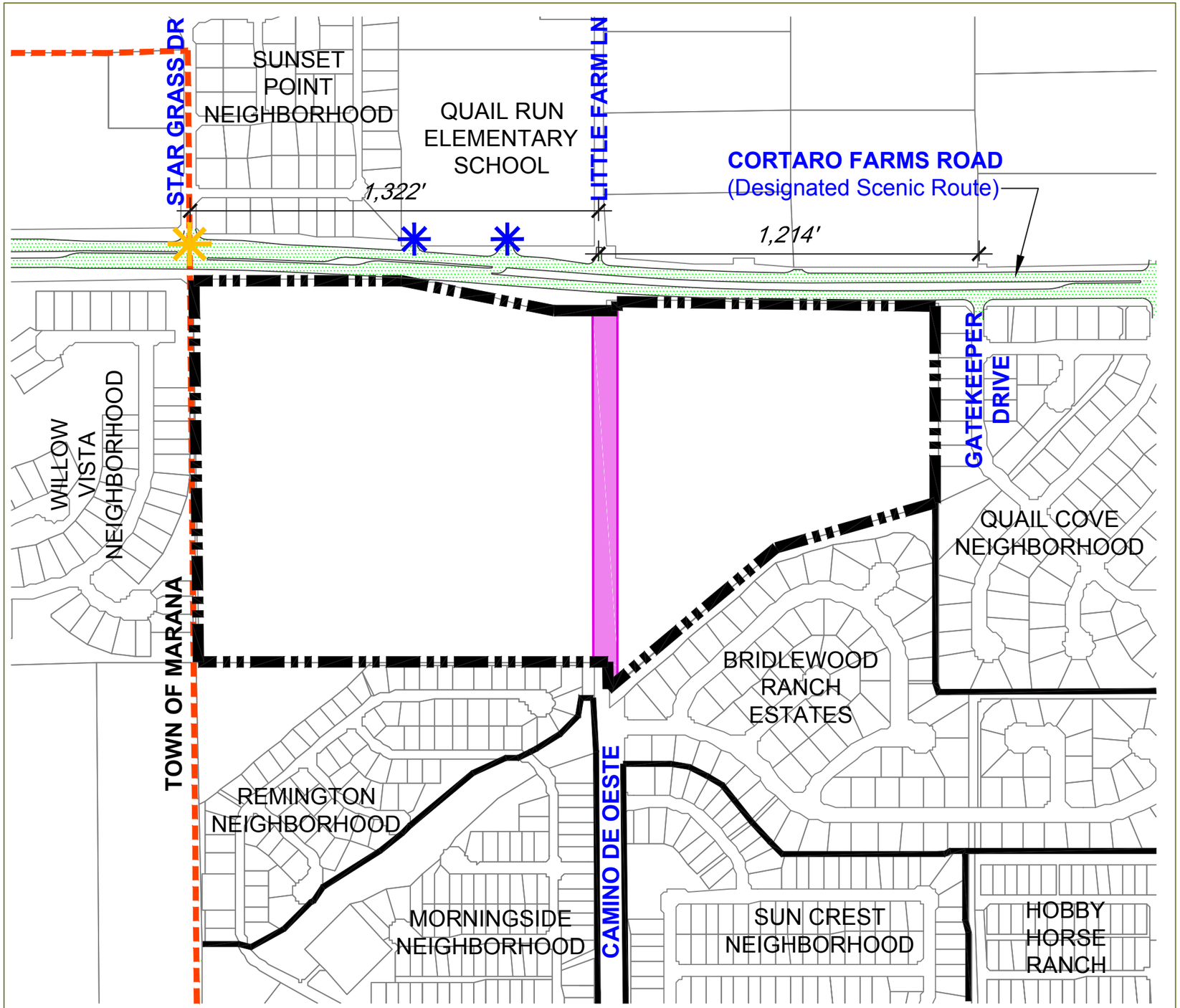
III.F Public Utilities

1. Public Sewers

   a. Size & Location of Existing Sewers.

      An extensive network of existing public sewers is already in place in the immediate vicinity, within the surrounding subdivisions, and through the actual Specific Plan site. Their size and location are depicted on Exhibit III.11.

      The majority of the Specific Plan site can be served by Sewer Nos. G-89-076 and G-79-121, both of which bisect the site and lie within that area which will be dedicated by it for the public right-of-way of Camino de Oeste.



LEGEND

- Boundary of Subject Specific Plan
- 80' Right-of-Way Dedication by this project for extension of Camino de Oeste
- Town of Marana Boundary
- Existing Pavement and Median in Cortaro Farms Road
- Existing Median Opening in Cortaro Farms Road
- Driveway Entrances into Quail Run Elementary School
- 100' — Approximate Distances between Street Intersections / Driveways

175 0 175 350

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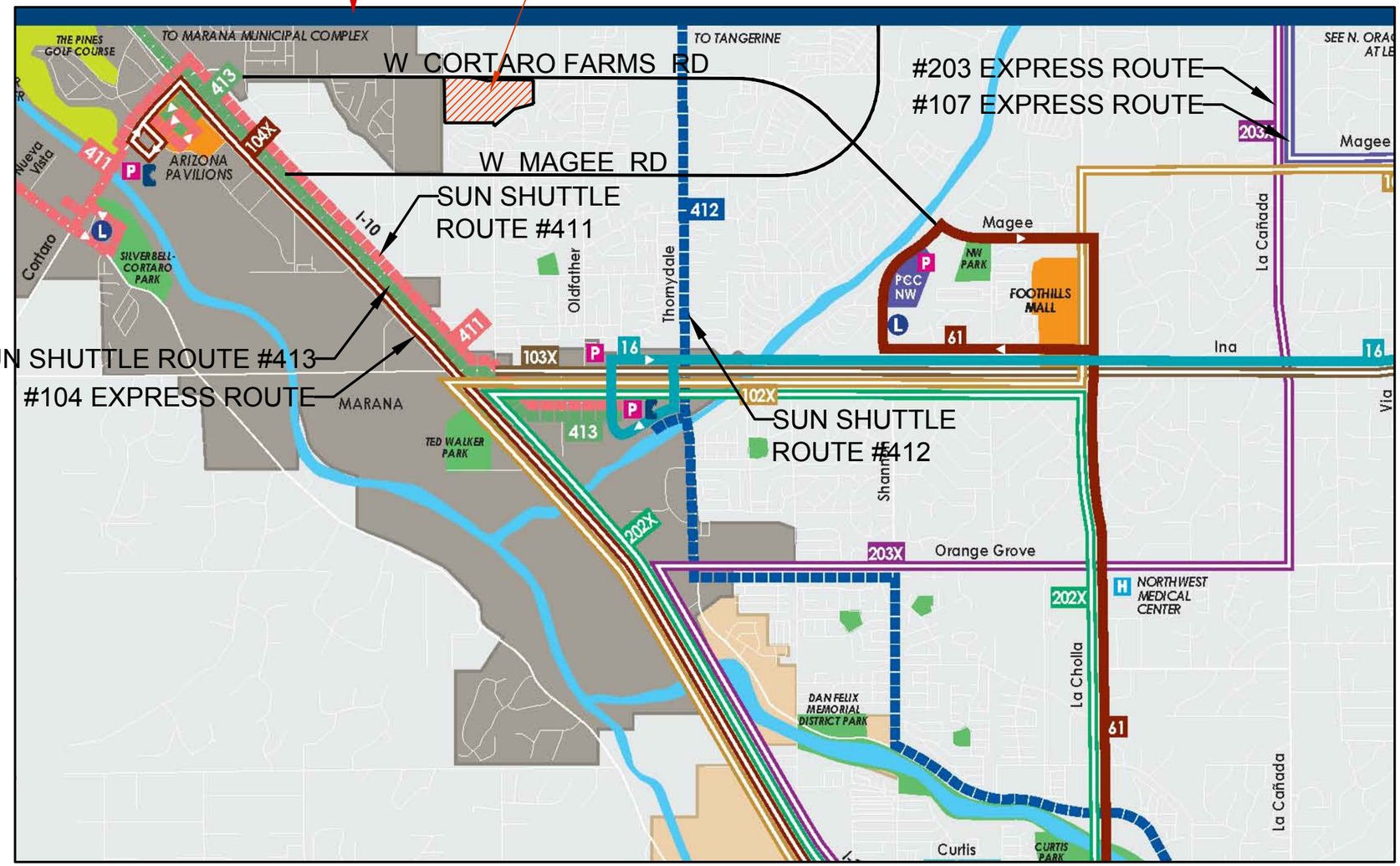
Cortaro 57
SPECIFIC PLAN

TRANSPORTATION ACCESS
Exhibit III.8

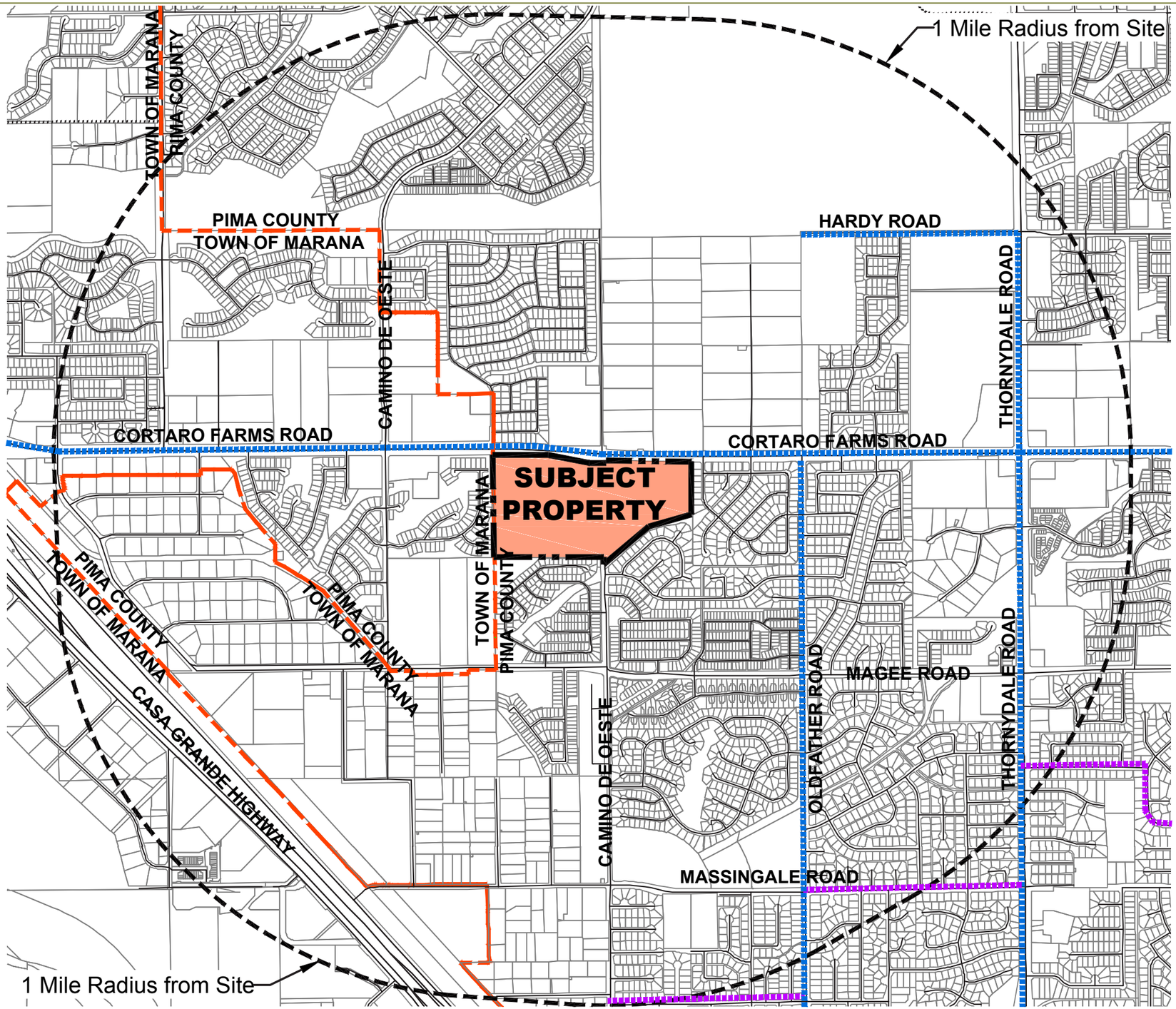
North Extent of Available Sun Tran Mapping

SUBJECT PROPERTY



LEGEND

- Specific Subject Property
- 34 — Sun Tran Route Indicator, Typ.
- P — Park & Ride Lot
- #203 Express Route
- Sun Shuttle Route #412
- Sun Shuttle Route #411
- Sun Shuttle Route #413



LEGEND

Boundary of Specific Plan Subject Property

Town/County Limits

Bike Route with Striped Shoulders; both sides of street within roadway prism

Bike Route; Residential Streets

650 0 650 1300

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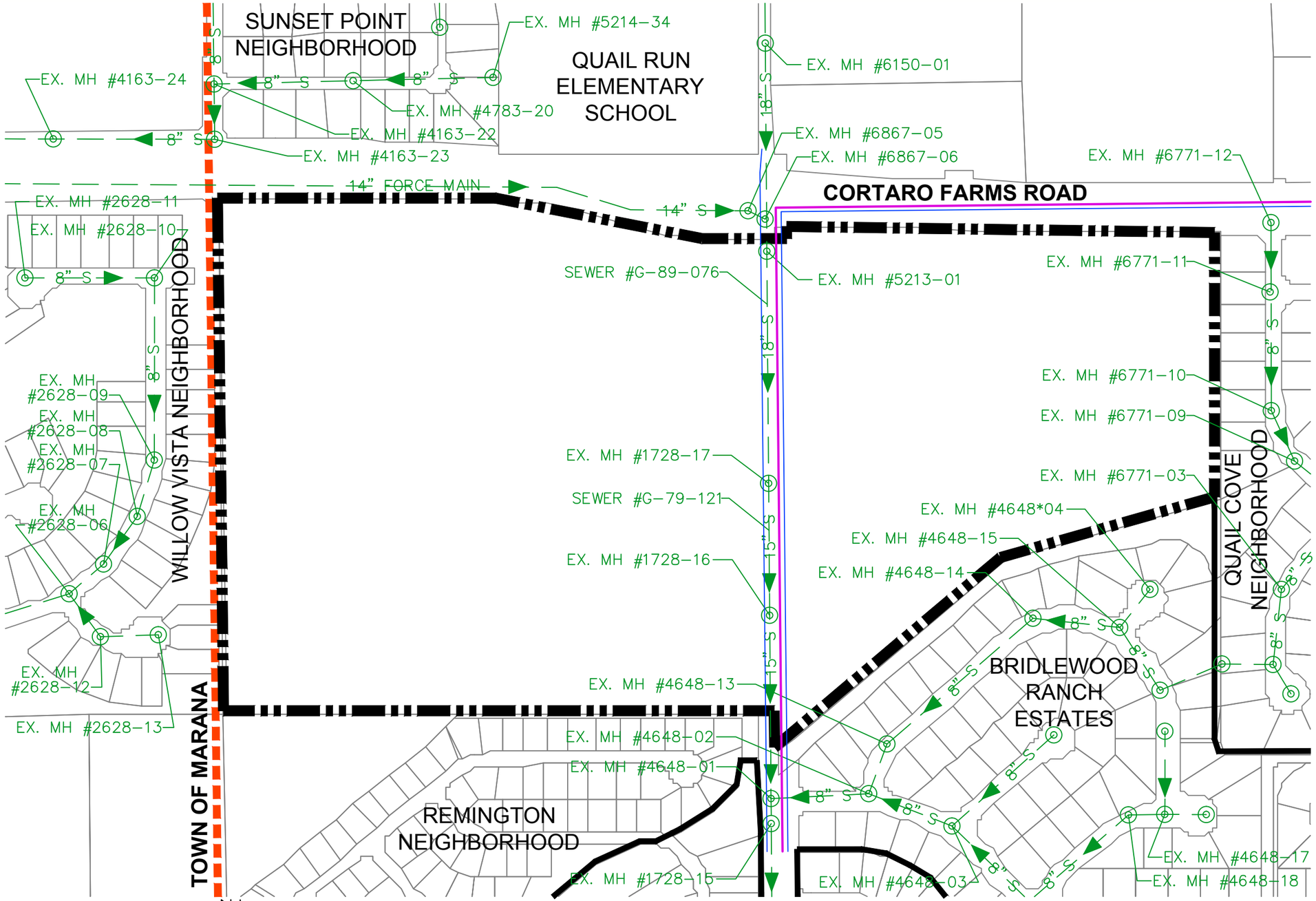
Cortaro 57
SPECIFIC PLAN

EXISTING PCDOT DESIGNATED BICYCLE ROUTES
Exhibit III.10



LEGEND

- Boundary of Subject Specific Plan
- 8" S — Existing Pima County / RWRD Public Sewer, Flow Direction, Manhole Number & Line Size
- Existing Tucson Water Public Reclaimed Water Line
- Existing Tucson Water Public Water Line

NOTE:
This is a conceptual depiction subject to refinement at the time of future platting.

The westernmost portion of the Property can be gravity-served by Sewer No. G-2015-067 within the adjacent/off-site Willow Vista residential subdivision. Although located within the Town of Marana, its sewers are RWRD's and its common areas (including its streets) are dedicated as easements for all public utilities. As such, legal access provisions are already in place.

b. Constraints to Gravity Service

There are no constraints to providing gravity sewer service for the Project, nor in connecting its new sewers to the aforementioned public lines. Given the prevailing natural topography of the Property, the entire proposed project will drain southerly and southwesterly to facilitate direct gravity connection.

2. Potable Water

Tucson Water mains are already present within Cortaro Farms Road, adjacent to the Specific Plan site, as well as through the Property itself within than corridor that will be granted as an eighty foot (80') wide public right-of-way for Camino de Oeste (see Exhibit III.11). This framework of public mains will be expanded throughout the Project as development proceeds, in coordination with masterplanning and approval by Tucson Water.

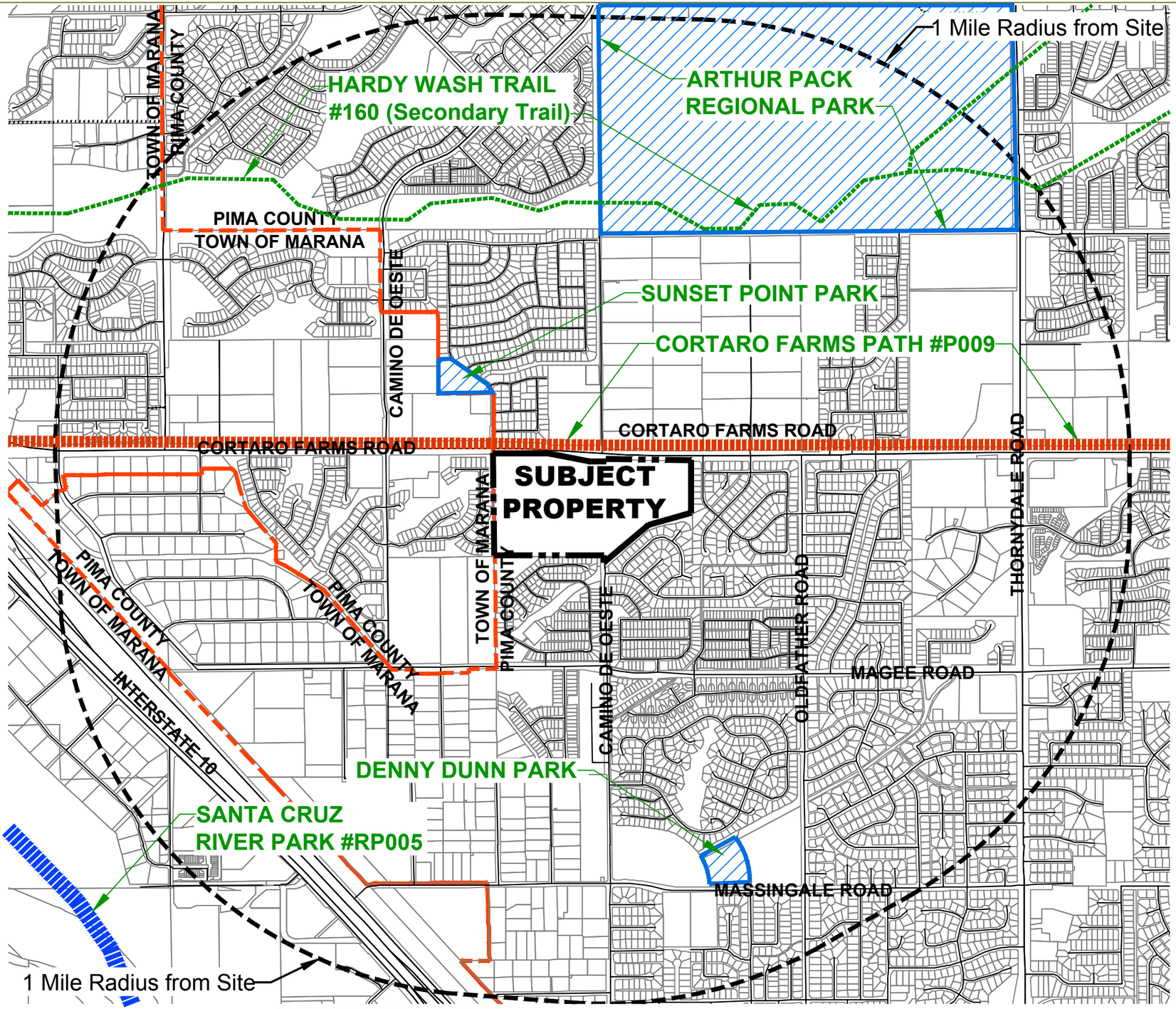
III.G Recreation

1. Public Parks, Recreation Areas & Trails within One (1) Mile

There is a variety of public recreational sites within the vicinity and the larger outlying region; see Exhibit III.12 for mapping of the various trails and park facilities located within one (1) mile of the rezoning site.

2. Trail Rights-of-Way

Per the current Pima Regional Trail System Masterplan, there are no trails planned along the project's frontages nor within its immediate surroundings. That being said, existing paved bicycle lanes already exist within the Cortaro Farms Road roadway prism. Outlying designated Trails have been illustrated on Exhibit III.12.



LEGEND

- Boundary of Specific Plan Subject Property
- Town/County Limits
- Designated Pima County River Park Trail
- Pima County Public Sidewalks and Multi-Use / Bicycle Lanes within roadway
- Designated Pima County Singletrack Trail
- Public Park

NOTE:

All above trail elements are per the Pima Regional Trail System Masterplan; August 9, 2010.

650 0 650 1300

III.H Cultural Resources, Archaeological & Historic Sites

1. Records Check and Letter Report

Two (2) separate Class III Cultural Resources Surveys were completed by Tierra Right-of-Way Services, Ltd. which, collectively, over the entire subject Property. These were completed in March, 2020 and December, 2020, respectively. The Surveys reviewed those existing records in the AZSITE, ASM Archaeological Records Office, and NRHP databases, which include records from the Arizona State Museum (ASM), Arizona State University, the Bureau of Land Management (BLM), and other sources. The Surveys indicate that no archaeological sites, cultural resources, or historic properties are located on the subject Property. The complete Tierra, Ltd. Survey reports are included as Appendix E of this Specific Plan document.

a. Prior Field Surveys

Seven (7) past surveys have been completed within one (1) mile of the subject property, but no prior survey had ever been previously done of the Property itself.

b. Previously Recorded Archaeological or Historic Resources

No archaeological or historic sites of significance were found by the Tierra surveys.

c. Probability of Buried Resources

There is a low probability of buried resources based upon the Surveys.

d. Recommendation as to Future Surveys

No further archaeological surveys of the property are deemed warranted. Routine discovery instructions apply to the owner/developer if future ground modifications reveal subsurface archaeological resources.

2. Survey Titles

“Cultural Resources Class III Survey for the Tri-Church Casitas Project, Pima County, Arizona”.

“Cultural Resources Class III Survey of Parcels 221-16-029C and 225-33-059M in Unincorporated Pima County, Arizona”.

III.I Composite Map: Site Analysis Findings & Conclusions

1. Description of Major Characteristics

The site is generally unremarkable in terms of landform or other significant special features, while evidencing significant areas of prior impacts, clearing, and general disturbance from illegal dumping, homeless encampments, and native plant theft.

The specific characteristics cited in the Site Analysis Guidelines are respectively illustrated on Exhibit III.13 (Composite Map) as follows:

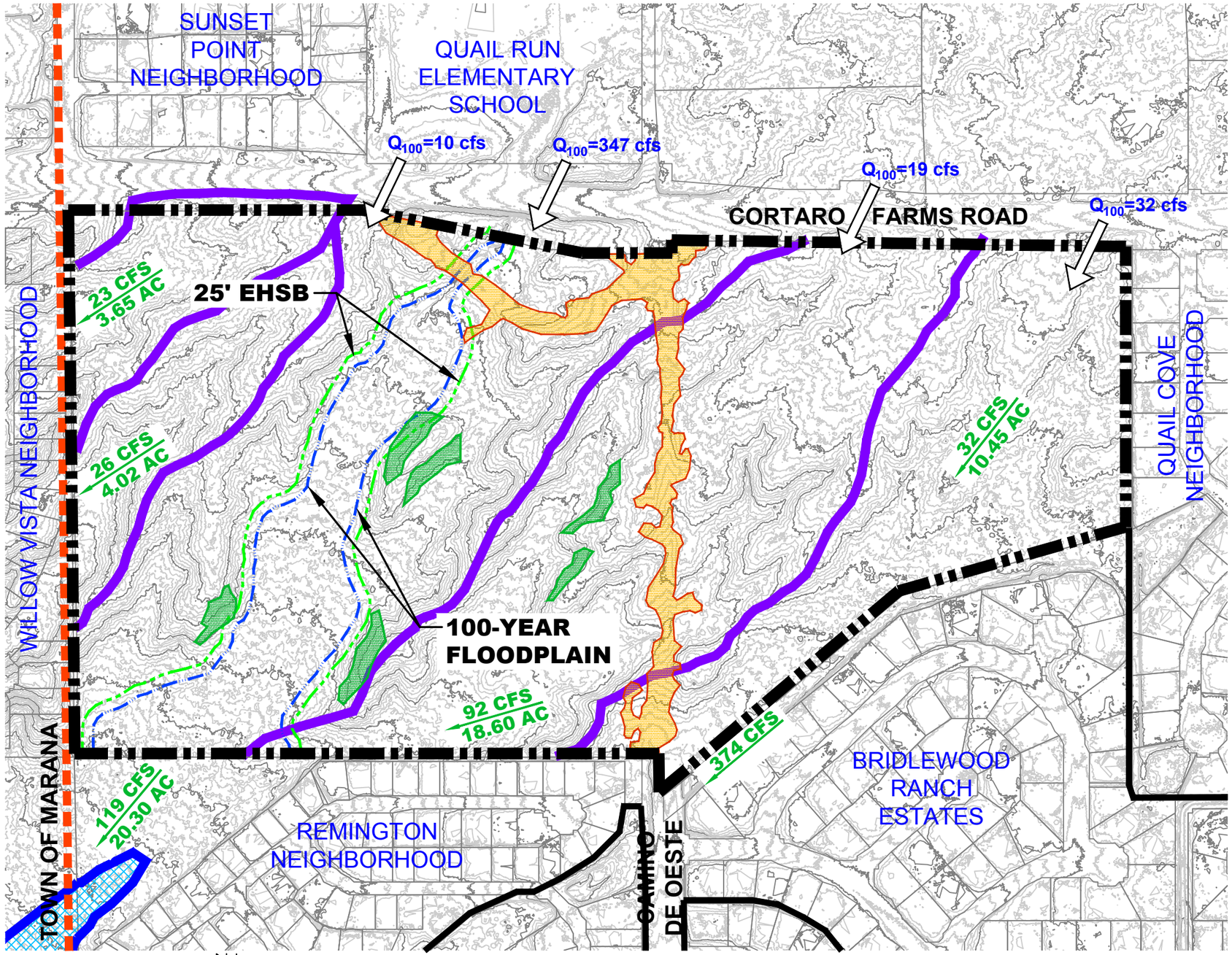
1. Topography. There are no restricted peaks and ridges, rock outcrops, or talus slopes on the property. The existing slivers of slopes of 15% or greater have been depicted on the Composite Map exhibit, along with the 1' contour interval mapping of the site and aforementioned areas of existing disturbance.

2. Hydrology. The Composite Map exhibit contains the following identified items from the checklist: (a) 100-year regulatory floodplains traversing the site in the existing condition; (b) erosion hazard setbacks; and (c) concentration points and 100-year volumes entering and leaving the site.

   The following items from the checklist are not present on the property and so will not be depicted on the Composite Map: (d) FEMA sheet flood areas; (e) regulated riparian habitat; and (f) lakes, ponds, springs, etc.

3. Biological Resources. The Site contains the following identified items from the checklist: (a) saguaros, mapped and categorized by their appropriate height category; and (b) ironwood trees. These have not been depicted on the Composite Map due to their large number and the unreadability of the Exhibit that would result. Instead, the entire site inventory for these species has been provided in Appendix C of this document.

   The following items from the checklist do not exist on the property and so will not be depicted on the Composite Map: (c) pima pineapple cactus; (d) needle-spined pineapple cactus; and (4) areas in which disturbance is prohibited by an adopted Pima County ordinance or policy.



LEGEND

- Boundary of Subject Specific Plan
- Existing Condition Topographic Contour (1' Interval); darker / bolder lines are 5' interval
- Areas of prior disturbance and clearing / removal of vegetation
- Existing slivers of 15% or greater slopes as defined by Site Analysis Checklist
- Important Riparian Area; occurs off-site only. There is none located within the subject Specific Plan.
- Q_{100}=32 cfs — Incoming existing Q_{100} quantities
- On-Site Watersheds
- 92 CFS / 18.60 AC — Exiting existing Q_{100} quantities
- Regulatory floodplains
- Existing erosion hazard setbacks

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LOCAL ADVICE & COUNSEL

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Baker & Associates Engineering, Inc.

Cortaro 57
SPECIFIC PLAN

COMPOSITE MAP

Exhibit III.13

Bibliography

Pima County Department of Transportation, Traffic Engineering Division website for current traffic counts; http://dot.pima.gov/trafeng/trafcnt/adt.htm.

Pima County Department of Transportation, 2016 Subdivision and Development Street Standards (SDSS).

Pima County Major Streets & Scenic Routes Plan. Pima County Ordinance No. 1995-42, as amended. Case No. Co14-79. Web address: http://gis.pima.gov/maps/majscenic/mssr.pdf

Institute of Transportation Engineers (ITE). 2008. Trip Generation, 8th Edition: An ITE Informational Report.

The Smart Growth Network website, Smart Growth Principles, http://www.smargrowth.org/engine/index.php/principles

Florida Department of Transportation (FDOT), 2013. Quality/Level of Service (QLOS) Handbook

Appendix

Appendix A: Alternative Concept Plans of Potential Build-out Scenarios

150 0 150 300

Conceptual Build-out Schematic

All Single-Family Residential Lots

Conceptual Build-out Schematic

Single-Family Residential West of Camino de Oeste

Multi-Family Rental Homes East of Camino de Oeste

Appendix B: Preliminary Traffic Impact Study

Cortaro 57

Preliminary Traffic Study
to Accompany the Specific Plan Submittal

Prepared for submittal to:

Pima County, AZ

M Esparza Engineering, LLC
2934 W. Salvia Drive
Tucson, AZ 85745

March 30, 2021

Cortaro 57
Preliminary Traffic Study
to Accompany the Specific Plan Submittal

For Submittal to:

Pima County, AZ

Prepared by:

M Esparza Engineering
2934 W. Salvia Drive
Tucson, AZ 85745
520-207-3358
ME Eng Project No. 2021.07

Marcos Esparza P.E., Principal

March 30, 2021

TABLE OF CONTENTS

LIST OF EXHIBITS

1. Introduction and Summary

Purpose of Report and Study Objectives

This preliminary traffic study examines the anticipated traffic impacts from the Cortaro 57 Specific Plan. The project area is located south of Cortaro Farms Road and is bisected by the Camino de Oeste alignment south of Cortaro Farms Road. The project is bounded on the west by the Willow Vista residential neighborhood, on the east by Quail Cove residential development, and on the south by Bridlewood Ranch Estates (east of the Camino de Oeste south alignment) and the Country Highland development (west of the Camino de Oeste south alignment) in unincorporated Pima County, Arizona. The preliminary study has been prepared to support the submittal of the Cortaro 57 Specific Plan. The project includes a potential mix of residential uses and a smaller commercial parcel on approximately 57 acres of land. A complete Traffic Impact Study (TIS) will be prepared at the future subdivision platting stage of the project, when the land uses, intensities and site plan are better evolved. The location of this project in the context of the regional transportation system is illustrated in Exhibit 1.

This preliminary traffic study is provided to assess potential impacts in the vicinity of the project, based on the planned uses anticipated in the Specific Plan. This study addresses the impacts at the proposed site access drives and adjacent roadways for the opening year (2023). The project proposes access at three locations on Cortaro Farms Road, as well as at additional access points along an extension of Camino de Oeste.

Executive Summary

Site Location and Study Area

The project is located south of Cortaro Farms Road and is bisected by the Camino de Oeste alignment south of Cortaro Farms Road. The project is bounded on the west by the Willow Vista residential neighborhood, on the east by Quail Cove residential development, and on the south by Bridlewood Ranch Estates (east of the Camino de Oeste south alignment) and the Country Highland development (west of the Camino de Oeste south alignment) in unincorporated Pima County, Arizona. The study area includes site access driveways and the adjacent roadways.

Development Description

The preliminary concept includes up to 235 single family residential lots and a commercial area of about 60,000 total square feet. The residential component could alternatively include a mix of single family and multi-family units. A very preliminary concept plan showing a possible lot layout is provided in Exhibit 2. This layout is illustrative only as a potential development scenario to provide a basis for this preliminary traffic study.

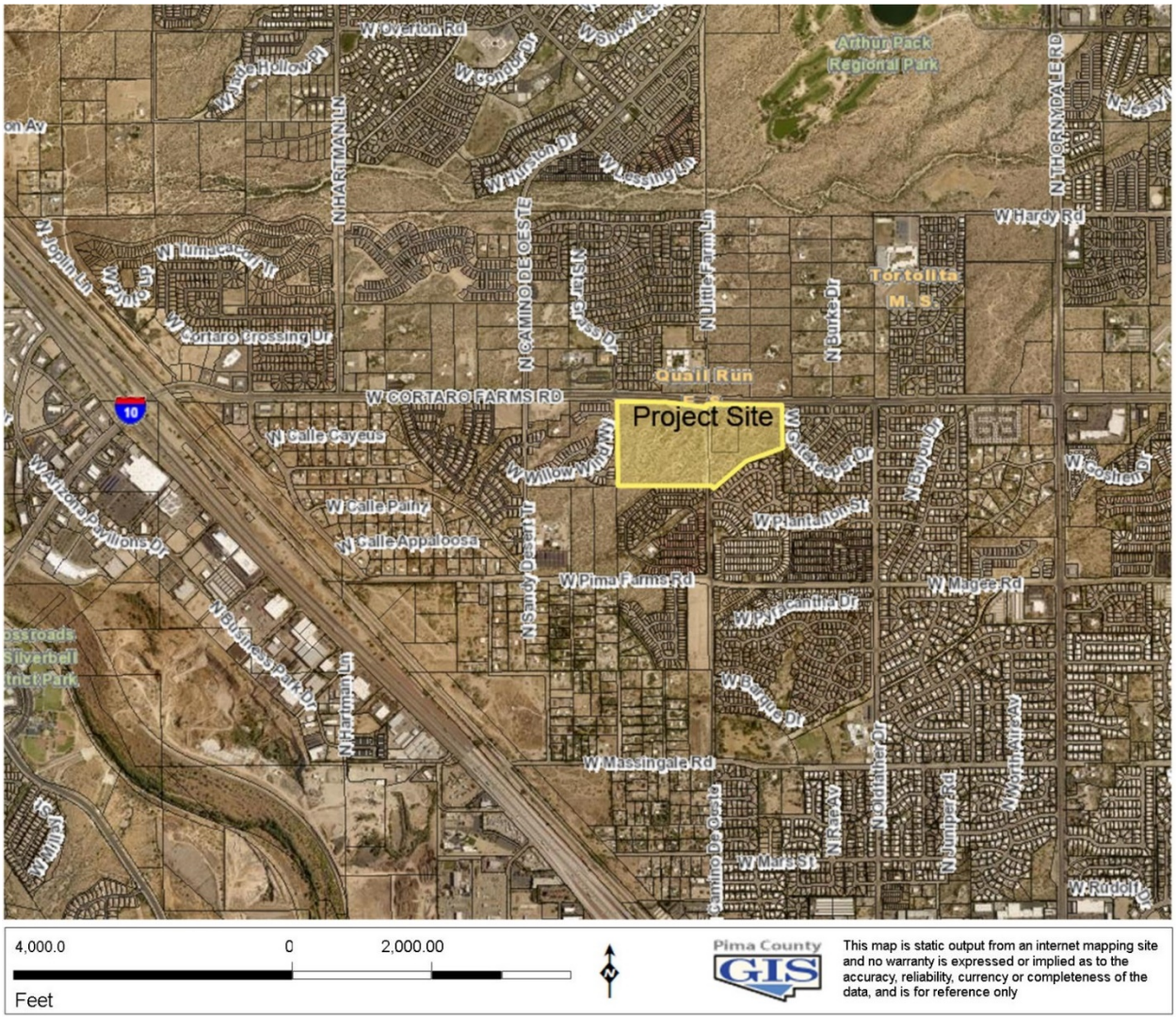
Principal Findings

Using a conservative land use plan assuming a mix of residential types (135 single family lots and 200 multi-family residential units), a coffee shop with drive through window and a medical office building, the total trip generation is estimated to be 4,722 trips per weekday, 505 trips during the AM peak hour and 340 trips during the PM peak hour. About eighty-nine percent of the coffee shop trips are anticipated to be "pass-by trips" which reduces the estimated total trips within the study area network. Traffic volumes will be distributed to the roadway system based on the location of the lots and the expected traffic patterns at the study area intersections.

A turn lane warrant analysis found that eastbound right turn lanes on Cortaro Farms Road may be warranted at two of the project area intersections. Based on a conservative assumption that a coffee shop with drive-through lanes would be in the commercial pad, a right turn lane would be warranted on Cortaro Farms

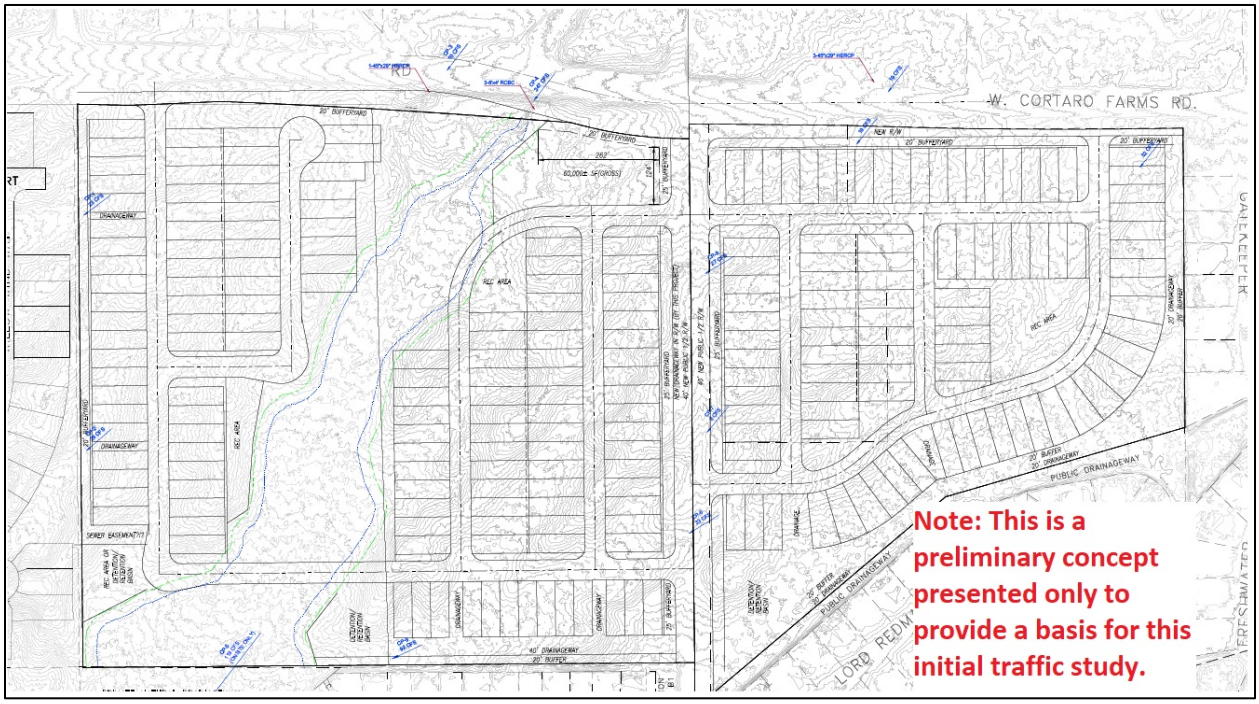
Road at the commercial driveway (Driveway 2). With the extension of Camino de Oeste to Cortaro Farms Road, the Specific Plan land use trips and the background volumes may warrant an eastbound right turn lane at this new intersection. It is recommended that the extension of Camino de Oeste have a three-lane cross section with one lane in each direction and a continuous left turn lane. This would match the existing section to the south.

Exhibit 1 Location Map



Source: Pima County GIS

Exhibit 2 Conceptual Site Plan



Conclusions and Recommendations

1. This preliminary study addresses a 57-acre residential and commercial development located south of Cortaro Farms Road along the Camino de Oeste (south) alignment. This study is a supporting document to the Cortaro 57 Specific Plan submittal.

2. Along the project frontage, Cortaro Farms Road and Camino de Oeste are owned and maintained by Pima County.

3. This preliminary study analyzes a mix of single-family residential lots (135) and multi-family units (200) a coffee shop with drive through lanes and a medical office building. when completed. For the purpose of this traffic study, buildout is estimated to be around 2023, although the homebuyer's market will determine actual buildout. This mix was chosen to be a conservative choice, and the future development may likely produce fewer trips if a less intense commercial land use is constructed.

4. Access to the project will be from Cortaro Farms Road at four locations, one being an extension of Camino de Oeste from the south to its intersection with Cortaro Farms Road. All access locations on Cortaro Farms Road will be limited to right-in, right-out only due to the raised median on Cortaro Farms Road. There will be three new intersections on the extension of Camino de Oeste providing access to the project uses. These intersections will allow for full access movements.

5. The site adjoins existing residential development to the south, west and east.

6. The roadways and intersections currently operate at LOS D or better.

7. Based on this preliminary and conservative site plan and analysis, the project will generate about 4,722 trips per day, of which 505 will be in the AM peak and 340 in the PM peak. About 89% of the coffee shop trips will be pass-by trips, reducing the number of new trips on the surrounding roadway to about 3,173 net weekday trips, 244 net AM peak hour trips and 276 net PM peak hour trips.

8. Because the final land uses are conceptual and the future commercial uses are subject to change, we did not conduct intersection capacity analyses, as any mitigation recommendations would be very speculative and would likely overestimate the impacts at the study area off-site intersections. However, we did conduct a preliminary turn lane warrant analysis to anticipate any recommended turn lanes on Cortaro Farms Road.

9. The turn lane analysis found that right turn lanes may be warranted at the commercial driveway on Cortaro Farms Road and on Cortaro Farms Road at its new intersection with Camino de Oeste. If these turn lanes are found to be warranted at the actual development plan and subdivision platting stage, Pima County standards set minimum storage lengths at 110 feet for roadways with posted speed limits of 40 mph or less. A queuing analysis will also have to be conducted to determine the lengths of the turn lane queues.

10. When the full TIS is conducted, a queuing analysis should also be performed for the downstream U-turn locations on Cortaro Farms Road at Star Grass Drive and at Burke Drive/Freshwater Lane.

11. Discussions in conjunction with Pima County and Marana School District should be held to assess whether a pedestrian crossing is recommended and appropriate on Cortaro Farms Road from the project area to serve Quail Run Elementary School. Final determination as to the need for such a crossing will be, to some extent, based upon the final uses on the project's commercial site, as well as the amount of pedestrian traffic from the more than one-thousand existing homes located south of the Specific Plan site.

2. Proposed Development

Site Location

The project is located south of Cortaro Farms Road and is bisected by the Camino de Oeste alignment south of Cortaro Farms Road. The project is bounded on the west by the Willow Vista residential neighborhood, on the east by Quail Cove residential development, and on the south by Bridlewood Ranch Estates (east of the Camino de Oeste south alignment) and the Country Highland development (west of the Camino de Oeste south alignment) in unincorporated Pima County, Arizona.

Land Use and Intensity

The preliminary concept includes up to 235 single family residential lots and a commercial area of about 60,000 total square feet. The residential component could alternatively include a mix of single family (135 lots) and multi-family (200 units) uses. For the purposes of this traffic study, and to provide a preliminary conservative estimate, we assumed that a high generator, a coffee shop with drive through windows and a 7,000 square foot medical office building, and the mix of single-family (135 lots) and multi-family (200 units) residential uses would comprise the land uses on this site.

Site Plan

The preliminary concept plan is shown in Exhibit 2.

Access Geometrics

There will be three access locations on Cortaro Farms Road, as well as access from the extension of the Camino de Oeste to its intersection with Cortaro Farms Road. All access locations on Cortaro Farms Road will be limited to right-in, right-out due to the raised median on Cortaro Farms Road. There will be full access at the three intersections on the extended Camino de Oeste section.

Development Phasing and Timing

For the purposes of this preliminary traffic study, we have assumed buildout by 2023. However, market forces will determine the actual rate of construction.

3. Study Area Conditions

Study Area and Horizon Year

For this preliminary traffic study, we have analyzed the project access locations on Cortaro Farms Road and on Camino de Oeste as well as the roadways themselves. The study area for a full Traffic Impact Study, which will be prepared at the development plan and future subdivision platting stage will be determined based on the trip generation of the land uses once they are better developed. The horizon year is 2023.

Land Use

Existing Land Use

The site is currently vacant. The land is generally surrounded by residential developments on the west, south and east. The Quail Run Elementary School is north of Cortaro Farms Road.

Site Accessibility

The site will be accessed from Cortaro Farms Road and the northern extension of Camino de Oeste.

Existing and Future Area Roadway System

Exhibit 3 is a tabulation of the major streets in the vicinity of the project with number of lanes, speed limits, facilities (bike lanes, sidewalks) and daily volumes.

Roadway segment levels of service is based on the Florida Department of Transportation (FDOT) Generalized Annual Average Daily Volumes for Florida's Urbanized Areas – Table 1. The estimated LOS D capacity of a four-lane non-state roadway such as Cortaro Farms Road is 35,820 vehicles per day (vpd). The estimated LOS D capacity of two-lane roadways such as Camino de Oeste and Oldfather Drive is between 10,700 and 13,990 vpd depending on the speed limit of the roadway and the presence of turn lanes along the roadway. Based on the existing volumes shown in Exhibit 3, all roadways currently operate well below the LOS D daily volume threshold.

Exhibit 3 Roadway Inventory

Roadway Segment	Road Classification (Pima County MSRP)	Owning/ Maintenance Jurisdiction	Existing Rights of-Way (feet)	# Lanes	Posted Speed Limit	Bike Facilities	Pedestrian Facilities	Bus Route	Public Roadway Improvements Within Five Years	Recorded ADT	Year	Data Source	LOS D Capacity
Cortaro Farms Road, West of Camino de Oeste (South)	Medium Volume Arterial (PC)	Marana/Pima County	150	4	40	Bike Route with Striped Shoulder	Sidewalk	No	No	19,000	2020	PAG	35,820
Cortaro Farms Road, East of Camino de Oeste (South)	Medium Volume Arterial (PC)	Pima County	150	4	40	Bike Route with Striped Shoulder	Sidewalk, South Side	No	No	16,651	2020	PAG	35,820
Camino de Oeste, North of Cortaro Farms Road	Collector (PC)	Marana/Pima County	80	2	35	No	Sidewalk, West Side	No	No	6,197	2020	PAG	10,700
Sandy Desert Trail, South of Cortaro Farms Road	Not Designated	Marana	75	2	30	No	Sidewalk	No	No	No Volumes Available			10,700
Camino de Oeste, South of Project Site	Collector (PC)	Pima County	80	2	35	No	No	No	No	4,147	2020	PAG	13,990
Pima Farms Road, West of Camino de Oeste	Local Road	Marana	95-120	2	35	No	No	No	No	No Volumes Available			10,700
Magee Road, East of Camino de Oeste	Low Volume Arterial (PC)	Pima County	90	2	35	Striped Shoulder	No	No	No	4,561	2020	PAG	10,700
Oldfather Road, South of Cortaro Farms Road	Not Classified	Pima County	90	2	35	Bike Route with Striped Shoulder	Sidewalk	No	No	7,383	2020	PAG	13,990
Oldfather Road, South of Magee Road	Not Classified	Pima County	90	2	35	Bike Route with Striped Shoulder	Sidewalk	No	No	7,810	2020	PAG	13,990

Site Circulation

Site circulation will be typical for a residential subdivision as shown in the site plan.

4. Existing Conditions

Physical Characteristics

Roadway Characteristics

Existing roadways serving the project are described below. The table in Exhibit 3 contains a summary of physical characteristics of these roadways and Exhibit 4 provides ground photographs of roadway segments and intersections.

Cortaro Farms Road was recently improved to a four-lane divided roadway from Camino de Oeste to Thornydale Road. The project was completed in 2019. The project included multi-use lanes, curbed median, storm drain system, cross drainage structures, retaining walls, public art, rubberized asphalt, traffic signal improvements, native re-vegetation landscaping and signage and pavement markings. The four-lane capacity of Cortaro Farms Road is about 35,800 vehicles per day at Level of Service D. It has a posted speed limit of 40 mph in the vicinity of the project but increases to 45 mph east of Thornydale Road. West of Camino de Oeste, and east of Thornydale Road the full four-lane divided arterial cross-section is already in place.

Camino de Oeste, north of Cortaro Farms Road is a two-lane undivided roadway with curb and sidewalk on the east side of the roadway to about 600 feet north of Cortaro Farms. The two-lane capacity of Camino de Oeste is 10,700 vehicles per day at Level of Service D. It has a posted speed limit of 35 mph. It continues south of Cortaro Farms Road as *Sandy Desert Trail*, a two-lane residential collector with a speed limit of 30 mph and sidewalks on each side.

Camino de Oeste south of the project site a two-lane roadway with a two-way center left turn lane. Its capacity is about 14,000 vehicles per day at Level of Service D. There is curb with no sidewalk on both sides of the roadway. It has a posted speed limit of 35 mph. The roadway will be constructed as a two-lane divided collector roadway north to its future intersection with Cortaro Farms Road.

Pima Farms Road is a paved, east-west two-lane roadway that extends west of Camino de Oeste about one-mile where it continues as Cerius Stravenue. It has a posted speed limit of 35 mph.

Magee Road is a paved, east-west two-lane arterial that extends east of Camino de Oeste about two miles where it continues as Shannon Road. It has a posted speed limit of 35 mph.

Oldfather Drive is a paved, north-south two-lane residential collector that extends from Cortaro Farms Road on the north to Ina Road on the south. It has a posted speed limit of 35 mph. Oldfather Drive is a bike route with striped shoulders and sidewalks on both sides of the roadway.

Exhibit 4 Ground Photographs

Looking West on Cortaro Farms Road towards Star Grass Drive

Looking East on Cortaro Farms Road from Star Grass Drive

Exhibit 4 (cont.) **Ground Photographs**

Looking North on Camino de Oeste Curb Cut toward Cortaro Farms Road

Looking South along Camino de Oeste South of Project Boundary

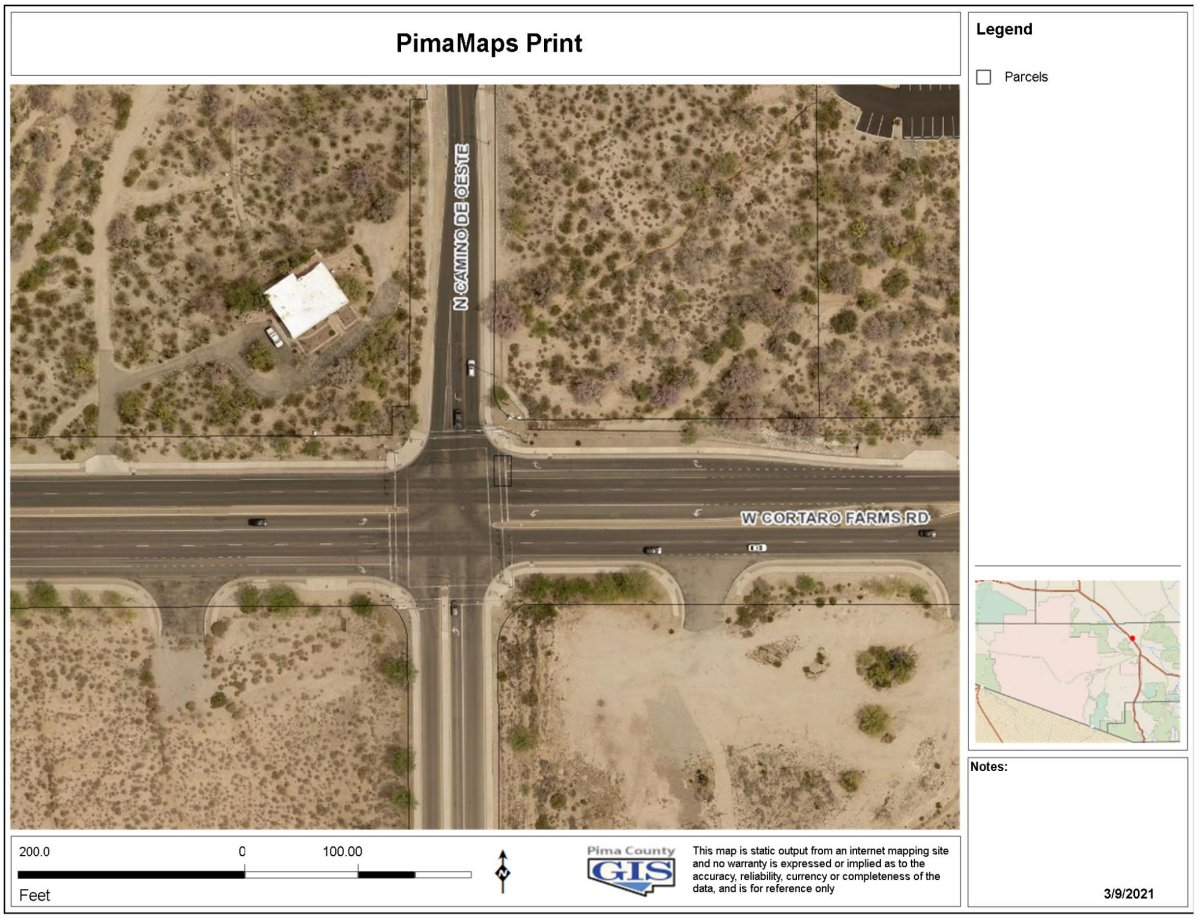
Exhibit 4 (cont.) **Ground Photographs**

Looking North along Camino de Oeste South of Project Boundary

Existing Intersections

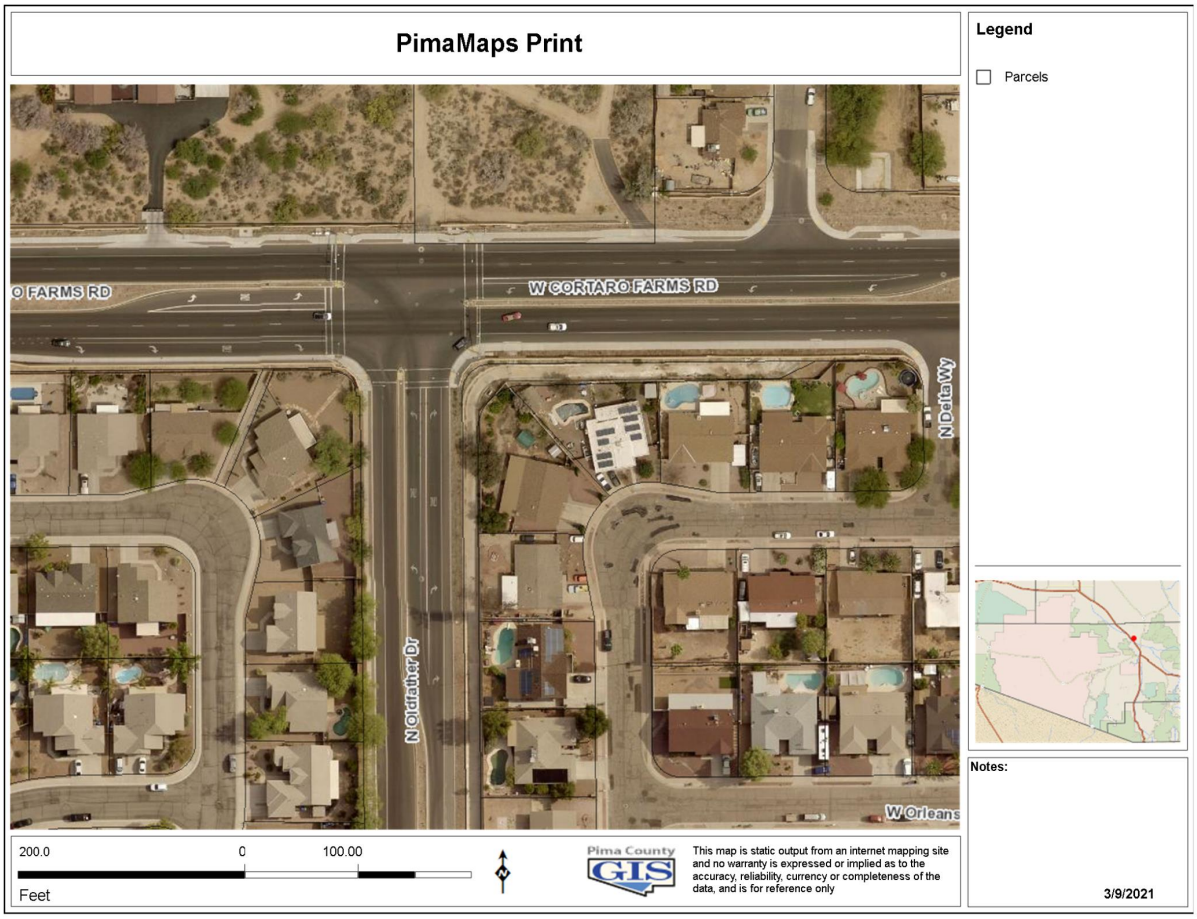
Cortaro Farms Road/Camino de Oeste (N)/Sandy Desert Trail is a four-legged signalized intersection. The eastbound and westbound approaches have left turn and right turn lanes. The north and south approaches have a left turn lane and a shared through/right turn lane. The eastbound and northbound approaches each have an exclusive left-turn lane and an exclusive right turn lane. The Cortaro Farms approaches have a permitted/protected left turn phase. The intersection is shown in Exhibit 5.

Exhibit 5 Cortaro Farms Road/Camino de Oeste/Sandy Desert Trail



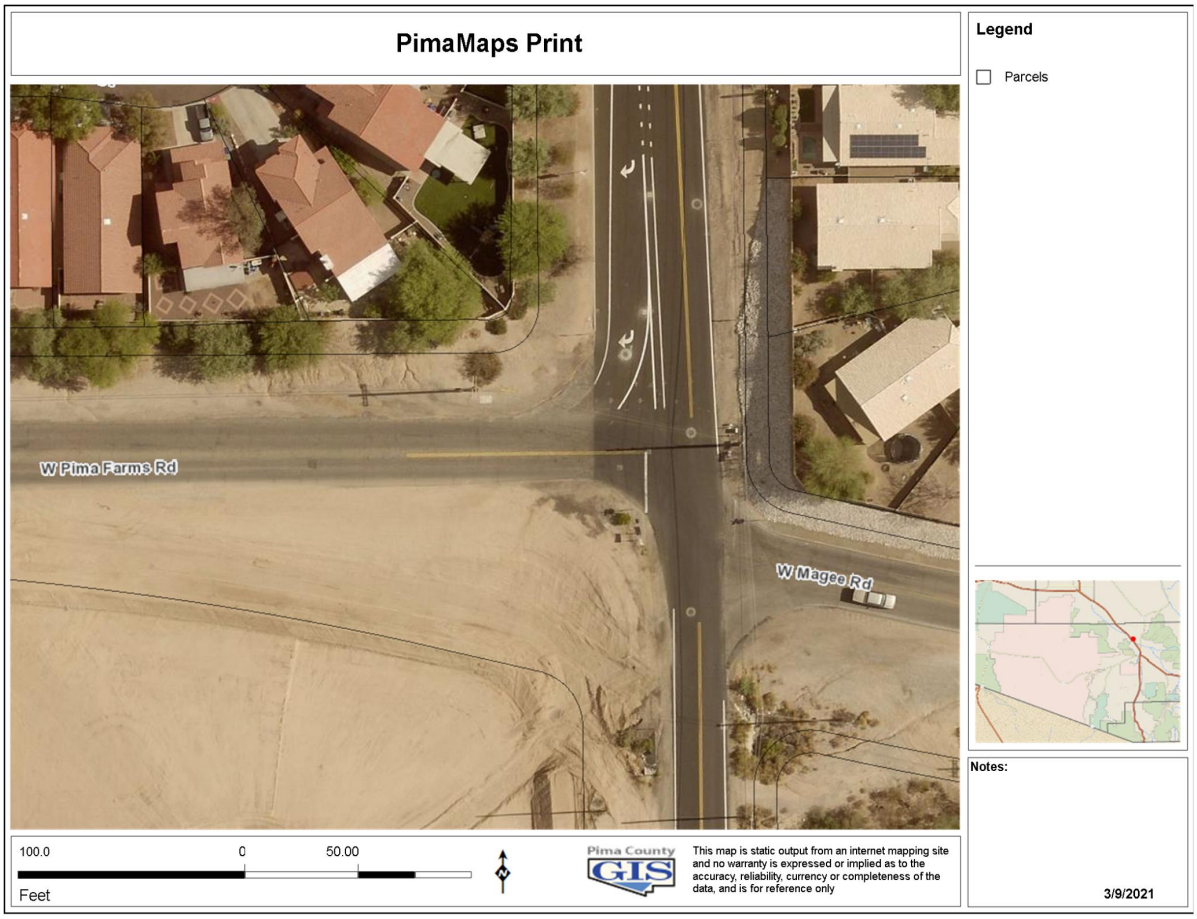
Cortaro Farms/Oldfather Drive is a three-legged signalized intersection with a left turn phase on the westbound approach. The intersection is configured with one left turn lane and one right turn lane on the south leg, a U-turn lane two through lanes and a right turn lane on the west leg, and a left turn lane and two through lanes on the east leg. The intersection is shown in Exhibit 6.

Exhibit 6 Cortaro Farms Road/Oldfather Drive



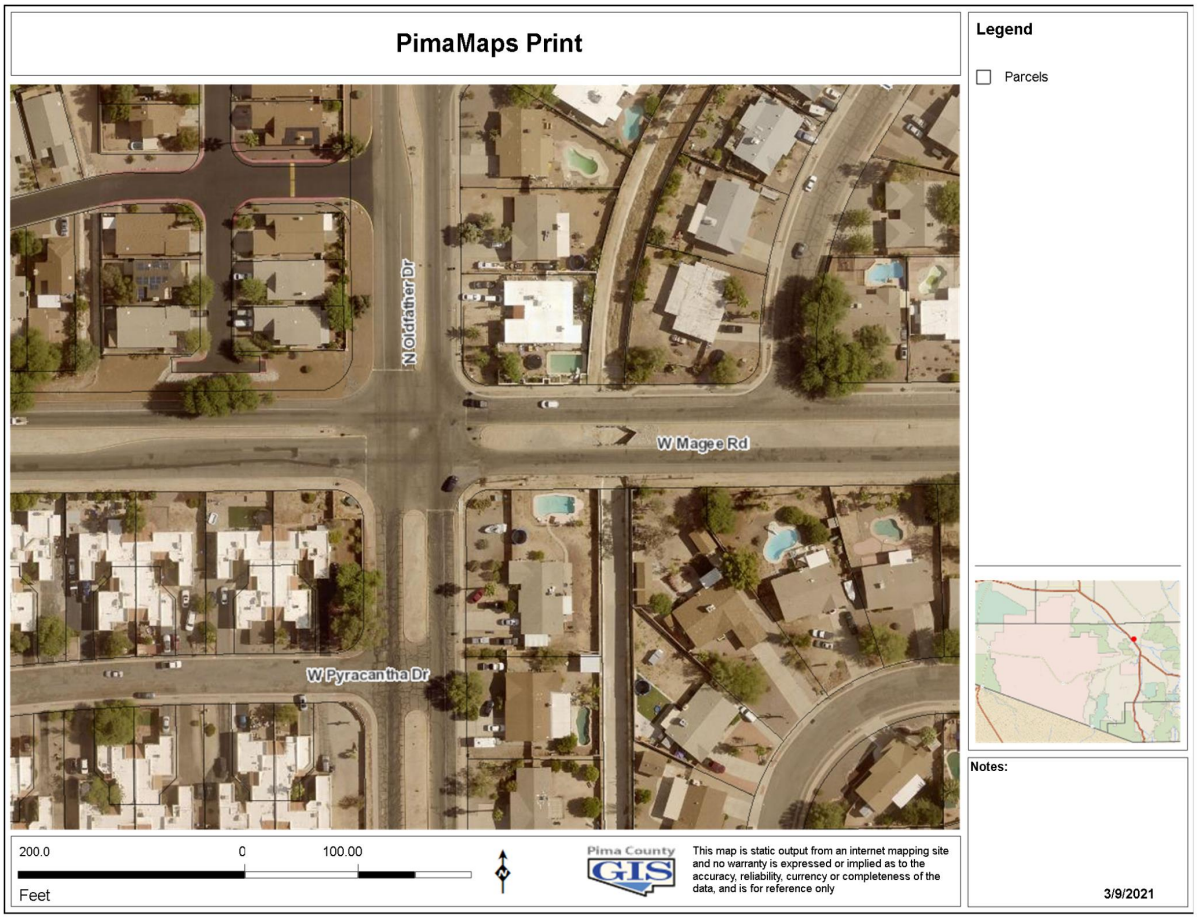
Camino de Oeste/Pima Farms Road/Magee Road is a four-legged intersection with stop control on the Pima Farms Road and Magee Road approaches. The southbound approach has a shared left/through lane and an exclusive right-turn lane. The other three legs are single-lane approaches. The west leg (Pima Farms Road) is offset by about 40 feet north of the east leg (Magee Road). The intersection is shown in Exhibit 7.

Exhibit 7 Camino de Oeste/Pima Farms Road/Magee Road



Magee Road/Oldfather Drive is a four-legged intersection with all-way stop control. The north and west legs each have an exclusive left turn lane and a shared through/right turn lane. The south and east legs have single-lane approaches. The intersection is shown in Exhibit 8.

Exhibit 8 Magee Road/Oldfather Drive



Transit Service

The closest transit route is Sun Shuttle Route 412 which runs on Thornydale Road with a stop at Cortaro Farms Road.

Multi-Modal Impacts/Facilities

Cortaro Farms Road and Oldfather Drive are bike routes with striped lanes on both sides. Both streets have sidewalks on both sides of the streets. Magee Road, east of Camino de Oeste also has striped lanes for bicycle use on both sides.

Sight Distance/Topography

Sight distances at the study area intersections appear to be acceptable. Acceptable sight distance should be ensured through clearing of vegetation if necessary.

Connectivity

The project will construct an extension of Camino de Oeste to intersect with Cortaro Farms Road. This will complete a connection from Cortaro Farms Road to Ina Road. There will be better access to Quail Run Elementary School for families who live south of the project site.

5. Existing Traffic Conditions

Roadway Traffic Volumes and Performance

Daily roadway volumes on Cortaro Farms Road and the surrounding roadways are available from Pima Association of Governments website. Because this study was prepared to support the Specific Plan, and a follow up TIS will be prepared when the actual tenants are known, this TIS only analyzes level of service conditions on the project roadways. More rigorous analyses, including peak hour intersection capacity analyses will be conducted at the development plan stage.

Level of service is a qualitative description of how well a roadway or intersection operates under prevailing traffic conditions based on traffic volumes and capacity. A grading system of A through F, similar to academic grades, is utilized. LOS A is free-flowing traffic, whereas LOS F is forced flow, delay, and extreme congestion. LOS D (Pima County) is generally accepted as the standards in urbanized areas.

Segment performance has been estimated using the planning methods contained in the Florida Department of Transportation (FDOT) Generalized Annual Average Daily Volumes for Florida's Urbanized Areas – Table 1[1]. Exhibit 9 shows that all project area roadways have daily volumes that are below the daily LOS D capacity thresholds.

[1] *Florida Department of Transportation Quality/Level of Service Handbook*, Generalized Volumes for Urbanized Areas

Exhibit 9 Current Traffic Volumes and LOS on Roadway Segments

Roadway Segment	Recorded ADT	Year	Data Source	LOS D Capacity
Cortaro Farms Road, West of Camino de Oeste (South)	19,000	2020	PAG	35,820
Cortaro Farms Road, East of Camino de Oeste (South)	16,651	2020	PAG	35,820
Camino de Oeste, North of Cortaro Farms Road	6,197	2020	PAG	10,700
Sandy Desert Trail, South of Cortaro Farms Road	No Volumes Available			10,700
Camino de Oeste, South of Project Site	4,147	2020	PAG	13,990
Pima Farms Road, West of Camino de Oeste	No Volumes Available			10,700
Magee Road, East of Camino de Oeste	4,561	2020	PAG	10,700
Oldfather Road, South of Cortaro Farms Road	7,383	2020	PAG	13,990
Oldfather Road, South of Magee Road	7,810	2020	PAG	13,990

Safety Related Deficiencies

ADOT collects crash data for all roadways within the state. We reviewed the data within the project study area for the most recently available five-year period (2015-2019). A summary of the crashes within the five-year period are provided in Exhibits 10a (intersection crashes) and 10b (roadway segment crashes).

It should be noted that the segment of Cortaro Farms Road between Camino de Oeste and Thornydale was recently improved to a four-lane urban arterial. The project was completed in Spring 2019, therefore, most of the crashes recorded along Cortaro Farms Road occurred when the roadway was a two-lane road or during the construction of the roadway.

The highest five-year intersection crash rate, 0.87 crashes per million vehicles entering (MVE) occurred at the Cortaro Farms Road/Oldfather signalized intersection. Nineteen crashes occurred over this period with sixteen being rear-end crashes.

The next highest intersection crash rate (0.82 crashes per MEV) was at the unsignalized Camino de Oeste/Pima Farms Road/Magee Road intersection. There were four rear end crashes and three angle crashes among the nine crashes recorded during the five-year period.

Cortaro Farms Road experienced a five-year crash rate of 0.89 crashes per million vehicle-miles during the five-year period. There was a total of thirty-one crashes during this period, with the majority occurring in 2017. The most common crash type was "rear-end" with 22 of the 31. There were only two crashes recorded in 2019, perhaps due to the safety improvements associated with the roadway widening project.

Exhibit 10a Intersection Crash Data – 2015-2019

Cortaro Farms Road/Camino de Oeste/Sandy Desert Trail

Crash Type	2015	2016	2017	2018	2019	Total	%
Left Turn	1	1			1	3	12%
Angle	1	1			1	3	12%
Rear End	6	2	3	3	2	16	64%
Sideswipe			1	1		2	8%
Other			1			1	4%
Total	8	4	5	4	4	25	
Crash Rate (per MVE)	0.90	0.45	0.56	0.45	0.45	0.56	

Severity						Total	%
Bodily Injury	2	1	1	1	2	7	28%
Property Damage	6	3	4	3	2	18	72%

Cortaro Farms Road/Oldfather Drive

Crash Type	2015	2016	2017	2018	2019	Total	%
Single Vehicle	1		1			2	11%
Rear End	6	1	8	1		16	84%
Sideswipe	1					1	5%
Total	8	1	9	1	0	19	
Crash Rate (per MVE)	1.82	0.23	2.05	0.23	0.00	0.87	

Severity						Total	%
Bodily Injury	2		3			5	26%
Property Damage	6	1	6	1		14	74%

Cortaro Farms Road/Star Grass

Crash Type	2015	2016	2017	2018	2019	Total	%
Left Turn				1		1	33%
Sideswipe	1					1	33%
Other		1				1	33%
Total	1	1	0	1	0	3	
Crash Rate (per MVE)	0.14	0.14	0.00	0.14	0.00	0.08	

Severity						Total	%
Bodily Injury						0	0%
Property Damage	1	1		1		3	100%

Cortaro Farms Road/Gatekeeper

Crash Type	2015	2016	2017	2018	2019	Total	%
Rear End				2		2	100%
Total	0	0	0	2	0	2	
Crash Rate (per MVE)	0.00	0.00	0.00	0.31	0.00	0.06	

Severity						Total	%
Bodily Injury						0	0%
Property Damage				2		2	100%

Cortaro Farms Road/Freshwater

Crash Type	2015	2016	2017	2018	2019	Total	%
Left Turn		1				1	17%
Rear End	2	2	1			5	83%
Total	2	3	1	0	0	6	
Crash Rate (per MVE)	0.27	0.41	0.14	0.00	0.00	0.16	

Severity						Total	%
Bodily Injury	1					1	17%
Property Damage	1	3	1			5	83%

Camino de Oeste/Pima Farms Road/Magee Road

Crash Type	2015	2016	2017	2018	2019	Total	%
Single Vehicle		1				1	11%
Angle	1	1	1			3	33%
Rear End			2	2		4	44%
Head On	1					1	11%
Total	2	2	3	2	0	9	
Crash Rate (per MVE)	0.91	0.91	1.37	0.91	0.00	0.82	

Severity						Total	%
Bodily Injury						0	0%
Property Damage	2	2	3	2		9	100%

Note: MVE = Million Vehicles Entering the intersection

Exhibit 10b Roadway Crash Data – 2015-2019

Cortaro Farms: Camino de Oeste to Oldfather Drive

Crash Type	2015	2016	2017	2018	2019	Total	%
Single Vehicle		1	1	1	1	4	13%
Left Turn	1					1	3%
Rear End	6	1	13	2		22	71%
Sideswipe		3			1	4	13%
Total	7	5	14	3	2	31	
Crash Rate (per MVM)	1.01	0.72	2.02	0.43	0.29	0.89	

Severity						Total	%
Fatal						0	0%
Bodily Injury	2	1	2		1	6	19%
Property Damage	5	4	12	3	1	25	81%

Note: MVM = Million Vehicle Miles

Data Sources

- Pima Association of Governments – Traffic Volumes
- Florida Department of Transportation Generalized Annual Average Daily Volumes for Florida's Urbanized Areas – Table 1
- ADOT – Crash Records

6. Projected Traffic Conditions

Site Traffic Forecasting

Trip Generation

Trips generated by the project have been estimated using the rates published in the *ITE Trip Generation Manual, 10th Edition* for land use categories 210– Single Family Detached Housing, 220-Multi-family Housing (Low-Rise), 938-Coffee/Donut Shop with Drive-Through Window and No Indoor Seating and 720-Medical-Dental Office Building. The residential component mix of single family and multi-family housing was found to generate a slightly higher trip generation than if the residential component only had single-family residential uses. The trip rates and resulting trip generation are provided in Exhibit 11.

The table shows that the total daily traffic generated by this project at buildout is about 4,722 trips during the average weekday, 505 during the AM peak hour and 340 during the PM peak hour.

Exhibit 11 Site Trip Generation

Trip Generation Rates - Average Rates

Proposed Use	*Unit*	*No.Units*	*ITE Categ.*	*Weekday AM*		*Weekday PM*		*Avg Weekday*	
				In	*Out*	*In*	*Out*	*In*	*Out*
Single-Family Detached Housing	Dwelling Unit	135	210	0.74		0.99		9.44	
				25%	75%	63%	37%	50%	50%
Multifamily Housing (Low-Rise)	Dwelling Unit	200	220	0.46		0.56		7.32	
				23%	77%	63%	37%	50%	50%
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating	1000 SF	0.87	938	337.04		83.33		2000	
				50%	50%	50%	50%	50%	50%
Medical-Dental Office Building	1000 SF	7.00	720	2.78		3.46		34.8	
				78%	22%	20%	72%	50%	50%

Preliminary Trip Generation

Proposed Use		*Unit*	*No. Units*	*Weekday AM*		*Weekday PM*		*Avg Weekday*	
				In	*Out*	*In*	*Out*	*In*	*Out*
Single-Family Detached Housing		Dwelling Unit	135	100		134		1274	
				25	75	84	49	637	637
Multifamily Housing (Low-Rise) Housing		Dwelling Unit	200	92		112		1464	
				21	71	71	41	732	732
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating		1000 SF	0.87	293		72		1740	
				147	147	36	36	870	870
Medical-Dental Office Building		1000 SF	7.00	19		22		244	
				15	4	5	17	122	122
Totals				505		340		4722	
				208	297	196	145	2,361	2,361

Some numbers do not appear to add due to rounding.

Mode Split

All trips were assumed to be via motor vehicle. No trips were assigned to bike, pedestrian, or transit modes.

Pass-By Traffic

Pass-by trips associated with the coffee shop land use were calculated based on pass-by trip rates for this land use in the *ITE Trip Generation Handbook, 3rd Edition*, and are shown in Exhibit 12. The total net new trips (total trips minus pass-by trips) are shown in Exhibit 13.

Exhibit 12 Pass-By Trip Generation

Pass-by Trips		*Unit*	*Pass By Rates*	*Weekday AM*		*Weekday PM*		*Avg Weekday**	
				In	*Out*	*In*	*Out*	*In*	*Out*
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating		1000 SF	89%	261 130	 130	65 32	 32	1549 774	 774

Exhibit 13 Net New Trips

Net New Trips		*Unit*	*No. Units*	*Weekday AM*		*Weekday PM*		*Avg Weekday*	
				In	*Out*	*In*	*Out*	*In*	*Out*
Single-Family Detached Housing		Dwelling Unit	135	100 25	 75	134 84	 49	1274 637	 637
Multifamily Housing (Low-Rise) Housing		Dwelling Unit	200	92 21	 71	112 71	 41	1464 732	 732
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating		1000 SF	0.87	32 16	 16	8 4	 4	191 96	 96
Medical-Dental Office Building		1000 SF	7.00	19 15	 4	22 5	 17	244 122	 122
Totals				244 77	 166	276 164	 112	3173 1,587	 1,587

Trip Distribution and Assignment

Trips generated by this project have been distributed to the surrounding roadway network. We distributed 40% of the trips to the west and 40% to the east, both via Cortaro Farms Road. We distributed the remaining 20% south on Camino de Oeste. The resulting peak hour assignments at the project access intersections are illustrated in Exhibits 14 (non pass-by trips) and 15 (pass-by trips).

Exhibit 14 Site Trips – Non Pass-By at Project Driveways

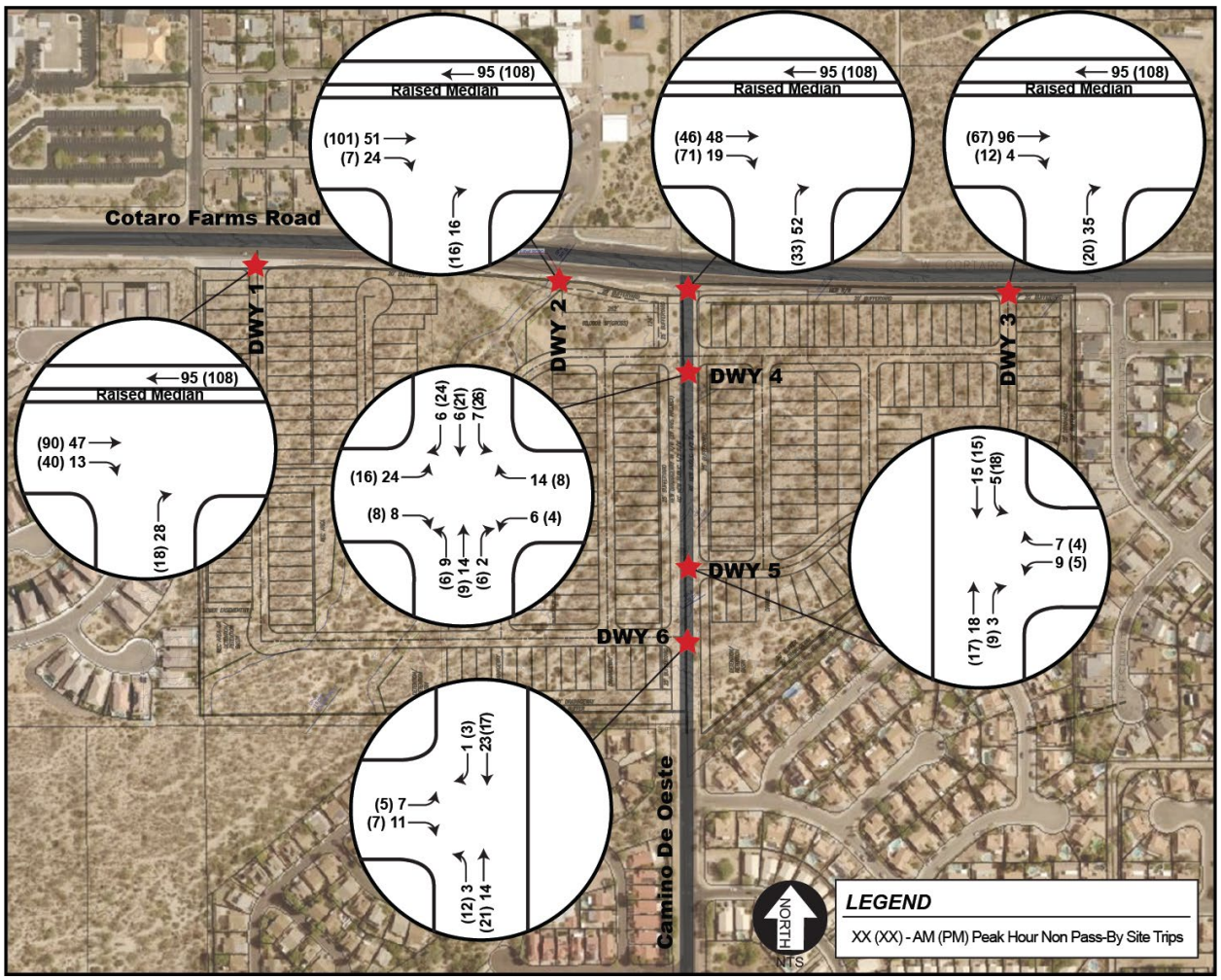
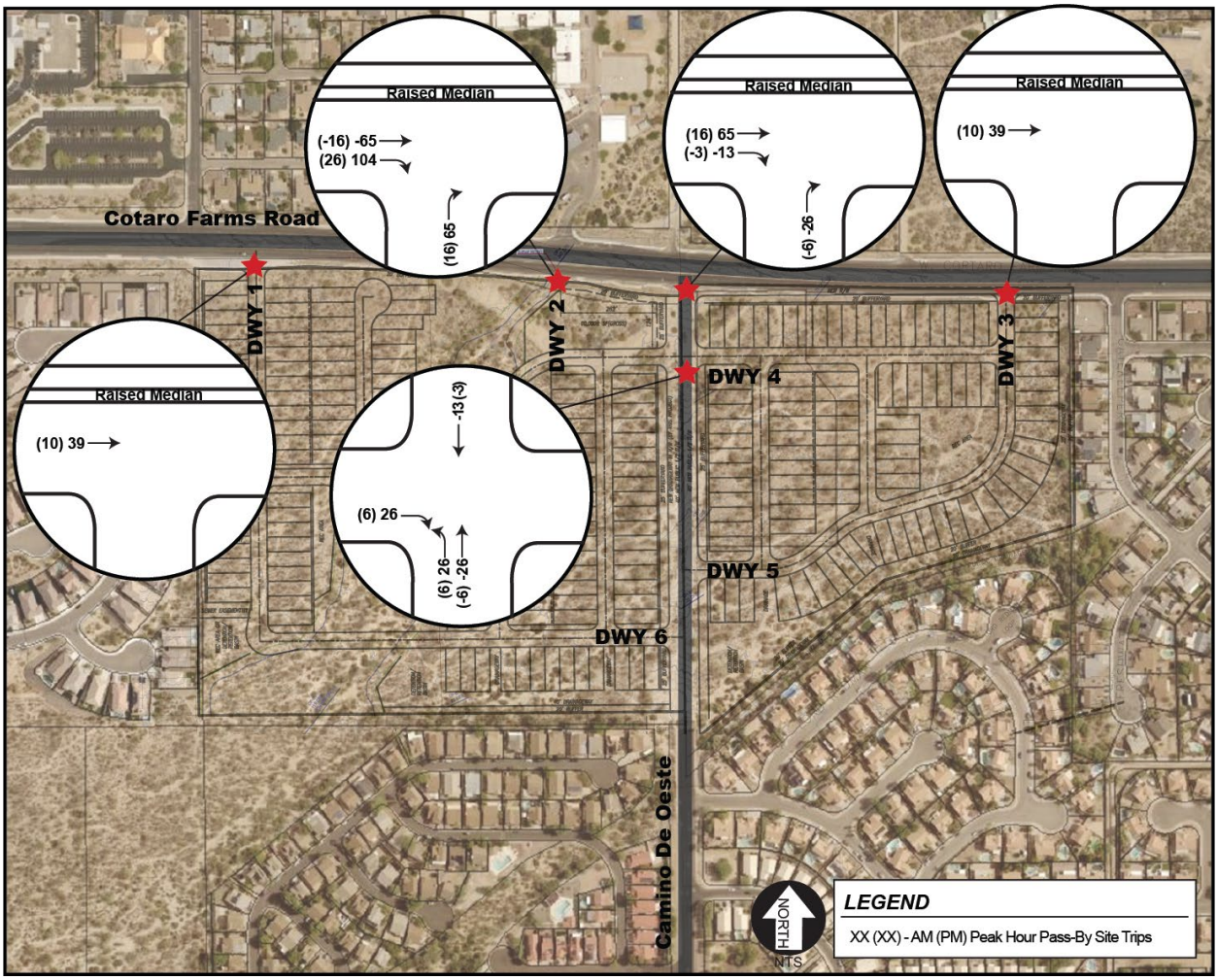


Exhibit 15 Site Trips – Pass By



Non-Site Traffic Forecasting

There are no background intersection traffic volume data available beyond a 2017 turning movement count at the Cortaro Farms Road/Camino de Oeste/Sandy Desert Trail intersection for intersections in the vicinity of the project. There are roadway volumes on PAG's website in the vicinity of the project. We reviewed a 24-hour count on Cortaro Farms Road that was collected on September 11, 2019, after Cortaro Farms Road was widened to four lanes. We applied a growth rate of 2%/year to the highest peak hour volumes between 7-9 AM and 4-6 PM to estimate year 2023 traffic volumes on Cortaro Farms Road near its future intersection with the northern extension of Camino de Oeste.

The 2019 and 2023 peak hour volumes on Cortaro Farms Road are provided in Exhibit 16. These hourly volumes were used in the assessment of turn lane warrants at the project driveways on Cortaro Farms Road.

Exhibit 16 Cortaro Farms Road – Peak Hour Volumes

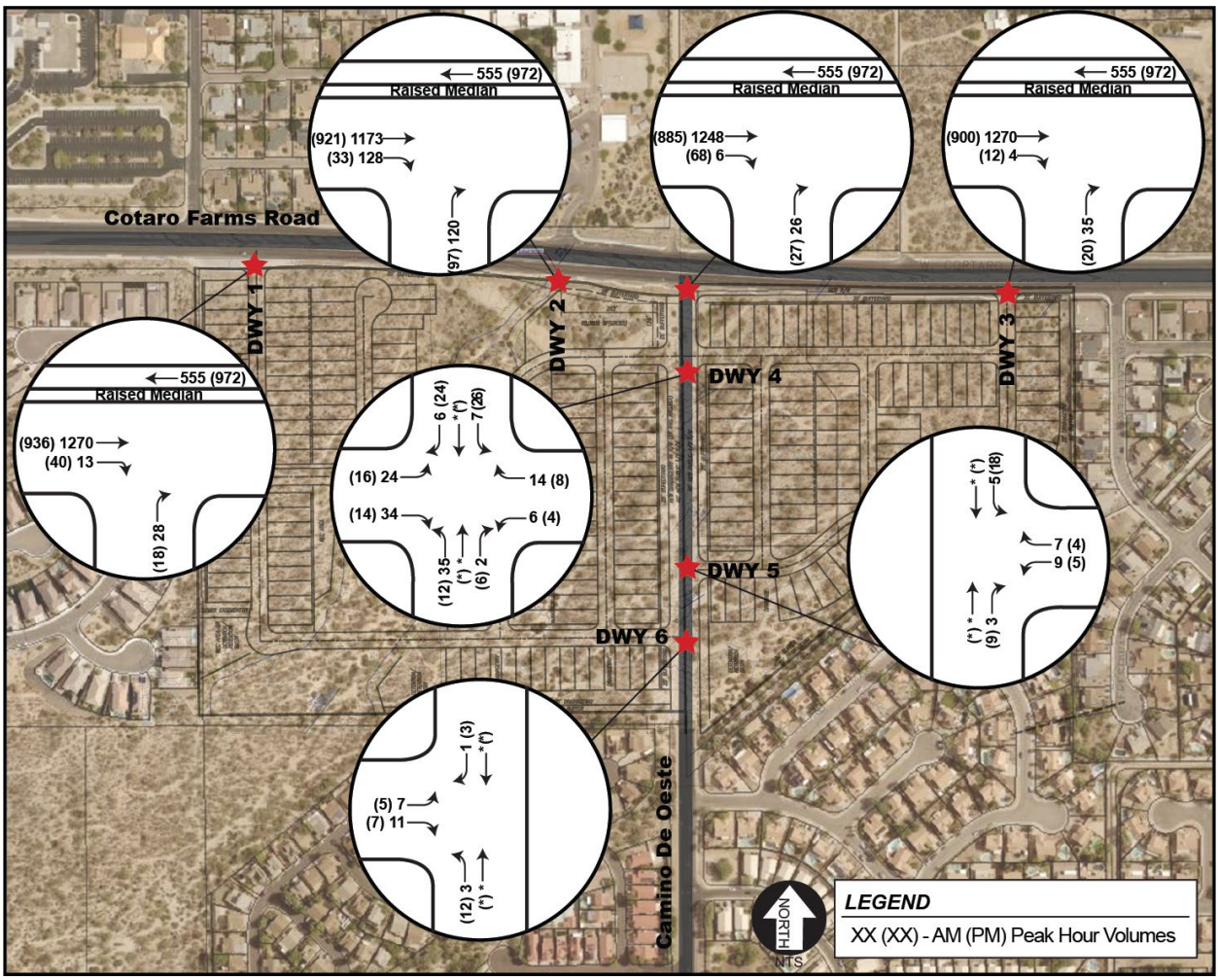
	Peak Hour Volumes	
	Year 2019	**Year 2023**
Eastbound AM	1,094	1,184
Eastbound PM	680	736
Westbound AM	425	460
Westbound PM	798	864

Total Traffic

The background traffic was added to the site traffic to estimate total traffic at the project driveways. The resulting peak hour volumes at the project driveways are illustrated in Exhibit 17.

We did not estimate through traffic volumes on Camino de Oeste as these volumes would be speculative for this planning level analysis. However, there would have to be approximately 800 – 900 vehicles during the peak hour for southbound or northbound right turn lanes to be warranted at the project driveways based on Pima County right turn lane warrant criteria. It is unlikely that the future volumes on this roadway segment would be realized, thus right turn lanes are not projected to be warranted. A continuous left turn lane on Camino de Oeste is expected to be constructed, so a left turn lane warrant analysis was not conducted for left turns on Camino de Oeste.

Exhibit 17 2023 Driveway Volumes



Through movements on Camino de Oeste have not been estimated for this report.

7. Traffic and Improvement Analysis

Roadway Levels of Service

Exhibit 18 summarizes the new ADT and daily volume capacity (LOS D) of the roadway segment with and without the project in 2023.

The table show that based on the growth of 2%/year estimated for the background traffic, and the LOS D criteria found in FDOT's *Generalized Annual Average Traffic Volumes in Urbanized Areas*, the 2023 no project and with project volumes will not exceed the theoretical daily service volume LOS D thresholds.

Exhibit 18 Year 2023 Roadway Future Volumes

Roadway Segment	LOS D Capacity	2023 No Project ADT	Site Trips	2023 With Project*
Cortaro Farms Road, West of Camino de Oeste (South)	35,820	20,566	1,269	21,835
Cortaro Farms Road, East of Camino de Oeste (South)	35,820	18,024	1,269	19,293
Camino de Oeste, North of Cortaro Farms Road	10,700	6,708	159	6,866
Camino de Oeste, South of Project Site	13,990	4,489	635	5,123
Magee Road, East of Camino de Oeste	10,700	4,937	317	5,254
Oldfather Road, South of Cortaro Farms Road	13,990	7,992	159	8,150
Oldfather Road, South of Magee Road	13,990	8,454	159	8,612

**It is expected that the new intersection of Cortaro Farms Road/Camino de Oeste will draw background traffic to and from Cortaro Farms Road and Camino de Oeste, and that the traffic volumes shown in Exhibit 19 will likely be higher on Camino de Oeste and lower on Cortaro Farms Road. This will be analyzed more fully when the TIA is prepared at the future subdivision platting and development plan stages.*

Acceleration/Deceleration Lanes, Left Turn Lanes

The Pima County Subdivision and Development Street Standards includes warrants for left and right turn lanes. For the right turn lane warrant, the hourly right turn volume is plotted against the major road volume (Exhibit 19).

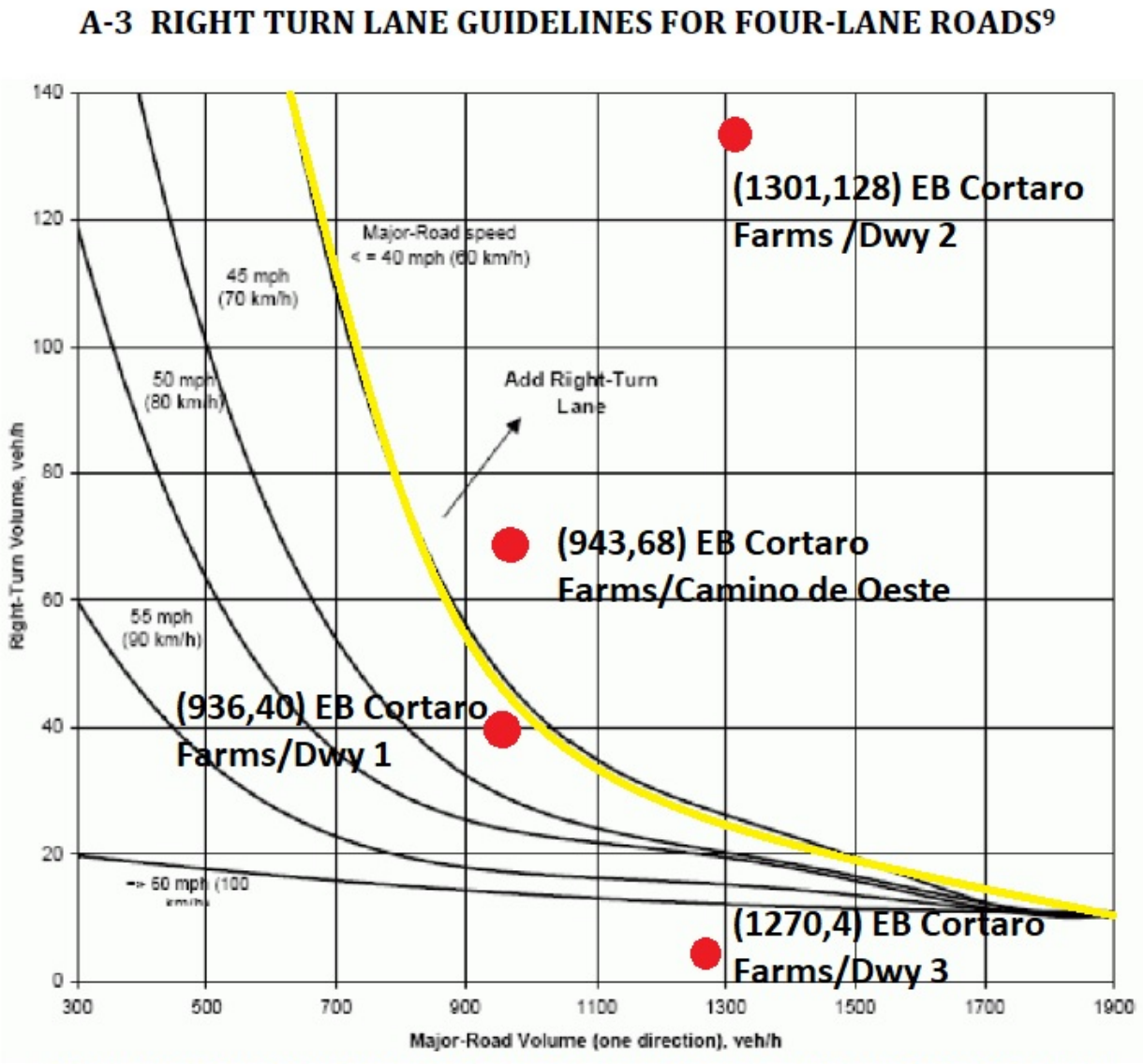
Because of the raised median on Cortaro Farms Road and that the Camino de Oeste extension will have a continuous left turn lane, we did not conduct left turn warrant analyses for these roadways. We conducted a right turn lane warrant analysis for turns from Cortaro Farms Road into the project driveways and at its future intersection with Camino de Oeste.

The right turn lane warrant is met for the eastbound right turn into Driveway 2, the commercial driveway and on Cortaro Farms Road at its intersection with Camino de Oeste, based on the trip distribution estimate. A more detailed analysis will be conducted at the future subdivision platting and development plan stages.

Based on this preliminary analysis, right turn lanes are not anticipated to be warranted at the other project driveways on Cortaro Farms Road.

Turn lanes should be 110 feet long at a minimum per Pima County turn lane standards for 40-mph roadways.

Exhibit 19 Right Turn Lane Warrant Criteria – Pima County



Note: Existing roadway constraints may restrict the ability or need to install turning lanes. Traffic Engineering may require a traffic engineering analysis to support alternative recommendations for the installation of turning lanes.

Quail Run School Crossing

Quail Run Elementary School is on the north side of Cortaro Farms Road, directly opposite the project site. The school boundaries extend south on Camino de Oeste and parents will have better vehicular and pedestrian access to Cortaro Farms Road and the school, although there will be no direct vehicular connection to the school due to the raised median on Cortaro Farms Road. The future commercial use within the Specific Plan area may also be an attractor for employees and or students at the school. The potential for a pedestrian crossing, whether signalized or unsignalized should be discussed with Pima County and the Marana School District as the project continues to future subdivision platting and at the development plan stages.

Pedestrian, Bicycle, and Transit Considerations

Pedestrian and bike facilities should be included in the internal subdivision streets as required by County subdivision street standards. The pedestrian circulation network for the residential land uses will be comprised of new public sidewalks, pedestrian paths and trails, and bike-friendly neighborhood streets. These circulation elements will accommodate both pedestrians and bicyclists and will connect to the public sidewalks and multi-use lanes on the adjacent public arterials (Cortaro Farms Road, the new Camino de Oeste extension).

The closest transit route is Sun Shuttle Route 412 which runs on Thornydale Road with a stop at Cortaro Farms Road.

Speed Considerations

The posted speed limit on Camino de Oeste south of the project is currently 35 mph. It is expected that the extension of Camino de Oeste will also be posted for 35 mph.

Traffic calming measures may be desirable on internal streets. Traffic calming measures might include pedestrian tables, mini roundabouts, and curb "bump outs" at intersections along the more important pedestrian routes.

Other Mitigation

This preliminary traffic study is intended to provide a general analysis of potential transportation conditions within and in the vicinity of the project site. A more comprehensive traffic impact study that will provide additional mitigation recommendation should be conducted at the future subdivision platting and development plan stages when land use intensities and the site plan are more evolved.

8. Conclusions and Recommendations

Conclusions and Recommendations

1. This preliminary study addresses a 57-acre residential and commercial development located south of Cortaro Farms Road along the Camino de Oeste (south) alignment. This study is a supporting document to the Cortaro 57 Specific Plan submittal.
2. Along the project frontage, Cortaro Farms Road and Camino de Oeste are owned and maintained by Pima County.
3. This preliminary study analyzes a mix of single-family residential lots (135) and multi-family units (200) a coffee shop with drive through lanes and a medical office building. when completed. For the purpose of this traffic study, buildout is estimated to be around 2023, although the homebuyer's market will determine actual buildout. This mix was chosen to be a conservative choice, and the future development may likely produce fewer trips if a less intense commercial land use is constructed.
4. Access to the project will be from Cortaro Farms Road at four locations, one being an extension of Camino de Oeste from the south to its intersection with Cortaro Farms Road. All access locations on Cortaro Farms Road will be limited to right-in, right-out only due to the raised median on Cortaro Farms Road. There will be three new intersections on the extension of Camino de Oeste providing access to the project uses. These intersections will allow for full access movements.
5. The site adjoins existing residential development to the south, west and east.
6. The roadways and intersections currently operate at LOS D or better.
7. Based on this preliminary and conservative site plan and analysis, the project will generate about 4,722 trips per day, of which 505 will be in the AM peak and 340 in the PM peak. About 89% of the coffee shop trips will be pass-by trips, reducing the number of new trips on the surrounding roadway to about 3,173 net weekday trips, 244 net AM peak hour trips and 276 net PM peak hour trips.
8. Because the final land uses are conceptual and the future commercial uses are subject to change, we did not conduct intersection capacity analyses, as any mitigation recommendations would be very speculative and would likely overestimate the impacts at the study area off-site intersections. However, we did conduct a preliminary turn lane warrant analysis to anticipate any recommended turn lanes on Cortaro Farms Road.
9. The turn lane analysis found that right turn lanes may be warranted at the commercial driveway on Cortaro Farms Road and on Cortaro Farms Road at its new intersection with Camino de Oeste. If these turn lanes are found to be warranted at the actual development plan and subdivision platting stage, Pima County standards set minimum storage lengths at 110 feet for roadways with posted speed limits of 40 mph or less. A queuing analysis will also have to be conducted to determine the lengths of the turn lane queues.
10. When the full TIS is conducted, a queuing analysis should also be performed for the downstream U-turn locations on Cortaro Farms Road at Star Grass Drive and at Burke Drive/Freshwater Lane.
11. Discussions in conjunction with Pima County and Marana School District should be held to assess whether a pedestrian crossing is recommended and appropriate on Cortaro Farms Road from the project area to serve Quail Run Elementary School. Final determination as to the need for such a crossing will be, to some extent, based upon the final uses on the project's commercial site, as well as the amount of pedestrian traffic from the more than one-thousand existing homes located south of the Specific Plan site.

Appendix C:
Native Plant Inventory of Saguaros & Ironwood Trees

Scale: 1" = 50'

0' 25' 50' 100' 150' North

IRONWOOD & SAGUARO INVENTORY SUMMARY	
Ironwoods	**Total**
Total Inventory	1,320
Non-Viable	508
Possibly Preserve in Place	175
Highly Salvageable	25
Moderately Salvageable	196
Possibly Salvageable	67
Not Salvageable	319
All quantities are approximate	
Saguaros	**Total**
Total Inventory	827
< 6' Tall	142
6' - < 18' Tall	540
18' - 25' (+/-)	71
25' +	74
All quantities are approximate	

ABBREVIATIONS

The following abbreviations were used in the plant tables:

BL - Broken Limbs; Tree has significant broken branches.
BT - Broken Top, generally used in description of cactus.
DW - Dead Wood; Tree has significant die back or dead/broken limbs.
DY - Dying; Tree is dying.
FD - Frost Damage.
IN - Insect or Disease Infestation.
LB - Low Branched; Tree has many low branches that will need to be removed for salvaged and removal will destroy structure of tree.
LE - Leaning; Tree is leaning to the point where salvage will be difficult.
MS - Marginal Salvage; Used during field inventory to identify less desirable salvage candidates to be used if needed to meet % requirements.
MT - Tree has significant mistletoe infestation.
NV - Not Viable; These are trees which are not included in the calculations for the site because they are not in viable condition.
OT - Tree has an old trunk indicating dieback at some point in the past.
PD - Pruning Damage.
PIP- Plants to be preserved in place.
PIP-ROW - Plants to be preserved in place but located within the Right of Way. These plants are not included in the calculation of credits for PIP plants on the site.
PROX- Other vegetation in the vicinity will make salvage difficult.
PS - Possible Salvage; Used in the field to identify best potential salvage candidates.
RD - Rodent Damage; Rodents have excavated at the base of the tree.
RFS- Plants to be removed from site, damaged or destroyed.
RT - Rotted Trunk; Trunk has been broken off or rotted out and has hollow areas, making long term health and viability of the tree questionable.
SAL- Salvage; Used during field inventory to identify trees that should be salvaged regardless of % requirements.
SL - Slope; Tree is on steep slope where salvage will not be possile.
SO - Soils; Soil is rocky or otherwise unsuitable for excavation.
SR - Surface roots are evident, making excavation difficult.
ST - Stunted.
SZ - Size of the tree; either spread, caliper or height is not conducive to salvage.
TD - Trunk Damage.
TM - Too Multi; Tree has multiple trunks coming out of the ground that will make moving the tree difficult without significant damage.
TOS- Plant to be transplanted on site.
VMS - Very Marginal Salvage; Used during field inventory to identify least desirable salvage candidates to be used if needed to meet % requirements.

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Date: 4/9/21
Drawn by: LMW
Checked by: GRS

☐ Design Review
☐ Construction Documents
☒ Agency Submittal
☐ Construction Set
☒ Not for Construction

CORTARO 57
SPECIFIC PLAN

SAGUARO & IRONWOOD INVENTORY

CORTARO FARMS ROAD

MATCHLINE -- SEE SHEET 1

MATCHLINE -- SEE SHEET 3

Scale: 1" = 50'

0' 25' 50' 100' 150'

North

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CORTARO 57
SPECIFIC PLAN

SAGUARO & IRONWOOD INVENTORY

MATCHLINE -- SEE SHEET 2

MATCHLINE -- SEE SHEET 1

CACTUS INVENTORY

ID NO.	DESCRIPTION	SIZE	ARMS	VIABILITY		TRANS	COMMENTS
1	Carnegiea gigantea - Saguaro	12		H	H	PS	
2	Carnegiea gigantea - Saguaro	4		H	H	PS	
3	Carnegiea gigantea - Saguaro	8		H	H	PS	
5	Carnegiea gigantea - Saguaro	18+	20+	M	L	SZ	
6	Carnegiea gigantea - Saguaro	18+	16	M	L	SZ	
7	Carnegiea gigantea - Saguaro	8		H	H	PS	
12	Carnegiea gigantea - Saguaro	8		H	H	PS	
13	Carnegiea gigantea - Saguaro	8		H	H	PS	
16	Carnegiea gigantea - Saguaro	18+	20+	L	L	BT	
21	Carnegiea gigantea - Saguaro	5		H	H	PS	
33	Carnegiea gigantea - Saguaro	18+	10	M	L	SZ	
35	Carnegiea gigantea - Saguaro	6		H	H	PS	
36	Carnegiea gigantea - Saguaro	10		H	H	PS	
41	Carnegiea gigantea - Saguaro	10		L	L	BT	
42	Carnegiea gigantea - Saguaro	3		H	H	PS	
45	Carnegiea gigantea - Saguaro	8		H	H	PS	
46	Carnegiea gigantea - Saguaro	8		H	H	PS	
47	Carnegiea gigantea - Saguaro	6		M	H	PS	
48	Carnegiea gigantea - Saguaro	10		H	H	PS	
49	Carnegiea gigantea - Saguaro	6		H	H	PS	
50	Carnegiea gigantea - Saguaro	8		H	H	PS	
51	Carnegiea gigantea - Saguaro	8		M	H	PS	
54	Carnegiea gigantea - Saguaro	18+	12	M	L	LE	SZ
56	Carnegiea gigantea - Saguaro	3		H	H	PS	
58	Carnegiea gigantea - Saguaro	2		H	H	PS	
60	Carnegiea gigantea - Saguaro	2		M	H	PS	
69	Carnegiea gigantea - Saguaro	6		H	H	PS	
75	Carnegiea gigantea - Saguaro	6		H	H	PS	
87	Carnegiea gigantea - Saguaro	18+	9	H	L	SZ	
88	Carnegiea gigantea - Saguaro	18+	6	H	H	PS	
92	Carnegiea gigantea - Saguaro	4		H	H	PS	
96	Carnegiea gigantea - Saguaro	6		H	H	PS	
97	Carnegiea gigantea - Saguaro	6		H	H	PS	
98	Carnegiea gigantea - Saguaro	8		H	H		PS
99	Carnegiea gigantea - Saguaro	6		H	H	PS	
100	Carnegiea gigantea - Saguaro	12		H	H	PS	
102	Carnegiea gigantea - Saguaro	6		H	H	PS	
112	Carnegiea gigantea - Saguaro	3		M	H	PS	
121	Carnegiea gigantea - Saguaro	18+	16	H	L	SZ	
127	Carnegiea gigantea - Saguaro	8		M	L	BT	MS
132	Carnegiea gigantea - Saguaro	12		H	H	PS	
134	Carnegiea gigantea - Saguaro	15	2	H	H	PS	
135	Carnegiea gigantea - Saguaro	15	1	H	H	PS	
139	Carnegiea gigantea - Saguaro	3		M	H	PS	
143	Carnegiea gigantea - Saguaro	18+	12	L	L	DY	
144	Carnegiea gigantea - Saguaro	6		H	H	PS	
145	Carnegiea gigantea - Saguaro	6		H	H		
165	Carnegiea gigantea - Saguaro	8		H	H	PS	
166	Carnegiea gigantea - Saguaro	10		H	L	PROX	
167	Carnegiea gigantea - Saguaro	2		H	H	PS	
172	Carnegiea gigantea - Saguaro	18+	6	M	L	SZ	
173	Carnegiea gigantea - Saguaro	6		M	M	MS	
176	Carnegiea gigantea - Saguaro	6		H	M	MS	PROX
178	Carnegiea gigantea - Saguaro	18+		L	L	DY	
179	Carnegiea gigantea - Saguaro	6		H	H	PS	
180	Carnegiea gigantea - Saguaro	18+	2	L	L	SZ	
181	Carnegiea gigantea - Saguaro	6		H	H	PS	
182	Carnegiea gigantea - Saguaro	8		H	H	PS	
184	Carnegiea gigantea - Saguaro	2		H	H	PS	
186	Carnegiea gigantea - Saguaro	18+	10	H	L	SZ	
190	Carnegiea gigantea - Saguaro	3		H	H	PS	
191	Carnegiea gigantea - Saguaro	6		L	L	BT	
196	Carnegiea gigantea - Saguaro	15		M	H	PS	
198	Carnegiea gigantea - Saguaro	18+	12	M	L	LE	
201	Carnegiea gigantea - Saguaro	6		H	H	PS	
202	Carnegiea gigantea - Saguaro	8		M	M	MS	LE
206	Carnegiea gigantea - Saguaro	5		H	H	PS	
207	Carnegiea gigantea - Saguaro	12		H	H	PS	
210	Carnegiea gigantea - Saguaro	6		H	H	PS	
212	Carnegiea gigantea - Saguaro	5		H	H	PS	
213	Carnegiea gigantea - Saguaro	6		H	H	PS	
214	Carnegiea gigantea - Saguaro	6		H	H	PS	
215	Carnegiea gigantea - Saguaro	6		H	H	PS	
217	Carnegiea gigantea - Saguaro	10		H	H	PS	
218	Carnegiea gigantea - Saguaro	15	1	H	H	PS	
219	Carnegiea gigantea - Saguaro	6		L	L		
221	Carnegiea gigantea - Saguaro	4		H	H	PS	
222	Carnegiea gigantea - Saguaro	5		H	H	PS	
223	Carnegiea gigantea - Saguaro	6		H	H	PS	
224	Carnegiea gigantea - Saguaro	4		H	H	PS	
225	Carnegiea gigantea - Saguaro	4		H	H	PS	
226	Carnegiea gigantea - Saguaro	8		H	H	PS	
236	Carnegiea gigantea - Saguaro	3		H	H	PS	
239	Carnegiea gigantea - Saguaro	2		H	H	PS	
241	Carnegiea gigantea - Saguaro	18	5	L	L	DY	
247	Carnegiea gigantea - Saguaro	12		H	H	PS	
248	Carnegiea gigantea - Saguaro	6		H	H	PS	
252	Carnegiea gigantea - Saguaro	4		H	H	PS	
255	Carnegiea gigantea - Saguaro	8		H	H	PS	
258	Carnegiea gigantea - Saguaro	2		H	H	PS	
260	Carnegiea gigantea - Saguaro	10		H	H	PS	
263	Carnegiea gigantea - Saguaro	18+	12	M	L	LE	
265	Carnegiea gigantea - Saguaro	4		M	H	PS	
266	Carnegiea gigantea - Saguaro	18+	7	M	L	SZ	
271	Carnegiea gigantea - Saguaro	4		H	H	PS	
272	Carnegiea gigantea - Saguaro	18+	20+	M	L	SZ	
277	Carnegiea gigantea - Saguaro	6		H	H	PS	
280	Carnegiea gigantea - Saguaro	8		H	H	PS	
286	Carnegiea gigantea - Saguaro	8		H	H	PS	
300	Carnegiea gigantea - Saguaro	18+	9	L	L	DY	
312	Carnegiea gigantea - Saguaro	10		L	L	DY	
313	Carnegiea gigantea - Saguaro	8		L	L	DY	
322	Carnegiea gigantea - Saguaro	4		H	H	PS	
323	Carnegiea gigantea - Saguaro	4		L	L	BT	
324	Carnegiea gigantea - Saguaro	8		H	H	PS	
325	Carnegiea gigantea - Saguaro	8		L	L	BT	
327	Carnegiea gigantea - Saguaro	4		H	H	PS	
331	Carnegiea gigantea - Saguaro	8		H	H	PS	
332	Carnegiea gigantea - Saguaro	8		H	H	PS	
333	Carnegiea gigantea - Saguaro	5		H	H	PS	
334	Carnegiea gigantea - Saguaro	4		L	L	DY	
335	Carnegiea gigantea - Saguaro	8		H	H	PS	
336	Carnegiea gigantea - Saguaro	12		H	H	PS	
337	Carnegiea gigantea - Saguaro	8		H	H	PS	
338	Carnegiea gigantea - Saguaro	10		H	H	PS	
339	Carnegiea gigantea - Saguaro	8		H	H	PS	
344	Carnegiea gigantea - Saguaro	15		H	M	MS	
345	Carnegiea gigantea - Saguaro	8		H	H	PS	
346	Carnegiea gigantea - Saguaro	10		H	H	PS	
347	Carnegiea gigantea - Saguaro	10		H	H	PS	
348	Carnegiea gigantea - Saguaro	8		L	L	PROX	
349	Carnegiea gigantea - Saguaro	8		M	M	MS	
351	Carnegiea gigantea - Saguaro	18+	8	H	L	SZ	SZ
352	Carnegiea gigantea - Saguaro	8		H	M	MS	
353	Carnegiea gigantea - Saguaro	8		H	M	MS	
354	Carnegiea gigantea - Saguaro	5		H	H	PS	
355	Carnegiea gigantea - Saguaro	10		H	H	PS	
359	Carnegiea gigantea - Saguaro	8		H	H	PS	
362	Carnegiea gigantea - Saguaro	18+	6	H	L	SZ	SZ
363	Carnegiea gigantea - Saguaro	10		H	H	PS	
364	Carnegiea gigantea - Saguaro	5		H	L	PRO	MS
365	Carnegiea gigantea - Saguaro	6		H	H	PS	
368	Carnegiea gigantea - Saguaro	12		H	H	PS	
369	Carnegiea gigantea - Saguaro	12		H	H	PS	
370	Carnegiea gigantea - Saguaro	4		H	H	PS	
372	Carnegiea gigantea - Saguaro	18+	3	H	H	PS	
375	Carnegiea gigantea - Saguaro	18+	1	M	L	SZ	SZ BT
376	Carnegiea gigantea - Saguaro	10		H	H	PS	
377	Carnegiea gigantea - Saguaro	8		H	H	PS	
378	Carnegiea gigantea - Saguaro	3		H	H	PS	
379	Carnegiea gigantea - Saguaro	6		H	H	PS	
380	Carnegiea gigantea - Saguaro	6		H	H	PS	
381	Carnegiea gigantea - Saguaro	6		H	H	PS	
382	Carnegiea gigantea - Saguaro	8		H	H	PS	
383	Carnegiea gigantea - Saguaro	8		H	H	PS	
385	Carnegiea gigantea - Saguaro	6		H	H	PS	
386	Carnegiea gigantea - Saguaro	6		H	H	PS	
387	Carnegiea gigantea - Saguaro	6		H	H	PS	
388	Carnegiea gigantea - Saguaro	6		H	H	PS	
389	Carnegiea gigantea - Saguaro	10		H	H	PS	
390	Carnegiea gigantea - Saguaro	8		H	H	PS	
391	Carnegiea gigantea - Saguaro	8		H	H	PS	
394	Carnegiea gigantea - Saguaro	15		H	H	PS	
403	Carnegiea gigantea - Saguaro	8		H	H	PS	
404	Carnegiea gigantea - Saguaro	15	1	H	M	MS	PROX
405	Carnegiea gigantea - Saguaro	10	1	H	H	PS	
406	Carnegiea gigantea - Saguaro	15		H	H	PS	
407	Carnegiea gigantea - Saguaro	10		H	H	PS	
408	Carnegiea gigantea - Saguaro	10		H	H	PS	
414	Carnegiea gigantea - Saguaro	6		H	H	PS	
415	Carnegiea gigantea - Saguaro	12		H	H	PS	
417	Carnegiea gigantea - Saguaro	15		H	H	PS	
419	Carnegiea gigantea - Saguaro	6		H	H	PS	
421	Carnegiea gigantea - Saguaro	15		H	H	PS	
425	Carnegiea gigantea - Saguaro	4		H	H	PS	
435	Carnegiea gigantea - Saguaro	6		H	H	PS	
439	Carnegiea gigantea - Saguaro	15	1	H	H	PS	
440	Carnegiea gigantea - Saguaro	8		H	H	PS	
441	Carnegiea gigantea - Saguaro	18+	3	M	L	SZ	
445	Carnegiea gigantea - Saguaro	6		H	H	PS	
448	Carnegiea gigantea - Saguaro	6		H	H	PS	
451	Carnegiea gigantea - Saguaro	8		L	L	DY	
458	Carnegiea gigantea - Saguaro	6		H	H	PS	
462	Carnegiea gigantea - Saguaro	4		H	H	PS	
463	Carnegiea gigantea - Saguaro	15	4	M	M	MS	
465	Carnegiea gigantea - Saguaro	6		H	H	PS	
470	Carnegiea gigantea - Saguaro	6		H	H	PS	
471	Carnegiea gigantea - Saguaro	10		H	H	PS	
472	Carnegiea gigantea - Saguaro	12		H	H	PS	
477	Carnegiea gigantea - Saguaro	6		H	H	PS	
481	Carnegiea gigantea - Saguaro	4		H	H	PS	
483	Carnegiea gigantea - Saguaro	18+		L	L	SZ	SZ
487	Carnegiea gigantea - Saguaro	10		H	H	PS	
490	Carnegiea gigantea - Saguaro	6		H	H	PS	
491	Carnegiea gigantea - Saguaro	6		H	H	PS	
495	Carnegiea gigantea - Saguaro	10		H	H	PS	
496	Carnegiea gigantea - Saguaro	6		H	H	PS	
506	Carnegiea gigantea - Saguaro	15		H	H	PS	

Scale: 1" = 50'

0' 25' 50' 100' 150'

North

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CORTARO 57
SPECIFIC PLAN

SAGUARO & IRONWOOD INVENTORY

CACTUS INVENTORY

ID NO.	DESCRIPTION	SIZE	ARMS	VIABILITY	TRANS	COMMENTS
507	Carnegiea gigantea - Saguaro	15		H	H	PS
508	Carnegiea gigantea - Saguaro	15	1	H	H	PS
510	Carnegiea gigantea - Saguaro	12		H	H	PS _
513	Carnegiea gigantea - Saguaro	4		H	H	PS
514	Carnegiea gigantea - Saguaro	6		H	H	PS
515	Carnegiea gigantea - Saguaro	5		H	H	PS
518	Carnegiea gigantea - Saguaro	15	4	H	H	PS
520	Carnegiea gigantea - Saguaro	12		L	L	DY
521	Carnegiea gigantea - Saguaro	6		H	H	PS
522	Carnegiea gigantea - Saguaro	18+	5	H	L	SZ
524	Carnegiea gigantea - Saguaro	4		H	H	PS
525	Carnegiea gigantea - Saguaro	8		H	H	PS
526	Carnegiea gigantea - Saguaro	18+	8	M	L	BT
527	Carnegiea gigantea - Saguaro	10		H	H	PS
528	Carnegiea gigantea - Saguaro	18+	10	L	L	SZ SZ LE
533	Carnegiea gigantea - Saguaro	15	1	H	H	PS
534	Carnegiea gigantea - Saguaro	10		H	H	PS
535	Carnegiea gigantea - Saguaro	8		L	L	RT
536	Carnegiea gigantea - Saguaro	12		H	H	PS
542	Carnegiea gigantea - Saguaro	15		H	M	MS SL
543	Carnegiea gigantea - Saguaro	15	1	H	M	MS SL
544	Carnegiea gigantea - Saguaro	6		H	M	MS PROX
546	Carnegiea gigantea - Saguaro	10		H	H	PS
547	Carnegiea gigantea - Saguaro	8		H	H	PS _
548	Carnegiea gigantea - Saguaro	12		H	H	PS _
549	Carnegiea gigantea - Saguaro	12		H	H	PS _
550	Carnegiea gigantea - Saguaro	18+	20+	L	L	SZ SZ RT
552	Carnegiea gigantea - Saguaro	6		H	H	PS
554	Carnegiea gigantea - Saguaro	8		L	L	DY
556	Carnegiea gigantea - Saguaro	4		H	H	PS
557	Carnegiea gigantea - Saguaro	15		H	H	PS
558	Carnegiea gigantea - Saguaro	10		H	H	PS
562	Carnegiea gigantea - Saguaro	18+	9	L	L	DY SZ SZ
563	Carnegiea gigantea - Saguaro	18+	8	H	L	SZ SZ
564	Carnegiea gigantea - Saguaro	15	9	L	L	BT
565	Carnegiea gigantea - Saguaro	18+	8	L	L	DY LE
577	Carnegiea gigantea - Saguaro	18+		L	L	LE
579	Carnegiea gigantea - Saguaro	10		H	H	PS
582	Carnegiea gigantea - Saguaro	12		H	H	PS
586	Carnegiea gigantea - Saguaro	15	1	H	H	PS
588	Carnegiea gigantea - Saguaro	12		H	H	PS
618	Carnegiea gigantea - Saguaro	10		H	H	PS
625	Carnegiea gigantea - Saguaro	4		L	L	
626	Carnegiea gigantea - Saguaro	15		L	L	DY
627	Carnegiea gigantea - Saguaro	15		H	H	PS
628	Carnegiea gigantea - Saguaro	12		H	H	PS
629	Carnegiea gigantea - Saguaro	15		H	H	PS _
630	Carnegiea gigantea - Saguaro	12		H	H	PS
631	Carnegiea gigantea - Saguaro	15		H	H	PS
634	Carnegiea gigantea - Saguaro	8		H	H	PS
635	Carnegiea gigantea - Saguaro	10		H	L	PRO PROX
637	Carnegiea gigantea - Saguaro	12		H	H	PS
640	Carnegiea gigantea - Saguaro	4		H	H	PS
641	Carnegiea gigantea - Saguaro	8		H	H	PS
644	Carnegiea gigantea - Saguaro	12		H	H	PS
645	Carnegiea gigantea - Saguaro	10	3	L	L	BT
654	Carnegiea gigantea - Saguaro	18+	6	M	L	SZ SZ
659	Carnegiea gigantea - Saguaro	8		M	M	MS
660	Carnegiea gigantea - Saguaro	4		L	L	MS
665	Carnegiea gigantea - Saguaro	6		H	H	PS
666	Carnegiea gigantea - Saguaro	15		H	H	PS
669	Carnegiea gigantea - Saguaro	18+	12	L	L	BT
670	Carnegiea gigantea - Saguaro	6		H	H	PS
671	Carnegiea gigantea - Saguaro	18+	9	M	L	SZ SZ
672	Carnegiea gigantea - Saguaro	18+	3	M	L	SZ SZ
674	Carnegiea gigantea - Saguaro	4		H	H	PS
675	Carnegiea gigantea - Saguaro	4		H	H	PS
676	Carnegiea gigantea - Saguaro	10		L	L	PROX
678	Carnegiea gigantea - Saguaro	18+	3	M	L	SL
679	Carnegiea gigantea - Saguaro	18+	4	H	L	SL SZ SZ
695	Carnegiea gigantea - Saguaro	18+	6	M	H	
696	Carnegiea gigantea - Saguaro	10	4	L	L	DY
697	Carnegiea gigantea - Saguaro	15	2	H	H	PS
698	Carnegiea gigantea - Saguaro	12		H	H	PS
699	Carnegiea gigantea - Saguaro	15		L	L	PROX
700	Carnegiea gigantea - Saguaro	12		H	H	PS
701	Carnegiea gigantea - Saguaro	8		L	L	BT
702	Carnegiea gigantea - Saguaro	12		H	H	PS
703	Carnegiea gigantea - Saguaro	8		H	H	PS
704	Carnegiea gigantea - Saguaro	12		H	M	MS PROX
705	Carnegiea gigantea - Saguaro	10		H	M	MS SZ
708	Carnegiea gigantea - Saguaro	18+	4	M	L	SZ SZ LE
710	Carnegiea gigantea - Saguaro	15	5	H	H	PS
712	Carnegiea gigantea - Saguaro	8		H	H	PS
714	Carnegiea gigantea - Saguaro	8		H	H	PS
717	Carnegiea gigantea - Saguaro	6		H	H	PS _
727	Carnegiea gigantea - Saguaro	15		H	L	PRO MS
728	Carnegiea gigantea - Saguaro	15		M	L	RT
744	Carnegiea gigantea - Saguaro	4		L	L	
745	Carnegiea gigantea - Saguaro	6		H	H	PS
748	Carnegiea gigantea - Saguaro	6		H	H	PS
753	Carnegiea gigantea - Saguaro	8		H	H	PS PROX
760	Carnegiea gigantea - Saguaro	4		H	H	PS
763	Carnegiea gigantea - Saguaro	4		H	H	PS
766	Carnegiea gigantea - Saguaro	4		H	H	PS
767	Carnegiea gigantea - Saguaro	8		H	H	PS
771	Carnegiea gigantea - Saguaro	10		L	L	RT
773	Carnegiea gigantea - Saguaro	8		M	L	MS
774	Carnegiea gigantea - Saguaro	8		H	H	PS
775	Carnegiea gigantea - Saguaro	8		M	L	MS
781	Carnegiea gigantea - Saguaro	18+		M	L	BT SZ
786	Carnegiea gigantea - Saguaro	15		M	M	MS
790	Carnegiea gigantea - Saguaro	18+	6	H	L	SZ SZ
792	Carnegiea gigantea - Saguaro	18+	6	H	L	SZ SZ
797	Carnegiea gigantea - Saguaro	3		H	H	PS
798	Carnegiea gigantea - Saguaro	8		H	M	MS SL
800	Carnegiea gigantea - Saguaro	6		H	H	PS
802	Carnegiea gigantea - Saguaro	5		H	H	PS
803	Carnegiea gigantea - Saguaro	6		H	H	PS
804	Carnegiea gigantea - Saguaro	4		H	H	PS
805	Carnegiea gigantea - Saguaro	18+	7	L	L	BT
808	Carnegiea gigantea - Saguaro	5		H	H	PS
809	Carnegiea gigantea - Saguaro	6		H	L	SL
810	Carnegiea gigantea - Saguaro	8		L	L	SL PROX
814	Carnegiea gigantea - Saguaro	6		H	H	PS
816	Carnegiea gigantea - Saguaro	15		H	M	MS
817	Carnegiea gigantea - Saguaro	15	3	M	L	PRO SL
819	Carnegiea gigantea - Saguaro	6		H	H	PS
821	Carnegiea gigantea - Saguaro	18+	6	H	L	SZ SZ
822	Carnegiea gigantea - Saguaro	15	2	L	L	RT
830	Carnegiea gigantea - Saguaro	18+	12	M	L	LE SZ SZ
836	Carnegiea gigantea - Saguaro	10		H	M	MS SL
837	Carnegiea gigantea - Saguaro	8		H	M	MS SL
868	Carnegiea gigantea - Saguaro	15	2	H	H	PS
873	Carnegiea gigantea - Saguaro	6		H	H	PS
894	Carnegiea gigantea - Saguaro	18+	8	L	L	BT SZ
897	Carnegiea gigantea - Saguaro	18+	3	M	L	SZ SZ
898	Carnegiea gigantea - Saguaro	18+	3	H	L	SZ SZ
904	Carnegiea gigantea - Saguaro	8		H	H	PS
905	Carnegiea gigantea - Saguaro	12		L	L	RT
908	Carnegiea gigantea - Saguaro	18+		L	L	BT
910	Carnegiea gigantea - Saguaro	8		H	H	PS
914	Carnegiea gigantea - Saguaro	6		H	H	PS
918	Carnegiea gigantea - Saguaro	15	1	L	L	RT
920	Carnegiea gigantea - Saguaro	15		M	M	PRO MS
934	Carnegiea gigantea - Saguaro	18+	5	H	L	SZ SZ
945	Carnegiea gigantea - Saguaro	10		L	L	LE
952	Carnegiea gigantea - Saguaro	18+	9	L	L	SZ SZ
956	Carnegiea gigantea - Saguaro	6		H	H	PS
962	Carnegiea gigantea - Saguaro	8		H	H	PS
964	Carnegiea gigantea - Saguaro	6		H	H	PS
968	Carnegiea gigantea - Saguaro	4		H	H	PS
971	Carnegiea gigantea - Saguaro	12		H	H	PS
972	Carnegiea gigantea - Saguaro	10		H	H	PS _
973	Carnegiea gigantea - Saguaro	6		H	M	MS PROX
976	Carnegiea gigantea - Saguaro	18+	16	H	L	SZ SZ
990	Carnegiea gigantea - Saguaro	6		H	H	PS _
995	Carnegiea gigantea - Saguaro	6		H	H	PS
997	Carnegiea gigantea - Saguaro	6		H	H	PS
998	Carnegiea gigantea - Saguaro	6		H	H	PS
1002	Carnegiea gigantea - Saguaro	10		H	L	SL
1003	Carnegiea gigantea - Saguaro	18	3	H	L	SZ
1013	Carnegiea gigantea - Saguaro	8		L	L	BT
1014	Carnegiea gigantea - Saguaro	18	4	M	L	SL
1015	Carnegiea gigantea - Saguaro	6		H	M	SL MS
1016	Carnegiea gigantea - Saguaro	4		H	M	SL MS
1019	Carnegiea gigantea - Saguaro	15	2	H	H	PS
1020	Carnegiea gigantea - Saguaro	15	_	H	H	PS
1021	Carnegiea gigantea - Saguaro	8		H	H	PS
1022	Carnegiea gigantea - Saguaro	15	9	H	H	PS
1024	Carnegiea gigantea - Saguaro	15		H	H	PS
1035	Carnegiea gigantea - Saguaro	8		H	H	PS
1044	Carnegiea gigantea - Saguaro	6		L	L	BT
1049	Carnegiea gigantea - Saguaro	8		H	H	PS
1050	Carnegiea gigantea - Saguaro	18	1	H	M	MS SZ
1053	Carnegiea gigantea - Saguaro	8		H	H	PS
1055	Carnegiea gigantea - Saguaro	6		H	H	PS
1057	Carnegiea gigantea - Saguaro	8		H	H	PS
1058	Carnegiea gigantea - Saguaro	8		H	H	PS
1061	Carnegiea gigantea - Saguaro	5		H	H	PS
1069	Carnegiea gigantea - Saguaro	10	3	L	L	BT
1070	Carnegiea gigantea - Saguaro	8		H	H	PS
1081	Carnegiea gigantea - Saguaro	15		H	H	PS _
1083	Carnegiea gigantea - Saguaro	10		H	H	PS
1084	Carnegiea gigantea - Saguaro	10		H	H	PS
1088	Carnegiea gigantea - Saguaro	10		H	H	PS
1089	Carnegiea gigantea - Saguaro	10		H	H	PS
1093	Carnegiea gigantea - Saguaro	6		H	H	PS
1104	Carnegiea gigantea - Saguaro	18+	5	H	L	SZ
1105	Carnegiea gigantea - Saguaro	18+	5	H	L	SZ
1107	Carnegiea gigantea - Saguaro	18+	3	L	L	RT LE
1111	Carnegiea gigantea - Saguaro	18+	14	H	L	SZ SZ
1116	Carnegiea gigantea - Saguaro	12	1	H	H	PS
1120	Carnegiea gigantea - Saguaro	6		H	H	PS
1121	Carnegiea gigantea - Saguaro	6		H	H	PS
1124	Carnegiea gigantea - Saguaro	6		H	H	PS
1125	Carnegiea gigantea - Saguaro	6		H	H	PS
1126	Carnegiea gigantea - Saguaro	8		H	H	PS
1127	Carnegiea gigantea - Saguaro	10		H	H	PS
1129	Carnegiea gigantea - Saguaro	8		H	H	PS
1138	Carnegiea gigantea - Saguaro	18+	2	H	M	MS
1140	Carnegiea gigantea - Saguaro	8		M	L	PRO _
1145	Carnegiea gigantea - Saguaro	8		H	H	PS
1148	Carnegiea gigantea - Saguaro	18+	16	H	H	PS SZ SZ
1149	Carnegiea gigantea - Saguaro	10		G		PS
1151	Carnegiea gigantea - Saguaro	10		G		PS
1152	Carnegiea gigantea - Saguaro	6		G		PS
1153	Carnegiea gigantea - Saguaro	8		G		PS
1156	Carnegiea gigantea - Saguaro	12		G		PS
1157	Carnegiea gigantea - Saguaro	18+	3	G		PS SZ _
1158	Carnegiea gigantea - Saguaro	6		G		PS
1159	Carnegiea gigantea - Saguaro	10		G		PS
1162	Carnegiea gigantea - Saguaro	10		G		PS
1163	Carnegiea gigantea - Saguaro	6		G		PS
1164	Carnegiea gigantea - Saguaro	18+	10	P		SZ SZ LE
1166	Carnegiea gigantea - Saguaro	10		G		PS
1167	Carnegiea gigantea - Saguaro	6		G		PS
1168	Carnegiea gigantea - Saguaro	8		G		PS
1170	Carnegiea gigantea - Saguaro	18+	9	F		SZ SZ LE
1171	Carnegiea gigantea - Saguaro	2		G		PS _
1173	Carnegiea gigantea - Saguaro	15	3	G		MS SZ
1174	Carnegiea gigantea - Saguaro	8		G		PS
1175	Carnegiea gigantea - Saguaro	10		P		BT
1177	Carnegiea gigantea - Saguaro	18	2	G		SZ
1178	Carnegiea gigantea - Saguaro	10		G		PS
1179	Carnegiea gigantea - Saguaro	8		G		PS
1183	Carnegiea gigantea - Saguaro	8		G		PS
1184	Carnegiea gigantea - Saguaro	8		G		PS
1187	Carnegiea gigantea - Saguaro	8		G		PS
1190	Carnegiea gigantea - Saguaro	4		G		PS
1191	Carnegiea gigantea - Saguaro	12		G		PS
1192	Carnegiea gigantea - Saguaro	6		G		PS
1195	Carnegiea gigantea - Saguaro	4		P		RT _ _
1197	Carnegiea gigantea - Saguaro	15		P		RT
1198	Carnegiea gigantea - Saguaro	3		G		PS
1199	Carnegiea gigantea - Saguaro	6		G		PS
1200	Carnegiea gigantea - Saguaro	6		G		PS
1201	Carnegiea gigantea - Saguaro	6		G		PS
1203	Carnegiea gigantea - Saguaro	5		G		PS
1204	Carnegiea gigantea - Saguaro	8		G		PS
1206	Carnegiea gigantea - Saguaro	18	3	G		SZ
1208	Carnegiea gigantea - Saguaro	6		G		PS
1211	Carnegiea gigantea - Saguaro	6		G		PS
1213	Carnegiea gigantea - Saguaro	6		G		PS
1216	Carnegiea gigantea - Saguaro	6		G		PS
1217	Carnegiea gigantea - Saguaro	18	5	G		SZ
1218	Carnegiea gigantea - Saguaro	8		G		_
1220	Carnegiea gigantea - Saguaro	12	2	F		MS
1223	Carnegiea gigantea - Saguaro	8		G		PS
1225	Carnegiea gigantea - Saguaro	10		G		PS
1230	Carnegiea gigantea - Saguaro	8		G		PS
1231	Carnegiea gigantea - Saguaro	8		G		PS
1232	Carnegiea gigantea - Saguaro	10		G		PS
1234	Carnegiea gigantea - Saguaro	6		G		PS
1238	Carnegiea gigantea - Saguaro	8		G		PS
1240	Carnegiea gigantea - Saguaro	6		G		PS
1241	Carnegiea gigantea - Saguaro	10		G		PS
1245	Carnegiea gigantea - Saguaro	8		G		PS
1246	Carnegiea gigantea - Saguaro	10		G		PS _ _
1248	Carnegiea gigantea - Saguaro	15		G		PS
1249	Carnegiea gigantea - Saguaro	18+	8	F		SZ
1251	Carnegiea gigantea - Saguaro	10		G		PS
1253	Carnegiea gigantea - Saguaro	15	1	G		PS
1254	Carnegiea gigantea - Saguaro	5		P		RT
1256	Carnegiea gigantea - Saguaro	15		G		PS
1258	Carnegiea gigantea - Saguaro	10		G		PS
1261	Carnegiea gigantea - Saguaro	6		G		PS
1262	Carnegiea gigantea - Saguaro	6		G		PS
1264	Carnegiea gigantea - Saguaro	4		G		PS
1265	Carnegiea gigantea - Saguaro	6		F		RT
1269	Carnegiea gigantea - Saguaro	6		G		PS
1270	Carnegiea gigantea - Saguaro	10		G		PS _
1271	Carnegiea gigantea - Saguaro	12		G		PS
1275	Carnegiea gigantea - Saguaro	18+	1	G		SZ
1276	Carnegiea gigantea - Saguaro	15	_	G		MS
1278	Carnegiea gigantea - Saguaro	6		G		PS
1279	Carnegiea gigantea - Saguaro	8		G		PS
1280	Carnegiea gigantea - Saguaro	10		G		PS
1281	Carnegiea gigantea - Saguaro	18	2	G		SZ
1282	Carnegiea gigantea - Saguaro	8		G		
1284	Carnegiea gigantea - Saguaro	12		G		PS
1288	Carnegiea gigantea - Saguaro	18+	12	F		SZ SZ BT
1289	Carnegiea gigantea - Saguaro	6		G		PS
1290	Carnegiea gigantea - Saguaro	6		G		PS
1292	Carnegiea gigantea - Saguaro	6		G		PS
1293	Carnegiea gigantea - Saguaro	6		G		PS
1295	Carnegiea gigantea - Saguaro	12		G		PS
1296	Carnegiea gigantea - Saguaro	6		G		PS
1297	Carnegiea gigantea - Saguaro	10		G		PS
1298	Carnegiea gigantea - Saguaro	15		G		PS
1299	Carnegiea gigantea - Saguaro	4		G		PS
1300	Carnegiea gigantea - Saguaro	8		G		PS
1301	Carnegiea gigantea - Saguaro	18+	14	F		SZ SZ LE
1307	Carnegiea gigantea - Saguaro	4		G		PS
1309	Carnegiea gigantea - Saguaro	12		G		PS _ _
1310	Carnegiea gigantea - Saguaro	10		G		PS
1313	Carnegiea gigantea - Saguaro	18+	14	P		SZ SZ BT
1314	Carnegiea gigantea - Saguaro	18	2	G		SZ
1315	Carnegiea gigantea - Saguaro	18+	6	G		SZ SZ
1317	Carnegiea gigantea - Saguaro	8		G		PS _ _
1318	Carnegiea gigantea - Saguaro	6		G		PS
1320	Carnegiea gigantea - Saguaro	6		G		PS
1324	Carnegiea gigantea - Saguaro	18+	10	F		SZ SZ _
1325	Carnegiea gigantea - Saguaro	10		G		PS
1327	Carnegiea gigantea - Saguaro	10		G		PS
1328	Carnegiea gigantea - Saguaro	10		G		PS _
1329	Carnegiea gigantea - Saguaro	10		G		PS
1330	Carnegiea gigantea - Saguaro	12	2	G		PS
1337	Carnegiea gigantea - Saguaro	18	5	G		SZ
1341	Carnegiea gigantea - Saguaro	8		G		PS
1343	Carnegiea gigantea - Saguaro	6		G		PS
1344	Carnegiea gigantea - Saguaro	15		G		PS
1345	Carnegiea gigantea - Saguaro	6		G		PS
1347	Carnegiea gigantea - Saguaro	8		G		PS
1348	Carnegiea gigantea - Saguaro	8		G		PS
1351	Carnegiea gigantea - Saguaro	6	1	F		MS BT
1353	Carnegiea gigantea - Saguaro	18+	4	G		SZ SZ
1354	Carnegiea gigantea - Saguaro	4	4	G		
1356	Carnegiea gigantea - Saguaro	8		G		PS _ _
1359	Carnegiea gigantea - Saguaro	18+	6	G		SZ SZ
1360	Carnegiea gigantea - Saguaro	4		G		PS
1361	Carnegiea gigantea - Saguaro	18+	5	G		SZ
1362	Carnegiea gigantea - Saguaro	8		G		PS
1363	Carnegiea gigantea - Saguaro	12		G		PS
1364	Carnegiea gigantea - Saguaro	10		G		PS
1365	Carnegiea gigantea - Saguaro	8		G		PS
1368	Carnegiea gigantea - Saguaro	15	4	G		PS
1372	Carnegiea gigantea - Saguaro	4		G		PS
1373	Carnegiea gigantea - Saguaro	18+	1	P		SZ LE BT
1374	Carnegiea gigantea - Saguaro	6		G		PS
1375	Carnegiea gigantea - Saguaro	6		G		PS
1378	Carnegiea gigantea - Saguaro	8		G		PS
1379	Carnegiea gigantea - Saguaro	15	3	G		PS
1382	Carnegiea gigantea - Saguaro	6		G		PS
1385	Carnegiea gigantea - Saguaro	6		G		PS
1386	Carnegiea gigantea - Saguaro	18+	8	G		SZ SZ LE
1387	Carnegiea gigantea - Saguaro	12	2	G		PS
1388	Carnegiea gigantea - Saguaro	15	4	P		PRO BT
1390	Carnegiea gigantea - Saguaro	8	1	P		BT
1392	Carnegiea gigantea - Saguaro	8		G		PS
1393	Carnegiea gigantea - Saguaro	10		G		PS _
1395	Carnegiea gigantea - Saguaro	18	4	F		SZ
1396	Carnegiea gigantea - Saguaro	18	1	F		SZ SZ
1398	Carnegiea gigantea - Saguaro	6		G		PS
1399	Carnegiea gigantea - Saguaro	8		G		PS
1401	Carnegiea gigantea - Saguaro	10		G		PS
1402	Carnegiea gigantea - Saguaro	8		G		PS
1403	Carnegiea gigantea - Saguaro	15	2	G		PS
1404	Carnegiea gigantea - Saguaro	18+	3	G		SZ SZ
1408	Carnegiea gigantea - Saguaro	8		G		PS
1409	Carnegiea gigantea - Saguaro	10		G		PS
1410	Carnegiea gigantea - Saguaro	10		G		PS
1415	Carnegiea gigantea - Saguaro	4		G		PS
1416	Carnegiea gigantea - Saguaro	18	1	G		SZ
1420	Carnegiea gigantea - Saguaro	4		G		PS
1422	Carnegiea gigantea - Saguaro	6		G		PS
1424	Carnegiea gigantea - Saguaro	18+	7	F		SZ SZ
1430	Carnegiea gigantea - Saguaro	18	5	F		SZ
1431	Carnegiea gigantea - Saguaro	6		G		PS
1435	Carnegiea gigantea - Saguaro	18+	7	F		SZ SZ
1438	Carnegiea gigantea - Saguaro	8		G		PS
1442	Carnegiea gigantea - Saguaro	8		G		PS
1443	Carnegiea gigantea - Saguaro	6		G		PS
1445	Carnegiea gigantea - Saguaro	5		G		PS
1446	Carnegiea gigantea - Saguaro	10		G		PS
1448	Carnegiea gigantea - Saguaro	12		G		PS
1449	Carnegiea gigantea - Saguaro	12		G		PS
1450	Carnegiea gigantea - Saguaro	8		F		RT MS
1451	Carnegiea gigantea - Saguaro	6		F		RT MS
1454	Carnegiea gigantea - Saguaro	6		G		PS
1455	Carnegiea gigantea - Saguaro	10		G		PS
1456	Carnegiea gigantea - Saguaro	4		G		PS
1458	Carnegiea gigantea - Saguaro	10		G		PS
1461	Carnegiea gigantea - Saguaro	18+	4	G		SZ SZ
1462	Carnegiea gigantea - Saguaro	15	3	P		BT _
1465	Carnegiea gigantea - Saguaro	4		G		PS
1466	Carnegiea gigantea - Saguaro	10		G		PS
1469	Carnegiea gigantea - Saguaro	15	4	G		MS SZ
1470	Carnegiea gigantea - Saguaro	15	_	G		MS SZ
1471	Carnegiea gigantea - Saguaro	3		G		PS
1474	Carnegiea gigantea - Saguaro	4		G		PS

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Date: 4/9/21
Drawn by: LMW
Checked by: GRS

☐ Design Review
☐ Construction Documents
☒ Agency Submittal
☐ Construction Set
☒ Not for Construction

CORTARO 57
SPECIFIC PLAN
SAGUARO & IRONWOOD INVENTORY

CACTUS INVENTORY

ID NO.	DESCRIPTION	SIZE	ARMS	VIABILITY	TRANS	COMMENTS
1477	Carnegiea gigantea - Saguaro	18+	4	F		SZ SZ
1479	Carnegiea gigantea - Saguaro	18+	5	P		SZ SZ LE
1489	Carnegiea gigantea - Saguaro	15	5	P		
1492	Carnegiea gigantea - Saguaro	10		G		PS
1494	Carnegiea gigantea - Saguaro	18+	5	F		SZ
1495	Carnegiea gigantea - Saguaro	18+	6	F		SZ SZ
1496	Carnegiea gigantea - Saguaro	15		F		RD MS
1498	Carnegiea gigantea - Saguaro	8		G		PS
1499	Carnegiea gigantea - Saguaro	6		G		PS
1501	Carnegiea gigantea - Saguaro	6		G		PS
1504	Carnegiea gigantea - Saguaro	6		F		PS
1505	Carnegiea gigantea - Saguaro	18+	2	F		LE SZ SZ
1506	Carnegiea gigantea - Saguaro	3		G		PS
1507	Carnegiea gigantea - Saguaro	18+	4	F		SZ SZ LE
1509	Carnegiea gigantea - Saguaro	18+	12	P		SZ SZ BT
1511	Carnegiea gigantea - Saguaro	6		G		PS
1514	Carnegiea gigantea - Saguaro	18+	16	G		SZ SZ
1515	Carnegiea gigantea - Saguaro	18	2	F		SZ
1518	Carnegiea gigantea - Saguaro	3		G		PS
1521	Carnegiea gigantea - Saguaro	5		P		BT
1524	Carnegiea gigantea - Saguaro	18+	12	F		SZ SZ
1527	Carnegiea gigantea - Saguaro	18+	2	G		SZ SZ
1528	Carnegiea gigantea - Saguaro	18+	12	P		SZ SZ
1536	Carnegiea gigantea - Saguaro	15	5	F		MS
1538	Carnegiea gigantea - Saguaro	5		G		PS
1539	Carnegiea gigantea - Saguaro	18+	8	G		SZ SZ
1540	Carnegiea gigantea - Saguaro	18+	5	G		SZ SZ
1541	Carnegiea gigantea - Saguaro	18+	2	P		SZ SZ BT
1542	Carnegiea gigantea - Saguaro	18+	12	F		SZ SZ BT
1543	Carnegiea gigantea - Saguaro	18+	8	F		SZ SZ BT
1547	Carnegiea gigantea - Saguaro	18+	8	G		LE SL
1550	Carnegiea gigantea - Saguaro	2		G		PS
1551	Carnegiea gigantea - Saguaro	6		G		PS
1555	Carnegiea gigantea - Saguaro	6		P		BT
1556	Carnegiea gigantea - Saguaro	12	2	G		PS
1557	Carnegiea gigantea - Saguaro	4		G		PS
1558	Carnegiea gigantea - Saguaro	4		G		PS
1559	Carnegiea gigantea - Saguaro	15		G		PS
1560	Carnegiea gigantea - Saguaro	2		G		PS
1561	Carnegiea gigantea - Saguaro	6		G		PS
1565	Carnegiea gigantea - Saguaro	3		G		PS
1567	Carnegiea gigantea - Saguaro	6		G		PS
1574	Carnegiea gigantea - Saguaro	18+	6	P		LE
1575	Carnegiea gigantea - Saguaro	6	6	P		LE
1576	Carnegiea gigantea - Saguaro	3		G		PS
1579	Carnegiea gigantea - Saguaro	4		G		PS
1580	Carnegiea gigantea - Saguaro	3		G		PS
1582	Carnegiea gigantea - Saguaro	8	14	F		SZ SZ
1585	Carnegiea gigantea - Saguaro	3		G		PS
1586	Carnegiea gigantea - Saguaro	4		G		PS
1587	Carnegiea gigantea - Saguaro	4		P		BT
1588	Carnegiea gigantea - Saguaro	2		G		PS
1592	Carnegiea gigantea - Saguaro	3		G		PS
1593	Carnegiea gigantea - Saguaro	6		G		PS
1594	Carnegiea gigantea - Saguaro	4		G		PS
1595	Carnegiea gigantea - Saguaro	6	3	P		BT
1596	Carnegiea gigantea - Saguaro	10		G		PS
1599	Carnegiea gigantea - Saguaro	2		G		PS
1604	Carnegiea gigantea - Saguaro	2		G		PS
1605	Carnegiea gigantea - Saguaro	15	4	G		MS SL
1606	Carnegiea gigantea - Saguaro	18+	9	P		LE SZ SZ
1610	Carnegiea gigantea - Saguaro	18+	4	G		SZ SZ SL
1611	Carnegiea gigantea - Saguaro	10		G		PS
1612	Carnegiea gigantea - Saguaro	18+	6	P		LE SZ SZ
1613	Carnegiea gigantea - Saguaro	6		G		PS
1614	Carnegiea gigantea - Saguaro	6		G		PS
1617	Carnegiea gigantea - Saguaro	5		G		PS
1619	Carnegiea gigantea - Saguaro	15	3	F		PS
1620	Carnegiea gigantea - Saguaro	15	3	F		PS
1621	Carnegiea gigantea - Saguaro	12		G		PS
1622	Carnegiea gigantea - Saguaro	6		G		PS
1627	Carnegiea gigantea - Saguaro	6		F		PS
1628	Carnegiea gigantea - Saguaro	8		F		MS RT
1629	Carnegiea gigantea - Saguaro	10		G		PS
1632	Carnegiea gigantea - Saguaro	18+	4	G		SZ
1633	Carnegiea gigantea - Saguaro	3		G		PS
1634	Carnegiea gigantea - Saguaro	18+	14	G		SZ SZ
1635	Carnegiea gigantea - Saguaro	6		G		PS
1638	Carnegiea gigantea - Saguaro	1		G		PS
1640	Carnegiea gigantea - Saguaro	6		G		PS
1641	Carnegiea gigantea - Saguaro	8		G		PS
1642	Carnegiea gigantea - Saguaro	8		G		PS
1643	Carnegiea gigantea - Saguaro	2		G		PS
1644	Carnegiea gigantea - Saguaro	4		G		PS
1646	Carnegiea gigantea - Saguaro	18+	8	G		SZ SZ
1647	Carnegiea gigantea - Saguaro	4		G		PS
1648	Carnegiea gigantea - Saguaro	12		G		PS
1650	Carnegiea gigantea - Saguaro	3		G		PS
1652	Carnegiea gigantea - Saguaro	10		G		PS
1653	Carnegiea gigantea - Saguaro	12		G		PS
1654	Carnegiea gigantea - Saguaro	4		G		PS
1657	Carnegiea gigantea - Saguaro	12		G		PS
1660	Carnegiea gigantea - Saguaro	8		G		PS
1666	Carnegiea gigantea - Saguaro	12		G		PS
1667	Carnegiea gigantea - Saguaro	10		G		PS
1668	Carnegiea gigantea - Saguaro	18+	4	G		SZ
1669	Carnegiea gigantea - Saguaro	4		G		PS
1673	Carnegiea gigantea - Saguaro	6		G		PS
1674	Carnegiea gigantea - Saguaro	18+	4	F		SZ SZ
1676	Carnegiea gigantea - Saguaro	8		G		PS
1677	Carnegiea gigantea - Saguaro	5		G		PS
1680	Carnegiea gigantea - Saguaro	18+	12	F		SZ SZ
1681	Carnegiea gigantea - Saguaro	3		G		PS
1682	Carnegiea gigantea - Saguaro	12		G		PS
1684	Carnegiea gigantea - Saguaro	18+	2	G		SZ SZ
1685	Carnegiea gigantea - Saguaro	15		G		PS
1692	Carnegiea gigantea - Saguaro	6		G		PS
1696	Carnegiea gigantea - Saguaro	2		G		PS
1697	Carnegiea gigantea - Saguaro	2		G		PS
1698	Carnegiea gigantea - Saguaro	18+	2	G		SZ
1699	Carnegiea gigantea - Saguaro	8		G		PS
1700	Carnegiea gigantea - Saguaro	18+	5	G		PS
1701	Carnegiea gigantea - Saguaro	4		G		PS
1702	Carnegiea gigantea - Saguaro	10		G		PS
1705	Carnegiea gigantea - Saguaro	10		G		PS
1706	Carnegiea gigantea - Saguaro	6		G		PS
1707	Carnegiea gigantea - Saguaro	6		P		BT
1708	Carnegiea gigantea - Saguaro	15	2	G		PS
1713	Carnegiea gigantea - Saguaro	1		G		PS
1714	Carnegiea gigantea - Saguaro	6		P		RT
1715	Carnegiea gigantea - Saguaro	18+	2	G		SZ
1717	Carnegiea gigantea - Saguaro	6		G		PS
1719	Carnegiea gigantea - Saguaro	8		G		PS
1724	Carnegiea gigantea - Saguaro	10		G		PS
1725	Carnegiea gigantea - Saguaro	4		G		PS
1726	Carnegiea gigantea - Saguaro	15	2	G		PS
1749	Carnegiea gigantea - Saguaro	4		G		PS
1750	Carnegiea gigantea - Saguaro	12		G		PS
1753	Carnegiea gigantea - Saguaro	4		G		PS
1754	Carnegiea gigantea - Saguaro	10		G		PS
1755	Carnegiea gigantea - Saguaro	8		G		PS
1756	Carnegiea gigantea - Saguaro	4		G		PS
1762	Carnegiea gigantea - Saguaro	8		G		PS
1763	Carnegiea gigantea - Saguaro	8		G		PS
1764	Carnegiea gigantea - Saguaro	15	4	G		MS SZ
1767	Carnegiea gigantea - Saguaro	4		G		PS
1769	Carnegiea gigantea - Saguaro	10		G		PS
1774	Carnegiea gigantea - Saguaro	10		G		PS
1777	Carnegiea gigantea - Saguaro	18	6	P		RT
1780	Carnegiea gigantea - Saguaro	10		G		PS
1783	Carnegiea gigantea - Saguaro	6		P		RT
1784	Carnegiea gigantea - Saguaro	12		P		DY
1785	Carnegiea gigantea - Saguaro	8		F		BT
1786	Carnegiea gigantea - Saguaro	8		G		PS
1787	Carnegiea gigantea - Saguaro	4		G		PS
1788	Carnegiea gigantea - Saguaro	6		G		PS
1789	Carnegiea gigantea - Saguaro	5		G		PS
1791	Carnegiea gigantea - Saguaro	6		G		PS
1792	Carnegiea gigantea - Saguaro	8		G		PS
1793	Carnegiea gigantea - Saguaro	3		G		PS
1796	Carnegiea gigantea - Saguaro	10		G		PS
1805	Carnegiea gigantea - Saguaro	4		G		PS
1807	Carnegiea gigantea - Saguaro	4		G		PS
1809	Carnegiea gigantea - Saguaro	4		G		PS
1810	Carnegiea gigantea - Saguaro	6		G		PS
1811	Carnegiea gigantea - Saguaro	3		G		PS
1812	Carnegiea gigantea - Saguaro	6		G		PS
1813	Carnegiea gigantea - Saguaro	8		P		DY
1815	Carnegiea gigantea - Saguaro	18	4	G		SZ
1816	Carnegiea gigantea - Saguaro	10		G		PS
1817	Carnegiea gigantea - Saguaro	15	2	G		PS
1819	Carnegiea gigantea - Saguaro	6		P		BT RT
1822	Carnegiea gigantea - Saguaro	6		G		PS
1825	Carnegiea gigantea - Saguaro	18		P		DY
1828	Carnegiea gigantea - Saguaro	15	2	G		MS SZ
1832	Carnegiea gigantea - Saguaro	18	5	G		SZ
1834	Carnegiea gigantea - Saguaro	18+	8	P		LE SZ SZ
1836	Carnegiea gigantea - Saguaro	6		G		PS
1837	Carnegiea gigantea - Saguaro	18+	10	F		SZ SZ
1838	Carnegiea gigantea - Saguaro	15		G		PS
1839	Carnegiea gigantea - Saguaro	8		P		BT
1840	Carnegiea gigantea - Saguaro	6		G		PS
1841	Carnegiea gigantea - Saguaro	6		G		PS
1842	Carnegiea gigantea - Saguaro	10		G		PS
1843	Carnegiea gigantea - Saguaro	10		G		PS
1844	Carnegiea gigantea - Saguaro	10		P		BT
1847	Carnegiea gigantea - Saguaro	8		P		BT
1849	Carnegiea gigantea - Saguaro	8		F		MS
1850	Carnegiea gigantea - Saguaro	6		F		MS
1854	Carnegiea gigantea - Saguaro	6		G		PS
1855	Carnegiea gigantea - Saguaro	12		G		PS
1856	Carnegiea gigantea - Saguaro	12		G		PS
1859	Carnegiea gigantea - Saguaro	10		G		PS
1860	Carnegiea gigantea - Saguaro	12		G		PS
1863	Carnegiea gigantea - Saguaro	4		G		PS
1866	Carnegiea gigantea - Saguaro	12		G		PS
1867	Carnegiea gigantea - Saguaro	6		G		PS
1868	Carnegiea gigantea - Saguaro	12		G		PS
1870	Carnegiea gigantea - Saguaro	12	1	G		PS
1871	Carnegiea gigantea - Saguaro	10		G		PS
1873	Carnegiea gigantea - Saguaro	6		G		PS
1874	Carnegiea gigantea - Saguaro	8		P		BT
1877	Carnegiea gigantea - Saguaro	6		G		PS
1878	Carnegiea gigantea - Saguaro	10		G		PS
1880	Carnegiea gigantea - Saguaro	4		G		PS
1882	Carnegiea gigantea - Saguaro	5		G		PS
1886	Carnegiea gigantea - Saguaro	18+	9	G		SZ SZ LE
1890	Carnegiea gigantea - Saguaro	15		G		PS
1894	Carnegiea gigantea - Saguaro	5		G		PS
1896	Carnegiea gigantea - Saguaro	3		G		PS
1897	Carnegiea gigantea - Saguaro	18	1	G		MS SZ
1906	Carnegiea gigantea - Saguaro	6		P		BT
1914	Carnegiea gigantea - Saguaro	6		G		PS
1918	Carnegiea gigantea - Saguaro	2		G		PS
1927	Carnegiea gigantea - Saguaro	5		G		PS
1932	Carnegiea gigantea - Saguaro	5		G		PS
1935	Carnegiea gigantea - Saguaro	2		G		PS
1936	Carnegiea gigantea - Saguaro	18+	9	P		SZ SZ LE
1954	Carnegiea gigantea - Saguaro	18+	2	P		PS BT
2001	Carnegiea gigantea - Saguaro	10		P		
2009	Carnegiea gigantea - Saguaro	18+	6	F		SZ SZ
2011	Carnegiea gigantea - Saguaro	4		G		PS
2017	Carnegiea gigantea - Saguaro	18+	4	P		RT BT
2018	Carnegiea gigantea - Saguaro	18+	10	F		LE
2021	Carnegiea gigantea - Saguaro	4	2	F		BT
2023	Carnegiea gigantea - Saguaro	8		G		PS
2025	Carnegiea gigantea - Saguaro	4		P		RT
2030	Carnegiea gigantea - Saguaro	6		G		PS
2040	Carnegiea gigantea - Saguaro	6		G		PS
2047	Carnegiea gigantea - Saguaro	15		F		MS RT
2058	Carnegiea gigantea - Saguaro	8		G		PS
2059	Carnegiea gigantea - Saguaro	15		G		PS
2060	Carnegiea gigantea - Saguaro	10	1	G		PS
2078	Carnegiea gigantea - Saguaro	6		G		PS
2081	Carnegiea gigantea - Saguaro	3		G		PS
2082	Carnegiea gigantea - Saguaro	18+	14	P		LE BT
2083	Carnegiea gigantea - Saguaro	18+	10	P		DY
2087	Carnegiea gigantea - Saguaro	8		G		PS
2089	Carnegiea gigantea - Saguaro	10		G		PS
2090	Carnegiea gigantea - Saguaro	12		G		PS
2092	Carnegiea gigantea - Saguaro	8		G		PS
2093	Carnegiea gigantea - Saguaro	10		G		PS
2094	Carnegiea gigantea - Saguaro	8		G		PS
2095	Carnegiea gigantea - Saguaro	8		P		RT
2096	Carnegiea gigantea - Saguaro	8		G		PS
2097	Carnegiea gigantea - Saguaro	4		G		PS
2098	Carnegiea gigantea - Saguaro	4		G		PS
2099	Carnegiea gigantea - Saguaro	4		G		PS
2101	Carnegiea gigantea - Saguaro	18+	8	F		SZ SZ LE
2104	Carnegiea gigantea - Saguaro	6		G		PS
2106	Carnegiea gigantea - Saguaro	10		G		PS
2113	Carnegiea gigantea - Saguaro	10		G		PS
2118	Carnegiea gigantea - Saguaro	6		G		PS
2126	Carnegiea gigantea - Saguaro	8		G		PS
2127	Carnegiea gigantea - Saguaro	12		P		RT
2129	Carnegiea gigantea - Saguaro	18+	8	G		SZ SZ
2134	Carnegiea gigantea - Saguaro	4		G		PS
2135	Carnegiea gigantea - Saguaro	8		G		PS
2136	Carnegiea gigantea - Saguaro	8		G		PS
2137	Carnegiea gigantea - Saguaro	15		G		PS
2140	Carnegiea gigantea - Saguaro	5		G		PS
2144	Carnegiea gigantea - Saguaro	18+	3	F		SZ SZ
2146	Carnegiea gigantea - Saguaro	18+	9	P		BT SZ SZ
2150	Carnegiea gigantea - Saguaro	4		G		PS
2154	Carnegiea gigantea - Saguaro	6		G		PS
2155	Carnegiea gigantea - Saguaro	10		G		PS
2156	Carnegiea gigantea - Saguaro	8		G		PS
2157	Carnegiea gigantea - Saguaro	8		G		PS
2161	Carnegiea gigantea - Saguaro	18+	8	G		SZ SZ
2162	Carnegiea gigantea - Saguaro	8		P		RT
2165	Carnegiea gigantea - Saguaro	18+	8	F		SZ SZ
2169	Carnegiea gigantea - Saguaro	8		G		PS
2170	Carnegiea gigantea - Saguaro	6		G		PS
2172	Carnegiea gigantea - Saguaro	4		G		PS
2173	Carnegiea gigantea - Saguaro	12		G		PS
2174	Carnegiea gigantea - Saguaro	15		G		PS
2175	Carnegiea gigantea - Saguaro	4		G		PS
2176	Carnegiea gigantea - Saguaro	15	3	G		PS
2177	Carnegiea gigantea - Saguaro	15	3	G		PS

IRONWOOD INVENTORY

ID NO.	DESCRIPTION	SIZE	VIABILITY		TRANS	COMMENTS
4	Olneya tesota - Desert Ironwood	12+	L	L		DT TM
8	Olneya tesota - Desert Ironwood	12+	L	L		DT TM RD
9	Olneya tesota - Desert Ironwood	12+	L	L		DW TM RD
10	Olneya tesota - Desert Ironwood	10	L	L		DW BL
11	Olneya tesota - Desert Ironwood	12+	L	L		DW BL TM
14	Olneya tesota - Desert Ironwood	12+	M	M		DW SZ TM
15	Olneya tesota - Desert Ironwood	12+	L	L		DW RD TM
17	Olneya tesota - Desert Ironwood	6	M	M		
18	Olneya tesota - Desert Ironwood	6	M	M		VMS MT
19	Olneya tesota - Desert Ironwood	6	M	M		VMS DW
20	Olneya tesota - Desert Ironwood	10	M	M		MS RT
22	Olneya tesota - Desert Ironwood	12+	L	L		RD TM MT
23	Olneya tesota - Desert Ironwood	8	M	M		VMS DT LE
24	Olneya tesota - Desert Ironwood	12+	L	L		TM MT DW
25	Olneya tesota - Desert Ironwood	12+	L	L		TM DT DW
26	Olneya tesota - Desert Ironwood	6	M	M		VMS DT DW
27	Olneya tesota - Desert Ironwood	8	L	L		RD DT BL
28	Olneya tesota - Desert Ironwood	12+	L	L		RD DT MT
29	Olneya tesota - Desert Ironwood	10	M	M		VMS DW LB
30	Olneya tesota - Desert Ironwood	12+	L	L		DY
31	Olneya tesota - Desert Ironwood	12+	M	L		TM DW LB
32	Olneya tesota - Desert Ironwood	6	L	L		MT
34	Olneya tesota - Desert Ironwood	12+	H	L		LE SZ
37	Olneya tesota - Desert Ironwood	12+	M	L		TM SZ
38	Olneya tesota - Desert Ironwood	12+	M	L		TM SZ
39	Olneya tesota - Desert Ironwood	12+	L	L		RT TM
40	Olneya tesota - Desert Ironwood	10	L	L		MT DW
43	Olneya tesota - Desert Ironwood	12+	L	L		DY DW
44	Olneya tesota - Desert Ironwood	12+	L	L		RD DW MT
52	Olneya tesota - Desert Ironwood	10	M	M		VMS DW
53	Olneya tesota - Desert Ironwood	10	M	M		VMS TM
55	Olneya tesota - Desert Ironwood	8	M	M		VMS DW
57	Olneya tesota - Desert Ironwood	12+	L	L		RD DW SZ
59	Olneya tesota - Desert Ironwood	12+	L	L		RT DW SZ
61	Olneya tesota - Desert Ironwood	12+	L	L		RT DW RD
62	Olneya tesota - Desert Ironwood	12+	L	L		DT DW LB
63	Olneya tesota - Desert Ironwood	12+	L	L		DY VMS
64	Olneya tesota - Desert Ironwood	12	L	L		BL DW
65	Olneya tesota - Desert Ironwood	6	M	M		DT VMS
66	Olneya tesota - Desert Ironwood	10	M	L		TM DW
67	Olneya tesota - Desert Ironwood	12+	L	L		DT RT
68	Olneya tesota - Desert Ironwood	8	M	M		VMS DW
70	Olneya tesota - Desert Ironwood	12+	M	L		SZ DW
71	Olneya tesota - Desert Ironwood	12+	L	L		SZ RT DW
72	Olneya tesota - Desert Ironwood	8	M	M		MS
73	Olneya tesota - Desert Ironwood	12	M	L		DT RT
74	Olneya tesota - Desert Ironwood	8	M	M		VMS DT
76	Olneya tesota - Desert Ironwood	6	M	M		MS DW
77	Olneya tesota - Desert Ironwood	12+	M	L		SZ RD
78	Olneya tesota - Desert Ironwood	8	M	M		MS DW
79	Olneya tesota - Desert Ironwood	8	M	M		MS DW
80	Olneya tesota - Desert Ironwood	12	L	L		DY
81	Olneya tesota - Desert Ironwood	10	M	M		VMS DW
82	Olneya tesota - Desert Ironwood	8	M	M		MS DW
83	Olneya tesota - Desert Ironwood	12+	M	L		SZ
84	Olneya tesota - Desert Ironwood	18+	L	L		RD RT
85	Olneya tesota - Desert Ironwood	6	H	H		PS
86	Olneya tesota - Desert Ironwood	12	M	L		DT DW
89	Olneya tesota - Desert Ironwood	12+	L	L		DT RD
90	Olneya tesota - Desert Ironwood	6	H	H		PS
91	Olneya tesota - Desert Ironwood	12+	M	L		BL DW
93	Olneya tesota - Desert Ironwood	12+	L	L		TM LB BL
94	Olneya tesota - Desert Ironwood	6	H	H		PS
95	Olneya tesota - Desert Ironwood	12+	M	L		TM DW
101	Olneya tesota - Desert Ironwood	8	H	H		PS
103	Olneya tesota - Desert Ironwood	12+	L	L		BL DW TM
104	Olneya tesota - Desert Ironwood	6	M	M		VMS DW
105	Olneya tesota - Desert Ironwood	12	M	L		LB DW DT
106	Olneya tesota - Desert Ironwood	8	M	L		LB DW TM
107	Olneya tesota - Desert Ironwood	6	M	M		VMS DW
108	Olneya tesota - Desert Ironwood	10	L	L		TM DT
109	Olneya tesota - Desert Ironwood	18+	M	L		DT SZ
110	Olneya tesota - Desert Ironwood	12	M	L		DT DW
111	Olneya tesota - Desert Ironwood	12+	L	L		TM DT
113	Olneya tesota - Desert Ironwood	8	M	M		TM VMS
114	Olneya tesota - Desert Ironwood	8	L	L		TM DW
115	Olneya tesota - Desert Ironwood	8	M	M		VMS DW
116	Olneya tesota - Desert Ironwood	6	M	M		VMS DW
117	Olneya tesota - Desert Ironwood	6	M	M		VMS DW
118	Olneya tesota - Desert Ironwood	4	M	M		VMS DW
119	Olneya tesota - Desert Ironwood	12+	M	L		TM DW RD
120	Olneya tesota - Desert Ironwood	12	M	L		TM DW
122	Olneya tesota - Desert Ironwood	12	L	L		TM DW BL
123	Olneya tesota - Desert Ironwood	6	M	M		TM DW VMS
124	Olneya tesota - Desert Ironwood	12	M	L		DT DW
125	Olneya tesota - Desert Ironwood	8	M	M		TM VMS
126	Olneya tesota - Desert Ironwood	12	L	L		DW BL
128	Olneya tesota - Desert Ironwood	12+	L	L		DW BL

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Date: 4/9/21
Drawn by: LMW
Checked by: GRS

☐ Design Review
☐ Construction Documents
☒ Agency Submittal
☐ Construction Set
☒ Not for Construction

CORTARO 57
SPECIFIC PLAN

SAGUARO & IRONWOOD INVENTORY

IRONWOOD INVENTORY

ID NO.	DESCRIPTION	SIZE	VIABILITY		TRANS	COMMENTS		
129	Olneya tesota - Desert Ironwood	10	L	L	DW	BL	RD	
130	Olneya tesota - Desert Ironwood	8	L	L	DW	RT	RD	
131	Olneya tesota - Desert Ironwood	4	H	H	PS			
133	Olneya tesota - Desert Ironwood	4	H	H	PS			
136	Olneya tesota - Desert Ironwood	6	H	H	PS	DW		
137	Olneya tesota - Desert Ironwood	10	M	L	TM	DW		
138	Olneya tesota - Desert Ironwood	6	H	H	PS			
140	Olneya tesota - Desert Ironwood	6	M	M	MS	DW		
141	Olneya tesota - Desert Ironwood	6	M	M	MS	DW		
142	Olneya tesota - Desert Ironwood	8	M	M	MS	LB		
146	Olneya tesota - Desert Ironwood	8	M	L	BL	DW		
147	Olneya tesota - Desert Ironwood	12+	M	L	TM	LB		
148	Olneya tesota - Desert Ironwood	12+	L	L	MT	DW		
149	Olneya tesota - Desert Ironwood	6	L	L	OT	DW		
150	Olneya tesota - Desert Ironwood	12+	H	L	SZ			
151	Olneya tesota - Desert Ironwood	6	H	H	PS			
152	Olneya tesota - Desert Ironwood	6	M	M	MS			
153	Olneya tesota - Desert Ironwood	12+	M	L	TM			
154	Olneya tesota - Desert Ironwood	12+	L	L	OT	DW	BL	
155	Olneya tesota - Desert Ironwood	12+	L	L	OT	DW	BL	
156	Olneya tesota - Desert Ironwood	12+	L	L	PD	DW	BL	
157	Olneya tesota - Desert Ironwood	8	M	M	MS	DW		
158	Olneya tesota - Desert Ironwood	12+	L	L	RD	DW	BL	
159	Olneya tesota - Desert Ironwood	12+	L	L	MT	DW		
160	Olneya tesota - Desert Ironwood	12	M	M	VMS	SZ		
161	Olneya tesota - Desert Ironwood	12+	H	L	TM	SZ		
162	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW		
163	Olneya tesota - Desert Ironwood	10	M	M	VMS	SZ		
164	Olneya tesota - Desert Ironwood	12	M	M	VMS	SZ		
168	Olneya tesota - Desert Ironwood	6	H	H	PS			
169	Olneya tesota - Desert Ironwood	6	M	M	MS			
170	Olneya tesota - Desert Ironwood	8	M	M	VMS	TM		
171	Olneya tesota - Desert Ironwood	12+	L	L	BL	TM	DW	
174	Olneya tesota - Desert Ironwood	12+	L	L	RD	OT	DW	
175	Olneya tesota - Desert Ironwood	10	L	L	TM	OT	DW	
177	Olneya tesota - Desert Ironwood	6	H	H	PS			
183	Olneya tesota - Desert Ironwood	12	M	L	LB	DW		
185	Olneya tesota - Desert Ironwood	12	L	L	LE	DW		
187	Olneya tesota - Desert Ironwood	8	M	M	MS	SO		
188	Olneya tesota - Desert Ironwood	10	M	M	MS	SO		
189	Olneya tesota - Desert Ironwood	6	M	M	MS			
192	Olneya tesota - Desert Ironwood	12+	M	L	TM	SZ		
193	Olneya tesota - Desert Ironwood	12+	L	L	OT	DW		
194	Olneya tesota - Desert Ironwood	6	H	M	MS			
195	Olneya tesota - Desert Ironwood	12+	M	L	TM			
197	Olneya tesota - Desert Ironwood	10	M	L	TM	DW		
199	Olneya tesota - Desert Ironwood	12+	L	L	OT	DW	RT	
200	Olneya tesota - Desert Ironwood	12+	L	L	OT	DW	RT	
203	Olneya tesota - Desert Ironwood	12+	M	L	TM	SZ		
204	Olneya tesota - Desert Ironwood	12+	L	L	RT	BL		
205	Olneya tesota - Desert Ironwood	12	M	L	TM	BL		
208	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW	MT	
209	Olneya tesota - Desert Ironwood	6	M	M	RT	DW	VMS	
211	Olneya tesota - Desert Ironwood	12+	M	L	RT	DW	SZ	
216	Olneya tesota - Desert Ironwood	6	H	H	PS			
220	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	MT	
227	Olneya tesota - Desert Ironwood	12+	L	L	BL	RT	TM	
228	Olneya tesota - Desert Ironwood	6	M	M	DW	VMS		
229	Olneya tesota - Desert Ironwood	6	H	H	PS			
230	Olneya tesota - Desert Ironwood	12	M	L	RT	SZ		
231	Olneya tesota - Desert Ironwood	12+	L	L	RT	RD		
232	Olneya tesota - Desert Ironwood	8	M	M	MS			
233	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	TM	
234	Olneya tesota - Desert Ironwood	12+	M	L	TM	DW		
235	Olneya tesota - Desert Ironwood	12+	M	L	TM	DW		
237	Olneya tesota - Desert Ironwood	12	M	M	VMS	DW		
238	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW	RT	
240	Olneya tesota - Desert Ironwood	4	H	H	PS			
242	Olneya tesota - Desert Ironwood	18+	L	L	BL	DW	TM	
243	Olneya tesota - Desert Ironwood	6	H	H	PS			
244	Olneya tesota - Desert Ironwood	6	H	H	PS			
245	Olneya tesota - Desert Ironwood	12	M	M	VMS	LB		
246	Olneya tesota - Desert Ironwood	6	H	H	PS			
249	Olneya tesota - Desert Ironwood	6	M	M	MS			
250	Olneya tesota - Desert Ironwood	12+	M	L	SZ			
251	Olneya tesota - Desert Ironwood	12+	L	L	DW	BL		
253	Olneya tesota - Desert Ironwood	12+	M	L	DW	SZ		
254	Olneya tesota - Desert Ironwood	10	M	M	DW	VMS		
256	Olneya tesota - Desert Ironwood	4	M	H	PS			
257	Olneya tesota - Desert Ironwood	8	M	H	PS			
259	Olneya tesota - Desert Ironwood	12+	M	L	SZ	DW		
261	Olneya tesota - Desert Ironwood	12+	L	L	RD	DW	TM	
262	Olneya tesota - Desert Ironwood	12+	L	L	DY			
264	Olneya tesota - Desert Ironwood	12+	L	L	RT	PD		
267	Olneya tesota - Desert Ironwood	12+	L	L	DY			
268	Olneya tesota - Desert Ironwood	12+	L	L	DW	BL	RT	
269	Olneya tesota - Desert Ironwood	12+	L	L	DW	BL	MT	
270	Olneya tesota - Desert Ironwood	12+	L	L	DW	BL	MT	
273	Olneya tesota - Desert Ironwood	4	H	H	PS			
274	Olneya tesota - Desert Ironwood	12	L	L	DY			
275	Olneya tesota - Desert Ironwood	12	M	L	SZ			
276	Olneya tesota - Desert Ironwood	12+	H	L	SZ			
278	Olneya tesota - Desert Ironwood	8	H	H	PS			
279	Olneya tesota - Desert Ironwood	12+	L	L	DY			
281	Olneya tesota - Desert Ironwood	8	M	H	PS			
282	Olneya tesota - Desert Ironwood	12+	M	L	TM	SZ		
283	Olneya tesota - Desert Ironwood	12+	L	L	DY			
284	Olneya tesota - Desert Ironwood	4	M	M	VMS			
285	Olneya tesota - Desert Ironwood	8	M	L	TM			
287	Olneya tesota - Desert Ironwood	6	H	H	PS			
288	Olneya tesota - Desert Ironwood	6	M	M	VMS	RD		
289	Olneya tesota - Desert Ironwood	10	M	M	MS			
290	Olneya tesota - Desert Ironwood	12	M	L	TM	SZ		
301	Olneya tesota - Desert Ironwood	6	H	H	PS			
302	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW		
303	Olneya tesota - Desert Ironwood	6	H	H	PS			
304	Olneya tesota - Desert Ironwood	6	H	M	MS			
305	Olneya tesota - Desert Ironwood	6	H	H	PS			
306	Olneya tesota - Desert Ironwood	8	H	M	MS	LB		
307	Olneya tesota - Desert Ironwood	12	M	L	TM			
308	Olneya tesota - Desert Ironwood	6	M	L	LE			
309	Olneya tesota - Desert Ironwood	10	M	M	LB	MS		
310	Olneya tesota - Desert Ironwood	10	M	M	SZ	MS		
311	Olneya tesota - Desert Ironwood	18+	M	L	SZ	RD		
314	Olneya tesota - Desert Ironwood	8	H	M	MS			
315	Olneya tesota - Desert Ironwood	18+	L	L	LB	SZ	DW	
316	Olneya tesota - Desert Ironwood	8	M	L	LE			
317	Olneya tesota - Desert Ironwood	12	M	L	SZ	TM		
318	Olneya tesota - Desert Ironwood	12+	M	L	SZ	TM		
319	Olneya tesota - Desert Ironwood	12+	L	L	RT	SL		
320	Olneya tesota - Desert Ironwood	18+	M	L	SZ	DW		
321	Olneya tesota - Desert Ironwood	12	M	L	SZ	DW		
326	Olneya tesota - Desert Ironwood	12+	M	L	SZ	DW		
328	Olneya tesota - Desert Ironwood	8	M	L	LE			
329	Olneya tesota - Desert Ironwood	18+	H	L	SZ			
330	Olneya tesota - Desert Ironwood	6	H	H	PS			
340	Olneya tesota - Desert Ironwood	8	L	L		DW		
341	Olneya tesota - Desert Ironwood	12	M	L	TM	DW		
342	Olneya tesota - Desert Ironwood	6	M	M	BL	DW	VMS	
343	Olneya tesota - Desert Ironwood	12+	L	L	BL	RT		
350	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW		
356	Olneya tesota - Desert Ironwood	6	H	H	PS			
357	Olneya tesota - Desert Ironwood	6	H	H	PS			
358	Olneya tesota - Desert Ironwood	4	H	H	PS			
360	Olneya tesota - Desert Ironwood	6	H	H	PS			
361	Olneya tesota - Desert Ironwood	12	L	L	BL	DW		
366	Olneya tesota - Desert Ironwood	10	L	L	RT	DW		
367	Olneya tesota - Desert Ironwood	18+	M	L	SZ	DW		
371	Olneya tesota - Desert Ironwood	4	L	L	PS			
373	Olneya tesota - Desert Ironwood	18+	L	L	RT	DW		
374	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW		
384	Olneya tesota - Desert Ironwood	12+	L	L	RT	RD		
392	Olneya tesota - Desert Ironwood	12+	L	L	DW	TM		
393	Olneya tesota - Desert Ironwood	6	L	L	DW	TM		
395	Olneya tesota - Desert Ironwood	12+	M	L	RD	TM		
396	Olneya tesota - Desert Ironwood	12+	L	L	IN	DW		
397	Olneya tesota - Desert Ironwood	12+	L	L	IN	DW		
398	Olneya tesota - Desert Ironwood	8	L	L	RD	DW		
399	Olneya tesota - Desert Ironwood	12+	L	L	SL	DW		
400	Olneya tesota - Desert Ironwood	4	M	M	MS			
401	Olneya tesota - Desert Ironwood	12+	L	L	IN	DW		
402	Olneya tesota - Desert Ironwood	10	L	L	IN	DW		
409	Olneya tesota - Desert Ironwood	8	M	M	MS			
410	Olneya tesota - Desert Ironwood	10	M	L	SZ			
411	Olneya tesota - Desert Ironwood	12	L	L	RT	BL		
412	Olneya tesota - Desert Ironwood	10	L	L	RT	BL		
413	Olneya tesota - Desert Ironwood	6	H	H	PS			
416	Olneya tesota - Desert Ironwood	6	H	H	PS	DW		
418	Olneya tesota - Desert Ironwood	6	H	H	PS			
420	Olneya tesota - Desert Ironwood	10	H	M	MS			
422	Olneya tesota - Desert Ironwood	12+	M	L	TM	SZ		
423	Olneya tesota - Desert Ironwood	10	M	L	OT	RT		
424	Olneya tesota - Desert Ironwood	6	H	H	PS			
426	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW		
427	Olneya tesota - Desert Ironwood	6	M	H	PS	DW		
428	Olneya tesota - Desert Ironwood	12	L	L	RD	DW	TM	
429	Olneya tesota - Desert Ironwood	6	M	M	MS			
430	Olneya tesota - Desert Ironwood	6	H	H	PS			
431	Olneya tesota - Desert Ironwood	8	H	H	PS			
432	Olneya tesota - Desert Ironwood	6	M	M	MS			
433	Olneya tesota - Desert Ironwood	4	M	M	MS			
434	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	TM	
436	Olneya tesota - Desert Ironwood	8	M	L		DW		
437	Olneya tesota - Desert Ironwood	10	M	M	MS	TM		
438	Olneya tesota - Desert Ironwood	12	M	L		TM		
442	Olneya tesota - Desert Ironwood	12	M	L	DW	SZ		
443	Olneya tesota - Desert Ironwood	12	M	L	DW	SZ		
444	Olneya tesota - Desert Ironwood	4	H	H	PS			
446	Olneya tesota - Desert Ironwood	8	H	H	PS			
447	Olneya tesota - Desert Ironwood	8	M	M	MS	DW		
449	Olneya tesota - Desert Ironwood	6	M	M	MS	DW		
450	Olneya tesota - Desert Ironwood	6	L	L	RT	DW		
452	Olneya tesota - Desert Ironwood	4	H	M	MS	SO		
453	Olneya tesota - Desert Ironwood	12	M	L	SZ	SO		
454	Olneya tesota - Desert Ironwood	10	M	L	SZ	VMS		
455	Olneya tesota - Desert Ironwood	8	M	M	MS			
456	Olneya tesota - Desert Ironwood	8	M	M	MS			
457	Olneya tesota - Desert Ironwood	8	L	L	BL	DW		
459	Olneya tesota - Desert Ironwood	18+	L	L	BL	DW	IN	
460	Olneya tesota - Desert Ironwood	12+	L	L	DY			
461	Olneya tesota - Desert Ironwood	12+	L	L	DY			
464	Olneya tesota - Desert Ironwood	12+	L	L	DY			
466	Olneya tesota - Desert Ironwood	10	M	L		DW		
467	Olneya tesota - Desert Ironwood	12	M	L		DW		
468	Olneya tesota - Desert Ironwood	12+	M	L	RT	DW		
469	Olneya tesota - Desert Ironwood	12	M	L	RT	TM		
473	Olneya tesota - Desert Ironwood	6	M	L	SL			
474	Olneya tesota - Desert Ironwood	6	M	M	MS	DW		
475	Olneya tesota - Desert Ironwood	8	M	M	MS	LB		
476	Olneya tesota - Desert Ironwood	8	M	M	MS	LB		
478	Olneya tesota - Desert Ironwood	12	L	L	TM	LB	DW	
479	Olneya tesota - Desert Ironwood	8	M	M	MS			
480	Olneya tesota - Desert Ironwood	12	L	L	LE	RT	DW	
482	Olneya tesota - Desert Ironwood	6	M	M	MS			
484	Olneya tesota - Desert Ironwood	8	M	M	MS	DW		
485	Olneya tesota - Desert Ironwood	12+	M	L	TM	SZ		
486	Olneya tesota - Desert Ironwood	4	H	H	PS			
488	Olneya tesota - Desert Ironwood	12+	L	L	DY			
489	Olneya tesota - Desert Ironwood	10	M	L	TM			
492	Olneya tesota - Desert Ironwood	12	M	L	DW			
493	Olneya tesota - Desert Ironwood	6	H	H	PS			
494	Olneya tesota - Desert Ironwood	6	L	L	DW	BL		
497	Olneya tesota - Desert Ironwood	12	M	M	VMS			
498	Olneya tesota - Desert Ironwood	4	H	H	PS			
499	Olneya tesota - Desert Ironwood	6	L	L	SL	DW		
500	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT		
501	Olneya tesota - Desert Ironwood	8	M	M	MS	DW		
502	Olneya tesota - Desert Ironwood	10	L	L	RT	DW		
503	Olneya tesota - Desert Ironwood	6	L	L	RT	DW		
504	Olneya tesota - Desert Ironwood	6	M	M	MS	DW		
505	Olneya tesota - Desert Ironwood	12	L	L	BL	DW		
509	Olneya tesota - Desert Ironwood	6	M	M	MS	DW		
511	Olneya tesota - Desert Ironwood	8	L	L	TM	DW		
512	Olneya tesota - Desert Ironwood	8	M	L	LE	DW		
516	Olneya tesota - Desert Ironwood	10	L	L	BL	DW		
517	Olneya tesota - Desert Ironwood	12+	L	L	DY			
519	Olneya tesota - Desert Ironwood	12+	L	L	IN	DW	RT	
523	Olneya tesota - Desert Ironwood	6	H	M	MS	SO		
529	Olneya tesota - Desert Ironwood	8	L	L	SL	DW		
530	Olneya tesota - Desert Ironwood	12+	L	L	RD	BL		
531	Olneya tesota - Desert Ironwood	8	H	H	PS			
532	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT		
537	Olneya tesota - Desert Ironwood	8	L	L	DW	RT		
538	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT		
539	Olneya tesota - Desert Ironwood	10	M	M	DW	VMS		
540	Olneya tesota - Desert Ironwood	12	M	L	DW	TM		
541	Olneya tesota - Desert Ironwood	6	L	L	DW	SL		
545	Olneya tesota - Desert Ironwood	18+	L	L	DW	RT	TM	
551	Olneya tesota - Desert Ironwood	6	H	H	PS			
553	Olneya tesota - Desert Ironwood	10	L	L	DY			
555	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	BL	
559	Olneya tesota - Desert Ironwood	6	M	L	TM	DW	BL	
560	Olneya tesota - Desert Ironwood	8	M	M	MS			
561	Olneya tesota - Desert Ironwood	10	M	L	SZ			
566	Olneya tesota - Desert Ironwood	12+	L	L	RD	BL		
567	Olneya tesota - Desert Ironwood	10	M	M	MS			
568	Olneya tesota - Desert Ironwood	8	M	M	MS			
569	Olneya tesota - Desert Ironwood	12+	L	L	RT	BL		
570	Olneya tesota - Desert Ironwood	12	M	L	TM			
571	Olneya tesota - Desert Ironwood	8	M	M	VMS			
572	Olneya tesota - Desert Ironwood	6	M	M	MS			
573	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW		
574	Olneya tesota - Desert Ironwood	8	L	L	TM	RD		
575	Olneya tesota - Desert Ironwood	12+	L	L	TM	RD		
576	Olneya tesota - Desert Ironwood	4	H	H	PS			
578	Olneya tesota - Desert Ironwood	12	M	L	RT	DW		
580	Olneya tesota - Desert Ironwood	12+	L	L	RT	RD	BL	
581	Olneya tesota - Desert Ironwood	6	M	M	MS			
583	Olneya tesota - Desert Ironwood	8	M	L	RT	DW		
584	Olneya tesota - Desert Ironwood	8	M	L	TM	SL		
585	Olneya tesota - Desert Ironwood	12	M	L	TM	SL		
587	Olneya tesota - Desert Ironwood	8	M	M	VMS			
589	Olneya tesota - Desert Ironwood	12	L	L	TM	RT	LB	
590	Olneya tesota - Desert Ironwood	10	M	L	TM	DW	LB	
591	Olneya tesota - Desert Ironwood	12	L	L	TM	DW	RD	
592	Olneya tesota - Desert Ironwood	12	L	L	TM	DW	SL	
593	Olneya tesota - Desert Ironwood	10	L	L	TM	DW	RD	
594	Olneya tesota - Desert Ironwood	8	H	H	PS			
595	Olneya tesota - Desert Ironwood	8	M	M	MS			
596	Olneya tesota - Desert Ironwood	10	M	L	TM			
597	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT	DW	
598	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT	DW	
599	Olneya tesota - Desert Ironwood	12	L	L	TM	RT	DW	
600	Olneya tesota - Desert Ironwood	12	L	L	TM	RT	DW	
601	Olneya tesota - Desert Ironwood	8	M	M	MS	RT	DW	
602	Olneya tesota - Desert Ironwood	8	L	L	TM	RT	DW	
603	Olneya tesota - Desert Ironwood	12+	L	L	TM	RD	DW	
604	Olneya tesota - Desert Ironwood	12+	L	L	TM	RD	DW	
605	Olneya tesota - Desert Ironwood	10	L	L	TM	RT	DW	
606	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT	LB	
607	Olneya tesota - Desert Ironwood	6	M	L	DW			
608	Olneya tesota - Desert Ironwood	8	M	M	MS			
609	Olneya tesota - Desert Ironwood	6	L	L	LE			
610	Olneya tesota - Desert Ironwood	8	M	M	VMS	TM		
611	Olneya tesota - Desert Ironwood	8	M	M	VMS	DW		
612	Olneya tesota - Desert Ironwood	8	L	L	TM	DW		
613	Olneya tesota - Desert Ironwood	12+	L	L	TM	RD		
614	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT		
615	Olneya tesota - Desert Ironwood	10	L	L	TM	RT	BL	
616	Olneya tesota - Desert Ironwood	10	L	L	TM	RT	BL	
617	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	BL	
619	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	RD	
620	Olneya tesota - Desert Ironwood	12+	L	L	SL	RT	RD	
621	Olneya tesota - Desert Ironwood	6	H	H	PS			
622	Olneya tesota - Desert Ironwood	8	H	M	MS			
623	Olneya tesota - Desert Ironwood	12+	M	L	SZ	BL		
624	Olneya tesota - Desert Ironwood	10	M	M	MS			
632	Olneya tesota - Desert Ironwood	6	L	L	LE	SL		
633	Olneya tesota - Desert Ironwood	12	L	L	RD	SL		
636	Olneya tesota - Desert Ironwood	6	H	H	PS			
638	Olneya tesota - Desert Ironwood	6	M	H	PS	DW		
639	Olneya tesota - Desert Ironwood	6	H	H	PS	SL		
642	Olneya tesota - Desert Ironwood	6	H	H	PS	SL		
643	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT		
646	Olneya tesota - Desert Ironwood	18+	L	L	TM	RT	DW	
647	Olneya tesota - Desert Ironwood	8	H	H	PS			
648	Olneya tesota - Desert Ironwood	8	M	L	TM			
649	Olneya tesota - Desert Ironwood	6	L	L	DY			
650	Olneya tesota - Desert Ironwood	6	M	M	MS			
651	Olneya tesota - Desert Ironwood	12+	M	L	SZ	RT		
652	Olneya tesota - Desert Ironwood	6	M	M	MS	SO		
653	Olneya tesota - Desert Ironwood	8	M	M	MS	DW		
655	Olneya tesota - Desert Ironwood	10	M	L	SZ	DW		
656	Olneya tesota - Desert Ironwood	12	M	L	SZ	DW		
657	Olneya tesota - Desert Ironwood	12+	L	L	SZ	DY		
658	Olneya tesota - Desert Ironwood	12+	L	L	TM	BL	DW	
661	Olneya tesota - Desert Ironwood	12+	L	L	TM	RD	IN	
662	Olneya tesota - Desert Ironwood	10	M	L	DW			
663	Olneya tesota - Desert Ironwood	18+	L	L	DW	RD		
664	Olneya tesota - Desert Ironwood	6	M	M	MS	SO		
667	Olneya tesota - Desert Ironwood	6	M	L	DW	SL		
668	Olneya tesota - Desert Ironwood	10	L	L	DW	TM		
673	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	BL	
677	Olneya tesota - Desert Ironwood	12+	M	L	DW	SZ	TM	
680	Olneya tesota - Desert Ironwood	8	H	H	PS			
681	Olneya tesota - Desert Ironwood	6	F	L	LE			
682	Olneya tesota - Desert Ironwood	10	H	M	MS	SZ		
683	Olneya tesota - Desert Ironwood	8	M	L		SO		
684	Olneya tesota - Desert Ironwood	6	M	M	MS	SO		
685	Olneya tesota - Desert Ironwood	6	M	M	MS	SO		
686	Olneya tesota - Desert Ironwood	12	L	L	RT	DW		
687	Olneya tesota - Desert Ironwood	10	M	L	RT	DW		
688	Olneya tesota - Desert Ironwood	8	L	L	LE	SO		
689	Olneya tesota - Desert Ironwood	6	M	M	MS	SO		
690	Olneya tesota - Desert Ironwood	8	M	M	MS	SO		
691	Olneya tesota - Desert Ironwood	4	H	H	PS			
692	Olneya tesota - Desert Ironwood	4	L	L	DY			
693	Olneya tesota - Desert Ironwood	12	L	L	RT			
694	Olneya tesota - Desert Ironwood	18+	M	L	SZ	TM		
706	Olneya tesota - Desert Ironwood	8	M	M	MS	SL		
707	Olneya tesota - Desert Ironwood	10	M	L	TM	DW		
709	Olneya tesota - Desert Ironwood	18+	L	L	DY			
711	Olneya tesota - Desert Ironwood	6	H	H	PS			
713	Olneya tesota - Desert Ironwood	10	M	L	LE			
715	Olneya tesota - Desert Ironwood	12	L	L	TM	LE		
716	Olneya tesota - Desert Ironwood	6	M	L	DW	LE		
718	Olneya tesota - Desert Ironwood	12	M	L	DY			
719	Olneya tesota - Desert Ironwood	10	M	M	MS			
720	Olneya tesota - Desert Ironwood	8	L	L	LE			
721	Olneya tesota - Desert Ironwood	10	L	L	RT			
722	Olneya tesota - Desert Ironwood	12+	L	L	DY			
723	Olneya tesota - Desert Ironwood	6	M	M	MS			
724	Olneya tesota - Desert Ironwood	12	L	L	DW			
725	Olneya tesota - Desert Ironwood	12	L	L	DW	RT		
726	Olneya tesota - Desert Ironwood	12	M	L	DW			
729	Olneya tesota - Desert Ironwood	10	M	M	MS			
730	Olneya tesota - Desert Ironwood	6	M	M	VMS			
731	Olneya tesota - Desert Ironwood	10	M	L	DW	IN		
732	Olneya tesota - Desert Ironwood	10	M	L	DW	TM		
733	Olneya tesota - Desert Ironwood	12+	L	L	RT	TM		
734	Olneya tesota - Desert Ironwood	8	L	L	RT	TM		
735	Olneya tesota - Desert Ironwood	12+	L	L	RT	RD		
736	Olneya tesota - Desert Ironwood	8	L	L	RT	DW		
737	Olneya tesota - Desert Ironwood	8	M	M	MS	DW		
738	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW		
739	Olneya tesota - Desert Ironwood	12+	M	L	SZ	DW		
740	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW		
741	Olneya tesota - Desert Ironwood	10	M	M	MS	DW	BL	
742	Olneya tesota - Desert Ironwood	6	M	M	MS	DW	SO	
743	Olneya tesota - Desert Ironwood	6	M	M	MS	DW	SO	
746	Olneya tesota - Desert Ironwood	6	M	M	MS	DW	SO	
747	Olneya tesota - Desert Ironwood	10	M	L	BL	DW		

ERNEST GREGORY A. GRIS
Expires 6-30-2022

GRS
LANDSCAPE ARCHITECTS,LLC
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Date: 4/9/21
Drawn by: LMW
Checked by: GRS

☐ Design Review
☐ Construction Documents
☒ Agency Submittal
☐ Construction Set
☒ Not for Construction

CORTARO 57
SPECIFIC PLAN
SAGUARO & IRONWOOD INVENTORY

IRONWOOD INVENTORY

ID NO.	DESCRIPTION	SIZE	VIABILITY		TRANS.	COMMENTS	
749	Olneya tesota - Desert Ironwood	10	L	L	TM	RT	
750	Olneya tesota - Desert Ironwood	10	L	L	IN	RT	
751	Olneya tesota - Desert Ironwood	8	M	L	SL		
752	Olneya tesota - Desert Ironwood	8	M	M	MS		
754	Olneya tesota - Desert Ironwood	12+	L	L	DY		
755	Olneya tesota - Desert Ironwood	8	M	M	MS		
756	Olneya tesota - Desert Ironwood	10	M	L	SO		
757	Olneya tesota - Desert Ironwood	12	L	L	SO	RT	
758	Olneya tesota - Desert Ironwood	12	L	L	SO	IN	
759	Olneya tesota - Desert Ironwood	12+	M	L	SZ		
761	Olneya tesota - Desert Ironwood	18+	L	L	RT	LE	
762	Olneya tesota - Desert Ironwood	8	M	M	MS	–	
764	Olneya tesota - Desert Ironwood	12	L	L	MT	RT	
765	Olneya tesota - Desert Ironwood	10	L	L	TM	RT	
768	Olneya tesota - Desert Ironwood	12	L	L	TM	RT	
769	Olneya tesota - Desert Ironwood	8	M	M	MS		
770	Olneya tesota - Desert Ironwood	8	M	M	MS		
772	Olneya tesota - Desert Ironwood	4	H	H	PS		
776	Olneya tesota - Desert Ironwood	6	H	H	PS		
777	Olneya tesota - Desert Ironwood	8	M	M	MS		
778	Olneya tesota - Desert Ironwood	8	M	L	LE		
779	Olneya tesota - Desert Ironwood	6	M	M	VMS		
780	Olneya tesota - Desert Ironwood	8	M	L	DW		
782	Olneya tesota - Desert Ironwood	8	M	M	MS		
783	Olneya tesota - Desert Ironwood	6	M	M	MS		
784	Olneya tesota - Desert Ironwood	6	M	M	MS		
785	Olneya tesota - Desert Ironwood	6	M	M	MS		
787	Olneya tesota - Desert Ironwood	12	M	L	RT	DW	
788	Olneya tesota - Desert Ironwood	10	L	L	RT	IN	
789	Olneya tesota - Desert Ironwood	8	M	M	MS	–	
791	Olneya tesota - Desert Ironwood	12	L	L	LB	DW	
793	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
794	Olneya tesota - Desert Ironwood	10	L	L	RT	IN	
795	Olneya tesota - Desert Ironwood	10	L	L	RT	IN	
796	Olneya tesota - Desert Ironwood	10	L	L	RT	IN	
799	Olneya tesota - Desert Ironwood	8	M	L		SL	
801	Olneya tesota - Desert Ironwood	8	L	L	RT	SL	
806	Olneya tesota - Desert Ironwood	12	L	L	RT	IN	DW
807	Olneya tesota - Desert Ironwood	8	L	L	RT	IN	TM
811	Olneya tesota - Desert Ironwood	12	L	L	IN	SL	TM
812	Olneya tesota - Desert Ironwood	12	M	M	MS	SL	
813	Olneya tesota - Desert Ironwood	10	L	L	LE	SL	DW
815	Olneya tesota - Desert Ironwood	12+	L	L	DY		
818	Olneya tesota - Desert Ironwood	12+	L	L	DY		–
820	Olneya tesota - Desert Ironwood	8	M	L	SO	DW	
823	Olneya tesota - Desert Ironwood	18+	L	L	DY		
824	Olneya tesota - Desert Ironwood	12	M	L	SO		
825	Olneya tesota - Desert Ironwood	6	M	M	VMS	LE	
826	Olneya tesota - Desert Ironwood	4	H	H	PS		
827	Olneya tesota - Desert Ironwood	8	H	H	PS		
828	Olneya tesota - Desert Ironwood	8	H	H	PS		
829	Olneya tesota - Desert Ironwood	12+	L	L	RT	RD	
831	Olneya tesota - Desert Ironwood	8	M	L	DW		
832	Olneya tesota - Desert Ironwood	12+	L	L	DY		
833	Olneya tesota - Desert Ironwood	12	M	L	TM		
834	Olneya tesota - Desert Ironwood	8	M	L	RT	SL	
835	Olneya tesota - Desert Ironwood	12+	L	L	DY		–
838	Olneya tesota - Desert Ironwood	12+	L	L	DY		
839	Olneya tesota - Desert Ironwood	10	M	L	RT		
840	Olneya tesota - Desert Ironwood	10	M	M	VMS	SL	
841	Olneya tesota - Desert Ironwood	12	M	L	SZ	SL	
842	Olneya tesota - Desert Ironwood	8	M	M	MS		
843	Olneya tesota - Desert Ironwood	4	M	M	MS		
844	Olneya tesota - Desert Ironwood	10	M	L	SZ		
845	Olneya tesota - Desert Ironwood	12+	L	L	DY		
846	Olneya tesota - Desert Ironwood	6	M	L	TM	SL	
847	Olneya tesota - Desert Ironwood	4	M	L		SL	
848	Olneya tesota - Desert Ironwood	12+	L	L	TM	SL	
849	Olneya tesota - Desert Ironwood	6	M	M	VMS	SL	
850	Olneya tesota - Desert Ironwood	12	M	L	TM	SL	
851	Olneya tesota - Desert Ironwood	8	M	L	TM	SL	
852	Olneya tesota - Desert Ironwood	12+	L	L	DY		
853	Olneya tesota - Desert Ironwood	10	M	L	TM		
854	Olneya tesota - Desert Ironwood	8	M	M	MS		
855	Olneya tesota - Desert Ironwood	10	M	L	TM		
856	Olneya tesota - Desert Ironwood	4	M	M	MS	SL	
857	Olneya tesota - Desert Ironwood	8	M	M	MS	SL	
858	Olneya tesota - Desert Ironwood	10	L	L	RD	DW	
859	Olneya tesota - Desert Ironwood	6	M	M	MS	DW	
860	Olneya tesota - Desert Ironwood	6	M	L	RT	DW	
861	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW	
862	Olneya tesota - Desert Ironwood	12+	M	L	SZ	DW	
863	Olneya tesota - Desert Ironwood	12+	L	L	DY		
864	Olneya tesota - Desert Ironwood	10	L	L	DY		
865	Olneya tesota - Desert Ironwood	6	M	M	MS		
866	Olneya tesota - Desert Ironwood	12+	L	L	RT	IN	
867	Olneya tesota - Desert Ironwood	12+	L	L	RT	IN	
869	Olneya tesota - Desert Ironwood	6	M	M	MS	LB	
870	Olneya tesota - Desert Ironwood	12+	L	L	DY		
871	Olneya tesota - Desert Ironwood	12+	M	L	TM	SZ	
872	Olneya tesota - Desert Ironwood	8	M	M	MS		
874	Olneya tesota - Desert Ironwood	6	M	M	MS		
875	Olneya tesota - Desert Ironwood	8	M	M	MS		
876	Olneya tesota - Desert Ironwood	6	H	H	PS		
877	Olneya tesota - Desert Ironwood	10	M	M	VMS		
878	Olneya tesota - Desert Ironwood	4	H	H	PS		
879	Olneya tesota - Desert Ironwood	10	H	M	MS		
880	Olneya tesota - Desert Ironwood	12+	L	L	RD	TM	
881	Olneya tesota - Desert Ironwood	4	H	H	PS		
882	Olneya tesota - Desert Ironwood	12+	L	L	DY		
883	Olneya tesota - Desert Ironwood	12+	L	L	RT		
884	Olneya tesota - Desert Ironwood	12+	L	L	RT	BL	
885	Olneya tesota - Desert Ironwood	12+	L	L	RT	BL	
886	Olneya tesota - Desert Ironwood	8	M	M	MS		
887	Olneya tesota - Desert Ironwood	6	H	H	PS		
888	Olneya tesota - Desert Ironwood	10	M	M	MS		
889	Olneya tesota - Desert Ironwood	8	M	L	LB		
890	Olneya tesota - Desert Ironwood	6	M	M	MS		
891	Olneya tesota - Desert Ironwood	6	M	L	SO		
892	Olneya tesota - Desert Ironwood	6	M	L	SO		
893	Olneya tesota - Desert Ironwood	8	L	L	SO	RT	
895	Olneya tesota - Desert Ironwood	4	M	M	MS		
896	Olneya tesota - Desert Ironwood	6	M	L	RT		
899	Olneya tesota - Desert Ironwood	12+	M	L	RT	SZ	
900	Olneya tesota - Desert Ironwood	8	M	L	RT	–	
901	Olneya tesota - Desert Ironwood	10	L	L	RT		
902	Olneya tesota - Desert Ironwood	10	L	L	DY		
903	Olneya tesota - Desert Ironwood	4	M	M	MS		
906	Olneya tesota - Desert Ironwood	12+	L	L	RT	TM	
907	Olneya tesota - Desert Ironwood	12+	L	L	DY		
909	Olneya tesota - Desert Ironwood	6	M	M	MS		
911	Olneya tesota - Desert Ironwood	6	M	M	MS	DW	
912	Olneya tesota - Desert Ironwood	6	M	M	VMS	SO	
913	Olneya tesota - Desert Ironwood	6	H	H	PS		
915	Olneya tesota - Desert Ironwood	8	H	H	PS		
916	Olneya tesota - Desert Ironwood	6	M	L	SO		
917	Olneya tesota - Desert Ironwood	8	M	M	MS		
919	Olneya tesota - Desert Ironwood	8	M	M	MS		
921	Olneya tesota - Desert Ironwood	8	M	M	VMS	SO	
922	Olneya tesota - Desert Ironwood	10	M	L	BL	SO	
923	Olneya tesota - Desert Ironwood	6	H	H	PS		
924	Olneya tesota - Desert Ironwood	8	H	M	MS	LB	
925	Olneya tesota - Desert Ironwood	6	M	M	MS		
926	Olneya tesota - Desert Ironwood	8	M	M	MS		
927	Olneya tesota - Desert Ironwood	8	M	M	MS		
928	Olneya tesota - Desert Ironwood	18+	L	L	RD		
929	Olneya tesota - Desert Ironwood	8	M	L	SL		
930	Olneya tesota - Desert Ironwood	8	L	L	SL		
931	Olneya tesota - Desert Ironwood	8	L	L	RT		
932	Olneya tesota - Desert Ironwood	6	L	L	RT	TM	
933	Olneya tesota - Desert Ironwood	8	L	L	RT	TM	
935	Olneya tesota - Desert Ironwood	12+	L	L	DY		
936	Olneya tesota - Desert Ironwood	12+	L	L	DY		
937	Olneya tesota - Desert Ironwood	12+	L	L	DY		
938	Olneya tesota - Desert Ironwood	12+	L	L	DY	SL	
939	Olneya tesota - Desert Ironwood	10	L	L	RD	SL	
940	Olneya tesota - Desert Ironwood	8	M	M	VMS	SO	
941	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT	
942	Olneya tesota - Desert Ironwood	12	M	L	TM	RT	
943	Olneya tesota - Desert Ironwood	12+	L	L	DY	–	
944	Olneya tesota - Desert Ironwood	12	L	L	DY		
946	Olneya tesota - Desert Ironwood	8	M	M	VMS		
947	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT	
948	Olneya tesota - Desert Ironwood	8	M	M	MS		
949	Olneya tesota - Desert Ironwood	8	M	L	LE		
950	Olneya tesota - Desert Ironwood	12+	L	L	DY		
951	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	
953	Olneya tesota - Desert Ironwood	12+	M	L	BL	DW	
954	Olneya tesota - Desert Ironwood	4	H	L	SL	MS	
955	Olneya tesota - Desert Ironwood	12	L	L	SL	DW	
957	Olneya tesota - Desert Ironwood	18+	M	L	SZ	TM	
958	Olneya tesota - Desert Ironwood	6	M	M	MS	SO	
959	Olneya tesota - Desert Ironwood	6	M	M	MS	SO	
960	Olneya tesota - Desert Ironwood	12+	M	L	RT	SO	
961	Olneya tesota - Desert Ironwood	8	M	L	TM	SO	
963	Olneya tesota - Desert Ironwood	12+	M	L	SL	SZ	
965	Olneya tesota - Desert Ironwood	12	L	L	SL	RT	
966	Olneya tesota - Desert Ironwood	4	M	M	MS		
967	Olneya tesota - Desert Ironwood	8	M	L	SL		
969	Olneya tesota - Desert Ironwood	12	M	L	RT	TM	
970	Olneya tesota - Desert Ironwood	12	M	L	RT	TM	
974	Olneya tesota - Desert Ironwood	6	M	M	SO	MS	
975	Olneya tesota - Desert Ironwood	6	M	M	SO	MS	
977	Olneya tesota - Desert Ironwood	12	M	L	DW	SZ	
978	Olneya tesota - Desert Ironwood	8	M	M	MS	LB	
979	Olneya tesota - Desert Ironwood	8	M	M	MS	RT	
980	Olneya tesota - Desert Ironwood	6	M	M	MS	BL	
981	Olneya tesota - Desert Ironwood	8	M	M	MS	SO	
982	Olneya tesota - Desert Ironwood	8	M	M	MS	SO	
983	Olneya tesota - Desert Ironwood	8	M	M	MS	LB	
984	Olneya tesota - Desert Ironwood	8	L	L	RT		
985	Olneya tesota - Desert Ironwood	10	L	L	RT		
986	Olneya tesota - Desert Ironwood	8	M	L	LB		
987	Olneya tesota - Desert Ironwood	18+	M	L	SZ	TM	
988	Olneya tesota - Desert Ironwood	8	L	L	SO	TM	
989	Olneya tesota - Desert Ironwood	18+	L	L	RT	TM	
991	Olneya tesota - Desert Ironwood	18+	L	L	RT	RD	SL
992	Olneya tesota - Desert Ironwood	10	L	L	RT	TM	SL
993	Olneya tesota - Desert Ironwood	12+	L	L	RT	TM	SL
994	Olneya tesota - Desert Ironwood	12	L	L	RT	TM	
996	Olneya tesota - Desert Ironwood	6	M	M	MS		
999	Olneya tesota - Desert Ironwood	8	L	L	TM	DW	
1000	Olneya tesota - Desert Ironwood	12	L	L	TM	RT	
1001	Olneya tesota - Desert Ironwood	12+	L	L	SL	RT	
1004	Olneya tesota - Desert Ironwood	6	M	M	VMS		
1005	Olneya tesota - Desert Ironwood	8	L	L	RT		
1006	Olneya tesota - Desert Ironwood	6	M	L	SL		
1007	Olneya tesota - Desert Ironwood	6	M	L	SL		
1008	Olneya tesota - Desert Ironwood	18+	M	L	TM	SZ	
1009	Olneya tesota - Desert Ironwood	10	M	L	DW	SO	
1010	Olneya tesota - Desert Ironwood	6	M	M	MS		
1011	Olneya tesota - Desert Ironwood	10	M	M	VMS	DW	
1012	Olneya tesota - Desert Ironwood	12+	L	L	DW	SL	
1017	Olneya tesota - Desert Ironwood	12+	L	L	RT	IN	
1018	Olneya tesota - Desert Ironwood	12	L	L	RT	IN	
1023	Olneya tesota - Desert Ironwood	6	M	M	MS		
1025	Olneya tesota - Desert Ironwood	8	M	M	MS	DW	
1026	Olneya tesota - Desert Ironwood	8	M	M	MS	SO	
1027	Olneya tesota - Desert Ironwood	8	M	M	MS		
1028	Olneya tesota - Desert Ironwood	8	M	M	MS		
1029	Olneya tesota - Desert Ironwood	8	M	M	MS		
1030	Olneya tesota - Desert Ironwood	8	L	L	SL		
1031	Olneya tesota - Desert Ironwood	6	M	M	VMS		
1032	Olneya tesota - Desert Ironwood	8	M	M	VMS		
1033	Olneya tesota - Desert Ironwood	6	M	M	VMS		
1034	Olneya tesota - Desert Ironwood	8	M	M	VMS		
1036	Olneya tesota - Desert Ironwood	10	M	L		DW	
1037	Olneya tesota - Desert Ironwood	12	L	L	IN	DW	
1038	Olneya tesota - Desert Ironwood	12	L	L	IN	RT	
1039	Olneya tesota - Desert Ironwood	10	M	M	MS	RT	
1040	Olneya tesota - Desert Ironwood	6	M	M	MS	RT	
1041	Olneya tesota - Desert Ironwood	10	M	L	TM	RT	
1042	Olneya tesota - Desert Ironwood	8	M	L	TM	RT	
1043	Olneya tesota - Desert Ironwood	8	L	L	DW	RT	
1045	Olneya tesota - Desert Ironwood	12	L	L	DW	RT	
1046	Olneya tesota - Desert Ironwood	8	M	L	DW	RT	
1047	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	
1048	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1051	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	
1052	Olneya tesota - Desert Ironwood	12	L	L	RT	TM	
1054	Olneya tesota - Desert Ironwood	8	M	L	RT		
1056	Olneya tesota - Desert Ironwood	12+	M	L	RT	TM	
1059	Olneya tesota - Desert Ironwood	18+	L	L	SZ	DW	
1060	Olneya tesota - Desert Ironwood	10	M	L	RT	DW	
1062	Olneya tesota - Desert Ironwood	10	M	L	TM	DW	
1063	Olneya tesota - Desert Ironwood	12+	M	L	TM	SZ	
1064	Olneya tesota - Desert Ironwood	6	M	M	MS	–	
1065	Olneya tesota - Desert Ironwood	6	M	M	MS	–	
1066	Olneya tesota - Desert Ironwood	6	M	M	MS	SL	
1067	Olneya tesota - Desert Ironwood	8	M	M	VMS	SL	
1068	Olneya tesota - Desert Ironwood	12+	M	L	SZ	SL	
1071	Olneya tesota - Desert Ironwood	4	M	M	MS	LB	
1072	Olneya tesota - Desert Ironwood	12+	M	L	SZ	LB	
1073	Olneya tesota - Desert Ironwood	4	M	M	VMS	LB	
1074	Olneya tesota - Desert Ironwood	6	M	M	MS		
1075	Olneya tesota - Desert Ironwood	18+	M	L	SZ		
1076	Olneya tesota - Desert Ironwood	12	M	L	SO		
1077	Olneya tesota - Desert Ironwood	4	M	M	MS		
1078	Olneya tesota - Desert Ironwood	8	M	M	MS		
1079	Olneya tesota - Desert Ironwood	10	L	L	OT	RT	
1080	Olneya tesota - Desert Ironwood	8	M	M	MS		
1082	Olneya tesota - Desert Ironwood	12+	M	L	DY		
1085	Olneya tesota - Desert Ironwood	8	M	L	TM	DW	
1086	Olneya tesota - Desert Ironwood	8	M	M	MS	DW	
1087	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1090	Olneya tesota - Desert Ironwood	8	M	L	SL	–	
1091	Olneya tesota - Desert Ironwood	6	L	L	SL		
1092	Olneya tesota - Desert Ironwood	8	M	M	MS		
1094	Olneya tesota - Desert Ironwood	6	M	M	MS		
1095	Olneya tesota - Desert Ironwood	10	M	M	MS		
1096	Olneya tesota - Desert Ironwood	10	M	L	TM		
1097	Olneya tesota - Desert Ironwood	10	M	L	RT		
1098	Olneya tesota - Desert Ironwood	10	M	L	SO		
1099	Olneya tesota - Desert Ironwood	10	M	L	SO	DW	
1100	Olneya tesota - Desert Ironwood	12	L	L	SO	TM	
1101	Olneya tesota - Desert Ironwood	8	L	L	SO	LE	
1102	Olneya tesota - Desert Ironwood	8	M	M	VMS		
1103	Olneya tesota - Desert Ironwood	8	M	L	LE		
1106	Olneya tesota - Desert Ironwood	6	M	L	LE	DW	
1108	Olneya tesota - Desert Ironwood	6	M	M	MS		
1109	Olneya tesota - Desert Ironwood	6	M	M	MS		
1110	Olneya tesota - Desert Ironwood	18+	M	L	SZ		
1112	Olneya tesota - Desert Ironwood	10	L	L	DY		
1113	Olneya tesota - Desert Ironwood	8	M	L	SO		
1114	Olneya tesota - Desert Ironwood	10	L	L	BL	DW	
1115	Olneya tesota - Desert Ironwood	10	M	M			
1117	Olneya tesota - Desert Ironwood	12+	M	L	IN	RT	
1118	Olneya tesota - Desert Ironwood	8	M	L	SO		
1119	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1122	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1123	Olneya tesota - Desert Ironwood	10	M	L	DY		
1128	Olneya tesota - Desert Ironwood	12+	M	L	RT	DW	
1130	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1131	Olneya tesota - Desert Ironwood	12+	L	L	RT	SZ	
1132	Olneya tesota - Desert Ironwood	12	L	L	RT	SZ	
1133	Olneya tesota - Desert Ironwood	8	M	M	MS	–	
1134	Olneya tesota - Desert Ironwood	8	M	M	MS		
1135	Olneya tesota - Desert Ironwood	12	M	L	DW		
1136	Olneya tesota - Desert Ironwood	4	M	M	MS		
1137	Olneya tesota - Desert Ironwood	8	M	L	TM		
1139	Olneya tesota - Desert Ironwood	12+	M	L	TM	DW	
1141	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT	
1142	Olneya tesota - Desert Ironwood	18+	M	L	SZ	–	
1143	Olneya tesota - Desert Ironwood	18+	L	L	RT		
1144	Olneya tesota - Desert Ironwood	8	M	L	RT		
1146	Olneya tesota - Desert Ironwood	8	M	L	TM	DW	
1147	Olneya tesota - Desert Ironwood	8	M	L	TM	DW	
1150	Olneya tesota - Desert Ironwood	10	L	L	OT	DW	
1154	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1155	Olneya tesota - Desert Ironwood	10	L	L	OT	RT	
1160	Olneya tesota - Desert Ironwood	10	L	L	OT	RT	TM
1161	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	TM
1165	Olneya tesota - Desert Ironwood	10	L	L	OT	RT	TM
1169	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	IN
1172	Olneya tesota - Desert Ironwood	12+	F		SZ	DW	
1176	Olneya tesota - Desert Ironwood	12+	L	L	OT	TM	
1180	Olneya tesota - Desert Ironwood	12	L	L	DY		
1181	Olneya tesota - Desert Ironwood	12	G		SZ		
1182	Olneya tesota - Desert Ironwood	10	L	L	OT	TM	
1185	Olneya tesota - Desert Ironwood	6	G		MS	LB	
1186	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	
1188	Olneya tesota - Desert Ironwood	8	F		MS	–	
1189	Olneya tesota - Desert Ironwood	8	L	L	TM	RD	
1193	Olneya tesota - Desert Ironwood	10	L	L	DW	RD	
1194	Olneya tesota - Desert Ironwood	8	F		DW	MS	
1196	Olneya tesota - Desert Ironwood	8	L	L	LE	DW	
1202	Olneya tesota - Desert Ironwood	12	L	L	LE	DW	
1205	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1207	Olneya tesota - Desert Ironwood	12	F		LB	DW	
1209	Olneya tesota - Desert Ironwood	12+	L	L	OT	TM	
1210	Olneya tesota - Desert Ironwood	6	F		MS		
1212	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1214	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	DW
1215	Olneya tesota - Desert Ironwood	6	G		PS	–	
1219	Olneya tesota - Desert Ironwood	12	F		LB	DW	
1221	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1222	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1224	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	IN
1226	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	TM
1227	Olneya tesota - Desert Ironwood	6	F		MS		
1228	Olneya tesota - Desert Ironwood	10	L	L	DW	RT	
1229	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	LB
1233	Olneya tesota - Desert Ironwood	12+	F		DW	SZ	–
1235	Olneya tesota - Desert Ironwood	8	L	L	DW	RT	
1236	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	OT
1237	Olneya tesota - Desert Ironwood	12+	F		DW	SZ	
1239	Olneya tesota - Desert Ironwood	8	F		DW	RT	
1242	Olneya tesota - Desert Ironwood	12	L	L	DW	RT	
1243	Olneya tesota - Desert Ironwood	6	F		DW	MS	
1244	Olneya tesota - Desert Ironwood	10	L	L	DW	MS	
1247	Olneya tesota - Desert Ironwood	8	F		DW	MS	
1250	Olneya tesota - Desert Ironwood	10	L	L	DY		
1252	Olneya tesota - Desert Ironwood	8	F		MS	DW	
1255	Olneya tesota - Desert Ironwood	12	L	L	OT	DW	RT
1257	Olneya tesota - Desert Ironwood	10	L	L	OT	DW	RT
1259	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	
1260	Olneya tesota - Desert Ironwood	12+	L	L	–		DY
1263	Olneya tesota - Desert Ironwood	12	L	L		DW	
1266	Olneya tesota - Desert Ironwood	12	L	L	RD	DW	
1267	Olneya tesota - Desert Ironwood	10	L	L	RT	SR	
1268	Olneya tesota - Desert Ironwood	8	F		TM	DW	
1272	Olneya tesota - Desert Ironwood	10	F		TM	DW	
1273	Olneya tesota - Desert Ironwood	12+	L	L	TM	RT	DW
1274	Olneya tesota - Desert Ironwood	6	G		PS		
1277	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	LB
1283	Olneya tesota - Desert Ironwood	6	F		RT	DW	–
1285	Olneya tesota - Desert Ironwood	8	F		RT	DW	
1286	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1287	Olneya tesota - Desert Ironwood	10	L	L	RD	DW	
1291	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	OT
1294	Olneya tesota - Desert Ironwood	10	F		SL	DW	RT
1302	Olneya tesota - Desert Ironwood	10	F		SL	DW	RT
1303	Olneya tesota - Desert Ironwood	12+	L	L	LB	DW	RT
1304	Olneya tesota - Desert Ironwood	10	L	L	LB	DW	SL
1305	Olneya tesota - Desert Ironwood	12	F		TM	DW	OT
1306	Olneya tesota - Desert Ironwood	8	L	L	RD	DW	OT
1308	Olneya tesota - Desert Ironwood	6	F		MS		
1311	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1312	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	OT
1316	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	OT
1319	Olneya tesota - Desert Ironwood	10	F		LB	TM	
1321	Olneya tesota - Desert Ironwood	10	L	L	RD	DW	

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Date: 4/9/21
Drawn by: LMW
Checked by: GRS

☐ Design Review
☐ Construction Documents
☒ Agency Submittal
☐ Construction Set
☒ Not for Construction

CORTARO 57
SPECIFIC PLAN
SAGUARO & IRONWOOD INVENTORY

IRONWOOD INVENTORY							
			VIABILITY				
ID NO.	DESCRIPTION	SIZE		TRANS	COMMENTS		
1322	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	TM
1323	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	TM
1326	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	TM
1331	Olneya tesota - Desert Ironwood	10	L	L	RD	DW	TM
1332	Olneya tesota - Desert Ironwood	12+	F		SZ	DW	LB
1333	Olneya tesota - Desert Ironwood	12+	L	L	IN	DW	LB
1334	Olneya tesota - Desert Ironwood	10	L	L	OT	DW	RT
1335	Olneya tesota - Desert Ironwood	12+	L	L	OT	RD	RT
1336	Olneya tesota - Desert Ironwood	6	F		MS		
1338	Olneya tesota - Desert Ironwood	8	L	L	RT		
1339	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1340	Olneya tesota - Desert Ironwood	10	F		MS	DW	
1342	Olneya tesota - Desert Ironwood	10	L	L	RT	RD	
1346	Olneya tesota - Desert Ironwood	6	L	L	RT	DW	
1349	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	
1350	Olneya tesota - Desert Ironwood	8	L	L	DY		
1352	Olneya tesota - Desert Ironwood	12	L	L	IN	RT	
1355	Olneya tesota - Desert Ironwood	12	F		DW	RT	
1357	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	
1358	Olneya tesota - Desert Ironwood	10	L	L	DW	RT	
1366	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1367	Olneya tesota - Desert Ironwood	10	F		MS		
1369	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW	
1370	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW	RT
1371	Olneya tesota - Desert Ironwood	12	L	L	TM	DW	RT
1376	Olneya tesota - Desert Ironwood	6	F		TM	DW	RT
1377	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1380	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1381	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1383	Olneya tesota - Desert Ironwood	12	F		SZ		
1384	Olneya tesota - Desert Ironwood	12+	F		SZ		
1389	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1391	Olneya tesota - Desert Ironwood	12	L	L	RT	OT	TM
1394	Olneya tesota - Desert Ironwood	12	L	L	DY		
1397	Olneya tesota - Desert Ironwood	6	F		MS		
1400	Olneya tesota - Desert Ironwood	10	F		TM	DW	
1405	Olneya tesota - Desert Ironwood	4	F		MS	DW	
1406	Olneya tesota - Desert Ironwood	12	L	L	DY		
1407	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	
1411	Olneya tesota - Desert Ironwood	12	F		TM	LB	
1412	Olneya tesota - Desert Ironwood	10	L	L	RT	TM	
1413	Olneya tesota - Desert Ironwood	12+	L	L	RT	OT	RD
1414	Olneya tesota - Desert Ironwood	12+	L	L	RT	OT	
1417	Olneya tesota - Desert Ironwood	8	L	L	RT	OT	TM
1418	Olneya tesota - Desert Ironwood	8	L	L	SL	SR	
1419	Olneya tesota - Desert Ironwood	8	F		MS	SR	
1421	Olneya tesota - Desert Ironwood	12+	F		SZ		
1423	Olneya tesota - Desert Ironwood	12	L	L	RT		
1425	Olneya tesota - Desert Ironwood	6	F		TM	DW	
1426	Olneya tesota - Desert Ironwood	10	F		TM	DW	
1427	Olneya tesota - Desert Ironwood	12	G		SZ		
1428	Olneya tesota - Desert Ironwood	10	L	L	DW	RD	
1429	Olneya tesota - Desert Ironwood	12	L	L	RT	OT	
1432	Olneya tesota - Desert Ironwood	12+	G		SZ		
1433	Olneya tesota - Desert Ironwood	10	F		DW	RT	
1434	Olneya tesota - Desert Ironwood	12+	F		SZ	TM	
1436	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1437	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1439	Olneya tesota - Desert Ironwood	10	L	L	OT	DW	RT
1440	Olneya tesota - Desert Ironwood	6	G		PS		
1441	Olneya tesota - Desert Ironwood	6	G		PS		
1444	Olneya tesota - Desert Ironwood	6	G		PS		
1447	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	
1452	Olneya tesota - Desert Ironwood	12	L	L	DW	RT	
1453	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	OT
1457	Olneya tesota - Desert Ironwood	6	F		DW	MS	
1459	Olneya tesota - Desert Ironwood	12+	L	L	DW	RD	
1460	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1463	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1464	Olneya tesota - Desert Ironwood	6	F		BL	DW	
1467	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1468	Olneya tesota - Desert Ironwood	10	F		DW	RT	
1472	Olneya tesota - Desert Ironwood	12	F		OT	RT	
1473	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	
1475	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	
1476	Olneya tesota - Desert Ironwood	10	F		VMS	SZ	
1478	Olneya tesota - Desert Ironwood	10	F		VMS	DW	
1480	Olneya tesota - Desert Ironwood	8	F		RT	DW	
1481	Olneya tesota - Desert Ironwood	10	G		RT	TM	
1482	Olneya tesota - Desert Ironwood	10	F		MS		
1490	Olneya tesota - Desert Ironwood	8	F		MS		
1491	Olneya tesota - Desert Ironwood	8	F		MS		
1493	Olneya tesota - Desert Ironwood	6	F		MS	SL	
1497	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1500	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1502	Olneya tesota - Desert Ironwood	12	L	L	DY		
1503	Olneya tesota - Desert Ironwood	8	L	L	DW	RT	
1508	Olneya tesota - Desert Ironwood	6	L	L	DW	TM	
1510	Olneya tesota - Desert Ironwood	12	L	L	DW	RT	
1512	Olneya tesota - Desert Ironwood	12+	L	L	DW	RT	
1513	Olneya tesota - Desert Ironwood	10	L	L	RD	RT	OT
1516	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	OT
1517	Olneya tesota - Desert Ironwood	6	F		MS	SL	
1519	Olneya tesota - Desert Ironwood	12	F		OT	RT	
1520	Olneya tesota - Desert Ironwood	12	L	L	DW	RT	SL
1522	Olneya tesota - Desert Ironwood	6	G		PS		
1523	Olneya tesota - Desert Ironwood	6	G		PS		
1525	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	
1526	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	OT
1529	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	OT
1530	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	OT
1531	Olneya tesota - Desert Ironwood	10	F		TM	DW	
1532	Olneya tesota - Desert Ironwood	10	F		VMS	SZ	
1533	Olneya tesota - Desert Ironwood	6	F		LE	DW	
1534	Olneya tesota - Desert Ironwood	8	L	L	RD	TM	
1535	Olneya tesota - Desert Ironwood	10	F		VMS	LB	
1537	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1544	Olneya tesota - Desert Ironwood	12+	F		LB	DW	
1545	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	
1546	Olneya tesota - Desert Ironwood	10	L	L	SL	RT	
1548	Olneya tesota - Desert Ironwood	6	G		SL	MS	
1549	Olneya tesota - Desert Ironwood	10	L	L	SL	DW	
1552	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1553	Olneya tesota - Desert Ironwood	10	F		MS	SO	
1554	Olneya tesota - Desert Ironwood	6	G		MS	SO	
1562	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	
1563	Olneya tesota - Desert Ironwood	4	G		PS		
1564	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	
1566	Olneya tesota - Desert Ironwood	10	F		TM	LB	
1568	Olneya tesota - Desert Ironwood	6	F		VMS	DW	
1569	Olneya tesota - Desert Ironwood	12+	L	L	RT	TM	
1577	Olneya tesota - Desert Ironwood	8	L	L	RT	SL	
1578	Olneya tesota - Desert Ironwood	8	L	L	RT	SL	DW
1581	Olneya tesota - Desert Ironwood	10	F		VMS	SL	
1583	Olneya tesota - Desert Ironwood	12	L	L	LB	RT	SO
1584	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	BL
1589	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	OT
1590	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	OT
1591	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	LB
1597	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	
1598	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	
1600	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1601	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	OT
1602	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	TM
1603	Olneya tesota - Desert Ironwood	4	F		MS	SL	
1607	Olneya tesota - Desert Ironwood	8	F		TM	DW	
1608	Olneya tesota - Desert Ironwood	8	F		MS		
1609	Olneya tesota - Desert Ironwood	12+	L	L	RT	RD	DW
1615	Olneya tesota - Desert Ironwood	12+	L	L	RT	RD	DW
1616	Olneya tesota - Desert Ironwood	12+	F		LB	TM	DW
1618	Olneya tesota - Desert Ironwood	12+	L	L	RD	TM	DW
1623	Olneya tesota - Desert Ironwood	10	L	L	RT		DW
1624	Olneya tesota - Desert Ironwood	12	F		RT	SL	DW
1625	Olneya tesota - Desert Ironwood	8	L	L	RT	SL	DW
1626	Olneya tesota - Desert Ironwood	8	L	L	RT	OT	DW
1630	Olneya tesota - Desert Ironwood	8	G		PS		
1631	Olneya tesota - Desert Ironwood	8	G		MS	LB	
1636	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	DW
1637	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	BL
1639	Olneya tesota - Desert Ironwood	10	L	L	DW	RT	BL
1645	Olneya tesota - Desert Ironwood	12+	L	L	RD	DW	RT
1649	Olneya tesota - Desert Ironwood	12+	L	L	TM	DW	RT
1651	Olneya tesota - Desert Ironwood	8	L	L	OT	DW	RT
1655	Olneya tesota - Desert Ironwood	12+	L	L	OT	TM	RT
1656	Olneya tesota - Desert Ironwood	6	L	L	RT	DW	
1658	Olneya tesota - Desert Ironwood	8	F		MS		
1659	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	
1661	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1662	Olneya tesota - Desert Ironwood	10	F		MS	DW	
1663	Olneya tesota - Desert Ironwood	6	F		MS		
1664	Olneya tesota - Desert Ironwood	8	F		MS		
1665	Olneya tesota - Desert Ironwood	12+	L	L	RT	IN	
1670	Olneya tesota - Desert Ironwood	8	F		SL		
1671	Olneya tesota - Desert Ironwood	12	F		SZ		
1672	Olneya tesota - Desert Ironwood	6	F		MS		
1675	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	
1678	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1679	Olneya tesota - Desert Ironwood	10	F		TM		
1683	Olneya tesota - Desert Ironwood	10	F		VMS	SZ	
1686	Olneya tesota - Desert Ironwood	6	G		PS		
1687	Olneya tesota - Desert Ironwood	10	F		SL		
1688	Olneya tesota - Desert Ironwood	12+	F		OT	RT	
1689	Olneya tesota - Desert Ironwood	8	L	L	OT	RT	
1690	Olneya tesota - Desert Ironwood	6	F		SL	RT	
1693	Olneya tesota - Desert Ironwood	4	G		PS		
1694	Olneya tesota - Desert Ironwood	6	F		LB		
1695	Olneya tesota - Desert Ironwood	6	F		MS		
1703	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	
1704	Olneya tesota - Desert Ironwood	8	L	L	OT	DW	
1709	Olneya tesota - Desert Ironwood	4	G		PS		
1710	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	
1711	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	
1712	Olneya tesota - Desert Ironwood	12	L	L	DY		
1716	Olneya tesota - Desert Ironwood	8	G		PS		
1718	Olneya tesota - Desert Ironwood	6	L	L	RT	DW	
1720	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1721	Olneya tesota - Desert Ironwood	12	F		LB		
1722	Olneya tesota - Desert Ironwood	6	F		MS		
1723	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	
1727	Olneya tesota - Desert Ironwood	10	F		MS	SZ	
1728	Olneya tesota - Desert Ironwood	12+	F			SZ	
1729	Olneya tesota - Desert Ironwood	12+	F			SZ	
1735	Olneya tesota - Desert Ironwood	12	F		RT	SZ	
1736	Olneya tesota - Desert Ironwood	4	F		MS		
1737	Olneya tesota - Desert Ironwood	8	F		MS		
1738	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	
1739	Olneya tesota - Desert Ironwood	10	F		MS	DW	
1740	Olneya tesota - Desert Ironwood	10	F		BL	DW	
1741	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1742	Olneya tesota - Desert Ironwood	12+	L	L	RT	TM	
1743	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1744	Olneya tesota - Desert Ironwood	12+	F		VMS	SO	
1745	Olneya tesota - Desert Ironwood	10	L	L	DY		
1746	Olneya tesota - Desert Ironwood	8	L	L	RT		
1747	Olneya tesota - Desert Ironwood	8	L	L	RT		
1748	Olneya tesota - Desert Ironwood	6	F		MS		
1751	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1752	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1757	Olneya tesota - Desert Ironwood	12	L	L	RT	BL	
1758	Olneya tesota - Desert Ironwood	8	F		MS		
1759	Olneya tesota - Desert Ironwood	8	L	L	DW	BL	
1760	Olneya tesota - Desert Ironwood	8	F		MS		
1761	Olneya tesota - Desert Ironwood	8	F		MS		
1765	Olneya tesota - Desert Ironwood	8	F		MS		
1766	Olneya tesota - Desert Ironwood	8	F		MS		
1768	Olneya tesota - Desert Ironwood	4	L	L	MS	RT	
1770	Olneya tesota - Desert Ironwood	8	L	L	TM	RT	
1771	Olneya tesota - Desert Ironwood	8	F		MS		
1772	Olneya tesota - Desert Ironwood	8	F		MS		
1773	Olneya tesota - Desert Ironwood	6	F		MS		
1775	Olneya tesota - Desert Ironwood	12+	L	L	RD	RT	
1776	Olneya tesota - Desert Ironwood	12+	L	L	BL	RT	
1778	Olneya tesota - Desert Ironwood	6	F		MS		
1779	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	
1781	Olneya tesota - Desert Ironwood	10	L	L	RT	IN	
1782	Olneya tesota - Desert Ironwood	8	F		MS		
1790	Olneya tesota - Desert Ironwood	8	F		MS		
1794	Olneya tesota - Desert Ironwood	6	G		PS		
1795	Olneya tesota - Desert Ironwood	12	L	L	DW	SZ	
1797	Olneya tesota - Desert Ironwood	6	F		MS		
1798	Olneya tesota - Desert Ironwood	12	F		SZ		
1799	Olneya tesota - Desert Ironwood	8	F		SZ		
1800	Olneya tesota - Desert Ironwood	8	F		MS		
1801	Olneya tesota - Desert Ironwood	8	F		MS		
1802	Olneya tesota - Desert Ironwood	12	L	L	RT		
1803	Olneya tesota - Desert Ironwood	12+	L	L	RT	BL	
1804	Olneya tesota - Desert Ironwood	8	F		MS		
1806	Olneya tesota - Desert Ironwood	6	F		MS		
1808	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1814	Olneya tesota - Desert Ironwood	12+	L	L	SZ	DW	
1818	Olneya tesota - Desert Ironwood	12+	L	L	SZ	RT	RD
1820	Olneya tesota - Desert Ironwood	6	F		SO	MS	
1821	Olneya tesota - Desert Ironwood	10	F		SO	MS	
1823	Olneya tesota - Desert Ironwood	8	F			MS	
1824	Olneya tesota - Desert Ironwood	12+	L	L	RT	RD	
1826	Olneya tesota - Desert Ironwood	6	G		PS		
1827	Olneya tesota - Desert Ironwood	12+	L	L	RT		
1829	Olneya tesota - Desert Ironwood	12+	L	L	RT	BL	
1830	Olneya tesota - Desert Ironwood	6	L	L	RT	IN	
1831	Olneya tesota - Desert Ironwood	8	L	L	RT	OT	
1833	Olneya tesota - Desert Ironwood	6	F		DW		
1835	Olneya tesota - Desert Ironwood	6	L	L	DW	RT	
1845	Olneya tesota - Desert Ironwood	8	F		MS	DW	
1846	Olneya tesota - Desert Ironwood	12+	F		SZ	DW	
1848	Olneya tesota - Desert Ironwood	8	L	L	PS		
1851	Olneya tesota - Desert Ironwood	6	F		RT	DW	
1852	Olneya tesota - Desert Ironwood	6	L	L	RT	DW	LE
1853	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	OT
1857	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	IN
1858	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	IN
1861	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	OT
1862	Olneya tesota - Desert Ironwood	10	L	L	RT	DW	OT
1864	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	BL
1865	Olneya tesota - Desert Ironwood	6	G		PS		
1869	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	
1872	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1875	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	RD
1876	Olneya tesota - Desert Ironwood	12	F		LB	DW	
1879	Olneya tesota - Desert Ironwood	8	F		MS	DW	
1881	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1883	Olneya tesota - Desert Ironwood	10	G		PS		
1884	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1885	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	DW
1887	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1888	Olneya tesota - Desert Ironwood	8	G		PS		
1889	Olneya tesota - Desert Ironwood	12	F		RT		
1891	Olneya tesota - Desert Ironwood	8	F		VMS	DW	
1892	Olneya tesota - Desert Ironwood	12+	L	L	RT	DW	
1893	Olneya tesota - Desert Ironwood	8	F		MS		
1895	Olneya tesota - Desert Ironwood	12	L	L	MT	DW	RT
1898	Olneya tesota - Desert Ironwood	12	L	L	OT	DW	RT
1899	Olneya tesota - Desert Ironwood	10	L	L	OT	DW	RT
1900	Olneya tesota - Desert Ironwood	10	L	L	RD	DW	
1901	Olneya tesota - Desert Ironwood	12+	F		RT	DW	TM
1902	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	LE
1903	Olneya tesota - Desert Ironwood	10	F		VMS	SZ	RT
1904	Olneya tesota - Desert Ironwood	12+	F		SZ	TM	RT
1905	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1907	Olneya tesota - Desert Ironwood	6	F		MS	DW	
1908	Olneya tesota - Desert Ironwood	10	F		BL	DW	
1909	Olneya tesota - Desert Ironwood	8	F		VMS	LB	
1910	Olneya tesota - Desert Ironwood	12	F		SZ	TM	
1911	Olneya tesota - Desert Ironwood	12+	L	L	SZ	BL	RT
1912	Olneya tesota - Desert Ironwood	12+	F		SZ	LB	
1913	Olneya tesota - Desert Ironwood	12+	L	L	SZ	LB	
1915	Olneya tesota - Desert Ironwood	12+	L	L	SZ	LB	
1916	Olneya tesota - Desert Ironwood	10	L	L	LE	LB	
1917	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1919	Olneya tesota - Desert Ironwood	12	L	L	LE	DW	BL
1920	Olneya tesota - Desert Ironwood	12	F		LB	DW	
1921	Olneya tesota - Desert Ironwood	8	F		RT	VMS	
1922	Olneya tesota - Desert Ironwood	12	F		RT	SZ	
1923	Olneya tesota - Desert Ironwood	12+	F		RT	SZ	
1924	Olneya tesota - Desert Ironwood	10	F		MS		
1925	Olneya tesota - Desert Ironwood	12+	F		RT	SZ	
1926	Olneya tesota - Desert Ironwood	10	L	L	RT	TM	
1928	Olneya tesota - Desert Ironwood	8	F		DW	VMS	
1929	Olneya tesota - Desert Ironwood	8	F		DW	VMS	
1930	Olneya tesota - Desert Ironwood	10	L	L	DW	RT	
1931	Olneya tesota - Desert Ironwood	6	F		VMS	LB	
1933	Olneya tesota - Desert Ironwood	12	F		TM	RT	
1934	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	
1937	Olneya tesota - Desert Ironwood	12	L	L	DY		
1938	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1939	Olneya tesota - Desert Ironwood	12	L	L	RT	DW	
1940	Olneya tesota - Desert Ironwood	10	F		BL	DW	
1941	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	
1942	Olneya tesota - Desert Ironwood	8	L	L	OT	RT	
1943	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	BL
1944	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	BL
1945	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1946	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1947	Olneya tesota - Desert Ironwood	12+	L	L	RT	MT	
1948	Olneya tesota - Desert Ironwood	6	F		VMS	RT	
1949	Olneya tesota - Desert Ironwood	12	L	L	DY		
1950	Olneya tesota - Desert Ironwood	8	F		MS		
1951	Olneya tesota - Desert Ironwood	10	F		VMS		
1952	Olneya tesota - Desert Ironwood	6	F		PS		
1953	Olneya tesota - Desert Ironwood	10	L	L	LE		
1955	Olneya tesota - Desert Ironwood	12	F		TM	SZ	
1956	Olneya tesota - Desert Ironwood	8	F		LE	LB	
1957	Olneya tesota - Desert Ironwood	8	F		RT	LB	
1958	Olneya tesota - Desert Ironwood	12	L	L	TM	LB	
1959	Olneya tesota - Desert Ironwood	6	F		MS		
1960	Olneya tesota - Desert Ironwood	12	L	L	RT	TM	OT
1961	Olneya tesota - Desert Ironwood	12+	L	L	RT	TM	OT
1962	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1963	Olneya tesota - Desert Ironwood	8	F		RT		
1964	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1965	Olneya tesota - Desert Ironwood	12+	L	L	MT	TM	
1966	Olneya tesota - Desert Ironwood	12+	L	L	RT	OT	
1967	Olneya tesota - Desert Ironwood	8	L	L	RT	OT	
1968	Olneya tesota - Desert Ironwood	8	L	L	LE	OT	
1969	Olneya tesota - Desert Ironwood	10	L	L	RD	OT	
1970	Olneya tesota - Desert Ironwood	12	L	L	BL	RT	
1971	Olneya tesota - Desert Ironwood	12+	L	L	BL	RT	OT
1972	Olneya tesota - Desert Ironwood	10	G		TM	RT	OT
1973	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1974	Olneya tesota - Desert Ironwood	12	F		DW		
1975	Olneya tesota - Desert Ironwood	12	F		DW	TM	
1976	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1977	Olneya tesota - Desert Ironwood	10	F		RT		
1978	Olneya tesota - Desert Ironwood	10	F		LB		
1979	Olneya tesota - Desert Ironwood	12+	F		TM		
1980	Olneya tesota - Desert Ironwood	12+	L	L	DY		
1981	Olneya tesota - Desert Ironwood	12+	L	L	RT	OT	
1982	Olneya tesota - Desert Ironwood	6	F		MS		
1983	Olneya tesota - Desert Ironwood	12+	L	L	RD	DW	
1984	Olneya tesota - Desert Ironwood	10	L	L	DY		
1985	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	DW
1986	Olneya tesota - Desert Ironwood	12+	L	L	OT	RT	DW
1987	Olneya tesota - Desert Ironwood	8	F		MS		
1988	Olneya tesota - Desert Ironwood	12+	F		OT	TM	
1989	Olneya tesota - Desert Ironwood	12	L	L	OT	RT	
1990	Olneya tesota - Desert Ironwood	12+	F		SZ		
1991	Olneya tesota - Desert Ironwood	12+	L	L	RT	TM	
1992	Olneya tesota - Desert Ironwood	10	L	L	RT	OT	
1993	Olneya tesota - Desert Ironwood	12+	L	L	RT	OT	TM
1994	Olneya tesota - Desert Ironwood	10	F		TM		
1995	Olneya tesota - Desert Ironwood	8	F		TM		
1996	Olneya tesota - Desert Ironwood	8	L	L	RT	DW	
1997	Olneya tesota - Desert Ironwood	10	F		TM	DW	

Expires 6-30-2022

GRS LANDSCAPE ARCHITECTS LLC
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(520) 909-4678
gregs@grslandscapearchitects.com

Date: 4/9/21
Drawn by: LMW
Checked by: GRS

☐ Design Review
☐ Construction Documents
☒ Agency Submittal
☐ Construction Set
☒ Not for Construction

CORTARO 57
SPECIFIC PLAN

SAGUARO & IRONWOOD INVENTORY

IRONWOOD INVENTORY

ID NO.	DESCRIPTION	SIZE	VIABILITY		TRANS	COMMENTS		
1998	Olneya tesota - Desert Ironwood	8	L		L	BL	DW	
1999	Olneya tesota - Desert Ironwood	12	F			BL	TM	SL
2000	Olneya tesota - Desert Ironwood	12	L		L	BL	RT	OT
2002	Olneya tesota - Desert Ironwood	12	L		L	BL	RT	SL
2003	Olneya tesota - Desert Ironwood	8	F			MS		
2004	Olneya tesota - Desert Ironwood	12+	L		L	RT	OT	TM
2005	Olneya tesota - Desert Ironwood	12+	F			SL	RT	
2006	Olneya tesota - Desert Ironwood	12	L		L	OT	RT	
2007	Olneya tesota - Desert Ironwood	12	F			OT	RT	TM
2008	Olneya tesota - Desert Ironwood	10	F			VMS	RT	
2010	Olneya tesota - Desert Ironwood	10	F			MS		
2012	Olneya tesota - Desert Ironwood	12+	L		L	TM	OT	RT
2013	Olneya tesota - Desert Ironwood	10	F			VMS		
2014	Olneya tesota - Desert Ironwood	6	F			MS	LB	
2015	Olneya tesota - Desert Ironwood	10	F			MS		
2016	Olneya tesota - Desert Ironwood	12+	L		L	RT	DW	TM
2019	Olneya tesota - Desert Ironwood	12	L		L	RT	DW	OT
2020	Olneya tesota - Desert Ironwood	12	L		L	RT	DW	OT
2022	Olneya tesota - Desert Ironwood	12	F			TM	RT	OT
2024	Olneya tesota - Desert Ironwood	12+	L		L	DW	RT	OT
2026	Olneya tesota - Desert Ironwood	12+	F			SZ	RT	OT
2027	Olneya tesota - Desert Ironwood	8	F			MS		
2028	Olneya tesota - Desert Ironwood	8	F			TM		
2029	Olneya tesota - Desert Ironwood	8	F			TM		
2031	Olneya tesota - Desert Ironwood	12+	L		L	TM	RT	OT
2032	Olneya tesota - Desert Ironwood	10	F			MS		
2033	Olneya tesota - Desert Ironwood	8	F			MS		
2034	Olneya tesota - Desert Ironwood	12+	L		L	RT	OT	
2035	Olneya tesota - Desert Ironwood	6	F			LE		
2036	Olneya tesota - Desert Ironwood	8	F			TM		
2037	Olneya tesota - Desert Ironwood	12+	L		L	OT	RT	MT
2038	Olneya tesota - Desert Ironwood	8	F			MS		
2039	Olneya tesota - Desert Ironwood	12+	L		L	OT	RT	
2041	Olneya tesota - Desert Ironwood	12+	F			TM	DW	
2042	Olneya tesota - Desert Ironwood	12+	L		L	RD	DW	RT
2043	Olneya tesota - Desert Ironwood	8	L		L	OT	DW	RT
2044	Olneya tesota - Desert Ironwood	8	G			PS		
2045	Olneya tesota - Desert Ironwood	8	G			PS		
2046	Olneya tesota - Desert Ironwood	12+	F			TM	SZ	
2048	Olneya tesota - Desert Ironwood	6	G			PS		
2049	Olneya tesota - Desert Ironwood	6	F			MS	LE	
2050	Olneya tesota - Desert Ironwood	6	F			MS	SO	
2051	Olneya tesota - Desert Ironwood	10	F			VMS	TM	
2052	Olneya tesota - Desert Ironwood	12+	F			SZ	TM	
2053	Olneya tesota - Desert Ironwood	8	F			MS	LB	
2054	Olneya tesota - Desert Ironwood	8	F			MS	SO	
2055	Olneya tesota - Desert Ironwood	12	L		L	DW	SO	
2056	Olneya tesota - Desert Ironwood	12	F			DW	SZ	
2057	Olneya tesota - Desert Ironwood	6	F			MS		
2061	Olneya tesota - Desert Ironwood	8	F			MS		
2062	Olneya tesota - Desert Ironwood	12	F			SZ		
2063	Olneya tesota - Desert Ironwood	12+	F			SZ	TM	
2064	Olneya tesota - Desert Ironwood	12+	L		L	BL	DW	
2065	Olneya tesota - Desert Ironwood	10	F			VMS	SZ	
2066	Olneya tesota - Desert Ironwood	12	L		L	DW	RT	
2067	Olneya tesota - Desert Ironwood	12+	L		L	SZ	LE	SO
2068	Olneya tesota - Desert Ironwood	12+	F			SZ		
2069	Olneya tesota - Desert Ironwood	6	F			MS		
2070	Olneya tesota - Desert Ironwood	8	F			TM		
2071	Olneya tesota - Desert Ironwood	8	F			MS	LB	
2072	Olneya tesota - Desert Ironwood	8	F			MS	LB	
2073	Olneya tesota - Desert Ironwood	8	F				LB	
2074	Olneya tesota - Desert Ironwood	8	F			LE	LB	
2075	Olneya tesota - Desert Ironwood	10	F			VMS	SZ	
2076	Olneya tesota - Desert Ironwood	12	F			LB	SZ	
2077	Olneya tesota - Desert Ironwood	12+	L		L	TM	SL	DW
2079	Olneya tesota - Desert Ironwood	12	L		L	RT	OT	DW
2080	Olneya tesota - Desert Ironwood	12+	L		L	RT	OT	DW
2084	Olneya tesota - Desert Ironwood	8	F			SO	LB	
2085	Olneya tesota - Desert Ironwood	10	F			VMS	LB	
2086	Olneya tesota - Desert Ironwood	8	F			TM	OT	
2088	Olneya tesota - Desert Ironwood	4	F			MS	LB	
2091	Olneya tesota - Desert Ironwood	6	F			MS	RT	
2100	Olneya tesota - Desert Ironwood	6	G			PS		
2102	Olneya tesota - Desert Ironwood	12	L		L	LE	DW	
2103	Olneya tesota - Desert Ironwood	10	F			BL	SZ	
2105	Olneya tesota - Desert Ironwood	8	F			MS	DW	
2107	Olneya tesota - Desert Ironwood	8	L		L	BL	DW	
2108	Olneya tesota - Desert Ironwood	10	F			LE	DW	
2109	Olneya tesota - Desert Ironwood	12+	F			SZ	TM	
2110	Olneya tesota - Desert Ironwood	10	F				TM	
2111	Olneya tesota - Desert Ironwood	12	F			LB	TM	
2112	Olneya tesota - Desert Ironwood	18+	F			SZ	TM	
2114	Olneya tesota - Desert Ironwood	4	G			PS		
2115	Olneya tesota - Desert Ironwood	8	F			RT	DW	
2116	Olneya tesota - Desert Ironwood	12+	F			RT	SZ	
2117	Olneya tesota - Desert Ironwood	8	F			MS		
2119	Olneya tesota - Desert Ironwood	6	F			MS	LE	
2120	Olneya tesota - Desert Ironwood	12	F			SZ		
2121	Olneya tesota - Desert Ironwood	8	F			RT		
2122	Olneya tesota - Desert Ironwood	10	F			MS		
2123	Olneya tesota - Desert Ironwood	8	F			MS		
2124	Olneya tesota - Desert Ironwood	12	F			SZ		
2125	Olneya tesota - Desert Ironwood	12+	L		L	TM	DW	
2128	Olneya tesota - Desert Ironwood	12+	L		L	TM	RT	
2130	Olneya tesota - Desert Ironwood	6	G			PS		
2131	Olneya tesota - Desert Ironwood	8	G			PS		
2132	Olneya tesota - Desert Ironwood	6	G			PS		
2133	Olneya tesota - Desert Ironwood	6	L		L	DY		
2138	Olneya tesota - Desert Ironwood	6	L		L	RT	DW	
2139	Olneya tesota - Desert Ironwood	10	L		L	RT	DW	
2141	Olneya tesota - Desert Ironwood	12	L		L	RT	RD	
2142	Olneya tesota - Desert Ironwood	12	L		L	RT	OT	
2143	Olneya tesota - Desert Ironwood	8	L		L	RT	TM	
2145	Olneya tesota - Desert Ironwood	10	F			MS		
2147	Olneya tesota - Desert Ironwood	10	G			VMS	SZ	
2151	Olneya tesota - Desert Ironwood	12+	F			DW	SZ	
2152	Olneya tesota - Desert Ironwood	6	G			MS		
2158	Olneya tesota - Desert Ironwood	10	G			MS		
2159	Olneya tesota - Desert Ironwood	12+	F			SZ	TM	
2160	Olneya tesota - Desert Ironwood	12+	F			SZ	IN	
2163	Olneya tesota - Desert Ironwood	12+	L		L	RT	OT	
2164	Olneya tesota - Desert Ironwood	12+	F			SZ	TM	
2166	Olneya tesota - Desert Ironwood	12	L		L	DW	RT	
2167	Olneya tesota - Desert Ironwood	18+	G			SZ		
2168	Olneya tesota - Desert Ironwood	12+	L		L	RD	BL	DW
2171	Olneya tesota - Desert Ironwood	12+	F			TM	BL	DW

ABBREVIATIONS

The following abbreviations were used in the plant tables:

- BL - Broken Limbs; Tree has significant broken branches.
- BT - Broken Top, generally used in description of cactus.
- DW - Dead Wood; Tree has significant die back or dead/broken limbs.
- DY - Dying; Tree is dying.
- FD - Frost Damage.
- IN - Insect or Disease Infestation.
- LB - Low Branched; Tree has many low branches that will need to be removed for salvaged and removal will destroy structure of tree.
- LE - Leaning; Tree is leaning to the point where salvage will be difficult.
- MS - Marginal Salvage; Used during field inventory to identify less desirable salvage candidates to be used if needed to meet % requirements.
- MT - Tree has significant mistletoe infestation.
- NV - Not Viable; These are trees which are not included in the calculations for the site because they are not in viable condition.
- OT - Tree has an old trunk indicating dieback at some point in the past.
- PD - Pruning Damage.
- PIP- Plants to be preserved in place.
- PIP-ROW - Plants to be preserved in place but located within the Right of Way. These plants are not included in the calculation of credits for PIP plants on the site.
- PROX-Other vegetation in the vicinity will make salvage difficult.
- PS - Possible Salvage; Used in the field to identify best potential salvage candidates.
- RD - Rodent Damage; Rodents have excavated at the base of the tree.
- RFS- Plants to be removed from site, damaged or destroyed.
- RT - Rotted Trunk; Trunk has been broken off or rotted out and has hollow areas, making long term health and viability of the tree questionable.
- SAL- Salvage; Used during field inventory to identify trees that should be salvaged regardless of % requirements.
- SL - Slope; Tree is on steep slope where salvage will not be possile.
- SO - Soils; Soil is rocky or otherwise unsuitable for excavation.
- SR - Surface roots are evident, making excavation difficult.
- ST - Stunted.
- SZ - Size of the tree; either spread, caliper or height is not conducive to salvage.
- TD - Trunk Damage.
- TM - Too Multi; Tree has multiple trunks coming out of the ground that will make moving the tree difficult without significant damage.
- TOS- Plant to be transplanted on site.
- VMS - Very Marginal Salvage; Used during field inventory to identify least desirable salvage candidates to be used if needed to meet % requirements.

GRS LANDSCAPE ARCHITECTS,LLC
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Date: 4/9/21
Drawn by: LMW
Checked by: GRS

☐ Design Review
☐ Construction Documents
☒ Agency Submittal
☐ Construction Set
☒ Not for Construction

CORTARO 57
SPECIFIC PLAN
SAGUARO & IRONWOOD INVENTORY

Appendix D:
Tucson Water Will-Serve Letter

TUCSON WATER
A proud part of the City of Tucson

February 4, 2021

CBRE- Ben Becker
7320 N. San Blas Drive
Tucson, AZ 85704

Attn: Ben Becker

SUBJECT: Water Availability for Project: Near Camino de Oeste & Lord Redman, APN: 229-33-059R Case # WA3403, T-12 R-13 S-30, Lots: 9999, Location Code: UNI: Total Area: 15.9ac, Zoning: SR

WATER SUPPLY

Tucson Water will provide water service to this project based on the subject zoning of the above parcels. Tucson Water has an assured water supply (AWS) designated from the State of Arizona Department of Water Resources (ADWR). An AWS designation means Tucson Water has met the criteria established by ADWR for demonstration of a 100-year water supply - it does not mean that water service is currently available to the subject project.

WATER SERVICE

The approval of water meter applications is subject to the current availability of water service at the time an application is received. The developer shall be required to submit a water master plan identifying, but not limited to: 1) Water Use; 2) Fire Flow Requirements; 3) Offsite/Onsite Water Facilities; 4) Loops and Proposed Connection Points to Existing Water System; and 5) Easements/Common Areas.

Any specific area plan fees, protected main/facility fees and/or other needed facilities' cost, are to be paid by the developer. *If the existing water system is not capable of meeting the requirements of the proposed development, the developer shall be financially responsible for modifying or enhancing the existing water system to meet those needs.* ***This letter shall be null and void two years from the date of issuance.***

Issuance of this letter is not to be construed as agency approval of a water plan or as containing construction review comments relative to conflicts with existing water lines and the proposed development.

If you have any questions, please call New Development at 791-4718.

Sincerely,

Michael Mourreale

Michael Mourreale
Engineering Manager
Tucson Water New Development

MM:ka
cc: 22533059R.docx/New Area/Committed Demand/WAL parcels

Appendix E:
Cultural Resources Surveys

STATE HISTORIC PRESERVATION OFFICE
SURVEY REPORT SUMMARY FORM

1. REPORT TITLE

1a. Report Title*:* Cultural Resources Class III Survey of Parcels 221-16-029C and 225-33-059M in Unincorporated Pima County, Arizona.

1b. Report Author(s): Chance Copperstone, M.A.

1c. Date: December 31, 2020 **1d. Report No.:** Tierra Archaeological Report No. 2020-165

2. PROJECT REGISTRATION/PERMITS

2a. ASM Accession Number: N/A

2b. AAA Permit Number: 2020-048bl

2c. ASLD Lease Application Number(s): N/A

2d. Other Permit Number(s).: N/A

3. ORGANIZATION/CONSULTING FIRM

3a. Name: Tierra Right of Way Services, Ltd.

3b. Internal Project Number: 20TA00-486.01

3c. Internal Project Name: Cortaro Farms 57 Class III

3d. Contact Name: Barbara Montgomery

3e. Contact Address: 1575 East River Road, Suite 201, Tucson, AZ 85718

3f. Contact Phone: 520.319.2106

3g. Contact Email: bmontgomery@tierra-row.com

4. SPONSOR/LEAD AGENCY

4a. Sponsor: ACM Ventures

4b. Lead Agency: Pima County

4c. Agency Project Number(s): N.A

4d. Agency Project Name: N/A

4e. Funding Source(s): Private

4f. Other Involved Agencies: N/A

4g. Applicable Regulations: Pima County Ordinance No. 2018-027

5. DESCRIPTION OF PROJECT OR UNDERTAKING: ACM Ventures is seeking to purchase and rezone parcels 221-16-029C and 225-33-059M for residential use.

6. PROJECT AREA/AREA OF POTENTIAL EFFECTS: The project area consists of 41.75 acres (16.9 hectares) encompassing the two parcels mentioned above, located to the south of the intersection of Cortaro Farms Road and Camino de Oeste (Figures 1 and 2).

7. PROJECT LOCATION

7a. Address:

7b. Route: N/A **7c. Mileposts Limits:** N/A

7d. Nearest City/Town: Marana **7e. County:** Pima County

7f. Project Locator UTM: 494159 Easting 3580218 Northing **7g. NAD** 83 **7h. Zone:** 12

7i. Baseline & Meridian: G&SR **7j. USGS Quadrangle(s):** Jaynes

7k. Legal Description(s): T12S, R12E, Section 25**;** T12S, R13E, Section 30

8. SURVEY AREA

8a. Total Acres: 41.75 acres

8b. Survey Area.

1. Land Jurisdiction	2. Total Acres Surveyed	3. Total Acres Not Surveyed	4. Justification for Areas Not Surveyed
Private	41.75	0	N/A

9. ENVIRONMENTAL CONTEXTS

9a. Landform: Terrace

9b. Elevation: 2,300 ft amsl

9c. Surrounding Topographic Features: Urban development

9d. Nearest Drainage: Santa Cruz River, ca. 1 miles to the west

9e. Local Geology: Quaternary Surface Deposits (Arizona Geological Survey 2020)

9f. Vegetation: Arizona Upland Subdivision of the Sonoran Desertscrub biotic community (Brown 1994). Mesquite, cholla, saguaro, palo verde, creosote and prickly pear are all present (Photo 1).

9g. Soils/Deposition: Rough, broken land- Palos Verdes Complex (NRCS 2020).

9h. Buried Deposits: Not likely

9i. Justification: The project area is located on a terrace, so depth is possible but nothing was found on the surface that suggests cultural deposits are present.

I0. BUILT ENVIRONMENT: The built environment adjacent to the project area includes modern residential developments and the recently widened Cortaro Farms Road. Camino de Oeste is a dirt road near the center of the project area, and existing buried and aerial utilities pass along the edge of the road.

11. INVENTORY CLASS COMPLETED

11a. Class I Inventory: ☐

11b. Researcher(s):

11c. Class II Survey: ☐

11d Sampling Strategy:

11e. Class III Inventory: ☒

12. BACKGROUND RESEARCH SOURCES

12a. AZSITE: ☒

12b. ASM Archaeological Records Office: ☐

12c. SHPO Inventories and/or SHPO Library: ☐

12d. NRHP Database: ☒

12e. ADOT Portal: ☐

12f. GLO Maps: GLO Map Nos. 1955 (T12S, R12E), dated February 23, 1897, and 1958 (T12S, R13E), dated September 27, 1912, show only an unnamed road within the project area (Figure 3). No sign of the road was encountered during the survey.

12g. Land- Managing Agency Files: N/A

12h. Tribal Cultural Resources Files: N/A

12i. Local Government Websites: N/A

12j. Other: N/A

13. BACKGROUND RESEARCH RESULTS

13a. Previous Projects within Project Area (Figure 4 REDACTED)

1. Project Reference Number	2. Project Name	3. Author(s)	4. Year
1981-174.ASM	Sierra Vista Project	Wirth Associates	1981
1988-200.ASM	CAP Northwest, Phase III	Heuett	1988
1994-424.ASM	Wastewater Pump Station Survey	Myers	1994
2001-42.ASM	Cortaro Farms Survey	Brack	2001
20TA00-085.01	Tri-Church Casitas Survey	Copperstone	2020

13b. Previously Recorded Cultural Resources within Project Area

1. Site Number	2. Affiliation	3. Site Type	4. Eligibility Status	5. Associated Reference(s)
N/A				

13c. Historic Buildings/Districts/Neighborhoods. (None in project area)

1. Property Name or Address	2. Year	3. Eligibility Status
N/A		

14. CULTURAL CONTEXTS

14a. Prehistoric Culture: Hohokam

14b. Protohistoric Culture: O'odham

14c. Indigenous Historic Culture: O'odham

14d. Euro-American Culture: A.D. 1500-1970

15. FIELD SURVEY PERSONNEL

15a. Principal Investigator: Barbara Montgomery, PhD.

15b. Field Supervisor: Chance Copperstone, M.A.

15c. Crew: Sean Parsons and Alison Talbot

15d. Fieldwork Date(s): 12/30/2020

16. SURVEY METHODS

16a. Transect Intervals: 20 m apart

16b. Coverage (%): 100

16c. Site Recording Criteria: ASM

16d. Ground Surface Visibility: 50%

16e. Observed Disturbances: Modern trash is present throughout the project area and one small camp is present.

17. FIELD SURVEY RESULTS

17a. No Cultural Resources Identified: ☒

17b. Isolated Occurrences (IOs) Only: ☐

17c. Number of IOs Recorded: N/A

17d. Table of IOs.

1. IO Number	2. Description	3. Date Range	4. UTMs

18. COMMENTS: No sites, historic buildings, or isolates were observed in the project area during the survey. Tierra recommends that ACM Ventures should be allowed to proceed with the proposed project without further archaeological work.

SECTION 19. ATTACHMENTS
19a. Project Location Map: ☒ Figures 1 and 2
19b. Land Jurisdiction Map: ☒ Figure 1
19c. Background Research Map(s): ☒ Figure 4
19d. GLO Map(s): ☒ Figure 3
19e. References: ☒

SECTION 20. CONSULTANT CERTIFICATION

I certify the information provided herein has been reviewed for content and accuracy and all work meets applicable agency standards.

Barbara K. Montgomery

_____
Signature

Principal Investigator
Title

SECTION 21. DISCOVERY CLAUSE

In the event that previously unreported cultural resources are encountered during ground disturbing activities, all work must immediately cease within 30 meters (100 feet) until a qualified archaeologist has documented the discovery and evaluated its eligibility for the Arizona or National Register of Historic Places in consultation with the lead agency, the SHPO, and Tribes, as appropriate. Work must not resume in this area without approval of the lead agency.

If human remains are encountered during ground-disturbing activities, all work must immediately cease within 30 meters (100 feet) of the discovery and the area must be secured. The Arizona State Museum, lead agency, SHPO, and appropriate Tribes must be notified of the discovery. All discoveries will be treated in accordance with NAGPRA (Public Law 101-601; 25 U.S.C. 3001-3013) or Arizona Revised Statutes (A.R.S. § 41-844 and A.R.S. § 41-865), as appropriate, and work must not resume in this area without authorization from ASM and the lead agency.

References Cited

Arizona Geological Survey
2020 The Geologic Map of Arizona. Available at: http://data.azgs.az.gov/geologic-map-of-arizona/. Accessed on December 30, 2020.

Brack, Michael L.
2001 *A Cultural Resources Survey of Cortaro Farms Road between Interstate 10 and Thornydale Road, Pima County, Arizona*. Project Report No. 00-131. Desert Archaeology, Inc., Tucson.

Brown, David E. (editor)
1994 *Biotic Communities: Southwestern United States and Northwestern Mexico.* University of Utah Press, Salt Lake City.

Copperstone, Chance
2020 *Cultural Resources Class III Survey for the Tri-Church Casitas Project, Pima County, Arizona.* Tierra Archaeological Report No. 2020-pending. Tierra Right of Way Services, Ltd, Tucson.

Heuett, Mary Lou
1988 *An Archaeological Survey of 3.1 Miles of a Right-of-Way for CAP Northwest Phase III along Cortaro Farms, Thornydale and Oasis Roads, Tucson, Arizona*. Cultural and Environmental Systems, Inc., Tucson.

Myers, Laural
1994 *A Cultural Resource Survey along Cortaro Farms Road for a Proposed Wastewater Pump Station and Force Main, Pima County, Arizona*. Archaeological Report 94-179. SWCA, Inc., Environmental Consultants, Tucson.

Natural Resources Conservation Service (NRCS)
2020 Web Soil Survey Map. Available at: http://websoilsurvey.nrcs.usda.gov/app/. Accessed on December 30, 2020.

Wirth Associates, Inc.
1981 *A Cultural Resource Assessment of the Sierra Vista Project*. Wirth Associates, Inc. San Diego, California.

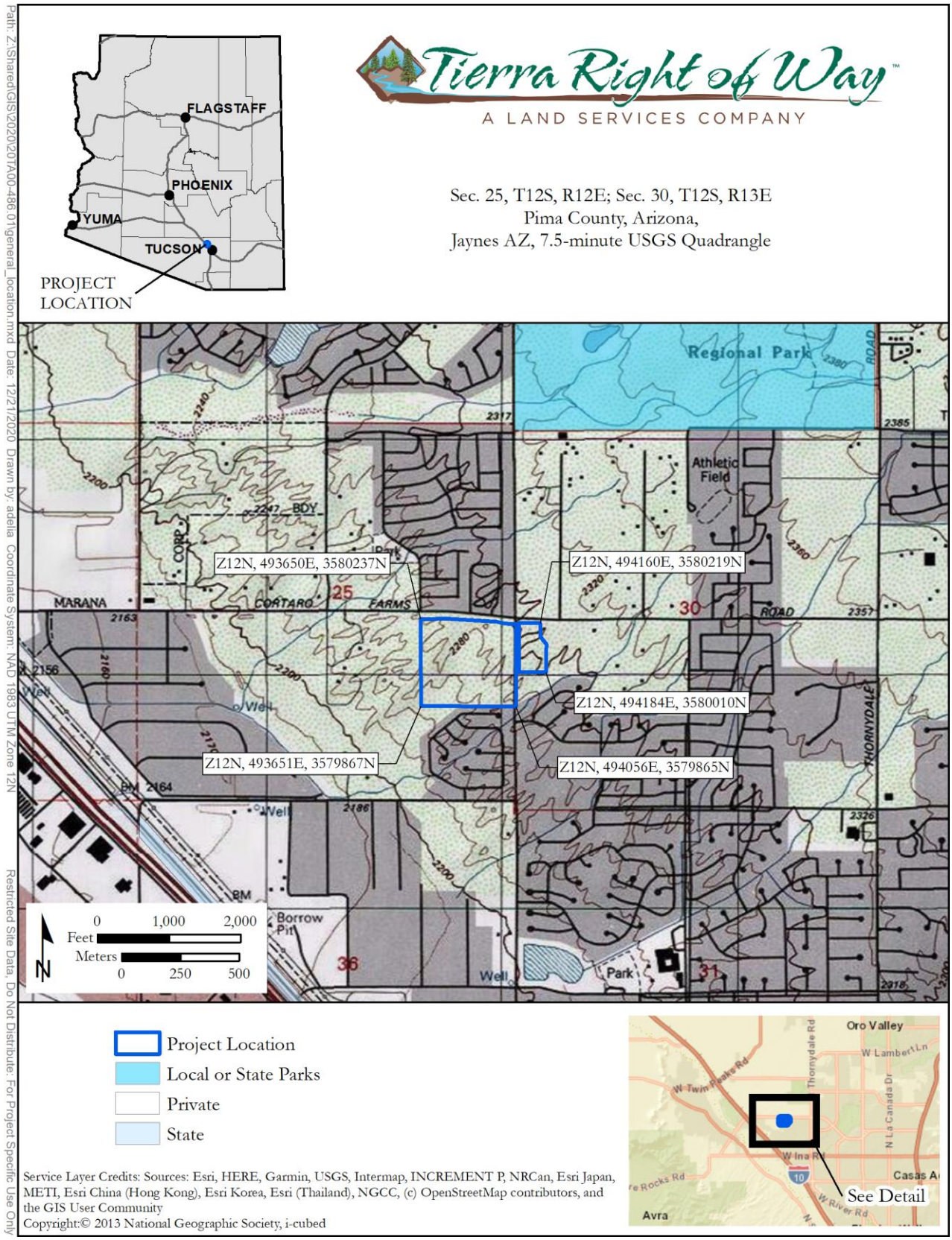

Figure 1. Project location.

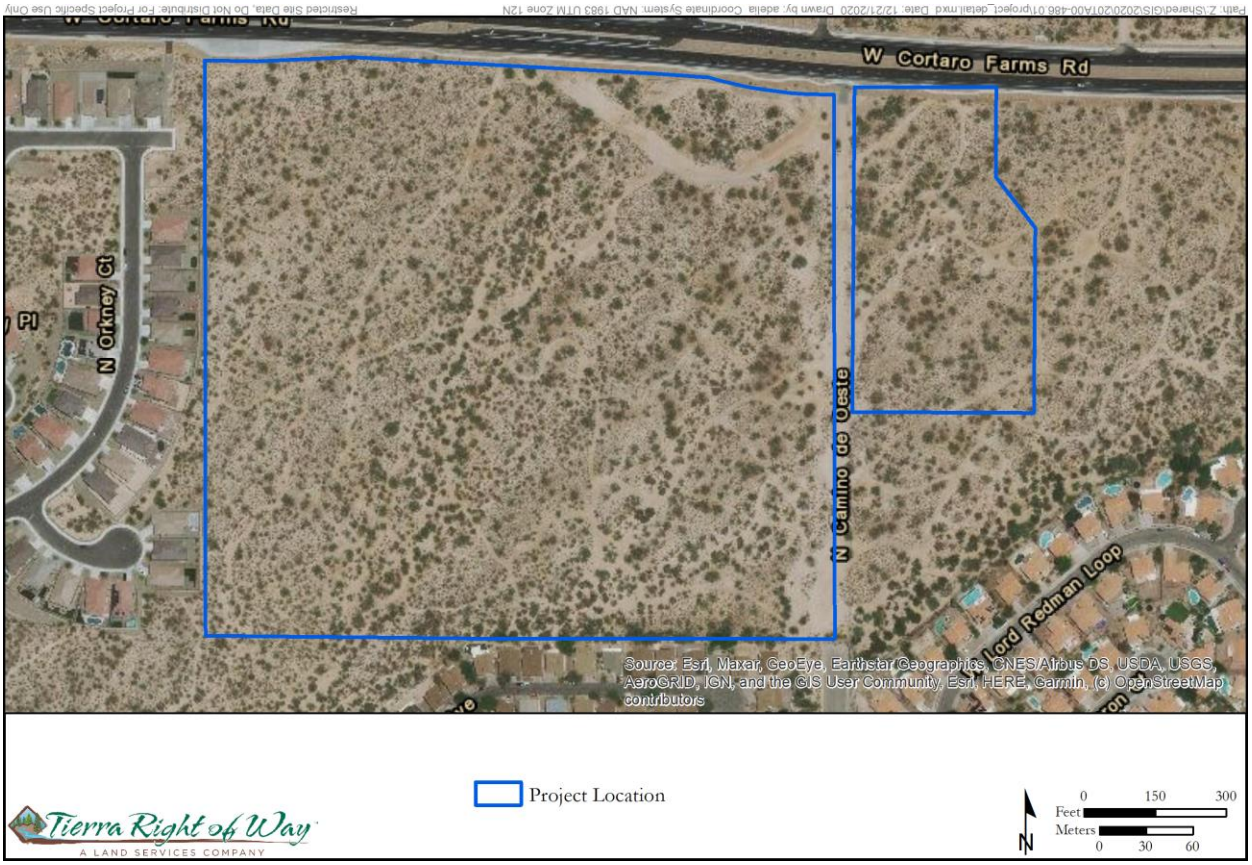

Figure 2. Detail of project location.

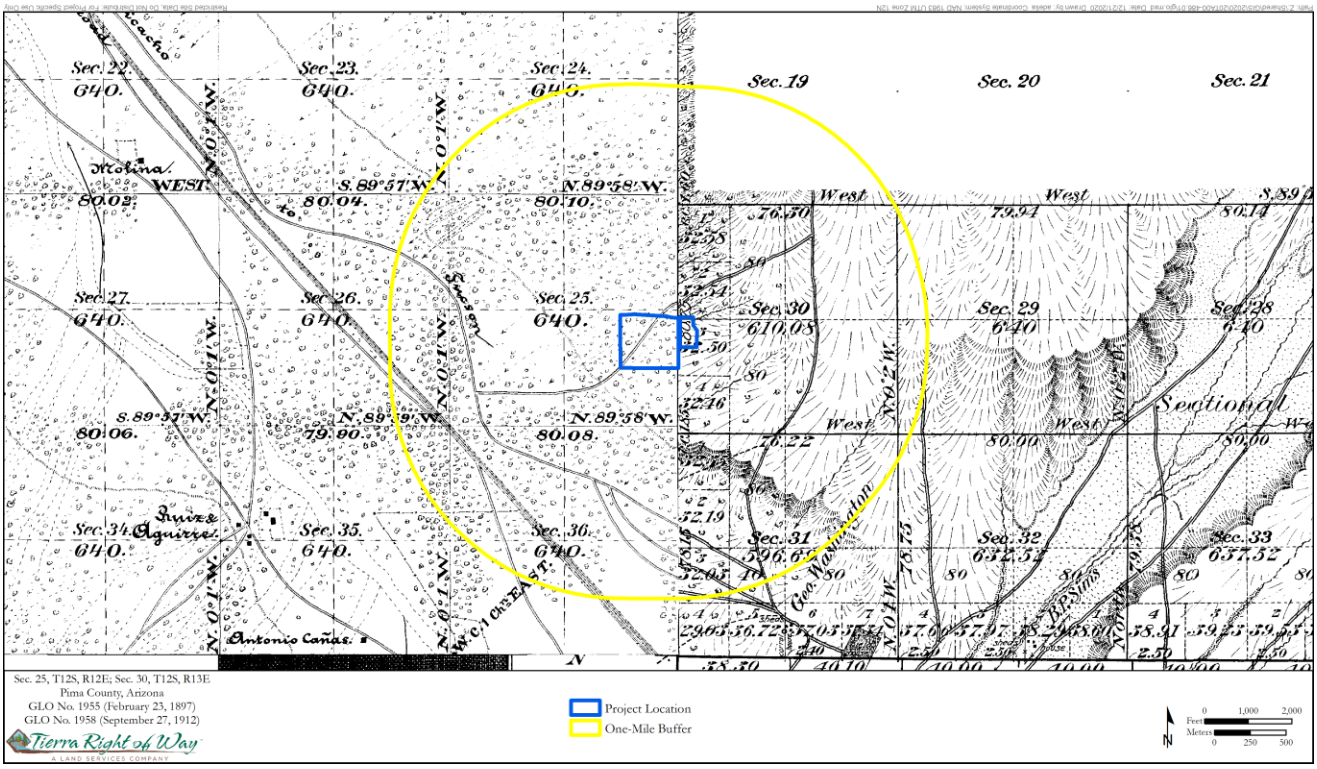

Figure 3. Portions of General Land Office Map #s 1955 (T12S, R12E) and 1958 (T12S, R13E)

Figure 4 REDACTED

Figure 4. Previous projects and archaeological sites within 1 mile of project area. CONFIDENTIAL

Photo 1. Project area overview looking east.

STATE HISTORIC PRESERVATION OFFICE
SURVEY REPORT SUMMARY FORM

1. REPORT TITLE

1a. Report Title*: Cultural Resources Class III Survey for the Tri-Church Casitas Project, Pima County, Arizona*

1b. Report Author(s): Chance Copperstone, M.A.

1c. Date: March 6, 2020 **1d. Report No.:** Tierra Archaeological Report No. 2020-pending

2. PROJECT REGISTRATION/PERMITS

2a. ASM Accession Number: N/A

2b. AAA Permit Number: 2020-048bl

2c. ASLD Lease Application Number(s): N/A

2d. Other Permit Number(s).: N/A

3. ORGANIZATION/CONSULTING FIRM

3a. Name: Tierra Right of Way Services, Ltd.

3b. Internal Project Number: 20TA00-085.01

3c. Internal Project Name: Tri-Church Casitas Survey

3d. Contact Name: Barbara Montgomery

3e. Contact Address: 1575 East River Road, Suite 201, Tucson, AZ 85718

3f. Contact Phone: 520.319.2106

3g. Contact Email: bmontgomery@tierra-row.com

4. SPONSOR/LEAD AGENCY

4a. Sponsor: ACM Ventures

4b. Lead Agency: Pima County

4c. Agency Project Number(s): N.A

4d. Agency Project Name: N/A

4e. Funding Source(s): Private

4f. Other Involved Agencies: N/A

4g. Applicable Regulations: Pima County Ordinance No. 2018-027

5. DESCRIPTION OF PROJECT OR UNDERTAKING: ACM Ventures is seeking to purchase and rezone parcels 22533059P and 22533059Q for residential use.

6. PROJECT AREA/AREA OF POTENTIAL EFFECTS: The project area consists of 14.2 acres (5.75 hectares) encompassing the two parcels mentioned above, located at the southeast corner of the intersection of Cortaro Farms Road and Camino de Oeste (Figures 1 and 2).

7. PROJECT LOCATION

7a. Address:

7b. Route: N/A **7c. Mileposts Limits:** N/A

7d. Nearest City/Town: Marana **7e. County:** Pima County

7f. Project Locator UTM: 494160 Easting 3580219 Northing **7g. NAD** 83 **7h. Zone:** 12

7i. Baseline & Meridian: G&SR **7j. USGS Quadrangle(s):** Jaynes

7k. Legal Description(s): T12S, R13E, Section 30

8. SURVEY AREA

8a. Total Acres: 14.2 acres

8b. Survey Area.

1. Land Jurisdiction	2. Total Acres Surveyed	3. Total Acres Not Surveyed	4. Justification for Areas Not Surveyed
Private	14.2	0	N/A

9. ENVIRONMENTAL CONTEXTS

9a. Landform: Terrace

9b. Elevation: 2,300 ft amsl

9c. Surrounding Topographic Features: Urban development

9d. Nearest Drainage: Santa Cruz River, ca. 1 miles to the west

9e. Local Geology: Quaternary Surface Deposits (Arizona Geological Survey 2019)

9f. Vegetation: Arizona Upland Subdivision of the Sonoran Desertscrub biotic community (Brown 1994). Mesquite, cholla, saguaro, palo verde, creosote and prickly pear are all present.

9g. Soils/Deposition: Anthony and Sonoita soils, a sandy loam (NRCS 2020).

9h. Buried Deposits: Likely possible

9i. Justification: The project area is located on a terrace, so depth is possible but nothing was found on the surface that suggests cultural deposits are present.

I0. BUILT ENVIRONMENT: The built environment adjacent to the project area includes modern residential developments and the recently widened Cortaro Farms Road. Camino de Oeste is a dirt road along the west edge of the project area, and existing buried and aerial utilities pass along the edge of the road.

11. INVENTORY CLASS COMPLETED

11a. Class I Inventory: ☐

11b. Researcher(s):

11c. Class II Survey: ☐

11d Sampling Strategy:

11e. Class III Inventory: ☒

12. BACKGROUND RESEARCH SOURCES

12a. AZSITE: ☒

12b. ASM Archaeological Records Office: ☐

12c. SHPO Inventories and/or SHPO Library: ☐

12d. NRHP Database: ☒

12e. ADOT Portal: ☐

12f. GLO Maps: GLO Map No. 1958 (T12S, R13E), dated September 27, 1912, shows no historic features within the project area (Figure 3).

12g. Land- Managing Agency Files: N/A

12h. Tribal Cultural Resources Files: N/A

12i. Local Government Websites: N/A

12j. Other: N/A

13. BACKGROUND RESEARCH RESULTS

13a. Previous Projects within Project Area (Figure 4)

1. Project Reference Number	2. Project Name	3. Author(s)	4. Year
1981-174.ASM	Sierra Vista Project	Wirth Associates	1981

1988-200.ASM	CAP Northwest, Phase III	Heuett	1988
1994-424.ASM	Wastewater Pump Station Survey	Myers	1994

13b. Previously Recorded Cultural Resources within Project Area

1. Site Number	2. Affiliation	3. Site Type	4. Eligibility Status	5. Associated Reference(s)
N/A				

13c. Historic Buildings/Districts/Neighborhoods. (None in project area)

1. Property Name or Address	2. Year	3. Eligibility Status
N/A		

14. CULTURAL CONTEXTS

14a. Prehistoric Culture: Hohokam

14b. Protohistoric Culture: O'odham

14c. Indigenous Historic Culture: O'odham

14d. Euro-American Culture: A.D. 1500-1969

15. FIELD SURVEY PERSONNEL

15a. Principal Investigator: Barbara Montgomery, PhD.

15b. Field Supervisor: Chance Copperstone, M.A.

15c. Crew: N/A

15d. Fieldwork Date(s): 3/5/2020

16. SURVEY METHODS

16a. Transect Intervals: 20 m apart

16b. Coverage (%): 100

16c. Site Recording Criteria: ASM

16d. Ground Surface Visibility: 50%

16e. Observed Disturbances: Dirt two-tracks and possible mountain bike paths cross through the project area at multiple points. There are several borrow pits throughout the project area where it looks like gravel was removed.

17. FIELD SURVEY RESULTS

17a. No Cultural Resources Identified: ☒

17b. Isolated Occurrences (IOs) Only: ☐

17c. Number of IOs Recorded: N/A

17d. Table of IOs.

1. IO Number	2. Description	3. Date Range	4. UTMs

18. COMMENTS: No sites, historic buildings, or isolates were observed in the project area during the survey. Tierra recommends that ACM Ventures should be allowed to proceed with the proposed project without further archaeological work.

SECTION 19. ATTACHMENTS
19a. Project Location Map: ☒ Figures 1 and 2
19b. Land Jurisdiction Map: ☒ Figure 1
19c. Background Research Map(s): ☒ Figure 4
19d. GLO Map(s): ☒ Figure 3
19e. References: ☒

SECTION 20. CONSULTANT CERTIFICATION

I certify the information provided herein has been reviewed for content and accuracy and all work meets applicable agency standards.

Barbara K. Montgomery

_____
Signature

Principal Investigator
Title

SECTION 21. DISCOVERY CLAUSE

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If human remains are encountered during ground-disturbing activities, all work must immediately cease within 30 meters (100 feet) of the discovery and the area must be secured. The Arizona State Museum, lead agency, SHPO, and appropriate Tribes must be notified of the discovery. All discoveries will be treated in accordance with NAGPRA (Public Law 101-601; 25 U.S.C. 3001-3013) or Arizona Revised Statutes (A.R.S. § 41-844 and A.R.S. § 41-865), as appropriate, and work must not resume in this area without authorization from ASM and the lead agency.

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Heuett, Mary Lou
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Myers, Laural
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Wirth Associates, Inc.
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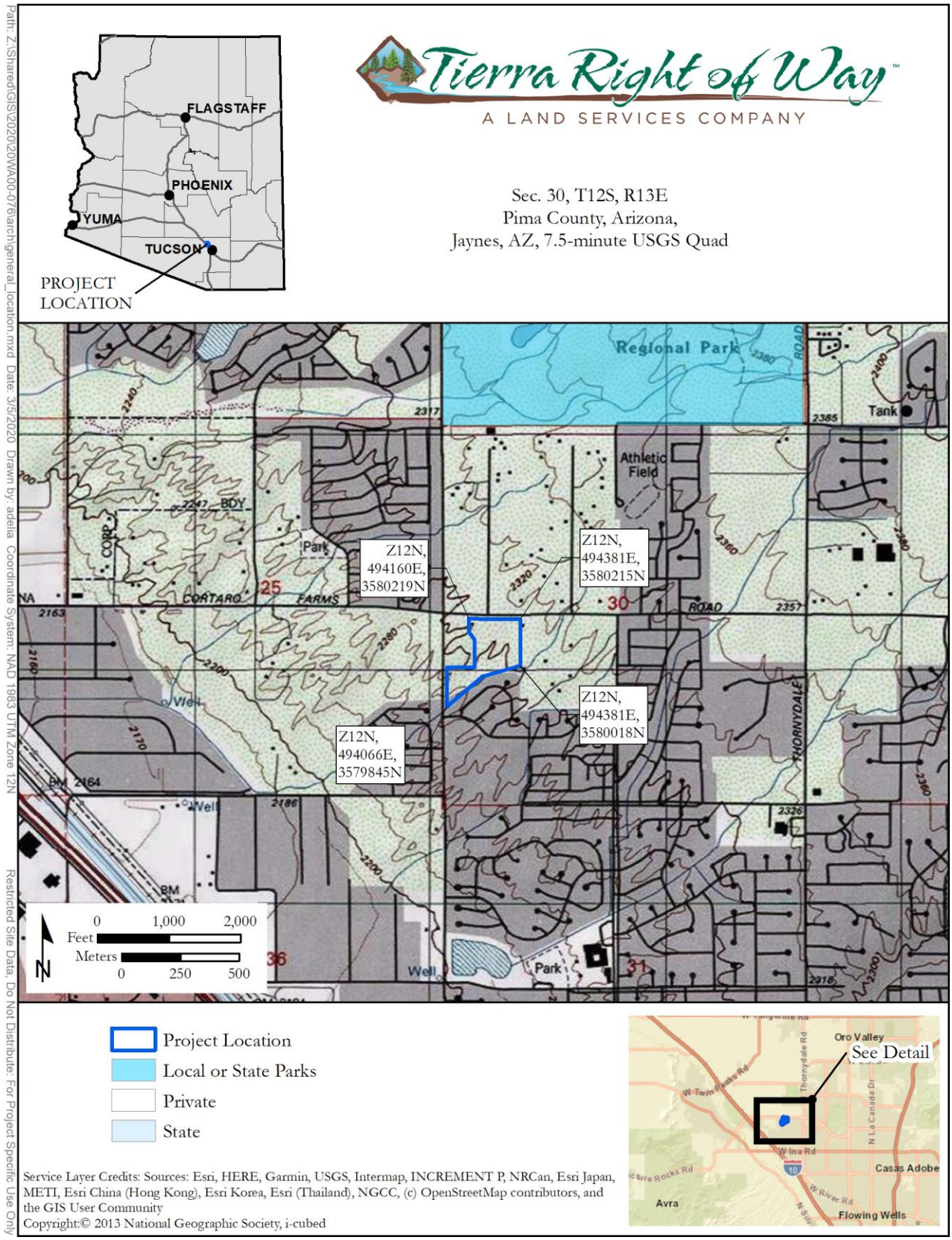

Figure 1. Project location.

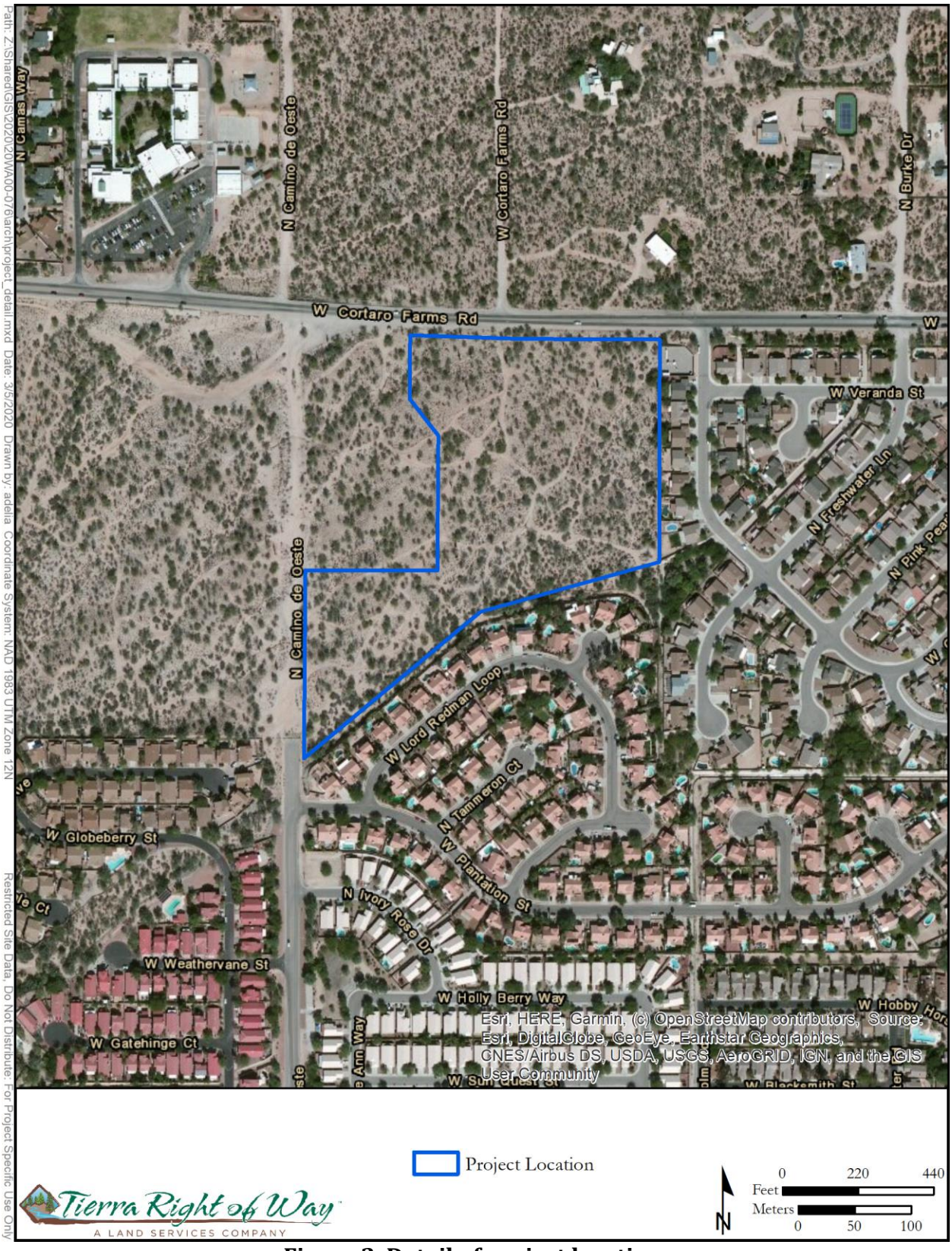

Figure 2. Detail of project location.

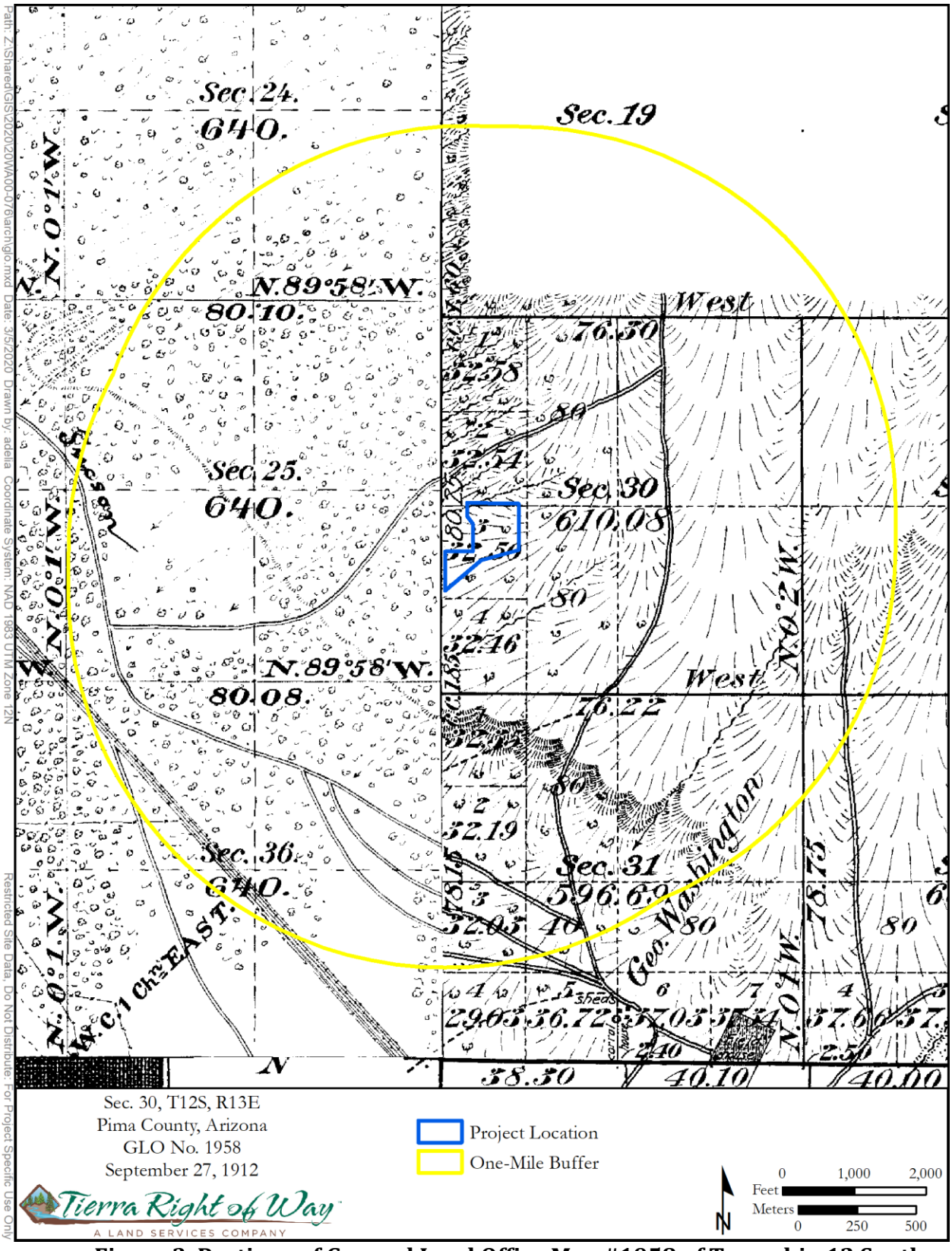

Figure 3. Portions of General Land Office Map #1958 of Township 12 South, Range 13 East.

Figure 4 has been redacted.

Figure 4. Previous projects and archaeological sites within 1 mile of project area. CONFIDENTIAL

Photo 1. Project area overview from southwest corner, looking northeast.

Photo 2. Project area overview from north end, looking south.