MEMORANDUM

DATE: July 16, 2019
For August 1, 2019 Hearing

TO: John Iurino
Zoning Examiner

FROM: Scott Clark
Planning & Development Services
Director

SUBJECT: REZONING: PLANNING & DEVELOPMENT SERVICES REPORT
C9-19-06 Benedictine Monastery PAD – Country Club Road
O-3 and R-3 to PAD zone (Ward 6)

Issue – This is a request by Corky Poster, of Poster Frost Mirto, Inc, on behalf of the property owners, Tucson Monastery, LLC, to rezone approximately 6.89 acres from O-3 and R-3 to PAD zoning. The rezoning site is located at 800 North Country Club Road, approximately 771 feet south of Speedway Boulevard (see Case Location Map). The proposed project is an adaptive re-use of the Benedictine Monastery site which would include: rehabilitating and repurposing the monastery building with commercial and multi-family residential uses as well as new construction of multi-family residential and a parking garage. The new construction would have varied building heights ranging from 33-feet, 44-feet and 55-feet. The PAD will include a Historic Landmark designation for the Benedictine Monastery.

Planning & Development Services Recommendation – The Planning & Development Services Department recommends approval of Planned Area Development, (PAD) zoning, subject to the development standards found in the attached Benedictine Monastery PAD document, and subject to approval by Mayor and Council.

Background Information – This is a companion case to C9-19-07 Benedictine Monastery which proposes a Historic Landmark designation for the Benedictine Monastery. The boundaries of the landmark include the footprint of the monastery and a 40,067 square foot buffer around the perimeter of the building for a total of 51,501 square feet.

The monastery, designed by Tucson architect Roy Place, was constructed in 1940, and is an example of Spanish Colonial Revival. The building is the last of the architect's designs that readily conveys its association with him. Place's favored aesthetic during the height of his career was Spanish Colonial Revival. The Benedictine Monastery is in the National Register of Historic Places as a contributing property to the Sam Hughes National Historic District.

The Historic Landmark designation for the Benedictine Monastery will be incorporated into the Benedictine Monastery PAD. The PAD document will include compliance with the UDC Section 5.8.5 Standards for Establishing or Amending HLs. The building is the third monastery of the Benedictine Order of the Sisters of perpetual Adoration built in the United States from a total of 8 such monasteries, and is one of two surviving monasteries in this order extant in the United States.

The footprint of the building was designed in the form of an "E" and constructed of brick, sheathed in cement plaster, and accented with arcades, stone medallions, corbels, columns, pilasters, coping, and ornamental iron gates, and a tiled-topped dome with copper finials. The north wing housed the sanctuary

and chapel, the central wing housed the refectory, the south wing, the living and workrooms, and the former kitchen and utility rooms were located in a second-story deck above the chapel. Interior courtyards were located between the wings and enclosed by and connected with open-air arcades. The interior courtyards and grounds were landscaped with a mix of fruit and deciduous trees, and date palms, and both native and non-native ornamental plants.

PAD Document Review: The PAD document went through an iterative review process with approximately 26 City departments and outside agencies, including reviews with a neighborhood Design Advisory Committee as part of the plan amendment approval process, with multiple drafts until there was consensus and approval that the final document was ready for the Zoning Examiner's public hearing. The PAD review involved considerations including adopted policy, existing capacities, or planned improvements, with specific information such as but not limited to design criteria, traffic impacts and counts, water demand impact, sewer capacities.

Existing Land Use: Former Religious Monastery complex that included sanctuary, residences, offices, meeting hall, surface parking lots, and grounds. In late 2018, the immediate parcel to the north, a 0.73 acre site was acquired and combined with the monastery site.

Zoning Descriptions:

Existing
Office Zone (O-3) – Professional and semiprofessional office, high density residential developments, and limited research and development uses permitted.

Residence Zone (R-3) – This zone provides for high density, residential development and compatible uses. Civic, educational, recreation, religious uses, and select other ues, such as day care and urban agriculture, are also permitted that provide reasonable compatibility with adjoining residential uses.

Proposed
Planned Area Development (PAD) – The purpose of the Planned Area Development (PAD) zone is to enable and encourage comprehensively planned development in accordance with adopted plans and polices.

Historic Landmark (HL) – The PAD will include Historic Landmark designation for the Benedictine Monastery (HL area specifically dimensioned) that imposes standards and procedures that are in addition to those required under the PAD zoning standards.

Surrounding Zones and Land Uses:
North: Zoned O-3 and C-1; Administrative and Professional Office; General Merchandise Sales
South: Zoned O-3; Administrative and Professional Office
East: Zoned R-3 and R-2; Residential
West: Zoned R-1; Residential

Previous Cases on the Property: None

Related Cases:

C9-16-13 Trinity Presbyterian Church PAD – University Boulevard and 4th Avenue, C-3/R-3 to PAD (H)
This was a rezoning request for a 2.79 acre site, the Trinity Church block, to replace the underlying

zoning with a PAD for a mix of land uses, commercial/retail, residential, with two new buildings, Building 1 – four stories/61,847 SF and Building 2 – three stories/20924 SF, integrated with the existing historic Trinity Presbyterian Church complex. The PAD document incorporated UDC Section 5.8.8 and 5.8.9, Historic Design Review and Design Standards. On February 22, 2017, Mayor and Council adopted Ordinance No. 11437 to change zoning from C-3 and R-3 to PAD (H).

Tucson Community Center (TCC), PAD-5 Mayor and Council adopted the TCC, PAD-5 on August 3, 1987, Resolution 14130, for approximately 33 acres located between Granada Avenue and Church Avenue between Cushing Street and Congress Street, for a community center with a music hall, arena and exhibition hall. Development Area C within PAD-5 is identified as Historic Landmark as it contains the Sosa-Carrillo-Fremont House at 145-153 S. Main Street which was listed June 2, 1971 and has a period of significance of 1858 and 1879. It is individually listed on the National Register of Historical Places.

Applicant's Request – The applicant is proposing an adaptive re-use of the Benedictine Monastery site. A PAD zoning is being requested in order to 1) provide historic protection standards for the Benedictine Monastery; 2) provide a single zoning classification to accommodate an adaptive mix use project; 3) ability to restrict and/or allow appropriate land uses compatible with the surrounding neighborhoods; and 4) allow for design flexibility in heights, densities, landscaping, and parking for new construction and the existing monastery.

Planning Considerations – Land use policy direction for this area is provided by *Plan Tucson, Alvernon-Broadway Area Plan and Miramonte Neighborhood Plan.*

Plan Tucson – *Plan Tucson* supports maintaining the character of existing neighborhoods, while accommodating some new development and redevelopment and encouraging reinvestment and new services and amenities that contribute further to neighborhood stability. It supports adaptive reuse of historic landmarks and the preservation of Tucson's historic architecture. *Plan Tucson* supports high density residential and commercial development along arterials. It supports infill and redevelopment projects that reflect sensitivity to site and neighborhood conditions and adheres to relevant site and architectural design guidelines. It encourages special zoning districts, such as Planned Area Developments (PAD) or overlay districts, as a way to promote the reuse of historic structures or sites, foster mixed-use activity nodes and pedestrian and multi-modal oriented development areas.

Alvernon-Broadway Area Plan - The *Alvernon-Broadway Area Plan* (*ABAP*) general goals are to identify appropriate locations for new development, and to protect and preserve the integrity of established residential, low-density neighborhoods. The *ABAP* identifies the rezoning site for commercial-neighborhood level, office, and high density residential land uses. The *ABAP* defines neighborhood-level commercial as commercial uses intended primarily to serve a local neighborhood market, for example those uses allowed in the City's C-1 zone. It states that high density residential uses are generally appropriate along arterial streets, with residential development that is sensitively designed to enhance existing lands uses by compatibility of scale, density, and character with existing development. Nonresidential uses are intended to be at locations that are most suited to handle the intensity of such uses in terms of traffic generation and other potential impacts on adjacent residential uses. Nonresidential uses should be along arterials, with all parking met onsite. Screening and buffering for adjacent residential uses must be provided on-site. The *ABAP* suggests providing setbacks and a transition of heights and/or densities for proposed development which is adjacent to less intense uses, unless other mitigation measures provide adequate buffering. It calls for a transition of building heights downward

from the arterial street frontage along Country Club Road towards adjacent residential uses to be compatible with adjacent buildings. The *ABAP* calls for minimizing traffic impacts of Country Club Road on surrounding neighborhoods and encouraging the enhancement of the visual streetscape along Country Club Road.

Miramonte Neighborhood Plan - *The Miramonte Neighborhood Plan (MNP)* was amended December 18, 2018 (Resolution 22976) to allow for adaptive re-use of the Benedictine Monastery site located on the eastside of Country Club Road between 2nd and 3rd Streets. The amended Conceptual Land Use map identifies the amendment site for commercial-neighborhood level, office, and high density residential. The *MNP* - Policy 2.4 calls for the preservation and reuse of the Benedictine Monastery site. This section of the *MNP* encourages the preservation of the Benedictine Monastery through an Historic Landmark designation process. It allows a maximum height of 55-feet but with step downs towards Country Club Road, with architectural style of new development to be compatible with the monastery and the overall design character of the neighborhoods. It allows 250 new construction residential units, and additional residential units allowed in the monastery above that total amount, with no limit to the number of potential residential units to be located inside the existing monastery. An advisory committee with neighborhood representation shall be formed during the PAD rezoning process to ensure neighborhood input and feedback throughout the design and PAD rezoning. The *MNP, Section 2.4.6* calls out an agreement during the plan amendment process as binding conditions within the PAD document those specified items outlined in the agreement. That agreement and conditions are discussed later in this staff report.

The *MNP* calls for preserving the character of the neighborhood by ensuring that future land uses make a positive contribution to the neighborhood through such elements as an increase in home ownership in both low and high density development; a diverse mix of land uses that contribute to the traditional character of the neighborhood; carefully designed transitions between land uses; functional open space in all residential zones; green and sustainable development; and the use of native and/or drought tolerant plant materials.

The *MNP* supports the preservation and economic sustainability of the Benedictine Monastery as an important historic site, including preservation of the landscape buffering. The MNP calls for creating transitions between residential and commercial areas. It encourages that high density housing step down heights and densities to the property edge and extensive use of landscape plant materials and screening to buffer the edges of higher density residential development.

Planned Area Development Overview – The development of the Benedictine Monastery PAD includes three principal design objectives of the development team. One, preserve the historic Benedictine Monastery following Secretary Interior Standards for Historic Preservation on the exterior of the monastery, and designate the monastery a City of Tucson Historic Landmark. The developer will follow a rehabilitative adaptive re-use approach for the interior of the monastery with multi-family/commercial uses. Second, the remainder of the monastery site outside the identified HL boundary area will be developed for a mix of multi-family and commercial uses. And third, developer will continue to work with neighbors and a neighborhood advisory committee on site development and an architectural aesthetic.

PAD Zoning Standards

The Benedictine Monastery PAD utilizes the basic parameters of the C-1 zone, with the PAD consisting of a single modified zoning district with specifically crafted development regulations and guidelines for

the property in its entirety. Only the permitted land uses specified in the PAD and the historic designation documents are permitted within the PAD (See Part 3.B Permitted Uses, A, page 56-58). It should be noted that land uses such as Group Dwelling, Large Bar, and Large Dance Hall are not permitted. The PAD does allow for personal storage but only for tenants of the property. The PAD proposes 253 new construction residential units, 35 rehab residential units within the monastery, and approximately 20,000 square feet of commercial. The Concept shows commercial uses located within the monastery building and at the northwest portion of the site along Country Club Road See Exhibit 3A, page 53). The proposed residential parking requirements are 1.08 spaces per residential units; non-residential parking at 1 space for each 400 square feet of non-residential space (See Part 3.C Development Standards,8, page 61). The garage is currently planned for four levels and 216-230 vehicles, with an additional 140-160 surface parking spaces currently planned. The proposed parking garage will have a maximum building height of 55-feet. Buildings fronting on Country Club Road, excluding Historic Landmark designation and the parking garage, will have a maximum building height of 35-feet. Buildings along Anderson Boulevard will have a maximum building height of 45-feet. All other structures will have a maximum building height of 55-feet (See Exhibits 3B and 3C, pages 63-64).

The Benedictine Monastery PAD in Appendix A includes a copy of the plan amendment (Resolution 22976) to both the *Alvernon-Broadway Area Plan* and the *Miramonte Neighborhood Plan* that allowed for adaptive re-use of the Benedictine Monastery. Also Appendix A includes a table that outlines how the implementation of these *Plans* is being addressed within the PAD document, citing both amendment language and conditions and then relating them to the corresponding sections within the PAD.

Field inspection by staff indicates there are currently no billboards on the rezoning site.

Transportation Standards

Country Club Road is identified as an arterial road on the City's Major Streets and Routes Map. The applicant's Traffic Impact Study indicates at full build-out, the proposed development is expected to generate a total of 2,536 daily trips, 211 AM Peak Hour trips, and 230 PM Peak Hour trips. The mode traffic split is estimated at 60% autos, 25% bicyclists, and 15% pedestrian/transit users.

In lieu of the standard dedication of right-of-way according to the City of Tucson Major Streets and Routes, the PAD contains language agreed upon by both City of Tucson Transportation and the Developer in which the developer covenants and agrees to control this strip of right-of-way but will transfer at no cost to the City of Tucson in the event of a future widening of Country Club (See Part 3, page 55). There are two primary access points along Country Club Road with one access point on 2nd Street. No primary access will be allowed along the east side of the property along Anderson Boulevard; however, there will be one controlled service access point not available to project residents (See Exhibit 3D, page 65). A two-way left turn lane along Country Club Road will be designed and constructed by the developer, including addition of new 5-foot sidewalk along the property on local streets, with 6-foot sidewalk along Country Club Road See Exhibit 3E, page 66).

PAD Historic Landmark Standards

The boundary of the Historic Landmark area within the PAD encompasses 51,501 square feet of the total 6.89 acres for the PAD site. Part 3, D. Historic Landmark Standards outlines the design guidelines for the exterior of the Benedictine Monastery based on the *Secretary of the Interior Standards for the treatment of Historic Properties* (Standards). This section includes a Historic Landmark development standards table. Part 3, Section F outlines the design review process for the HL with a full review by the Tucson-

Pima County Historical Commission, Plans Review Subcommittee required for any project involving a building permit or modification of the exterior appearance of the monastery.

The PAD document outlines that *Secretary of the Interior Standards* for new construction adjacent to Historic Structures will provide the following limited guideline: New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. The developer's proposal accomplishes this by the following:

- The massing and heights of the new construction reflect those of the Monastery.
- The 55' height matches the Chapel facade.
- The lower level arcade on the Country Club north facade recalls the arcade porch of the Monastery.
- The heavy chocolate brown lower level of the new work matches the Roy Place poured stone columns and Chapel entry.
- Like the Monastery, the upper level stucco lightens the massing. The upper-most levels further lighten with a glass and metal finish.
- The proposed new construction is contemporary, having "its own time and place." But the design is carefully organized to be respectful of Roy Place's legacy.

Conclusion – The request to rezone the site to a PAD zoning is consistent with *Plan Tucson, Alvernon-Broadway Area Plan, and the Miramonte Neighborhood Plan* which recognize this site as appropriate for an adaptive reuse project of the Benedictine Monastery site, with a mixed-use project consisting of residential, office and commercial/retail uses. A plan amendment has been approved to facilitate this PAD rezoning. No additional conditions are recommended for the Benedictine Monastery PAD. Approval of the requested Benedictine Monastery PAD is appropriate only if C9-19-07 Benedictine Monastery Historic Landmark is approved by Mayor and Council.

BENEDICTINE MONASTERY

PLANNED AREA DEVELOPMENT-HISTORIC LANDMARK (PAD-HL)

CITY OF TUCSON

FINAL Submittal, July 1, 2019

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PART 1 – INTRODUCTION

A. Background and Project Overview

The former Benedictine Monastery at 800 N. Country Club Road (between Speedway to the north and 5th/6th Street to the south) was completed in 1940 and designed by Tucson architect Roy Place. Originally built to house a congregation of Sisters of the Benedictine Order, the monastery served in that capacity until 2018. The building is the third monastery of the Benedictine Order of the Sisters of Perpetual Adoration built in the United States from a total of 8 such monasteries, and is one of two surviving monasteries of this order extant in the United States. Today, the building serves as one of the last stylistic examples of monumental Spanish Colonial Revival architecture in Tucson. The Benedictine Monastery is in the National Register of Historic Places as a contributing property to the Sam Hughes Neighborhood National Historic District.

By 2016, the fifty or so sisters previously housed in the Monastery had diminished to nine residents. Sister Joan and her Board of Advisors decided to sell the property based on the appraised value for the highest and best use at its O-3/R-3 capacity, to use the proceeds to support the aging sisters of the Order, and move back to the home facilities in Clyde, Missouri. After sale, it was determined that the highest and best economic use for the site was by-the-bed student housing.

The 6.1338 acre property was sold to Ross Rulney (Tucson Monastery LLC) for preservation of the Monastery and development of the remaining portion of the vacant parcel. Quoting Ross Rulney from the Arizona Daily Star article about the sale, October 6, 2017, "I envision additional development on the property consisting of a housing component that will complement the adaptive reuse of the existing building…..The monastery is a historic treasure, and I will work to preserve the exterior of the building, while taking great care with interior improvements."

In late 2018, Mr. Rulney acquired the .7293 acre 3 lot north parcel. (125-13-0700, 125-13-0710, 125-13-0690). The abandoned eyesore brick building on that site and has since been demolished. The combined parcel is 6.8631 acres. The owner has acquired sliver parcel 125-13-0900. The owner is acquiring the City R/W alley between the two parcels. It is proposed that the COT shall transfer its fee title interest in the alley located between Tucson Monastery Parcels 125-13-068A, 125-13-0710, 125-13-0700, and 125-13-0690 to Tucson Monastery, LLC, and release and abandon any and all rights thereto.

Mr. Rulney initially explored the development of the site at its existing mixed high-density residential and office zoning, but after several meetings with adjoining neighborhoods (Sam Hughes and Miramonte) and the City of Tucson Ward 6 Council office, the decision was made to pursue the more interactive and flexible zoning of a PAD. City of Tucson staff subsequently determined that the extant Miramonte Neighborhood Plan and the Broadway-Alvernon Area Plan required Plan Amendments to allow for the proposed PAD. That Plan Amendment was approved by the City of Tucson Mayor and City Council on December 18, 2018. (See Appendix A)

B. Project Process to Date

The planning for the rehabilitation of the Benedictine Monastery and the redevelopment of the site began in early October 2017 and has continued with an extraordinary amount of public review and public input. It is a high profile site with a lot of interest and emotion form immediate neighbors and Tucson at large. The following is a time-line of the key steps leading up to this PAD submittal:

1. April 15, 2017:	Real Estate Brochure soliciting purchaser for Benedictine Monastery
2. September 17, 2017:	Ross Rulney signs purchase-agreement for Benedictine Monastery
3. Nov./Dec., 2017:	Initial meetings with neighbors at Ward 6
4. December 13, 2017:	Benedictine Monastery: Concept presentation to Ward 6/Miramonte. Decision made to proceed with a PAD instead of under-lying zoning
5. January 2018:	Design development based on December 13, 2017 meeting
6. February 9, 2018:	Meeting with neighbors at Ward 6
7. February 26, 2018:	Close of escrow in Rulney purchase on Benedictine Monastery
8. February 27, 2018:	Meeting with neighbors at Ward 6
9. March 28, 2018:	Informal community meeting at Monastery Chapel presenting preliminary ideas on the Monastery development. 250-300 attend
10. March 30, 2018:	Meeting with Ward 6 Councilmember
11. April 20, 2018:	Meeting with City of Tucson staff regarding schedule and submissions
12. May 22, 2018:	City Council initiates Historic Landmark designation for Monastery
13. June 28, 2018:	Formal (and required) Plan Amendment Neighborhood Meeting at Monastery Chapel. 150-200 attend
14. July 7, 2018:	Plan Amendment Application filed with the City of Tucson
15. July 20, 2018:	Plan Amendment Application Accepted by City of Tucson
16. August 7, 2018:	Plan Amendment Application Revised to include newly-acquired parcel north of Monastery site (Country Club and 2nd Street)
17. September 12, 2018:	Planning Commission Study Session re: proposed Plan Amendment (Study Session was continued with a request by Commission to negotiate with neighbors)
18. September 19, 2018:	Negotiation with neighbors at Ward 6
19. September 27, 2018:	Negotiation with neighbors at Ward 6
20. October 4, 2018:	Negotiation with neighbors at Ward 6
21. October 5, 2018:	Signed Joint Statement between Neighbors for Reasonable Monastery Development and Tucson Monastery LLC regarding Plan Amendment (See Appendix A)

22. October 10, 2018: Planning Commission Study Session Continued. Public Hearing set.
23. November 15, 2018: Planning Commission Public Hearing. No recommendation.
24. December 18, 2018: Mayor & Council Public Hearing on Plan Amendment. Approved 7-0.
25. January 5, 2019: Submission to COT P & DSD of PAD 1st Draft for Courtesy Review
26. February 26, 2019: First Design Advisory Committee meeting scheduled (@PFM)
27. February 28, 2019 First Formal Review Submission to P&DSD
28. April 3, 2019 Design Advisory Committee Meeting (@PFM)
29. May 1, 2019 Design Advisory Committee Meeting (@ Ward 6)
30. May 30, 2019 Second Formal Review Submission to P&DSD
31. June 19, 2019 Final Design Advisory Committee Meeting (@ Ward 6)
32. June 24, 2019 Final Historic Landmark Submission to COT Historic Preservation Officer
33. June 29, 2019 Final Submission to P&DSD

C. Architectural Character and Streetscape

The Benedictine Monastery is a Spanish Colonial treasure and a masterwork of architect Roy Place, arguably Tucson's most important 20th Century architect.

When it was first constructed, the Monastery was isolated, pre-dating the build-out of both the Sam Hughes and Miramonte neighborhoods.

Over the subsequent years, Tucson's urban development has encroached on this previously remote Monastery site to the point that it is now defined as "mid-town" Tucson. The historic Sam Hughes neighborhood (listed in the National Register of Historic Places) sits to the west and is characterized by spacious and well-maintained single-family detached homes, mostly built in the 1930's and 1940's. The more recently developed Miramonte neighborhood was mostly developed in the late 1940's and 1950's and is characterized by single-family detached homes on the west (nearest to the Monastery) and lower-priced market-rate multi-family housing on the eastern portion of the neighborhood.

This Benedictine Monastery project as defined by this PAD is committed to four key architectural character and streetscape principles:

1. The massing of the new development on the vacant land of this site will **transition** to the adjacent neighbors to the east and west by lowering heights from a maximum of 55' toward Anderson and toward Country Club, with the tallest portions of the new development located at the center of the site (as defined by the allowable heights in the approved Plan Amendment, December18, 2018.)
2. The architectural character of the new development will be sympathetic to the architectural character of the Roy Place Monastery, but not inappropriately imitative of a building of a different time and place. The development will follow the Secretary of the Interior's Standards for new development adjacent to historic structures.
3. The exterior of Benedictine Monastery will be preserved as is and as per the PAD-included Historic Landmark (HL), while the interior of the building is excluded from the regulatory aspects of this HL.
4. The landscape will be preserved and developed as follows:
   - the landscape within the boundaries of the Historic Landmark (HL) will be preserved as follows:
     a. the landscape north of the Monastery will be preserved except for the ability to build a sunken patio at the northwest corner of the Monastery to allow for ADA accessibility to the Chapel basement.
     b. the landscape west of the Monastery will be preserved except for the allowable removal of the high water-consuming grass immediately adjacent to the Monastery and replacement with hardscape.
     c. The landscape south of the Monastery is excluded from the HL
   - the perimeter oleander will be preserved and maintained to provide a uniform edge to the site
   - the landscape on the remaining vacant portions of the site will be inventoried, evaluated, and documented on a significant-plant-by-plant basis to either be preserved, relocated, grafted, or removed, in accordance with, and to accommodate, the needs of new construction.

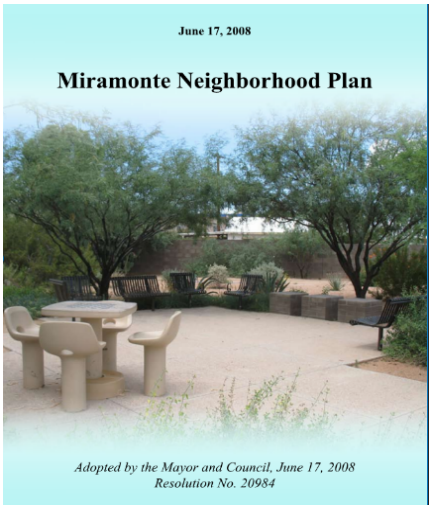
D. Rationale/Benefits for PAD; Conformance with General Plan/Land Use Plans

A PAD is being used in this project for four main purposes:

- Provide historic protection standards for the Benedictine Monastery
- Cure the split zoning on the site
- Provide assurance to neighbors by eliminating currently-allowable inappropriate uses (e.g. Group Dwelling/by-the-bed student housing)
- Allow for increased flexibility in heights, densities, and parking for new construction. The PAD will allow for slightly higher residential densities and comparable average heights to the 40' underlying zoning (see Appendix E), but with the flexibility of providing greater heights in some appropriate locations on the site and lower heights in other appropriate locations on the site.
- Allow for acceptable commercial uses in the historic Benedictine Monastery and at other appropriate locations on site.

The first step in the entitlement for the proposed development of the Benedictine Monastery were based in the requests for Plan Amendments to both the Miramonte Neighborhood Plan and the Broadway Alvernon-Area Plan. In that application, and by extension this PAD, the points for conformance with goals and objectives of these Plans were, and are, as follows:

Applicable Miramonte Neighborhood Plan Goals, Policies and Strategies



Goal #1 – Neighborhood Infill Compatibility

Policy 1.1 – Preserve character of the Neighborhood by ensuring that future land uses makes a positive contribution to the Neighborhood through application of following Neighborhood values.

- A diverse mix of land uses that contributes to the traditional character of the neighborhood
- Carefully designed transitions of land uses.
- Green and sustainable development (water harvesting, energy conservation, alternative energy sources, alternative modes of transportation, covered parking)
- Full involvement of residents and stakeholders in Neighborhood Decisions.

Strategy 1.1.1 – …the Neighborhood should work constructively with developers to ensure that higher density development is of high quality and that Neighborhood values are incorporated into projects.

Strategy 1.1.2 – …for-profit developers to explore alternatives for the development of housing that is affordable for entry level workers, such as teachers, firefighters, police, healthcare & childcare workers.

Policy 1.2 – Work with the existing development procedures to be sure that neighbors have an opportunity to be active participants in decisions that affect land use in the Neighborhood.

Goal #2 – Neighborhood Preservation and Rehabilitation

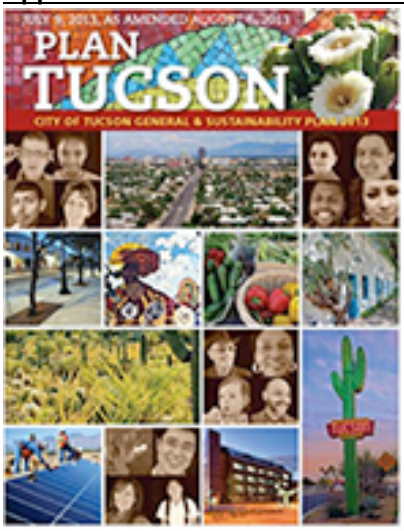
Policy 2.1 – Protect historic architecture of the Neighborhood.

Strategy 2.1.2 – Encourage the maintenance and preservation of potentially eligible structures in the Neighborhood.

Policy 2.2 - Protect historic sites and landscapes in the Neighborhood.

Strategy 2.2.1- …assist in the development of a long-range plan for preservation/economic stability of Benedictine Monastery as an important historic site, including preservation of the landscape buffering.

Applicable Plan Tucson Goals and Policies



PLAN TUCSON FOCUS AREA: THE SOCIAL ENVIRONMENT

Goal #1 – A mix of well-maintained, energy-energy efficient housing options with multi-modal access to basic goods and services, recognizing the important role of homeownership to neighborhood stability.

Housing Policies

Policy H11 – Encourage residential development including both market rate and affordable housing projects in Tucson.

PLAN TUCSON FOCUS AREA: THE BUILT ENVIRONMENT

Goal #23 – A community that respects and integrates historic resources into the built environment and uses them for the advancement of multiple community goals.

Goal #25 – An urban form that conserves natural resources, improves and builds on existing public infrastructures and facilities,

and provides an interconnected multi-modal transportation system to enhance the mobility of people and goods.

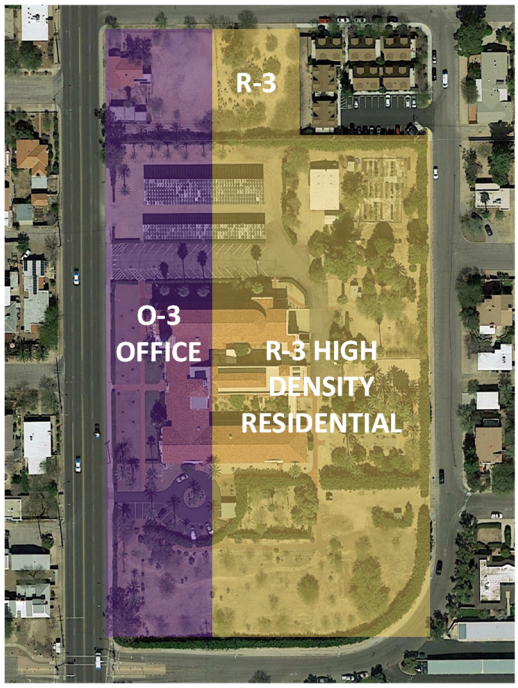
Historic Preservation Policies
Policy HP1 – Implement incentives for private property owners to maintain, retrofit, rehabilitate, and adaptively reuse historic buildings.

Redevelopment and Revitalization Policies
Policy RR7 – Undertake an inclusive community participation process in redevelopment and revitalization efforts.

Land Use, Transportation, and Urban Design Policies
Policy LT3 – Support development opportunities where: a) residential, commercial, employment, and recreational uses are located or could be located and integrated; b) there is close proximity to transit; c) multi-modal transportation choices exist or can be accommodated; d) there is a potential to develop moderate to higher density development.
Policy LT9 – Locate housing, employment, retail and services in proximity to each other to allow easy access between uses and reduce car dependence on the car.

- Guideline LT 28.1.14 – Support the continuation of original use or adaptive reuse of historic landmarks.
- Guideline LT 28.1.16 – Preserve Tucson's historic architecture in keeping with applicable rehabilitation standards.
- Guideline LT 28.2.12 – Support environmentally sensitive design that protects the integrity of existing neighborhoods, complements adjacent land uses, and enhances the overall function and visual quality of the street, adjacent properties, and the community.
- Guideline LT 28.2.13 – Support infill and redevelopment projects that reflect sensitivity to site and neighborhood conditions and adhere to relevant site and architectural guidelines.
- Guideline LT 28.2.14 – Protect established residential neighborhoods by supporting compatible development, which may include other residential, mixed-use infill/appropriate nonresidential uses.

E. Benefits to the Community and the Applicant by the Use of a PAD: Application of Best Practices of Urban Design; Preliminary Community Involvement



The current zoning of the site is unusual and limiting in that there is a zoning division line that runs right through the site from north to south, cutting right through the heart of the Benedictine Monastery itself. Furthermore that existing zoning forces heights and uses that are not in the Best Practices use of the site and the redevelopment of this historic resource. By using a PAD, zoning that is tailor-made for the unique conditions of this site and its adjacency to two lower density neighborhoods, can be developed with full neighborhood participation and in a way that protects the irreplaceable historic resource of the Benedictine Monastery. While it is true that the Mayor and Council themselves on May 22, 2018 initiated a Historic Landmark, incorporating the Historic Landmark into a flexible PAD rezoning allows for Best Practices development of the site as well as protecting the City of Tucson from any potential Proposition 207 claims connected to that Historic Landmark initiation.

In addition, the use of a PAD and the community process that we have committed to in the earlier Plan Amendment and the PAD process allows for a much greater involvement of the adjacent Sam Hughes and Miramonte neighborhoods and the many other community members with a concern for the future of this historic site. That process has already been extensive throughout the last 14 months of community participation. Further demonstration of that is the Plan Amendment commitment by the Owner to form and work with a Design Advisory Committee made up of representatives of the Sam Hughes and Miramonte neighborhoods.

And finally, Student Housing, an allowable use in the current R-3 and O-3 zoning, was a very large concern of the neighbors in our earliest meetings with them. By using the PAD to make “Group Dwelling” a prohibited use, the biggest concern of neighbors is put to rest.

F. Compatibility with Adjoining Land Uses

A great deal of the time and effort that proceeded this PAD submittal was devoted to utilizing the Plan Amendment process as a means to memorialize the issues and concerns of neighbors and the compatibility of the project to adjoining land uses. The approved Plan Amendment itself incorporated complex site heights, setbacks, landscape screening, and site access points that were aimed at insuring compatibility. While many of these issues would be critical in a typical PAD, the fact that they were addressed in the Plan Amendment, eliminates these issues as a source of contention and debate. In particular, the October 5, 2018, Signed Joint Statement between Neighbors for Reasonable Monastery Development and Tucson Monastery LLC regarding the Plan Amendment was an excellent summary of

the critical issues that were identified by neighbors to make the project compatible with the Sam Hughes and Miramonte neighborhoods. (See Appendix A)

G. Feasibility of the PAD with Existing Infrastructure and Services

We have contacted the appropriate infrastructure sources and offer the following:

1. Water:

CITY OF TUCSON

TUCSON WATER DEPARTMENT

February 20, 2019

Cypress Civil Development, LLC
2030 E. Speedway Blvd #110
Tucson, AZ 85719

Attn: Theresa Hadley

SUBJECT: **Water Availability for Project: 800 N. Country Club Rd , APN: 125100660, 12513068A, 125130690, 125130710, 125130900, Case #: WA2731 , T-14 R-14 S-09 , Location Code: TUC , Total Area: 6.52 , Zoning: R-3**

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, P.E.
Engineering Manager
Tucson Water Department

MM:ka
CC:125100660,12513068a,0700,710,690,900,.docx

TUCSON WATER

NEW DEVELOPMENT • P.O. BOX 27210 • TUCSON, AZ 85726-7210
(520) 791-4718 • FAX (520) 791-2501 • TDD (520) 791-2639 • www.tucsonaz.gov/water

2. Sewer

PIMA COUNTY
WASTEWATER RECLAMATION
201 NORTH STONE AVENUE
TUCSON, ARIZONA 85701-1207

JACKSON JENKINS
DIRECTOR

PH: (520) 724-6500
FAX: (520) 724-9635

February 20, 2019

Theresa Hadley
Cypress Civil Development
2030 E Speedway Boulevard, Suite 110
Tucson, Arizona 85719

Capacity Response No. 2019-36 Type II

RE: **Benedictine Convent, Parcels 125100660, 12513068A, 125130700, 125130690, 125130900, 125130710, 12513065A**
Estimated Flow 51,480 gpd (ADWF).
P19WC00036

Greetings:

The above referenced project is tributary to the Agua Nueva Water Reclamation Facility via the South Rillito - West (South Line) Interceptor.

Capacity is currently available for a project this size in the public sewer I-530, downstream from cleanout 8152*05.

This letter is **not** a reservation or commitment of treatment or conveyance capacity for this project. It is **not** an approval of point and method of connection. It is an analysis of the system as of this date. Allocation of capacity is made by the Type III Capacity Response.

If further information is needed, please feel free to contact us at (520) 724-6607.

Reviewed by: Kurt Stemm, CEA Sr.

3. Arizona Game and Fish

Arizona Environmental Online Review Tool Report

Arizona Game and Fish Department Mission
To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.

Project Name:
Benedictine Monastary

User Project Number:
PFA-02

Project Description:
Monastery PAD

Project Type:
Development Within Municipalities (Urban Growth), Residential single dwelling and associated infrastructure, Maintenance/expansion/rehabilitation of existing facilities

Contact Person:
Chris Laria

Organization:
The Planning Center

On Behalf Of:
CITY

Project ID:
HGIS-08707

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

Page 1 of 9

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HabiMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:
   Project Evaluation Program, Habitat Branch
   Arizona Game and Fish Department
   5000 West Carefree Highway
   Phoenix, Arizona 85086-5000
   Phone Number: (623) 236-7600
   Fax Number: (623) 236-7366
   Or
   PEP@azgfd.gov
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies

Arizona Game and Fish Department
Project ID: HGIS-08707

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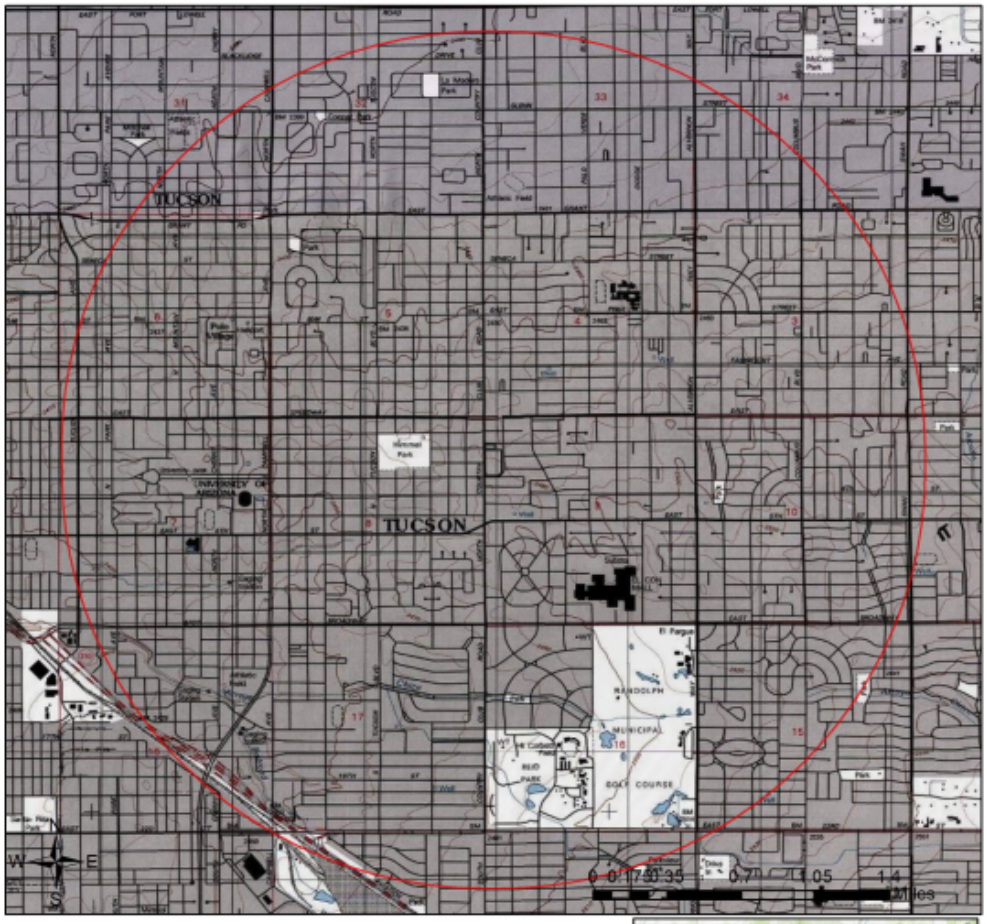
Benedictine Monastary

USA Topo Basemap With Locator Map



Project Boundary

Buffered Project Boundary

Project Size (acres): 6.80

Lat/Long (DD): 32.2330 / -110.9260

County(s): Pima

AGFD Region(s): Tucson

Township/Range(s): T14S, R14E

USGS Quad(s): TUCSON

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, ©

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Arizona Game and Fish Department
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Benedictine Monastary

Web Map As Submitted By User

Project Boundary

Buffered Project Boundary

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Arizona Game and Fish Department
Project ID: HGIS-08707

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Review Date: 2/12/2019 05:23:08 PM

Benedictine Monastary

Topo Basemap with Township/Ranges, Land Ownership, Critical Habitats, Wildlife Corridors

- Project Boundary
- Buffered Project Boundary
- Township/Ranges
- Wildlife Corridors
- Critical Habitat

Land Ownership

- AZ Game & Fish Dept.
- BLM
- BOR
- Indian Res.
- Military
- Mixed/Other
- National Park/Mon.
- Private
- State & Regional Parks
- State Trust
- US Forest Service
- Wildlife Area/Refuge

Project Size (acres): 6.80
Lat/Long (DD): 32.2330 / -110.9260
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T14S, R14E
USGS Quad(s): TUCSON

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

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Arizona Game and Fish Department
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Review Date: 2/12/2019 05:23:08 PM

Special Status Species and Special Areas Documented within 2 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Capsicum annuum var. glabriusculum	Chiltepin		S			
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Lithobates yavapaiensis	Lowland Leopard Frog	SC	S	S		1A

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/
.

Species of Greatest Conservation Need
Predicted within 2 Miles of Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Aix sponsa	Wood Duck					1B
Ammospermophilus harrisii	Harris' Antelope Squirrel					1B
Anaxyrus retiformis	Sonoran Green Toad			S		1B
Anthus spragueii	Sprague's Pipit	SC				1A
Antrostomus ridgwayi	Buff-collared Nightjar		S			1B
Aspidoscelis stictogramma	Giant Spotted Whiptail	SC	S			1B
Aspidoscelis xanthonota	Red-backed Whiptail	SC	S			1B
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B
Botaurus lentiginosus	American Bittern					1B
Calypte costae	Costa's Hummingbird					1C
Chilomeniscus stramineus	Variable Sandsnake					1B
Cistothorus palustris	Marsh Wren					1C
Colaptes chrysoides	Gilded Flicker			S		1B
Coluber bilineatus	Sonoran Whipsnake					1B
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Crotalus tigris	Tiger Rattlesnake					1B
Cynanthus latirostris	Broad-billed Hummingbird		S			1B
Dipodomys spectabilis	Banner-tailed Kangaroo Rat			S		1B
Euderma maculatum	Spotted Bat	SC	S	S		1B
Eumops perotis californicus	Greater Western Bonneted Bat	SC		S		1B
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	SC	S	S		1B
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1A
Haliaeetus leucocephalus	Bald Eagle	SC, BGA	S	S		1A
Heloderma suspectum	Gila Monster					1A
Incilius alvarius	Sonoran Desert Toad					1B
Kinosternon sonoriense sonoriense	Desert Mud Turtle			S		1B
Lasiurus xanthinus	Western Yellow Bat		S			1B
Leopardus pardalis	Ocelot	LE				1A

Arizona Game and Fish Department
Project ID: HGIS-08707

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Review Date: 2/12/2019 05:23:08 PM

Species of Greatest Conservation Need
Predicted within 2 Miles of Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1A
Lepus alleni	Antelope Jackrabbit					1B
Lithobates yavapaiensis	Lowland Leopard Frog	SC	S	S		1A
Macrotus californicus	California Leaf-nosed Bat	SC		S		1B
Melanerpes uropygialis	Gila Woodpecker					1B
Melospiza lincolnii	Lincoln's Sparrow					1B
Melozone aberti	Abert's Towhee		S			1B
Micrathene whitneyi	Elf Owl					1C
Micruroides euryxanthus	Sonoran Coralsnake					1B
Myiarchus tyrannulus	Brown-crested Flycatcher					1C
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis velifer	Cave Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Oreothlypis luciae	Lucy's Warbler					1C
Panthera onca	Jaguar	LE				1A
Peucaea carpalis	Rufous-winged Sparrow					1B
Phrynosoma solare	Regal Horned Lizard					1B
Phyllorhynchus browni	Saddled Leaf-nosed Snake					1B
Progne subis hesperia	Desert Purple Martin			S		1B
Setophaga petechia	Yellow Warbler					1B
Sphyrapicus nuchalis	Red-naped Sapsucker					1C
Spizella breweri	Brewer's Sparrow					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Toxostoma lecontei	LeConte's Thrasher			S		1B
Vireo bellii arizonae	Arizona Bell's Vireo					1B
Vulpes macrotis	Kit Fox	No Status				1B

Species of Economic and Recreation Importance Predicted within 2 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

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Project Type: Development Within Municipalities (Urban Growth), Residential single dwelling and associated infrastructure, Maintenance/expansion/rehabilitation of existing facilities

Project Type Recommendations:
Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

Minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g., microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g., livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before leaving the site. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants, https://agriculture.az.gov/. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control, http://www.usda.gov/wps/portal/usdahome. The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information https://www.azgfd.com/hunting/regulations.

Trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herptefauna (snakes, lizards, tortoise) from entering ditches.

4. Tucson Unified School District

TUCSON UNIFIED
SCHOOL DISTRICT

Department of Engineering, Facilities and Planning
TUSD Planning Services – 2025 E Winsett Street Tucson, Arizona 85719
(520) 225-4949
(520) 225-4939 (fax)

To: **Corky Poster, Architect/Planner/Principal**
Poster Frost Mirto, Inc.

From: **Shaun Brown**
Planning Technician

Date: **February 14, 2019**

Re: **Case/Project #:**
Project Name: **PAD Rezoning for 6.89 acres at 800 North Country Club Road**
New Units: **255**

Impacted Schools	Capcity	Projected Enrollment 2019	Additional Students from Project	Projected Enroll w/Project	Students Exceeding Capacity	Students Exceeding Capacity %
Hughes Elementary	325	363	31	394	69	21%
Mansfeld Middle	975	1040	11	1051	76	8%
Tucson High	2900	3054	14	3068	168	6%

Response:

Based on the projected enrollment at TUSD, there is inadequate capacity to absorb the impact of the proposed 225 apartments at Hughes Elementary and Mansfeld Middle and Tucson High Schools. Previsions recommended for funding the schools by the developer to help alleviate the projected overcrowding.

Proposed Methods of Mitigation
To help alleviate the projected overcrowding the developer may make voluntary monetary (per unit) to the affected schools or TUSD.

M:\Planning\Projects\Development Review\2019\Benediciten Monastery Development14Feb19.docx

PART 2 – SITE ANALYSIS

A. Existing Site Conditions

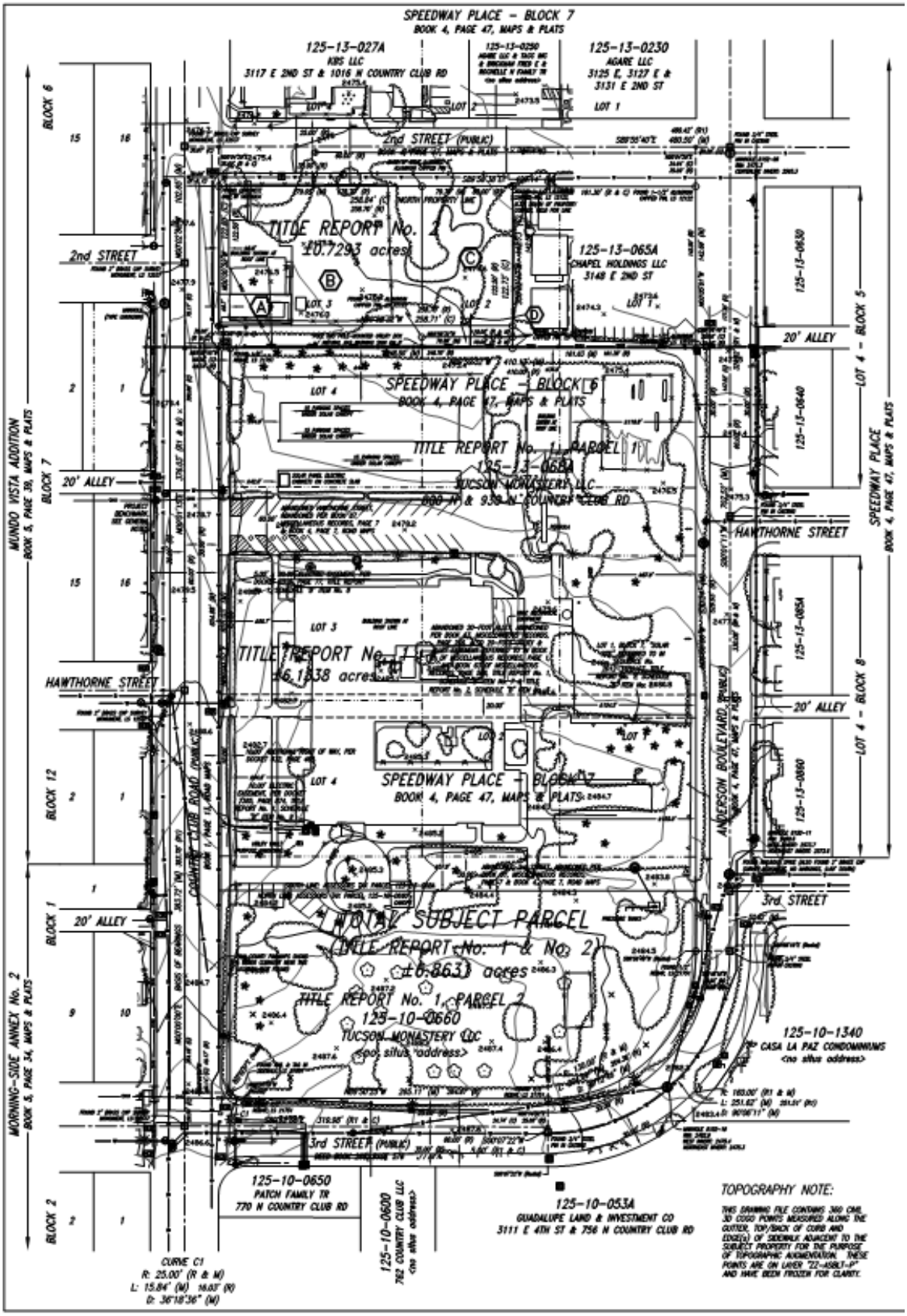
1. Existing On-Site development (Significant built constraints of the site)

The Benedictine Monastery, 800 N Country Club Road, is located on the northeast corner of Country Club Road and 3rd Street. It is comprised of five parcels. On the south APN # 125-13-068A & 125-10-0660 encompass approximately 6.13 acres. On the north, the more recently-acquired APN # 125-13-0710, 125-13-0700, and 125-13-0690, encompass approximately .7293 acres. The total of all five parcels is 6.8593 acres. There is currently a City-owned alley that separates the three northern parcels from the two southern parcels.

Construction of the 50,000+ square foot Benedictine Monastery began in 1939 and was completed in December 1940. The building was designed by prominent architect Roy Place. It is listed as a "Contributing" structure to the Sam Hughes National Register Neighborhood. There is a small brick building (shown on survey) on the northern parcel that has been recently demolished and removed. There is a small residence at the northeast corner of parcel 125-13-068A that is currently occupied by a caretaker. There is a large array of solar panels on a steel structure proving shade for parking and a source of alternative energy,

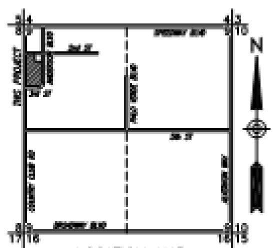
2. Landscape

The landscape on the premises is a mixture of styles that include formal, traditional cloister courtyard, remnant citrus and Date Palm orchard, native plantings, a vegetable garden, and disturbed areas. The plant palette is reflective of these styles and varies from location to location. The main entry to the monastery consists of a formal style and is comprised of non-native plants. The formal style is symmetrical in nature and centered around the main entry. Pittosporum and Lantana have been pruned into a hedge that flanks the sidewalk on Country Club Road. Junipers, and a lawn are immediately adjacent to the monastery entrance. South of the monastery, Native plants have been installed including Agaves, Ocotillo, and a mix of native and non-native trees encircled by a decomposed granite walking path. Immediately behind (east of) the monastery, groves of edible fruit trees are nearing their decline. The edibles vary from citrus varieties to Date Palms, and fig. In the northeast corner of the property there is a community garden that is no longer cared for. Two cloister gardens are present within the main building. Scattered throughout the property, several non-native trees, Eucalyptus species, Aleppo pine (one of which is very large), and others, have been planted. A large Oleander hedge encircles the property along the southern portion of Country Club Road, 3rd Street, Anderson Boulevard and the northern property line. Overall, the landscape is dated and many mature trees are nearing the end of their life.

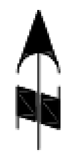

SPEEDWAY PLACE – BLOCK 7
BOOK 4, PAGE 47, MAPS & PLATS
125-13-027A
KBS LLC
3117 E 2ND ST & 1016 N COUNTRY CLUB RD
125-13-0230
AGARE LLC
3125 E, 3127 E & 3131 E 2ND ST
LOT 1
2nd STREET (PUBLIC)
TITLE REPORT No. 2
±0.7293 acres
125-13-065A
CHAPEL HOLDINGS LLC
3148 E 2ND ST
2nd STREET
20' ALLEY
SPEEDWAY PLACE – BLOCK 6
BOOK 4, PAGE 47, MAPS & PLATS
TITLE REPORT No. 1, PARCEL 1
125-13-068A
TUCSON MONASTERY LLC
800 N & 930 N COUNTRY CLUB RD
HAWTHORNE STREET
TITLE REPORT No. 1
±6.1338 acres
SPEEDWAY PLACE – BLOCK 7
BOOK 4, PAGE 47, MAPS & PLATS
ANDERSON BOULEVARD (PUBLIC)
3rd STREET
TOTAL SUBJECT PARCEL
(TITLE REPORT No. 1 & No. 2)
±6.8631 acres
TITLE REPORT No. 1, PARCEL 2
125-10-0660
TUCSON MONASTERY LLC
125-10-1340
CASA LA PAZ CONDOMINIUMS
3rd STREET (PUBLIC)
125-10-0650
PATCH FAMILY TR
770 N COUNTRY CLUB RD
125-10-0600
762 COUNTRY CLUB LLC
125-10-053A
GUADALUPE LAND & INVESTMENT CO
3111 E 4TH ST & 756 N COUNTRY CLUB RD
TOPOGRAPHY NOTE:
CURVE C1
R: 25.00' (R & M)
L: 15.84' (M) 16.03' (R)
D: 36°18'36" (M)
MUNDO VISTA ADDITION
BOOK 5, PAGE 39, MAPS & PLATS
MORNING-SIDE ANNEX No. 2
BOOK 5, PAGE 34, MAPS & PLATS
SPEEDWAY PLACE
BOOK 4, PAGE 47, MAPS & PLATS
BLOCK 6
BLOCK 7
BLOCK 12
BLOCK 1
BLOCK 2
LOT 4 – BLOCK 5
LOT 4 – BLOCK 8

GENERAL NOTES:

1. THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE COMMITMENT FOR TITLE INSURANCE (TITLE REPORT) ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, ORDER No. 60015543-001-RS-BW, EFFECTIVE DATE JANUARY 29, 2018, AMENDMENT No. 3 DATE FEBRUARY 7, 2018, REFERRED TO AS TITLE REPORT No. 1, AND AND IN ACCORDANCE WITH THE COMMITMENT FOR TITLE INSURANCE (TITLE REPORT) ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, ORDER No. 60016349-001-RS-BW, EFFECTIVE DATE JULY 25, 2018, AMENDMENT No. 1 DATE AUGUST 7, 2018, REFERRED TO AS TITLE REPORT No. 2. EASEMENTS AND ITEMS OF RECORD MAY BE LIMITED TO THOSE SHOWN ON THE NOTED TITLE REPORT. ANYONE HAVING AN INTEREST IN THE SUBJECT PROPERTY SHOULD OBTAIN A COPY OF THE NOTED TITLE REPORT AND REVIEW THE SCHEDULE B ITEMS. THE DATE OF THE LAST FIELD WORK WAS AUGUST 8, 2018.
2. BASIS OF BEARINGS: THE BASIS OF BEARINGS FOR THIS PROJECT IS THE CENTERLINE OF COUNTRY CLUB ROAD, BETWEEN THIRD STREET AND HAWTHORNE STREET. SAID BEARING BEING NORTH 00°00'00" EAST, AS SHOWN HEREON.
3. REFERENCES USED FOR THIS SURVEY INCLUDE, BUT MAY NOT BE LIMITED TO, THE FOLLOWING;
   - BOOK 4, PAGE 47, MAPS & PLATS.
   - BOOK 1, PAGE 13, ROAD MAPS.
   - BOOK 4, PAGE 7, ROAD MAPS.
   - BOOK 10, PAGE 80, RECORDS OF SURVEY.
   - BOOK 69, PAGE 60, RECORDS OF SURVEY.
   - BOOK 73, PAGE 74, RECORDS OF SURVEY.
4. ASSESSORS PARCEL NUMBERS (APN's), STREET NAMES, OWNERS NAMES AND ADDRESSES, IF SHOWN HEREON, ARE FROM THE PIMA COUNTY PIMAMAPS WEBSITE, AUGUST 5, 2018.
   (ALTA/NSPS OPTIONAL TABLE ITEM No. 2 and 13)
5. FLOODPLAIN: THIS PROJECT IS LYING WITHIN F.E.M.A. FLOODPLAIN ZONE "X" (UNSHADED). SAID ZONE "X" (UNSHADED) BEING REFERRED TO AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN", AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN MAP 04019C2281L, MAP REVISION DATE JUNE 16, 2011.
   (ALTA/NSPS OPTIONAL TABLE ITEM No. 3)
6. THE TOTAL AREA FOR THE SUBJECT PROPERTY IS AS FOLLOW: TITLE REPORT No. 1 CONTAINS 6.1338 ACRES, MORE OR LESS, TITLE REPORT No. 2 CONTAINS 0.7293 ACRES, MORE OR LESS, AND THE COMBINED SUBJECT PARCEL (TITLE REPORT No. 1 AND TITLE REPORT No. 2) CONTAINS 6.8631 ACRES, MORE OR LESS.
   (ALTA/NSPS OPTIONAL TABLE ITEM No. 4)
7. THIS IS AN ABOVE GROUND SURVEY ONLY. ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
   (ALTA/NSPS OPTIONAL TABLE ITEM No. 11)
8. THERE WAS NO OBSERVED EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS AT THE TIME OF THIS SURVEY.
   (ALTA/NSPS OPTIONAL TABLE ITEM No. 16)
9. PROPOSED CHANGES IN STREET RIGHT OF WAY LINES WAS NOT PROVIDED TO THE SURVEYOR. THERE WAS NO OBSERVED EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
   (ALTA/NSPS OPTIONAL TABLE ITEM No. 17)
10. THERE ARE NO PLOTTABLE OFFSITE EASEMENTS CONTAINED IN THE TITLE REPORTS FOR THIS PROJECT.
    (ALTA/NSPS OPTIONAL TABLE ITEM No. 19)
11. THIS SURVEY WAS PERFORMED BY PAUL M. COTE', AZ RLS 50761.



LOCATION MAP
SECTION 9
TOWNSHIP 14 SOUTH, RANGE 14 EAST
GILA & SALT RIVER MERIDIAN
PIMA COUNTY, ARIZONA
SCALE: 3"=1 MILE



50' 0' 50' 100'
SCALE: 1 INCH = 50 FEET
CONTOUR INTERVAL = 1 FOOT

TITLE REPORT No. 1 LEGAL DESCRIPTION:

PARCEL 1:

THE SOUTH 122.5 FEET OF LOTS 1, 2 AND 4 IN BLOCK 6;

LOTS 1, 2, 3 AND 4 IN BLOCK 7;

THAT CERTAIN ALLEY RUNNING IN AN EAST AND WEST DIRECTION THROUGH LOTS 1, 2, 3 AND 4 IN BLOCK 7 AND ABANDONED BY RESOLUTION KNOWN AS ABANDONMENT NO. 266 RECORDED IN BOOK 63 OF MISCELLANEOUS RECORDS AT PAGE 246;

THOSE PORTIONS OF HAWTHORNE STREET AND THIRD STREET, FORMERLY KNOWN AS BENEDICTINE DRIVE, DARA DRIVE, MOUNT ANGEL DRIVE AND MARTHA STREET, EXTENDING FROM THE EAST LINE OF COUNTRY CLUB ROAD TO THE WEST LINE OF ANDERSON BOULEVARD, ABANDONED BY RESOLUTION PROCEEDINGS NO. 483 RECORDED IN BOOK 87 OF MISCELLANEOUS RECORDS AT PAGE 7 AND SHOWN IN BOOK 4 OF ROAD MAPS AT PAGE 7; OF SPEEDWAY PLACE ADDITION, A SUBDIVISION OF PIMA COUNTY, ARIZONA ACCORDING TO THE MAP OR PLAT THEREOF OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PIMA COUNTY, ARIZONA, IN BOOK 4 OF MAPS AND PLATS AT PAGE 47 THEREOF.

EXCEPT THAT PORTION CONVEYED TO PIMA COUNTY, A BODY POLITIC IN DOCKET 632 AT PAGE 468.

PARCEL 2:

THE NORTH 156.67 FEET OF THE EAST 420 FEET OF THE WEST 450 FEET OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 14 SOUTH, RANGE 14 EAST, GILA AND SALT RIVER BASE AND MERIDIAN, PIMA COUNTY, ARIZONA.

EXCEPT THAT PORTION CONVEYED TO PIMA COUNTY IN BOOK 288 OF DEEDS AT PAGE 576.

FURTHER EXCEPT THAT PORTION CONVEYED TO PIMA COUNTY, A BODY POLITIC IN DOCKET 632 AT PAGE 468.

TITLE REPORT No. 1 SCHEDULE B EXCEPTIONS:

THE FOLLOWING SURVEY RELATED ITEMS ARE REFERENCED AS SCHEDULE B EXCEPTIONS IN THE AFOREMENTIONED TITLE REPORT:

1. RESERVATIONS CONTAINED IN THE PATENT FROM THE UNITED STATES OF AMERICA, RECORDED IN BOOK 34 OF DEEDS AT PAGE 632.
   (NOT GRAPHICALLY PLOTTABLE)
6. EASEMENTS, RESTRICTIONS, RESERVATIONS AND CONDITIONS AS SET FORTH ON THE RECORDED PLAT OF SAID SUBDIVISION RECORDED IN BOOK 4 OF MAPS AND PLATS AT PAGE 47.
   (THERE ARE NO PLOTTABLE EASEMENTS ON SAID PLAT)
7. EASEMENT AND RIGHTS INCIDENT THERETO, FOR THE PURPOSE OF UTILITIES AND ALLEY, AS SET FORTH IN INSTRUMENT RECORDED IN BOOK 61 OF MISCELLANEOUS RECORDS AT PAGE 1, AND IN BOOK 63 OF MISCELLANEOUS RECORDS AT PAGE 506.
   (EASEMENT LOCATION SHOWN HEREON)
8. EASEMENT AND RIGHTS INCIDENT THERETO, FOR THE PURPOSE OF ELECTRIC FACILITIES, AS SET FORTH IN INSTRUMENT RECORDED IN DOCKET 1015, PAGE 77.
   (EASEMENT LOCATION SHOWN HEREON)
9. EASEMENT AND RIGHTS INCIDENT THERETO, FOR THE PURPOSE ELECTRIC FACILITIES AND COMMUNICATION FACILITIES, AS SET FORTH IN INSTRUMENT RECORDED IN DOCKET 7365, PAGE 874.
   (EASEMENT LOCATION SHOWN HEREON)
10. MATTERS SHOWN ON SURVEY RECORDED IN BOOK 10, PAGE 80, RECORDS OF SURVEY, AND BOOK 73, PAGE 74, RECORDS OF SURVEY.
    (USED AS REFERENCES FOR THIS SURVEY)
11. LEASEHOLD, UNDER THE TERMS AND CONDITIONS OF AN UNRECORDED LEASE AS DISCLOSED BY MEMORANDUM OF SITE LEASE AGREEMENT, RECORDED IN SEQUENCE No. 2012-1630107.
    ("SOLAR SITE" SHOWN HEREON - SAID "SOLAR SITE" CONTAINS NO VISIBLE SOLAR FACILITIES)

TITLE REPORT No. 2 SCHEDULE B EXCEPTIONS:

THE FOLLOWING SURVEY RELATED ITEMS ARE REFERENCED AS SCHEDULE B EXCEPTIONS IN THE AFOREMENTIONED TITLE REPORT:

1. RESERVATIONS CONTAINED IN THE PATENT FROM THE UNITED STATES OF AMERICA, RECORDED IN BOOK 34 OF DEEDS AT PAGE 632.
   (NOT GRAPHICALLY PLOTTABLE)
4. EASEMENTS, RESTRICTIONS, RESERVATIONS AND CONDITIONS AS SET FORTH ON THE RECORDED PLAT OF SAID SUBDIVISION RECORDED IN BOOK 4 OF MAPS AND PLATS AT PAGE 47.
   (THERE ARE NO PLOTTABLE EASEMENTS ON SAID PLAT)
5. EASEMENT AND RIGHTS INCIDENT THERETO, FOR THE PURPOSE OF UTILITIES AND ALLEY, AS SET FORTH IN INSTRUMENT RECORDED IN BOOK 61 OF MISCELLANEOUS RECORDS AT PAGE 1, AND IN BOOK 63 OF MISCELLANEOUS RECORDS AT PAGE 506.
   (EASEMENT LOCATION SHOWN HEREON)
6. MATTERS SHOWN ON SURVEY RECORDED IN BOOK 69, PAGE 60, RECORDS OF SURVEY, AND BOOK 73, PAGE 74, RECORDS OF SURVEY.
   (USED AS REFERENCES FOR THIS SURVEY)

LEGEND:

- (R) RECORD BEARING AND/OR DISTANCE, PER BOOK 73, PAGE 74, RECORDS OF SURVEY
- (R1) RECORD BEARING AND/OR DISTANCE, PER BOOK 10, PAGE 80, RECORDS OF SURVEY
- (M) MEASURED BEARING AND/OR DISTANCE
- (C) CALCULATED BEARING AND/OR DISTANCE
- FOUND SURVEY MONUMENT, AS NOTED
- FOUND PROPERTY CORNER, AS NOTED
- CALCULATED POINT, NOTHING FOUND OR SET
- BENCHMARK
- SET 1/2" REBAR, RLS 50761
- GROUND LOCATED GAS METER
- GROUND LOCATED GAS VALVE
- GROUND LOCATED WATER METER BOX (MAY NOT CONTAIN METER)
- GROUND LOCATED WATER VALVE
- GROUND LOCATED FIRE HYDRANT
- GROUND LOCATED BACK FLOW PREVENTER
- GROUND LOCATED WATER SPIGOT
- GROUND LOCATED WELL
- GROUND LOCATED TRANSFORMER
- GROUND LOCATED UTILITY PEDESTAL (PURPOSE UNKNOWN)
- GROUND LOCATED ELECTRIC JUNCTION BOX
- GROUND LOCATED ELECTRIC METER
- GROUND LOCATED SANITARY SEWER MANHOLE
- GROUND LOCATED SANITARY SEWER CLEANOUT
- GROUND LOCATED COMMUNICATION PEDESTAL
- GROUND LOCATED COMMUNICATION MANHOLE
- HANDICAP RAMP
- (A) PARCEL INFORMATION, SEE PARCEL INFORMATION TABLE
- MONUMENT LINE
- PROPERTY LINE
- ORIGINAL SUBDIVISION LOT LINE
- EASEMENT LINE
- APPROXIMATE UNDERGROUND SANITARY SEWER, PER PIMA COUNTY MAPGUIDE
- APPROXIMATE UNDERGROUND WATER, PER CITY OF TUCSON WATER MAPS
- APPROXIMATE UNDERGROUND NATURAL GAS, PER SOUTHWEST GAS COMPANY MAPS
- APPROXIMATE UNDERGROUND ELECTRICAL LINE, PER ONE CALL GROUND LOCATED BLUESTAKING
- OVERHEAD UTILITY LINE(S)
- 125-13-065A ASSESSOR'S PARCEL NUMBER, PER PIMA COUNTY PIMAMAPS WEBSITE

TITLE REPORT No. 2 LEGAL DESCRIPTION:

THE NORTH 122.5 FEET OF LOT 3, AND THE WEST 80 FEET OF THE NORTH HALF OF LOT 2, BLOCK 6, OF SPEEDWAY PLACE, A SUBDIVISION OF PIMA COUNTY, ARIZONA ACCORDING TO THE MAP OR PLAT THEREOF OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PIMA COUNTY, ARIZONA, IN BOOK 4 OF MAPS AND PLATS AT PAGE 47 THEREOF.

EXCEPT THEREFROM THAT PORTION LYING WITHIN THE ALLEY AS CITED IN BOOK 61 OF MISCELLANEOUS RECORDS AT PAGE 1.

CERTIFICATION:

TO FIRST AMERICAN TITLE INSURANCE COMPANY; to TUCSON MONASTERY, LLC, AN ARIZONA LIMITED LIABILITY COMPANY; to BENEDICTINE CONVENT OF PERPETUAL ADORATION IN ARIZONA; AN ARIZONA NON-PROFIT CORPORATION, and to HOMESITES INC., AN ARIZONA CORPORATION:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 11 (LIMITED TO ABOVE GROUND VISIBLE UTILITIES AND ONLINE UTILITY MAPS), 13, 16, 17 and 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON AUGUST 8, 2018.

AUGUST 8, 2018
PAUL M. COTE', R.L.S.
ARIZONA REGISTRATION No. 50761

PARCEL INFORMATION TABLE

(A)
125-13-0710
HOMESITES INC
<no situs address>

(B)
125-13-0700
HOMESITES INC
3102 E & 3118 E 2ND ST

(C)
125-13-0690
HOMESITES INC
3120 E 2ND ST

(D)
125-13-0900
CHAPEL HOLDINGS LLC
<no situs address>

NO.	REVISION

ALTA/NSPS LAND TITLE SURVEY
A PORTION OF "SPEEDWAY PLACE",
PER BOOK 4, PAGE 47, MAPS & PLATS,
AND A PORTION OF SECTION 9, TOWNSHIP 14
SOUTH, RANGE 14 EAST, GILA AND SALT RIVER
MERIDIAN, PIMA COUNTY, ARIZONA

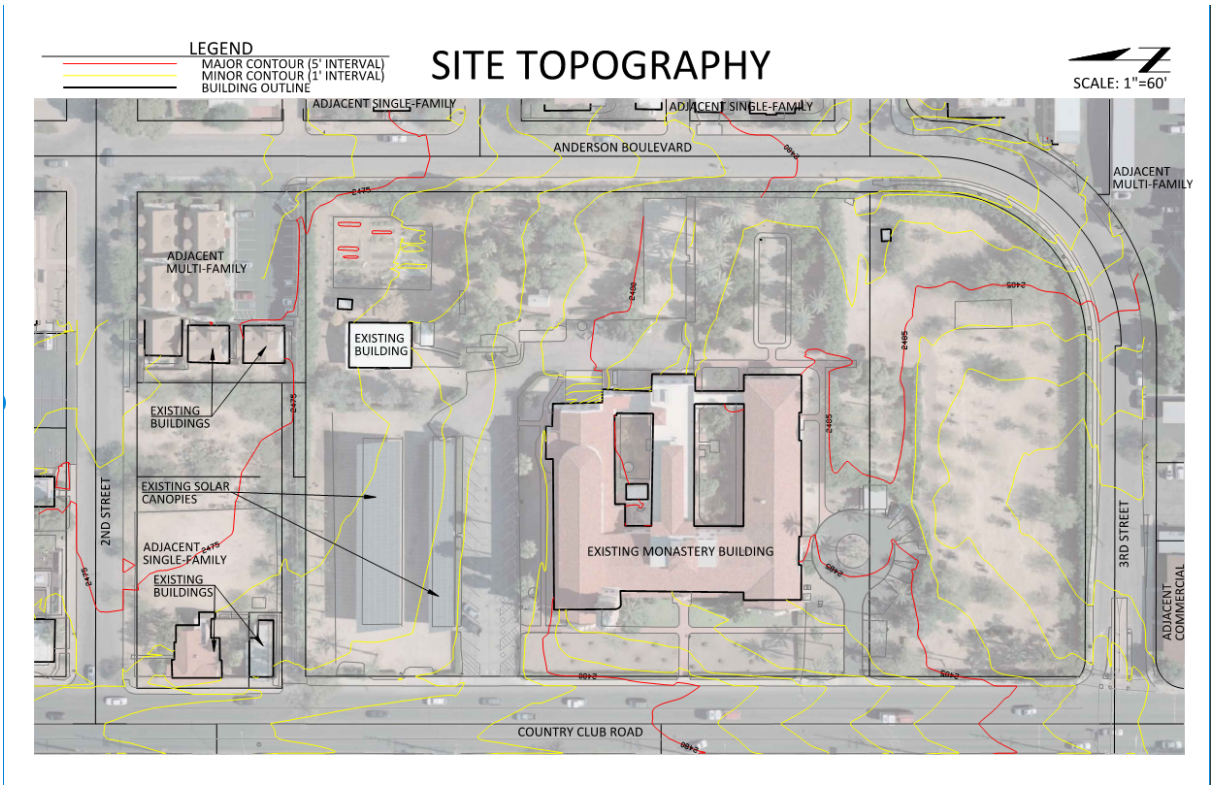
PLS PUTT LAND SURVEYING, INC.
4817 EAST FIFTH STREET, TUCSON, ARIZONA, 85711
TELEPHONE: (520) 790-8373 FAX: (520) 512-8373

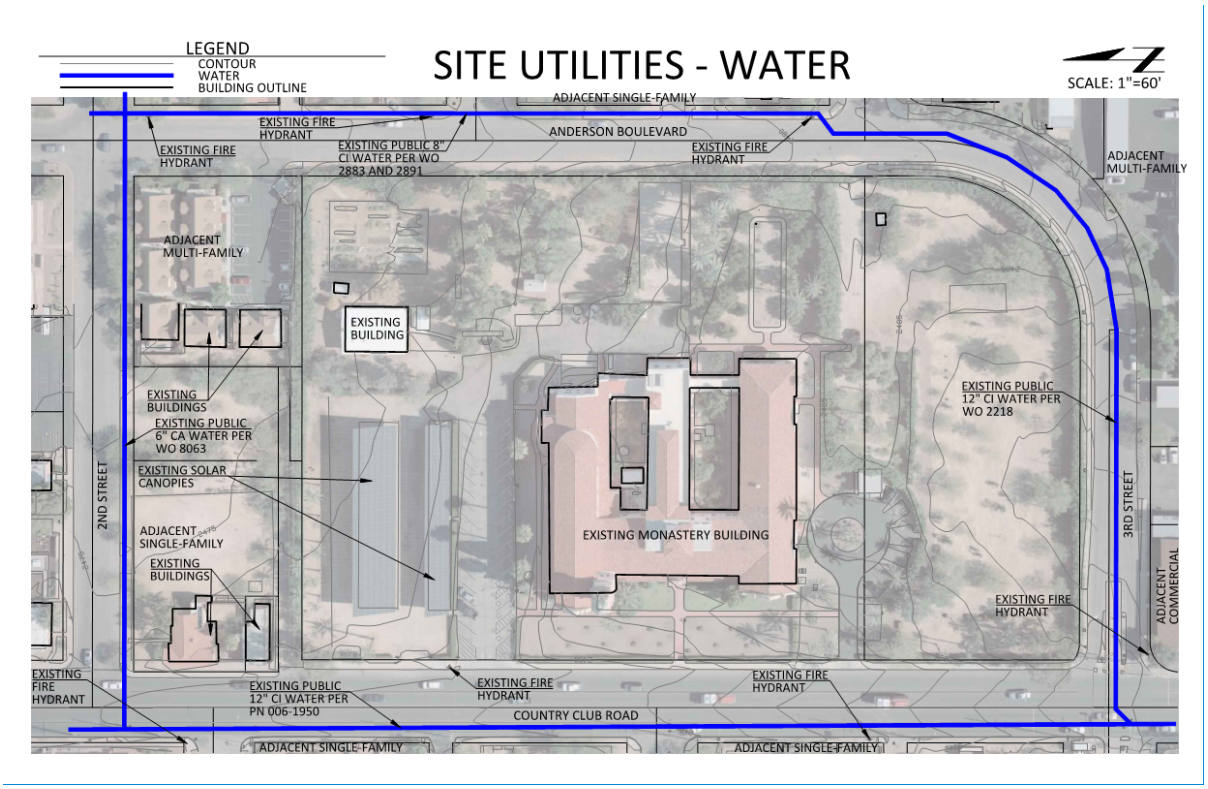
50761
PAUL M. COTE
EXPIRES 03/31/2019
(REFERS TO RENEWAL DATE)

DESIGNED:	N/A
DRAWN:	PMC
CHECKED:	DLP
DATE:	8/09/18
JOB No.	17-219

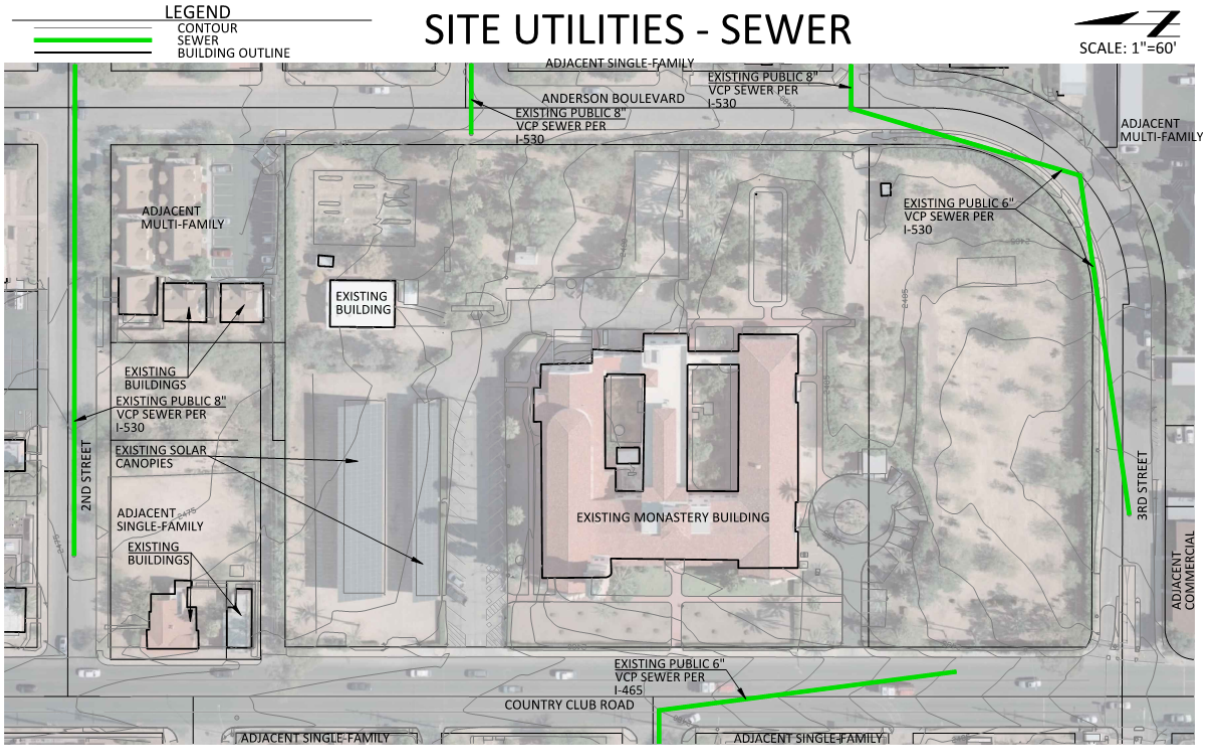
1 of 1

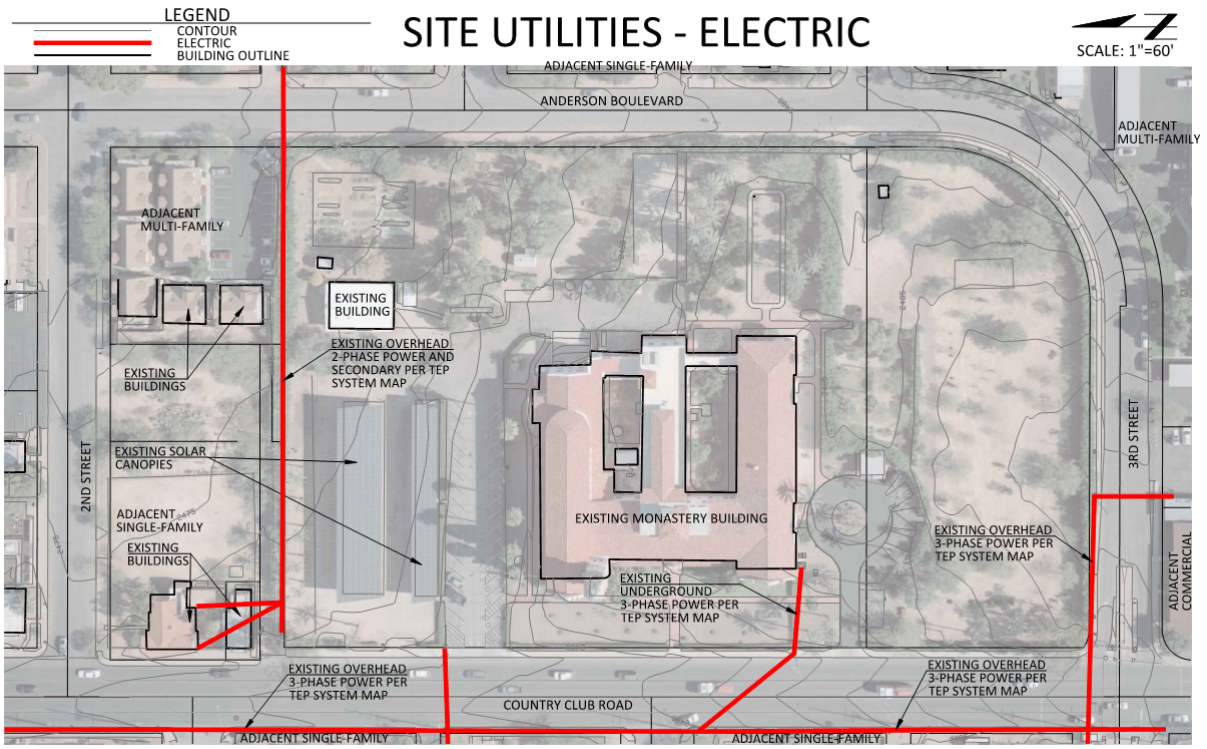
1. Existing Off-Site development (Significant built constraints of the site)

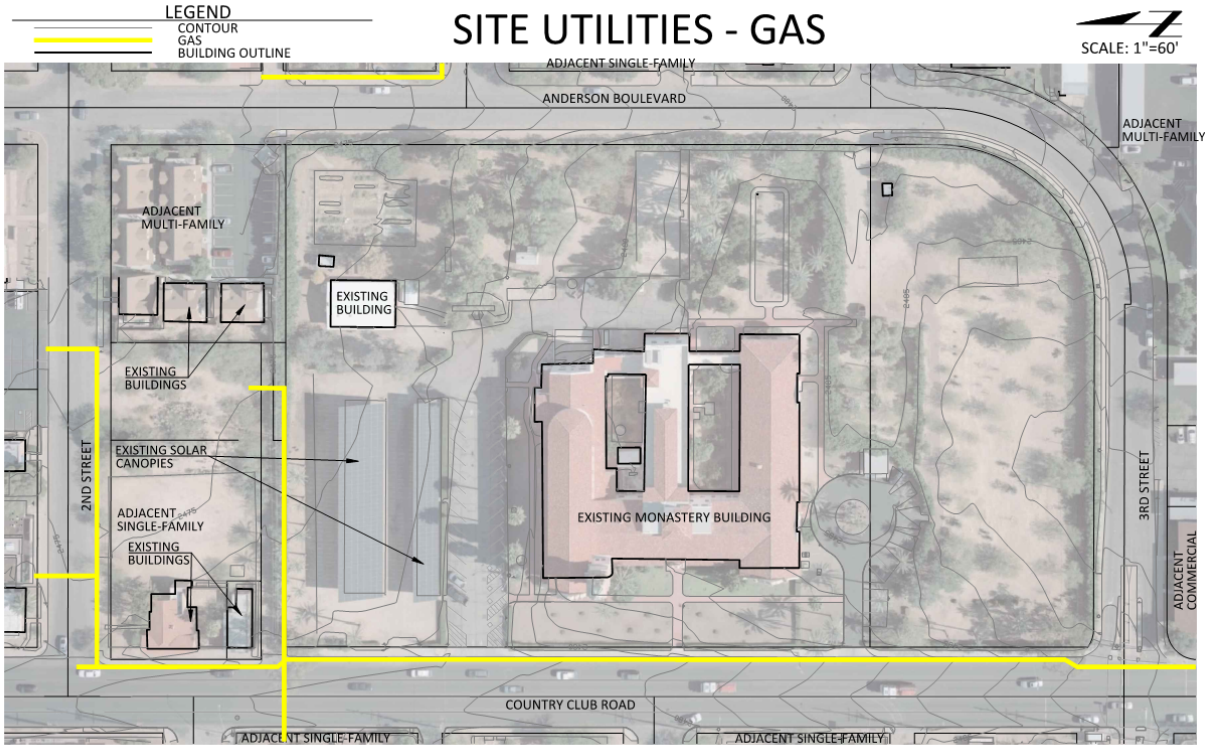


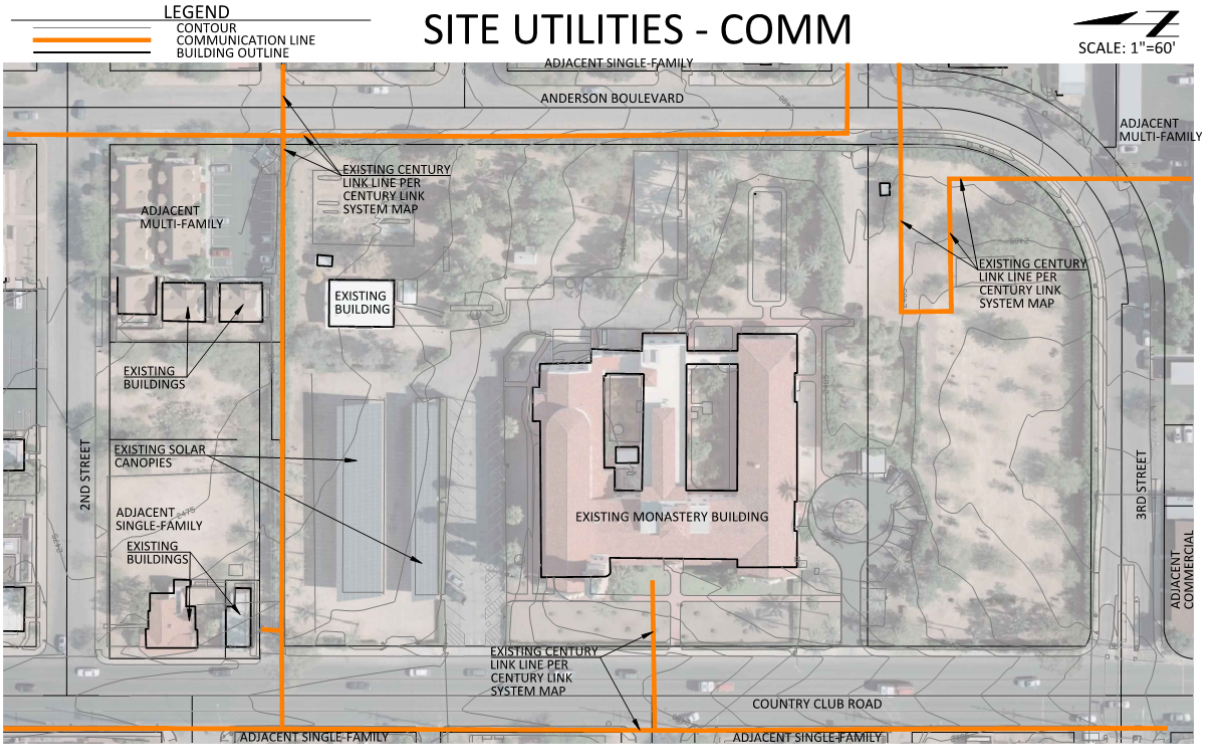


There is an existing well system on-site that will be continue to be used for irrigation of the site.


LEGEND
CONTOUR
SEWER
BUILDING OUTLINE
SITE UTILITIES - SEWER
SCALE: 1"=60'
ADJACENT SINGLE-FAMILY
ANDERSON BOULEVARD
EXISTING PUBLIC 8" VCP SEWER PER I-530
EXISTING PUBLIC 8" VCP SEWER PER I-530
ADJACENT MULTI-FAMILY
ADJACENT MULTI-FAMILY
EXISTING PUBLIC 6" VCP SEWER PER I-530
EXISTING BUILDING
EXISTING BUILDINGS
EXISTING PUBLIC 8" VCP SEWER PER I-530
EXISTING SOLAR CANOPIES
2ND STREET
ADJACENT SINGLE-FAMILY
EXISTING BUILDINGS
EXISTING MONASTERY BUILDING
3RD STREET
ADJACENT COMMERCIAL
EXISTING PUBLIC 6" VCP SEWER PER I-465
COUNTRY CLUB ROAD
ADJACENT SINGLE-FAMILY
ADJACENT SINGLE-FAMILY

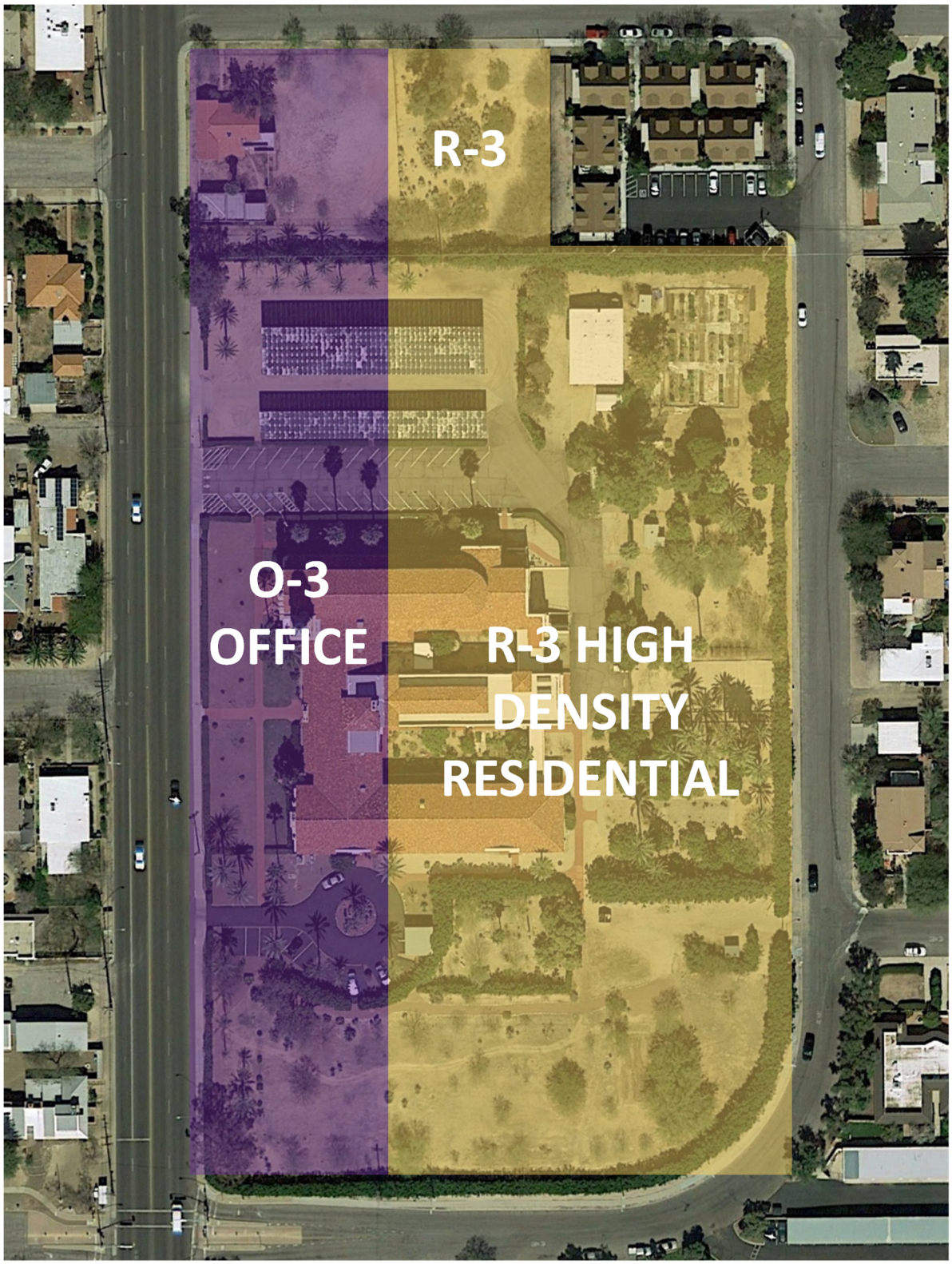

LEGEND
CONTOUR
ELECTRIC
BUILDING OUTLINE
SITE UTILITIES - ELECTRIC
SCALE: 1"=60'
ADJACENT SINGLE-FAMILY
ANDERSON BOULEVARD
ADJACENT MULTI-FAMILY
ADJACENT MULTI-FAMILY
EXISTING BUILDING
EXISTING OVERHEAD 2-PHASE POWER AND SECONDARY PER TEP SYSTEM MAP
EXISTING BUILDINGS
EXISTING SOLAR CANOPIES
2ND STREET
ADJACENT SINGLE-FAMILY
EXISTING BUILDINGS
EXISTING MONASTERY BUILDING
3RD STREET
EXISTING OVERHEAD 3-PHASE POWER PER TEP SYSTEM MAP
ADJACENT COMMERCIAL
EXISTING UNDERGROUND 3-PHASE POWER PER TEP SYSTEM MAP
EXISTING OVERHEAD 3-PHASE POWER PER TEP SYSTEM MAP
EXISTING OVERHEAD 3-PHASE POWER PER TEP SYSTEM MAP
COUNTRY CLUB ROAD
ADJACENT SINGLE-FAMILY
ADJACENT SINGLE-FAMILY


LEGEND
CONTOUR
GAS
BUILDING OUTLINE
SITE UTILITIES - GAS
SCALE: 1"=60'
ADJACENT SINGLE-FAMILY
ANDERSON BOULEVARD
ADJACENT MULTI-FAMILY
ADJACENT MULTI-FAMILY
EXISTING BUILDING
EXISTING BUILDINGS
EXISTING SOLAR CANOPIES
2ND STREET
ADJACENT SINGLE-FAMILY
EXISTING BUILDINGS
EXISTING MONASTERY BUILDING
3RD STREET
ADJACENT COMMERCIAL
COUNTRY CLUB ROAD
ADJACENT SINGLE-FAMILY
ADJACENT SINGLE-FAMILY


LEGEND
CONTOUR
COMMUNICATION LINE
BUILDING OUTLINE
SITE UTILITIES - COMM
SCALE: 1"=60'
ADJACENT SINGLE-FAMILY
ANDERSON BOULEVARD
ADJACENT MULTI-FAMILY
EXISTING CENTURY LINK LINE PER CENTURY LINK SYSTEM MAP
ADJACENT MULTI-FAMILY
EXISTING CENTURY LINK LINE PER CENTURY LINK SYSTEM MAP
EXISTING BUILDING
EXISTING BUILDINGS
EXISTING SOLAR CANOPIES
2ND STREET
ADJACENT SINGLE-FAMILY
EXISTING BUILDINGS
EXISTING MONASTERY BUILDING
3RD STREET
ADJACENT COMMERCIAL
EXISTING CENTURY LINK LINE PER CENTURY LINK SYSTEM MAP
COUNTRY CLUB ROAD
ADJACENT SINGLE-FAMILY
ADJACENT SINGLE-FAMILY

B. Zoning

The site is currently zoned as follows:



We are proposing a new zoning through this PAD. The PAD District is consistent with policy recommendations in Plan Tucson, the City's General Plan, as well as those in the Miramonte Neighborhood Plan. Both plans stress the importance of compatibility between uses, the promotion of commercial development along arterial corridors, and the protection of established neighborhoods.

1. General Plan Compliance

   The goal of the PAD is to promote the preservation, infill and development of the monastery for mixed use. Creating a mixed-use atmosphere that includes residential units, office and commercial facilities, strengthens the long-term viability of the Monastery building by allowing uses that will be marketable well into the future. In turn, that mix of marketable uses helps to ensure not only the preservation, but the use, of an iconic Tucson structure, and is consistent with Plan Tucson. Other related policies include:

   H 11: Encourage residential development including both market rate and affordable housing projects in Tucson.

   HP 1: Implement incentives for private property owners to maintain, retrofit, rehabilitate, and adaptively reuse historic buildings.

   LT 1: Integrate land use, transportation, and urban design to achieve an urban form that supports more effective use of resources, mobility options, more aesthetically-pleasing and active public spaces, and sensitivity to historic and natural resources and neighborhood character.

   LT 3: Support development opportunities where:
   a. residential, commercial, employment, and recreational uses are located or could be located and integrated
   b. There is close proximity to transit
   c. Multi-modal transportation choices exist or can be accommodated
   d. There is potential to develop moderate to higher density development

   LT 9: Plan Tucson supports locating housing, employment, retail, and services in proximity to each other to allow easy access between uses and reduce dependence on the car.

   LT 16: Reduce required motor-vehicle parking areas with increased bike facilities for development providing direct access to shared use paths for pedestrians and bicycles.

   BC 8: The Business Climate element of Plan Tucson promotes continued economic viability of existing neighborhoods and commercial districts by supporting a safe, distinctive, well-maintained, and attractive community with neighborhoods made up of residences and businesses that contribute to Tucson's quality of life and economic success.

2. Miramonte Neighborhood Plan Compliance

The intent of the Miramonte Neighborhood Plan (MNP) is to create a desirable location for residents, businesses, and offices. This will be accomplished by preserving neighborhood assets, providing appropriate transitions between land uses, and incorporating infill. The MNP is approximately one-half square mile bounded by Speedway Boulevard, Alvernon Way, Fifth Street, and Country Club Road, and is located approximately one mile east of the University of Arizona.

MNP policies that support the PAD Proposal:

- MNP-Policy 1.1:
  Preserve the character of the Neighborhood by ensuring that future land use makes a positive contribution to the Neighborhood through application of neighborhood values.
  - A diverse mix of land uses that contributes to the traditional character of the Neighborhood
  - Carefully designed transitions between land uses
  - A safe, attractive, and functional pedestrian environment
  - Green and sustainable development (e.g., water harvesting, energy conservation, alternative energy sources, alternate modes of transportation, covered parking)
  - Full involvement of residents and stakeholders in Neighborhood decisions
- MNP-Policy 1.2: Work with the existing development procedures to be sure that neighbors have an opportunity to be active participants in decisions that affect land use in the Neighborhood
- MNP- 2.1: Protect historic architecture of the Neighborhood
- MNP- 2.2: Protect historic sites and landscapes in the Neighborhood
- MNP- 3.1: Encourage good design to help make successful transitions between commercial and residential uses.
- MNP-Policy 3.2: Encourage good design to help make successful transitions between low density and higher density residential development.
- MNP-Policy 4.1: Protect, utilize and improve public landscape and streetscape enhancements with a focus on vegetation, including shade trees, neighborhood edges and nodes, and traffic calming

3. Alvernon-Broadway Area Plan

The intent of the Alvernon-Broadway Area Plan (ABAP) is provide land-use policy direction and design guidelines for new development, while protecting and enhancing existing uses. The ABAP will defer to the more specific neighborhood policies of the MNP should there be any conflict between the two plans. The ABAP encompasses approximately three-square miles and is bounded by Speedway Boulevard, Swan Road, 22nd Street, Alvernon Way, Broadway Boulevard., and Country Club Road.

Plan Amendment: Mayor and Council approved the Plan Amendment on December 18, 2018, with a 7-0 Vote. See Appendix A.

4. UDC: Allowable Uses, Requirements, and Constraints

The subject property currently has a mixed zoning of O-3 (Office Zone) and R-3 (Residence Zone). The northern parcels are all O-3. For the southern parcels, the O-3 zoning is located adjacent to Country Club Road and extends east for approximately 140 feet. The balance of both parcels is zoned R-3. (*See Exhibit B.4.1 Existing Zoning below)* Zones for the surrounding properties within 150 feet can be found in *Table II.C: Surrounding Zones.*

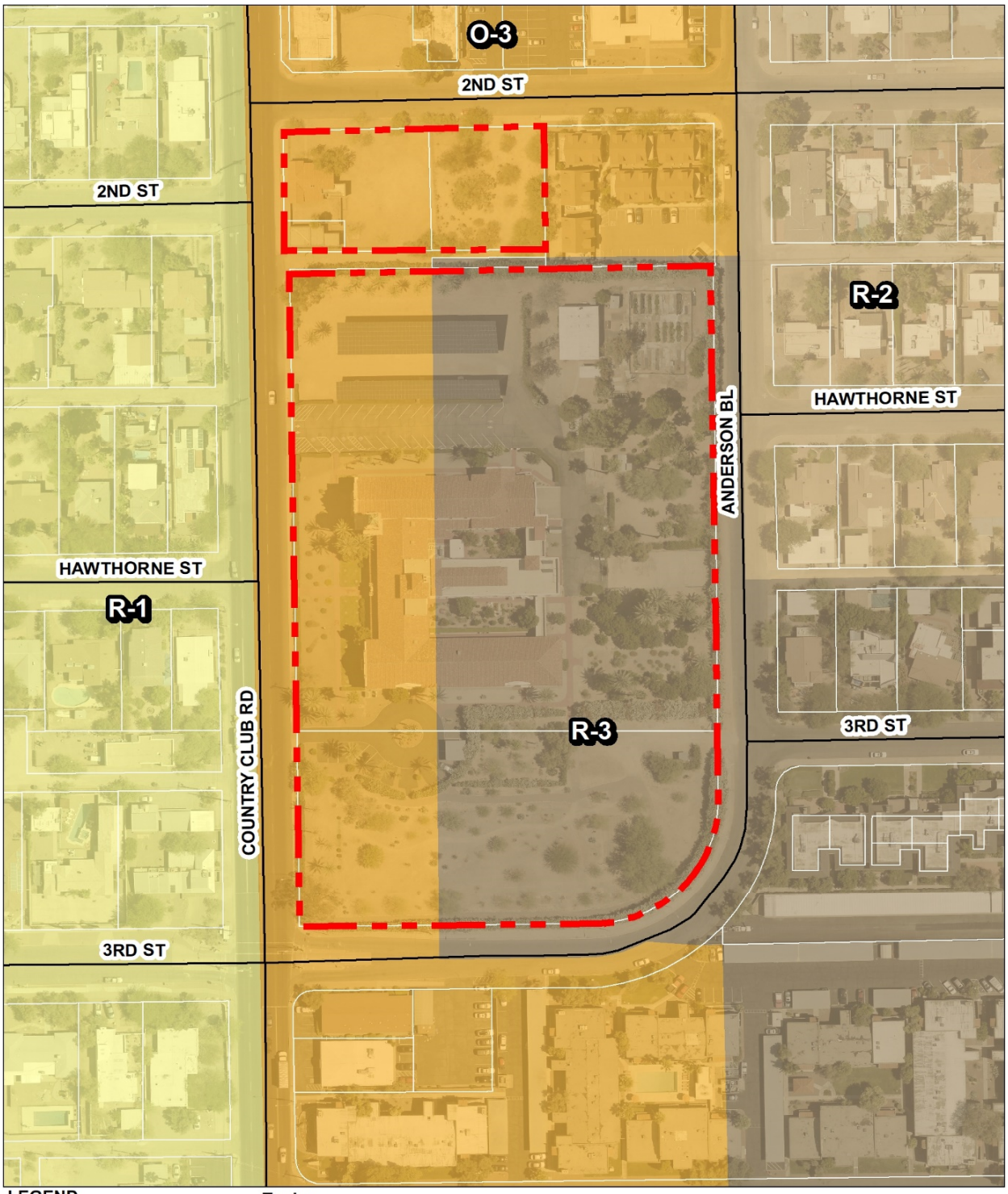
Table II.C: Surrounding Zones

Direction	Zone
North	O-3 (Office Zone)
South	O-3 (Office Zone)
East	R-2 (Residence Zone), R-3 (Residence Zone)
West	R-1 (Residential) – across Country Club Road

The existing zoning has a variety of opportunities and constraints that affect site design. Density for the site under existing zoning with Flexible Lot Development (FLD) standards (See Appendix E) allows for approximately 239 residential units. Maximum site coverage is 75% and there is a 10-foot landscape border required on the north, south and east property lines. The western property boundary requires a perimeter yard that is a minimum of 20 feet or one and one-half the height of the proposed building wall, whichever is greater, up to a maximum of 90 feet. A variety of uses can be applied to the site, ranging from high density residential to professional offices. Group dwellings are allowed and there is currently no limit on the number of proposed beds.

The Benedictine Monastery is a contributing structure to the Sam Hughes Historic Neighborhood, and as such, the façade of the existing building must remain intact.

Exhibit I.B.4.1: Existing Zoning in Context



LEGEND

PAD Boundary

Parcels

Zoning

R-2

R-2

R-3

O-3

NORTH

0' 75' 150'

FILE NAME: PFM-01_zoning_6x8.mxd

SOURCE: Pima County GIS, 2016

C. Transportation and Circulation Elements

The Benedictine Monastery PAD site is surrounded by a rich variety of transportation options. The available transportation modes include the automobile, designated bicycle routes, and access to bus routes. The Sam Hughes neighborhood also provides some of the most attractive and walkable sidewalks in Tucson that link to the University to the west of the PAD area.

Existing Streets Serving the PAD

The Benedictine Monastery PAD is bordered by Country Club Road on the west; 2nd Street on the north; 3rd Street on the south and Anderson Boulevard on the east. Currently access to the PAD area is provided at two locations along Country Club Road. The other surrounding streets provide pedestrian access to the residential areas to the north, south and east of the site. Country Club Road offers a designated SunTran bus route line and 3rd Street provides a protected bicycle route from the site directly to the University of Arizona campus to the west.

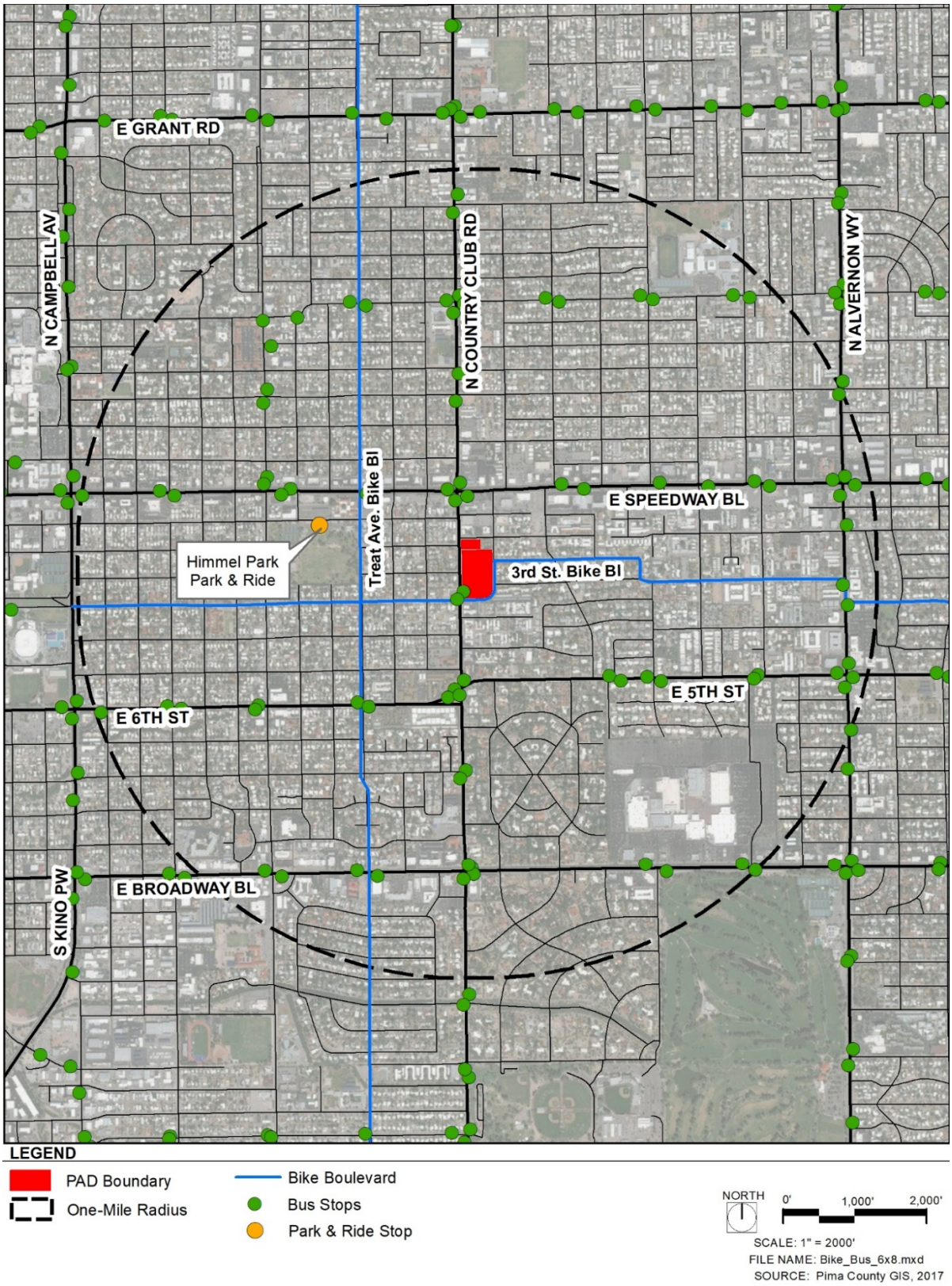
Bike and Bus Routes:

The 3rd Street Bike Boulevard is located on the property's southern boundary. It is an east/west thoroughfare that provides users safe enjoyable passage from The University of Arizona to Wilmot Road. It is used for leisure activities and commuting. The 3rd Street Bike Boulevard connects to several other bicycle friendly routes that easily reach downtown, the river paths and the Loop.

Bus transportation is conveniently located on the property's western boundary. North and southbound bus stops are located at the intersection of Country Club Road and 3rd Street. East and West bound stops are located north or south of the property at the intersections of Country Club Road and Speedway Boulevard and Country Club Road and 5th Street.

See exhibit 1.D.1.b Bike & Bus Routes.

Exhibit 1.D.1.b Bike & Bus Routes



D. Community Facilities

1. Fire Stations
   There are no fire stations located within a one (1) mile radius of the site. There are two (2) fire stations located approximately 1.25 miles away. Tucson Fire Department Station # 5 is located at 2835 E Grant Road, and Tucson Fire Department Station #3 is located at 24 N Norris Avenue.
2. Police Stations
   There is one police station located just outside the one (1) mile radius. It is The University of Arizona Police Department located at 1852 E. 1st Street.
3. Hospitals
   The nearest hospital is located approximately 1.25 miles east of the site. It is Banner-University Medical Center located at 1501 N Campbell Avenue.
4. Schools
   The site is located within Tucson Unified School District and is served by four (4) public Schools: two (2) public elementary schools, Hughes Elementary School and Blenman Elementary School, one (1) public high school, Catalina High School, and one (1) alternative school, Teenage Parent Alternative School. Four (4) charter schools are also within a one (1) mile radius of the site. They are: Amerischools Academy, Edge High School, Basis Tucson Primary, and Arizona College Prep Academy. Three (3) private schools are located just outside the one (1) mile radius of the site.
5. Commercial
   Commercial property is interspersed with other uses along Country Club Road. They are primarily located on the east side of the road and are comprised of professional offices, and services. The Speedway Boulevard corridor, north of the property, is comprised entirely of commercial and office space. Services range in variety of type and size and are in the form of small businesses, regional enterprises and corporate chains.
6. Library
   Himmel Park Public Library is located within one (1) mile of the site and is located at 1035 N. Treat Avenue.

Exhibit I.D.1: Community Facilities

LEGEND

- PAD Boundary
- One-Mile Radius
- Fire Station
- Library
- Police
- Hospital
- Public Schools
- Charter Schools
- Private Schools

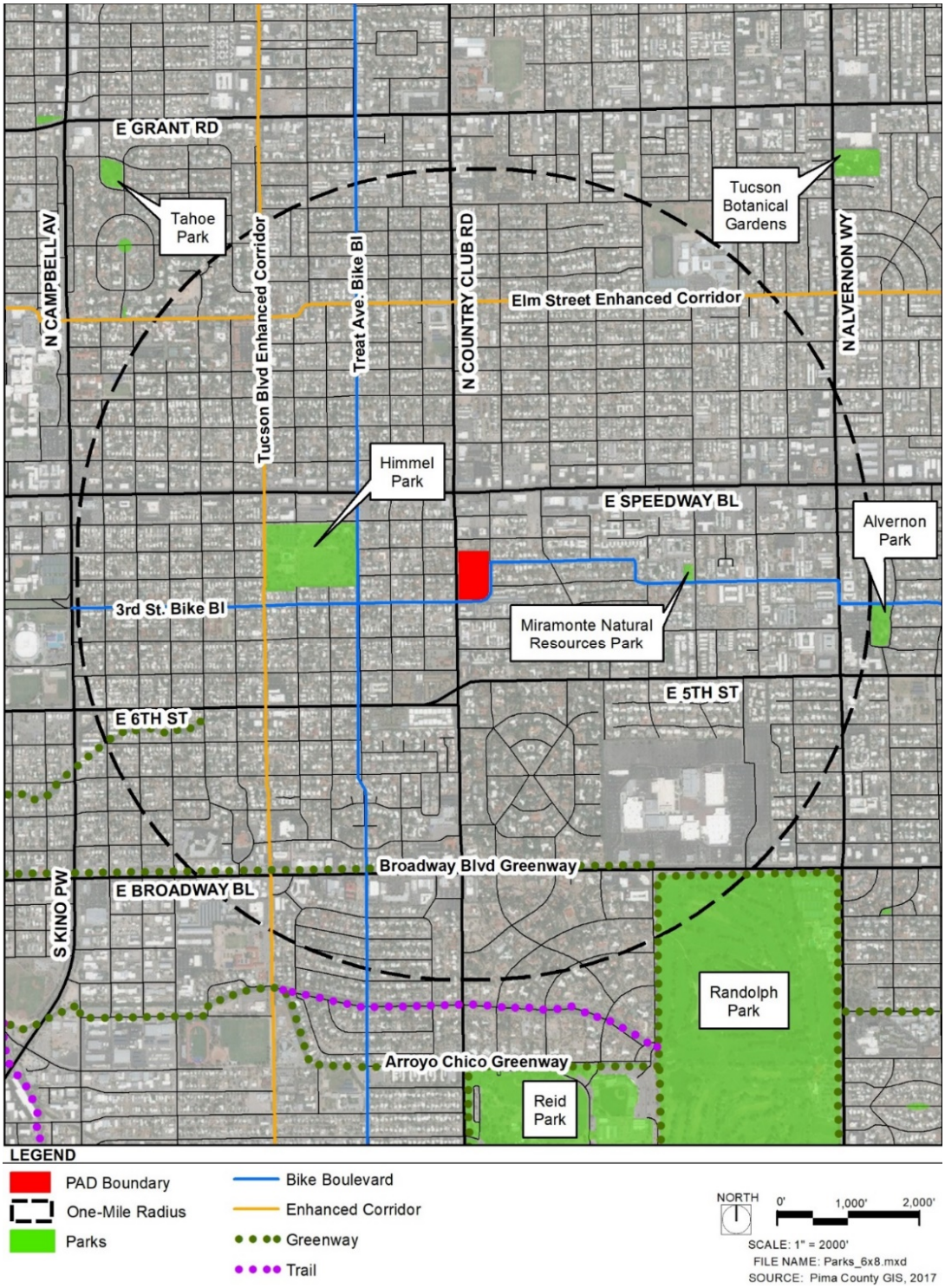
NORTH

0' 1,000' 2,000'

SCALE: 1" = 2000'
FILE NAME: schools_6x8.mxd
SOURCE: Pima County GIS, 2018

E. Off-site Open Space

Off-site open space in the area consists of four (4) parks: Himmel, Alvernon, Miramonte Natural Resources Park and Randolph Park, which offers active recreation in the form of golf, tennis, multi-use paths, and a skate park. **Exhibit I.E.1: Open Space**



F. Existing Hydrology

The proposed PAD district is located in the northwest quarter of the northwest quarter of Section 9, Township 14 South, Range 14 East, G.&S.R.M. The district occupies approximately 6.86 acres and is currently developed with the Benedictine Monastery campus consisting of one large main building, a small accessory building, solar covered parking areas, uncovered parking areas and large vegetated, but undeveloped, areas. The district is mostly rectangular in shape, with a square "bumpout" in the northwest corner of the district, and is bordered to the east by North Anderson Avenue, to the north by East 2nd Street, to the west by North Country Club Road and to the south by East 3rd Street. All adjacent streets are curbed and fully paved streets. The main vehicular access points to the site are at two existing curb cut driveways along Country Club Road.

According to the Federal Emergency Management Agency Flood Insurance Rate Map Panel No. 04019C2281L, dated June 16, 2011, the Parcel is located in the unshaded Zone X area which is an area determined to be outside the 500-year annual chance floodplain.

There are no known existing engineered drainage facilities within the district. The site slopes gently from the south to the north with average slopes in the 1%-2% range. Soils within the site are classified by the United States Soil Conservation Service (SCS) as 100% hydrologic soil group "D" that are soils having a very slow infiltration rate when thoroughly wet. These soils consist mainly of clays that have a high shrink-swell potential and soils that have a claypan or clay layer at or near the surface. These soils have a very slow rate of water transmission.

Based on site investigation, recent topographical survey information and the existence of adjacent curbed roadways it has been determined that there are no offsite watersheds affecting the district, i.e. no stormwater runoff is being conveyed to, and through, the site from any offsite watershed areas.

The district area itself consists of existing paved areas and structures with varying drainage patterns throughout. However, the stormwater that exits the site is primarily conveyed as sheet flow to the 2nd Street and Anderson Boulevard rights-of-way with all runoff from the area eventually making its way to the north end of the district and ultimately to the intersection of 2nd Street and Anderson Boulevard. The district area of 6.86 acres is approximately 28% impervious in the existing condition and generates an approximate runoff of 48 cubic-feet-per-second in the 100-year storm event, the majority of which is conveyed away from the site and ultimately to the north and to the 2bnd Street right-of-way.

G. Views

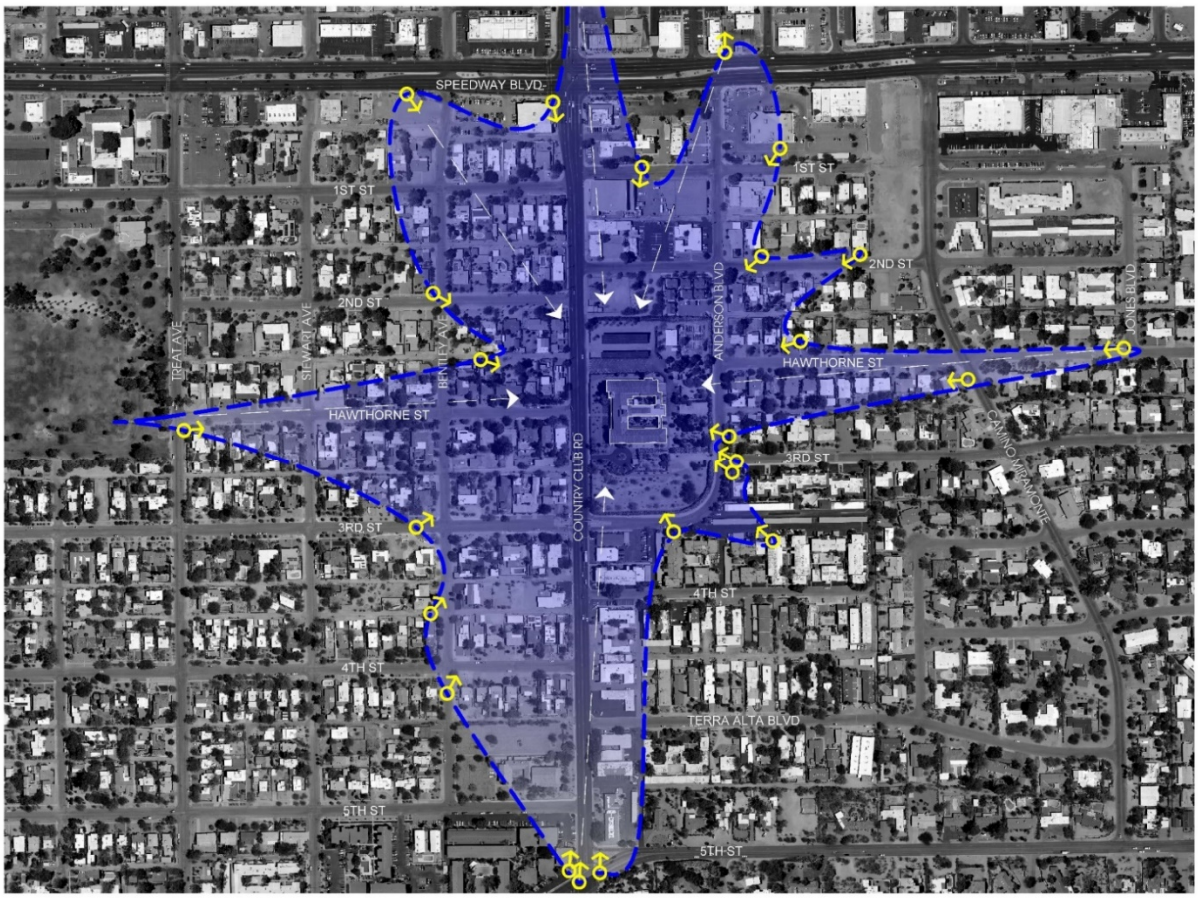
Viewsheds onto the subject property from surrounding parcels and roadways vary. The PAD boundary along most of Country Club Road is highly visible and open from the roadway. The remainder of the monastery is screened by a large Oleander hedge that is approximately ten feet tall. The hedge is dense and does not allow for views into the site. The monastery tower and roofline are visible from the surrounding neighborhoods.

The monastery tower is an architectural icon that is visible from the surrounding neighborhoods. View corridors and the approximate extent of its visibility from public rights-of-way have been mapped (see *Exhibit I.H.1: View Corridors*) in order to preserve these views to the greatest extent possible.

View corridors of the tower in the Sam Hughes Neighborhood occur west to east along 2nd Street, Hawthorne Street, 3rd Street and 4th Street. Additional west to east view corridors occur in the Miramonte Neighborhood along Hawthorne Street, and portions of 2nd Street. The Hawthorne Street view corridor in both neighborhoods is the longest and offers the most prominent views of the tower given its direct alignment, whereas existing homes and trees in the foreground obscure views from neighboring streets.

An additional view corridor extends along Country Club Road. The tower is visible as far south as 5th Street and as far north as Speedway Boulevard. See *Exhibit I.H.2: Photo Key Map* and *Exhibit I.H.3: Site Photos* for views of the property and for views looking from the property to adjacent areas.

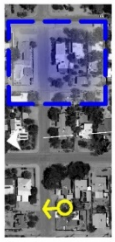
Exhibit I.H.1: View Corridors



BENEDICTINE MONASTERY

TOWER VIEWSHEDS

LEGEND



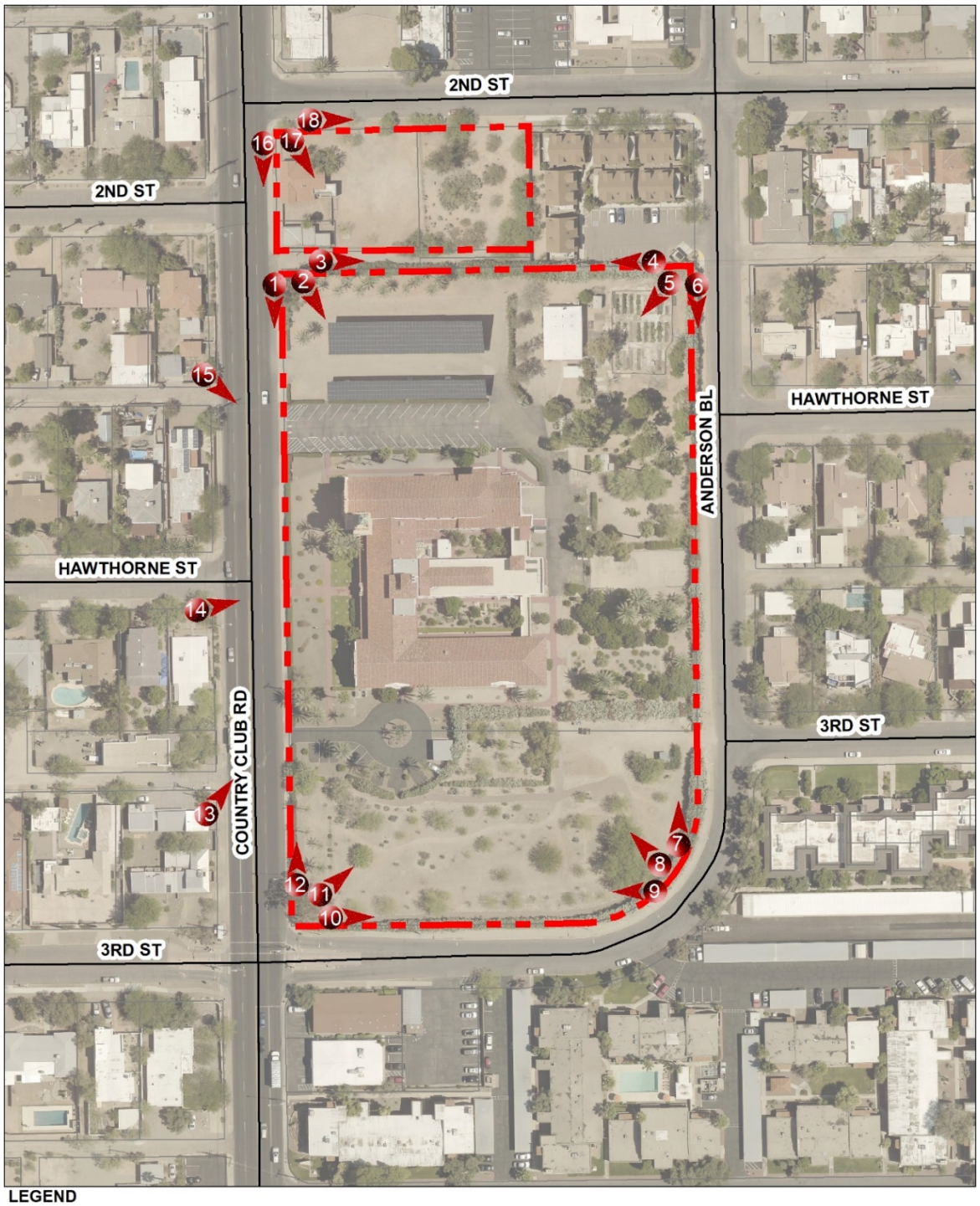
APPROXIMATE LIMITS OF KNOWN VIEWS TO TOWER

PROMINENT VIEW CORRIDOR OF TOWER

FURTHEST KNOWN VIEW POINT TO TOWER

NOTE:
ALL KNOWN VIEW POINTS AND VIEW CORRIDORS WERE ESTABLISHED USING PUBLIC PROPERTY ONLY. AT NO POINT DURING THE ANALYSIS PROCESS WAS PRIVATE PROPERTY ACCESSED TO DETERMINE IF CORRIDORS OR VIEWS EXTEND FURTHER THAN THE LIMITS ESTABLISHED IN THIS EXHIBIT.

Exhibit I.H.2: Photo Key Map



LEGEND

PAD Boundary

3 Photo Location and Direction

NORTH 0' 75' 150'

FILE NAME: PFM-01_Photo Point_6x8.mxd
SOURCE: Pima County GIS, 2016

Exhibit I.H.3: Site Photos

Photo Point 1: Northwest corner of Benedictine Monastery looking south along western property line

Photo Point 2: Northwest corner of Benedictine Monastery looking southeast into the property

Photo Point 3: Northwest corner of Benedictine Monastery looking east along row of solar covered parking

Photo Point 4: Northeast corner of Benedictine Monastery looking west along northern property line

Photo Point 5: Northeast corner of Benedictine Monastery looking southwest into the site

Photo Point 6: Northeast corner of Benedictine Monastery looking south along eastern property line

Photo Point 7: Southeast property corner looking north along eastern property line

Photo Point 8: Southeast property corner looking northwest into the site.

Photo Point 9: Southeast property corner looking west along southern property line

Photo Point 10: Southwest property corner looking east along southern property line

Photo Point 11: Southwest property corner looking northeast into the site

Photo Point 12: Southwest property corner looking north along western property line

Photo Point 13: Offsite photo looking at the Benedictine Monastery from the alley between 3rd Street and Hawthorne Street

Photo Point 14: Offsite photo looking at the Benedictine Monastery from Hawthorne Street

Photo Point 15: Offsite photo looking at the Benedictine Monastery from the alley between Hawthorn Street and 2nd Street on Country Club Road.

Photo Point 16: Photo looking south along Country Club Road from 2nd Street at the northeast corner of the northern parcels

Photo Point 17: Photo looking southeast across northern parcels from the corner of Country Club Road and 2nd Street

Photo Point 18: Photo looking east along northernmost edge of boundary adjacent to 2nd Street

PART 3 – PAD PROPOSAL

A. Design Approach to PAD

The development of the Benedictine Monastery site flows from three principle design objectives:

1. Preserve the iconic and historic Benedictine Monastery itself by:
   a. following the Preservation Guidelines of the Secretary Interior Standards for Historic Preservation on the exterior of the Monastery and its immediate environs (as elaborated in the Historic Landmark nomination contained later in this section).
   b. following a Rehabilitation ("Adaptive Re-Use") approach, the interior of the Monastery (as elaborated in the Historic Landmark nomination contained later in this section) will not be subject to Historic Landmark regulatory review.
2. Develop the remainder of the site (exclusive of the Historic Landmark boundaries shown in Appendix B of this PAD), using this PAD to set guidelines and standards consistent with the approved Plan Amendments to the Miramonte Neighborhood Plan and Broadway-Alvernon Area Plan approved by the Mayor and Council on December 18, 2018. In general, this site development is a mix of uses of high-density residential and commercial uses with adequate at-grade and structured parking to support these uses.
3. Continue to work with neighbors to elaborate a site development and landscape approach and an architectural aesthetic that is respectful of and compatible with adjoining neighborhoods and consistent with the intent of the Plan Amendment and the City of Tucson Development Standards.

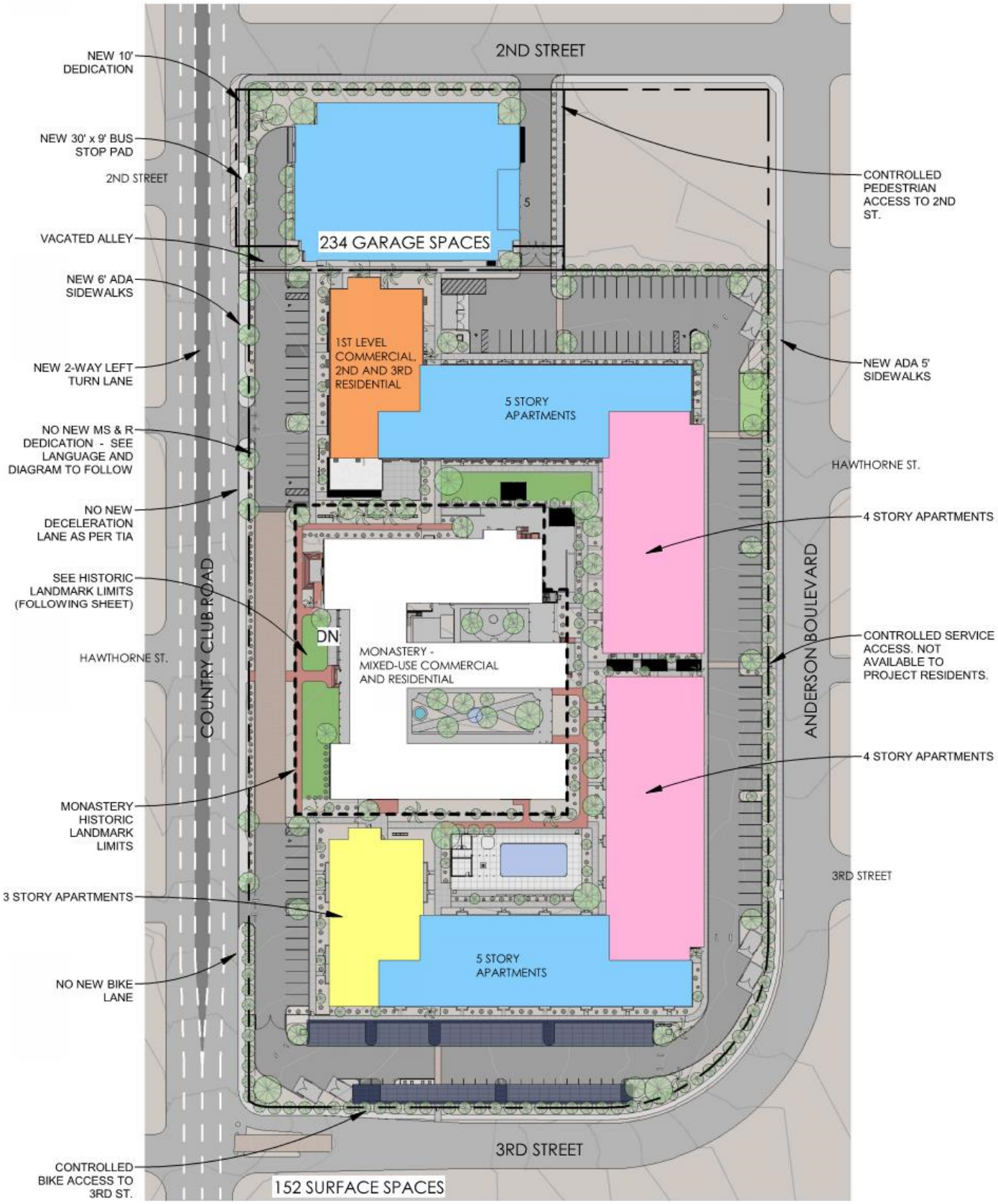
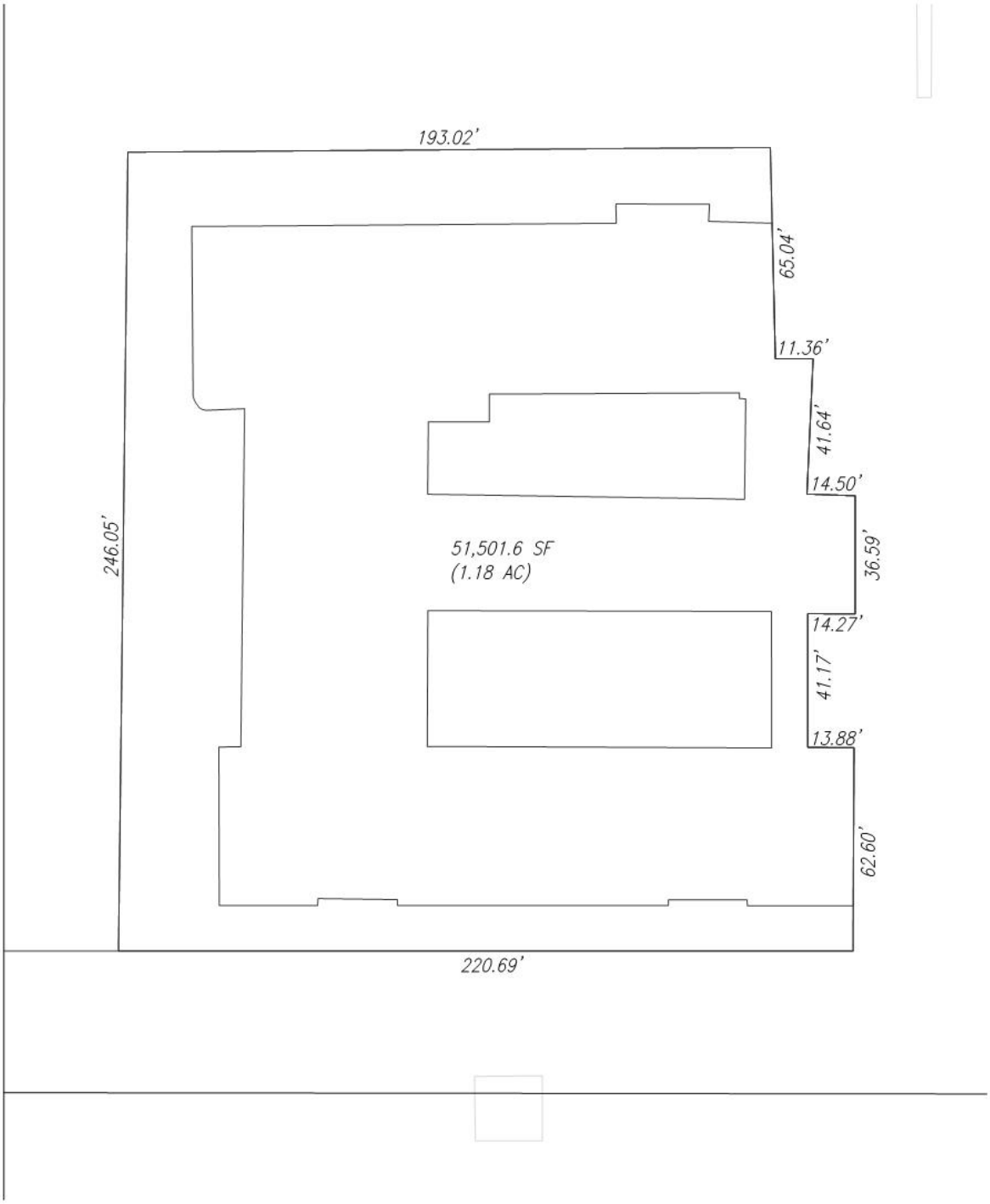
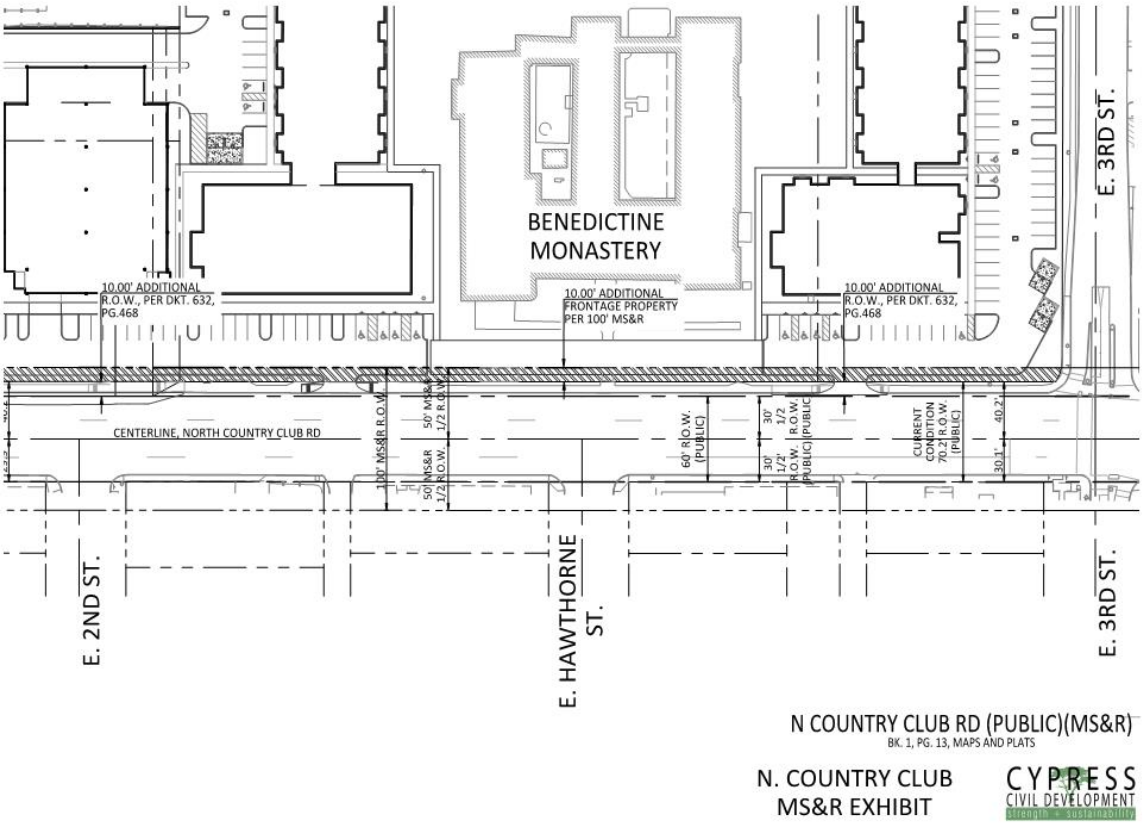


Exhibit 3A - 1ST LEVEL PLAN CONCEPT ***(subject to technical requirements of permit)***


193.02'
65.04'
11.36'
41.64'
14.50'
36.59'
14.27'
41.17'
13.88'
62.60'
246.05'
51,501.6 SF
(1.18 AC)
220.69'



Alternate Language to MS&R Dedication:

Developer covenants and agrees, which shall be a covenant running with the land, in consideration of, conditioned upon, and as a condition of rezoning through PAD approval, it shall dedicate at no cost to the City of Tucson (City) fee title to a strip of property fronting Country Club Road as shown on the attached <u>*Exhibit A*</u> *("Frontage Strip") in conformance with the City's Major Streets and Routes Map __insert date__ if the City determines to widen the existing Country Club Road right of way for a public improvement project. Developer shall be required to dedicate only that half-right-of-way portion of the Frontage Strip necessary for the road widening and shall not be required to dedicate any portion of the Frontage Strip unless and until the City has completed all required legislative actions necessary to widen the road and to begin construction of the road, and the project has been fully-funded and authorized. This covenant to conditionally dedicate shall be reflected in a note on the recorded PAD plan. Until such dedication, Developer may improve and use the Frontage Strip with landscape, hardscape, parking and access lanes, detention and retention, and any other use in conformance with the approved PAD other than buildings and permanent structures or facilities. In the event City exercises this covenant to dedicate the Frontage Strip in conformance with its Major Streets and Routes Plan, being required by legislative act, the nature and extent of which is non-discretionary, Developer hereby expressly waives any right to appeal City's action or to claim just compensation. If the City's Major Streets and Routes Plan is amended such that the Frontage Property is no longer included within the needed right of way widths or proposed dimensions, this covenant shall automatically terminate, and upon Developer's request, the City shall execute a termination of this covenant in recordable form.*

B. Permitted and Prohibited Uses

A. Development Regulations

Utilizing the basic parameters of the C-1 zone, this PAD consists of a single modified zoning district with specifically crafted development regulations and guidelines for the property in its entirety. Only the permitted land uses specified in the PAD and attached historic designation documents are permitted on the subject property. The monastery has additional standards that apply specifically to the existing structure and associated areas gaining historic designation (see appendix B). In the event that a conflict arises, the regulations providing the most protection to the historic designation will prevail. Where the PAD varies from the UDC or other relevant city standards, the PAD shall control. In instances where the PAD is silent in providing development standards or regulations, the provisions of the UDC for the C-1 zones, the Administrative and Technical Standards Manuals and other relevant City standards shall apply.

PAD Permitted Uses

a. *Agricultural Land Use Group*
   1. Community Garden, subject to: UDC Section 4.9.2.B
   2. Urban Farm, subject to: UDC Section 4.9.2.E

b. *Civic Use Group*
   1. Civic Assembly
   2. Cultural Use
   3. Educational Use: Elementary and Secondary Schools, subject to: UDC Section 4.9.3.D.1 – 7 and 4.9.13.O
   4. Educational Use: Instructional School, subject to: UDC Section 4.9.13.O
   5. Educational Use: Postsecondary Institution, subject to: UDC Section 4.9.3.E and 4.9.13.O
   6. Membership Organization, subject to: UDC Section 4.9.13.O
   7. Religious Use, subject to: UDC Section 4.9.13.O

c. *Commercial Services Use Group*
   1. Administrative and Professional Office, subject to: UDC Section 4.9.13.O
   2. Alcoholic Beverage Service:
      - Excluding Large Bar, subject to: UDC Section 4.9.13.P
      - With a Microbrewery as an accessory use to any permitted or special exception use Alcoholic Beverage Service Use, subject to: UDC Section 4.9.5.E.6 & .8
   3. Artisan Residence, subject to: UDC Section 4.9.4.E.1, .2, .3, .4, & .5 and 4.9.13.O
   4. Commercial Recreation, subject to: UDC Section 4.9.13.O
   5. Communications
      - Wireless Communication, subject to: UDC Section 4.9.4.I.2, .3 & .4a or .4b
   6. Day Care, subject to: UDC Section 4.9.13.O
   7. Entertainment
      - Excluding Large Dance Hall, subject to: UDC Section 4.9.4.C.3 and 4.9.13.O
   8. Financial Service
      - Excluding non-chartered institutions, subject to: UDC Section 4.9.4.L.1 & .3 and 4.9.13.
   9. Food Service

- Excluding Soup Kitchens, subject to: UDC Section 4.9.4.M.1 & 5 and 4.9.13.O
- With Alcoholic Beverage Service as an accessory use to Food Service, subject to: UDC Section 4.9.4.V.1, 3 & 5-9, 4.9.4.C.3 and 4.9.13.O

10. Medical Service
    - Extended Healthcare, subject to: UDC Section 4.9.13.O
    - Major, subject to: UDC Section 4.9.13.O
    - Outpatient, excluding blood donor centers; subject to: UDC Section 4.9.4.O.2 & 4.9.13.O
11. Parking
12. Personal Service, subject to: UDC Section 4.9.4.T.1 & 4.9.13.O
13. Research and Product Development, subject to: UDC Section 4.9.13.O
14. Technical Service, subject to: UDC Section 4.9.4.W.1 and 4.9.13.O
15. Trade Service and Repair:
    - Minor, subject to: UDC Section 4.9.4.X.2 and 4.9.13.O
16. Travelers Accommodations, Lodging, subject to: UDC Section 4.9.13.O
17. Travelers Accommodations, Lodging with Alcoholic Beverage Service as an accessory use, subject to: UDC Section 4.9.4.C.3 and 4.9.4.AA.2, .4, .7, .8, .9, & .11

d. *Residential Use Group:*
1. Duplex
2. Flexible Lot Development, subject to: UDC Section 8.7.3
3. Multifamily Development
4. Home Occupation as an accessory use to any permitted Family Dwelling, subject to: UDC Section 4.9.7.D
5. Residential Care Services
    - Adult Care or Physical and Behavioral Health Services: Unlimited # of Residents; subject to: UDC Section 4.9.7.J.3.d, .4 & .8 and 4.9.13.O
    - Rehabilitation Service, Children's Facility (Maximum of 10 residents), subject to: UDC Section 4.9.7.J.1,.3.a, & .4 and 4.9.13.O
    - Shelter Care for Victims of Domestic Violence, subject to: UDC Section 4.9.7.J.1, 3.c, & .4 and 4.9.13.O

e. *Retail Trade Use Group*
1. Food and Beverages Sales
    - Farmers' Market only; subject to: UDC Section 4.9.9.A.12.a -.d
    - Excluding Large Retail Establishment, subject to: UDC Section 4.9.13.O
2. General Merchandise Sales, excluding Large Retail Establishment, subject to: UDC Section 4.9.9.B.3 and 4.9.13.O

   Craftwork as an accessory use to any permitted Retail Trade uses, subject to: UDC Section 4.9.5.A

   Perishable Goods Manufacturing as an accessory to any permitted Retail Trade Uses, subject to: UDC Section 4.9.5.E.4, .5 & .8

f. *Storage Use Group*
1. Personal Storage for tenants of the property only, subject to: UDC Section 4.9.10.C and 4.9.13.O

Prohibited Uses

All C-1 and NC uses not listed as a permitted use in this PAD are not permitted.

C. Development Standards

Development Regulations

The following provides development regulations for the PAD and applies to the entirety of the site. The monastery has additional standards that apply specifically to the existing structure and associated areas gaining Historic Landmark designation (See Appendix B).

PAD Development Standards

The following provides the development standards applicable to the PAD planning area. Development standards will be used to provide compatibility with adjoining zoning districts and transitioning where appropriate to ensure compatibility to adjacent properties. The following standards apply to the development of buildings, landscape borders, vehicle use areas and buffering for all permitted uses within the PAD. These standards were developed utilizing the basic parameters of the C-1 zone. The Benedictine Monastery is proposed as an Historic Landmark (See Appendix B); therefore, the UDC Section 5.8 Historic Landmark designation standards will apply within the delineated boundaries unless modified in this document or accompanying Historic Landmark Designation document.

All new development within the PAD shall conform to all applicable building, fire and other life safety standards. The following standards will supersede the standards in the UDC in accordance with Section 3.5.5 Planned Area Development (PAD) Zone of the UDC, except where specific references to such standards are provided in this section of the document.

1) Density

   The agreement included in the enabling Miramonte and Alvernon-Broadway Plan Amendments states as follows: *The total number of new construction residential units shall be limited to an allowable two hundred fifty (250) units. Should the east-west oriented structures of the proposed development have a 3-story step-down to Country Club Road equal to or greater than the width of two (2) residential units, the total allowable density will be increased on the site to two hundred fifty-five (255) new construction units (See Exhibit 3A). The density of new construction residential units will not limit the potential of any additional residential units that may be located inside the existing monastery.*

   Based on this language this PAD proposes to allow: 253 new construction units and mixed-uses in the Monastery with no limit on the number of residential units located within.

2) Building Heights and Reductions

   The proposed parking garage will have a maximum building height of fifty-five (55) feet. Buildings fronting on Country Club Road, excluding the Historic Landmark designation and the parking garage, will have a maximum building height of thirty-five (35) feet. Buildings along Anderson Boulevard facing east/west will have a maximum building height of forty-five (45) feet. All other structures will have a maximum building height of fifty-five (55) feet (See Exhibit 3B). Building heights will be

measured to the top of all livable space and does not include additional height for parapets, mechanical screening, elevator shafts for roof top access and rooftop shade structures.

Rooftop amenities will be allowed in the stepdown areas of the building.

A building height step-down will occur on new construction fronting Country Club Road and portions of Anderson Boulevard. Building height step downs will be no less than the depth of a single residential apartment unit. Building height step downs will limit the building to 35' along Country Club Road. The building height step down on Anderson Boulevard will only be applied to buildings orientated parallel to Anderson Boulevard. The building height reduction along Anderson Boulevard will limit the structure to 45' (See Exhibit 3A). The Garage on Country Club Road and 2nd Street will be allowed to a height of 55' and will not be required to have a building height reduction.

3) Setbacks

All setbacks will be measured from the current property line. The proposed development includes a forty-five (45)-foot setback for all new residential buildings along Country Club Road and Anderson Boulevard. The garage may have a setback of 35' from Country Club. The property boundary on the south side of adjacent APN 125-13-065A (northeast property corner) will have a setback of forty-five (45) feet. A ten (10)-foot setback is provided along 2nd Street and the property boundary on the west side of adjacent APN 125-13-065A. See Exhibit 3B for further detail. There will be no internal setbacks, except as required by the HL. Shade structures and solar panels utilized as covered parking will not be required to comply with setback standards as outlined in the UDC. Maximum heights of shade and solar panels will be limited to 16'

4) Non-Residential Development Standards

Portions of the PAD (see exhibit 3A, Site Plan) have been designated as space that can be utilized by non-residential allowable uses listed in the Permitted Uses section of this document. Additional space within the existing monastery may also be utilized for non-residential purposes. The non-residential uses allowed within the PAD should encourage street level activity, but it is not required.

5) Circulation Standards

There are two (2) primary access points along Country Club Road with one (1) access point at 2nd Street. No primary access will be allowed along the east side of the property; however, there will be one (1) controlled service access point along Anderson Boulevard not available to project residents. (See Exhibits 3A and 3E) Circulation will move throughout the internal roadway system shown on Exhibit 3D, with passage provided in both directions. The proposed parking garage will include efficient entrance and exit strategies to promote connectivity throughout the entire site.

Pedestrian circulation (See Exhibit 3E) will be provided in and around existing and proposed buildings to create a connected, campus-like feel with unifying uses throughout the site. The PAD will override current practices and will be an exception to the technical standards manual.

Tucson Department of Transportation Technical standard requirements will apply during the development plan process.

Work within the right of way will require a private improvement agreement from City of Tucson engineering permits and codes.

Any relocation, modification, etc., of existing utilities and/or public improvements necessitated by the proposed development will be at no expense to the Public.

6) Landscape and Screening Standards

The proposed landscape program for the PAD will consist of three (3) main areas: streetscape, internal landscape border and parking areas. Landscape will be designed to maximize shade for pedestrians and reduce the urban heat island effect on the entire site. See Exhibit 3H for Landscape Plan.

a. Street Landscape Border-Country Club Road

The street landscape border along Country Club Road shall be five (5)-feet in width in accordance with the historic hedge boundary and material. Generally, the existing Oleander hedge (on the southern Country Club frontage) may be preserved and the existing lower *xylosma* hedge in front of the Monastery may be preserved to allow for clear views of the historic structure. New Oleander hedge will be planted in a similar 5' zone on the north end of the Country Club frontage. No additional border landscaping will be required.

b. Street Landscape Border-Anderson Boulevard and 3rd Street

The street landscape borders along Anderson Boulevard and 3rd Street shall consist of preserving and maintaining the existing perimeter oleander hedge to provide a uniform edge to the site. No additional landscaping will be required. Continued maintenance and replanting of dead or diseased Oleander in like species is required.

c. Parking Areas

Parking area canopy trees shall comply with UDC Section 7.6 Landscaping and Screening requirements and shall aid in the mitigation of urban heat island effect. No parking lot screening beyond the border hedge is required in the PAD.

d. The historic landmark designation of the Monastery lends itself to preservation of landscaping. Below is a list of requirements for historic preservation of the Monastery's existing landscape:

i. Retain hedgerows, date palms and junipers immediately adjacent to the outside perimeter of the building's footprint. In the event of damage or disease of vegetative materials, replacement plants may be like-for-like replacement or plants with similar color, texture and shape.

ii. Retain original landscaping components from early 1940s located immediately adjacent to the building exterior perimeter, and portions of the frontage grounds (includes juniper, date palms and hedgerow).

iii. Preserve in-place some representative plant species from within the two courtyards, as both courtyards are extremely overgrown and unusable at present.

iv. The internal courtyards will allow flexibility for adaptive re-use for recreational uses and human activities, while respecting the overall oasis concept. Replace only as necessary with identical plant materials or plants that mimic the original planting in color, texture and shape.

v. The landscape north of the Monastery will be preserved except for the ability to build a sunken patio at the northeast corner of the Monastery to allow for ADA accessibility to the Chapel basement.

vi. The landscape west of the monastery will be preserved except for the allowable removal of the high water-consuming grass immediately adjacent to the Monastery and replacement with hardscape.

7) Water Conservation Standards

Conservation standards will be accomplished via low water use plants, efficient irrigation and rainwater harvesting, except where existing landscapes are being preserved.

a. Low Water Use Plants: The plant palette will consist of predominately low water use, native and regionally adapted plants. The plants will be located relative to their functionality and the uses associated with the zones within which they are planted. The use of low water use plants in locations appropriate with their species characteristics provides for the conservation of potable water while assuring the survivability and long-term health of such plant material.

b. Irrigation: Plants requiring irrigation shall be irrigated by means of an efficient underground drip irrigation system. Underground drip systems reduce water evaporation and waste, thereby conserving water. The irrigation system will be controlled by a programmable controller which can be used to adjust irrigation schedules. The use of different seasonal irrigation schedules reduces the amount of water applied during cooler and wetter periods. Irrigation systems shall be fitted with irrigation controllers and shall be capable of monitoring and responding to plant water needs through the use of weather stations. The technology chosen should be capable of preventing the irrigation system from running if sufficient moisture is present to support the vegetation. The Owner intends to relocate the existing grandfathered well to another location on site and use it for irrigation.

c. Rainwater Harvesting: A water harvesting plan will be prepared for commercial uses in new construction within the PAD at the time of development plan submittal in compliance with Development Standards 10-03, illustrating fifty percent (50%) of estimated landscape water budget is met by water harvesting techniques. The water harvesting plan will utilize passive water harvesting techniques to collect rainwater and direct it to planting areas, thereby reducing the consumption of potable water for irrigation purposes.

A number of passive rainwater harvesting techniques may be employed to direct surface water and capture rainfall for the benefit of the landscape: curb cuts, flush curbs, recessed planting areas, minimized compaction of planting areas and semi-pervious pavers.

8) Parking and Loading Standards

The proposed residential parking minimum standard shall be 1.08 spaces per residential unit. The proposed non-residential parking minimum standard shall be one (1) space for each four hundred (400) square feet of non-residential space. Together these will calculate the required on-site parking.

These spaces will be provided by a multi-level parking garage with an open-deck top floor, planned for the northwest corner of the site. The garage is currently planned for four levels and 216-230 vehicles. An additional 140-160 surface parking spaces are currently planned in the Site Concept Plan (exhibit 3A). Based on allowable site usage (253 new residential units allowed + 35 rehab residential units currently planned in the Monastery = 288 x 1.08 = 311 required residential spaces) plus (50 required non-residential spaces (20,000 SF planned ÷ 400 SF) = 365 calculated required spaces.

Vehicle use areas shall be constructed utilizing materials and construction techniques in accordance with recommendations of the geotechnical engineer, UDC Standards, and concurrence from City of Tucson.

Accessible parking will be provided in accordance with the requirements noted in the 2012 IBC Chapter 11 and the ICC A117.1-2009. Accessible spaces and "Van Accessible" spaces will connect to the accessible route as required by ICC A117.1-2009 Edition. Newly constructed and modified sidewalks, detectable warnings and curb ramps will comply with accessibility requirements as required.

The project incorporates multiple short- and long-term bicycle storage options including interior and exterior means to park bicycles and encourage non-motorized travel to and from the site. There shall be a direct bicycle connection south to the 3rd Street Bicycle Path. Bicycle parking shall be per UDC Section 7.4.8.

9) Signage and Monumentation

Signage and monumentation within the PAD shall comply with the applicable City of Tucson Sign Code and sign regulations.

10) Solid Waste Standards

All required solid waste and recycle materials collection (see Exhibit 3G) and storage shall be designed in accordance with the City of Tucson Technical Standards Manual, Section 8: Solid Waste and Recycling Disposal, Collection, and Storage Standards. Solid waste and recycling collection and storage containers will be as shown on the Concept Site Plan. These are set back from the property line by 5' but will be screened by the existing oleander hedge.

11) Lighting

All outdoor light shall comply with the City of Tucson Outdoor Lighting Code. Street lighting is not required for public or private streets, including collector roads and local streets. Lighting may be integrated at the discretion of the owner. In addition, lighting may be provided to illuminate the upper level of the parking garage, common areas, residential lots, multifamily and commercial sites using full cut off lights and landscape accent lighting in accordance with the Outdoor Lighting Code and Dark Skies Ordinance.

The maps that follow graphically display the standards to be used for site development. They are all ***subject to technical requirements of permit review.***

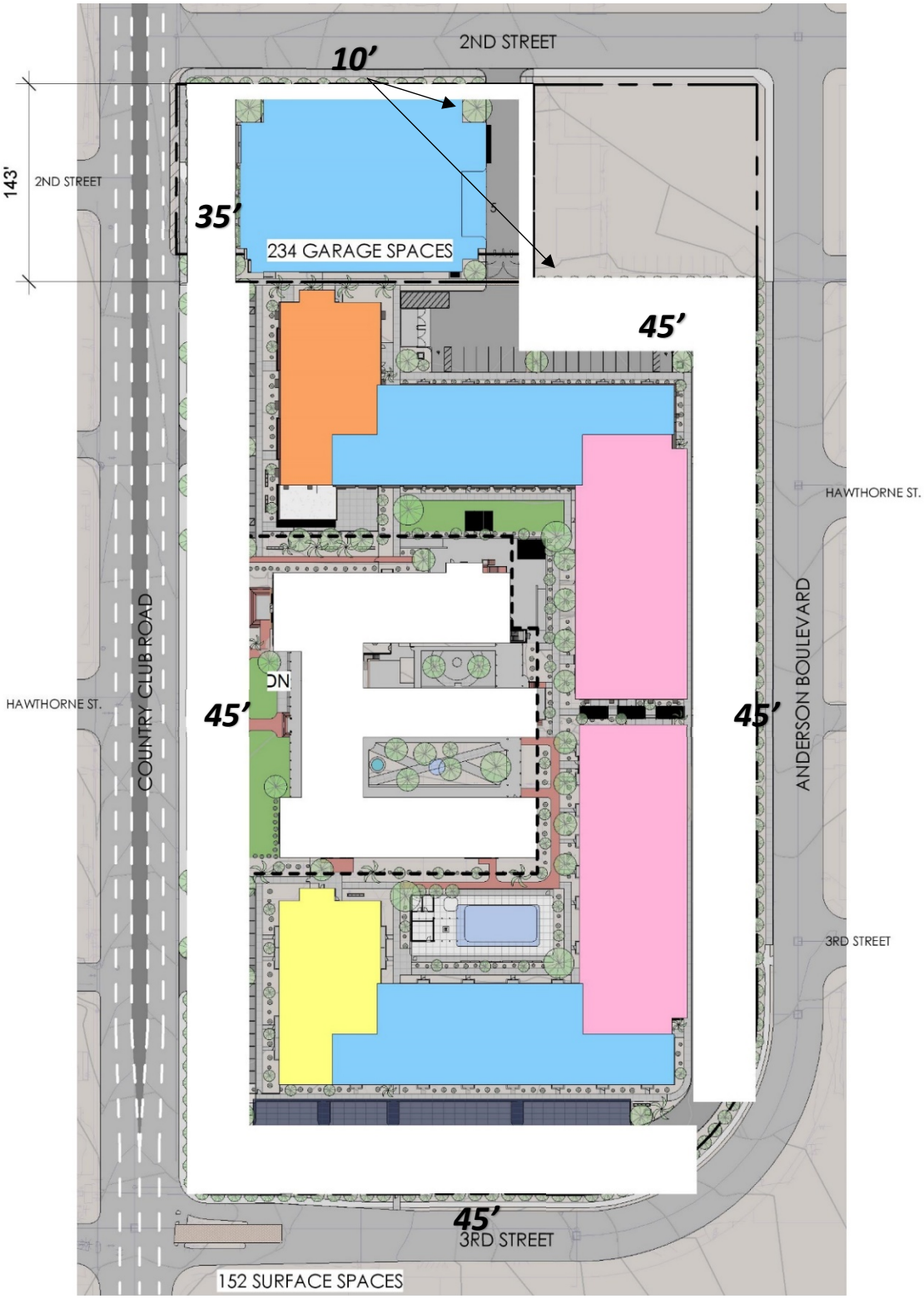


Exhibit 3B PROPOSED BUILDING SETBACKS (note: parking shade structures and solar panels are allowed in the setback to 16' in height as per proposed Development Standards) ***(subject to technical requirements of permit)***

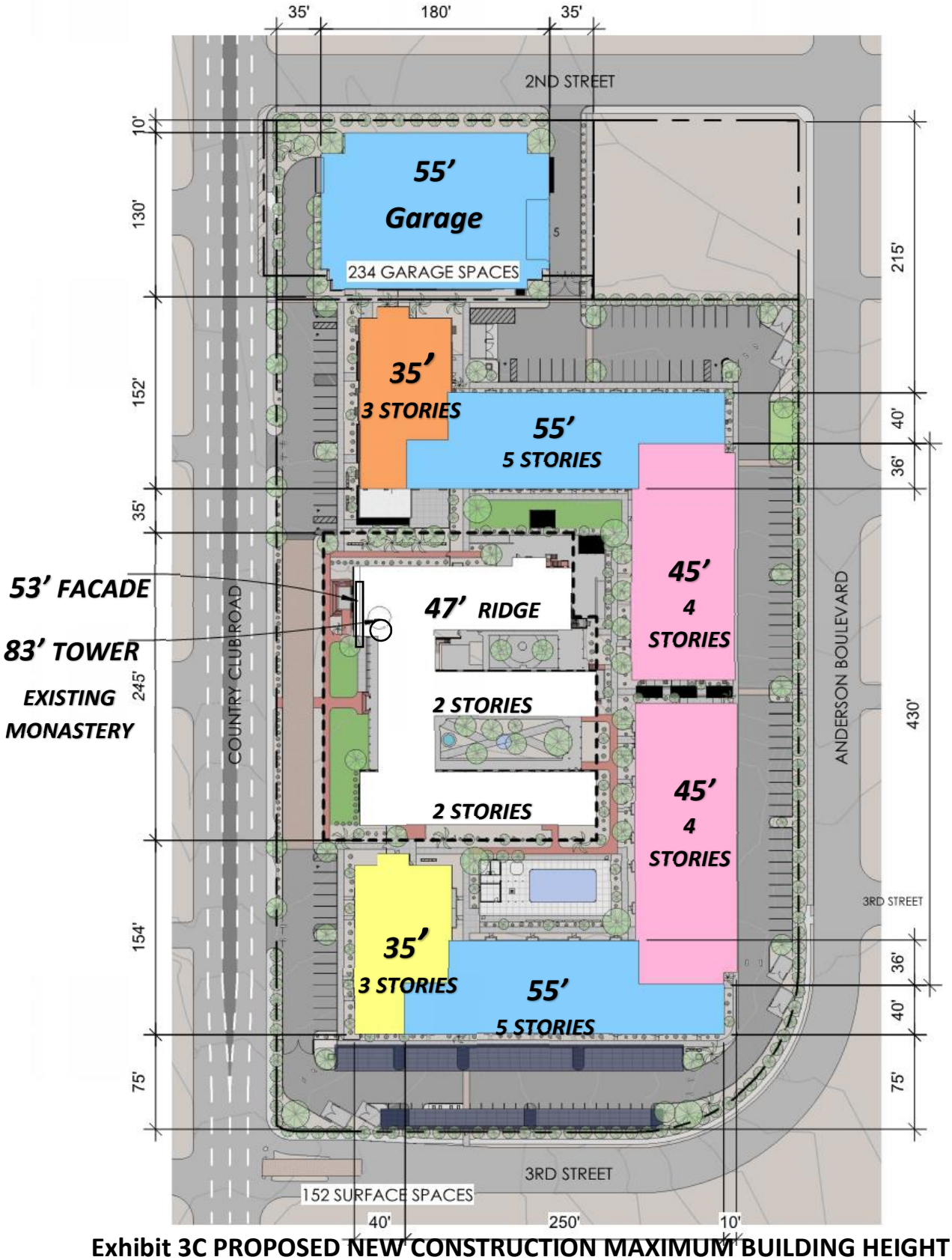


Exhibit 3C PROPOSED NEW CONSTRUCTION MAXIMUM BUILDING HEIGHT

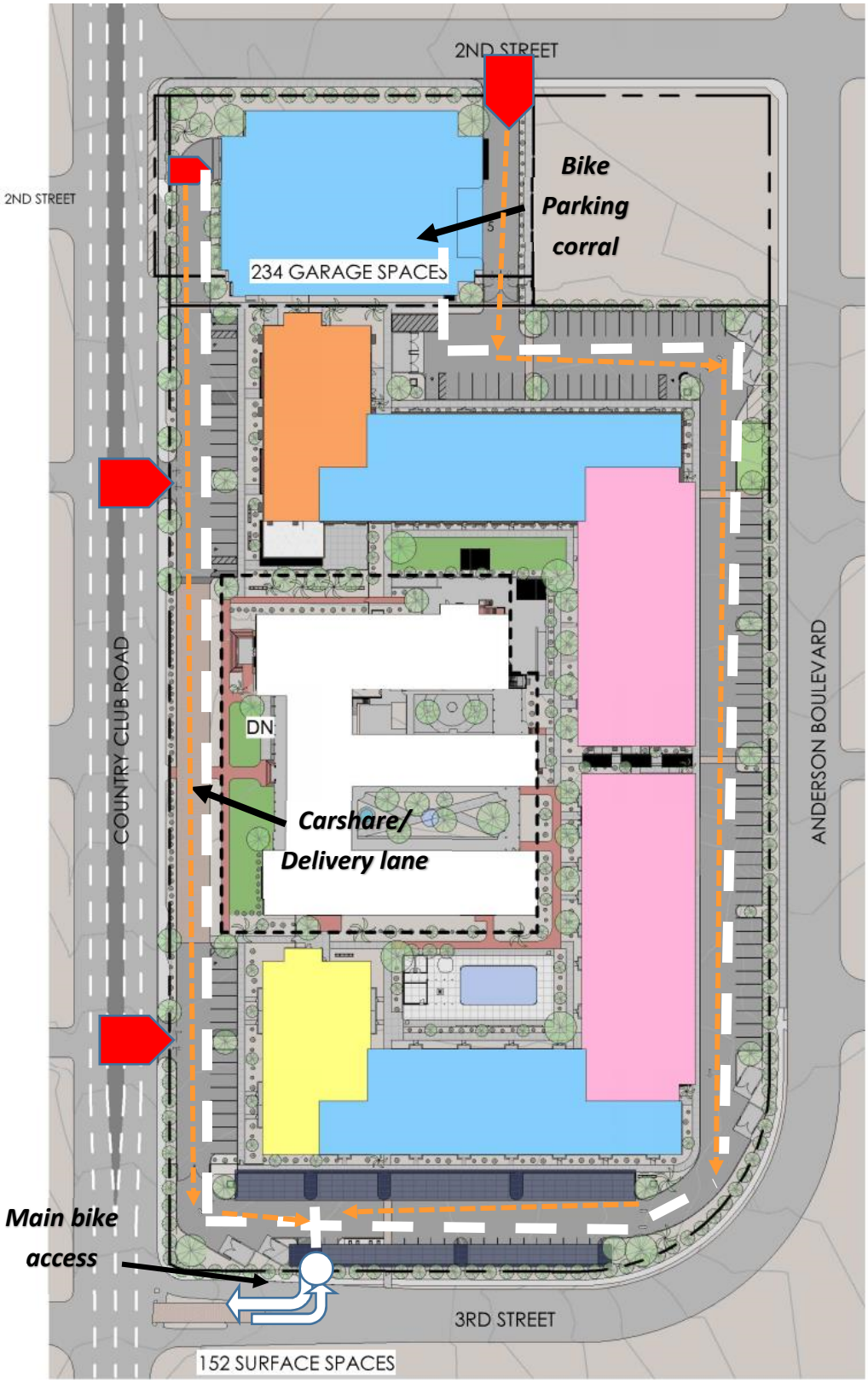


Exhibit 3D PROPOSED VEHICULAR ENTRANCES, BIKE CIRCULATION

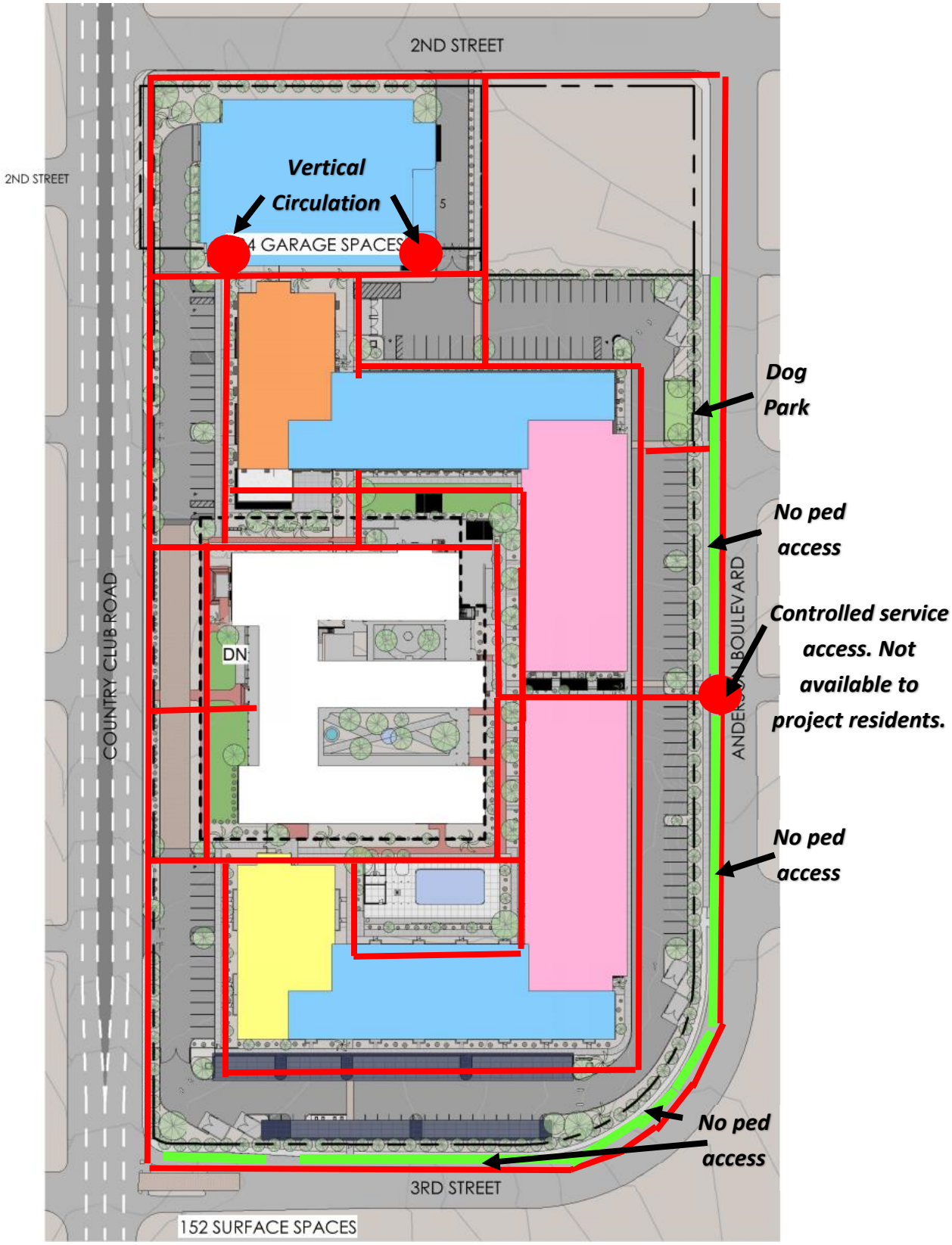


Exhibit 3E PROPOSED PEDESTRIAN CONCEPT (Sidewalks minimum of 5', 6' on CC)

Exhibit 3F PROPOSED LOADING ZONE

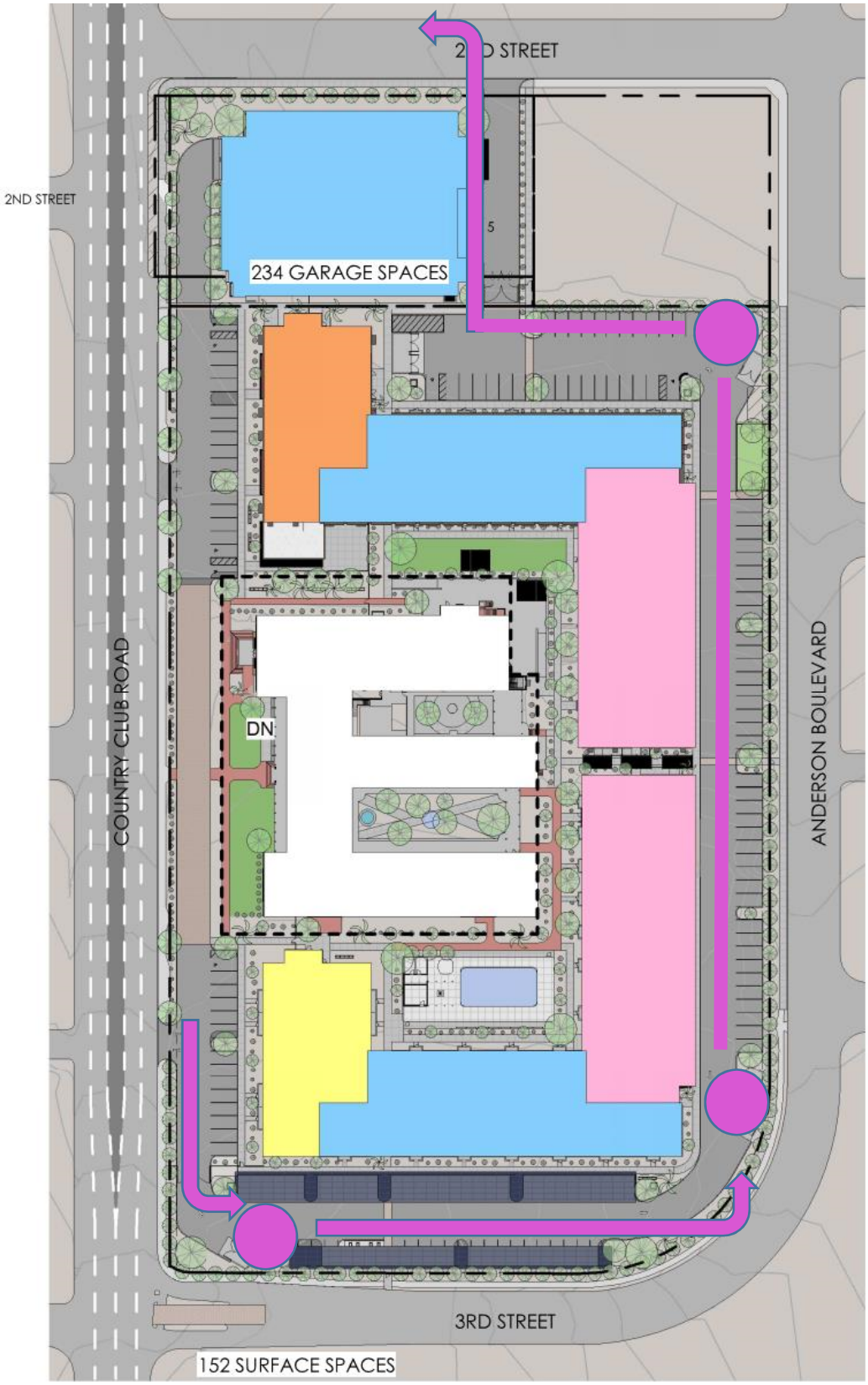


Exhibit 3G PROPOSED SOLID WASTE DISPOSAL AND RECYCLING

Exhibit H PROPOSED LANDSCAPE CONCEPT (Preserve existing E & S Oleander perimeter) Preservation of Landscape outside of HL is non-regulatory.
Existing landscape and additional landscape are conceptual and not regulated by this PAD.

D. Historic Landmark Standards

(Please Reference Historic Landmark Nomination in Appendix B)

At the time of the monastery's construction in 1940, Spanish Colonial Revival was reaching the end of its popularity, especially highly ornate designs on a monumental scale. As a result, the monastery stands as one of the last stylistic examples of Spanish Colonial Revival in Tucson. Moreover, the building is the last of architect Roy Place's designs that readily conveys its association with him. Place's favored aesthetic medium during the height of his career was Spanish Colonial Revival, and the City's iconic and widely recognizable civic, educational, and religious buildings of this style were all designed by Place. Because of the singularity of the monastery, it is essential that the future preservation of the exterior of the building preserve the property and its character-defining features that give the building its historic significance.

The following provides guidance for preservation of the building's characteristic features and refers only to the preservation and protection of the exterior within the designated boundaries of this historic landmark application package shown above. The boundaries of the landmark include the footprint of the monastery and a buffer around some of the perimeter of the building for a total of 51,501.6 sq. ft. (see Appendix B5).

The Design Guidelines for the exterior of the Benedictine Monastery are based on the *Secretary of the Interior Standards for the Treatment of Historic Properties* (Standards). These Standards outline four preferred treatment methods: (1) Preservation, (2) Rehabilitation, (3) Restoration, and (4) Reconstruction (National Park Service 2017). Each of the four treatment methods include ten standards that help guide planning and treatment of historic buildings. The Standards and their associated guidelines can be applied to all types of historic properties, and they include treatment standards for a property's exterior and interior; a property's landscape features, site, environment, and new construction. The preservation approach outlined below is one of *preservation* of the exterior and *rehabilitation* of the interior (the latter not governed by the requirements of this HL).

Using Preservation for the **exterior** as a treatment option entails adherence to the following 8 numbered standards:

1. A property will be used as it was historically or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a property that have acquired significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken (United States Government 1995).

Specific treatment objectives for the property include:

I: Preserve the location of the building by not altering the footprint (through either additions or reductions in sq. ft.), the façade, or immediately adjacent sidewalks or plantings (see Figure 2 for site layout and Appendix B5 for boundaries). Retain hedgerows, date palms, and junipers immediately adjacent to the outside perimeter of the building's footprint. In the event of damage or disease of vegetative materials, replacement plants may be any of the following: like-for-like replacement or plants with similar color, texture, and shape. As per 3B on Standards, grass may convert to paving.

II: The overall E-shaped floorplan, height, and exterior materials will be preserved. All decorative features (e.g. cast stone, copper finials, brass railings, ornamental iron, lantern and pendant lighting, brass and wood door fixtures, hardware, tiles [dome and roof], and statuary as they exist at present on the exterior of the building will be preserved and retained over time. At the discretion of the Owner interior millwork, such as doors and built-in shelving, and structural wall features (Figures 24–26) may be preserved but are not subject to the regulatory aspects of this HL. In the case of repair or damage, all aforementioned features will be rehabilitated as necessary.

The exterior northwest corner of the Monastery building will allow for a new sunken patio to give access to the lower level of the Chapel in accordance with the Americans with Disabilities Act.

Retain original landscaping components from early 1940s located immediately adjacent to the building exterior perimeter, and portions of the frontage grounds (includes juniper, date palms, and hedgerow). Additionally, preserve in-place some representative plant species from within the two courtyards (both courtyards are extremely overgrown and unusable at present). The internal courtyards will allow flexibility for adaptive re-use for recreational uses and human activities, while respecting the overall oasis concept. Replace only as necessary with identical plant materials or plants that mimic the original planting in color, texture, and shape.

Plant material and trees located outside the HL boundaries will be grafted and/or transplanted to Mission Garden located at 946 W. Mission Lane (*Arizona Daily Star*, 15 August 2018) at no cost to the Owner of the Monastery.

III: The preservation of the exterior will be consistent with the Secretary of the Interiors Standards for the Preservation treatment. Preserve and retain all exterior materials used for walls, roofing, foundation, porches, and decoration. Those exterior materials include brick, stucco plaster, paint, terra-cotta roofing tile, concrete mortar, cast stone, ceramic tile, wood (eave ends and beams inside arcades), and metal ornamentation (brass, copper, and wrought iron).

The maintenance of the building exterior will seek to preserve and protect the historic features as per the Secretary's Standards.

The Benedictine Sisters of Perpetual Adoration recently replaced over 200 windows with energy-efficient contemporary windows that resemble the original casements in color, number of lites and

mullions, and glazing. In the event that the windows are damaged or need repair or replacement, effort should be made to repair the window instead of replacement, but if not feasible, the replacement window should mirror the original windows in design, color, texture and other visual qualities and, where possible, materials. The same premise holds true for any exterior wall material or treatment that may require repair or replacement.

Retain hedgerows, date palms, and junipers immediately adjacent to the building's footprint. To avoid excessive water use in the desert, grass areas on the west side of the Monastery may be replaced with hardscape. Mitigation in areas outside of the historic landmark boundaries, will be accomplished by conducting a plant inventory to identify, record, and evaluate for salvage all remaining plants within the parcel. As noted previously, vegetation located outside the HL boundaries will be grafted (trees) and/or transplanted to Mission Garden located at 946 W. Mission Lane (*Arizona Daily Star*, 15 August 2018) at no cost to the Owner of the Monastery.

IV: All elements of workmanship in the monastery's exterior design and materials will be retained and preserved (Figure 25). Address any repairs or damage that would directly affect the quality of workmanship of the exterior. The interior of the entire Monastery and internal courtyards will allow for adaptive re-use to accommodate new non-religious uses as necessary. These interior modifications are not limited in any way by the Historic Landmark designation.

V: Preserve to the extent possible those qualities that evoke a feeling of contemplative space indicative of a cloistered religious setting, namely retention of the exterior, arcades, and walkways in and immediately around the building. Retain hedges and trees immediately adjacent to building, and portions of the frontage grounds to reinforce sense of place. The two interior courtyards may be modified to accommodate the adaptive re-use of the building, while maintaining the oasis feel.

***VI*:** Preserve the exterior characteristic Spanish Colonial Revival features and appearance as designed by Roy Place to retain integrity of association. Moreover, exterior Catholic iconography should be retained and preserved including all exterior statuary and inscriptions to maintain its religious associations.

HISTORIC LANDMARK DEVELOPMENT STANDARDS TABLE		
Refer to HL text for additional details.		
Item	***Topic***	***Standard***
1	Benedictine Monastery Exterior	The Exterior of the Monastery will be preserved and all of its character-defining elements will be preserved and repaired as necessary (As per Secretary of the Interior Standards), except for the items listed below (A)
1A	Roof Terrace	The Roof of the central wing of the Monastery has been historically used as a Terrace. It is proposed to continue this historic use. In order to do so, there will need to be a new walkable surface installed, and a discreet taller protective guardrail to meet current codes.
2	Benedictine Monastery Interior	The Benedictine Monastery Interior is excluded from the regulatory requirements of this Historic Landmark nomination
3	The Historic Landmark Boundary	The Monastery site and landscape will be preserved and all of its character-defining elements will be preserved and repaired as necessary (As per Secretary of the Interior Standards), except for items listed below (A-D)
3A	Sunken Plaza	There will be a sunken plaza installed at the north east corner of the Monastery to allow for ADA access to the basement (under the Chapel) for support uses for the residential development
3B	Front grass area	In order to conserve water, the two grass areas on the west face of the Monastery entry may be replaced with appropriate hardscape.
3C	Interior Patios	The two interior patios of the Monastery will remain in their general historic character, but modifications to allow for adaptive reuse of these patios will be permitted.
3D	Mechanical equipment	Mechanical equipment may be allowed to be placed within the boundaries of the HL in a careful and discreet manner.

E. Post-Development Hydrology

a. DRAINAGE SOLUTION: The proposed development will increase the total site impervious cover to approximately 93%. Predicted runoff is 54cfs during the 100-year event for the entire site. The site proposes a development consisting of several multistory buildings, a multi-level parking garage, sidewalks, the associated paved access, parking and landscaping throughout. The proposed improvements will incorporate depressed water harvesting areas to provide some retention of stormwater and will help reduce post-developed discharges to acceptable levels comparable with pre-developed discharges. The proposed drainage patterns will continue to be directed in a manner consistent with existing drainage patterns so as not to create any adverse impacts to the parcels and developments located downstream from the subject development.

b. POST-DEVELOPMENT DISCHARGE: The proposed development will produce a total runoff of approximately 54 cfs in the 100-year flood condition. As such, detention and retention will be required to reduce post developed conditions to less than or equal to existing conditions. The reduction will be accomplished with retention/detention facilities at surface levels and/or underground.

c. Developed runoff from the site remains much like existing conditions. Exit points are at similar locations and detention basins detain the flow to less-than or equal to existing conditions. Developed runoff will ultimately combine immediately downstream within Second Street and Anderson Boulevard and flow west within the street toward Camino Miramonte as part of the contributing area of the Christmas Wash.

F. Design Review and Standards:

DESIGN REVIEWS:
1. Historic Landmark:

In the event that repair, rehabilitation, or other exterior changes may be required, the design review process will follow a similar path as existing City of Tucson Historic Preservation Zone (HPZ) Reviews.

Minor Reviews: For future projects not requiring a permit (such as electrical upgrades, fences, gates, and window repair, etc.), an on-site review will be conducted by a member of the City of Tucson Planning and Development Services Department and a member of the Tucson-Pima County Historical Commission Plans Review Subcommittee.

Major Reviews: A full review by the Tucson-Pima County Historical Commission Plans Review Subcommittee will be required for any project involving a building permit or modification of the exterior appearance of the monastery.

Demolition: Demolition will require Mayor and Council approval.

Adjacent (PAD) New Construction: New construction will not be subject to approval by the TPCHC-PRS, but new construction designs will be presented to the TPCHC-PRS, for an update and Information-only Courtesy Review.

The Secretary of the Interior Standards for new construction adjacent to Historic Structures offers the following very limited guideline:

"10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired."

Our proposal meets this minimal requirement. Nonetheless, our own professional commitment to compatibility and the language of the Plan Amendments to Miramonte and Alvernon-Broadway urge an appropriate adjacent architecture. We will accomplish this by the following:

The massing and heights of the new construction reflect those of the Monastery. The 55' height matches the Chapel facade. The massing along Country Club, including the garage and the apartments north and south of the Monastery, are massed at approximately 38', which matches the massing of the lower portion of the historic Monastery. This gives a Country club elevation that is respectful of the Monastery's height. The lower level arcade on the Country Club north facade recalls the arcade porch of the Monastery. The heavy chocolate brown lower level of the new work matches the Roy Place poured-stone columns and Chapel entry. Like the Monastery, the upper level stucco lightens the massing. The upper-most levels further lighten with a glass and metal finish. The proposed new construction is clearly contemporary, as it should be "of its own time and place." The solids and voids of the new construction responds to the solids and voids of the Monastery west elevation. In sort, we have striven to design a new building adjacent to the historic Benedictine Monastery for a contemporary purpose and with contemporary technology, but the design is carefully organized and executed to be respectful of Roy Place's legacy.

2. Design Review of Permit compliance with PAD

The City of Tucson On-Call Design Professional shall be part of the PDSD Development Package Review and compliance with the PAD. Final permit review will be administered and implemented by the staff of the City of Tucson Planning and Development Services Department as per any standard zoning review. It is understood that there might need to be minor modifications of the PAD requirements to conform to technical permit review comments.

G. Interpretations and Amendments:

1. Interpretations:

The regulations and guidelines provided within this PAD supersede existing regulations within the City of Tucson Unified Development Code. If an issue arises regarding definitions, conditions, standards and/or situations not addressed in this PAD, those in the UDC shall prevail, as interpreted by the COT Zoning Administrator.

2. Amendments:

Amendments to this PAD may be necessary over time to respond to changing market demands, financial conditions, or to respond to the unanticipated needs of new users. Non-substantial changes to the PAD shall be approved pursuant to UDC Section 3.5.5.I and include the following:

- Modifications to the permitted and secondary uses that do not change the overall intent of the PAD.
- Modifications to tax code parcel boundaries, including changes to interior boundaries or combining parcels. (Except that changes to the PAD perimeter boundary may not be considered a minor amendment or non-substantial changes to the PAD).
- Any other items not expressly defined as substantial based on UDC Section 3.5.5.I

APPENDICES

APPENDIX A – Plan Amendment – Mayor and Council

ADOPTED BY THE
MAYOR AND COUNCIL

December 18, 2018

RESOLUTION NO. 22976

RELATING TO PLANNING AND ZONING: AMENDING BOTH THE *MIRAMONTE NEIGHBORHOOD PLAN* AND *ALVERNON-BROADWAY AREA PLAN* IN CASE PA-18-04 FOR PROPERTY LOCATED ON THE EASTSIDE OF COUNTRY CLUB ROAD BETWEEN 2ND AND 3RD STREETS TO ALLOW FOR ADAPATIVE RE-USE OF THE BENEDICTINE MONASTERY; AND SETTING AN EFFECTIVE DATE.

WHEREAS, the City of Tucson ("City") is authorized by Arizona Revised Statutes, Section 9-461.05 to prepare a comprehensive long-range general plan for the development of the City; and

WHEREAS, the City is engaged in a comprehensive and continuing planning process, the most significant of which has been the preparation of individual area plans; and

WHEREAS, the City of Tucson has established procedures for the development and adoption of sub-regional, area, and neighborhood plans as specific plans to implement the General Plan in specific areas within the City and those established procedures have been followed in the preparation and adoption of this Resolution; and

WHEREAS, the *Miramonte Neighborhood Plan* as referred to herein, was originally adopted on June 17, 2008 by Resolution No. 20984; and the *Alvernon-Broadway Area Plan* as referred to herein, was originally adopted on February

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27, 1995 by Resolution No. 16833, and last amended on July 9, 2013 by Resolution No. 22079; and

WHEREAS, the proposed amendment would allow for commercial-neighborhood level, office, high density residential; and add in the *Miramonte Neighborhood Plan* policy 2.4 Preservation and Reuse of Benedictine Monastery Site; and

WHEREAS, the proposed amendments were the subject of a duly noticed public hearing before the Planning Commission on November 15, 2018, which then voted 6-1 in favor of recommending the *Miramonte Neighborhood Plan* and *Alvernon-Broadway Area* amendments to Mayor and Council; and

WHEREAS, at that same public hearing a majority of Commissioners voted to reconsider their original motion, and the Commission then voted 4-3 against recommending the proposed *Miramonte Neighborhood Plan* and *Alvernon-Broadway Area* amendments to Mayor and Council; and

WHEREAS, because the Unified Development Code requires a concurring vote of seven Planning Commission members to make a recommendation to Mayor and Council, there is not, therefore, a formal Planning Commission recommendation on this plan amendment.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF TUCSON, ARIZONA, AS FOLLOWS:

SECTION 1. Both the *Miramonte Neighborhood Plan* and the *Alvernon-Broadway Area Plan* are hereby amended, to allow for adaptive re-use of the Benedictine Monastery as illustrated in Exhibits A and B attached to this Resolution;

SECTION 2. The various City officers and employees are authorized and directed to perform all acts necessary or desirable to give effect to this Resolution.

SECTION 3. If any provision of this Resolution or the application thereof to any person or circumstance is invalid, the invalidity shall not affect other provisions or applications of this Resolution which can be given effect without the invalid provision or circumstance, and to this end, the provisions of this Resolution are severable.

SECTION 4. This Resolution becomes effective thirty (30) days after it is adopted by the Mayor and Council and is available from the City Clerk.

PASSED, ADOPTED AND APPROVED by the Mayor and Council of the City of Tucson, Arizona December 18, 2018.

MAYOR

ATTEST:

CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY

REVIEWED BY:

CITY MANAGER

PG/tl
11/29/18

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Policy 2.4*

Preservation and Reuse of Benedictine Monastery Site

Strategies:

2.4.1 - Encourage preservation of the Monastery buildings through an Historic Landmark designation or other preservation architecture.

2.4.2 - Promote appropriate adaptive reuse opportunities for the Monastery buildings, including neighborhood-level commercial, office or high density residential uses.

2.4.3 - Develop residential heights based on the careful design of the project, allowing heights to 55' (as defined by Section 6.4.4 of the Unified Development Code), but with step downs toward Country Club Road. Architectural style of new development shall be compatible with the Monastery and the overall design character of the neighborhoods.

2.4.4 - The total number of new construction residential units shall be limited to the allowable 250 new construction residential units. An increase in the total allowable units on the site to 255 new construction residential units is allowed only if it meets the terms of an agreement referenced in Strategy 2.4.6. This will not limit the potential for any additional residential units to be located inside the existing Monastery. Additional residential units may be allowed in the Monastery above that amount.

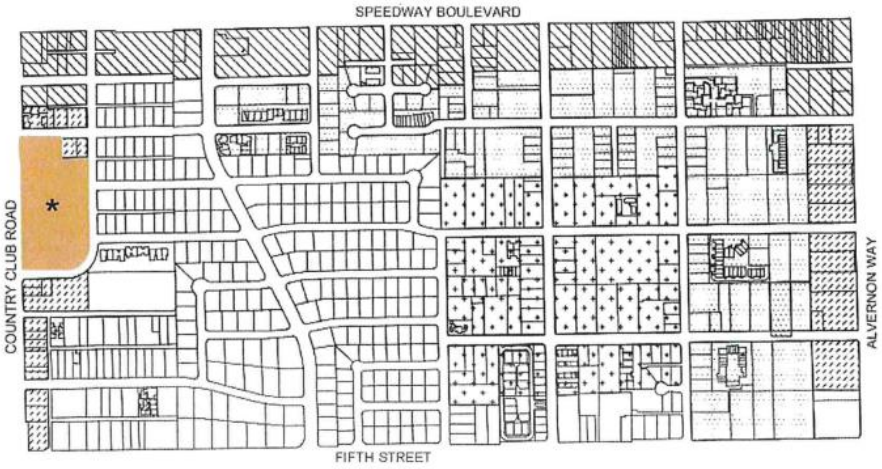
2.4.5 – An advisory committee with neighborhood representation shall be formed during the PAD / Rezoning process to insure neighborhood input and feedback throughout the design and PAD / Rezoning process. The specific membership structure, procedures and duties of the group will be detailed in the future Planned Area Development (PAD) document during the rezoning process.

2.4.6 – The advisory committee, the neighborhood and the developer shall incorporate as binding conditions within the PAD document specific items outlined in an agreement reached between Neighbors for Reasonable Monastery Development and Tucson Monastery LLC, dated October 5, 2018.

* Amendment _____, Resolution No _____

Exhibit 2: Miramonte Neighborhood Conceptual Land Use Map

[**Note:** This map is based on, and consistent with, the Alvernon-Broadway Area Plan Conceptual Land Use Map on page 21 of the City of Tucson, Alvernon-Broadway Area Plan (Adopted 1995, Amendments Aug. 1998, Oct. 1998, Sept. 2000, and _____.]



Miramonte Neighborhood Conceptual Land Use

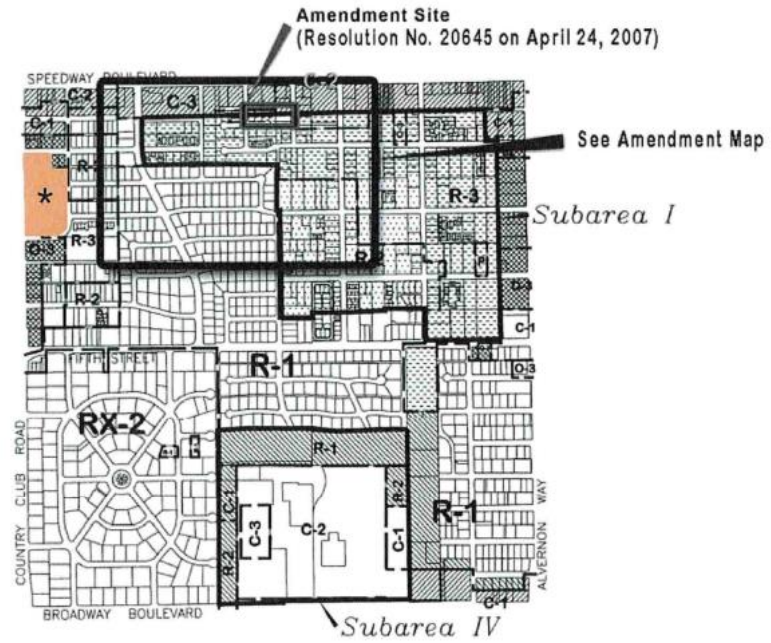
Legend

- Low Density Residential
- Medium Density Residential
- High Density Residential Office/High
- Density Residential Commercial/Office/High
- Density Residential
- * Commercial - Neighborhood Level/Office/High Density Residential

Amended _____, Resolution No. _____

Page 16 Miramonte Neighborhood Plan

ALVERNON-BROADWAY AREA PLAN
CONCEPTUAL LAND USE MAP



Legend

- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- OFFICE
- OFFICE/HIGH DENSITY RESIDENTIAL
- PARKING BUFFER
- COMMERCIAL/OFFICE/HIGH DENSITY RESIDENTIAL
- * Commercial - Neighborhood Level/Office/High Density Residential

N

0 400 800 feet

Amended _____, Resoultion No._____

Exhibit B to Resolution No. 22976

Attachment H

Neighbors for Reasonable Monastery Development
Tucson Monastery, LLC

Joint Statement of Neighbors for Reasonable Monastery Development and Tucson Monastery, LLC, Regarding the Benedictine Monastery Plan Amendment

October 5, 2018

On September 12, 2018, at the City of Tucson Planning Commission Study Session for the Proposed Plan Amendments to the Miramonte Neighborhood Plan and the Broadway-Alvernon Area Plan, the Commission continued their study session, requesting that the parties (developer and neighbors) get together and try to agree on more specifics for the Plan Amendment.

A group of four neighbors – Sam Behrend, Linda Dobbyn, Jason Kreag and Josephine Wilson – representing Miramonte and Sam Hughes met with the developer team in the offices of Council Member Steve Kozachik on September 19, September 27, and October 4, 2018, to discuss the issues highlighted by the Planning Commission. The meetings made positive progress. Below are the agreements reached at those meetings.

- **Height and Step-Downs:** We agreed that the 55' limit (as per UDC definition) should be the maximum allowable on site. We agreed that a step-down in the residential structure (not a garage structure) to three stories should occur along Country Club and that the east-west width of the three-story portion of the building should be no less than the depth of a single residential apartment unit. We agreed to a smaller step-down in the residential structure to mostly four stories along Anderson, corresponding to the pink area in the attached site plan. The planned garage will not have a step-down.

- **Buffers and Setbacks:** We agreed to save the oleanders at the south and east perimeter. To preserve the community's front views to the Monastery along Country Club, we agreed that we need a large building setback on the west (to the face of the Monastery Chapel), we agreed to place the parking (a minimum of single-loaded perpendicular parking) on the outer ring, which creates a large perimeter setback on the south and east. On the north, we agreed that we could minimize the setback on 2nd Street, even below the underlying zoning and with minimal setbacks adjoining the neighbor to the northeast corner of the site.

- **Density:** With regard to the total allowable residential density on site, we decided to support the "R-3/O-3 calculated unit count for the gross area of the site (250 new construction units)" language in the current Plan Amendment. Along with agreed-upon C1 and Neighborhood Commercial, additional residential units may be allowed in the monastery above that amount. Should the east-west width of the three-story step-down to Country Club be equal to or greater than the width of two residential units, we agree to increase the total allowable density on the site to 255 new construction units confined to the blue, pink and yellow areas in the attached site plan. This will not limit the potential of any additional residential units to be located inside the existing monastery.

- **Locations of Entrances:** Subject to approval by the COT, we agreed that vehicular entries to

the site would be confined to Country Club and 2nd Street; that an emergency entry or service entry might be required along Anderson, but these gates would be normally closed to vehicle and pedestrian traffic.

- **Prohibition on Student Housing:** We agreed that for-student/by-the-bed or by-the-room rental would be a prohibited use anywhere in the ultimate site zoning.

- **Preservation:** We agreed with the existing language for Preservation: Preservation and Reuse of Benedictine Monastery Site Strategies: 2.4.1 – Encourage preservation of the Monastery buildings through an Historic Landmark designation or other preservation mechanism, with the recognition that there is the need for some flexibility for north-side ADA access to the basement.

- **Reuse of the Monastery:** We agreed that we would need a commitment to neighborhood-friendly uses in the Plan Amendment and then devote the appropriate time in the collaborative PAD process to agree upon a list of allowable and prohibited uses from among the UDC-allowable C-1 and NC commercial and residential uses.

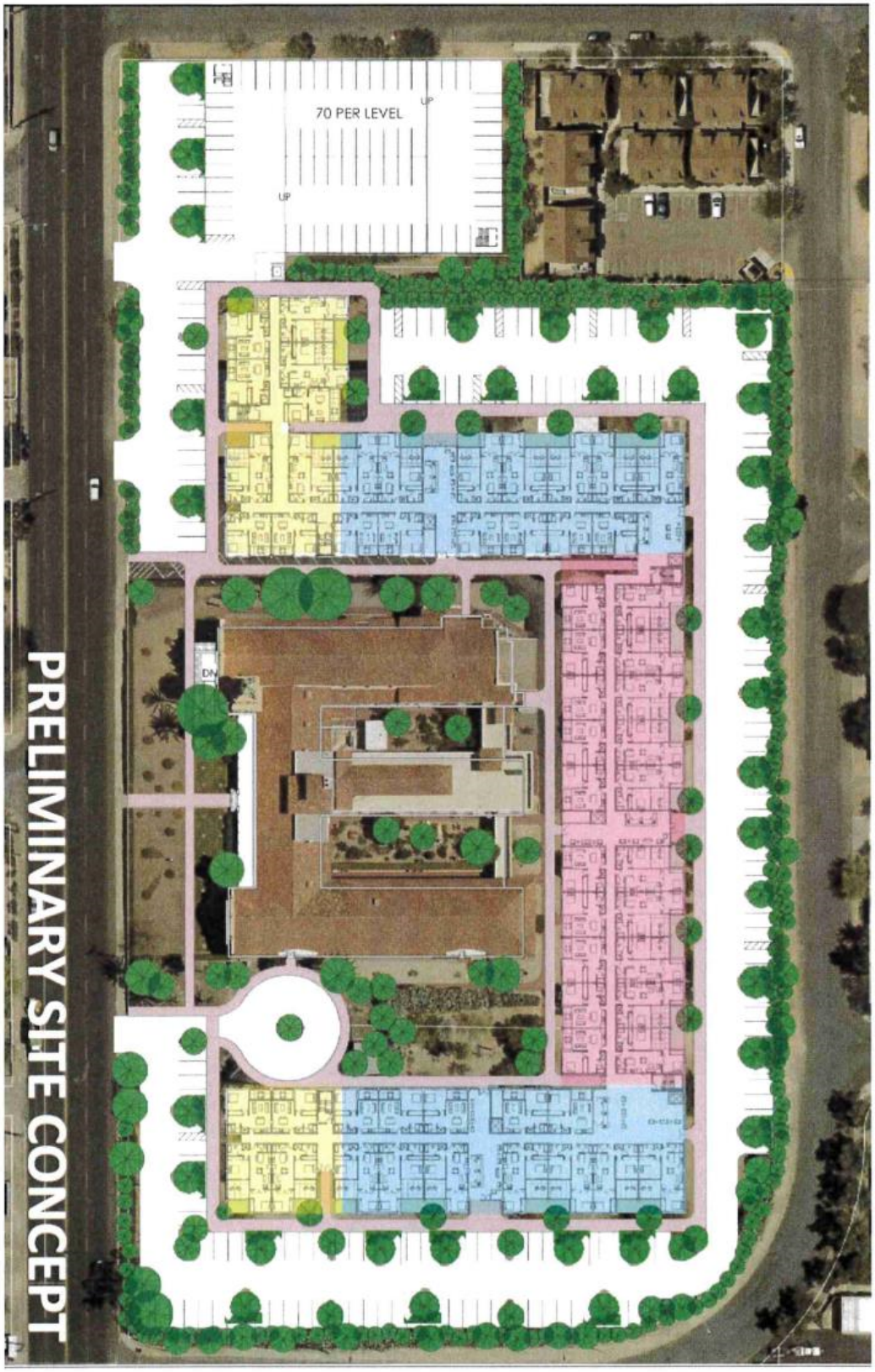
- **Thoughtful Design and Planning**: We agreed that the Benedictine Monastery is a very special place and, given the underlying zoning, the proposed development needs the utmost care in design and planning. That will be accomplished by both a thoughtful Plan Amendment and a creative and collaborative PAD process.

- **Working Together:** In discussing the pros and cons of the proposed Plan Amendment and subsequent PAD, the group agreed that we can and should work together to make a better project than would be possible with the underlying R-3/O-3 zoning.

The question remains: how does the Planning Commission move forward to implement these agreements?

We recommend that the Planning Commission approve the Plan Amendment language as submitted (see below), including the map revision to the Miramonte Neighborhood Plan and the Broadway Alvernon Area Plan as submitted, (below), provided that the items listed above are incorporated as binding conditions in the PAD document during the rezoning process.

"Policy 2.4: *Preservation and Reuse of Benedictine Monastery Site*
Strategies: 2.4.1 *– Encourage preservation of the Monastery buildings through an Historic Landmark designation or other preservation mechanism.*
Strategies: 2.4.2 *– Promote appropriate adaptive reuse opportunities for the Monastery buildings, including neighborhood-level commercial, office or high density residential uses.*
Strategies: 2.4.3 *– Develop residential heights based on the careful design of the project, allowing heights to 55' (as defined by Section 6.4.4 of the Unified Development Code) but with step downs toward Country Club Road. Architectural style of new development shall be compatible with the Monastery and the overall design character of the neighborhoods. An advisory committee with neighborhood representation shall be formed through the PAD process. The total number of new construction residential units shall be limited to the allowable R-3 calculated unit count for the gross area of the site (250 new construction units)."*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PRELIMINARY SITE CONCEPT

IMPLEMENTATION OF MIRAMONTE AND BROADWAY-ALVERNON PLAN AMENDMENTS

Item	*Policy*	*Where/How Implemented*
Policy 2.4 in Plan Amendment		
1	Change in Map to allow High-Density Residential and Commercial Uses	In PAD: Concept Plan and Allowable Uses
2	Implementation of Historic Landmark	In PAD: Appendix B
3	Adaptive Re-Use of the Benedictine Monastery for commercial, office. and/or high density residential	In PAD: Concept Plan and Allowable Uses
4	Building heights allowed to 55'. Step down to Country Club.	In PAD: Concept Plan showing Heights
5	Architectural style compatible with Monastery and neighborhood.	Design Advisory Committee formed and is operating to provide guidance to PAD and design.
6	Density: Allows 250/255 new units. Other rehab units allowed in Monastery along with commercial.	In PAD: Concept Plan showing Uses & Unit counts
7	Form an Advisory Committee during PAD process to insure neighborhood input into design and PAD	Design Advisory Committee formed and is operating to provide guidance to the PAD.
8	Incorporate Terms of October 5, 2018 agreement	See below
Policies In October 5, 2018 Agreement		
1	Building heights allowed to 55'. Step down to 3 stories on Country Club and mostly 4 stories on Anderson. Garage is excluded from step-downs.	In PAD: Concept Plan showing Heights
2	Buffers and setbacks: large on Country Club, large on south and east. Minimal on north and adjacent to NE neighbor.	In PAD: Concept Plan showing Setbacks
3	Density: Allows 250/255 new units (depending on Country Club setback). Other rehab units allowed in Monastery along with commercial.	In PAD: Concept Plan showing Uses & Unit counts
4	Vehicular entries confined to Country Club.	In PAD: Concept Plan showing Vehicular Entries
5	Student Housing is to be prohibited	Group Dwelling (by-the-room rental) is proposed to be a Prohibited Use in the PAD, subject to Federal Fair Housing Laws.
6	Preservation of Benedictine Monastery	See Policy 2.4 item 2 above.
7	Thoughtful Design and Planning	All elements of the PAD and subsequent design.
8	Work together in a collaboartive way to make a better project	Design Advisory Committee formed and is operating to provide guidance to the PAD.

APPENDIX B – HISTORIC LANDMARK

APPENDIX B – HISTORIC LANDMARK NOMINATION

Property Description

Physical Appearance and Characteristics

Located at 800 N. Country Club Road, the former Benedictine Convent and Chapel of Perpetual Adoration (also called Benedictine Sanctuary or Benedictine Monastery and referred hereafter as monastery) today rises prominently above surrounding buildings; clearly distinguishing itself from its neighbors. Even at the time of its construction in 1940, the building was destined to become one of Tucson's iconic landmark properties. Both local and national newspapers, lauded the new "Spanish-Renaissance" style building even before it was built, noting that the building "…will be one of the most beautiful structures ever erected in Tucson" (*Arizona Catholic Herald Annual Review* 1940 and *Arizona Daily Star* 1 December 1940*)* (Figure 1).

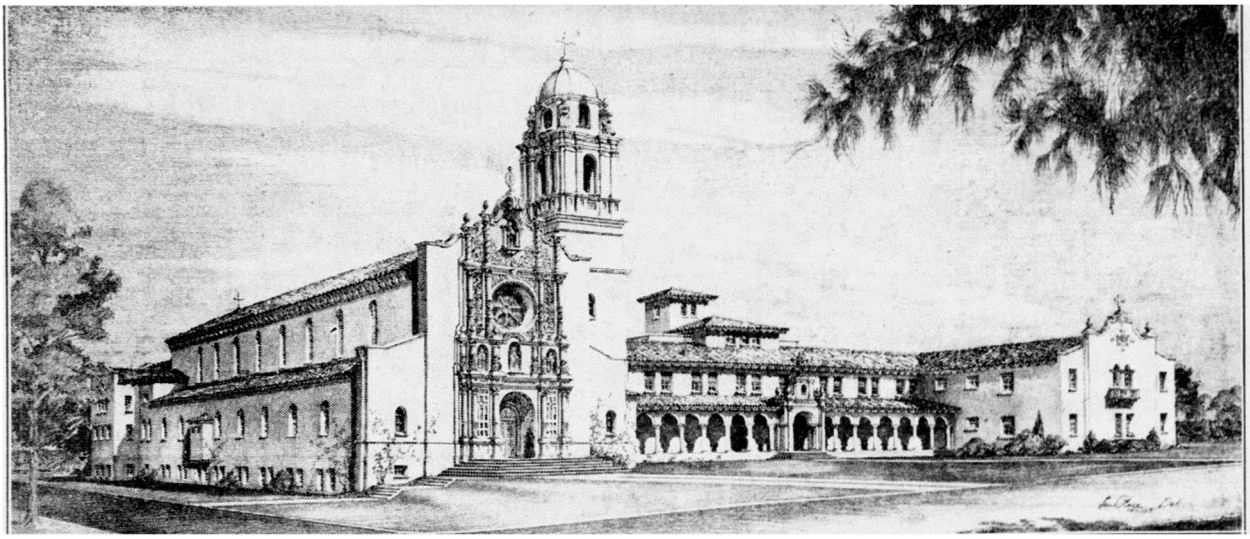

Figure 1. Architectural rendering of the Benedictine Convent and Chapel by architect Roy Place (drawn by Lew Place), as published in the *Arizona Daily Star* in December 1940.

True to the newspapers' predictions, the 73,030 sq. ft. multi-story monastery building designed by architect Roy Place for the order of the Benedictine Sisters of Perpetual Adoration, was an impressive feat of local religious architecture. The footprint of the building was designed in the form of an "E" and constructed of brick, sheathed in cement plaster, and accented with arcades, stone medallions, corbels, columns, pilasters, coping and ornamental iron gates, and a tiled-topped dome with copper finials. The north wing housed the sanctuary and chapel, the central wing housed the refectory, the south wing the living and workrooms, and the former kitchen and utility rooms were located in a second-story deck above the chapel. Interior courtyards were located between the wings and enclosed by and connected with open-air arcades. The interior courtyards and grounds were landscaped with a mix of fruit and deciduous

trees, and date palms, and both native and non-native ornamental plants (*Arizona Daily Star*, 1 December 1940).

Architectural Description

Overview of materials and construction

The monastery building shares some common material and design attributes that are visible on all elevations. The walls are composed of fired-brick sheathed in a light-pink concrete stucco and the foundation is a mix of steel posts and concrete footers within a poured concrete stem wall housing a basement. There are multiple roof forms, the majority of which are hipped with terra cotta tiles and concrete mortar. The other roofs are low-pitched shed-style above arcades or entrances with both terra-cotta tiles and mortar with exposed eaves with carved rafter ends or concrete slabs sheathed in stucco. Most windows too share similar attributes. Standard windows across much of the building include vinyl windows with two casements of four-lites each, as well as arched vinyl windows with three-lite casements, three-lite sliding sash, and five-lite fixed; many of which contain a crackle glazing. Most of the arched windows are located on the north wing, and all windows rest on red tile sills with a moderately-deep recess. A single Palladian window is located on the second story of the south wing facing west and is bordered by a cast-stone balcony (Figure 2 and Appendix A). Lastly, the orientation of the building follows standard design for Christian churches. The sanctuary is sited east-to-west allowing parishioners to pray east towards Jerusalem.

West Elevation

The primary elevation of the monastery faces west onto N. Country Club Road. The façade represents the “backbone” or arm between each axis or wing of the “E”, and is composed of a central, two-story rectangular arm running in a north-south direction flanked by wings protruding to the east. The two visible wing ends are the north wing housing the chapel and the south wing housing the living and work rooms. The central wing is not visible from the façade, but is located on-center and projects eastward from the east elevation of the arm (see Appendix A; Figures 1–4). The central arm is fronted by an arcade that runs the length of the arm and terminates at the intersection with each wing. The arcade is composed of rounded brick arches with cast-stone archivolts supported by stone Corinthian columns, resting on red tile pavers. Inside the arcade against the porch ceiling are a mix of supportive and decorative wood beams and small pendant lights.

Within the center of the arcade is an ornate entrance that acts as the main access to the private quarters (central and south wings) of the monastery. The entrance is framed by a rectangular cast-stone and plaster portico with an entablature inscribed with BENEDICTINE CONVENT in gold leaf lettering. Atop the cornice is a statue of St. Benedict housed in a smaller replica of the same portico capped by a brass cross. The portico frames a richly carved recessed wood-

paneled arched double door with brass hardware and 20 amber glass lites. Between the arch and the horizontal head of the door is a hand-carved medallion with relief lettering spelling the Latin word PAX accompanied by the image of a cross. Roughly in the center of the roofline are two boxy, tower-like rooms that protrude from the roof of the adjoining central wing and provide access to the roof deck. The connecting wing has a gable roof and the two rooms have hipped roofs; all with terra-cotta tile.

At the southwest end of the façade, the south wing is faced with a tiered artificial front. The front contains an elaborate scalloped parapet that rises well above the adjoining partially hipped roofline and is edged in cast-stone coping. At the apex of the parapet is a stone cross above a cast-stone shield flanked by floral motifs and bookended by geometric ornaments. Directly below and approximately on-center of the parapet is a rounded, cast-stone oxeye-style decoration with floral patterns incised into the surrounding stucco. Further down the façade (at the level of the second floor) is a Palladian window with an adjoining cast-stone balcony carved into decorative panels and supported by stone brackets.

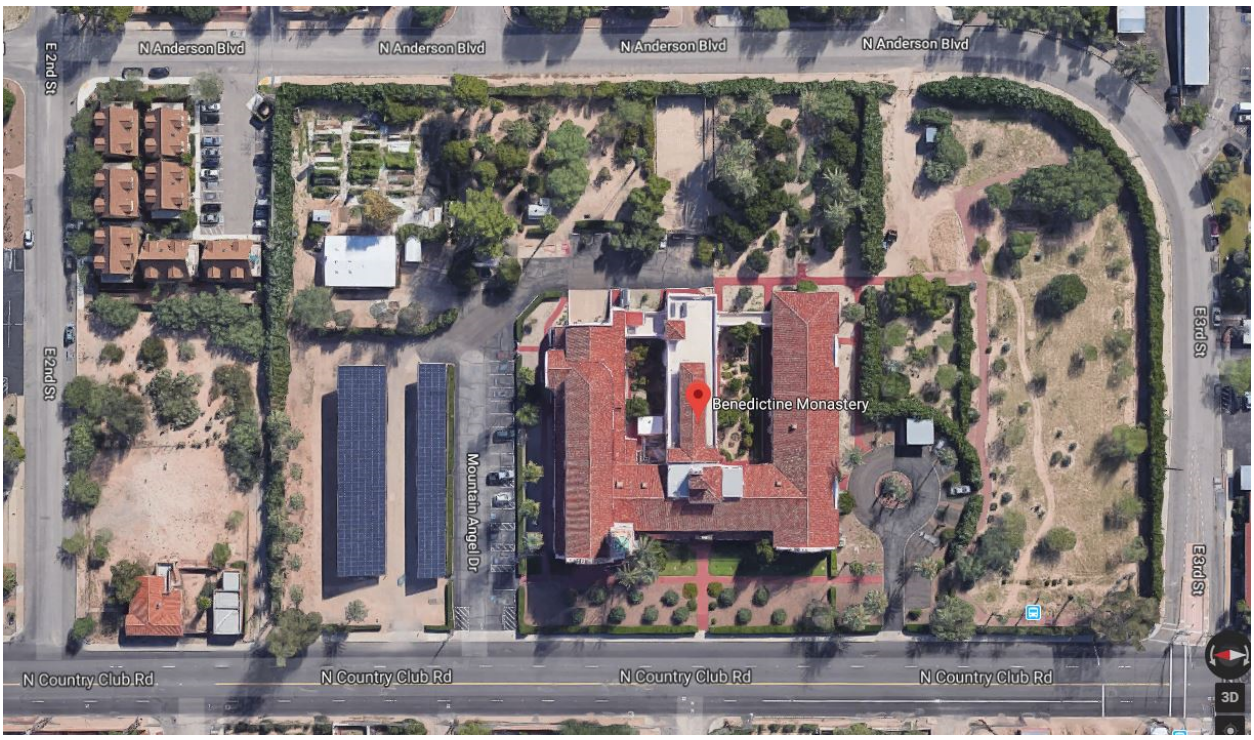

Figure 2. Google Earth image of the monastery in plan view (east is up [2018]).

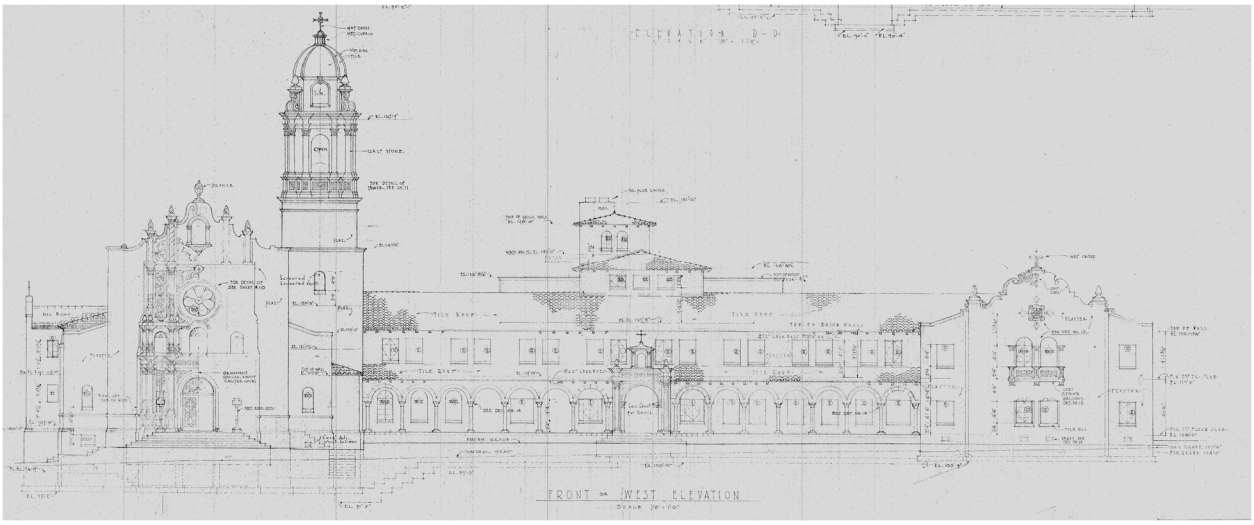

Figure 3. Reduced copy of the architectural rendering of the primary façade or west elevation of the Benedictine Convent and Chapel, 1939.

Figure 4. The west elevation or primary façade of the Benedictine Convent and Chapel, facing northeast (2019).

At the opposite end of the west elevation and fronting the north wing is the entrance to the chapel and sanctuary (see Figures 1–4). The sanctuary entry and associated bell tower are the

tallest and the most ornate portions of the entire facility. The raised entrance is composed of red tiles flanked by brass lanterns and railings (since painted) leading to an enriched door surround composed of cast-stone, framing a hand-carved wood-paneled double door. The door features wood handles, brass trim, cruciform shapes and a tympanum with BENEDICTINE SANCTUARY OF PERPETUAL ADORATION in relief. Inside the arched doorway are carved floral motifs, flanked by quasi- Corinthian-ionic pilasters, supporting an entablature housing three tabernacles for religious statuary, around which the entry surround continues to curve upwards around a central rose window, a fourth tabernacle, and culminating in an arched parapet (Figure 5).

At the southwest corner of the sanctuary entry is a square domed-tower. The tower is tiered; cresting to a multi-colored ceramic-tiled dome edged in copper ribs with a copper cupola and cross, and arched window openings. To the left of the entrance steps is an engraved cornerstone quarried from the Santa Rita Mountains. The walls are edged by hedge rows, with wall corners framed by palms and deciduous trees. Remnants of a grassy lawn also stretch across the façade.

North Elevation

The north elevation is composed entirely of the north wing, which is oriented east-to-west and houses the sanctuary, chapel, and associated rooms. The most prominent feature of the north wing is the rounded apse at the east end of the sanctuary and the clerestory that rises above the level of the aisle roofs located on either side of the sanctuary. The sanctuary has a hipped roof hidden below the parapet and aisle shed roofs; all sheathed in terra cotta. Other features include arcaded coping below the clearstory roofline, and a confessional room jutting from the wall near the northeastern half of the elevation. The confessional room is shallow, supported by concrete corbels, and topped by a hipped terra-cotta tile roof. A single raised entry is located near the northeast corner and marked by two rounded balusters located within an opening of the adjacent hedge row planted along the entire length of the north elevation. In addition, a protruding section of the north elevation mimics details of the southwest corner of the west elevation, including triptych style windows, a stone cross on the apex of the parapet, decorative wall treatments including a square cast-stone vent highlighted by incised stucco floral patterns, as well as a rounded false window, also of cast-stone (Figures 6 and 7; see Appendix A). The basement level of the building rises above grade and square windows with contemporary security bars are visible along the entire length of the north elevation.

Figure 5. Entrance to the Benedictine Convent and Chapel, facing southeast (2019).

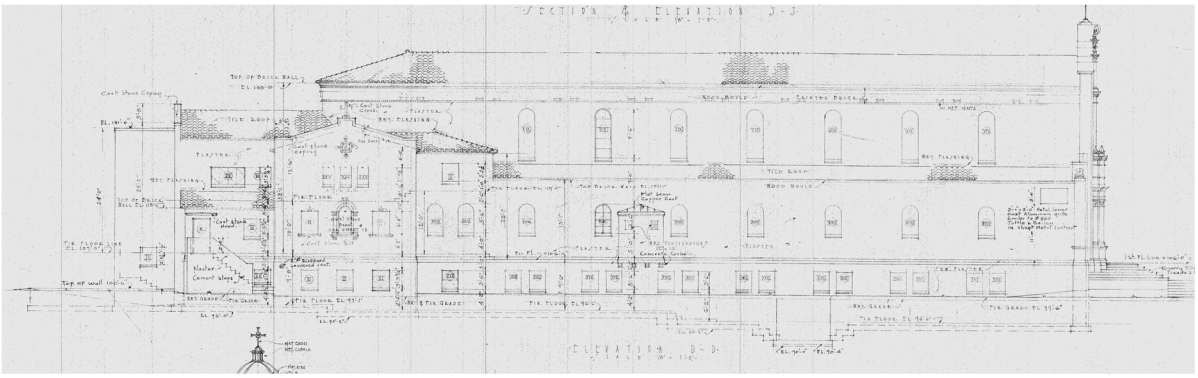

Figure 6. Reduced copy of the architectural rendering of the north elevation of the Benedictine Convent and Chapel, 1939.

Figure 7. The north elevation of the Benedictine Convent and Chapel, facing southwest (2019).

South Elevation

The south elevation is the more streamlined and less ornate of the entire building. The elevation is characterized by a long, two-story, rectangular wing (south wing) with a partially hipped roof sheathed in terra-cotta tiles with two entrances located near the east and west ends of the wing. The entrances are demarcated by a slight break (in the otherwise unbroken plane) in the wall whereby the roofline is punctuated by two gable roof forms rising about the edge of the eaves and outlined in terra-cotta tiles (Figures 8 and 9). Entrances are utilitarian in appearance and protected by stone hoods with low-sloped entries composed of poured concrete and painted red to match other elevations. The door near the southwest end of the wing is a wood-framed French door, and the other entry is a single wood panel door, with both protected by security screens. By-in-large the windows are evenly spaced across each story. Basement vents are visible across the length of the foundation and consist of breezeblock. Bougainvillea, orange trees, and date palms are also located against the building.

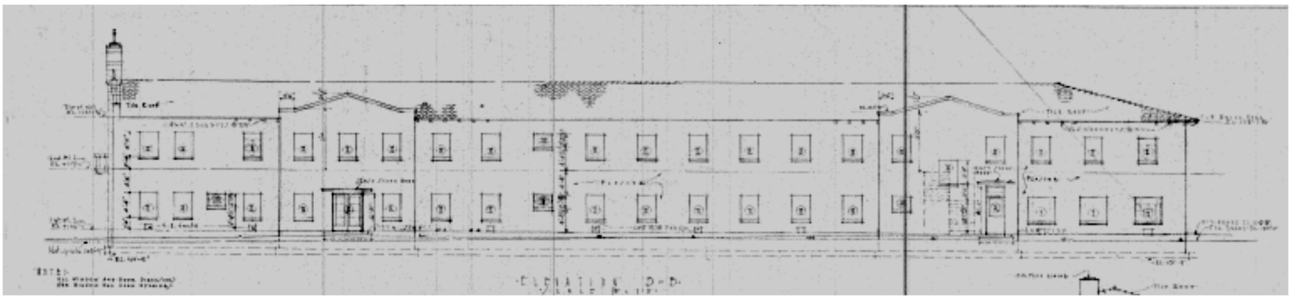

Figure 8. Reduced copy of the architectural rendering of the south elevation of the Benedictine Convent and Chapel, 1939.

Figure 9. The south elevation of the Benedictine Convent and Chapel, facing northeast (2019).

East Elevation

The primary decorative elements of the east elevation are the brick and cast-stone arcades that connect each of the projecting arms of the "E" to enclose the entire facility and soften an otherwise utilitarian appearance (Figures 10 and 11). Within the arches of the arcade are decorative iron screens that protect the courtyards from intruders. Immediately above the arcades are catwalks offering access between the second floors of each wing and are edged in chain-link fencing. The three "ends" of each wing are slightly staggered and each has a different front. The southeast or south wing has a boxy end with a hipped roof form and evenly-spaced windows, while the central wing has a low or nearly flat roof fronted by a raised loading dock with three doors protected by concrete slab overhangs, above which is a visible roof deck ramada. The face of the north wing has multiple projecting rooms and a mix of gable and shed rooflines with an uneven distribution of window and door openings. Decorative vents composed of breezeblock are located across much of the east elevation, and a sloped entry to the basement level is via roll-up garage doors. Vegetation immediately against the building is relegated to the corners, courtyard, and two small planting beds, however the remains of an orchard, a tennis court, shrine, and other outbuildings are located immediately east of the building.

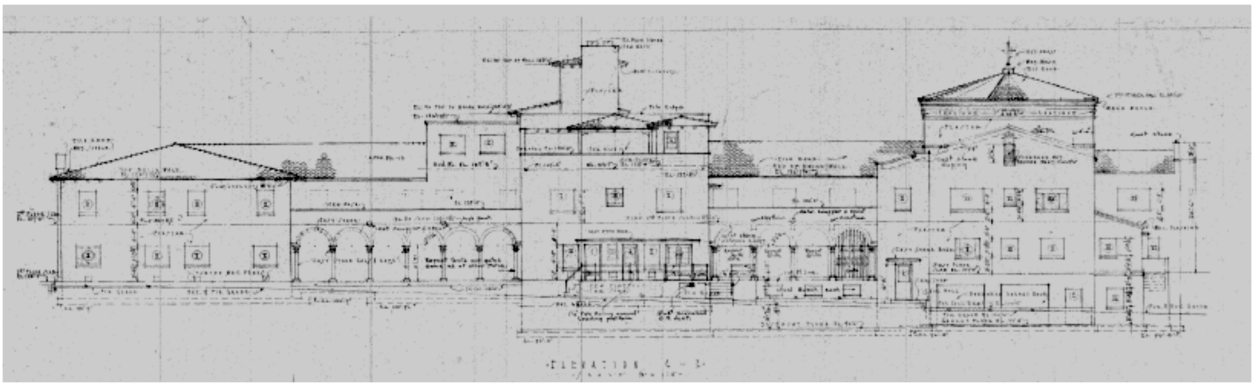

Figure 10. Reduced copy of the architectural rendering of the east elevation of the Benedictine Convent and Chapel, 1939.

Figure 11. The east elevation of the Benedictine Convent and Chapel, facing southwest (2019).

Interior Description

The monastery is composed of a basement and three stories. With the exception of the sanctuary, vestry, and receiving rooms on the first floor, the rest of the building presents a largely institutional, dormitory-style interior appearance. Starting with the third floor, the interior is composed of a laundry facility and an open-air roof deck with few distinguishing features present. The second floor is characterized by long, rectangular dormitory-style hallways housing individual rooms for each of the Sisters. Each room is square in size, contains a small corner sink and built-in shelves and wardrobe. The hallways are a white plaster with concrete and linoleum floors, and moderately low ceilings, with access to communal bathrooms

with colored ceramic tiles, steel-paneled bathroom stalls, and ceramic sinks. The second floor however, is not without decorative finishes. Finishes include rounded hallway entries with integrated corbels or brackets, and custom-made millwork including built-in wardrobes and shelves, telephone niches, and original pendant lighting.

The central and south wings of the first floor contain a similar configuration of small rooms and long unadorned hallways with original lighting, arched hallways openings, wall niches, custom millwork in each room, and communal bathrooms. On the other hand, the entirety of the north wing, the entrance, hallway, and flanking rooms to the central wing contain a number of custom-made features; features that distinguish themselves from the rest of the building.

Upon entry into the central wing is a two-roomed anti-chamber (Figure 12). The first room contains a stained concrete floor composed of an inlaid lamp motif encircled in the Latin phrase, ORARE ET LABORARE. Immediately to the east is a columned opening abutting two pony walls that look into the hallway. On both sides of the anti-chamber are small rectangular rooms with custom millwork cabinets, telephone niches, recessed shelving, and original pendant lighting. Farther down the hallway to the south is a small kitchen with a mix of steel and wood cabinets, Saltillo tile backsplashes, and a dining room with a wall-mounted and collapsible dining table hidden in the corner. Also, to the south is a receiving room with cove ceilings and original pendant lighting. The north hallway leading to the sanctuary contains decorative wall niches, hand-carved doors, and hallways with decorative brackets near the juncture between wall and ceiling.

Figure 12. Interior of anti-chamber into the central wing, facing east (2019).

The sanctuary and chapel that encompass the majority of the north wing are highly ornamental, and upon entry into the space—either from the narthex near the exterior entrance or from the interior hallway—the visitor is greeted with a soaring groined ceiling with multiple brick barrel vaults lined with cast-stone ribs that meet at decorative medallions across the length of the ceiling. The arches are supported by boxy columns with Corinthian capitals that delineate spaces between nave and aisle (Figure 13). Directly above the columns are floral art deco inspired glass and metal lanterns, and between each vault at the clearstory level are arched windows. The south wall of the aisle is punctuated by custom wood doors and smaller arched windows near the apse. On the opposite aisle, the north wall is lined with arched windows and a small wood-framed confessional booth. The center of the nave is carpeted and lined with wood pews that face the altar. The altar is located directly in front of the apse, and is composed of a green, pink, and white marble stepped platform with a scalloped canopy trimmed in gold leaf. The altar area is highlighted in pilasters circling the apse, edged in gold leaf and pink marble with small ornamental railings. To the north and south of the altar are transepts that provide access to the sacristy where vestments are stored in custom-made flat shelving drawers.

Figure 13. Interior of sanctuary facing the altar, facing east (2019).

Landscape

The monastery grounds consist of public (N. Country Club Road frontage [Figure 14]), semi-private (north and south elevations and perimeter), and private zones (courtyards). The landscaped grounds in each of the three zones contain a number of tree species, including fruit-bearing trees as well as shade and ornamental tree species. Palm types include *Phoenix dactylifera* (Date Palm), *Brahea armata* (Mexican Blue Palm), *Phoenix roebelenii* (Pygmy Date

Palm), *Washingtonia robusta* (Mexican Fan Palm), and *Phoenix canariensis* (Canary Island Date Palm). Native, fruit-bearing, desert-adapted, and non-native tree species include *Parkinsonia x 'Desert Museum'* (Desert Museum Palo Verde), *Prosopis sp.* (Mesquite varieties), *Olneya tesota* (Ironwood), *Persea Americana* (Avocado Tree), *Citrus sinensis 'Valencia'* (Valencia Orange), *Citrus x paradise* (Grapefruit Tree), *Punica granatum* (Pomegranate), *Olea europaea* (Swan Hill Olive), *Pistacia chinensis* (Chinese Pistache), other trees include Lime, Arizona Ash, Pine, Eucalyptus, and what is thought to be a Plumeria Tree.

Cactus and accent material are used throughout much of the site, most notably within the semi-private zone to the south. Many of these species, however, were not historically associated with the site, and likely added in later years in an attempt to reduce water consumption. Cactus and accent plant species include *Carnegia gigantea* (Saguaro), *Fouqueria splendens* (Ocotillo), *Daylirion wheeleri* (Desert Spoon), *Hesperaloe parvifolia* (Red Yucca), *Nolina microcarpa* (Bear Grass), *Opuntia lindheimeri* (Cow's Tongue Prickly Pear), *Opuntia santa-rita* (Purple Prickly Pear), *Agave Americana* (Century Plant), *Opuntia acanthocarpa* (Buckhorn Cholla), *Opuntia engelmannii* (Engelmann's Prickly Pear), *Ferocactus wislizenii* (Fishook Barrel).

Figure 14. Landscape grounds along west façade, facing northeast (2019).

Within the three zones, landscape design principals have been applied to varying degrees. The public zone fronting N. Country Club Road includes the development of foreground or introduction-space. Historically, that consisted of a green lawn extending from foundation plantings outward towards N. Country Club Road. The green lawn would have allowed for gatherings or other events too large to be accommodated in the private spaces either within the monastery or elsewhere on the grounds. Typical of the time period, a manicured front lawn was

not only designed to welcome visitors, but the manner in which it was cared for was a reflection of the residents within. Beyond the foreground, a traditional technique of providing trees, to bring the scale of a building down to a more pedestrian level/scale, was applied. This was accomplished by introducing date palms, fan palms, juniper, and other tree species to help bridge the scale of the building to the level of the visitor or pedestrian. Much of the primary (west-facing) façade, from the bell tower to the south, was left open or free of excessive vegetation; and by doing so, the ornate arcade is left exposed to the roadway. This exposure, would have created a pleasing transition from outdoor space, to transitional (covered yet open) space, to interior space. Further, allowing the arcade to remain open conveys a sense of openness and welcoming, and provided the opportunity for pedestrians to observe activity within the monastery grounds, thereby adding life and personality to an otherwise closed-off and private facility.

Another traditional landscape device was employed along the façade—a low hedge—for screening the intersection between foundation and grade (Figure 15). Vegetation however, was purposefully kept away from the entrance around the sanctuary. The openness was a means to provide clear and unobstructed views of and emphasis on the sanctuary and chapel.

Figure 15. Hedge along west-facing arcade, facing northeast (2019).

The two private zones include the north and south courtyards. The north courtyard has been developed as an orchard with a variety of citrus trees. The courtyard is enclosed on the north, west, and south sides, whereas the east side is bounded by an arcade with wrought iron fence

panels recessed into the open arcade. The south courtyard is similar in layout to the north courtyard and is organized with a traditional orchid layout. Tree types include a variety of citrus trees and one avocado tree. The avocado tree is the largest tree in this courtyard and acts as a focal point of the space. The south edge of this courtyard includes a formal, open air walkway that is defined by a series of balustrade lining the north edge of this walk with a concrete slab bench (Figure 16).

The citrus orchard, located on the east side of the grounds in the semi-private zone and outside the public viewshed, was originally planted with approximately 40 orange trees (the variety is thought to be Valencia) (Mauer and Bradley 1998) Over time, some trees have been lost due to poor maintenance practices, age, and gradual decline in health. It is estimated that two-thirds of the trees currently remain in place and appear to be in fair-to-poor condition (Barrett 2018). The lower branches are painted white to protect them from sunburn and while it appears that the orchard is being regularly irrigated, the fruit is no longer being harvested (Figure 17).

Figure 16. Walkway within the south courtyard, facing east-northeast (2019).

Figure 17. Orange orchard, facing northeast (2019).

In general, standard landscape design principles have been incorporated on the monastery grounds, such as punctuating building corners with trees, utilizing a grid-pattern for the orchards in the semi-private zones, and implementing lower-story plantings to help direct foot-traffic and to line walkways. Additionally, the use of cactus or accent material has been utilized at key locations throughout the facility, both as an aesthetic feature to help define unique areas on the grounds (such as a small reflection garden or shrine), but also as a symbolic transition to a more sustainable landscape. Several years before the Sister's made the decision to sell the facility, they were actively trying to make the facility more sustainable, including the landscape.

Overall, the original landscape plant palette and associated layout is typical of mid-20th century landscape design principles practiced in the desert southwest. The presence of a front lawn, foundation plantings, hedges, and corner trees emphasize the period in which it was designed. During the 1940s, the concept of water conservation or utilizing low-water use plant material was not a major component of landscape design, and since at least 2005, non-native plants were being actively removed or replaced with drought tolerant plant materials.

Setting

At the time of construction, the monastery was located on the eastern edge of Tucson's suburban periphery. With the exception of a handful of houses immediately west and northwest, the building stood as a prominent feature on the horizon (Figures 18 and 19). Following the post-World War II housing boom, the Sam Hughes Neighborhood to the west expanded to N. Country Club Road immediately adjacent to the monastery, and growth along Speedway Boulevard and 6th Street, ringed the once vacant land around it. Today, the

monastery sits among dense suburban and commercial development, and is bounded by paved streets, parking lots, and hedgerows. The once rural feel of the property has been altered, and modern features such as solar arrays and paved parking have taken its place. In spite of these changes over time, the building continues to retain its original footprint and much of its original landscaping.

Figure 18. Overview of monastery facing east, ca. 1940. Image courtesy of Arizona Historical Society (AHS No. 75072).

Figure 19. Overview of monastery facing northeast, ca. 1940. Image courtesy of Arizona Historical Society (AHS No. 75073).

Alterations

Very few alterations to the monastery have taken place over its history, with most relegated to interior repairs, energy efficient modernizations, and exterior landscaping. Beginning in the 1990s and extending through 2012, sinks were added to each of the sister's private quarters, electrical and HVAC were upgraded, a new irrigation well was added and a new fire suppression system was installed. The chapel too has been repainted several times over the years (personal communication with Poster Frost Mirto 2019). The most noteworthy changes to the building occurred more recently. In 2008, two solar panels were installed on the roof and a solar array was located in the parking lot north of the building. Between 2002 and 2004, 200 windows, excluding the rose window, were replaced with energy efficient double-paned windows (*Arizona Daily Star,* 13 October 2008). The original windows were a mix of 19 different varieties of steel sash, fixed arched windows, and steel casement windows. The replacement windows are a brushed brown metal to mimic the original steel, and follow the original window schedule as to number of lites, mullions, and reveal.

The most significant alterations to the property are related to the landscape. Around 1960, a parking lot was paved directly north and adjacent to the north wing, an additional overflow parking lot was graded, and by 2008, the graded lot contained solar panels. Over its developmental history, the vegetation around the property has matured and leafed out, but in

other areas, vegetation has been either removed or replaced. For example, the grassy lawn located along the curb fronting N. Country Club Road was removed and replaced with decomposed granite and shrubs. Within the past 5 years others have been replaced with drought tolerant plants, most of which are currently dormant. In addition, interior courtyard spaces have been revegetated with larger shrubs, perennials, and trees, and many of the original orange trees planted when the facility opened have since been cut down due to age or disease or left in a dormant state. There is not sufficient documentation to correctly identify the ages of existing vegetation, however during field documentation, a licensed arborist confirmed that none of the native species on site were of historic age. Based on a handful of historic photographs, only the grassy lawn, date palms, orange trees, and hedgerow along the property line to the east were part of the original construction.

Statement of Significance

Chronology (1935-2018) [Period of Significance 1940]

The Tucson Benedictine Convent and Chapel of Perpetual Adoration was established to house a congregation of Sisters that came from the Benedictine Convent of Perpetual Adoration in Clyde, Missouri. The Sisters were part of a small Catholic religious order that followed the Rule of St. Benedict, and trace their roots to the 1857 Swiss monastery of Maria-Rickenbach (available at: https://benedictinesisters.org/, accessed January 2019). In 1935, Reverend Bishop Daniel Gerke sent a formal invitation to the Clyde monastery inviting the Sisters to Tucson. Between October and November of 1935, 22 Sisters moved to Tucson from Missouri. Following the death of prominent Tucson businessman Albert Seinfeld, his mansion at 300 N. Main Street (designed by renowned architect Henry Trost) was sold to the Sisters and converted into a convent. For the next five years, the Benedictine Sisters lived in the former Steinfeld Mansion, but the building was not large enough to accommodate their needs, and they requested the services of an architect to design a new residence (*Arizona Daily Star*, 7 November 1935). In 1936, they contracted architect Josias Joesler to complete a concept for an addition to the Seinfeld Mansion. His concept was never realized however, and in 1939 the Sisters acquired the N. Country Club Road site, hiring architect Roy Place to develop a new concept (available at: https://preservetucson.org/, accessed January 11, 2019).

Construction began in November 1939, and in the spring of the following year, Reverend Bishop Gerke dedicated the cornerstone as it was laid (Figures 18–20). The stone, quarried from the Santa Rita Mountains, was inscribed in Latin, translating to “To the Eucharistic King of Ages, Prince of Peace, this Temple of Perpetual Adoration is dedicated.” In early December of 1940, the Sisters began moving into their new home and held several open houses of the new facility before all but the chapel and sanctuary were closed to the public (*Arizona Daily Star*, 7 December 1940 and 8 December 1940).

Figure 18. Groundbreaking ceremony with Bishop Daniel Gerke and Mother Carmelita (far right), 1939. Image courtesy of Arizona Historical Society (AHS No. 7550).

Figure 19. Laying of the cornerstone, 1940. Image courtesy of Sister Joan to Poster Frost Mirto (2019).

Figure 20. Laying of the cornerstone by Bishop Daniel Gerke, April 23, 1940. Image courtesy of Arizona Historical Society (AHS No. 7874).

The blessing of the building was held on December 15, 1940 and the first mass was held on December 16, 1940. Following the inaugural service, the chapel was formally opened to the public. The only impediment to officially dedicating the building was the arrival of the marble altar for the chapel. It was to arrive from Italy, but with World War II raging in Europe, the dedication ceremony would wait several years. In the interim, the altar from the Steinfeld Mansion was relocated to the new monastery. On the evening of December 8th, 1940, the monastery was closed, and no one not of the Benedictine Order was permitted beyond the Chapel and Sanctuary *(Arizona Daily Star*, 8 December 1940). The public services offered to the community included an open chapel and sanctuary for "adoration and worship" between 5 am and 8:30 pm daily, except Sundays when the public facilities opened at 7 am. Holy mass was provided daily at 6 am, and later moved to 5 pm.

During their tenure at the monastery, the Sisters did not receive financial support of the local diocese, and instead supported themselves by making and selling altar bread to churches throughout the Southwest —including selling gluten-free communion wafers—harvesting and selling dates and oranges, and selling various other handy-crafts at a small gift shop on the premises. In addition to daily prayer and making of altar bread, the Sisters occupied their time with bookkeeping, kitchen supervision and meal preparation, general cleaning, groundskeeping, caring for vestments, and flower arrangements for the altar (Brown 1974). By the late 1960s, many of the previous rules assigned to the order, including vows of silence and restrictions on visitors were relaxed (Shay 1975).

In the 1990s, the Sisters no longer produced altar bread as their primary source of income, with the task taken over by the Clyde Monastery. By 2010, 26 Benedictine Sisters were residing at the monastery. In the last several years, their primary means of income came from production of vestments and other handmade items in the gift shop. The sale of dates and oranges from the orchards also dropped off, as the trees were nearing the end of their useful life, and steps were being taken to conserve energy and water, therefore new trees were not planted to replace them (*Arizona Daily Star*, 13 October 2008, and 22 November 2010; personal communication between Sister Joan and Corky Poster). On February 26, 2018 the decision was made to close the monastery. All of the Sisters relocated to the motherhouse in Clyde, Missouri. With the closing of the Tucson monastery, the Missouri order remains the only monastery of this order still in operation within the United States (available at: http://www.tucsonmonastery.com/, accessed January 14, 2019).

Architect

Roy Place was born December 17, 1887 in San Diego, California to Harry and Stella Place. Place had one sister, Irene Place Choate. In 1906, Place graduated from high school and moved to Sacramento where he held an apprenticeship in architecture. During the next decade, Place worked as an architect in California and Chicago, met and married Wynne Crowe, and became the father of two sons, Lew and Meade (AHS n.d.). During his time in California, Place worked as an architect for Shepley, Rutan & Coolidge Architects of Boston, Massachusetts and was an affiliate of the California State Engineering Department, where he was a designer and a supervisory architect on several state buildings, including acting as the architect-inspector for the State Insane Asylum in Patton, California (Cooper and Place 1989). In 1914, the California architectural firm of L.T. Bristow and John B. Lyman was awarded the architectural contract for the design of the University of Arizona's Mines and Engineering building. Lyman, a close friend and colleague of Places', invited him to come to Tucson to collaborate on the project. During the first year of the University of Arizona project Lyman and Place formed their own architectural offices in an old adobe building on the east side of Stone Avenue between Broadway Boulevard and Congress Street. By 1916, Place had made Tucson his permanent home. Between 1916 and 1924, Lyman and Place collaborated on the design of 39 buildings on the University of Arizona campus including, Mines and Engineering (1916), Mechanical Arts (1918), Pyro Metallurgy (1919), Maricopa Hall (1920), Cochise Hall (1921), Steward Observatory (1923), and the Main Library ([1927] now Arizona State Museum).

In 1924, Lyman returned to San Diego to take over as president of his father-in-law's department store. Place remained in Tucson, opening his new office on the second floor of the Steinfeld Grocery Store at the northwest corner of Pennington Street and Stone Avenue. Before Place took up residence in the building, it had once been the local post office and the former photography studio of Henry Buehman, who complied a prolific photographic collection chronicling Tucson's history. Place hired former draftsman to Henry Trost, James McMillan, as

his chief architect, who, under Place's direction would design a number of buildings on the University of Arizona's campus (Cooper and Place 1989).

By the end of the 1920s, Place was one of the most prolific commercial architects working in Tucson. Between 1924 and 1940, Place designed some of the region's most recognizable buildings, including the Pioneer Hotel, Benedictine Sanctuary (Figure 21), Mansfeld Junior High School, Arizona School for the Deaf and Blind, Veteran's Administrative Hospital, Plaza Theater, Tucson High School, Corbett Lumber and Hardware Store, Bear Down Gym, Yuma Hall, Gila Hall, East Stadium, and Dormitory, the U.S. Post Office on Fourth Avenue, Woolworths, and portions of the Tucson Medical Center campus. Outside of Tucson he designed the Cochise County Courthouse in Bisbee and the U.S. Post Office in Yuma.

While his residential portfolio was smaller, Place had great influence over the subdivision design of Colonia Solana, acting as one of four architects overseeing the layout of the subdivision, as well as designing its first model home and creating an elegant Spanish Colonial sheathing for the El Con Water Tower (AHS n.d.).

Figure 21. Roy Place (right) and Reverence Gerke (left) at the monastery cornerstone ceremony, 1940. Image courtesy of Sister Joan to Poster Frost Mirto (2019).

In 1940, prior to joining his father's architectural firm, Lew Place had worked for his father as an inspector and clerk. He had also apprenticed under James McMillan prior to acquiring his architect's license. With the expansion of the firm, the office moved to the corner of Stone Avenue and Pennington Street; setting up shop in the very building Place designed for

Montgomery Ward in 1929. The firm's name changed to Place and Place and Lew retained the name after his father's death in 1950.

In addition to his architectural portfolio, Roy Place was active in the local Tucson community, and was affiliated with numerous fraternal and philanthropic groups, including Tucson Lodge No.4, Arizona Consistory No.1, and El Zaribah Temple. He was past president of the Tucson Rotary Club and a member of the Old Pueblo Club, El Rio Golf and Country Club, past president of the Engineer Club, and the first president of the Arizona chapter of the American Institute of Architects (Cooper and Place 1989). In later years, as Lew took over more responsibility at the firm, Roy turned his interest towards ranching, and acquired the Bear Valley Ranch in Santa Cruz County and a farm in partnership with his sons in Amado. Roy Place died in Tucson on September 22, 1950. He was 62 years of age.

Landscape

As construction of the monastery was completed, the grounds were cleaned of construction debris and rough graded. On-site concrete sidewalks, curbs or other hardscape areas were completed prior to the start of landscape operations. The original plant material was purchased and installed from Reid's Rancho Palos Nurseries (Reid's). Based on historic photographs dating to the 1940s, the lawn and date palms along N. Country Club Road were the first landscape elements to be installed. The date palms (*Phoenix dactylifera*) adjacent to the main entrance, as well as the vehicular turn-around to the south, match early photographs of the monastery and appear to be of the original installation. Archival photographs indicate that the date palms were originally all planted with an 8' (+/-) diameter concrete ring around the base of each tree; most likely these were installed as a means of preventing the migration of turf grass towards the base of the trunk (Figure 22). Again, based on historical photographs, the juniper hedges, trees, and other low-lying shrubs were not planted as part of the original landscape and were later, albeit historical, additions. The exact date of their installation is unknown.

It is also unknown to what extent, if any, Roy Place had in the design of the landscape. It is presumed Reid's most likely provided the landscape design and layout. Besides trees, shrubs, and vines, Reid's advertised "Landscape Services" in the early 1940's, which may have included design services (*Tucson Daily Citizen*, 30 July 1940 [Figure 23]).

Figure 22. West façade with original date palms and lawn, ca. 1940s. Image courtesy of Arizona Historical Society (AHS No.75076)

NURSERIES 72

REID'S
Rancho Palos Verdes
NURSERIES
TREES—SHRUBS—VINES
Largest Stock—Greatest Variety
Clearing—Leveling—Planting
Complete Property Development
and
Landscape Service.

BERMUDA SEED & FERTILIZERS
DESERT GARDENS

Figure 23. Advertisement for Reid's Rancho Palos Verdes Nurseries. *Tucson Citizen* 30 July 1940.

National Register of Historic Places Status

In 1994, the Sam Hughes Neighborhood Historic District was listed in the National Register of Historic Places (NRHP) and included 588 contributing resources within a period of significance dating from 1918 to 1953 (Rumsey 1994, Appendix B). In 2000, the district boundaries and resource count were amended to include additional properties increasing the district's total resource count to 615 contributing properties (Rumsey 2000). During the original nomination, the Benedictine Monastery was identified as a contributing resource to the district, although the description within the nomination document is misleading. It was identified as a non-contiguous contributing property outside the district's boundaries, which today would not be acceptable for NRHP listing as a contributing property (contributing properties must be within the district's boundaries). Further, no Arizona State Historic Property Inventory Form (HPIF) was completed at the time of designation (personal communication with Eric Vondy, Arizona State Historic Preservation Office on January 11, 2019). A newly completed HPIF and associated Pima County Assessor's information is included in this City of Tucson Historic Landmark application package (Appendixes C and D). Irrespective of whether the property was correctly identified and attributed to the district as a contributing resource, it is undoubtedly individually eligible to the NRHP. It clearly expresses individual distinction apart from the Sam Hughes Neighborhood Historic District, and readily conveys integrity of location, feeling, materials, design, workmanship, and association. Setting has changed multiple times over the years, and its integrity has been compromised.

NRHP Eligibility Criteria

The building is currently listed in the NRHP under eligibility Criterion C, based on its association with architect Roy Place and as an expression of monumental religious architecture. The Period of Significance identified in the Sam Hughes Neighborhood district nomination is 1918-1953, but for the purposes of this application, an appropriate Period of Significance is 1940 which signifies the date of construction.

Under guidelines established by the City of Tucson for this landmark application, it is essential that the monastery possess NRHP integrity for designation as a local landmark, meaning that the property retains its essential form and construction and continues to exist in the setting it was intended to occupy. Per these requirements, it is essential that the building retain most-if not-all, of the following aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The building possesses integrity of location, feeling, design, materials, workmanship, and association. It continues to reside it its original location, retains nearly all of its original design and materials, and readily conveys its feeling and association with the Catholic Church and Roy Place's architectural imprint.

Future Treatment and Design Guidelines

At the time of the monastery's construction in 1940, Spanish Colonial Revival was reaching the end of its popularity, especially highly ornate designs on a monumental scale. As a result, the monastery stands as one of the last stylistic examples of Spanish Colonial Revival in Tucson. Moreover, the building is the last of architect Roy Place's designs that readily conveys its association with him. Place's favored aesthetic medium during the height of his career was Spanish Colonial Revival, and the City's iconic and widely recognizable civic, educational, and religious buildings of this style were all designed by Place. Because of the singularity of the monastery, it is essential that the future rehabilitation of the building preserve the property and its character-defining features that give the building its historic significance. The following provides guidance for preservation of the building's characteristic features, and refers only to the preservation and protection of the designated boundaries of this historic landmark application package (Appendix E). The boundaries of the landmark include the footprint of the monastery and a 40, 067 sq. ft. buffer around the perimeter of the building for a total of 77,762 sq. ft. (see Appendix E).

The Design Guidelines for the Benedictine Monastery are based on the *Secretary of the Interior Standards for the Treatment of Historic Properties* (Standards). These Standards outline four preferred treatment methods: (1) Preservation, (2) Rehabilitation, (3) Restoration, and (4) Reconstruction (National Park Service 2017). Each of the four treatment methods include ten standards that help guide planning and treatment of historic buildings. The Standards and their associated guidelines can be applied to all types of historic properties, and they include treatment standards for a property's exterior and interior; a property's landscape features, site, environment, and new construction. The preservation approach outlined below is one of *preservation* of the exterior only and *rehabilitation* of the interior.

<u>Using Preservation as a treatment option entails adherence to the following 8 numbered standards:</u>

1. A property will be used as it was historically or be given a new uses that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

4. Changes to a property that have acquired significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken (United States Government 1995).

<u>Using Rehabilitation as a treatment option entails adherence to the following 10 numbered standards:</u>

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Specific treatment objectives for the property include:

I: Preserve the location of the building by not altering the footprint (through either additions or reductions in sq. ft.), the façade, or immediately adjacent sidewalks or plantings (see Figure 2 for site layout and Appendix E for boundaries). Retain hedgerows, date palms, and junipers immediately adjacent to the building's footprint. In the event of damage or disease of vegetative materials, replacement plants may be any of the following: like-for-like replacement or plants with similar color, texture, and shape. As per 3B on Standards, grass may convert to paving.

II: The overall E-shaped floorplan, height, and exterior materials will be preserved. All decorative features (e.g. cast stone, copper finials, brass railings, ornamental iron, lantern and pendant lighting, brass and wood door fixtures, hardware, tiles [dome and roof], and statuary as they exist at present on the exterior of the building will be preserved and retained over time. Preserve representative samples of interior millwork, such as doors and built-in shelving, and structural wall features (Figures 24–26). In the case of repair or damage, all aforementioned features will be rehabilitated or restored as necessary.

Retain original landscaping components from early 1940s located immediately adjacent to building, and portions of the frontage grounds (includes lawn [except as noted in Standard 3B], juniper, date palms, and hedgerow). Additionally, preserve in-place representative plant species from within the two courtyards (both courtyards are extremely overgrown and unusable at present). Replace only as necessary with identical plant materials or plants that mimic the original planting in color, texture, and shape.

Plant material and trees located outside the HL boundaries will be grafted and/or transplanted to Mission Garden located at 946 W. Mission Lane (*Arizona Daily Star*, 15 August 2018).

III: Preserve and retain all exterior materials used for walls, roofing, foundation, porches, and decoration. Those exterior materials include brick, stucco plaster, paint, terra-cotta roofing tile, concrete mortar, cast stone, ceramic tile, wood (eave ends and beams inside arcades), and metal ornamentation (brass, copper, and wrought iron).

The Benedictine Sisters of Perpetual Adoration recently replaced over 200 windows with energy-efficient contemporary windows that resemble the original casements in color, number of lites and mullions, and glazing. In the event that the windows are damaged or need repair or replacement, effort should be made to repair the window instead of replacement, but if not feasible, the replacement window should mirror the original windows in design, color, texture and other visual qualities and, where possible, materials. The same premise holds true for any exterior wall material or treatment that may require repair or replacement.

Retain hedgerows, date palms, and junipers immediately adjacent to the building's footprint. Mitigation in areas outside of the historic landmark boundaries, will be accomplished by conducting a plant inventory to identify, record, and evaluate for salvage all remaining plants within the parcel. As noted previously, vegetation located outside the HL boundaries will be grafted (trees) and/or transplanted to Mission Garden located at 946 W. Mission Lane (*Arizona Daily Star*, 15 August 2018).

Figure 24. Example of a character-defining portico, facing northeast (2019).

Figure 25. Example of decorative wall treatments throughout facility (2019).

Figure 26. Example of millwork within the sanctuary on the first floor, facing south (2019).

IV*:* All elements of workmanship in the monastery's exterior design and materials will be retained and preserved (Figure 27). Address any repairs or damage that would directly affect the quality of workmanship of the exterior.

V: Preserve to the extent possible those qualities that evoke a feeling of contemplative space indicative of a cloistered religious setting, namely retention of the exterior, interior courtyards, arcades, and walkways in and immediately around the building. Retain hedges and trees immediately adjacent to building, and portions of the frontage grounds to reinforce sense of place.

VI: Preserve the characteristic Spanish Colonial Revival features and appearance as designed by Roy Place to retain integrity of association. Moreover, Catholic iconography should be retained and preserved including all exterior statuary and inscriptions to maintain its religious associations.

Figure 27. Entrance to sanctuary displaying a high-level of workmanship, facing southeast (2019).

In the event that repair, rehabilitation, or other changes may be required, the design review process will follow a similar path as existing City of Tucson Historic Preservation Zone Reviews. For future projects not requiring a building permit (such as electrical upgrades, fences, gates, and window repair, etc.), an on-site review will be conducted by a member of the City of Tucson Planning and Development Services Department and a member of the Tucson-Pima County Historical Commission Plans Review Subcommittee. A full review by the Tucson-Pima County Historical Commission Plans Review Subcommittee will be required for any project involving a building permit or modification of the exterior appearance of the monastery. Demolition will require Mayor and Council approval.

HISTORIC LANDMARK DEVELOPMENT STANDARDS TABLE

Refer to HL for Additional details.

Item	*Topic*	*Standard*
1	Benedictine Monastery Exterior	The Exterior of the Monastery will be preserved and all of its character defining elements will be preserved and repaired as necessary (as per Secretary of the Interior Standards), except for the items listed below (A).
1A	Roof Terrace	The roof of the central wing of the Monastery has been historically used as a Terrace. It is proposed to continue this historic use. In order to do so, there will need to be a new walkable surface installed, and a discreet taller protective guardrail to meet current codes. The laundry room may be converted and expanded to the terrace to create a larger MPR.
2	Benedictine Monastery Interior	The Benedictine Monastery Interior is excluded from the regulatory requirements of this Historic Landmark nomination.
3	The Historic Landmark Boundary	The Monastery site and landscape will be preserved and all of its character-defining elements will be preserved and repaired as necessary (As per Secretary of the Interior Standards), except for the items listed below (A-D).
3A	Sunken Plaza	There will be a sunken plaza installed at the north east corner of the Monastery to allow for ADA access to the basement (under the Chapel) for support uses for the residential development.
3B	Front grass area	In order to conserve water, the two grass areas on the west face of the Monastery entry may be replaced with appropriate landscape.
3C	Interior Patios	The two interior patios of the Monastery will remain in their general historic character, but modifications to allow for adaptable reuse of these patios will be permitted.
3D	Mechanical Equiptment	Mechanical equipment may be allowed to be placed within boundaries of the HL in a careful and discreet manner.

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APPENDIX B1 – ORIGINAL ROY PLACE BENDICTINE MONASTERY DRAWINGS (UNDER SEPARATE COVER)

APPENDIX B2 – PAGES FROM NRHP – SAM HUGHES

NPS Form 10-900-a
(8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 2

Hughes, Sam, Neighborhood Historic District (Preferred)
name of property
Pima County, Arizona
county and State

==========

The achievements of Sam Hughes were memorialized by the opening of an elementary school in 1927 which bears his name. It is from this school, which lies at the heart of this neighborhood, that the SAM HUGHES HISTORIC DISTRICT takes its name"

The preceding three paragraphs are quoted directly and in their entirety from the prologue of the Sam Hughes Historic Neighborhood Historic Resource Survey Report authored by Don W. Ryden, A.I.A. Architects, Inc, Phoenix, Arizona, 1988.

HISTORIC DISTRICT GENERAL DESCRIPTION:

The Sam Hughes Historic District comprises a portion of 61 blocks in Tucson, Arizona developed during the period of 1921 through the 1950's and located immediately east of the University of Arizona campus. The total area within district boundaries measures 218 acres. Blocks are mostly square and are confined to a grid measuring approximately 450' x 450'.

The District is residential in character. Six public buildings are located within district boundaries: a bathhouse and swimming pool, a library, two pump houses belonging to the Water Department, one Church and the Sam Hughes Elementary School. There are 718 houses located within district boundaries. Accessory buildings such as guest houses, garages and storage sheds number approximately 418.

Major landmarks include a boulevard lined by palm trees and citrus trees (East Third Street), a public school (Sam Hughes Elementary School) and a 23.6 acre public park (Himmel Park) with recreational facilities and a library. An historic steam locomotive is on display at the center of the park. It is listed on the National Register of Historic Places.

Landmark buildings located near district boundaries and contributing to the district include a chapel and convent (the Benedictine Convent of Perpetual Adoration) and a neighborhood grocery (the Rincon Market).

The land is flat to gently sloping. Many times slopes are corrected by the use of low retaining walls next to the sidewalks. Streets within the district are laid out in a rectangular grid and carry mostly local traffic with major arterials located outside and at the periphery of the district boundaries. Curbs and gutters are present at all streets which are paved with asphalt. The curbs are stamped with 3" high letters listing the block and name for all street corners.

Architectural styles represented within district boundaries include 16 styles detailed in discussion below. The majority of the buildings are constructed in the Spanish Eclectic style. Other styles popular at the time of development are represented in lesser numbers which corresponds to their relative popularity and the date of construction. Street setbacks are generally uniform and there is a continuity of scale and proportion of structures in each area of the neighborhood.

Predominant wall finishes in the district are stuccoed masonry (brick and adobe) and both painted and unpainted brick. White stucco is the most common wall material due to the dominance of the Spanish Eclectic style present in abundance. For similar reasons, red clay mission tile is the dominant roofing material. Other materials and variations are discussed in more detail below in description of streets and individual important properties.

Landscaping is established and mostly maintained in the original manner. Some unique planning features are exhibited within district boundaries but the overall 450' x 450' ± grid is maintained. A system of "H" shaped blocks was designed that led to homes facing outward from all sides of the rectangular block. See Section 8, "Planning Features" for additional discussion.

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United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 7 Page 22

Hughes, Sam, Neighborhood Historic District (Preferred)
name of property
Pima County, Arizona
county and State

==========

THE MODERN / CONTEMPORARY STYLES (18 Properties Total):

There are few Modern / Contemporary houses within district boundaries and some of these are earlier houses which have been transformed through remodeling. Although the recognized modern and contemporary styles utilize a wide variety of forms and materials, the most common material used within district boundaries is stucco. Where possible district boundaries were selected to minimize the later constructions that are obtrusive to the overall quality of the neighborhood.

2830 East Third Street - Constructed 1939 - PHOTO #79

This Contemporary Style house was built in 1939, a very early date for this style of design. This is a result of the experimental nature of the Architect, Art Brown.

THE NEO-MEDITERRANEAN STYLE (1 Property Total):

The Neo-Mediterranean style completes a circular pattern of stylistic development in Tucson. The Sam Hughes neighborhood was initially developed at a time when many were rediscovering Tucson's Hispanic roots as exemplified by the efforts of the local boosters of that time. In the 1970's the Spanish/Mediterranean/Pueblo styles began a very strong revival. Newer forms often have elements that reflect changes in modern lifestyle, such as the 3-car garage, but materials and details are often quite historical.

730 North Forgeus Avenue - Constructed 1985 - PHOTO #80

It is unclear if this house was built in this style because of fashion or because of the desire to produce a design sympathetic to the historical character of the neighborhood. It is similar to the earlier Spanish Eclectic houses seen in Sam Hughes in terms of material and detail. The primary differences occur in the siting of the building and its relationship to the street. This house presents a blank wall to the street and focuses attention to a court at the side yard where a covered hip roofed porch, a tower form, and an arched feature window are present. The overall effect is of benefit to the neighborhood. Landscape trees, planted in front of the blank wall will embellish the house and the side entry in the years to come.

LANDMARK BUILDINGS LOCATED OUTSIDE OF DISTRICT BOUNDARIES:

800 N. Country Club Road - Constructed 1939-1940 - PHOTO #81

The chapel and convent of the Benedictine Order of Perpetual Adoration occupy the northeast corner of North Country Club Road and East Third Street. The complex is a large edifice of Spanish Eclectic design and is one of many landmark buildings designed by Architect Roy O. Place. It also the result of the team of Bishop Daniel James Gercke, his builder brother Mr. Sam Gercke, and Sister Mary Carmalita Quinn who chaired the design/building committee.

As described in preceding paragraphs, E. Third St. is a central axis and landmark to the Sam Hughes Historic District. Whereas the mall of the University of Arizona anchors and terminates the west end of Third St., the Benedictine Chapel anchors the east end of the district. Its siting also marks a noticeable transition from the nearby historic neighborhoods of the Sam Hughes area to more modern, less historic neighborhoods "behind" the chapel to the east.

NPS Form 10-900-a
(8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 8 Page 27

Hughes, Sam, Neighborhood Historic District (Preferred)
name of property
Pima County, Arizona
county and State

==========

The Architects of the Sam Hughes Historic Neighborhood:

The Sam Hughes Neighborhood is mostly a neighborhood designed and built by builder / developers without the assistance of architects. The architects who did work in the district are not represented by their landmark buildings.

Roy O. Place is responsible for more landmark historical buildings in Tucson than any other architect. His largest clients were the local school district, the University of Arizona, Pima County, and the Veterans Administration. He designed a large number of new buildings during Tucson's growth period. Many of his designs were highly ornamented Spanish Colonial Revival designs.

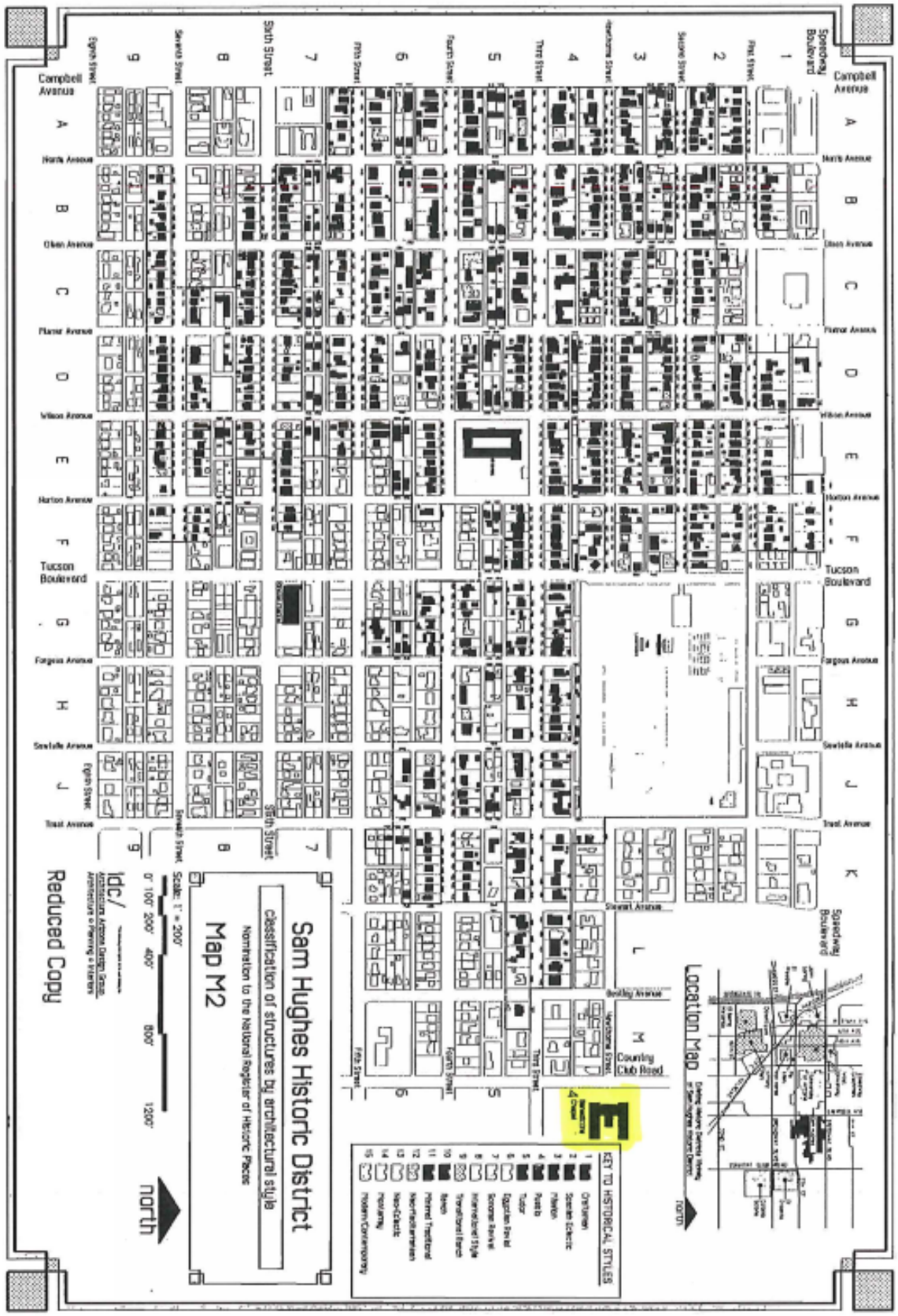
Henry O. Jaastad was the Mayor of Tucson and a practicing architect. His earlier work, from 1908 into the 1920's was typical of the time - simplified Victorian houses and bungalow designs. Later work followed the trend illustrated by the Sam Hughes neighborhood, shifting to the Spanish styles. His work within the district is from this later period.

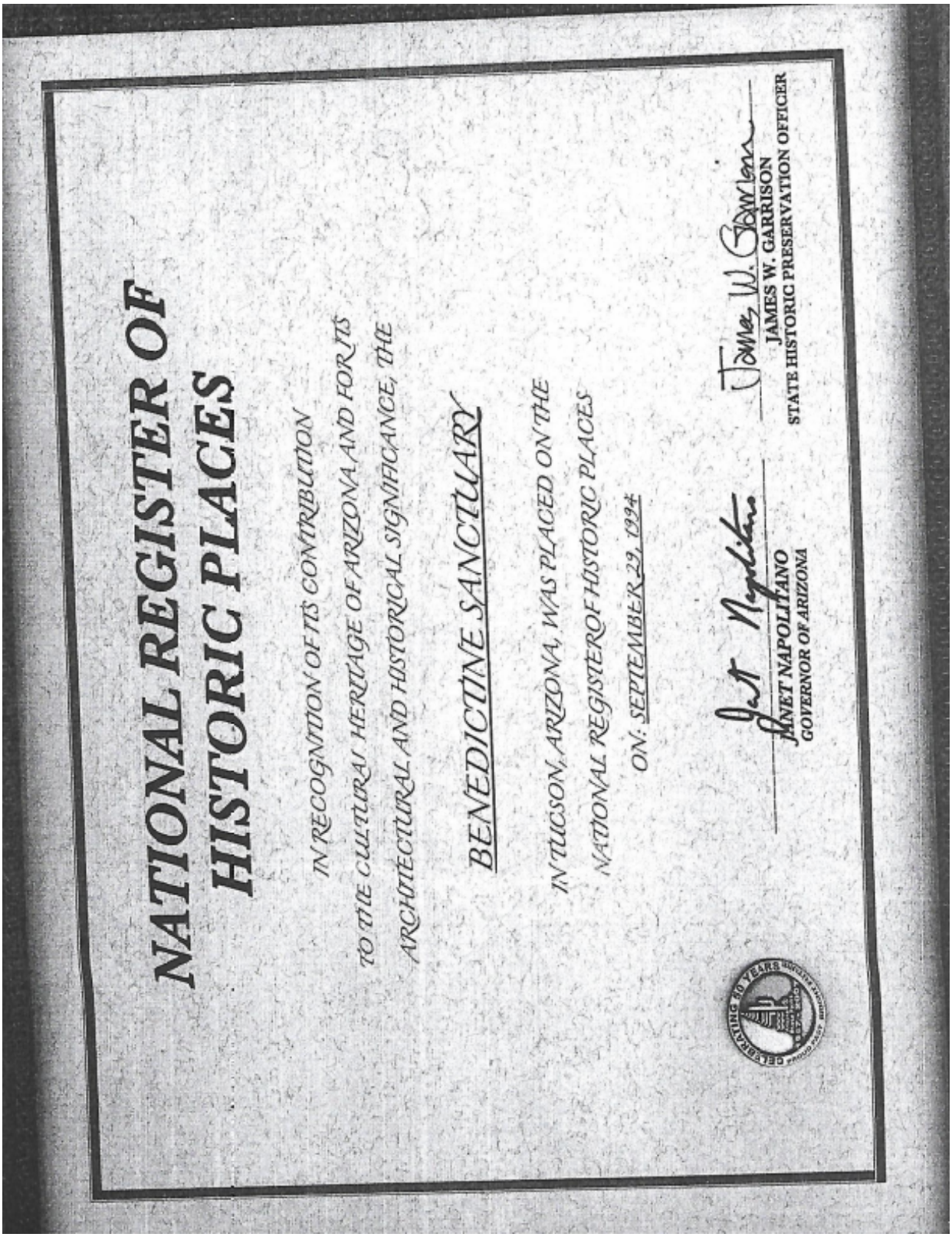
Josias Th. Joesler began his practice in Tucson in 1927 working as the architect for most of the John W. Murphey Building Company projects (Continuation Page 10). His earlier works were nearly all Spanish Eclectic with his later shift also matching popular trends, although he worked in a Mexican Ranch Style more than any other Tucson architect. His houses in Tucson (over 200) are well regarded by the local community. His work in International Style and Modern styles were not artistically successful in general. His work within district boundaries includes his best two efforts at International Style.

Arthur T. Brown opened an architectural office just outside district boundaries in 1936. His style of design was progressive for its time. Brown missed the period of the high popularity of the Spanish Eclectic and Mission Revivals - his early work included some Spanish work but also early modern work. His homes were known for dynamic lines, brick mixed with large expanses of glass, and innovative solutions to climate control.

The following table summarizes the work of professional architects in the Sam Hughes Historic District.

Architect	Project Address	Date	Style	Photo
Roy W. Place	Sam Hughes School	1927	Spanish Ecelctic	45
	800 N. Third St, Benedictine	1940	Spanish Ecelctic	81
Henry O. Jaastad	2003 E. Fourth St.	1928	Mission Revival	15
	720 N. Treat Ave.	1930	Cottage Revival	64
Josias Th. Joesler	1903 E. Third St.	1931	Spanish Eclectic	3
	2803 E. Fourth St.	1936	International Style / Art Moderne	18
	2809 E. Fourth St.	1936	International Style / Art Moderne	67
	2950 E. Third St.	1938	Sonoran Revival / Spanish Ecelctic	–
Arthur T. Brown	2830 E. Third St.	1939	Contemporary	79
	2917 E. Third St.	1939	International Style	68
	2621 E. Fourth St.	1940	Spanish Eclectic	–
	2625 E. Fourth St.	1941	Transitional Ranch	77


Sam Hughes Historic District
Classification of structures by architectural style
Nomination to the National Register of Historic Places
Map M2
Reduced Copy
Scale: 1" = 200'
0' 100' 200' 400' 800' 1200'
north
KEY TO HISTORICAL STYLES
Location Map
Campbell Avenue
Speedway Boulevard
Tucson Boulevard
Sixth Street
Counting Club Road



NATIONAL REGISTER OF HISTORIC PLACES

IN RECOGNITION OF ITS CONTRIBUTION
TO THE CULTURAL HERITAGE OF ARIZONA AND FOR ITS
ARCHITECTURAL AND HISTORICAL SIGNIFICANCE, THE

BENEDICTINE SANCTUARY

IN TUCSON, ARIZONA, WAS PLACED ON THE
NATIONAL REGISTER OF HISTORIC PLACES
ON: SEPTEMBER 29, 1994

JANET NAPOLITANO
GOVERNOR OF ARIZONA

JAMES W. GARRISON
STATE HISTORIC PRESERVATION OFFICER

APPENDIX B3 – AZ SHPO HISTORIC INVENTORY FORM

STATE OF ARIZONA **HISTORIC PROPERTY INVENTORY FORM**

Please type or print clearly. Fill out each applicable space accurately and with as much information as is known about the property. ***Use continuation sheets where necessary****. Send completed form to: State Historic Preservation Office, 1300 W. Washington, Phoenix, AZ 85007*

PROPERTY IDENTIFICATION

For properties identified through survey: Site No: N/A Survey Area: N/A

Historic Name(s): Benedictine Sanctuary, Benedictine Convent and Chapel of Perpetual Adoration, and Benedictine Monastery (*Enter the name(s), if any, that best reflects the property's historic importance.*)

Address: 800 and 930 N. Country Club Rd

City or Town: Tucson ☐ vicinity County: Pima Tax Parcel No. : 125-13-068A

Township: 14S Range: 14E Section: 9 Quarter Section: Acreage: 6.85 acres for whole site (1.7 acres for HL boundaries).

Block: 6 and 7 Lot(s): 12 and 4 Plat (Addition): Speedway Place Year of plat (addition): 1924

UTM reference: Zone ___ Easting ___ Northing ___ USGS 7.5' quad map: Tucson

Architect: Roy Place ☐ not determined ☒ known (source: Architectural Drawings)

Builder: E. Samuel Gerke ☐ not determined ☒ known (source: *Arizona Daily Star* newspaper)

Construction Date: 1940 ☒ known ☐ estimated (source: *Arizona Daily Star* newspaper)

STRUCTURAL CONDITION

☒ Good (*well maintained, no serious problems apparent*)

☐ Fair (*some problems apparent*) Describe: ___

☐ Poor (*major problems; imminent threat*) Describe: ___

☐ Ruin/Uninhabitable

USES/FUNCTIONS

Describe how the property has been used over time, beginning with the original use.

Religion: Church-related residence (1940-2018)

Sources: *Arizona Daily Star* Newspaper

PHOTO INFORMATION

Date of photo: 1/16/19

View Direction (*looking towards*) NE

Negative No.: LS 94405

SIGNIFICANCE

To be eligible for the National Register of Historic Places, a property must represent an important part of the history or architecture of an area. Note: a property need only be significant under one of the areas below to be eligible for the National Register.

A. HISTORIC EVENTS/TRENDS (*On a continuation sheet describe how the property is associated either with a significant historic event, or with a trend or pattern of events important to the history of the nation, the state, or a local community.*):

[C.] ARCHITECTURE (*On a continuation sheet describe how the property embodies the distinctive characteristics of a type, period, or method of construction, or that represents the work or a master, or possesses high artistic values.*): See Continuation Sheet No. 1

Outbuildings/Auxiliary Features: (*Describe any other buildings or structures on the property and whether they may be considered historic.*)

Small residence (not historic-age), tennis court (not historic-age), gardens (historic-age), orchard (historic-age), shrine (not historic-age), and parking lots (not historic-age).

Architectural Style: Spanish Colonial Revival

INTEGRITY

To be eligible for the National Register, a property must have integrity, that is, it must be able to visually convey its importance. Provide detailed information below about the property's integrity. Use continuation sheets if necessary.

1. LOCATION [X] Original Site [ ] Moved (date_____) Original Site:_____

2. DESIGN (*Describe alterations from the original design, including dates—known or estimated—when alterations were made*)
. See Continuation Sheet No. 1

3. SETTING (*Describe the natural and/or built environment around the property*)
Located on the edge of Sam Hughes Historic District, fronting Country Club Road and bounded on all sides by residential suburban development.

4. MATERIALS (*Describe the materials used in the following elements of the property*)
Walls (structure): Fired Brick Foundation: Concrete and Steel Roof: Ceramic Tile
Windows: Steel
If the windows have been altered, what were they originally? Vinyl (only a handful are replaced)
Wall Sheathing: Stucco
If the sheathing has been altered, what was it originally? N/A

5. WORKMANSHIP (*Describe the distinctive elements, if any, of craftsmanship or method of construction*)
Ornate, multi-story E-shaped building with arcades, a dome, Christina imagery, arched windows, Corinthian columns, corbels, balconies, cast stone relief, bronze finials, and a rose window over main entry.

NATIONAL REGISTER STATUS (if listed, check the appropriate box)

[ ] Individually listed [X] Contributor [ ] Noncontributor to Sam Hughes Neighborhood Historic District
Date Listed: 08/10/94 [ ] Determined eligible by Keeper of National Register (date:_____)

RECOMMENDATIONS OF ELIGIBILITY (opinion of SHPO staff or survey consultant)

Property [X] is [ ] is not eligible individually.
Property [X] is [ ] is not eligible as a contributor to a potential historic district.
[ ] More information needed to evaluate.
If not considered eligible, state reason:_____

FORM COMPLETED BY:

Name and Affiliation: Logan Simpson, Inc. Date: January 2019
Mailing Address: 177 N. Church Ave, Suite 607, 85701 Phone No.: 520-884-5500

HISTORIC PROPERTY INVENTORY FORM
CONTINUATION SHEET

Name of Property: Benedictine Monastery (800 & 930 N. Country Club Rd) Continuation Sheet Page: 1

Design

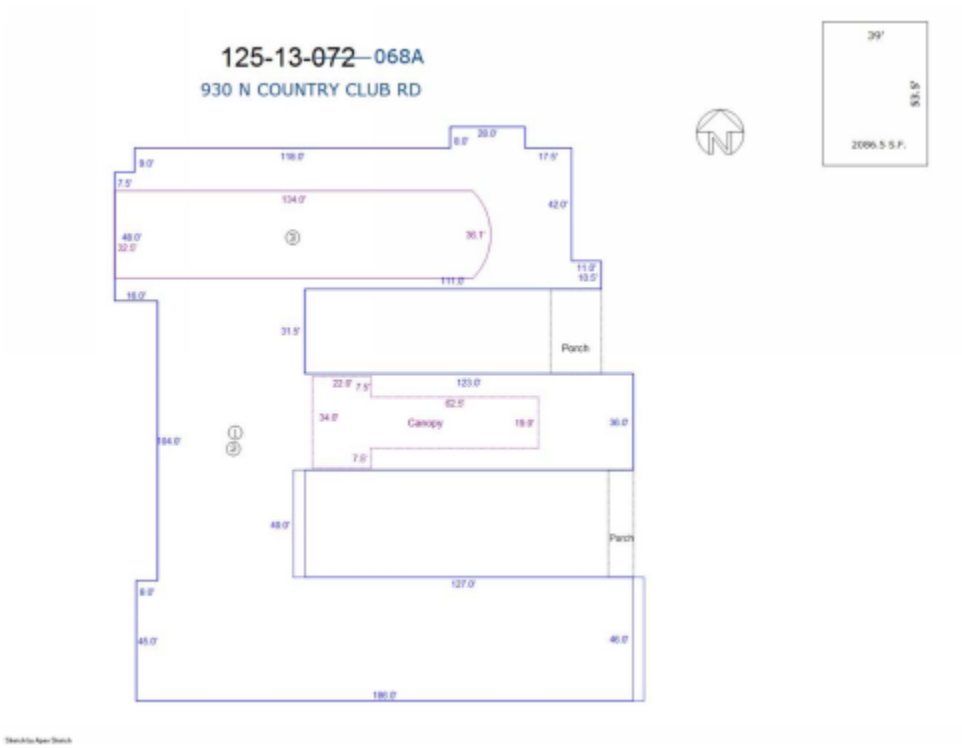
The footprint of the building was designed in the form of an "E" and constructed of brick, sheathed in cement plaster, and accented with stone medallions, corbels, columns and coping, ornamental iron gates, and a tiled topped-dome and copper finials. The north wing housed the chapel; the central wing housed the refectory, the south wing the living and workrooms, and the kitchen and utility rooms were located in a second-story deck above the chapel. Interior courtyards were located between the wings and enclosed by and connected with open-air arcades. The interior courtyards and grounds were landscaped with a mix of fruit, palm and deciduous trees, and ornamental non-native plants.

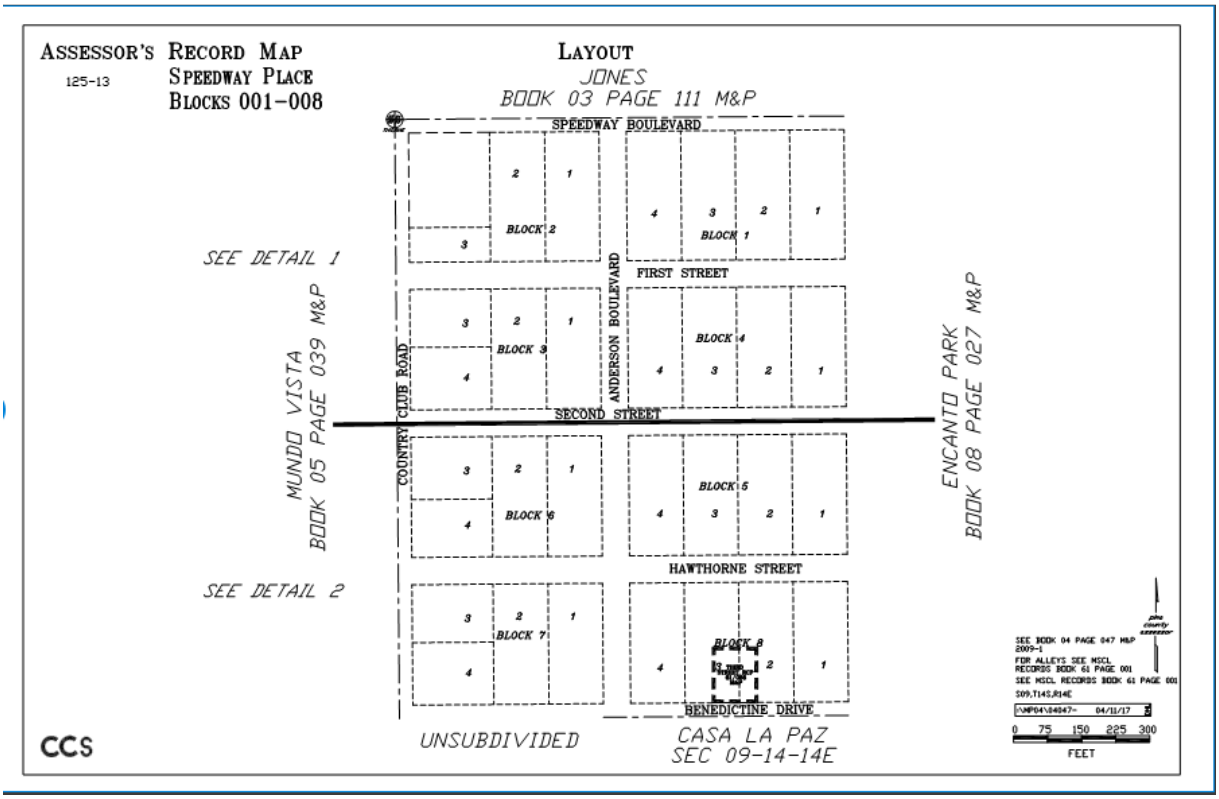
Very few alterations to the monastery have taken place over its history. The most significant changes to the building occurred more recently. In 2008, two solar panels were installed on the roof and a solar array was located in the parking lot north of the building, as well as replacement of the majority of windows with energy efficient double-paned windows. The most significant alterations to the property are related to the landscape. In the 1960s, a parking lot was paved directly north and adjacent to the north wing, an additional overflow parking lot was graded, and by 2008, the graded lot contained solar panels. Certainly over its developmental history, the vegetation around the property has matured and leafed out, but in other areas, vegetation has been either removed or replaced. For example the grassy lawn located along the curb fronting N. Country Club Rd was removed around 2005, and within the past 5 years been replaced with drought tolerant plants. In addition, interior courtyard spaces have been revegetated with larger shrubs and trees.

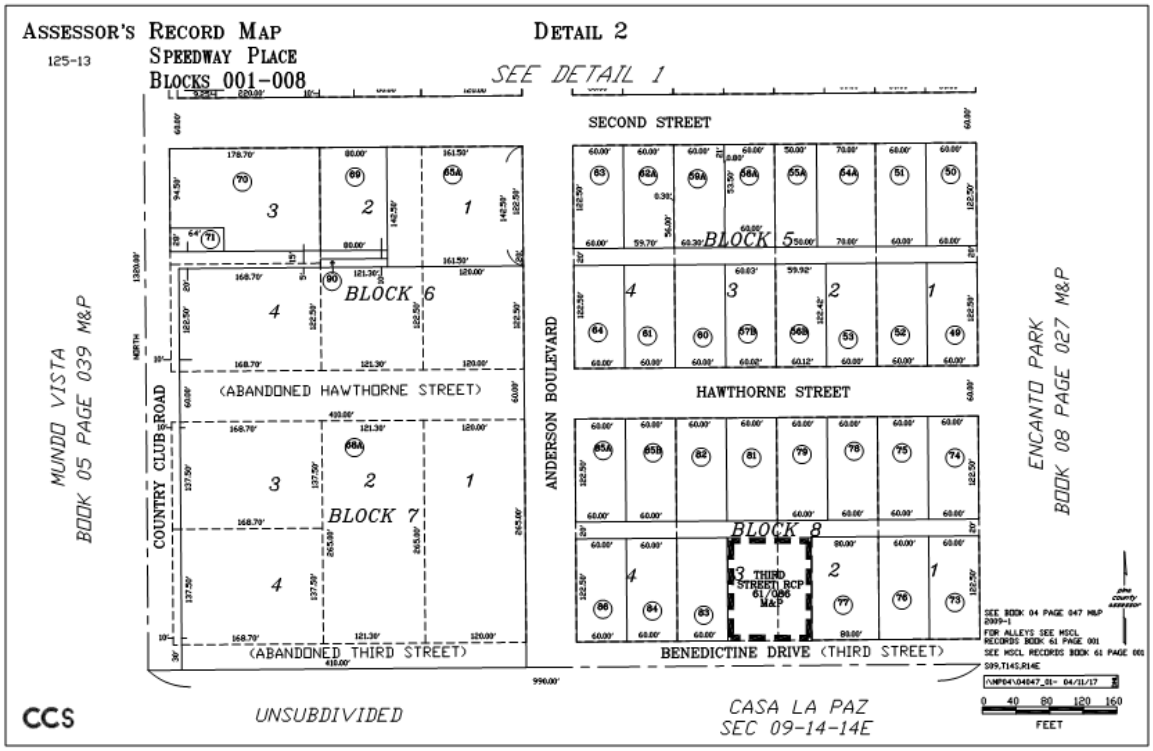
NRHP Eligibility Criteria

The building is currently listed in the NRHP under eligibility Criterion C as a contributing property to the Sam Hughes Neighborhood Historic District, based on its association with architect Roy Place and as an expression of monumental religious architecture.

APPENDIX B4 – ASSESSORS MAPS AND PLANS

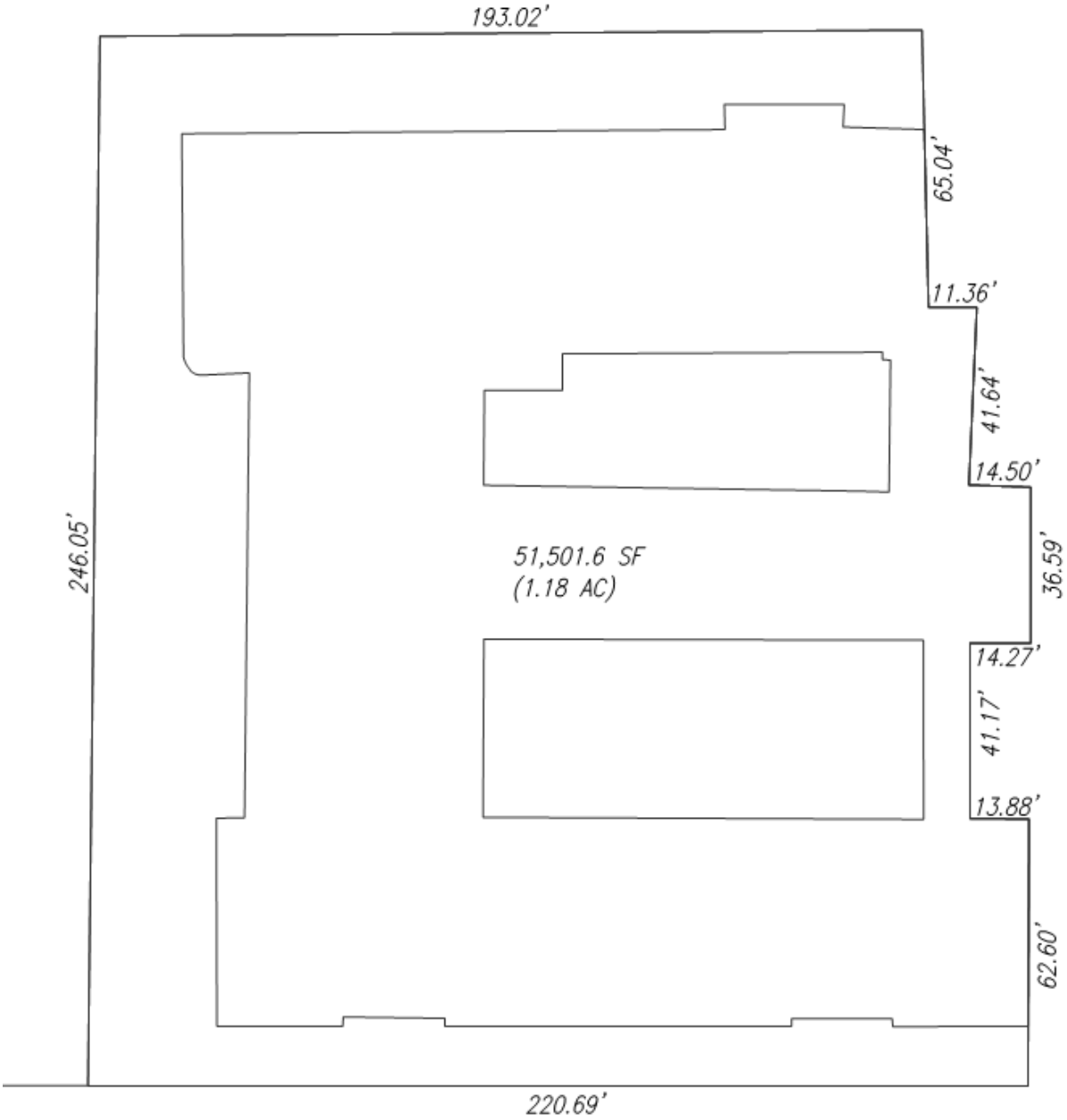





ASSESSOR'S RECORD MAP
125-13
SPEEDWAY PLACE
BLOCKS 001-008
DETAIL 2
SEE DETAIL 1
SECOND STREET
BLOCK 5
BLOCK 6
BLOCK 7
BLOCK 8
HAWTHORNE STREET
(ABANDONED HAWTHORNE STREET)
(ABANDONED THIRD STREET)
BENEDICTINE DRIVE (THIRD STREET)
ANDERSON BOULEVARD
COUNTRY CLUB ROAD
MUNDO VISTA
BOOK 05 PAGE 039 M&P
ENCANTO PARK
BOOK 08 PAGE 027 M&P
THIRD STREET RCP 61/086 M&P
UNSUBDIVIDED
CASA LA PAZ
SEC 09-14-14E
CCS
FEET

APPENDIX B5 – HL BOUNDARY WITH LEGAL DESCRIPTION

BENEDICTINE MONASTERY HISTORIC PROTECTION LIMITS – AUGUST 21, 2018


193.02'
65.04'
11.36'
41.64'
14.50'
36.59'
14.27'
41.17'
13.88'
62.60'
220.69'
246.05'
51,501.6 SF
(1.18 AC)

CYPRESS CIVIL DEVELOPMENT

strength + sustainability

LEGAL DESCRIPTION – BENEDICTINE HL BOUNDARY

A portion of Lots 2, 3 and 4 of Block 7 of SPEEDWAY PLACE, as recorded in Book 4 of Maps and Plats at Page 47 thereof, in the Office of the Pima County Recorder, located in Section 9, Township 14 South, Range 14 East, Gila and Salt River Meridian, State of Arizona, County of Pima, being more particularly described as follows:

Commencing at a found 2" brass cap survey monument stamped "LS 12537" at the intersection of Country Club Road and 3rd Street;

Thence South 89°52'38" East, along the centerline of 3rd Street, a distance of 40.08 feet;

Thence North 00°07'22" East, a distance of 29.62 feet, to a point along the east right-of-way of Country Club Road marked with a found nail and tag in the sidewalk stamped "LS 21751";

Thence North 00°00'52" East, along the east right-of-way of Country Club Road, a distance of 221.55 feet;

Thence South 89°59'08" East, a distance of 34.45 feet, to the **Point of Beginning;**

Thence North 00°39'07" West, a distance of 246.05 feet;

Thence North 89°33'48" East, a distance of 193.02 feet;

Thence South 01°20'14" East, a distance of 65.04 feet;

Thence South 89°42'09" West, a distance of 11.36 feet;

Thence South 02°32'07" West, a distance of 41.64 feet;

Thence South 87°58'34" West, a distance of 14.50 feet;

Thence South 00°00'34" West, a distance of 36.59 feet;

Thence North 89°41'42" West, a distance of 14.27 feet;

Thence South 02°02'40" East, a distance of 41.17 feet;

Thence South 89°33'45" East, a distance of 13.88 feet;

cypresscivil.com

2030 east speedway boulevard, suite #110
tucson, arizona 85719
p: 520.499.2456

Thence South 00°15'25" West, a distance of 62.60 feet;

Thence North 89°58'56" West a distance of 220.69 feet to the **Point of Beginning.**

The area of said easement contains 51,501.6 square feet or 1.18 acres, more or less.

APPENDIX C– DESIGN ADVISORY COMMITTEE

Composition of Design Advisory Working Group (during PAD development)

The Miramonte Neighborhood Association, with a unanimous vote, has appointed Ruth Beeker, Kim Fernández, and Mike Anglin as members of an ad hoc committee to serve as liaison between the Benedictine Monastery Project PAD development and the Miramonte Neighborhood. The Board believes this committee will serve as an opportunity for open lines of communication and a benefit to both the design team and the neighborhood.

The committee requests to establish regular bi-monthly, approximately one-hour, meetings to discuss topics of mutual interest regarding the project. With each meeting, the committee will prepare an agenda of topics based on concerns of neighborhood residents.

Secondly, the committee asks that the design team conduct an initial open-forum neighborhood meeting - not to be considered an official public meeting, but rather one that is specific to the Miramonte Neighborhood and their concerns. We believe such a meeting will establish and facilitate goodwill with the community most directly effected. A second open-forum neighborhood meeting is requested after the schematic design is finalized. We would like to schedule the initial forum by mid-February, preferably on a Saturday morning.

We, the committee and myself, are not opposed to the project, but expect to be engaged in a collaborative relationship of decision making – one that will assuage concerns of nearby residents and bolster support for the project. We believe such a relationship will benefit all concerned.

Thank you for your attention to this critical request, and please email the committee and myself as soon as possible to schedule the first liaison meeting, to be held prior to a mid-February neighborhood meeting .

Sincerely,

Linda Dobbyn

President

Miramonte Neighborhood Association

Ross:

So attached again is my slightly revised (from what I handed out to the Planning Folks) schedule that has a period of time for Design Advisory Group (orange bar).

My assumption is that the group consists of the following people:
Ruth Beeker (Miramonte)
Kim Fernandez (Miramonte)
Mike Anglin (Miramonte)
Denice Blake (Sam Hughes)

Bi-monthly meetings, as suggested, by Linda Dobbyn are fine with me. Let's set the first meeting for Wednesday February 27 at 6.00 at our PFM office (so that we can use the presentation equipment without lots of set-up.) Steve has suggested that he attend the first meeting, so we would need to clear that meeting with his schedule. After that then, we would meet again on March 13 and then again on April 3 (I have a conflict with another community meeting on the 27th.) I do not believe that we need a separate Miramonte meeting as suggested by Linda, but we can discuss at our meeting of February 27. The formal (noticed) Neighborhood meeting would be April 17 at the Monastery Chapel, but that date is tentative for now. We would have one last Advisory meeting on Wednesday May 1, if that were necessary.

I suggest that you discuss it with Steve. Once we have his input, I can contact Linda Dobbyn and other Advisory Group members and copy John Beall, Koren Manning etc.

Corky Poster
Architect / Planner/ Principal

POSTER FROST MIRTO, INC.
ARCHITECTURE | PLANNING | PRESERVATION

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Tucson, Arizona 85701
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C 520.861.6320
www.posterfrostmirto.com

Design Standards and Guidelines for Advisory Committee

Prior to development of any area within the PAD, design standards will be submitted as an extension of this document and shall be reviewed and approved by the COT P & DSD staff. These guidelines and standards will be representative of the overall intent of the Miramonte Neighborhood Plan as amended by the Plan Amendment of December 18, 2018 and will strive to develop a cohesive architecture compatible with the surrounding neighborhood. Additionally, the standards and guidelines will provide the framework for the character of the PAD and address the following goals:

- Establish a common theme and design elements to be used throughout the property. They will cover unifying site design elements, including streetscape design, signage, materials, colors and architectural styles established by the Master Developer.
- Ensure new development does not adversely impact existing neighborhood character by complying with the goals and polices of the Miramonte Neighborhood Plan as amended by the December 18, 2018 Plan Amendment.
- Ensure compatibility with existing historic architecture of the monastery.
- Provide consistency with the PAD and the intentions of the document.

FINAL COMMITTEE MEMBERSHIP

Ruth Beeker (Miramonte Neighborhood)
Kim Fernandez (Miramonte Neighborhood)
Mike Anglin (Miramonte Neighborhood)
Brian McCarthy (Sam Hughes Neighborhood)
Elissa Erly (Sam Hughes Neighborhood)
Denice Blake (Sam Hughes Neighborhood)

There were three meetings of the Advisory Committee:

February 26, 2019

Design Advisory Working Committee, Benedictine Monastery Development.
Tuesday February 26th at 4:00 PM at Poster Frost Mirto, 317 North Court Avenue, Tucson

1. Self-introductions and individual expectations for success
2. Review of Plan Amendment and what elements were set by that Mayor & Council Action
3. PAD Schedule
4. Review of current project design and PAD content
5. Committee commentary and feedback
6. Expected progress for next meeting
7. Set future meeting schedule

April 3, 2019

Dear Monastery Design Advisory Committee members:

At the request of the Sam Hughes Neighborhood, we have agreed to add two new members to the Benedictine Monastery Design Advisory Committee. The brief bios of these new members are below.
New Sam Hughes representatives to the Benedictine Monastery Design Advisory Committee:
Elissa Erly
2309 E 8th St
520-730-4232
lisaerly@gmail.com
She is a school nurse by profession but has this relevant experience: "I served on the board of the Tucson Historic Preservation Foundation for several years, coordinating the research phases for upcoming books on the architecture of Josias Joesler and Tom Gist. While a student in the U of A heritage preservation program, I worked on the successful NRHP nomination for the Rincon Heights neighborhood. I have taken courses in architectural history and preservation. I am a strong supporter of adaptive reuse of historic properties."
Brian McCarthy
2228 E 7th St
520-404-9376
mccarthybl@msn.com

Relevant experience: "I am an architect, now retired from active practice. My office was behind Rincon Market/Bob Dobbs at 500 N. Tucson Blvd. My firm was responsible for many historic renovation projects, such as the original Janos Restaurant, University Heights Apartments and Safford Middle and Elementary Schools. We completed a prior renovation at the Benedictine Monastery and Chapel. I have worked with numerous neighborhood and church building committees and have served for many years on the Diocese of Tucson Building Review Committee."

For the new members, Elissa and Brian, I have included (further below) the invitation to the upcoming meetings that I had already sent out to the four original members, Ruth Beeker, Denice Blake, Mike Anglin, and Kim Fernandez.

Finally, I wanted to update you on the prep for our next meeting. In addition to asking you to look carefully at the PAD 1st submittal document, (link further below in previous email). To allow you to see material prior to the meeting, we will send you updated design information for our April 3 meeting by the close of business Friday March 29.

I also wanted to let you know that Sam Hughes has included the Benedictine Monastery in their Home Tour 2019. On Sunday, March 31 from noon to 5 p.m., the Monastery will be partially open for visits (coordinating with the current asylum-seeker temporary use of the building.) Here is a link to an article about the tour:

https://tucson.com/lifestyles/home-and-garden/here-s-your-chance-to-sneak-a-peek-into-tucson/article_1ed9432d-eade-5906-b375-86248ed3daa6.html

We have been asked to provide some graphic boards at the Open House Tour regarding the current status of the design. We will use excerpts from the material that we will send out to you on Friday March 29 as exhibits in the Open House on March 31. And by the April 17 Community Meeting, we will further develop the project design based on your comments at our April 3 meeting.

Finally, if you have not seen the informative Ward 6 Newsletter of March 18, 2019 regarding the Monastery, I have included a link to that below.

https://www.tucsonaz.gov/ward-6/news/steve-ks-newsletter-031819#Benedictine

Thank you. Please let me know if you have any comments or questions.

Corky Poster
Architect / Planner/ Principal

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C 520.861.6320
www.posterfrostmirto.com

Dear Monastery Committee members:

Thanks for your patience. We have spent the last couple of weeks finalizing our submission of the PAD first submittal to the COT and concluding our various agreements between Poster Frost Mirto and Ross. We are working diligently getting all of our sub-consultants on-board and working on the schematic design of the project. We had thought we would meet two weeks after our first meeting, but we would have been wasting your time with not enough to show you.

I am proposing our next meeting to be **Wednesday April 3 at 4:00 PM** at Poster Frost Mirto. The Neighborhood meeting is scheduled for **Wednesday April 17 at 6:00 PM** at the Monastery Chapel. That will give us time to have work to show you and also time to incorporate your comments before the April 17 meeting.

Also just today the City of Tucson posted the PAD 1st Submittal on their website, so you have additional material to review. It is at https://www.tucsonaz.gov/pro/pdsd/permitdetail/RZ19-001/12513068A. It is a big file, so please be patient with it loading to your computer.

Please confirm your attendance at the meeting of April 3. Thanks. We look forward to our next meeting.

Corky Poster
Architect / Planner/ Principal
POSTER FROST MIRTO, INC.
ARCHITECTURE | PLANNING | PRESERVATION
317 North Court Avenue
Tucson, Arizona 85701

Review Comments/Questions by Kim Fernández, Design Advisory Committee Member and based on Benedictine Monastery PAD submission 02 28 2019.

Parking, Circulation and Transportation:

1. Please clarify how many vehicle parking spaces you will provide for residents and how many will be provided for other uses. Please explain any current code variations and if there are variations, why?
2. Will all the proposed parking be provided when initial permits are pulled? If not, how many spaces are being provided compared to how many residential units are being provided?
3. Is the Traffic Impact Study complete? If not, when is it expected to be completed?
4. Will a bus stop be maintained and will a bus pull-in/out be provided?
5. How will the service access points on Anderson be controlled/gated? Or how will pedestrian traffic be barred?
6. How will trash pick-up be situated so that residential neighbors are not adversely affected.

7. It is not clear that the oleander hedge is being kept at all points, particularly at the interior circulation road on the southwest corner on 3rd St. and Anderson, please clarify?
8. How will the oleander hedge be maintained over time? Will there be a fence on the inside of the oleanders to prevent vehicles damaging the hedge or someone cutting passageways through the hedge?
9. It was detailed that there are "beautiful sidewalks" in Sam Hughes leading to the UA, what about adding some sidewalks and beautification to Miramonte - at least to Whole Foods? (The Chroma Project at Speedway and Miramonte is making a donation to mitigate traffic impact to the neighborhood).

Other Concerns:

10. It was detailed how there are "lovely tower views" preserved from Country Club and Hawthorn in Sam Hughes, but they are proposed to be blocked on Hawthorn in Miramonte, please explain this choice?
11. How will lighting be designed so as not to impact the neighbors' dark skies?
12. How will heat island effect be addressed so as to not impact neighbors?
13. Please explain how the property is being taxed currently and in the future?
14. Please list any City benefits/breaks being requested for the project?
15. Are the existing dorm rooms being redesigned with individual bathrooms for each studio and one-bedroom rental? If there is to be group toilets, please explain how this keeps within the "no group dwelling" commitment?
16. P. 66 refers to Development run-off flowing "West" to Miramonte. I presume this is a typo and it is to flow "East" to Miramonte along Anderson and 2nd Street - please clarify. If this is so, please show how during significant event when this intersection already is flooded, that neighboring houses will not be inundated.
17. P. 96 refers to items that shall be approved. Does this included any changes to retail tenants and therefore a more intensive use would not have to have additional parking required?
18. Please clarify by section and designated perspective viewpoints how the massing will appear on the Anderson face of the development.
19. Is the well system on site currently in use? How do you envision its use in the future?

3/20/19
Friends:

As you know, the Benedictine Monastery is on the Sam Hughes home tour on Sunday. In a an earlier email I said that we would be showing proposals for the Monastery site to those Tour visitors on Sunday and sending you out that material prior to that. In thinking through that decision again, we have changed our mind. Doing that would short-change the level of detail that we could show the Design Advisory Committee working group by five days worth of progress. That just seems like a mistake.

So instead, at the Sam Hughes Tour on Sunday, we will let people in to see the Chapel (the rest of the building is occupied by asylum-seekers), show some historic photos, and let people know about the public meeting on April 17 with flyers. It seems more appropriate to show the public our design progress at that later date when the design would have matured substantially and had the benefit of the Committee's input. We will see you all at 4.00 on Wednesday at PFM.

Corky Poster

Architect / Planner/ Principal
POSTER FROST MIRTO, INC.

May 1, 2019

4/27/19
Friends:

We had a successful formal Neighborhood Meeting on Wednesday April 27 at the Benedictine Monastery Chapel.

The next meeting of Benedictine Monastery Design Advisory Committee will be **Wednesday May 1, 2019 at 4.00 PM**. As per my last email, I have not received any suggestions for a space closer to the Monastery. On Monday morning, I will check with Ward 6 and see if they have space available at 4.00 PM. I will also check with Ross to see if there is space we can use in the Monastery that will not interfere with the current asylum-seeker use. **I will finalize the location via email by the close of business Monday.**

For an agenda, I would offer the following (open to suggestions for additions and revisions, prior to the meeting):

1. Review and discussion of the content (HL and PAD) of the April 17 Neighborhood Meeting (presentation attached)
2. Review of minutes of Neighborhood Meeting (will go out by end of Monday with location email.)
3. Review of written comments related to Neighborhood Meeting (will go out by end of Monday with location email.)
4. Update on the PAD process, including feedback comments from COT P&DSD
5. Schedule going forward
6. New business

Corky Poster
Architect / Planner/ Principal

POSTER FROST MIRTO, INC.
ARCHITECTURE | PLANNING | PRESERVATION

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C 520.861.6320
www.posterfrostmirto.com

Design Advisory Committee Meeting Minutes
(PAD) rezoning application and (HL) rezoning application
for the Benedictine Monastery

Ward 6 Council Office *6:00 PM* *Wednesday, May 1, 2019*

ATTENDING

Ruth Beeker, Kim Fernandez, Mike Anglin, Brian McCarthy, Elissa Erly, Corky Poster, Savannah McDonald, Ross Rulney

AGENDA:

7. Review and discussion of the content (HL and PAD) of the April 17 Neighborhood Meeting (presentation attached)
8. Review of minutes of Neighborhood Meeting (will go out by end of Monday via email.)
9. Review of written comments related to Neighborhood Meeting (will go out by end of Monday with location email.)
10. Update on the PAD process, including feedback comments from COT P&DSD
11. Schedule going forward
12. New business

NOTES:

1. Discussion about TDOT recommendation. By a 5-0 vote, committee favored adding a center turn lane only and not widening Country Club nor dedicating additional R/W to the City of Tucson. Deceleration lane and bike lane not need here.
2. Concerned about drainage. Especially ponding at 2nd Street and Miramonte. Preliminary retention/detention plan explained. More information will be provided.
3. Committee concerned about heat island effect. Landscape and car shading plan explained. Committee supported the idea of building covered parking structures WITHIN THE SO-CALLED BUILDING SET BACK, and to include that as allowable in the PAD. Vote was 5-0 in favor.
4. Worried about mechanical equipment being visible from the ground. Design team explained that there will be parapets to hide the view and that the equipment will be centered in the roof.
5. 2nd Street Entry to garage was discussed. It was suggested that there should be a way to avoid the double road into the site. Design team will explore.
6. When will the garage go up? When the commercial tenant improvements are put into use.
7. Have we planned for Uber pick-up and drop-off? Yes. In front of Monastery.
8. Discussion about Chapel uses and commercial uses. It was suggested that the indoor space at the south end of north commercial should be a beautiful patio with an arcade around it. Design team will explore.

9. Long discussion about an entry from Miramonte into the Monastery site. Reversed previous complete prohibition if we can solve other issues. Perhaps a controlled gate. But what about security for the residents of the complex. As per a 5-0 vote by committee, the Design team will explore.
10. Final *caveat* that what we can actually build will depend on cost and *pro forma.* Extensive REVIT images presented at the meeting are still subject to change.
11. Meeting adjourned at 6.05 PM.

Material for June 19, 2019 Meeting

Friends:

I didn't realize that the date I picked was the same night as the Miramonte Neighborhood Meeting as I have been reminded by Ruth, Kim, and Mike. My apologies. Earlier that day is difficult for me and sounds tight for Mike.

So let's push it a week later and to our normal hour.

So…….We are **proposing our next meeting for 4.00 PM on Wednesday June 19 at the Ward 6 Council Office.**

Let's try another round of confirmations, please.

Corky Poster
Architect / Planner/ Principal

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From: Corky Poster
Sent: Friday, May 31, 2019 3:38 PM
To: beekerr2@netzero.net; Mike Anglin <mikea@lineandspace.com>; Kim Fernandez <kimfernandez72@gmail.com>; Denice Blake <johnden43@hotmail.com>; lisaerly@gmail.com; Brian and Lily McCarthy <mccarthybl@msn.com>
Cc: Ross Rulney <rossrulney@gmail.com>; Savannah McDonald <smcdonald@posterfrostmirto.com>; Corky Poster <cposter@posterfrostmirto.com>
Subject: Next Advisory Committee meeting

Friends:

We have been busy on the Monastery project on 2 fronts, based on comments from the previous Advisory Committee meetings. (The minutes of our May 1 meeting are attached).

1. We have submitted to the City of Tucson the next draft of the PAD and the HL (highlighted yellow means changes since our last submittal) They are available on-line at PRO for viewing at:

https://www.tucsonaz.gov/pro/pdsd/permitdetail/C9-19-06/12513068A
https://www.tucsonaz.gov/pro/pdsd/permitdetail/C9-19-07/12513068A

2. We also have been developing the drawings for the Monastery project having made a lot of progress on the new building and the garage and less progress on the Monastery itself. So we would like to share that material with you at our next meeting.

We are **proposing our next meeting for 4.00 PM on Wednesday June 19 at the Ward 6 Council Office.** We will work with Councilmember Kozachik to secure space at Ward 6. If there is nothing available we will fall back to Poster Frost Mirto. I will let people know about the final location, but I wanted to get the meeting on your calendars sooner rather than later.

Agenda:
1. Review of the PAD.
2. Review of the HL.
3. Review Design Development drawings for the Monastery site.
4. Schedule review moving forward.

Please let me know if you will be able to attend.

Corky Poster
Architect / Planner/ Principal

POSTER FROST MIRTO, INC.
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Design Advisory Committee Meeting Minutes
06.19.19, 4:00 - 6:00 PM, Ward 6 City Council Office

In attendance:
Design Advisory Committee (DAC): Kim Fernandez (Miramonte), Denice (Sam Hughes), Ruth (Miramonte)
Developing / Design team: Ross Rulney, Corky Poster, Savannah McDonald, Lucy Nielsen

Schedule
→ July 11th: looking for approval, approval with conditions, denial, NOT continuance
→ August 1st: Zoning Council meeting for PAD and historic landmark status
→ September 18th: Rezoning in front of zoning examiner
Outcome of Design Advisory Committee Involvement
Corky: When the time comes will the committee support, oppose, or take no stance on the strides made by the developer and design team to resolve issues brought up by Design Advisory Committee?
Ruth:
→ Concern about administrative process that led to the creation of the committee, disapproval of backdoor deals
→ Anticipating concern by Sam Hughes Neighborhood Association (those living on the Country Club side) regarding the height of the East structures at four stories rather than three
Kim:
→ Would like to have private committee member meeting to determine group's opinion on support.

East (Anderson) Pedestrian Access Point
DAC:
→ Desire to maintain welcoming appearance to Miramonte Neighborhood
→ Maintain parking for residents and guests of Miramonte (excluding Monastery residents)
→ Discourage overflow parking from apartments without involving City of Tucson to make a no-parking street
→ If a 'service only' entrance, who does that entail?
→ Amend language in PAD to specify exactly who can enter at the 'Controlled Pedestrian Access Point' on Anderson

D/D Team:
→ Necessary to maintain Anderson entrance to allow for servicing land-locked Monastery
→ Will amend language to specify controlled pedestrian *service* entrance only, not to be used by apartment residents
→ Parking along Anderson will remain uncontrolled, both resident of Miramonte Neighborhood and the apartments may use (but discouraged by lack of resident entrance point on Anderson)

Both parties content with language clarification in PAD and access point use.

Parking/ Transportation
D/D Team:
→ Parking garage has been lowered an entire level, widened slightly to the West.
→ Two access points to garage have been established: one on Country Club, one on Second.

DAC:
→ Unanimously very pleased with the lowering of the garage
→ Concern about Pedestrian safety on Second nearing garage
Ruth: Concern about noise of garbage trucks moving through site for neighbors on Hawthorne and Anderson

→ Is there enough parking for all the apartment units in addition to retail space? Aware that it follows regulation (one space per 400sqft) but worried about overflow parking in Miramonte Neighborhood.
- How many tables are in proposed restaurant and what is the structure covering said spaces?

D/D Team:
→ In agreement concerning pedestrian safety on second and noise of garbage trucks through site, will be addressed accordingly.
→ Following code of COT concerning parking, thought that it will be more than enough
→ Without increasing height of garage there is little opportunity to increase parking spaces on site
Corky: The young population is in the midst of a shift from a car-reliant lifestyle (ex: empty parking garage at The District on 6th Ave)
Ross: Projects in Oro Valley requesting less parking, car-reliance is depleting
→ Patio dining in restaurant space, only half covered by formal structure as of now. Covered walkway to dining area leads directly to garage

Both parties accepting of number of parking spaces without increasing height of parking garage as well as development of restaurant space with outdoor seating.

DAC:
→ Clarification of re-striping of Country Club
→ Concern with Traffic Impact Study regarding (1) 3rd St driveway (2) 2nd St and traffic coming from Calle Miramonte as well as apartments

D/D Team:
→ Re-stripe to five lanes in order to avoid traffic hold-ups southbound on Country Club
- Aligned entrances with alleys to avoid collision potential in center turn lane

→ 3rd St driveway refers only to existing roadway, no vehicular entrances into site from 3rd St
→ Working on exemption from COT Transportation office to redraw map that allows for potential to widen Country Club 100' (affecting both Monastery as well as 22 Sam Hughes Home)

Both parties agree that will likely never happen and map is antiquated.

Building Heights and Rooftop Structures
DAC:
→ Please Review building heights for all structures.
→ What rooftop shade structures are in question?
→ Visibility of rooftop patios on three story section of new construction on Anderson
- Can they see into neighborhood yards?
- Can the neighborhood see the patios?

→ Where is the bus stop that is currently at 3rd St and Country Club?

D/D Team:
→ Review building heights in relationship to grade changes as well as existing Monastery structure (all new buildings quite lower than existing 88' tower)
→ Existing ramada on Monastery is the only rooftop structure in the project

→ Review of Revit model using camera views assures DAC that the rooftop patios do not create any unsavory lines of vision to or from the homes in Miramonte
→ Bus stop moved further up Country Club to be closer to retail space and away from 3rd St bike path

Lighting
DAC: Express concern about the lighting along Anderson disrupting Miramonte Neighborhood

Corky: Introduces idea of LED lighting to create 'black line' to avoid light pollution into neighborhood

Accessibility
D/D Team: Increased site accessibility (in PAD drawings) through creating sunken courtyard with direct access to lower level amenities area.

Both parties express satisfaction with increased accessibility for residents as well as visitors to public space.

DAC members express interest in restriping 2nd St approaching Country Club to three lanes (right turn lane, left turn lane, opposing lane) as it is a major thoroughfare for Miramonte Neighborhood residents and now apartment residents. D/D Team agrees but clarifies it is out of the project scope and property boundaries, recommends proposing restriping to COT officials instead.

Outcome of Design Advisory Committee Involvement
All three attending members of Design Advisory Committee express independent support and satisfaction of the committee in creating design solutions more sensitive to the wants/ needs of the two Neighborhood Associations (Sam Hughes and Miramonte). Will discuss with other committee members.

Summary of Miramonte Neighborhood Development Mitigation Meeting with City Officials

June 3, 2019 Ward 6 Office 4:30-6:00

Compiled by Ruth Beeker

Present: Michael Ortega, City Manager; Albert Elias, Assistant City Manager; Diana Alarcon, Department of Transportation; Steve Kozachik, Ward 6 Council member; Ann Charles, Ward 6 Chief-of-staff; Kim Fernandez and Ruth Beeker, Miramonte Neighborhood Association Board representatives

Purpose: This preliminary meeting was in response to the document, *Impacts from Multiple Project Development in Miramonte Neighborhood***,** approved by the Miramonte Neighborhood Association Board, May 8, 2019. Discussion focused on City staff gathering information from Kim and Ruth as to areas of greatest concern:

Second Street, Country Club to Camino Miramonte

Continuous sidewalks for pedestrian safety

Rain harvesting/flood abatement

Calm/reduce traffic coming from the parking garage to the west and the rental housing to the east

Camino Miramonte, Speedway to Fifth Street

Narrowing of 40' width to provide a pedestrian pathway in the roadway, Second to Terra Alta

Special considerations for Terra Alta to Fifth: keep south exit at 5th Street as 2 lanes (right and left hand turn option); possibility of right-of way sidewalk to connect to Fifth Street sidewalk installation (Prop 407)?

Use of road surface variations, right-of-way features, neighborhood signage to enhance its appearance as a neighborhood street utilizing features compatible to nature theme of Miramonte Park @ Third and Richey

Traffic circle at Third Street Bike Route intersection; other means to slow traffic at other intersections?

Water harvesting/flood abatement to reduce rainwater flow into under-street pipe

Third Street, Country Club to Anderson

Impact of Benedictine opening for bikes and peds on north side

Need for safer bike and pedestrian way on south side—establish no parking zone?

Miramonte Neighborhood looks forward to the City of Tucson making a sufficient investment to address the mega impact which the Kivel Chroma and the Rulney Benedictine projects will make on the western portion of our area. We request that the City work closely with the neighborhood in exploring options.

……

To: Miramonte Neighborhood Association Board
From: Ruth Beeker, Kim Fernandez and Mike Anglin, Miramonte Representatives on the Benedictine Monastery Development Design Advisory Committee
Re: Report on the Final Meeting held June 20, 2019
The Benedictine Monastery Development Design Advisory Committee completed its work on June 20, 2019. Miramonte and Sam Hughes Neighbors Denice Blake, Kim Fernandez, and Ruth Beeker, met with Owner Ross Rulney and Corky Poster's architectural team at that time. They concluded that the relationship and coordination between the developer and the neighborhood representatives had been cordial and much improved over time as positions were clarified and modifications made.

Projected Schedule

- July 11, 2019—Appointment with Plan Review Sub-Committee of Tucson Pima County Historic Commission to assess Historic Landmark designation for the existing Monastery
- August 1, 2019—Zoning Examiner Public Hearings for Planned Area Development Rezoning and Historic Landmark Designation
- September 18, 2019--- Mayor/Council Meeting or Hearing on Planned Area Development Rezoning and Historic Landmark Designation as separate agenda items
- October 19, 2019---First date that construction can start dependent on M/C approval
  Construction has 3 components to be coordinated to be completed at same time
  new apartments—16 months
  existing Historic Buildings renovation and repurposing—8 months
  new parking garage—4 months
- Early 2021---completion of project

Street Interactions

- Country Club Road
  - Restriping from Third Street to Speedway to accommodate 5 lanes, 2 to the south, 2 to the north with a continuous center turn lane. Entrances to The Benedictine will be spaced in relationship to the Sam Hughes cross streets to avoid collisions
  - Straightening of the east side curb and sidewalk at the parking garage location
  - Relocating of the eastside bus-stop to be across from Second Street
  - 2 entrances/exits to The Benedictine property
  - All trash collections to be interior, trucks entering from the southernmost entry on Country Club and exiting only on Second Street; other regular service and emergency vehicles use Country Club entrances

- Second Street—Parking garage vehicle and sidewalk entrance/exit; suggested striping at the west intersection with Country Club to distinguish three traffic lanes, one for incoming traffic, one for left-hand turning exit and one for right-hand turning exit.

- Anderson Blvd.— one 6 foot wide, extra-tall gated entrance across from alley way between Third Street and Hawthorne Street with controlled, restricted use to authorized service and emergency personnel only
- Third Street---gated bike and pedestrian access point located east of the existing Third Street Bike Route dividers at Country Club Road

Parking

- On-site: 186 surface spaces on out-skirts of the property; 230 garage spaces.
- Assigned resident parking
- No parking restrictions on Anderson Blvd.

Design

- Elevations
    - Buildings facing Country Club (apartments, commercial north of Chapel on ground floor with arcade walkway, and parking garage) approximately 38 feet
    - Buildings on North and South side (apartments) approximately 54 feet; the existing grade descent of 10 feet, south to north, will impact appearance
    - Buildings on East side (apartments) approximately 44 feet

- Housing Units: 253 new-built, 34 repurposed
    - One-bedroom new construction apartment units (including any balcony or patio) approximately 700 sq. ft.; some units are 2-story lofts
    - Two-bedroom new construction apartment units (including any balcony or patio) approximately 1000 sq. ft.
    - Smaller residential units probable in repurposed convent
    - Approximate rental rates: slightly above $2/sq. ft.

- Features
    - Large graphic historical photographs displayed as wallpaper throughout the buildings
    - Retention of border oleanders and special landscape features within Historic Landmark boundaries; incorporation of landscaping within parklets, patios, and outdoor land use
    - Ramp access to the Monastery basement which will have amenities for residents
    - Lighting to meet “dark skies” criteria

Repurposing of the chapel for a public use yet to be determined

APPENDIX D – ZONING LETTER

T17SA00447

THE PLANNING CENTER
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October 25, 2017

Russlyn Wells
Zoning Administrator
City of Tucson
Planning and Development Services Department
201 North Stone Avenue, 3rd Floor North
Tucson, AZ 85701

Subject: Zoning Compliance Letter Request

Dear Ms. Wells:

This letter serves as a formal request to the City of Tucson by The Planning Center on behalf of Ross Rulney for a zoning determination letter as part of the site planning and due diligence process to clarify the dimensional standards for the O-3 zone and the functional open space requirements per the Flexible Lot Development – Maximum Density Option. Mr. Rulney is in the process of acquiring a parcel with two zoning designations (R-3 & O-3) for a proposed multi-family development.

We have provided a signature line below each of the two requests for interpretation.

O-3 Dimensional Standards Clarification

Per *Table 6.3-3.A: Dimensional Standards for the O-1, O-2, and O-3 Zones* of the Unified Development Code, the maximum building height within an O-3 Zone is twenty-five (25) feet for residential uses and forty (40) feet for non-residential uses. Per *Section 6.3.3.D* of the Unified Development Code, multi-family developments are classified as non-residential uses. Therefore, the maximum building height for the proposed multi-family development, a non-residential use, in the O-3 zone is forty (40) feet.

Concurrence: Russlyn Wells City of Tucson
Zoning Administrator

Functional Open Space Requirement Clarification

The purpose of the Flexible Lot Development (FLD) Option is "to provide greater flexibility for residential developments through the use of setback reductions, density allowances, etc. in exchange for on-site amenities such as trail dedications, additional functional open space, etc." The proposed multi-family development contemplates utilizing the FLD – Maximum Density Option in which additional functional open space will be provided in exchange for additional residential units. As the FLD option presents limitations on the allowable building heights within the O-3 zone, Mr. Rulney is interested in pursuing the FLD option only on the portion of the property that is currently zoned as R-3.

Recognizing that any permitted density allowances will be limited to the areas zoned as R-3 and functional open space must be provided when utilizing the FLD, the proposed multi-family project will function as a cohesive development with potential residential units in both the O-3 and R-3 zones. The request for this interpretation lies in the discussion of the location of the required functional open spaces.

Per *Section 8.7.3.F.2: Configuration and Location of Functional Open Space, "a) functional open space amenities may be configured as contiguous areas, but may also be incorporated into the design of other*

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elements on the site...; and c) Functional open space shall be conveniently located to and usable by the maximum number of the residential units on-site." Given that the proposed multi-family project will function as a single development with contiguous functional open space areas and residential units in both zones, the functional open space requirement may be co-located within the R-3 and O-3 zones in a manner that best serves all residents of the project, and does not need to be exclusively provided in the portion of the property utilizing the FLD option (i.e. the R-3 zone).

Concurrence: Russlyn Blues City of Tucson
Zoning Administrator

Thank you in advance for your review. Please let me know if we can provide more information or clarification for this request.

Sincerely,
THE PLANNING CENTER

Linda S. Morales, AICP
CEO

APPENDIX E – SITE PLANS AND ELEVATIONS

COUNTRY CLUB RD ELEVATION

SITE SECTION LOOKING WEST

ANDERSON BLVD ELEVATION

2ND STREET ELEVATION

3RD STREET ELEVATION

SITE SECTION LOOKING SOUTH

APPENDIX F –PUBLIC MEETING DOCUMENTATION (Pages not numbered in sequence)

POSTER
FROST
MIRTO

ARCHITECTURE
PLANNING
PRESERVATION

March 24, 2019

Dear Neighbor:

You are invited to attend the formal Neighborhood Meeting regarding a Planned Area Development (PAD) rezoning application and a Historic Landmark (HL) rezoning application for the Benedictine Monastery property at 800 North Country Club. On December 18, 2018 a Plan Amendment for the same property was approved by a 7-0 vote by the Mayor and City Council.

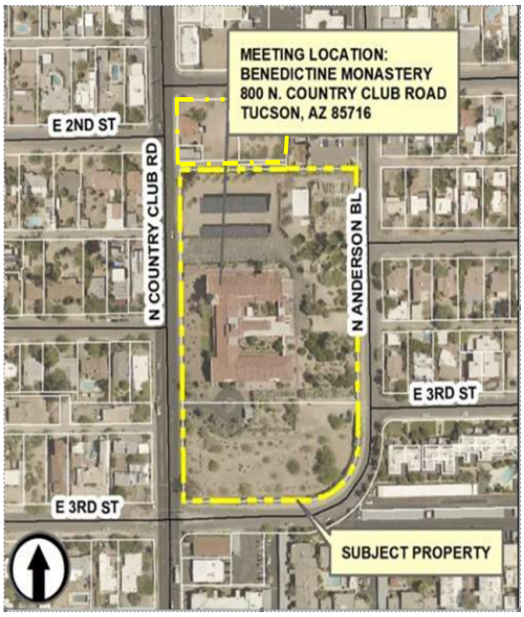
The proposed PAD will change the current Office/High Density Residential zoning (O-3 and R-3) (both of which already allow high density residential), to a "custom" zoning to allow new residential construction on site, neighborhood-scale commercial for the existing Monastery and for other portions of the site, and a parking structure. The proposed PAD will include very specific requirements for the site (much of which was already included in the approved Plan Amendment), such as a maximum height of 55' in the center of the site with lower heights along Country Club and Anderson, 255 new construction units, adaptive reuse of the Monastery for commercial and/or residential uses and other uses and site development.

In addition to the PAD, the proposed Historic Landmark rezoning (boundaries shown at right), originally initiated by the City of Tucson Mayor and Council, will provide City of Tucson regulatory Historic protection for the Monastery building.

Poster Frost Mirto and *Tucson Monastery LLC* will host a meeting to discuss both of the elements of the rezoning (PAD and HL), give an overview of the process, and address any questions or comments you may have. There will be time set aside separately for the PAD rezoning and HL designation in order to specifically address each of these processes fully with comments and discussion.

<u>Please join us:</u>

Wednesday, April 17, 2019 at 6:00 pm
Benedictine Monastery Chapel
800 North Country Club Road.
ENTER THROUGH THE CHAPEL DOORS.



In addition to comments at the Neighborhood Meeting, comments on the proposed Planned Area Development and the Historic Landmark may also be submitted to the City of Tucson Planning and Development Services Department, P.O. Box 27210, Tucson, AZ, 85726 or by phone at 520.791.5550. Additionally, comments may be made verbally and/or in writing at an upcoming Zoning Examiner public hearing to be formally noticed at a later date. If you cannot attend the April 17 meeting or have questions prior to April 17, please contact Corky Poster. call 520 861-6320 or email to (cposter@posterfrostmirto.com).

317 North Court Avenue
Tucson, Arizona 85701
PH 520.882.6310
FAX 520.882.0725
www.posterfrostmirto.com

DATE:

City of Tucson
Planning & Development Services
Rezoning Section
201 North Stone Avenue
PO Box 27210
Tucson, AZ 85726-7210

SUBJECT: Neighborhood Mailing Certification

ACTIVITY NUMBER: T19PRE0043

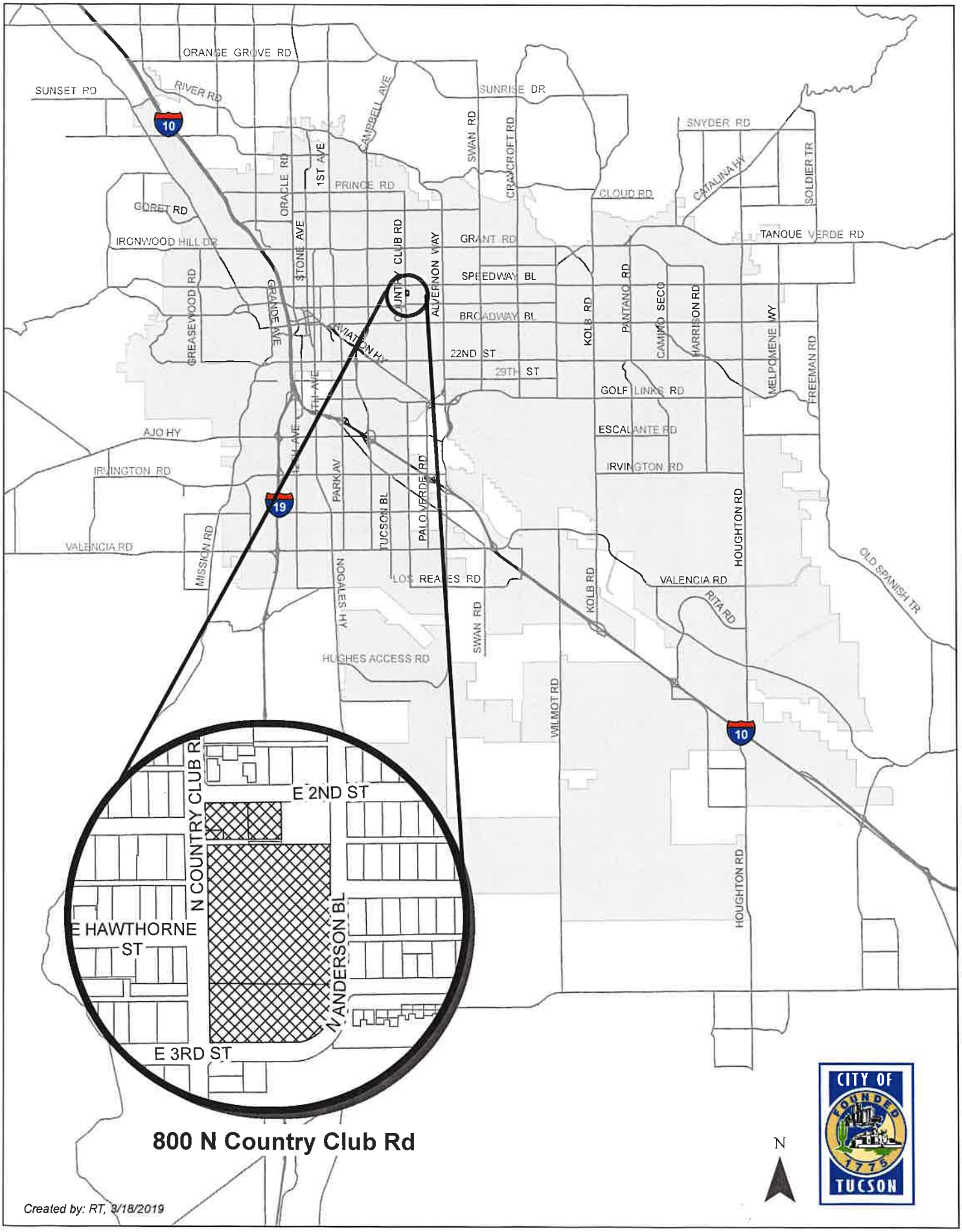
PROJECT LOCATION: 800 N COUNTRY CLUB RD

This serves to place on record the fact that on 3/28/19 (date) CHRIS LARIA (name), mailed notice of the 4/17/19 (date of meeting) neighborhood meeting such that the notice was received at least ten (10) days prior to the date of the meeting.

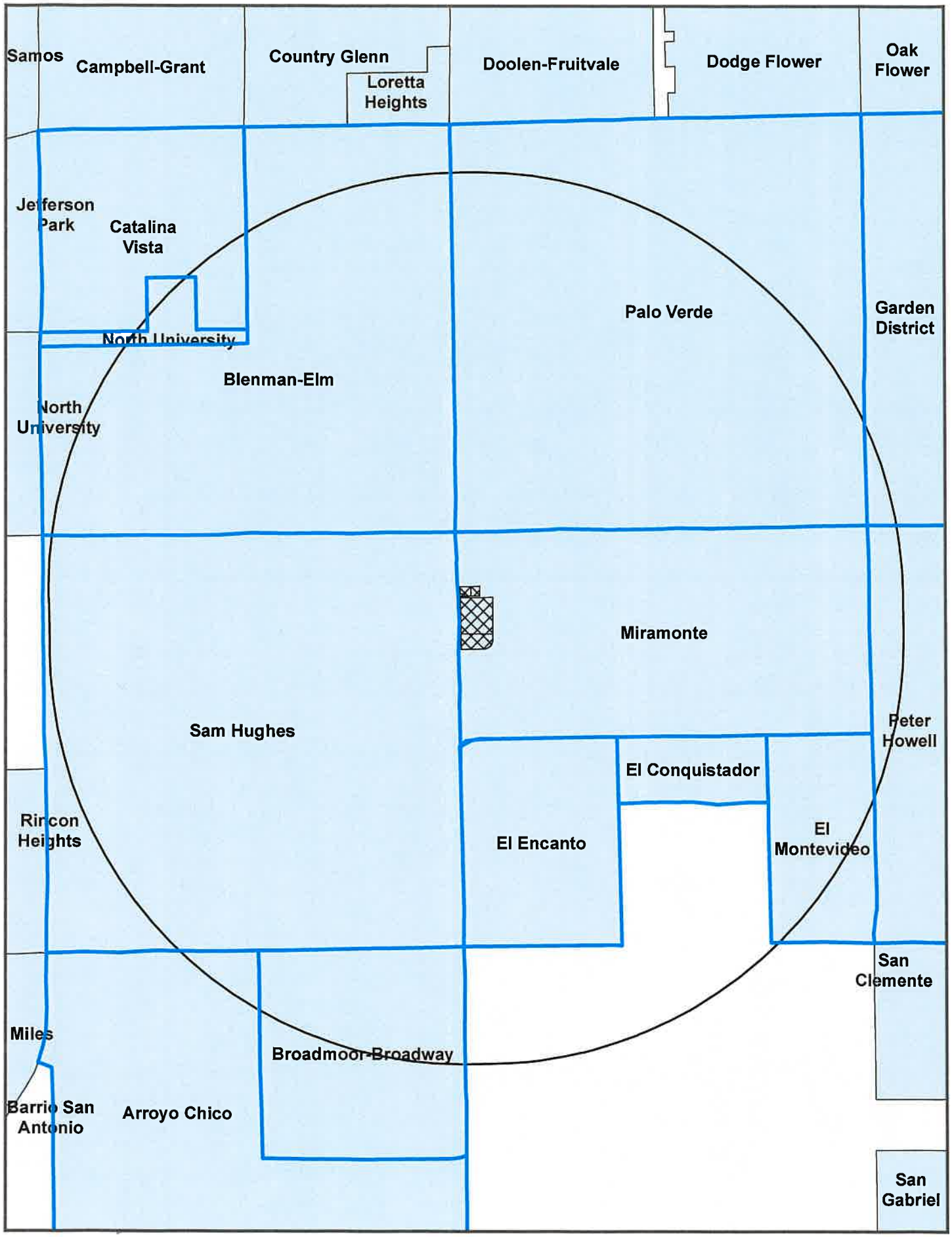
Signature: [signature] Date: 3/28/19

Attachment: copy of mailing labels

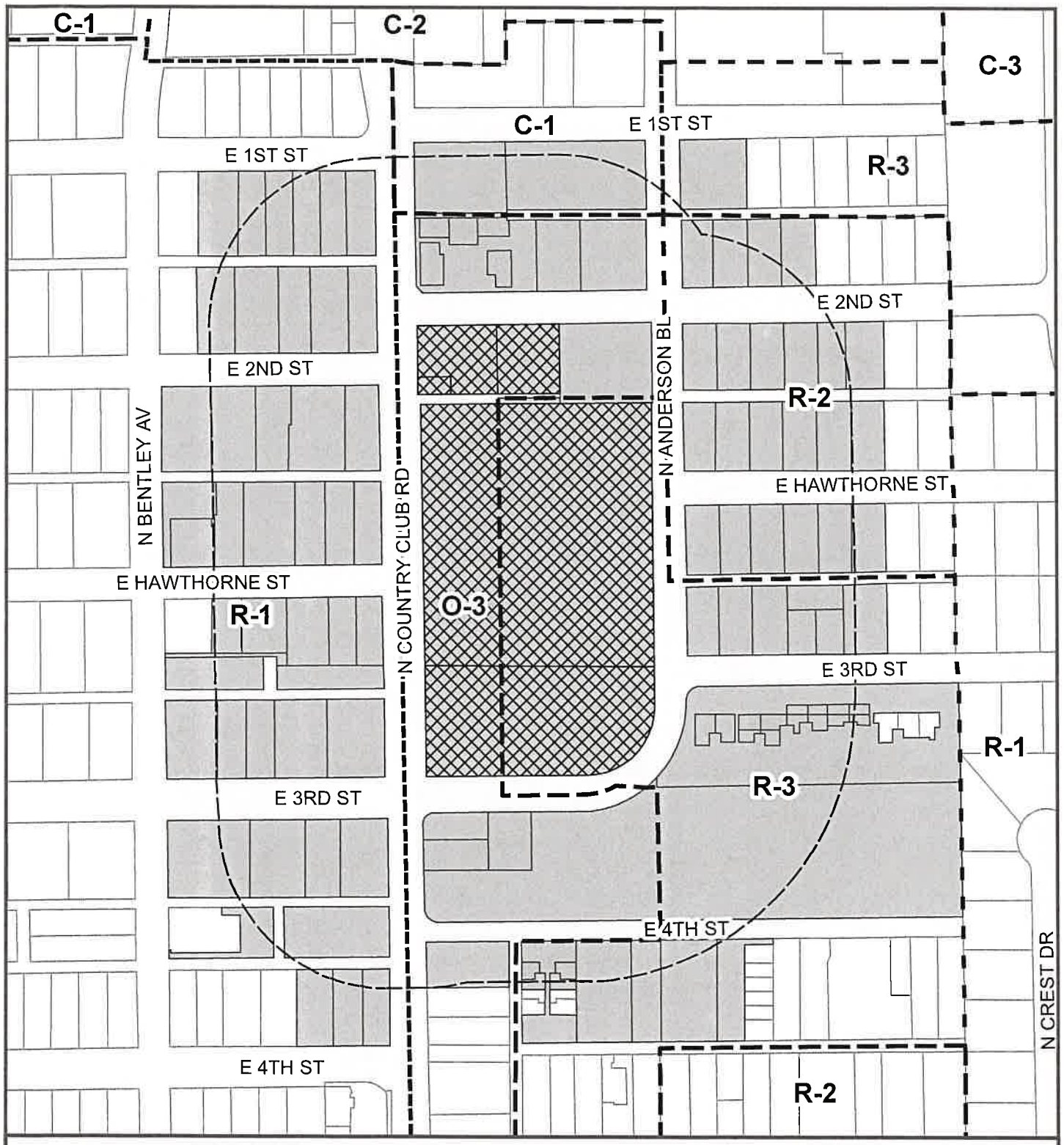
T19PRE0043


ORANGE GROVE RD
SUNSET RD
RIVER RD
SUNRISE DR
SNYDER RD
CAMPBELL AVE
SWAN RD
CRAYCROFT RD
ORACLE RD
1ST AVE
PRINCE RD
CLOUD RD
CATALINA HY
SOLDIER TR
GORET RD
IRONWOOD HILL DR
STONE AVE
COUNTRY CLUB RD
ALVERNON WAY
GRANT RD
TANQUE VERDE RD
SPEEDWAY BL
BROADWAY BL
GREASEWOOD RD
GRANDE AVE
AVIATION HY
22ND ST
29TH ST
KOLB RD
PANTANO RD
CAMINO SECO
HARRISON RD
MELPOMENE WY
FREEMAN RD
GOLF LINKS RD
ESCALANTE RD
AJO HY
IRVINGTON RD
PARK AV
TUCSON BL
PALO VERDE RD
HOUGHTON RD
VALENCIA RD
MISSION RD
NOGALES HY
LOS REALES RD
RITA RD
OLD SPANISH TR
SWAN RD
HUGHES ACCESS RD
WILMOT RD
N COUNTRY CLUB RD
E 2ND ST
E HAWTHORNE ST
N ANDERSON BL
E 3RD ST
800 N Country Club Rd
N
CITY OF TUCSON
FOUNDED 1775
Created by: RT, 3/18/2019

T19PRE0043


Samos
Campbell-Grant
Country Glenn
Loretta Heights
Doolen-Fruitvale
Dodge Flower
Oak Flower
Jefferson Park
Catalina Vista
North University
Blenman-Elm
North University
Palo Verde
Garden District
Miramonte
Sam Hughes
Peter Howell
El Conquistador
Rincon Heights
El Encanto
El Montevideo
San Clemente
Miles
Broadmoor-Broadway
Barrio San Antonio
Arroyo Chico
San Gabriel

T19PRE0043



Subject Property

Notification Area (300 ft. Radius)

Zone Boundaries

Properties Notified

Address: 800 N Country Club Rd.
Base Maps: Twp.14S Range 14E Sec. 9
Ward: 6

Feet
0 125 250
1 inch = 250 feet

N

Created by: RT, 3/18/2019

PLANNING & DEVELOPMENT SERVICES

201 N. Stone Avenue, 1st Floor Tucson, AZ 85701
Phone: 791-5550 Fax: 791-4340

RECEIPT

ACTIVITY #: T19PRE0043 **FEES RECEIPT #: R1903136**

Title: Benedictine Monastery PADLabels
Online Trans #:
Date: 03/13/2019
Time: 02:13 PM

Address:
800 N COUNTRY CLUB RD TUC

Legal:
SPEEDWAY PLACE S122.5' LOTS 1 2 & 4 BLK 6 & BLK 7 & ABAND HAWTHORNE ST & - 04047

Square Footage: 0
Valuation: $0.00
Composition Type: PREAPPLY
Construction Type:
Activity Description:

Applicant: CORKY POSTER
POSTER FROST MIRTO
317 N. COURT AVENUE 85701
520-861-6320

****

PAID BY:

Type	Method	Description	Amount
Payment	Check	16696	220.00

Notation: Pre PAD Labels

FEES PAID:

ACCOUNT CODE	DESCRIPTION	CURRENT PMTS
001-174-8602-01	PLAN - PUB NOTIFICATION	220.00

Issued by: SMONTES1 TOTAL: 220.00

APA BALANCE:

Jonathan Rothschild
Mayor
255 W. Alameda ST
Tucson, AZ 85701

Alice Roe
N.A.-Blenman-Elm
P.O. Box 42092
Tucson, AZ 85733

Michael Weingarten
N.A.-Broadmoor-Broadway
2702 E Arroyo Chico
Tucson, AZ 85716

Alison H. Jones
N.A.-Catalina Vista
300 N Sierra Vista Dr
Tucson, AZ 85719

Nicole Gerhart
N.A.-El Conquistador
3515 E. Calle Del Prado
Tucson, AZ 85716

Patricia Morales
N.A.-El Encanto Estates
3100 E Calle Portal
Tucson, AZ 85716

Rebecca Block
N.A.-El Montevideo
307 N Ridge Dr
Tucson, AZ 85716

Meg Johnson
N.A.-Garden District
PO Box 32384
Tucson, AZ 85751

Linda Dobbyn
N.A.-Miramonte
618 N Richey Blvd
Tucson, AZ 85716

Candice Filipek
N.A.-Palo Verde
Tucson, AZ

Les Pierce
N.A.-Arroyo Chico
2727 E. Beverly Drive
Tucson, AZ 85716

Leonora B Burkhart
N.A.-Blenman-Elm
P.O. Box 42092
Tucson, AZ 85733

David L Holder (1st VP)
N.A.-Broadmoor-Broadway
2617 E Croyden St
Tucson, AZ 85716

Alison M. Hughes
N.A.-Catalina Vista
2223 E Edison St
Tucson, AZ 85719

Margot Garcia
N.A.-El Encanto Estates
3100 E Calle Portal
Tucson, AZ 85716

Cyndi Amundson
N.A.-El Montevideo
Tucson, AZ

KristineYarter
N.A.-Garden District
P.O. Box 32384
Tucson, AZ 85751

Terence Borg
N.A.-Miramonte
3579 E 3rd St
Tucson, AZ 85716

Ronni Kotwica
N.A.-Palo Verde
3230 E Seneca
Tucson, AZ 85716

Dr. Margaret Drugay
N.A.-Peter Howell
P.O. Box 13314
Tucson, AZ 85732

Les Pierce
N.A.-Arroyo Chico
2727 E. Beverly Drive
Tucson, AZ 85716

Steve Morrison
N.A.-Blenman-Elm
Tucson, AZ

Barbara Becker
N.A.-Broadmoor-Broadway
2694 E Stratford Dr
Tucson, AZ 85716

Dan Schnoll
N.A.-Catalina Vista
2215 E Edison St.
Tucson, AZ 85719

Sarah Schram
N.A.-El Encanto Estates
3100 E Calle Portal
Tucson, AZ 85716

Hanna Miller
N.A.-El Montevideo
3762 E Calle De Soto
Tucson, AZ 85716

Lois Pawlak
N.A.-Garden District
PO Box 32384
Tucson, AZ 85751

Sam Behrend
N.A.-Miramonte
3205 E 3rd St
Tucson, AZ 85716

Steve Poe
N.A.-Palo Verde
Tucson, AZ

Suzanne Oviedo
N.A.-Peter Howell
Tucson, AZ

Oweta Josleyn
N.A.-Peter Howell
P.O. Box 13314
Tucson, AZ 85732

Rick Bell
N.A.-Sam Hughes
PO Box 42931
Tucson, AZ 85733

John S O'Dowd
N.A.-Sam Hughes
2819 E. Lisbon Pl
Tucson, AZ 85716

Richard Fimbres
Ward 5
4300 S. Park Av
Tucson, AZ 85714

Steve Kozachik
Ward 6
3202 E. 1st St
Tucson, AZ 85716

Expires 05/18/2019

125020670
SUMMIT RENTALS LLC
243 S CALLE DE MADRID
TUCSON, AZ, 85711-4132

125020770
GOULDEN EDWARD J & MARILYN J TR ATTN: GMAC MTG CORP OF PA TAX DEPT 100 WITMAR RD
PO BOX 963
HORSHAM, PA, 19044-2251

125031090
RILEY JOSEPH JR & KATHLEEN A JT/RS
3042 E HAWTHORNE ST
TUCSON, AZ, 85716-4136

125031110
BRODERICK TR ATTN: JAMES W & CYNTHIA S BRODERICK TR
3003 E 3RD ST
TUCSON, AZ, 85716-4124

12510053A
GUADALUPE LAND & INVESTMENT CO ATTN: SAGEWOOD PROPERTIES LLC
3901 E BROADWAY BLVD
TUCSON, AZ, 85711-3452

125101030
LA ROSE RICHARD M
77 VAN NESS AVE APT 506
SAN FRANCISCO, CA, 94102-6043

12513027A
KBS LLC ATTN: MARTIN LEE SHULTZ MD
1010 N COUNTRY CLUB RD
TUCSON, AZ, 85716-4239

125130280
QWEST CORP PROPERTY TAX DEPARTMENT ATTN: AMY BRILE
PO BOX 2599
OLATHE, KS, 66063-2599

125130600
CORNEY LOREN D & ANN BROOKS CP/RS
3213 E HAWTHORNE ST
TUCSON, AZ, 85716-4222

12513062A
AREVALO CLAUDIA
3210 E 2ND ST
TUCSON, AZ, 85716-4212

125130690
TUCSON MONASTERY LLC ATTN: SCOTIA GROUP MGMT LLC
6340 N CAMPBELL AVE STE 170
TUCSON, AZ, 85718-3182

125130710
TUCSON MONASTERY LLC ATTN: SCOTIA GROUP MGMT LLC
6340 N CAMPBELL AVE STE 170
TUCSON, AZ, 85718-3182

12514010A
BEAU SOLEIL PROPERTIES LLC
3360 W MONTGOMERY ST
TUCSON, AZ, 85742-9751

125020790
GOODHART DONNA BETH
3029 E 2ND ST
TUCSON, AZ, 85716-4112

125020810
O NEIL ROBERT E & KATHLEEN S Y STORE
3030 E 2ND ST
TUCSON, AZ, 85716-4113

125021280
JOHNSON NANCY J
3255 N STEWART AVE
TUCSON, AZ, 85716-1221

125021310
CITY OF TUCSON .

125031140
RITCHIE DENNIS C & AMANDA ROSS REVOC LIVING TR
3015 E 3RD ST
TUCSON, AZ, 85716-4124

12503118A
LEONARD DANIEL MATTHEW & HOLLY JENNIFER CP/RS
6211 N CANYON DR
TUCSON, AZ, 85704-6005

125100990
JELINEK FAMILY TRUST ATTN: ARTHUR J JELINEK TR
3218 E 3RD ST
TUCSON, AZ, 85716-4233

125101010
LEEDY SHERRY L
2004 BALTIMORE AVE
KANSAS CITY, MO, 64108-1914

125130240
QWEST CORP PROPERTY TAX DEPARTMENT ATTN: AMY BRILE
PO BOX 2599
OLATHE, KS, 66063-2599

12513056B
VAUGHN CHRISTIE & VAUGHN ARLENE F JT/RS
2601A DOVE CREEK LN
PASADENA, CA, 91107-1454

12513058A
KSIONDA G RORY
3220 E 2ND ST
TUCSON, AZ, 85716-4212

125140010
RODGERS INVESTMENT FUND I LTD PARTNERSHIP ATTN: RICHARD RODGERS
746 N COUNTRY CLUB RD
TUCSON, AZ, 85716-4506

125140610
J & G INVESTMENT LIMITED PARTNERSHIP ATTN: JOSEPH W & GWYNN R PATTERSON
2872 PALMER DR
SIERRA VISTA, AZ, 85650-5264

125020780
BLACKWELL JOHN L & BLAKE DENICE A TR
3025 E 2ND ST
TUCSON, AZ, 85716-4112

125020800
DELAIR JOHN R & O REILLY-DELAIR M MAUREEN REVOC TR
1225 E SUNSET DR STE 145 PMB 538
BELLINGHAM, WA, 98226-3554

125031130
BRODERICK TRUST ATTN: JAMES WILLIAM & CYNTHIA SCHMALZ BRODERICK TR
3003 E 3RD ST
TUCSON, AZ, 85716-4124

125031160
HILLIARD JOSEPHINE 5% & GENDA NEAL 95%
3033 E 3RD ST
TUCSON, AZ, 85716-4124

125101000
COSTELLO HEIDI BETH & WILSON STEVEN BENNETT
3220 E 3RD ST
TUCSON, AZ, 85716-4233

125101020
FINK BETTY M & WILLIAM CP/RS
3224 E 3RD ST
TUCSON, AZ, 85716-4234

125101340
CASA LA PAZ CONDOMINIUMS (FOR GIS PURPOSES ONLY)
, ,

125130230
AGARE LLC
PO BOX 30512
TUCSON, AZ, 85751-0512

12513055A
KSIONDA G RORY
3220 E 2ND ST
TUCSON, AZ, 85716-4212

12513057B
FRANKS ROSS L & KROHN BETTINA A CP/RS
PO BOX 3893
RANCHO SANTA FE, CA, 92067-3893

125130770
CUMMINGS SCOTT J
323 E 8TH ST # 230
TUCSON, AZ, 85705-8512

125140020
DAY JOHN W
720 N COUNTRY CLUB RD
TUCSON, AZ, 85716-0000

125140600
BIDEGAIN AARON T & RENEE M CP/RS
3124 E 4TH ST
TUCSON, AZ, 85716-4508

12502015A
APOSTLE MATTHEW LLC
3161 E TERRA ALTA BLVD
TUCSON, AZ, 85716-4515

125020680
MORGAN MICHAEL D
2509 N CAMPBELL AVE PMB 118
TUCSON, AZ, 85719-3304

125020760
KORN JANE BYEFF
5414 S SAYBROOK LN
SPOKANE, WA, 99223-9123

12502083A
HERZOG STEVEN P
3024 E 2ND ST
TUCSON, AZ, 85716-4113

125020890
STEPHENS JACOB H
3033 E HAWTHORNE ST
TUCSON, AZ, 85716-4135

125021260
THOMPSON MARY K
3034 E HAWTHORNE ST
TUCSON, AZ, 85716-4136

12503126A
JOHNSON FRANK M & BRADLEY FAMILY TR 1/3 PARSONS FRANK M 1/3 ATTN: DAVID & PATRICIA BRADLEY TR
3008 E 3RD ST
TUCSON, AZ, 85716-4125

125100600
762 COUNTRY CLUB LLC
6510 E MIRAMAR DR
TUCSON, AZ, 85715-3119

125100970
FOGELSONG JEAN M SURVIVORS TR
3214 E 3RD ST
TUCSON, AZ, 85716-4233

125101040
CHANDLER JOHN CHRISTOPHER
3228 E 3RD ST
TUCSON, AZ, 85716-4234

12513027B
QWEST CORP PROPERTY TAX DEPARTMENT ATTN: AMY BRILE
PO BOX 2599
OLATHE, KS, 66063-2599

125130450
HARD PROPERTY MANAGEMENT LLC
2231 E CALLE LUSTRE
TUCSON, AZ, 85718-4926

12513059A
WHEELER DANIEL G & CARMEN H CP/RS
3212 E 2ND ST
TUCSON, AZ, 85716-4212

125130810
DANIELS TIMOTHY J
3220 E HAWTHORNE ST
TUCSON, AZ, 85716-4223

125130870
THIRD STREET INVESTORS LLC ATTN: ROBERT DAVIS
3211 E 3RD ST
TUCSON, AZ, 85716-4215

125140120
PUEBLO CAPITAL LLC
2011 S HOWARD STRA
TUCSON, AZ, 85713-1442

125020710
FIRST STREET PROPERTY LLC
20 CARMEL HTS
WAPPINGERS FALLS, NY, 12590-3415

125020720
GOORDMAN JOHN MICHAEL
3014 E 1ST ST
TUCSON, AZ, 85716-4107

12502086A
BARTZ ERIKA J
5131 N SOLEDAD PRIMERA
TUCSON, AZ, 85718-4822

12502087C
COOK FAMILY TR ATTN: CHARLES R & ELIZABETH G COOK TR
1305 S GERTRUDA AVE
REDONDO BEACH, CA, 90277-5127

125031300
D ANTONIO JAMES
751 N COUNTRY CLUB RD
TUCSON, AZ, 85716-4505

125031310
FUENTEVILLA MIGUEL & SOTINSKY SONYA CP/RS
2810 E 4TH ST
TUCSON, AZ, 85716-4422

125100660
TUCSON MONASTERY LLC
6340 N CAMPBELL AVE STE 170
TUCSON, AZ, 85718-3182

125100930
BEATRICE MASON
1665 E 18TH ST STE 122
TUCSON, AZ, 85719-6800

125130300
GAILLEE INVESTMENT CO INC ATTN: MARTIN SCHULTZ
1010 N COUNTRY CLUB RD
TUCSON, AZ, 85716-4239

125130310
RRN INC
746 N COUNTRY CLUB RD
TUCSON, AZ, 85716-4506

125130480
ALCALDE PROPERTIES LLC
3150 E CERRADA LOS PALITOS
TUCSON, AZ, 85718-4244

125130630
KOSKY VITOTAUS J & DOLORES K TR
3202 E 2ND ST
TUCSON, AZ, 85716-4212

12513068A
TUCSON MONASTERY LLC
6340 N CAMPBELL AVE STE 170
TUCSON, AZ, 85718-3182

125130840
DAVIS ROBERT
3211 E 3RD ST
TUCSON, AZ, 85716-4215

12513085A
RAGLOW GREGORY J & JOYCE M CP/RS
3202 E HAWTHORNE ST
TUCSON, AZ, 85716-4223

125140850
HILL BARRIO LLC
300 W CHIHUAHUA ST
SILVER CITY, NM, 88061-4819

12502085A
ALBRECHT HELMUT HEINRICH & WOOD-ALBRECHT GAY A
3008 E 2ND ST
TUCSON, AZ, 85716-4113

125020910
RICKEL CATHY R & DEL CP/RS
3051 E HAWTHORNE ST
TUCSON, AZ, 85716-4135

125021240
EVANS GALEN C
3050 E HAWTHORNE ST
TUCSON, AZ, 85716-4136

125031100
CITY OF TUCSON

125031320
MARTIN MAXWELL E G
3039 E 4TH ST
TUCSON, AZ, 85716-4425

125100950
DEHART SUSAN J
3210 E 3RD ST
TUCSON, AZ, 85716-4232

125130250
AGARE LLC 37 INT & TACC INC 17TH & BROCKMAN FRED E & ROCHELLE H FAMILY TR 17TH ET AL
PO BOX 30512
TUCSON, AZ, 85751-0512

125130290
BRICKMAN FRED E & ROCHELLE H TR
3720 N ALLWOOD PL
TUCSON, AZ, 85750-2303

12513054A
ZAWADA SEBASTIAN LIVING TR
3334 E POPINAC LOOP
TUCSON, AZ, 85716-0000

125130610
CASA MIRAMONTE LLC
814 S 3RD AVE
TUCSON, AZ, 85701-3202

125130700
TUCSON MONASTERY LLC ATTN: SCOTIA GROUP MGMT LLC
6340 N CAMPBELL AVE STE 170
TUCSON, AZ, 85718-3182

125130780
H E ASSET MANAGEMENT LLC
1311 E CONDESA SEGUNDA
TUCSON, AZ, 85718-5704

125130830
HUBMAN DONALD G
3217 E 3RD ST
TUCSON, AZ, 85716-4215

125130890
THIRD STREET INVESTORS LLC ATTN: ROBERT DAVIS
3211 E 3RD ST
TUCSON, AZ, 85716-4215

125140650
FOSTYK MICHAEL J
204 WOODRIDGE CT
CANONSBURG, PA, 15317-9500

12502014A
KNIGHT AMY P
3045 E 1ST ST
TUCSON, AZ, 85716-4106

12502082A
BECHERER MICHAEL E & ELAINE W CP/RS
3028 E 2ND ST
TUCSON, AZ, 85716-4113

12502084A
GORDON JENNIFER ROTH & DEREK ROTH CP/RS
3020 E 2ND ST
TUCSON, AZ, 85716-4113

125020900
ROMEO ANGELO M & KEWITZ VERONICA R CP/RS
3039 E HAWTHORNE ST
TUCSON, AZ, 85716-4135

125021250
RILEY JOSEPH H JR & KATHLEEN A JT/RS
3042 E HAWTHORNE ST
TUCSON, AZ, 85716-4136

125021270
GROVER JANE MASON TR
3026 E HAWTHORNE ST
TUCSON, AZ, 85716-4136

12503119A
NUNEZ KIMBERLY A
799 N COUNTRY CLUB RD
TUCSON, AZ, 85716-4505

125031220
KREAG JASON & BUCH VANESSA CP/RS
3020 E 3RD ST
TUCSON, AZ, 85716-4125

125031330
NORTH WILLIAM E & JOYCE C
3031 E 4TH ST
TUCSON, AZ, 85716-4425

125100940
VAN OSTRAND TIMOTHY
3208 E 3RD ST
TUCSON, AZ, 85716-4232

125100960
THOMAS BONNIE L
51 ARGUELLO BLVD APT 5
SAN FRANCISCO, CA, 94118-1445

125100980
GIFFORD CAROL A TR
3216 E 3RD ST
TUCSON, AZ, 85716-4233

125130420
CHAI RICHARD & CHAI GABRIELA JT/RS
3219 E 2ND ST
TUCSON, AZ, 85716-4211

125130530
DE LUCA VINCENT J & DANESE C REVOC TR
3231 E HAWTHORNE ST
TUCSON, AZ, 85716-4222

125130790
LA PORTE GAYLE R
3226 E HAWTHORNE ST
TUCSON, AZ, 85716-4223

125130820
MONKS TERRENCE J & LAU SERRINE S & MONKS SARAH L ALL JT/RS
4951 N AVENIDA DE VIZCAYA
TUCSON, AZ, 85718-6083

125130880
THIRD STREET INVESTORS LLC ATTN: ROBERT DAVIS
3211 E 3RD ST
TUCSON, AZ, 85716-4215

125130900
CHAPEL HOLDINGS LLC
PO BOX 40070
TUCSON, AZ, 85717-0070

125140640
A JUICY TR ATTN: C J VOHS TR
3114 E 4TH ST
TUCSON, AZ, 85716-4508

125020690
CARO ERIC
3034 E 1ST ST
TUCSON, AZ, 85716-4107

125020700
MUELLER FAMILY TR ATTN: PHILIP G & CYNTHIA R MUELLER TR
3028 E 1ST ST
TUCSON, AZ, 85716-4107

12502087D
LIANG MING & WANG JINHUA & LIANG CHEN & GALLIEN KATHRYN
940 N BENTLEY AVE
TUCSON, AZ, 85716-4199

125020880
SCHELBLE JAMES M & MARION S JT/RS
3025 E HAWTHORNE ST
TUCSON, AZ, 85716-4135

12503127B
PALMOUR ROBERT E & KELLY E CP/RS
730 N BENTLEY AVE
TUCSON, AZ, 85716-4127

125100640
762 COUNTRY CLUB LLC
6510 E MIRAMAR DR
TUCSON, AZ, 85715-3119

125100650
PATCH FAMILY TR ATTN: JEFFREY C & ROBIN R PATCH TR
6571 E PLACITA ELEVADA
TUCSON, AZ, 85750-1200

125100910
WHITE HARRISON C & COOPER LYNN A JT/RS
3202 E 3RD ST
TUCSON, AZ, 85716-4232

125100920
KEAN FAMILY LIVING TR ATTN: LARRY K & KIMBERLY D KEAN TR
3204 E 3RD ST
TUCSON, AZ, 85716-4232

125130320
TACC INC
1002 N COUNTRY CLUB RD
TUCSON, AZ, 85716-4239

125130330
TACC INC
8414 E CAMBRIA DR
TUCSON, AZ, 85730-2614

125130460
3207 EAST SECOND STREET LLC
1861 N KOLB RD
TUCSON, AZ, 85715-4900

125130470
CITY OF TUCSON .
' '

125130640
SHELTON W DANIEL & TANA CP/RS
5420 N CALLE LA CIMA
TUCSON, AZ, 85718-4922

12513065A
WEST SEATTLE 37 INVESTORS LLC
12100 W OLYMPIC BLVD STE 350
LOS ANGELES, CA, 90064-1049

12513085B
WEBSTER RICHARD C JR & THERESA M CP/RS
3208 E HAWTHORNE ST
TUCSON, AZ, 85716-4223

125130860
BEHREND SAMUEL H & O NEIL MARY ANN JT/RS
2790 W PLACITA SOMBRA CHULA
TUCSON, AZ, 85745-7051

12514013A
3160 FOURTH STREET LLC
412 N 6TH AVE
TUCSON, AZ, 85705-8327

125140680
LA QUERENCIA HOMEOWNERS ASSN
,,

Expires 05/28/2019

POSTER
FROST
MIRTO

ARCHITECTURE
PLANNING
PRESERVATION

Formal Neighborhood Pre-Submittal Meeting re: Planned Area Development (PAD) rezoning application and a Historic Landmark (HL) rezoning application for the Benedictine Monastery

800 North Country Club *6:00 PM* *Wednesday, April 17, 2019*

AGENDA:

1. Project History and Introduction
2. Review of proposed Benedictine Monastery Historic Landmark Rezoning
3. Comments and Questions

4. Review of proposed Benedictine Monastery Planned Area Development (PAD)
5. Comments and Questions

6. Next steps

Additional Comments:

- Please write on back and turn in.
- Or send email to: (cposter@posterfrostmirto.com)
- Or mail to City of Tucson Planning and Development Services Department, P.O. Box 27210, Tucson, AZ, 85726 or by phone at 520.791.5550
- 1st Draft PAD and HL Submittal is available at: https://www.tucsonaz.gov/pro/pdsd/permitdetail/RZ19-001/12513068A

317 North Court Avenue
Tucson, Arizona 85701
PH 520.882.6310
FAX 520.882.0725
www.posterfrostmirto.com

POSTER
FROST
MIRTO

ARCHITECTURE
PLANNING
PRESERVATION

Formal Neighborhood Meeting re:
Planned Area Development (PAD) rezoning application and a Historic Landmark (HL) rezoning application for the Benedictine Monastery

800 North Country Club, Tucson Arizona *6:00 PM* *Wednesday, April 17, 2019*

SIGN-IN SHEET

Name	***Preferred Contact (email or phone)***
John F Wells	520-404-0596
RALPH STILES	520-299-7562
CHUCK BAYLES	520-207-2833
Nancy Cook	fincadesonorta@cox.net 325-4698
Marianne Bernsen	520 971-5596
Nancy DeFeo	520-798-1265
Celestino Fernández	349-6757
Claire O'Connor	tclaire.oconnor@gmail.com
Ken Plattner	Kenplattner.fr@gmail.com
Peter Andersen	
Kathleen McLaughlin	jmcl.2@netzero.net
JEAN-PAUL DIERNY	JPDIERNY@YAHOO.COM
PETER GAVIN	
MICHAEL BECHERER	MBECHERER@SWAIMAIA.COM
Denice Blake	johnden43@hotmail.com
Chris Hetler	chrishetler@yahoo.com
Henrietta Barassi	hbarassi@outlook.com
Ellen Adelstein	tucsonan@aol.com

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Tucson, Arizona 85701
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Formal Neighborhood Meeting re:
Planned Area Development (PAD) rezoning application and a Historic Landmark (HL) rezoning application for the Benedictine Monastery

800 North Country Club, Tucson Arizona *6:00 PM* *Wednesday, April 17, 2019*

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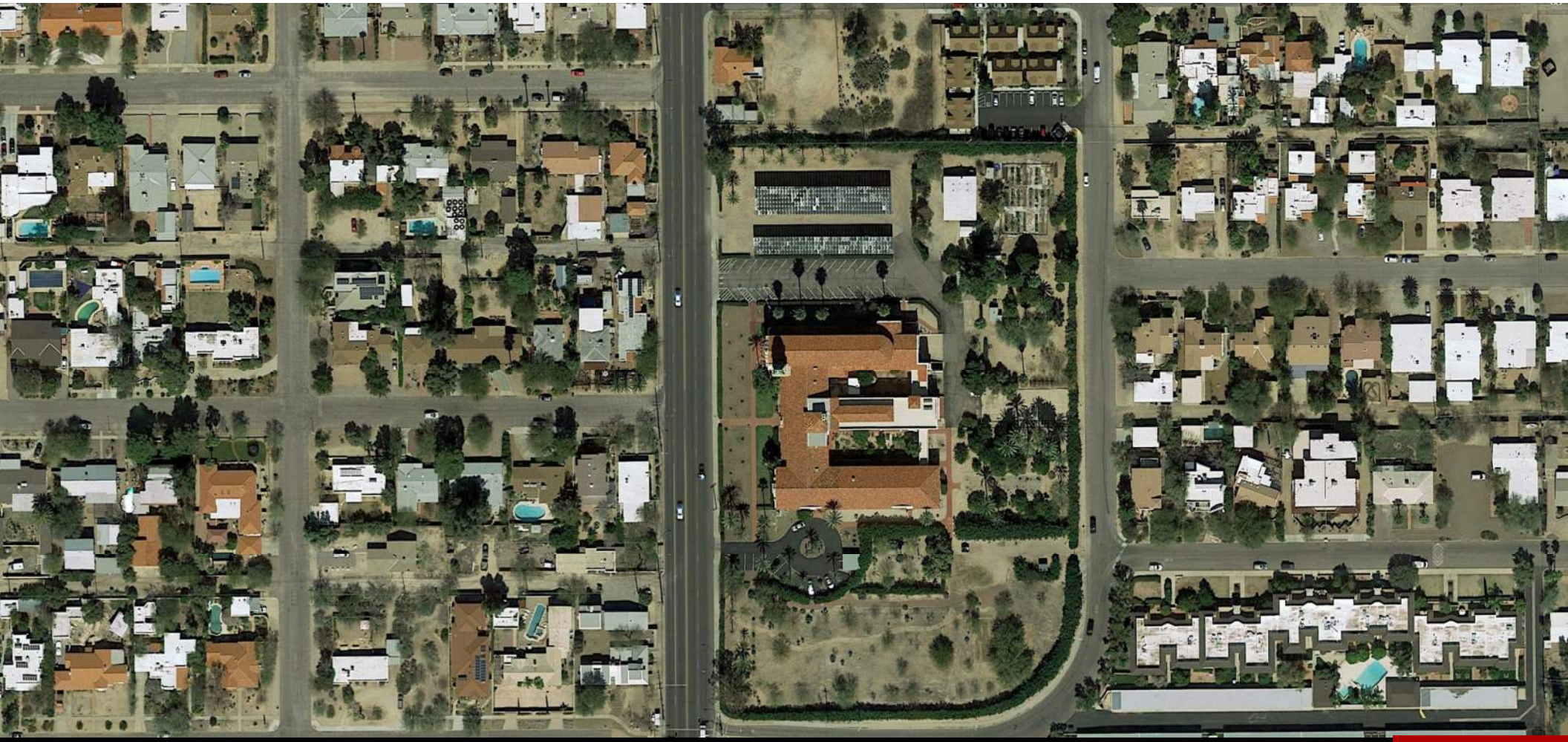

Benedictine Monastery Development: P.A.D. & HL REZONING; FORMAL NEIGHBORHOOD MEETING

April 17, 2019

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We are here tonight to discuss two topics: the HL rezoning to preserve and protect the Benedictine Monastery and the PAD rezoning to develop the site

This is a required pre-submittal Neighborhood Meeting to gather input and answer questions prior to the formal PAD & HL rezoning submittal to the City of Tucson.

In 45 years of work as Tucson leading preservation architects, Poster Frost Mirto has learned that saving buildings is the easier part of preservation.

Finding contemporary sustainable economic uses is the hard part.

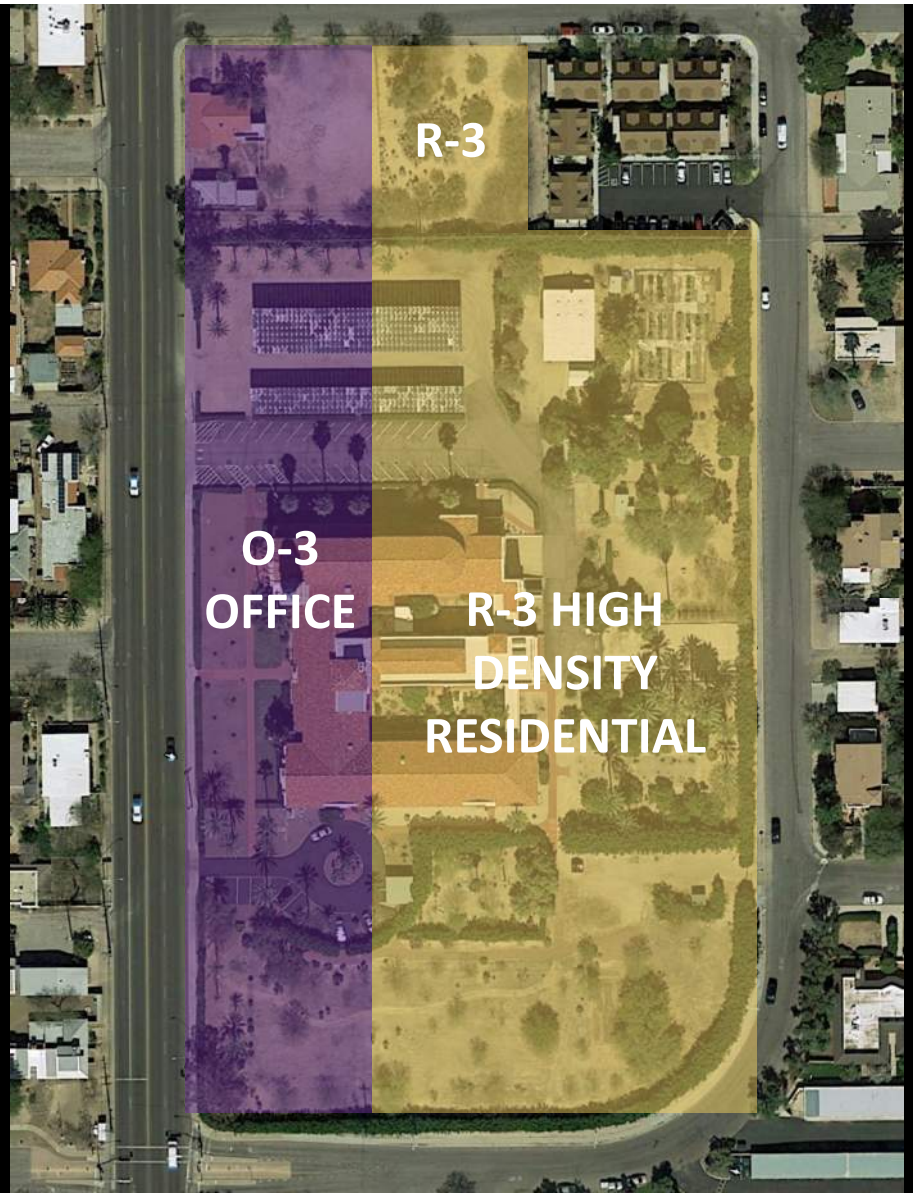
111

235 S. Church

But first some background to put tonight's meeting in context.

PROJECT TIMELINE

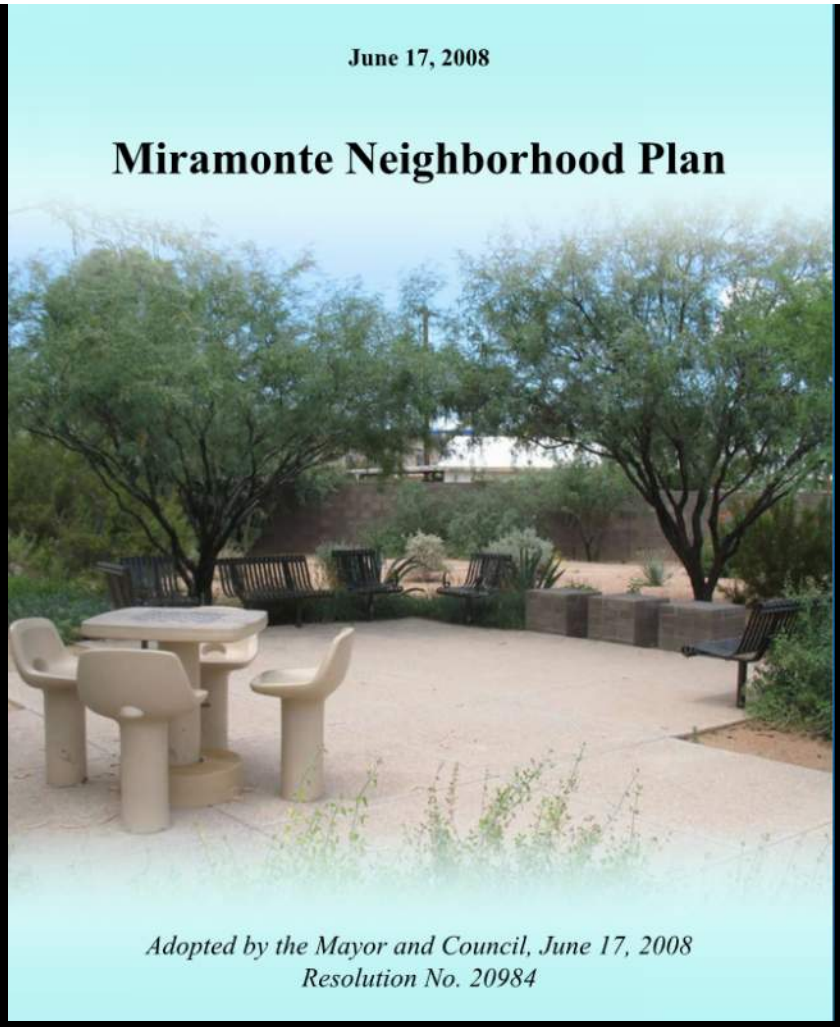
1. April 15, 2017:	Real Estate Brochure soliciting purchaser for Benedictine Monastery
2. September 17, 2017:	Ross Rulney signs purchase-agreement for Benedictine Monastery
3. Nov./Dec., 2017:	Initial meetings with neighbors at Ward 6
4. December 13, 2017:	Benedictine Monastery: Concept presentation to Ward 6/Miramonte. Decision made to proceed with a PAD instead of under-lying zoning
5. January 2018:	Design development based on December 13, 2017 meeting
6. February 9, 2018:	Meeting with neighbors at Ward 6
7. February 26, 2018:	Close of escrow in Rulney purchase on Benedictine Monastery
8. February 27, 2018:	Meeting with neighbors at Ward 6
9. March 28, 2018:	Informal community meeting at Monastery Chapel presenting preliminary ideas on the Monastery development. 250-300 attend
10. March 30, 2018:	Meeting with Ward 6 Councilmember
11. April 20, 2018:	Meeting with City of Tucson staff regarding schedule and submissions
12. May 22, 2018:	City Council initiates Historic Landmark designation for Monastery
13. June 28, 2018:	Formal (and required) Plan Amendment Neighborhood Meeting at Monastery Chapel. 150-200 attend
14. July 7, 2018:	Plan Amendment Application filed with the City of Tucson
15. July 20, 2018:	Plan Amendment Application Accepted by City of Tucson
16. August 7, 2018:	Plan Amendment Application Revised to include newly-acquired parcel north of Monastery site (Country Club and 2nd Street)
17. September 12, 2018:	Planning Commission Study Session re: proposed Plan Amendment (Study Session was continued with a request by Commission to negotiate with neighbors)
18. September 19, 2018:	Negotiation with neighbors at Ward 6
19. September 27, 2018:	Negotiation with neighbors at Ward 6
20. October 4, 2018:	Negotiation with neighbors at Ward 6
21. October 5, 2018:	Signed Joint Statement between Neighbors for Reasonable Monastery Development and Tucson Monastery LLC regarding Plan Amendment (See Appendix A)
22. October 10, 2018:	Planning Commission Study Session Continued. Public Hearing set.
23. November 15, 2018:	Planning Commission Public Hearing. No recommendation.
24. December 18, 2018:	Mayor & Council Public Hearing on Plan Amendment. Approved 7-0.
25. January 5, 2019:	Submission to COT P & DSD of PAD 1st Draft for Courtesy Review
26. February 26, 2019:	First Design Advisory Committee meeting
27. April 3, 2019:	Second Design Advisory Committee meeting

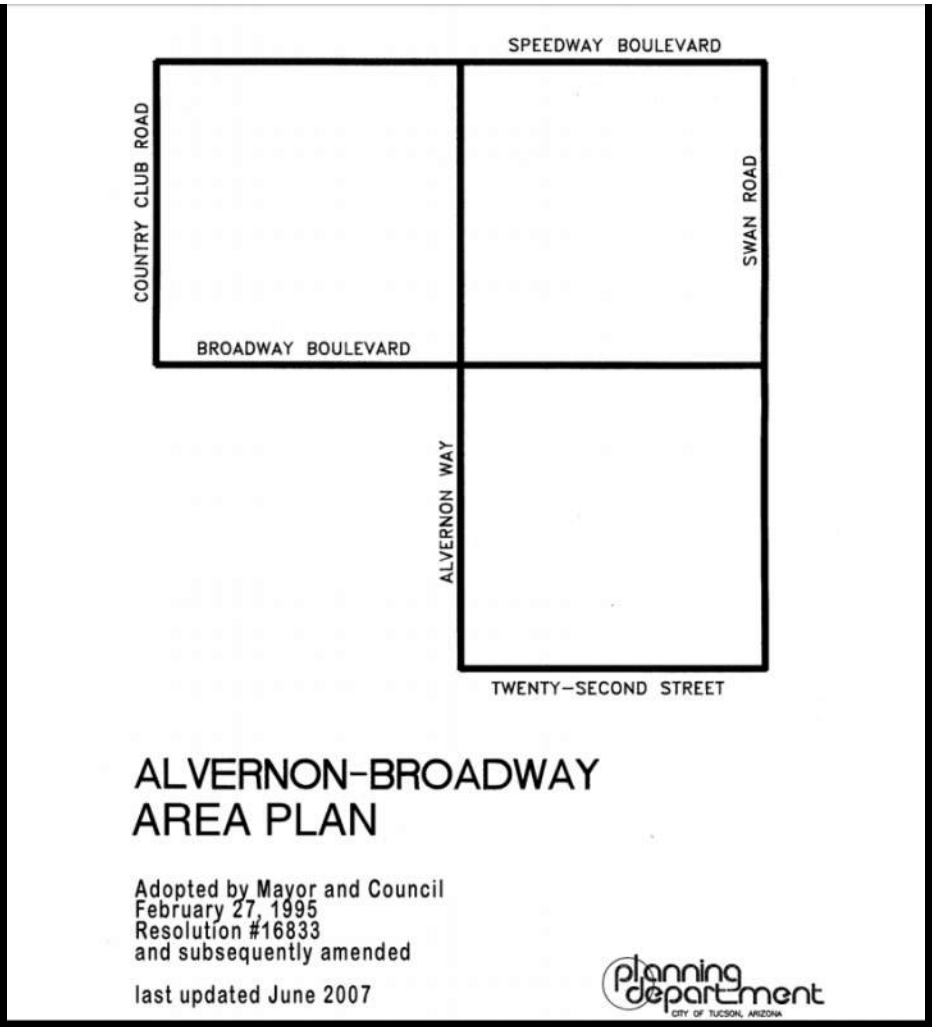


UNUSUAL EXISTING
COT ZONING
250 UNITS ALLOWED

EXISTING COT ZONING ALLOWABLE HEIGHT

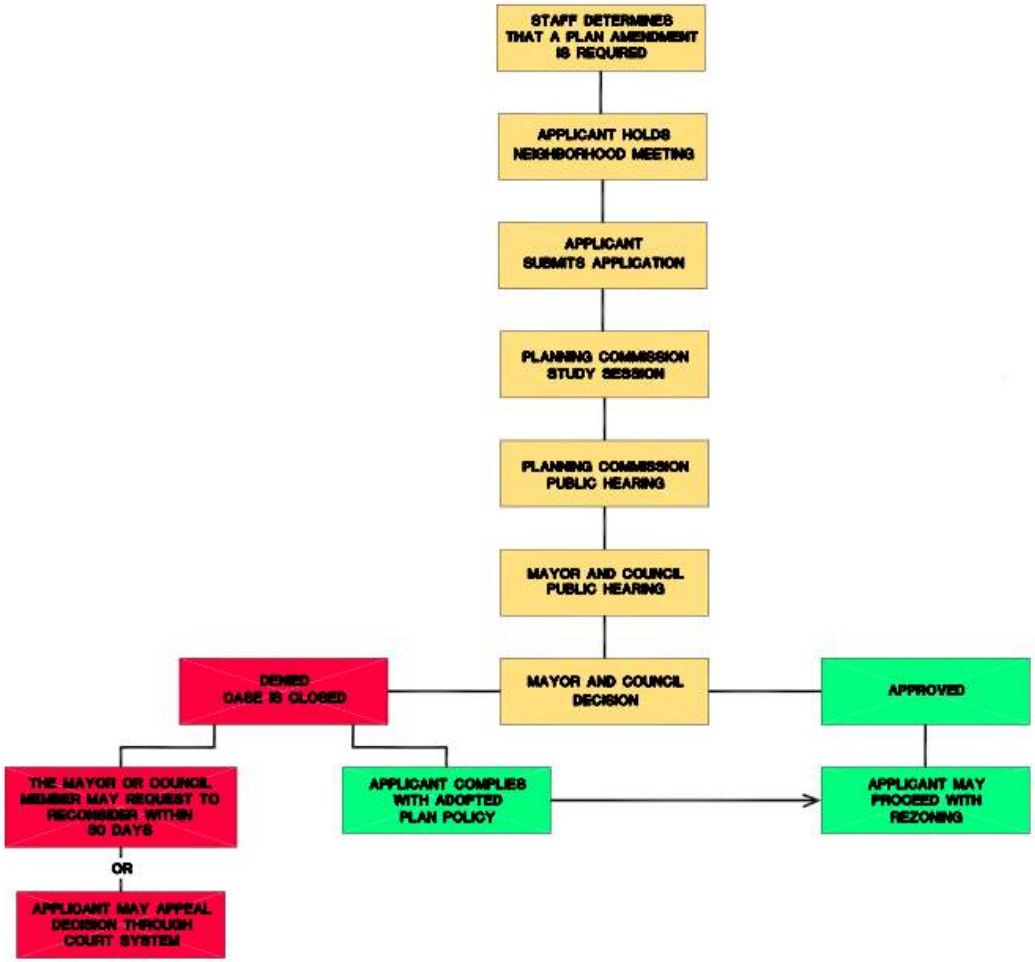
To do the quality project we envision, we have chosen to prepare a PAD to make modest changes to the existing zoning.





But that first required Plan Amendments

Plan Amendment Process



After lengthy negotiations with neighborhood representatives, on December 18, 2018, the Mayor & Council approved a Monastery Plan Amendment, 7-0

What progress did we make between March 28, 2018 and April 19, 2019?

Project presented March 28, 2018.

MARCH 28, 2018 PROPOSAL

- No Historic Protection
- Heights of 88’, 55’, & 44’ (compared to allowable 40’)
- Derelict north property with abandoned house
- Commercial uses in Monastery
- All surface parking
- The same number of new units as allowed in underlying zoning (222)
- No design review

DECEMBER 18, 2018 AGREEMENT

- Historic Landmark proposed
- Heights of 55’, 44’ and 33’ (compared to allowable 40’)
- Rulney acquired north property; Demolished abandoned house
- Mix of uses in Monastery
- Added parking in structure
- The same number of new units as allowed in underlying zoning (255)
- Design advisory committee
- Public use in Chapel
- Group Dwelling (student) prohibited
- No Miramonte auto or ped entries
- Save the oleanders

There are two formal parts to this meeting for neighborhood review and comment.

1. Historic Landmark Rezoning (HL)
2. P.A.D. Rezoning

HISTORIC LANDMARK REPORT

Property Description

Physical Appearance and Characteristics

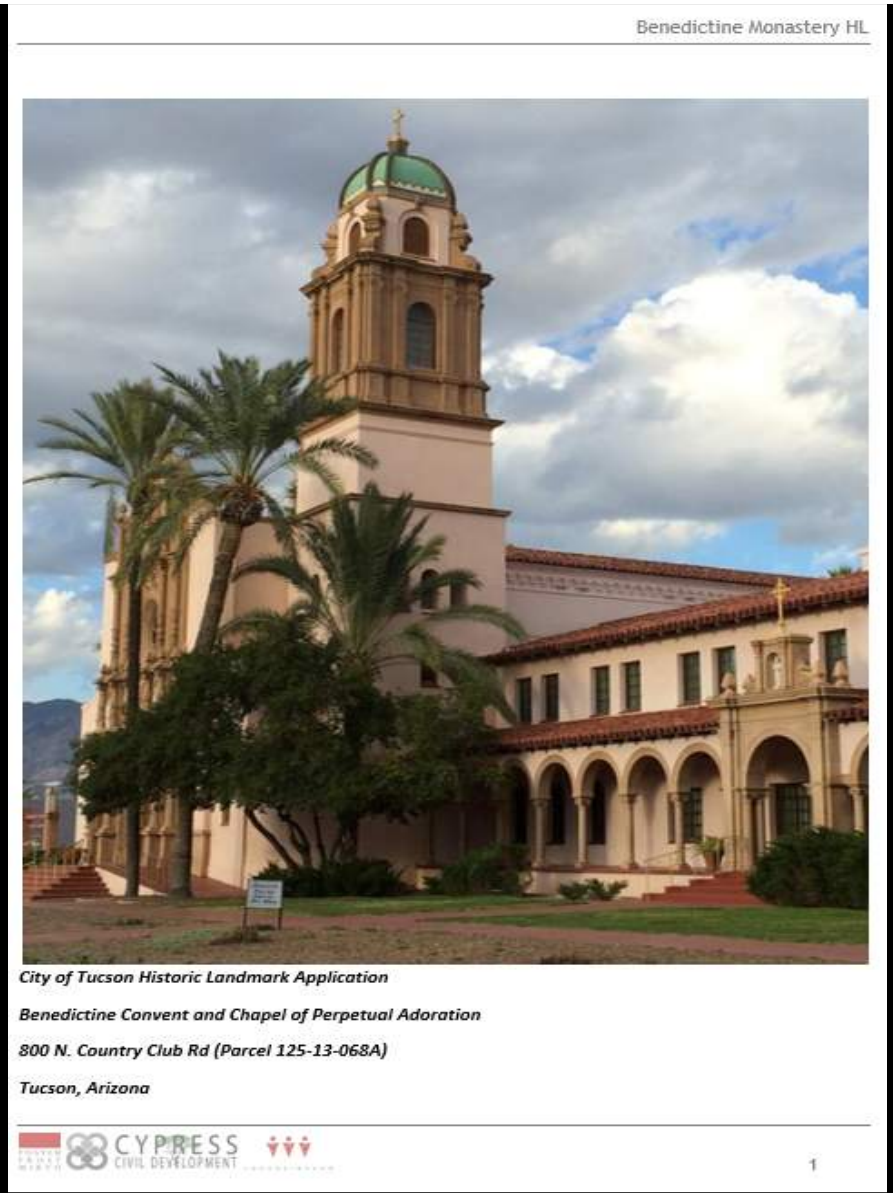
Architectural Description

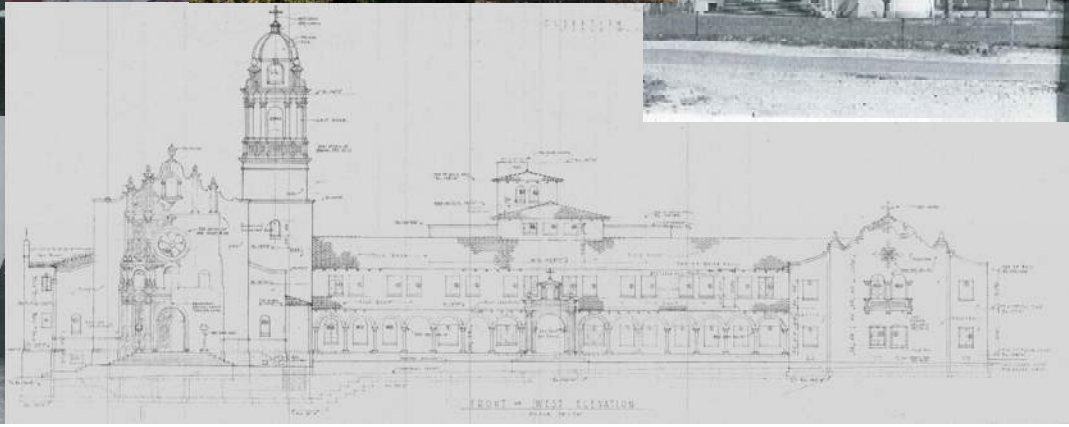
Historic Elevations
Interior
Landscape
Setting
Alterations

Statement of Significance

Chronology
Architect
Landscape
National Register Status
NRHP Eligibility Criteria

Future Treatment and Design Guidelines





Future Treatment and Design Guidelines

1. Establish Historic Landmark Boundaries (right)
2. Use “Preservation” treatment (as per Secretary of Interior Standards) for the exterior of the Monastery and its character-defining features.
3. The interior of the Monastery will be excluded from any HL regulatory control and will utilize “Rehabilitation” treatment (Adaptive re-use).
4. Retain original landscaping components from early 1940s located immediately adjacent to the building. (Allow replacement of west water-consuming grass).
5. Internal courtyards landscape will allow flexibility for adaptive re-use for human activities.
6. Plant material and trees located outside HL will be saved, transplanted, or grafted (Mission Gardens).
7. Allow modest sunken plaza on the NE corner of Chapel to allow ADA access to the basement.

Comments and questions on Historic Landmark proposal?

Part 2:
P.A.D. Rezoning Proposal

PART 1 – INTRODUCTION

PART 2 – SITE ANALYSIS

PART 3 – PAD - HL DISTRICT PROPOSAL

Development Standards as derived from the approved Plan Amendment (December 18, 2018).

Allowable Uses

ALLOWABLE USES ARE BASED ON ALLOWABLE C-1 USES, MODIFIED

Community Garden
Urban Farm
Civic Assembly
Cultural Use
Elementary and Secondary Education
Instructional School
Postsecondary Institution
Membership Organization
Religious Use
Administrative and Professional Office
Artisan Residence
Commercial Recreation
Day Care
Entertainment (Excluding Large Dance Hall)
Financial Service (Excluding non-chartered institutions)
Food Service (Excluding Soup Kitchens) (With Alcoholic Beverage Service as an accessory use)
Funeral Service
Extended Healthcare
Major Medical Service
Outpatient Medical Service (Excluding blood donor centers)
Parking
Personal Service
Research and Product Development
Technical Service
Minor Trade Service and Repair
Travelers Accommodation, Lodging (With Alcoholic Beverage Service as an accessory use)
Craftwork
Processing and Cleaning
Family Dwelling (with Home Occupation as an accessory use)
Duplex (with Home Occupation as an accessory use)
Multifamily Development (with Home Occupation as an accessory use)
Single-family, Detached (with Home Occupation as an accessory use)
Farmers' Market only (Excluding Large Retail Establishment)
General Merchandise Sales (Excluding Large Retail Establishment)
Craftwork as an accessory use to any permitted Retail Trade uses
Perishable Goods Manufacturing as an accessory to any permitted Retail Trade Uses
Renewable Energy Generation
Residential Care Services, Adult Care/Physical/Behavioral Health Services: Unlimited
Wireless Communication (no towers and antennas)
Personal Storage

Prohibited Uses

PROHIBITED USES (DELETED ALLOWABLE C-1 USES)

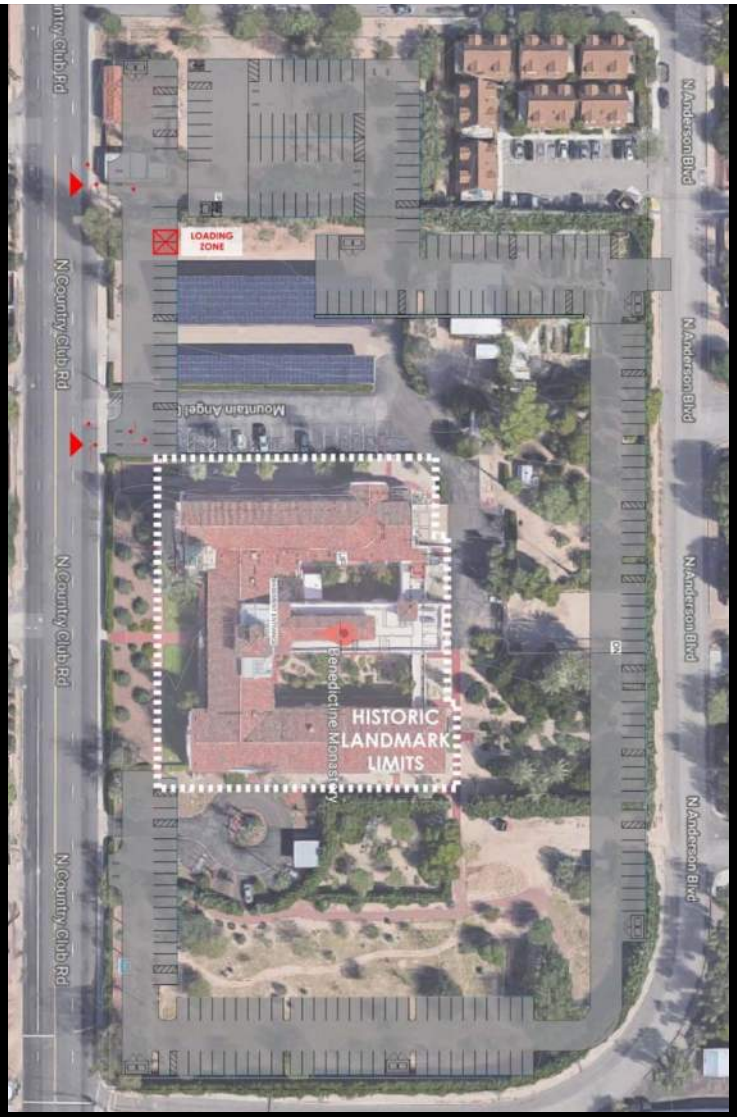
Cemetery
Animal Service
Salvaging and Recycling
Parks and Recreation (Including Golf Course)
Manufactured Housing (with Home Occupation as an accessory use)
Group Dwelling (ALREADY PROPOSED BY OWNER TO BE EXCLUDED)
Residential Care Services, Adult Rehabilitation or Shelter Care
Residential Care Services, Shelter Care for Victims of Domestic Violence
General Merchandise Sales (Automotive Minor Service/Repair as accessory use to fuel sales)
Salvaging and Recycling as an accessory use to any permitted Retail Trade uses
Hazardous Material Storage as an accessory use to any permitted principal use
All Commercial Services in the C-1 Zone may provide one drive-through service lane

Building Setbacks

New Construction Heights

Building Setbacks

Pedestrian Access and Concept



Loading and Service

Landscape Concept (Preserve Oleanders)

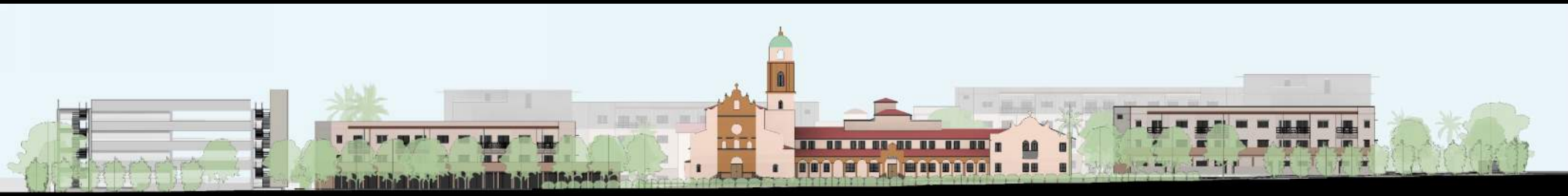
Current design update after two meeting with the Design Advisory Committee

Schematic Design, April 11, 2019

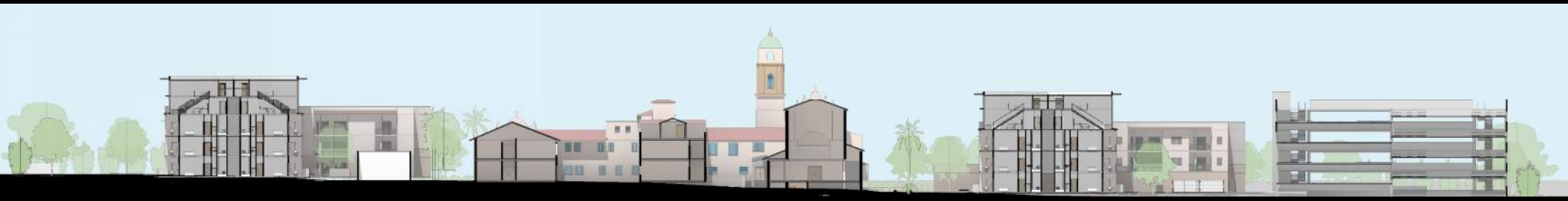
- 253 new construction residential units (a mix of 1 BR and 2 BR)
- 34 rehabilitated units in the Monastery
- 10,000 SF of neighborhood commercial
- Public/commercial uses in the Chapel and main Monastery entry.
- Housing support spaces in the basement of the Monastery (access by NE plaza)
- 164 surface parking spaces
- 240 garage spaces
- Service and emergency access from 2nd Street (no access from Anderson)
- No pedestrian access from Anderson
- Bicycle connection south to 3rd Street

Traffic and parking issues

- Approximately 400 parking spaces on site for 300 residential units plus commercial.
- The current PAG traffic count for Country Club (6th to Speedway) = 18,698 vehicles/day
- 2013 Traffic count on Country Club = 23, 722
- (Tucson Boulevard = 16,901 vehicles/day)
- Traffic engineer: daily trips generated by new development = 2,681
- Trips by mode = 1,608 (60%) by auto, 607 (25%) by bicycle (next to 3rd Street Bike Path), 402 (15% pedestrian and transit)
- Tucson Transportation Dept. requesting center left-turn lane into property.



West elevation of new development (from Country Club)



North south cross-section looking west

East west cross-section through south courtyard looking south

East elevation of new development (from Anderson)

Comments and questions on P.A.D and Schematic Design progress drawings?

BENEDICTINE MONASTERY DEVELOPMENT MEETING
PAD & HL REZONING; FORMAL NEIGHBORHOOD MEETING 4-17-19

6:07 Meeting Begins Corky Poster (Presenting), Savannah McDonald, Daniela Nunez (taking notes), Ross Rulney (amongst the crowd answering questions)

1. REVIEWING WHAT HAS BEEN SEEN
    a. 7 ACRES: After acquiring NW parcel
    b. 1940 black + white image, beginnings of the building
    c. Roy Place, Tucson architect
    d. Here to discuss:
        i. Historic landmark rezoning: to protect the Monastery
        ii. PAD: guiding redevelopment of this site
2. Required meeting that City of Tucson to receive input and to answer questions from community
3. PRESERVATION: PFM is leading preservation architects in town
    a. Saving building is easy part of historic preservation, hard part is finding contemporary sustainable uses of the building after time has passed
        i. PFM experience:
            1. Train Depot renovation
            2. Pima County Courthouse
            3. The Marist renovation
            4. Old Main UA Campus: "can't tell what you did."
4. BACKGROUND & CONTEXT
    a. Reviewing all the meetings since purchase of Fall 2017. We want commentary.
    b. UNUSUAL UNDERLYING ZONING: Zoning splits Property. West = R-3 (High density Residential) and East = O-3 (Office)
    c. EXISTING HEIGHT: we can do 40' all around IF we wanted, but we all agreed to prepare a PAD to make modest changes to existing zoning PAD. Gave us flexibility to have a better project. Development is complex
        i. PLAN AMENDMENT TO:
            1. Miramonte Neighborhood and Broadway/Alvernon Neighborhood Plan
            2. Dec 18, 2018, Mayor & Council approved Plan Amendment with a 7-0 vote Many details are in Monastery Plan Amendment (more that typically seen)
        ii. March 28, 2018: first meeting ever. What progress have we made? *SHOWS 8 STORY IMAGE*
            1. Much progress has happened since then, we're moving away from the original height.
            2. Originally there was no historic protection. There is now currently a Historic Landmark in motion… new heights proposed = 55', 44', 33'
            3. NW property has been purchased, demolished abandoned house
            4. Mix used of monastery
            5. Added parking to Monastery
            6. Same number of units (255) allowed in underlying zoning, due to having purchased new parcel
            7. Originally no design review, NOW there's a Design Committee (we've met two times)
            8. Chapel will be a public space
            9. We've prohibited Group Dwelling (aka Student Housing)
            10. At the request from Miramonte neighborhood, no auto or ped entries
            11. Save oleanders.

BENEDICTINE MONASTERY DEVELOPMENT MEETING
PAD & HL REZONING; FORMAL NEIGHBORHOOD MEETING 4-17-19

5. HISTORIC LANDMARK REZONING (HL)
    a. Link at the bottom of Handout has the detailed HL Document
    b. Old BW photos of Monastery, Roy Place, history of Site.
        i. Property description
        ii. Architectural description
        iii. Statement of significance
        iv. Future Treatment & Design Guidelines
            1. Proposed "boundary"
            2. Preservation treatment, exterior will not change nor will its character-defining features
            3. Interior of Monastery will be excluded from any HL regulatory control (adaptive-reuse)
            4. Retain original landscape from early 40's (replace water consuming grass)
            5. Internal courtyards will allow flexibility for adaptive reuse
            6. Plant material and trees located outside HL will be saved, transplanted, or grafted (mission garden)
            7. Allow modest sunken plaza for ADA
6. COMMENTS FROM PUBLIC
    a. What property on the North side did you buy?
        i. 2 parcels on the corner of 2nd street and Country Club Little red house, vacant land immediately to west of 7 little houses
    b. Historic Landmark will protect exterior, that's great, what will happen to the Chapel?
        i. We care about this space as much as you do. You can see our trajectory. You have our promise that we will save this place. The bishop told us he was no interest in what happened in this space.
    c. Grafting and vegetation? I didn't see word orange tree. What will happen to orange trees?
        i. We've in communication to the Sisters, they have said "please get rid of those orange trees." I know there's a lot of love for those orange trees, but the Sisters have asked us to remove the "tortured" trees, most of them are dying.
    d. Historic designation is wonderful. Does that mean that the interior of the chapel can be modified or destroyed?
        i. The answer is: this is not under the regulatory control of COT, but that doesn't mean we're going to destroy it. We're preservation architects, we care about this space, we will do something that is respectful. What is the sustainable allowable use that we can do with this space? We will soon enough talk to community.
    e. What will happen to the avocado trees?
        i. We intend to save that tree.
    f. What is the acreage of the Historic Landmark out of the whole site? We'll get back to you.
    g. How did nuns sell the monastery? How did the advertise it?
        i. Private sale between private people, put out through a broker like normal property. Sisters looked for religious use for quite some time, but they sold to local buyer that didn't immediately want to create Student Housing.
    h. Chuck, president of Miramonte Neighborhood Association I read in the newspaper that the design will keep with the design.
        i. If we'd proposed something that looks just like historic building, I'd be going against all the rules of preservation. We can't make in look just like the buildings
    i. Is Ross Rulney here?
        i. He's right behind you.

j. Comment: Marist college and building right near it is good practice.
k. Can you expand of number 5?
    i. The courtyards are dense. We want to modify so they are usable to the residents We will keep the lush and beautiful character of the courtyards.
l. Keeping the oleanders. They need water and the landscaping needs water.
    i. We're working on keeping them. We will preserve them.
m. Will you consider a modest display of about the history of the site and sisters?
    i. All that history is now recorded and documented by profession historians. It's all online.
n. Oleanders need a lot of water compared to other vegetation.
    i. Different opinion from lots of people. Miramonte is used to oleanders, the trees are irrigated by a well ON SITE that will allow to keep cost down.
o. Did you say this area can be a café or bookstore?
    i. The market responds only after having entitlements from city council. Finding commercial users for this site, especially an important site like this, is going to have to wait for the entitlement process.
p. Will you be saving any important things from the Monastery?
    i. Yes, we will save everything relating to the religious importance of the Monastery.
q. Who will maintain upkeep on building?
    i. The owner.
r. Comments on fire in Notre Dame, all of us are grateful for this Monastery building.
s. Is the inside not historic? Can it be demolished?
    i. We need to make changes to the interior of the building to make this a sustainable building. The interior is not part of HL

7. PAD REZONING REPORT
    a. Review Development standards as derived for the Plan Amendment. Due to the details in the Plan Amendment, a lot of the same things are in the PAD.
    b. Allowable uses. Go online for all the uses:
        i. List of things that can be on the site:
            1. Multifamily housing
            2. Food service
            3. Restaurant
            4. Artisan market
        ii. Cannot have:
            1. No golf courses
            2. No animal services
            3. No group dwelling
            4. No automotive
            5. No drive through
            6. Very long and complex list
    c. Setbacks, Heights, Uses, Parking, Traffic
        i. Setback: distance you have to hold buildings from property line. Proposing a large buffer on Country Club and Anderson (50')
        ii. Heights: 55', 45', 35'
        iii. Parking: around perimeter of the site, single loaded parking, double loaded parking, parking garage.
            1. Trash and emergency services will now get out on 2nd street.
            2. Parking garage is fee structure is so far undetermined.

iv. Pedestrian Access & Concept: no pedestrian connection to neighborhood and site. Biggest worry is that folks would park in neighborhood and make a short cut to the site. No pedestrian entry on east. There will be a bicycle entry/exit on 3rd Street.

d. DESIGN UPDATE: Design changed after meeting with the Design Advisory Committee.

i. This is not typically done. We wouldn't show detailed designs. We understand that people care about this site, and the only way we can move forwards is to be OPEN and transparent.

ii. Schematic design site plan:

1. Blue and green = residential uses.
2. All 1 and 2 bedroom, with a few studio apartments in Monastery.
3. 10,000 SF that fronts Country Club, will have a use that will be useful to neighborhood.
4. Basement under this building will be support spaces for building (i.e. gym)
5. 253 New Construction residential units. Aiming roughly 50-50 mix
6. 34 rehab units in Monastery.
7. Public/commercial uses in chapel.
8. 164 surface parking.
9. 240 garage spaces.
10. Service and emergency access from 2nd (no Anderson access).
11. No pedestrian access from Anderson.
12. Bicycle connection south to 3rd street, folks on site will probably move here because of the 3rd street bike path

iii. Traffic & Parking Issues

1. Approximately 400 parking spaces for 300 residential units plus commercial
2. Current PAG traffic count for Country Club (6th to Speedway) = 18,698 vehicles per day
3. 2013 traffic count on Country Club = 23,722 (Tucson Blvd = 16,901 per day)
4. Traffic engineer: daily trips generated by new development = 2,681
    a. 60% will be cars (1608 trips)
    b. 25% bicycle (607 trip)
    c. 15% pedestrian and transit (402 trips)
5. Tucson Transportation Dept, requesting center left turn lane into property
    a. Alternative: 3 lane road, one lane north, one lane south, and left turn lane, and ample bicycle lanes on either side Like Granada Street in downtown…Mayor and City Council recently passed a Complete Streets Ordinance that supports that idea
6. West Elevation.
    a. Building on Country Club align with façade of Monastery
7. North-South Cross Section looking West
    a. Tells us comparative heights between buildings,
    b. There's a 10' drop throughout the site Heights relative to the Monastery vary
8. East West Cross Section through Courtyard looking South
    a. Tallest part of the design, 2 story lofts lighten up the top of the building
9. East Elevation (from Anderson)

a. Notched around the Monastery to create an opening, we've stepped down the building towards the opening. The building is about 58' back from Anderson

10. Rendering 1 (Monastery looking NE)
    a. Shows 3 story building, created an arcade to match the existing arcade
11. Rendering 2 (Monastery looking SE)
    a. Scales similarly to the Monastery, New Construction is 50' from property line. Spanish Colonial Revival = Monastery, New Construction = Contemporary (Comment: It has no character. It looks like it can be in Acapulco. It's dull. It's generic.)

e. COMMENTS + QUESTION
   i. I think you should consider public art on the new structures to make the buildings look unique and interesting, and reflecting history of this building
      1. We can line the hallways with art
   ii. Anderson avenue is brilliant. Could we make it no parking?
   iii. Height of steeple?
      1. 88'
   iv. What kind of lighting from East side?
      1. We don't have zoning allowed yet; much we would love comments about your concerns
      2. I would prefer the lighting to be lower level lighting so it's not going towards the neighborhood (from Miramonte resident)
   v. I quite liked how the new addition to Tucson High School was treated (Tech Building on 6th Street)
   vi. From my apartment I can see the top view I won't have my view
      1. People living in apartments will have an awesome view
   vii. In the meeting, no one from the Miramonte association liked the building details being in the Plan Amendment. When's the next meeting? Where's my leverage?
      1. Let me explain the process We will include these comments to take them to the COT and it will be part of the Public Hearing. You are all welcome to attend. The Zoning Commission will make a recommendation. It will go to Mayor and Council, and they will have a Public hearing
   viii. What's the timeline?
      1. We're hoping to be in front of the Mayor in Council in September
   ix. Traffic numbers?
      1. The numbers don't make any sense
   x. There is no student housing?
      1. Federal law says that a 21-year-old (for example) who goes to UA can live in the building. But the 4 bedrooms, rent-by-the-bedroom type is PROHIBITED. We are not allowing group dwelling, no student housing
   xi. Can you explain what group dwelling means?
      1. If you rent a 4-bedroom apartment with separate leases for each bedroom qualifies as group dwelling. They share common space with other roommates. That's a lucrative business.
   xii. We're very lucky to have a developer and architect like you guys. When I found out Corky Poster of Poster Frost Mirto was head architect, I was very pleased. The

developer can make a lot more money, but they went in another direction. I'm thankful for your involvement

xiii. Will the leases be 9 months, 12 months?
    1. 9, 12, 13 months.
    2. Rents will be comparable to new market rate downtown prices People are willing to pay higher rent because of location This location is as important to people as living in downtown $2 per square foot A 800 sf unit, about $1600

xiv. How long will it take to finish this project?
    1. If we were aiming for a Fall building permit, we will do everything all at once We're not starting everything at the same time. Our goal is to finish at the same time. By the end of 2020

xv. I agree about Tucson High because of materials, colors, form I would want more of that here. No mimicking or copying. No balconies

xvi. We want to see a reflection of the Monastery.

xvii. In Sam Hughes, looking at projected numbers of bicycles: it's dangerous. I would like the city to come up with an idea on how they're going to handle the bicycle traffic
    1. One aspect of Complete Streets Ordinance has guidelines for how to treat bicycle lanes

xviii. Parking garage, will it be lit all night
    1. We will make sure we have LED downlighting, so it doesn't have glare going to other

xix. I liked what she said about the design. What if you added the red roofs? I need to see 3D, up above, but I need more clear drawings I need to see them NOW.

xx. I live right behind here, what's the noise level going to be? All I can hear are birds right now?
    1. Noise falls from distance; I don't envision sound problems. Not any more from the existing apartments.

xxi. The noise from Country Club completely masks the apartment sounds

xxii. (Person 1) In contrast to the no balconies comment, I think the balconies provide a human edge. I like to see people living life.
    1. (Person 2) It may not be student housing, but students could live here. What about the drying towels over the railing?
    2. (Person 1) THAT'S LIFE. I love seeing that

xxiii. Corky = The 1st level units will all have ground floor entrance for that neighborhood feel

xxiv. Michael Becherer local architect, lives nearby (next door), will be AIA president. Given the alternative, this is the preferred option. Based on the market rate, I don't think many students will live here. I'm concerned about the Parking Structure.
    1. The parking garage needs more work, we will do more work.

xxv. Are the patio areas arched? Are there elements of arches?
    1. They're just square, we think the notion of an arcade is an imitation of the building. We want a compatible and sympathetic design. They're not arches, but we think they will have the shade and character.

xxvi. In terms of exterior finishes, have you made any decisions?
    1. We want to have a masonry base below for the building, a stucco skin for the middle levels, and a light materials (steel) at the top for lightness

xxvii. Garage is 5 story? Is it just square, open? Or does it have a great design?

1. We will try to make it fit in with the site. It is substantially far back from Country Club.

xxviii. How many spaces will be open to the public?

1. That is a tricky question to answer. Parking will be primarily for users of the site. Residents and customers of the commercial activities. Not sure if that is what you mean by "public."

xxix. Have you decided if you're going to complete the garage with the New Construction?

1. Garage can take 4 months to build, the New Construction will take about 16 months, the monastery will take about 8 months. All will complete at the same time.

xxx. How far away will you have to be to see the spire?

1. Ruth Beeker has asked me the exact same question, and she wants to be able to see it too. We will work with her to make sure it's considered

xxxi. What's target demographic?

1. Principle folks are millennials that may not be able to afford Sam Hughes or western Miramonte. Another one we are targeting are empty nesters. I've had lots of people come up to me saying they can't wait to move out of their big houses and downsize, BUT stay in the neighborhood.

xxxii. Comment from audience: I would like to thank Ross Rulney for his generosity for allowing the Tucson community to use this Monastery for the sort term care of asylum-seeking migrants. (Extensive applause from meeting attendees.)

MEETING ADJOURNED: 7.58 PM.

From: Claire O'Connor <tclaire.oconnor@gmail.com>
Sent: Friday, April 19, 2019 3:14 PM
To: Corky Poster <cposter@posterfrostmirto.com>; Ken Plattner <kenplattner.fr@gmail.com>
Subject: Appreciating your monastery presentation on Wednesday

Hi there Corky,

I know I already thanked/appreciated you in person after Wednesday's meeting, but I find it's always nice to have it in writing, too!

My husband and I were both impressed with the way-good (!) progress that you and the development team/M&C have made. We also appreciate how genuine, down-to-earth, and principled you are. Ken also said that he was impressed that the presentation was informative, authentic, heartfelt, but not 'slick'. We're both really happy with the middle ground that's been reached, and we fully support you, your firm, Ross, and M&C moving forward. You've exceeded our expectations, and as neighbors who live about a half-mile north, we're really excited to see it all come to fruition. That place is woven into what makes Tucson worthy of its' citizens' affections, and I feel that legacy will only blossom with what you're proposing. Salut!

Looking forward to what's next! Thank you again for your great work!

Cheers,
Claire

_____

T. Claire O'Connor
(520) 904-0877 cell/text
www.DelightDesignStudio.com

Review Comments/Questions by Kim Fernández, Design Advisory Committee Member and based on Benedictine Monastery PAD submission 02 28 2019.

Parking, Circulation and Transportation:

1. Please clarify how many vehicle parking spaces you will provide for residents and how many will be provided for other uses. Please explain any current code variations and if there are variations, why?

2. Will all the proposed parking be provided when initial permits are pulled? If not, how many spaces are being provided compared to how many residential units are being provided?

3. Is the Traffic Impact Study complete? If not, when is it expected to be completed?

4. Will a bus stop be maintained and will a bus pull-in/out be provided?

5. How will the service access points on Anderson be controlled/gated? Or how will pedestrian traffic be barred?

6. How will trash pick-up be situated so that residential neighbors are not adversely affected.

7. It is not clear that the oleander hedge is being kept at all points, particularly at the interior circulation road on the southwest corner on 3rd St. and Anderson, please clarify?

8. How will the oleander hedge be maintained over time? Will there be a fence on the inside of the oleanders to prevent vehicles damaging the hedge or someone cutting passageways through the hedge?

9. It was detailed that there are "beautiful sidewalks" in Sam Hughes leading to the UA, what about adding some sidewalks and beautification to Miramonte - at least to Whole Foods? (The Chroma Project at Speedway and Miramonte is making a donation to mitigate traffic impact to the neighborhood).

Other Concerns:

10. It was detailed how there are "lovely tower views" preserved from Country Club and Hawthorn in Sam Hughes, but they are proposed to be blocked on Hawthorn in Miramonte, please explain this choice?

11. How will lighting be designed so as not to impact the neighbors' dark skies?

12. How will heat island effect be addressed so as to not impact neighbors?

13. Please explain how the property is being taxed currently and in the future?

14. Please list any City benefits/breaks being requested for the project?

15. Are the existing dorm rooms being redesigned with individual bathrooms for each studio and one-bedroom rental? If there is to be group toilets, please explain how this keeps within the "no group dwelling" commitment?

16. P. 66 refers to Development run-off flowing "West" to Miramonte. I presume this is a typo and it is to flow "East" to Miramonte along Anderson and 2nd Street - please clarify. If this is so, please show how during significant event when this intersection already is flooded, that neighboring houses will not be inundated.

17. P. 96 refers to items that shall be approved. Does this included any changes to retail tenants and therefore a more intensive use would not have to have additional parking required?

18. Please clarify by section and designated perspective viewpoints how the massing will appear on the Anderson face of the development.

19. Is the well system on site currently in use? How do you envision its use in the future?

Corky Poster

From: Bret Harte, Dianne M - (dianne) <dianne@email.arizona.edu>
Sent: Wednesday, April 17, 2019 9:06 PM
To: Corky Poster
Subject: Monastery

I spoke to Ross Rulney following tonight's session, mentioning Bakersfield's highly successful repurposed church/restaurant. He was interested in knowing its name: The Tower—craft bar and grill—and there's a smashing photo on their website. Good session, good deflection of idiot queries. dianne

Get Outlook for iOS

Corky Poster

From: John Leech <johnrleech@yahoo.com>
Sent: Thursday, April 18, 2019 6:26 AM
To: Corky Poster
Cc: Gabriel Rico; Ross H. Rulney; Steve Kozalchik
Subject: Housing international students in the monastery building

Congratulations on the presentation of the revised plans for the reuse of the Benedictine Sanctuary property. The sketch in this morning 's Star looks great.

My thought long unvoiced is that the monastery living quarters could be repurposed for housing international students such as the nursing students the Sisters of Notre Dame have at Notre Dame de Namur university in Belmont California.

The chapel could continue in something close to its original purpose.

I see the mother Pelican on the altar canopy is still on duty watching over her children; that is, the old monastery is sheltering God's children.

Applause for that to you the architect, and to the developer, the city councilman, Alitas and the volunteers from the community.

Of course office or hospitality use — especially the latter — would also be winsome use of the old dormitory...

Sorry I missed the meeting last night. I was across town for another strategic meeting.

John R. Leech.
1.520.591.1894
1.520.615.6422
PO Box 65807
Tucson AZ 85728

Corky Poster

From: Michelle Crow <michellec@beyond-tucson.org>
Sent: Thursday, April 18, 2019 11:00 AM
To: Corky Poster
Subject: Comment re: Monastery and need for contact info

Corky -

Hope you have been doing well!

I wanted to connect with you for two reasons:

1. As a resident of Sam Hughes neighborhood, I want to register my positive opinion of the plans you and Ross Rulany have worked so hard to complete on the Monastery. Also much gratitude to him for allowing the migrants to stay there in the interim. Good job and thank you both!

2. I am trying to reach Dora with Flowers and Bullets and I know you work with F & B frequently. Do you happen to have a contact for her you can share with me? I have left a voicemail on their general mail box with no luck so far.

We want to ask her to serve on a panel re: school lunch programs (see full description of the symposium below my Sig line) so she can describe F & B's development of the community garden and animal husbandry on the old Julia Keen school grounds and nearby neighborhood homes. The symposium is being organized jointly with a few U of A colleges/departments and I am just now trying to finalize the panelists for this afternoon panel and think she would be perfect! IF … only I can get ahold of her!

Any help you can provide would be deeply appreciated!

Michelle Crow
Executive Director

BEYOND
move ✿ explore ✿ nourish ✿ connect

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www.beyond-tucson.org
Facebook | Twitter | Instagram

Nutrition Symposium: Are School Lunches Healthy?
Friday, May 31 10 am - 5 pm
Dunbar Cultual Center
325 W Second St.

Tucson, Az 85705

Our afternoon panel seeks to look at the this question with more of a racial, socio-economic, equity lens. We are hoping the panel will help ground this discussion in our local region, by considering specific factors that might be impeding, or helping, minority and/or low income students receive a healthy school lunch.

We have a few other panelists that agreed to be on the panel who have done extensive research (and one that developed non-profit programs) to address some of the historical practices of USDA nutrition guidelines and how they have impacted specific populations in our country which were never considered or consulted in the science or policy formation stages, and then experienced adverse health impacts as a result. Our initial thoughts are that Dora could help us discuss the issue of urban food deserts, and more importantly innovating solutions to get fresh food from local food sources. Plus it is such an fantastic use of a closed school facility.

Just for background here is the rest of the day content:

The morning is being organized by U of A Nutrition department and provides participants with substantive background on the history of school lunch guidelines and how the current program operates. There will also be a panel discussion with representatives of various school lunch programs here in Tucson as well as ADE School Nutrition Directors to add insight on how the system works and how decisions get made from top to bottom.

The afternoon is being organized by College of Education and begins with a keynote from Nina Teicholz, nationally known speaker and investigative science journalist who has written several articles and a book digging deeper into the science of nutrition, challenging USDA guidelines, and taking a deeper look at school lunch policies and the behind the scene influences that create them. Her past work (including her book The Big Fat Surprise) contends that current USDA dietary guidelines were based on 1980 clinical trials for middle aged (white) males fighting heart disease. Her research looks at how science has evolved since and is starting to question many of those underlying assumptions. Policy makers, and political forces in D.C., however make changing USDA guidelines a challeneging process.

We also have youth panelists from several schools districts and charter school(s) for an afternoon panel of youth voices. They are also working on a student led video project with Rep. Andres Cano in which they plan to interview students in their own school cafeterias as part of a 5 minute video to be shown before their youth panel.

Finally, we hope to facilitate small group table discussions and do some next-steps action planning at the end of the day so participants can move forward with their own concrete ideas to help improve the health of our students.

Hopefully this gives you enough background to consider the request. But if you have any questions at all please do not hesitate to give me a call on my cell to discuss further.

Corky Poster

From: ricossuavess@yahoo.com
Sent: Friday, April 26, 2019 12:10 PM
To: Corky Poster
Subject: benedictine

hi. i think the best use for the beautiful benedictine is to keep the cathedral and make around it a hospice for upscale clientele. sort of god's waiting room.

Corky Poster

From: Alan Voelkel <avoelkel@mac.com>
Sent: Thursday, April 18, 2019 9:55 AM
To: Corky Poster
Subject: Monastery Design

Good morning!
As a near-neighbor of the Benedictine Monastery, I have followed the controversy with great interest. I appreciate very much your efforts to take into consideration the concerns of the neighboring community.

One issue I have not seen addressed is the issue of increased traffic on Country Club Road which is already over-burdened. With hundreds of additional cars turning on and off of Country Club from the new apartments and businesses the traffic snarls will be nightmarish unless mitigated from the outset with design considerations.

My suggestion is to widen Country Club Road with an additional lane on the east side of the road along the entire Benedictine property so that slowing vehicles can pull off and on and not obstruct the regular flow of traffic. Since the lane is already widened from the north corner to Broadway, the expanded lane will also serve as an extension of the right-turn lane onto Broadway.

Thanks for all the work and thought you are putting into the project.

Alan Voelkel
220 S. Country Club Rd

Corky Poster

From: beekerr2@netzero.net
Sent: Wednesday, April 17, 2019 8:02 PM
To: Corky Poster
Subject: Opinion of one

Corky,
I may have been the only person in the room who sees the present solution as worse than the 88 foot buildings. I see what we have as an opportunity lost to have good architectural design. I would much rather see more height variation, less footprint, more open space to be landscaped. Instead we have squat buildings all over the site. Pathetic. Not your fault, but I find it disappointing.
Ruth

4-26-'19

Sir,

I'm writing you about MR ROSS RULNOY.

I saw him give an interview on Arig. "360" with Lorraine Rivera; He just flat out lied about the nature and scope of the Benedictine Monastery project. He said the project was going to be "luxury" Apts. But according to the report from Sam Hughes he is going to build "efficiency" apts. He is going to gut the inside of the Monastery and put efficiency rooms in the Monastery. Low income is not luxury. I'm paying heavy taxes →

to live in my house and my neighborhood. But I understand he has an exemption. Why? Is this true?

I'm very angry about this. I don't think Ross Rulney is honest or trustworthy.

This project should not go forward as is; and not with Ross Rulney!

This type of project will not add luster to your reputation. The resentment to this project is strong and growing. Its too massive and not fit for Sam Huges.

michael Cajero

NEWS ON HUGHES

Official Newsletter of the Sam Hughes Neighborhood Association

Spring 2019

290 Apartments, Parking Garage At Monastery Site

The owner of the Benedictine Monastery is moving forward with plans to place an apartment complex and garage around the historic building. In an application to the city, developer Ross Rulney requested a zoning change known as a planned area development to raise the building height and density allowed at the site.

Rulney plans to construct new buildings in a U-shape around three sides of the monastery to house 255 efficiency, one- and two-bedroom apartments. He also plans to convert the residential portion of the monastery (not the church portion) into 35 apartments. Parking for these apartment dwellers would be provided around the perimeter of the new buildings as well as in a free-standing parking garage on the north side of the property bordering 2nd St.

The new height limits at the site would run as high as 55 feet, although the actual height of the buildings will likely be closer to 60 feet because the Unified Development Code allows parapets, A/C units and other building elements above the nominal height.

Rulney and the architect Corky Poster will host a public meeting April 17 at 6 p.m. at the monastery to discuss the project.

According to a tentative timeline of the project prepared by the development team, the proposal for a zoning change could go before the zoning examiner in early summer, then proceed to the mayor and city council as early as July or August.

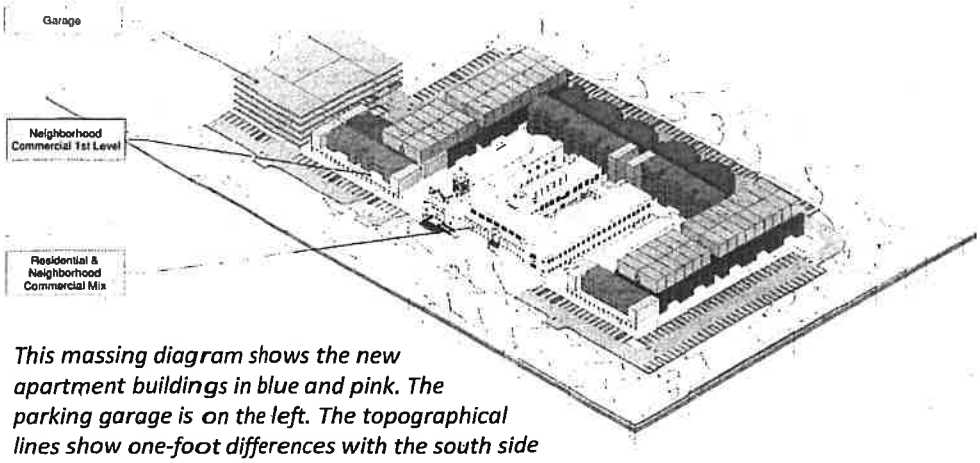
This is the second of two approvals Rulney needs from the mayor and council. He received the first approval in December when they voted 7-0 to allow changes in the Miramonte neighborhood plan and Broadway-Alvernon area plan to accommodate the development. In these situations, the first vote is highly predictive of the second vote, meaning the zoning change is almost certain to be approved. Construction could then start as early as September.

Along with the rezoning, Rulney is also applying to make the monastery an historic landmark. The mayor and council voted last year to give both the monastery and its grounds historic landmark status. Rulney's application limits the historic landmark to the monastery itself, leaving the grounds open for development. The city will consider the rezoning and the historic landmark designation as a part of the same application, which will speed the process.

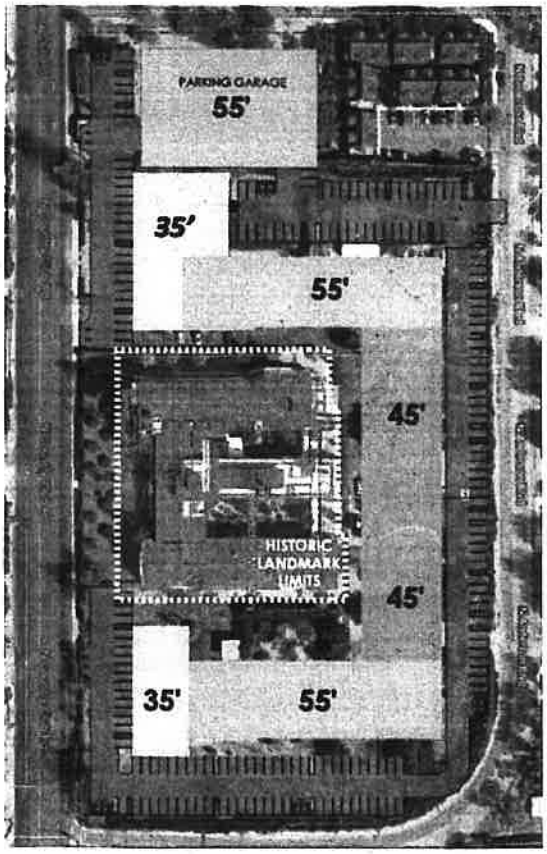
Rulney, a native Tucsonan, co-owns the property with Malcolm C. Berman of Del Rey, Florida.

At the Miramonte Neighborhood Association meeting in March, several neighbors expressed concern about the development's impact on traffic on Country Club Blvd, in particular southbound vehicles seeking to make a left turn without a turn lane. Neighbors can raise concerns about traffic and other issues at the April meeting, although the developer is under no obligation to make changes to his plan.

For history buffs, the documents the developer submitted to the city contain an interesting history of the monastery, as well as many historic photos: https://www.tucsonaz.gov/pro/pdsd/permitdetail/RZ19-001/12513068A



This massing diagram shows the new apartment buildings in blue and pink. The parking garage is on the left. The topographical lines show one-foot differences with the south side at a slightly higher elevation than the north.



This diagram shows the proposed heights of the planned buildings. Actual heights will likely be five or so feet higher. The white dotted line shows the limit of the Historic Landmark designation.

APPENDIX G – TRAFFIC IMPACT ANALYSIS (TIA) (Pages not numbered in PAD sequence)

TRAFFIC IMPACT STUDY

for

BENEDICTINE MONASTERY APARTMENTS

Prepared for:

City of Tucson

Prepared by:

Mathieu Engineering Corp.
5960 E. 2nd Street
Tucson, Arizona 85711

Project No. 19-102

MAY 2019 – FIRST SUBMITTAL

Registered Professional Engineer (Civil)
CERTIFICATE NO.
20930
MICHAEL E.
MATHIEU
Date signed 5/24/19
ARIZONA, U.S.A.

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APPENDIX A

HCS Analysis – Country Club Road/Speedway Boulevard Intersection
HCS Analysis – Country Club Road/5th-6th Street Intersection
HCS Analysis – Country Club Road/Driveway 1 Intersection
HCS Analysis – Country Club Road/Driveway 2 Intersection

APPENDIX B

Turning Movement Counts

FIGURES

Figure 1 Pima County Map
Figure 2 Location Plan
Figure 3 Site Plan
Figure 4 2019 Existing Traffic Volumes
Figure 5 2021 Site Traffic Assignments
Figure 6 2021 Non-site Traffic Assignments
Figure 7 2021 Total Traffic Assignments

1. INTRODUCTION AND SUMMARY

The former Benedictine Monastery site is being re-developed into a mixed use development of apartment buildings, medical-dental office spaces, and a specialty retail use. The site will also include a detached parking structure. The name of the development will be the Benedictine Monastery Apartments. The total acreage of the site is 6 acres. The existing Benedictine Monastery is located at 800 N. Country Club Road. The zoning of the site allows for office use and group dwellings. However the site is being re-zoned to allow for increasing the building height of the proposed buildings.

The apartments will be located on the north, south, and east sides of the monastery. The monastery building will remain but will be converted to a public use space such a medical/dental office use, a restaurant use, and a specialty retail use. The re-developed site will have two (2) site access driveways along Country Club Road and one along 2nd Street and bike access to the 3rd Street Bike Route.

To encourage an active transportation development, there will be direct bicycle access to the 3rd Street Bike Route. As included with the apartment amenities will be a bike storage area and a bike repair area.

PURPOSE OF THE REPORT AND STUDY OBJECTIVES

Approval of the TIA is required from the City of Tucson. As part of the approval process, the City of Tucson requires a TIA prepared per the City of Tucson's *Access Management Guidelines Manual (AMGM)*, Section 6.3.2 – Traffic Impact Analysis. The objective of this TIA is to determine the traffic impacts of the proposed Benedictine Monastery Apartment development on Country Club Road and 2nd Street and at the existing Country Club Road/3rd Street intersection, at the Country Club Road/Speedway Boulevard intersection, and at the Country Club Road/5th-6th Street intersection and to recommend any needed improvements to maintain efficient and safe traffic operations. The specific study objectives are as follows:

- Determine the trips associated with this proposed Benedictine Monastery Apartment development;
- Evaluate the existing Country Club Road/Speedway Boulevard intersection;
- Evaluate the existing Country Club Road/5th-6th Street intersection;
- Evaluate the proposed driveways for right-turn lane warrants along Country Club Road;
- Provide a set of conclusions based on the HCS analysis;
- Make recommendations based on the results of the study.

2. PROPOSED DEVELOPMENT

The proposed Benedictine Monastery Apartment development is located along the east side of Country Club Road between 3rd Street and 2nd Street. The proposed development is located within the limits of the City of Tucson and under the jurisdictional control of the City of Tucson. (**See Figures 1 and 2**). The projected opening year and build-out year is 2021. Therefore, the Study Horizon Year is 2021.

LAND USE AND DENSITY

The proposed land uses will be a mixed development of residential use (apartments), medical/dental use, and specialty retail use including a possible restaurant. The existing zoning is O-3 on the west 1/3 and R-3 on the eastern 2/3 of the parcel. The proposed zoning is a PAD with residential and commercial uses.

SITE PLAN

Figure 3 – Site Plan provides a scaled drawing of the proposed development plan, which illustrates the location of the roadways, the Site Plan layout, and the site access driveways. The proposed development will have three (3) site access driveways – two driveways (Driveways 1 and 2) along Country Club Road and one driveway (Driveway 3) along 2nd Street. Driveway 1 is the south driveway along Country Club Road and Driveway 2 is the north driveway along Country Club Road. The driveways will be full access driveways.

Country Club Road is a four-lane north/south major arterial roadway with curb and gutter and sidewalk – 2 lanes in the NB direction and 2 lanes in the SB direction. Country Club Road has a 35 MPH posted speed limit.

As a condition of the approval of this development, Country Club Road between 3rd Street and 2nd Street will be re-striped as a five-lane roadway cross-section with a center two-way left-turn lane.

3rd Street is a two-lane unmarked east/west neighborhood collector roadway with bike lanes, curb and sidewalk. 3rd Street has a 30 MPH posted speed limit.

The existing Country Club Road/3rd Street intersection is a four-way signalized TOUCAN Intersection. This type of intersection allows two groups, pedestrians and bicyclists, to safely cross Country Club Road. At this TOUCAN intersection, the signal rests on a green signal for Country Club Road. A bicyclists or pedestrian activates the signal by depressing a push button to activate the WALK indication and green signal.

The parcels of land surrounding the proposed site are currently a mixture of developed land with some commercial and residential uses.

DEVELOPMENT PHASING AND TIMING

The proposed development will have a single construction phase. The duration of the construction will be approximately 12 to 18 months depending agency approvals. The projected completion and build-out year is 2021; therefore the Study Horizon Year is 2021.

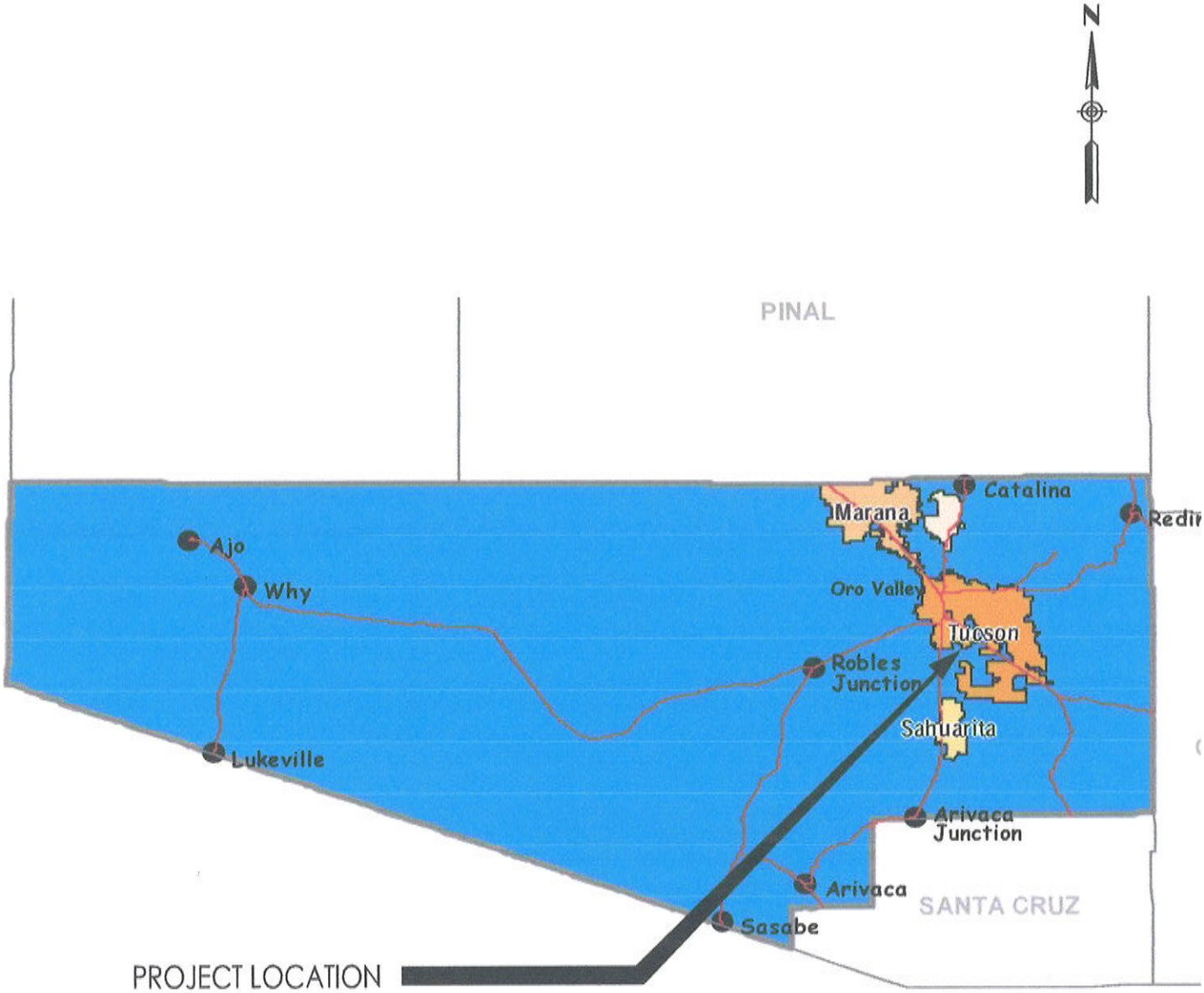
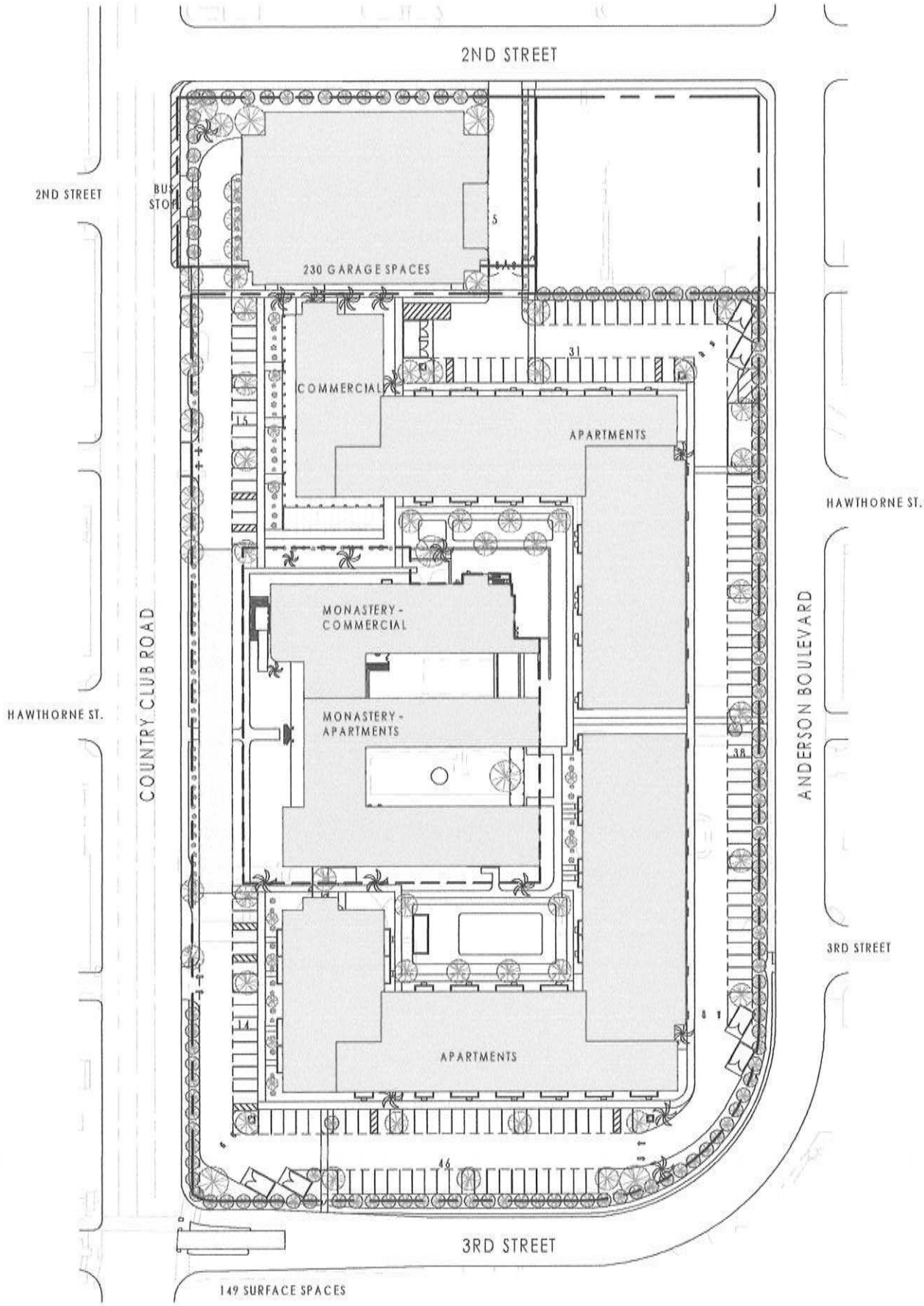


FIGURE 1
LOCATION MAP

FIGURE 2
CITY OF TUCSON MAP



1 SITE PLAN - TIA

SCALE: 1" = 100'-0"

STUDY AREA

The study area for the proposed development is confined to the City of Tucson roadways. The area of significant traffic impacts and influence area have been established based on the size, density, and characteristics of the proposed development. The existing land uses surrounding the site, as well as the site's accessibility, have been considered in determining the site's study and influence areas.

Area of Significant Traffic Impact

This development was determined to be a small development per the *City of Tucson Access Management Guidelines Manual*. The proposed development is expected to generate more than 100 peak hour trips but less than 500 peak hour trips. Therefore, the proposed development requires a Category I TIA. The area of significant traffic was determined to consist of the following intersections:

- The existing signalized Country Club Road/3rd Street intersection;
- The existing Country Club Road/Speedway Boulevard intersection;
- The existing Country Club Road/5th-6th Street intersection;
- The proposed unsignalized Country Club Road/Driveway 1 intersection;
- The proposed unsignalized Country Club Road/Driveway 2 intersection;
- The proposed unsignalized 3rd Street/Driveway 3 intersection.

Influence Area

A development's influence area consists of the geographic area surrounding the development from which it is expected to draw the majority of its trips. In the case of the proposed development, the geographic area from which the majority of the expected site-generated trips will come from is the Country Club Road corridor. Per the City of Tucson requirements, the influence area would encompass the existing and proposed intersections referenced above.

LAND USE

Under present conditions the property on which the proposed development will be located is currently a closed monastery, a parking lot with solar panels, and one other building. The parcels of land surrounding the proposed site are currently a mixture of developed land with commercial and residential uses.

SITE ACCESSIBILTY

In most cases, the incoming trips will originate and terminate from areas outside the proposed development and will use Country Club Road and 2nd Street to access the site access driveways and vice–versa for the exiting site-generated traffic.

The proposed development will have three (3) site access driveways – two driveways (Driveways 1 and 2) along Country Club Road and one driveway (Driveway 3) along 2nd Street. Driveway 1 is the south driveway along Country Club Road and Driveway 2 is the north driveway along Country Club Road. The driveways will be full access driveways. There will also bike access to the 3rd Street Bike Route.

The analysis of the existing conditions included the following items:

- Physical characteristics
- Traffic volumes
- Capacity
- Safety of the roadway network

The analysis of the existing conditions provides a base against which the traffic impacts of the proposed commercial development can be measured.

PHYSICAL CHARACTERISTICS

Figure 4 illustrates the existing street network and ADTs. In an earlier section of this report, three existing intersections were identified to comprise the influence area. The following briefly describes each of the existing intersections.

- **Country Club Road**

Country Club Road is a four-lane north/south major arterial roadway with curb and gutter and sidewalk – 2 lanes in the NB direction and 2 lanes in the SB direction. Country Club Road has a 35 MPH posted speed limit. There are no bike lanes. Country Club Road is served by SunTran, Route 17. There are existing bus shuttles at 3rd Street.

- **Country Club Road/3rd Street**

The existing Country Club Road/3rd Street intersection is a four-way signalized TOUCAN Intersection. This type of intersection allows two groups, pedestrians and bicyclists, to safely cross Country Club Road. At this TOUCAN intersection, the signal rests on a green signal for Country Club Road. A bicyclists or pedestrian activates the signal by depressing a push button to activate the WALK indication and green signal. The EB and WB approaches consist of single exclusive right-turn lane. The NB and SB approaches are two lane approaches with the outside lane being a combination through/right-turn lane. See photo on the next page.

- **Country Club Road/Speedway Boulevard**

The existing Country Club Road/Speedway Boulevard intersection is a four-way signalized intersection with a lagging left-turn phase for all approaches. The EB and WB approaches consist of an exclusive left-turn lane, 3 through lanes, and an exclusive right-turn lane. The NB and SB approaches consist of an exclusive left-turn lane, 2 through lanes, and an exclusive right-turn lane.

- **Country Club Road/5th-6th Street**

The existing Country Club Road/5th-6th Street intersection is a four-way signalized Intersection with a lagging left-turn phase for all approaches. The EB and WB approaches consist of an exclusive left-turn lane and 2 through lanes. The NB and SB approaches consist of an exclusive left-turn lane and 2 through lanes with the outside through lane being a combination through/right-turn lane.

Country Club Road/3rd Street – looking north

TRAFFIC VOLUMES

The 2018 ADT on Country Club Road north of 3rd street is 19,600 vehicles a day based on data from the PAG website. The 2019 ADT on Country Club Road is estimated to be 19,800 vehicles a day. The estimated ADT value for Country Club Road is based on data from the PAG website and applying a 1.0 growth factor.

The turning movement counts at the Country Club Road/3rd Street intersection, at the Country Club Road/Speedway Boulevard intersection, and at the Country Club Road/5th-6th street intersection were collected on January 31, 2019 during the AM and PM Peak Hours. The counts were collected by **Traffic Research & Analysis Inc.** for **Mathieu Engineering Corp**. The morning peak hour for all three intersections was found to be from 7:30 AM to 8:30 AM and the evening peak hour was found to be from 4:30 PM to 5:30 PM for the Country Club Road/3rd Street intersection and the Country Club/Speedway Boulevard intersection. For the Country Club Road/5th-6th street intersection, the evening peak hour was found to be from 4:45 PM to 5:45 PM. The traffic count data is provided in **Appendix B**. **Figure 4** shows the existing turning movement counts for the AM and PM Peak Hours on the roadway network.

LEVEL OF SERVICE

The Level of Service (LOS) is a qualitative description of how well a roadway and/or intersection operates under certain traffic conditions. LOS uses a grading system similar to academic grades, A through F. LOS A is a free-flow traffic condition and LOS F is a forced flow with extreme congestion condition.

EXISTING LEVEL OF SERVICE – INTERSECTION

The AM and PM Peak Hour traffic conditions at the intersection were evaluated for the respective Study Horizon Year using *HCS 2000* + software, release 5.21, which replicates the *Highway Capacity Manual 2000,* published by the Transportation Research Board for signalized intersections.

Country Club Road/Speedway Boulevard Intersection
The 2019 existing traffic conditions for the AM and PM Peak Hours for the signalized Country Club Road/Speedway Boulevard intersection were analyzed using the existing intersection geometry and the turning movement count data referenced above. See **Table 1** below for the results of the HCS Analysis.

TABLE 1
2019 EXISTING LEVEL OF SERVICE

SIGNALIZED INTERSECTION	2019 LEVELOF SERVICE							
	AM PEAK HOUR				PM PEAK HOUR			
	EB	WB	NB	SB	EB	WB	NB	SB
	L-T-R	L-T-R	L-T-R	L-T-R	L-T-R	L-T-R	L-T-R	L-T-R
Country Club Road/Speedway Blvd.	C-C-B	C-D-B	C-C-C	C-C-C	C-D-B	C-C-B	C-D-C	C-C-C

For the 2019 existing traffic conditions, the Country Club Road/Speedway Boulevard intersection operates at LOS C during the AM Peak Hour with 32.7 seconds of delay and LOS C during the PM Peak Hour with 33.8 seconds of delay.

Country Club Road/5th-6th Street Intersection
The 2019 existing traffic conditions for the AM and PM Peak Hours for the signalized Country Club Road/5th-6th Street intersection were analyzed using the existing intersection geometry and the turning movement count data referenced above. See **Table 2** below for the results of the HCS Analysis.

TABLE 2
2019 EXISTING LEVEL OF SERVICE

SIGNALIZED INTERSECTION	2019 LEVELOF SERVICE							
	AM PEAK HOUR				PM PEAK HOUR			
	EB	WB	NB	SB	EB	WB	NB	SB
	L-T	L-T-R	L-T-R	L-T-R	L-T	L-T-R	L-T-R	L-T-R
Country Club Road/5th-6th Street	B-B	B-C-B	C-C-B	B-C	B-C	C-C-C	C-D-B	C-D

For the 2019 existing traffic conditions, the Country Club Road/5th-6th intersection operates at LOS C during the AM Peak Hour with 24.9 seconds of delay and LOS C during the PM Peak Hour with 28.3 seconds of delay.

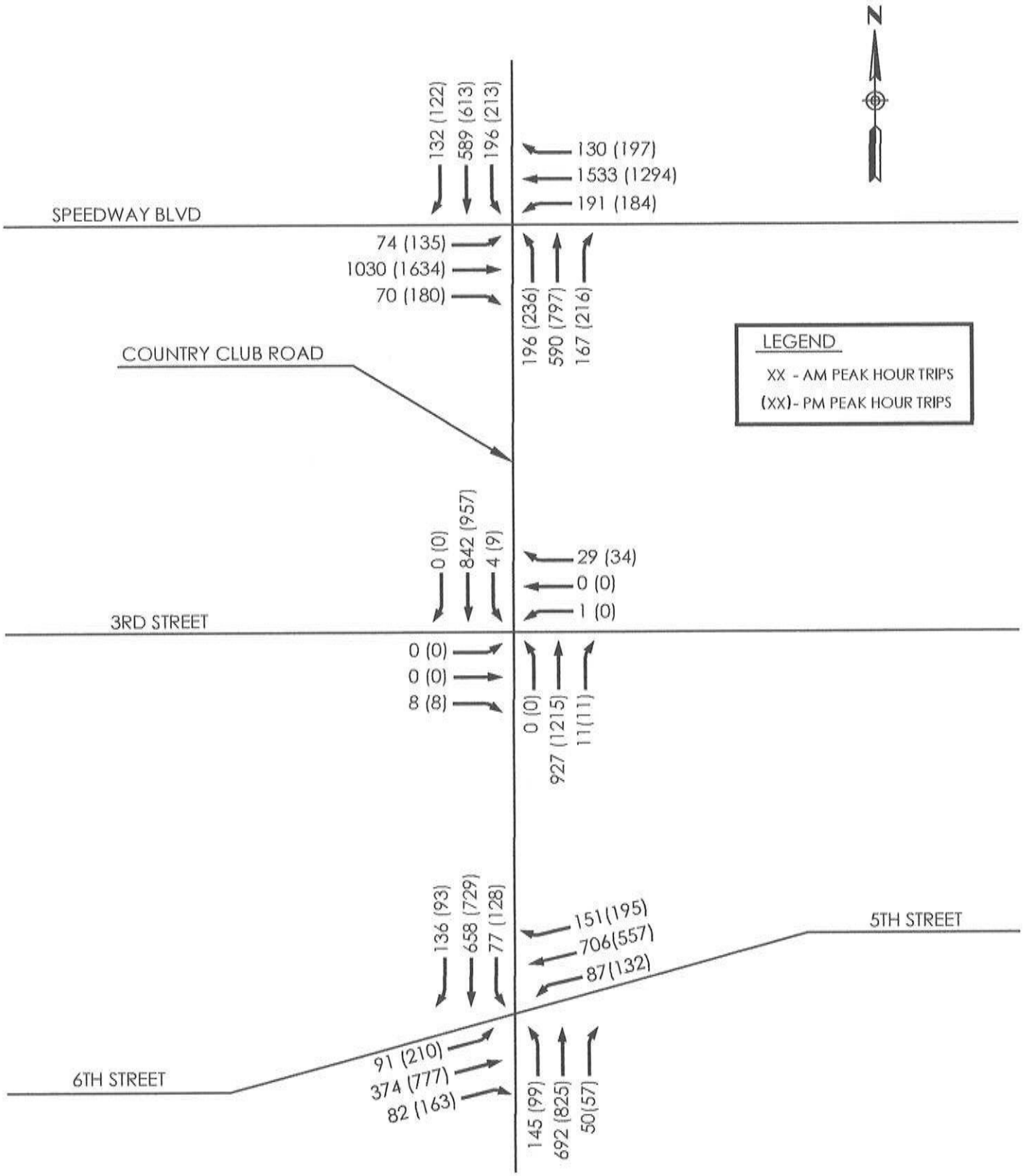


FIGURE 4
2019 EXISTING TRAFFIC VOLUMES

SITE TRAFFIC FORECASTING

The Study Horizon Year for this Category I Traffic Impact Study is 2021. A five-step process was used to forecast the site traffic. This process involved: 1) estimating the amount of traffic generated by the site; 2) determining the mode of transportation for these trips; 3) determining the amount of pass-by traffic, 4) distributing the traffic and 5) assigning the traffic to specific routes.

Trip Generation

The average daily traffic volume and the AM and PM Peak Hour volumes generated by the proposed development has been estimated using the average trips rates provided in the Institute of Transportation Engineer's (ITE) *"Trip Generation, 9th Edition"*, Land Use Code: 220 – Apartments, Land Use Code 720 – Medical- Dental Office Building and Land use Code 826 – Specialty Retail Center. **Table 3** sets forth the expected number of trips. At full build-out, the proposed development is expected to generate a total of 2,536 daily trips, 211 AM Peak Hour trips, and 230 PM Peak Hour trips, based on the uses noted above and using the trip generation average trip rates referenced in **Appendix A**.

TABLE 3
BENEDICTINE MONASTERY - SITE TRAFFIC GENERATION

LAND USE	ITE CODE	No. of Units and SF	NUMBER OF VEHICLE TRIPS						
			AM PEAK HOUR			PM PEAK HOUR			DAILY
			IN	OUT	TOTAL	IN	OUT	TOTAL	(TWO-WAY)
Apartments	220	287	29	117	146	116	62	178	1,909
Medical-Dental Office Building	720	10,000	19	5	24	10	26	36	361
Speciality Retail Center	826	6,000	20	21	41	7	9	16	266
TOTAL TRIPS			68	143	211	133	97	230	2,536

Mode Split

The location and potential use of the proposed development suggests that the majority of the trips will be by automobile, bicycle, pedestrians, and transit users. The traffic split will be 60% autos, 25% bicyclists, and 15% pedestrians/transit users.

PAVEMENT DESIGN DISCLAIMER

The vehicle assumption noted above is by no means intended to be used as a traffic mix prediction in determining the pavement design and/or asphalt/concrete specifications.

Pass-by Traffic

Pass-by traffic (traffic already on the adjacent roadway) will provide a zero percentage of the site-generated traffic for the apartments (ITE Land use 220), the medical-dental office use ITE Land Use 720), and the specialty retail use (ITE Land Use Code 826). Available ITE data, as published in the *ITE Trip Generation Manual, 9th Edition, Volume 1, Chapter 5* and in the *ITE Trip Generation Handbook, 3rd Edition, August 2014, Appendix* F suggests that pass-by trips are a non-issue for apartments, medical-dental office uses, and specialty retail uses.

Directional Distribution

Based on the turning volume counts at the existing Country Club Road/3rd Street intersection, the existing Country Club Road/Speedway Boulevard intersection, and the existing Country Club Road/5th-6th Street intersection counted on January 31, 2019 and the regional attraction of the proposed development, the expected directional distribution of the site-generated traffic from the proposed development will be 50% to and from the north and 50% to and from the south along Country Club Road.

SITE TRAFFIC ASSIGNMENTS

The expected AM and PM Peak Hour trips and daily trips for the proposed development are assigned to the roadway network using the directional distributions referenced above. The traffic assignments are shown in **Figure 5 – 2021 – Site Traffic Assignments.**

NON-SITE TRAFFIC FORECASTING

The projected 2021 non-site or background traffic volumes which will be on the surrounding roadway network is shown on Figure 6. The traffic volumes are determined by applying a 1.0% growth factor to the 2019 traffic volumes. These traffic volumes do not include the expected trips from the proposed development. See **Figure 6 – 2021 Non-Site Traffic Assignments.**

TOTAL TRAFFIC

For the Study Horizon Year 2021, the projected 2021 non-site traffic will be combined with the expected AM and PM Peak Hour trips and daily trips from the proposed development to create the 2021 Total Traffic volumes. These volumes are illustrated on **Figure 7 – 2021 Total Traffic Assignments**

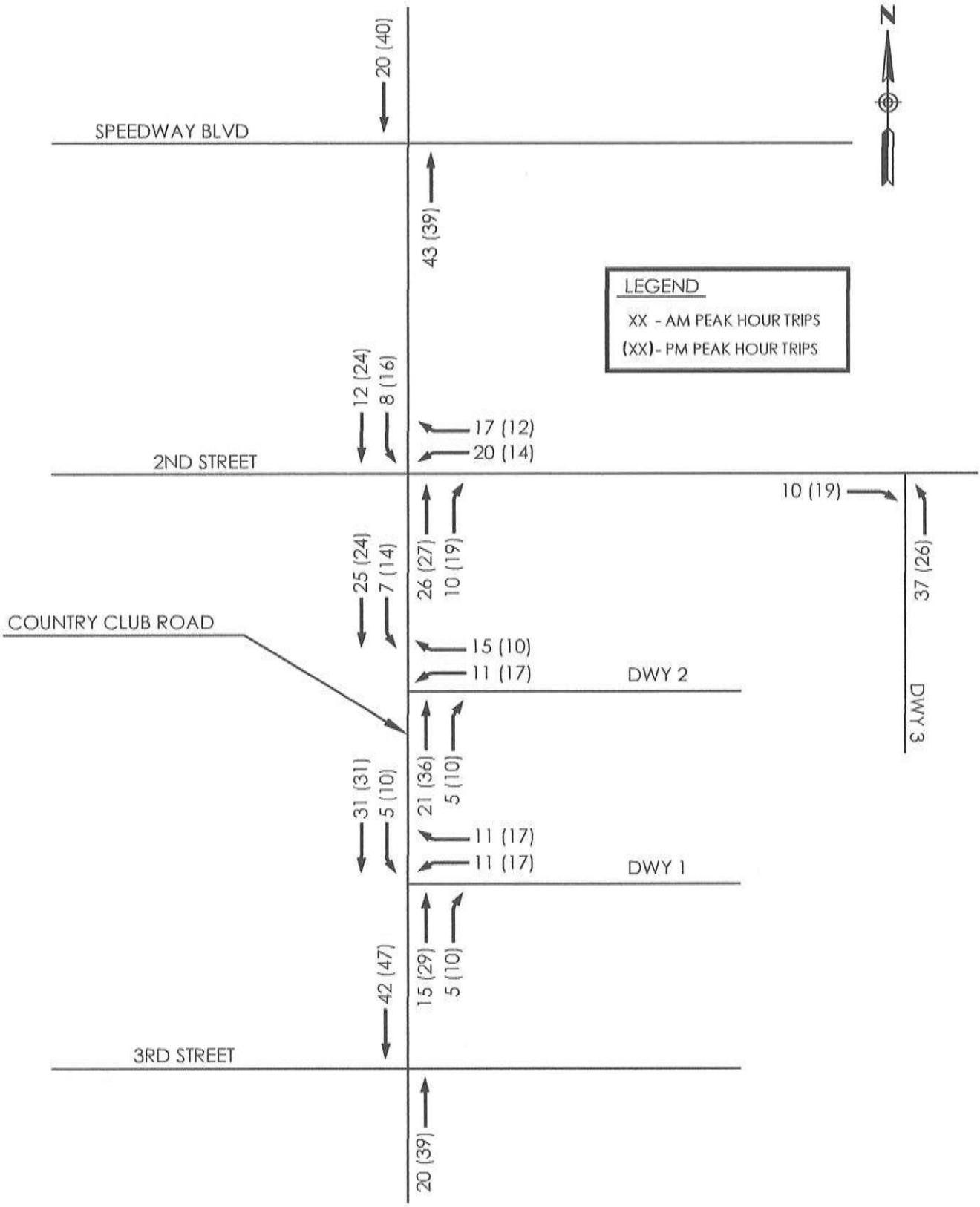


FIGURE 5
2021 SITE TRAFFIC ASSIGNMENTS

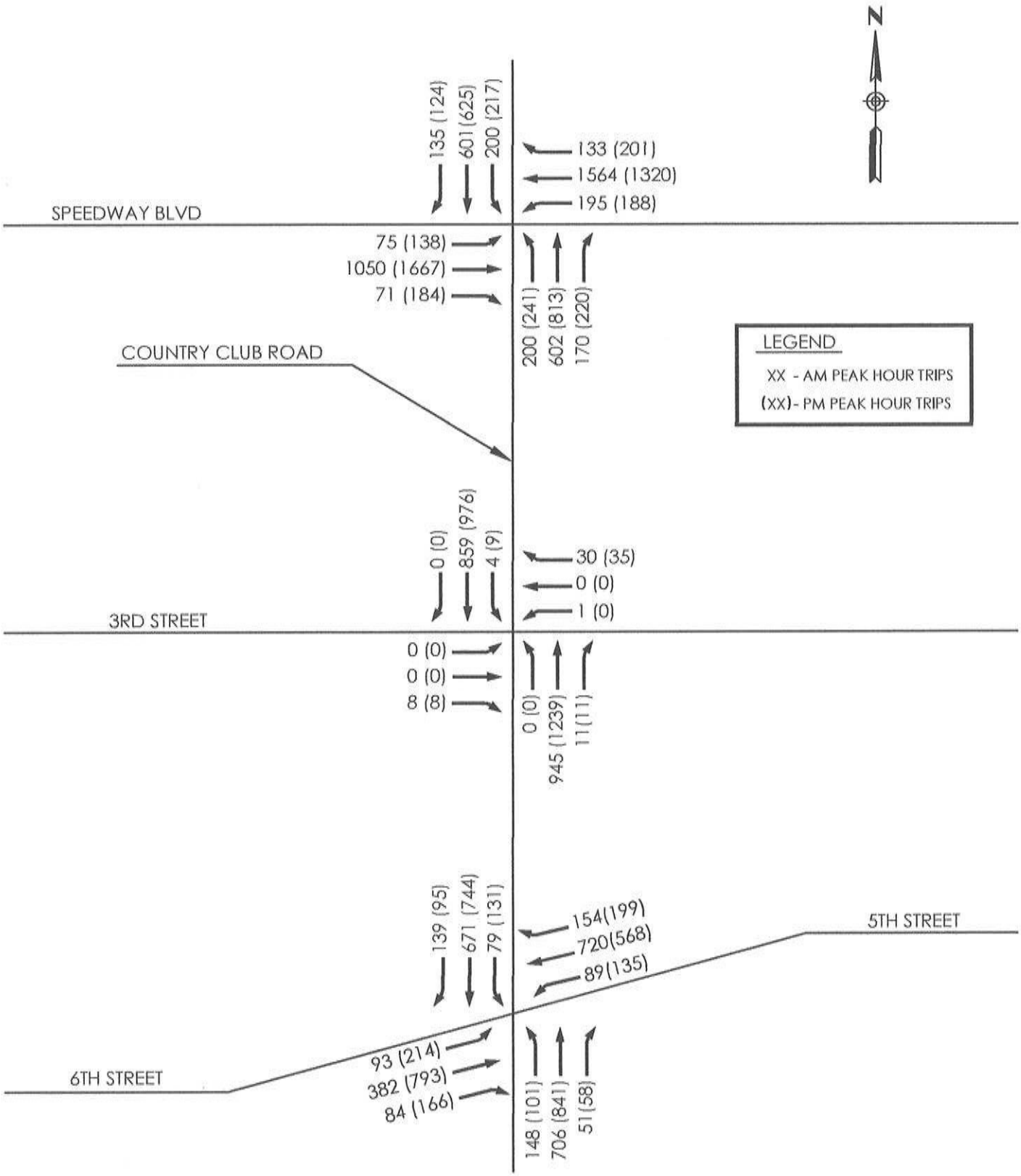


FIGURE 6
2021 NON-SITE TRAFFIC VOLUMES

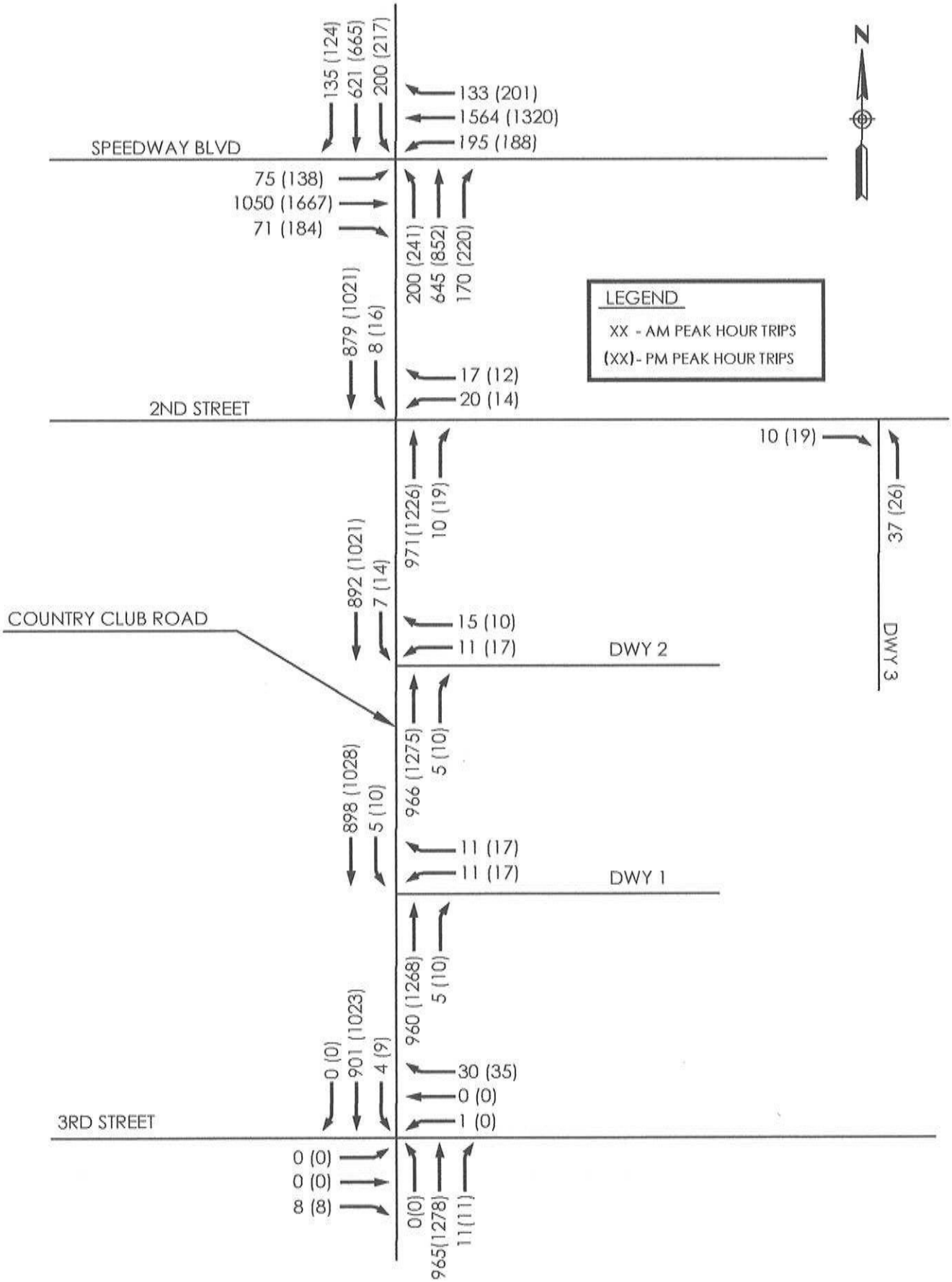


FIGURE 7
2021 TOTAL TRAFFIC ASSIGNMENTS

The effects of the project's total traffic on the existing Country Club Road/Speedway Boulevard intersection and the Country Club Road/5th-6th Street intersection and the proposed site access driveways on Country Club Road will be analyzed for the Study Horizon Year 2021.

As noted in Section 4, existing Country Club Road/Speedway Boulevard intersection operates at LOS C during both the AM and PM Peak Hours for the 2019 existing traffic conditions and the existing Country Club Road/5th-6th Street intersection operates at LOS C during both the AM and PM Peak Hours for the 2019 existing traffic conditions.

LEVEL OF SERVICE – STUDY INTERSECTIONS FOR STUDY HORIZON YEAR 2017

As noted previously, the Level of Service (LOS) is a qualitative description of how well a roadway and/or intersection operates under certain traffic conditions. LOS uses a grading system similar to academic grades, A through F. LOS A is a free-flow traffic condition and LOS F is a forced flow with extreme congestion condition.

The AM and PM Peak Hour traffic conditions at the intersection were evaluated for the respective Study Horizon Year using *HCS 2000* + software, release 5.21, which replicates the *Highway Capacity Manual 2000,* published by the Transportation Research Board for signalized intersections.

Country Club Road/Speedway Boulevard Intersection – 2021
The 2021 Total Traffic conditions for the signalized Country Club Road/Speedway Boulevard intersection were analyzed using the existing intersection geometry. The results are listed below in **Table 4**.

TABLE 4
2021 PROPOSED LEVEL OF SERVICE

SIGNALIZED INTERSECTION	2021 LEVELOF SERVICE							
	AM PEAK HOUR				PM PEAK HOUR			
	EB	WB	NB	SB	EB	WB	NB	SB
	L-T-R	L-T-R	L-T-R	L-T-R	L-T-R	L-T-R	L-T-R	L-T-R
Country Club Road/Speedway Blvd.	C-C-B	C-E-B	C-D-C	C-D-C	C-E-B	C-C-B	C-E-C	C-C-C

For the 2021 Total Traffic conditions, the results of the analysis indicate that the intersection will operate at LOS D during the AM Peak Hour with 40.6 seconds of delay and LOS D during the PM Peak Hour with 47.0 seconds of delay.

Country Club Road/5th-6th Street Intersection – 2021

The 2021 Total Traffic conditions for the signalized Country Club Road/5th-6th Street intersection were not analyzed. For the 2019 Total Traffic conditions the intersection operates at LOS C. For the 2021 conditions 20 AM Peak Hour trips and 39 PM Peak hour trips will be added to the through traffic, it should not degrade the LOS of the intersection below LOS C.

AUXILIARY LANES WARRANTS AND RECOMMENDATIONS

NB Right-turn Lane at Driveway 1

Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes, a 35 MPH speed limit, and the *City of Tucson Transportation Access Management Guidelines*, *Figure 5-3 – Right Turn Guidelines for Four-Lane Roadways*, and plotting the data points on the graph, a NB right-turn lane would not be warranted along Country Club Road at the Country Club Road/Driveway 1 intersection during the AM or PM Peak Hours.

NB Right-turn Lane at Driveway 2

Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes, a 35 MPH speed limit, and the *City of Tucson Transportation Access Management Guidelines*, *Figure 5-3 – Right Turn Guidelines for Four-Lane Roadways*, and plotting the data points on the graph, a NB right-turn lane would not be warranted along Country Club Road at the Country Club Road/Driveway 2 intersection during the AM or PM Peak Hours.

LEVEL OF SERVICE – DRIVEWAY INTERSECTIONS FOR STUDY HORIZON YEAR 2021

Country Club Road/Driveway 1 Intersection – 2021

The Country Club Road/Driveway 1 intersection was analyzed as a two-way unsignalized intersection with one-way STOP control on Driveway 1. The driveway is a full access driveway. The results are listed below in **Table 5**.

TABLE 5
2021 PROPOSED LEVEL OF SERVICE

UNSIGNALIZED INTERSECTION	2021 APPROACH LEVEL OF SERVICE							
	AM PEAK HOUR				PM PEAK HOUR			
	EB	WB	NB	SB	EB	WB	NB	SB
		L-R		L		L-R		L
Country Club Road/Driveway 1		C-B		B		D-B		B

For the 2021 Total Traffic conditions, the results of the analysis indicate that the WB Approach will operate at LOS C during the AM Peak Hour with 16.5 seconds of delay. During the PM Peak Hour, the WB Approach will operate at LOS C with 24.0 seconds of delay.

Country Club Road/Driveway 2 Intersection – 2021

The Country Club Road/Driveway 2 intersection was analyzed as a two-way unsignalized intersection with one-way STOP control on Driveway 2. The driveway is a full access driveway. The results are listed below in **Table 6**.

TABLE 6
2021 PROPOSED LEVEL OF SERVICE

UNSIGNALIZED INTERSECTION	2021 APPROACH LEVEL OF SERVICE							
	AM PEAK HOUR				PM PEAK HOUR			
	EB	WB	NB	SB	EB	WB	NB	SB
		L-R		L		L-R		L
Country Club Road/Driveway 2		C-B		B		D-B		B

For the 2021 Total Traffic conditions, the results of the analysis indicate that the WB Approach will operate at LOS C during the AM Peak Hour with 16.9 seconds of delay. During the PM Peak Hour, the WB Approach will operate at LOS D with 26.4 seconds of delay.

TRAFFIC SAFETY

The sight distance triangles at the proposed driveways will be calculated and shown on the Improvement Plans. No vegetation is planned at the intersections or within the Country Club Road right-of-way. Therefore, there should be no visual restrictions at the driveway intersections.

PEDESTRIAN CONSIDERATIONS

Sidewalks currently exist along Country Club Road and 3rd Street in the vicinity of the proposed development and will be reconstructed as needed as part of the development of the site.

TRAFFIC CONTROL NEEDS

At the proposed driveway intersections with Country Club Road and 2nd Street, one-way STOP control is recommended with STOP signs installed on the driveways. Sufficient gaps in the Country Club Road traffic stream exist, allowing for ingressing and egressing left and right-turn movements to and from Country Club Road. Therefore, lane movement restrictions for the roadways are not recommended.

Country Club Road is a four-lane north/south major arterial roadway with curb and gutter and sidewalk – 2 lanes in the NB direction and 2 lanes in the SB direction. Country Club Road has a 35 MPH posted speed limit.

As a condition of the approval of this development, Country Club Road between 3rd Street and 2nd Street will be re-striped as a five-lane roadway cross-section with a center two-way left-turn lane.

The conclusions of this report indicate that the proposed development - Benedictine Monastery Apartments will have minor traffic impacts on the existing transportation network, namely Country Club Road and 2nd Street and the existing Country Club Road/3rd Street intersection and the proposed site access driveways.

SITE ACCESSIBILTY

In most cases, the incoming trips will originate and terminate from areas outside the proposed development and will use Country Club Road and 2nd Street to access the site access driveways and vice–versa for the exiting site-generated traffic.

The proposed development will have three (3) site access driveways – two driveways (Driveways 1 and 2) along Country Club Road and one driveway (Driveway 3) along 2nd Street. Driveway 1 is the south driveway along Country Club Road and Driveway 2 is the north driveway along Country Club Road. The driveways will be full access driveways. There will also bike access to the 3rd Street Bike Route.

AUXILIARY LANES WARRANTS AND RECOMMENDATIONS

NB Right-turn Lane at Driveway 1
Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes, a 35 MPH speed limit, and the *City of Tucson Transportation Access Management Guidelines*, *Figure 5-3 – Right Turn Guidelines for Four-Lane Roadways*, and plotting the data points on the graph, a NB right-turn lane would not be warranted along Country Club Road at the Country Club Road/Driveway 1 intersection during the AM or PM Peak Hours.

NB Right-turn Lane at Driveway 2
Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes, a 35 MPH speed limit, and the *City of Tucson Transportation Access Management Guidelines*, *Figure 5-3 – Right Turn Guidelines for Four-Lane Roadways*, and plotting the data points on the graph, a NB right-turn lane would not be warranted along Country Club Road at the Country Club Road/Driveway 2 intersection during the AM or PM Peak Hours.

RESULTS

Country Club Road/3rd Street Intersection
For the 2019 existing traffic conditions, the Country Club Road/Speedway Boulevard intersection operates at LOS C during the AM Peak Hour with 32.7 seconds of delay and LOS C during the PM Peak Hour with 33.8 seconds of delay.

For the 2021 Total Traffic conditions, the results of the analysis indicate that the intersection will operate at LOS D during the AM Peak Hour with 40.6 seconds of delay and LOS D during the PM Peak Hour with 47.0 seconds of delay.

Country Club Road/5th-6th Street Intersection

For the 2019 existing traffic conditions, the Country Club Road/5th-6th intersection operates at LOS C during the AM Peak Hour with 24.9 seconds of delay and LOS C during the PM Peak Hour with 28.3 seconds of delay.

The 2021 Total Traffic conditions for the signalized Country Club Road/5th-6th Street intersection were not analyzed. For the 2019 Total Traffic conditions the intersection operates at LOS C. For the 2021 conditions 20 AM Peak Hour trips and 39 PM Peak hour trips will be added to the through traffic, it should not degrade the LOS of the intersection below LOS C.

Country Club Road/Driveway 1 Intersection

For the 2021 Total Traffic conditions, the results of the analysis indicate that the WB Approach will operate at LOS C during the AM Peak Hour with 16.5 seconds of delay. During the PM Peak Hour, the WB Approach will operate at LOS C with 24.0 seconds of delay.

Country Club Road/Driveway 2 Intersection

For the 2021 Total Traffic conditions, the results of the analysis indicate that the WB Approach will operate at LOS C during the AM Peak Hour with 16.9 seconds of delay. During the PM Peak Hour, the WB Approach will operate at LOS D with 26.4 seconds of delay.

As a condition of the approval of this development, Country Club Road between 3rd Street and 2nd Street will be re-striped as a five-lane roadway cross-section with a center two-way left-turn lane.

8. LIMITATIONS

Mathieu Engineering Corp.'s Professional Civil Engineering services have been performed using that degree of professional skill ordinarily exercised, under similar circumstances, by reputable transportation engineering firms practicing in this locality. No other warranty, expressed or implied, is made.

The contents of this report are intended for the sole use of the addressee and his/her designees. In completing this report, data was obtained from a variety of sources (i.e. City, County, State, and Federal sources); Mathieu Engineering Corp. has assumed these sources reliable and accurate. Should deviations from this report be noted, this firm shall be contacted for review of the area of concern.

Every reasonable attempt was made to acquire recent traffic impact studies, traffic projections, and/or data that may be helpful in more accurately projecting traffic volumes. Mathieu Engineering Corp. is not responsible for incorporating data made available after this document has been finalized.

This report is issued with the understanding that it the responsibility of the owner to see that its provisions are carried out or brought to the attention of those concerned. In the event that any changes of the proposed project are planned, the conclusions and recommendations contained in this report shall be reviewed and the report shall be modified or supplemented as necessary.

APPENDIX A

HCS Analysis – Country Club Road/Speedway Boulevard Intersection
HCS Analysis – Country Club Road/5th-6th Street Intersection
HCS Analysis – Country Club Road/Driveway 1 Intersection
HCS Analysis – Country Club Road/Driveway 2 Intersection

HCS+: Signalized Intersections Release 5.21

Analyst: MEM
Agency: Mathieu Eng. Corp.
Date: 5/24/2019
Period: AM Peak Hour
Project ID: Benedictine Monastery Apts.
E/W St: Speedway Blvd.

Inter.:
Area Type: All other areas
Jurisd: City of Tucson
Year : 2019 Existing
N/S St: Country Club Rd.

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	74	1030	70	191	1533	130	196	590	167	196	589	132
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P	P			NB	Left	P	P		
	Thru	P					Thru	P			
	Right	P					Right	P			
	Peds						Peds				
WB	Left	P	P			SB	Left	P	P		
	Thru	P					Thru	P			
	Right	P					Right	P			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		22.0	9.0	0.0				16.0	9.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	470	1805	0.17	0.47	20.1	C		
T	1627	5176	0.67	0.31	23.1	C	22.6	C
R	508	1615	0.15	0.31	17.8	B		
Westbound								
L	470	1805	0.43	0.47	22.9	C		
T	1627	5176	1.00	0.31	46.9	D	42.5	D
R	508	1615	0.27	0.31	19.3	B		
Northbound								
L	470	1805	0.44	0.39	24.3	C		
T	827	3618	0.76	0.23	31.7	C	29.5	C
R	369	1615	0.48	0.23	27.9	C		
Southbound								
L	470	1805	0.44	0.39	24.3	C		
T	827	3618	0.76	0.23	31.6	C	29.2	C
R	369	1615	0.38	0.23	25.8	C		

Intersection Delay = 32.7 (sec/veh) Intersection LOS = C

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: AM Peak Hour
Intersection:
Area Type: All other areas
Jurisdiction: City of Tucson
Analysis Year: 2019 Existing
Project ID: Benedictine Monastery Apts.
E/W St: Speedway Blvd. N/S St: Country Club Rd.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	74	1030	70	191	1533	130	196	590	167	196	589	132
% Heavy Veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PK 15 Vol	20	274	19	51	408	35	52	157	44	52	157	35
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ParkExist												
NumPark												
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	79	1096	74	203	1631	138	209	628	178	209	627	140
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0	0	0	0	0	0	0	0
%InProtPhase	0.0			0.0			0.0			0.0		

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	3	3	3	3	3	3	3	3	3	3	3	3
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P	P			NB	Left	P	P		
	Thru	P					Thru	P			
	Right	P					Right	P			
	Peds						Peds				
WB	Left	P	P			SB	Left	P	P		
	Thru	P					Thru	P			
	Right	P					Right	P			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		22.0	9.0	0.0				16.0	9.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	74	1030	70	191	1533	130	196	590	167	196	589	132
PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj flow	79	1096	74	203	1631	138	209	628	178	209	627	140
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj flow	79	1096	74	203	1631	138	209	628	178	209	627	140
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	T	R	L	T	R	L	T	R
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lanes	1	3	1	1	3	1	1	2	1	1	2	1
fW	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fHV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fG	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fP	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fBB	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fLU	1.000	0.908	1.000	1.000	0.908	1.000	1.000	0.952	1.000	1.000	0.952	1.000
fRT		1.000	0.850		1.000	0.850		1.000	0.850		1.000	0.850
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Sec.	0.211			0.211			0.308			0.308		
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000
S	1805	5176	1615	1805	5176	1615	1805	3618	1615	1805	3618	1615
Sec.	400			400			585			585		

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		0	1805	0.00	0.200	361	0.00
Perm		79	400	0.20	0.271	109	0.72
Left	L	79			0.47	470	0.17
Prot							
Perm							
Thru	T	1096	5176	0.21	0.31	1627	0.67
Right	R	74	1615	0.05	0.31	508	0.15
Westbound							
Prot		94	1805	# 0.05	0.200	361	0.26
Perm		109	400	0.27	0.271	109	1.00
Left	L	203			0.47	470	0.43
Prot							
Perm							
Thru	T	1631	5176	# 0.32	0.31	1627	1.00
Right	R	138	1615	0.09	0.31	508	0.27
Northbound							
Prot		100	1805	0.06	0.200	361	0.28
Perm		109	585	0.19	0.186	109	1.00
Left	L	209			0.39	470	0.44
Prot							
Perm							
Thru	T	628	3618	0.17	0.23	827	0.76
Right	R	178	1615	0.11	0.23	369	0.48
Southbound							
Prot		100	1805	# 0.06	0.200	361	0.28
Perm		109	585	# 0.19	0.186	109	1.00
Left	L	209			0.39	470	0.44
Prot							
Perm							
Thru	T	627	3618	0.17	0.23	827	0.76
Right	R	140	1615	0.09	0.23	369	0.38

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.61
Total lost time per cycle, L = 7.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.68

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.17	0.47	19.3	1.000	470	0.50	0.8	0.0	20.1	C		
T	0.67	0.31	20.9	1.000	1627	0.50	2.2	0.0	23.1	C	22.6	C
R	0.15	0.31	17.2	1.000	508	0.50	0.6	0.0	17.8	B		
Westbound												
L	0.43	0.47	20.0	1.000	470	0.50	2.9	0.0	22.9	C		
T	1.00	0.31	24.0	1.000	1627	0.50	22.9	0.0	46.9	D	42.5	D
R	0.27	0.31	18.0	1.000	508	0.50	1.3	0.0	19.3	B		
Northbound												
L	0.44	0.39	21.2	1.000	470	0.50	3.0	0.0	24.3	C		
T	0.76	0.23	25.2	1.000	827	0.50	6.5	0.0	31.7	C	29.5	C
R	0.48	0.23	23.4	1.000	369	0.50	4.5	0.0	27.9	C		
Southbound												
L	0.44	0.39	21.2	1.000	470	0.50	3.0	0.0	24.3	C		
T	0.76	0.23	25.2	1.000	827	0.50	6.4	0.0	31.6	C	29.2	C

R	0.38	0.23	22.8	1.000	369	0.50	3.0	0.0	25.8	C

Intersection delay = 32.7 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach	M	M	M	M
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	33.0	33.0	27.0	27.0
Effective permitted green time for LT lane group, g(s)	19.0	19.0	13.0	13.0
Opposing effective green time, go (s)	22.0	22.0	16.0	16.0
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	3	3	2	2
Adjusted LT flow rate, VLT (veh/h)	79	203	209	209
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	1631	1096	627	628
Lost time for LT lane group, tL	5.00	5.00	5.00	5.00
Computation				
LT volume per cycle, LTC=VLTC/3600	1.54	3.95	4.06	4.06
Opposing lane util. factor, fLUo	0.908	0.908	0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	11.64	7.82	6.40	6.41
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.69	0.69	0.77	0.77
gq, (see Exhibit C16-4,5,6,7,8)	18.93	8.82	7.09	7.11
gu=g-gq if gq>=gf, or = g-gf if gq<gf	0.07	10.18	5.91	5.89
n=Max(gq-gf)/2,0)	9.46	4.41	3.55	3.56
PTHo=1-PLTo	1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	7.12	4.04	2.41	2.41
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.21	0.21	0.31	0.31
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.21	0.21	0.31	0.31
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.211	0.211	0.308	0.308

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No
Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
LT volume per cycle, LTC=VLTC/3600
Opposing lane util. factor, fLUo 0.908 0.908 0.952 0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg
OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		79	203	209	209
v/c ratio from Capacity Worksheet, X		0.17	0.43	0.44	0.44
Protected phase effective green interval, g (s)		14.0	14.0	14.0	14.0
Opposing queue effective green interval, gq		14.93	8.82	7.09	7.11
Unopposed green interval, gu		4.00	10.18	5.91	5.89
Red time r=(C-g-gq-gu)		37.1	37.0	43.0	43.0
Arrival rate, qa=v/(3600(max[X,1.0]))		0.02	0.06	0.06	0.06
Protected ph. departure rate, Sp=s/3600		0.501	0.501	0.501	0.501
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		22.28	0.21	0.36	0.36
XPerm		0.01	1.50	1.54	1.54
XProt					
Case		4	5	5	5
Queue at beginning of green arrow, Qa		0.00	1.05	1.14	1.14
Queue at beginning of unsaturated green, Qu		1.14	2.58	2.91	2.91
Residual queue, Qr		0.00	0.00	0.00	0.00
Uniform Delay, d1		19.3	20.0	21.2	21.2

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
L	0.0	0.00		19.3	0.00	0.0	0.0	20.1
T	0.0	0.00		20.9	0.00	0.0	0.0	23.1
R	0.0	0.00		17.2	0.00	0.0	0.0	17.8
Westbound								
L	0.0	0.00		20.0	0.00	0.0	0.0	22.9
T	0.0	0.00		24.0	0.00	1.0	0.0	46.9
R	0.0	0.00		18.0	0.00	0.0	0.0	19.3
Northbound								
L	0.0	0.00		21.2	0.00	0.0	0.0	24.3
T	0.0	0.00		25.2	0.00	0.0	0.0	31.7
R	0.0	0.00		23.4	0.00	0.0	0.0	27.9
Southbound								
L	0.0	0.00		21.2	0.00	0.0	0.0	24.3
T	0.0	0.00		25.2	0.00	0.0	0.0	31.6
R	0.0	0.00		22.8	0.00	0.0	0.0	25.8

Intersection Delay 32.7 sec/veh Intersection LOS C

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound			Northbound			Southbound		
LaneGroup	L	T	R	L	T	R	L	T	R	L	T	R
Init Queue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Rate	79	402	74	203	598	138	209	329	178	209	329	140
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
No.Lanes	1	3	1	1	3	1	1	2	1	1	2	1
SL	996	1900	1615	996	1900	1615	1218	1900	1615	1218	1900	1615
LnCapacity	470	597	508	470	597	508	470	434	369	470	434	369
Flow Ratio	0.1	0.2	0.0	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1
v/c Ratio	0.17	0.67	0.15	0.43	1.00	0.27	0.44	0.76	0.48	0.44	0.76	0.38
Grn Ratio	0.47	0.31	0.31	0.47	0.31	0.31	0.39	0.23	0.23	0.39	0.23	0.23
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3	3	3	3	3	3	3	3
Pltn Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1	0.8	6.8	1.0	2.3	11.6	2.0	2.7	6.0	3.0	2.7	6.0	2.3
kB	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.5
Q2	0.1	1.3	0.1	0.4	7.1	0.2	0.4	1.5	0.4	0.4	1.5	0.3
Q Average	1.0	8.1	1.1	2.7	18.8	2.2	3.2	7.5	3.4	3.2	7.5	2.6
Q Spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q Storage	140	300	300	200	400	200	90	200	175	120	340	100
Q S Ratio	0.2	0.7	0.1	0.3	1.2	0.3	0.9	0.9	0.5	0.7	0.5	0.6
70th Percentile Output:												
fB%	1.3	1.2	1.3	1.3	1.2	1.3	1.3	1.2	1.3	1.3	1.2	1.3
BOQ	1.2	9.9	1.5	3.4	22.6	2.8	4.0	9.1	4.3	4.0	9.1	3.3
QSRatio	0.2	0.8	0.1	0.4	1.4	0.4	1.1	1.1	0.6	0.8	0.7	0.8
85th Percentile Output:												
fB%	1.6	1.5	1.6	1.6	1.4	1.6	1.6	1.5	1.6	1.6	1.5	1.6
BOQ	1.6	11.8	1.9	4.3	26.4	3.6	5.0	11.0	5.3	5.0	11.0	4.1
QSRatio	0.3	1.0	0.2	0.5	1.6	0.4	1.4	1.4	0.8	1.0	0.8	1.0
90th Percentile Output:												
fB%	1.9	1.6	1.9	1.8	1.5	1.8	1.8	1.6	1.8	1.8	1.6	1.8
BOQ	1.8	13.0	2.2	4.8	28.4	4.1	5.6	12.0	6.0	5.6	12.0	4.7
QSRatio	0.3	1.1	0.2	0.6	1.8	0.5	1.6	1.5	0.9	1.2	0.9	1.2
95th Percentile Output:												
fB%	2.4	1.8	2.4	2.2	1.6	2.2	2.1	1.8	2.1	2.1	1.8	2.2
BOQ	2.3	14.6	2.7	5.9	30.4	5.0	6.8	13.6	7.2	6.8	13.6	5.7
QSRatio	0.4	1.2	0.2	0.7	1.9	0.6	1.9	1.7	1.0	1.4	1.0	1.4
98th Percentile Output:												
fB%	2.9	2.0	2.9	2.6	1.7	2.7	2.5	2.0	2.5	2.5	2.0	2.6
BOQ	2.8	16.2	3.3	7.0	32.5	5.9	7.9	15.2	8.4	7.9	15.2	6.7
QSRatio	0.5	1.3	0.3	0.9	2.0	0.7	2.2	1.9	1.2	1.7	1.1	1.7

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.21

Analyst: MEM
Agency: Mathieu Eng. Corp.
Date: 5/24/2019
Period: PM Peak Hour
Project ID: Benedictine Monastery Apts.
E/W St: Speedway Blvd.

Inter.:
Area Type: All other areas
Jurisd: City of Tucson
Year : 2019 Existing
N/S St: Country Club Rd.

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	135	1634	180	184	1294	197	236	797	216	213	613	122
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	A			NB	Left	A	A		
Thru	A					Thru	A			
Right	A					Right	A			
Peds						Peds				
WB Left	A	A			SB	Left	A	A		
Thru	A					Thru	A			
Right	A					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	23.0	8.0	0.0				17.0	8.0	0.0	
Yellow	2.0	3.0					2.0	3.0		
All Red	0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	444	1805	0.32	0.47	21.0	C		
T	1701	5176	1.01	0.33	48.1	D	43.5	D
R	531	1615	0.36	0.33	18.3	B		
Westbound								
L	444	1805	0.44	0.47	23.1	C		
T	1701	5176	0.80	0.33	24.3	C	23.5	C
R	531	1615	0.39	0.33	18.6	B		
Northbound								
L	444	1805	0.56	0.39	24.1	C		
T	879	3618	0.95	0.24	46.2	D	38.5	D
R	392	1615	0.58	0.24	25.5	C		
Southbound								
L	444	1805	0.50	0.39	22.6	C		
T	879	3618	0.73	0.24	27.6	C	25.8	C
R	392	1615	0.33	0.24	22.3	C		

Intersection Delay = 33.8 (sec/veh) Intersection LOS = C

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: PM Peak Hour
Intersection:
Area Type: All other areas
Jurisdiction: City of Tucson
Analysis Year: 2019 Existing
Project ID: Benedictine Monastery Apts.
E/W St: Speedway Blvd. N/S St: Country Club Rd.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	135	1634	180	184	1294	197	236	797	216	213	613	122
% Heavy Veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	36	430	47	48	341	52	62	210	57	56	161	32
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ParkExist												
NumPark												
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	142	1720	189	194	1362	207	248	839	227	224	645	128
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0	0	0	0	0	0	0	0
%InProtPhase	0.0			0.0			0.0			0.0		

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	3	3	3	3	3	3	3	3	3	3	3	3
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		23.0	8.0	0.0				17.0	8.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	135	1634	180	184	1294	197	236	797	216	213	613	122
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj flow	142	1720	189	194	1362	207	248	839	227	224	645	128
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj flow	142	1720	189	194	1362	207	248	839	227	224	645	128
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	T	R	L	T	R	L	T	R
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lanes	1	3	1	1	3	1	1	2	1	1	2	1
fW	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fHV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fG	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fP	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fBB	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fLU	1.000	0.908	1.000	1.000	0.908	1.000	1.000	0.952	1.000	1.000	0.952	1.000
fRT		1.000	0.850		1.000	0.850		1.000	0.850		1.000	0.850
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Sec.	0.200			0.200			0.286			0.286		
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000
S	1805	5176	1615	1805	5176	1615	1805	3618	1615	1805	3618	1615
Sec.	380			380			543			543		

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		33	1805	0.02	0.186	335	0.10
Perm		109	380	0.29	0.286	109	1.00
Left	L	142			0.47	444	0.32
Prot							
Perm							
Thru	T	1720	5176	# 0.33	0.33	1701	1.01
Right	R	189	1615	0.12	0.33	531	0.36
Westbound							
Prot		85	1805	# 0.05	0.186	335	0.25
Perm		109	380	0.29	0.286	109	1.00
Left	L	194			0.47	444	0.44
Prot							
Perm							
Thru	T	1362	5176	0.26	0.33	1701	0.80
Right	R	207	1615	0.13	0.33	531	0.39
Northbound							
Prot		139	1805	# 0.08	0.186	335	0.41
Perm		109	543	0.20	0.200	109	1.00
Left	L	248			0.39	444	0.56
Prot							
Perm							
Thru	T	839	3618	# 0.23	0.24	879	0.95
Right	R	227	1615	0.14	0.24	392	0.58
Southbound							
Prot		115	1805	0.06	0.186	335	0.34
Perm		109	543	0.20	0.200	109	1.00
Left	L	224			0.39	444	0.50
Prot							
Perm							
Thru	T	645	3618	0.18	0.24	879	0.73
Right	R	128	1615	0.08	0.24	392	0.33

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.69
Total lost time per cycle, L = 4.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.73

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.32	0.47	20.6	1.000	444	0.11	0.4	0.0	21.0	C		
T	1.01	0.33	23.5	1.000	1701	0.50	24.6	0.0	48.1	D	43.5	D
R	0.36	0.33	17.9	1.000	531	0.11	0.4	0.0	18.3	B		
Westbound												
L	0.44	0.47	22.4	1.000	444	0.11	0.7	0.0	23.1	C		
T	0.80	0.33	21.4	1.000	1701	0.34	2.8	0.0	24.3	C	23.5	C
R	0.39	0.33	18.1	1.000	531	0.11	0.5	0.0	18.6	B		
Northbound												
L	0.56	0.39	22.5	1.000	444	0.16	1.6	0.0	24.1	C		
T	0.95	0.24	26.1	1.000	879	0.46	20.1	0.0	46.2	D	38.5	D
R	0.58	0.24	23.3	1.000	392	0.17	2.1	0.0	25.5	C		
Southbound												
L	0.50	0.39	21.7	1.000	444	0.11	0.9	0.0	22.6	C		
T	0.73	0.24	24.4	1.000	879	0.29	3.2	0.0	27.6	C	25.8	C

R	0.33	0.24	21.8	1.000	392	0.11	0.5	0.0	22.3	C

Intersection delay = 33.8 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach	M	M	M	M
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	33.0	33.0	27.0	27.0
Effective permitted green time for LT lane group, g(s)	20.0	20.0	14.0	14.0
Opposing effective green time, go (s)	23.0	23.0	17.0	17.0
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	3	3	2	2
Adjusted LT flow rate, VLT (veh/h)	142	194	248	224
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	1362	1720	645	839
Lost time for LT lane group, tL	5.00	5.00	5.00	5.00
Computation				
LT volume per cycle, LTC=VLTC/3600	2.76	3.77	4.82	4.36
Opposing lane util. factor, fLUo	0.908	0.908	0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	9.72	12.28	6.59	8.57
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.67	0.67	0.76	0.76
gq, (see Exhibit C16-4,5,6,7,8)	13.08	20.00	7.29	12.18
gu=g-gq if gq>=gf, or = g-gf if gq<gf	6.92	0.00	6.71	1.82
n=Max(gq-gf)/2,0)	6.54	10.00	3.64	6.09
PTHo=1-PLTo	1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	5.35	7.83	2.45	2.97
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.20	0.20	0.29	0.29
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.20	0.20	0.29	0.29
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.200	0.200	0.286	0.286

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No
Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
LT volume per cycle, LTC=VLTC/3600
Opposing lane util. factor, fLUo 0.908 0.908 0.952 0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+P1)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If P1>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				

Permitted Right Turns

Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg
OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		142	194	248	224
v/c ratio from Capacity Worksheet, X		0.32	0.44	0.56	0.50
Protected phase effective green interval, g (s)		13.0	13.0	13.0	13.0
Opposing queue effective green interval, gq		13.08	16.00	7.29	8.18
Unopposed green interval, gu		6.92	4.00	6.71	4.00
Red time r=(C-g-gq-gu)		37.0	37.0	43.0	44.8
Arrival rate, qa=v/(3600(max[X,1.0]))		0.04	0.05	0.07	0.06
Protected ph. departure rate, Sp=s/3600		0.501	0.501	0.501	0.501
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.30	0.53	0.31	0.83
XPerm		1.07	1.46	1.86	1.07
XProt					
Case		5	5	5	5
Queue at beginning of green arrow, Qa		0.14	0.96	1.81	0.23
Queue at beginning of unsaturated green, Qu		1.98	2.86	3.46	3.30
Residual queue, Qr		0.00	0.00	0.00	0.00
Uniform Delay, d1		20.6	22.4	22.5	21.7

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
L	0.0	0.00		20.6	0.00	0.0	0.0	21.0
T	0.0	0.00		23.5	0.00	4.8	0.0	48.1
R	0.0	0.00		17.9	0.00	0.0	0.0	18.3
Westbound								
L	0.0	0.00		22.4	0.00	0.0	0.0	23.1
T	0.0	0.00		21.4	0.00	0.0	0.0	24.3
R	0.0	0.00		18.1	0.00	0.0	0.0	18.6
Northbound								
L	0.0	0.00		22.5	0.00	0.0	0.0	24.1
T	0.0	0.00		26.1	0.00	0.0	0.0	46.2
R	0.0	0.00		23.3	0.00	0.0	0.0	25.5
Southbound								
L	0.0	0.00		21.7	0.00	0.0	0.0	22.6
T	0.0	0.00		24.4	0.00	0.0	0.0	27.6
R	0.0	0.00		21.8	0.00	0.0	0.0	22.3

Intersection Delay 33.8 sec/veh Intersection LOS C

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound			Northbound			Southbound		
LaneGroup	L	T	R	L	T	R	L	T	R	L	T	R
Init Queue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Rate	142	631	189	194	500	207	248	440	227	224	338	128
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
No.Lanes	1	3	1	1	3	1	1	2	1	1	2	1
SL	941	1900	1615	941	1900	1615	1151	1900	1615	1151	1900	1615
LnCapacity	444	624	531	444	624	531	444	461	392	444	461	392
Flow Ratio	0.2	0.3	0.1	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1
v/c Ratio	0.32	1.01	0.36	0.44	0.80	0.39	0.56	0.95	0.58	0.50	0.73	0.33
Grn Ratio	0.47	0.33	0.33	0.47	0.33	0.33	0.39	0.24	0.24	0.39	0.24	0.24
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3	3	3	3	3	3	3	3
Pltn Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1	1.6	12.3	2.8	2.2	8.9	3.1	3.3	8.4	3.9	3.0	6.1	2.0
kB	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.3
Q2	0.2	6.4	0.2	0.3	1.6	0.3	0.5	3.4	0.5	0.4	1.0	0.2
Q Average	1.7	18.7	3.0	2.5	10.5	3.4	3.8	11.8	4.3	3.3	7.0	2.2
Q Spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q Storage	140	300	300	200	400	200	90	200	175	120	340	100
Q S Ratio	0.3	1.6	0.3	0.3	0.7	0.4	1.0	1.5	0.6	0.7	0.5	0.6
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
BOQ	2.1	21.7	3.6	2.9	12.3	4.0	4.5	13.9	5.2	4.0	8.3	2.6
QSRatio	0.4	1.8	0.3	0.4	0.8	0.5	1.2	1.7	0.7	0.8	0.6	0.7
85th Percentile Output:												
fB%	1.6	1.5	1.6	1.6	1.5	1.6	1.6	1.5	1.6	1.6	1.5	1.6
BOQ	2.7	27.3	4.7	3.9	15.9	5.3	5.9	17.8	6.8	5.2	10.8	3.5
QSRatio	0.5	2.3	0.4	0.5	1.0	0.7	1.6	2.2	1.0	1.1	0.8	0.9
90th Percentile Output:												
fB%	1.8	1.6	1.7	1.8	1.6	1.7	1.7	1.6	1.7	1.7	1.7	1.8
BOQ	3.0	29.1	5.3	4.3	17.2	5.8	6.5	19.2	7.5	5.8	11.8	3.9
QSRatio	0.5	2.4	0.4	0.5	1.1	0.7	1.8	2.4	1.1	1.2	0.9	1.0
95th Percentile Output:												
fB%	2.0	1.7	2.0	2.0	1.8	2.0	2.0	1.8	2.0	2.0	1.9	2.0
BOQ	3.5	32.0	6.1	5.0	19.3	6.7	7.5	21.4	8.6	6.6	13.4	4.5
QSRatio	0.6	2.7	0.5	0.6	1.2	0.8	2.1	2.7	1.2	1.4	1.0	1.1
98th Percentile Output:												
fB%	2.6	1.9	2.5	2.5	2.1	2.5	2.4	2.1	2.4	2.5	2.3	2.5
BOQ	4.4	36.2	7.5	6.2	22.5	8.3	9.2	24.9	10.5	8.2	16.0	5.6
QSRatio	0.8	3.0	0.6	0.8	1.4	1.0	2.6	3.1	1.5	1.7	1.2	1.4

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.21

Analyst: MEM
Agency: Mathieu Eng. Corp.
Date: 5/24/2019
Period: aM Peak Hour
Project ID: Benedictine Monastery Apts.
E/W St: 5th-6th Street

Inter.:
Area Type: All other areas
Jurisd: City of Tucson
Year : 2019 Existing

N/S St: Country Club Rd.

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	1	1	2	1	1	2	0
LGConfig	L	T		L	T	R	L	T	R	L	TR	
Volume	91	374		87	706	151	145	692	50	77	658	136
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vol						0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		21.0	8.0	0.0				19.0	8.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	444	1805	0.21	0.44	18.5	B		
T	1085	3618	0.36	0.30	19.4	B	19.2	B
Westbound								
L	572	1805	0.16	0.44	12.9	B		
T	1085	3618	0.68	0.30	23.2	C	21.7	C
R	485	1615	0.32	0.30	19.4	B		
Northbound								
L	444	1805	0.34	0.41	22.0	C		
T	982	3618	0.73	0.27	26.1	C	25.0	C
R	438	1615	0.12	0.27	19.3	B		
Southbound								
L	444	1805	0.18	0.41	19.2	B		
TR	957	3524	0.86	0.27	32.6	C	31.4	C

Intersection Delay = 24.9 (sec/veh) Intersection LOS = C

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: aM Peak Hour
Intersection:
Area Type: All other areas
Jurisdiction: City of Tucson
Analysis Year: 2019 Existing
Project ID: Benedictine Monastery Apts.
E/W St: 5th-6th Street N/S St: Country Club Rd.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	91	374		87	706	151	145	692	50	77	658	136
% Heavy Veh	0	0		0	0	0	0	0	0	0	0	0
PHF	0.96	0.96		0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PK 15 Vol	24	97		23	184	39	38	180	13	20	171	35
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900	1900	1900	1900	1900	1900	1900	
ParkExist												
NumPark												
No. Lanes	1	2	0	1	2	1	1	2	1	1	2	0
LGConfig	L	T		L	T	R	L	T	R	L	TR	
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vol						0			0			0
Adj Flow	95	390		91	735	157	151	721	52	80	827	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000			0.000	1.000		0.000	1.000		0.172	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0	0	0	0	0	0	0	
%InProtPhase	0.0			0.0			0.0			0.0		

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Arriv. Type	3	3		3	3	3	3	3	3	3	3	
Unit Ext.	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext of g	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ped Min g		3.2			3.2			3.2			3.2	

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		21.0	8.0	0.0				19.0	8.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	91	374		87	706	151	145	692	50	77	658	136
PHF	0.96	0.96		0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj flow	95	390		91	735	157	151	721	52	80	685	142
No. Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Lane group	L	T		L	T	R	L	T	R	L	TR	
Adj flow	95	390		91	735	157	151	721	52	80	827	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000			0.000	1.000		0.000	1.000		0.172	

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T		L	T	R	L	T	R	L	TR	
So	1900	1900		1900	1900	1900	1900	1900	1900	1900	1900	
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
fW	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fHV	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fG	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fP	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fBB	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fA	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fLU	1.000	0.952		1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
fRT		1.000			1.000	0.850		1.000	0.850		0.974	
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Sec.	0.222			0.484			0.250			0.250		
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000			1.000	1.000		1.000	1.000		1.000	
S	1805	3618		1805	3618	1615	1805	3618	1615	1805	3524	
Sec.	422			920			475			475		

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		0	1805	# 0.00	0.186	335	0.00
Perm		95	422	# 0.23	0.257	109	0.87
Left	L	95			0.44	444	0.21
Prot							
Perm							
Thru	T	390	3618	0.11	0.30	1085	0.36
Right							
Westbound							
Prot		0	1805	0.00	0.186	335	0.00
Perm		91	920	0.10	0.257	237	0.38
Left	L	91			0.44	572	0.16
Prot							
Perm							
Thru	T	735	3618	0.20	0.30	1085	0.68
Right	R	157	1615	0.10	0.30	485	0.32
Northbound							
Prot		42	1805	# 0.02	0.186	335	0.13
Perm		109	475	0.23	0.229	109	1.00
Left	L	151			0.41	444	0.34
Prot							
Perm							
Thru	T	721	3618	0.20	0.27	982	0.73
Right	R	52	1615	0.03	0.27	438	0.12
Southbound							
Prot		0	1805	0.00	0.186	335	0.00
Perm		80	475	0.17	0.229	109	0.73
Left	L	80			0.41	444	0.18
Prot							
Perm							
Thru	TR	827	3524	# 0.23	0.27	957	0.86
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.48
Total lost time per cycle, L = 7.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.54

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.21	0.44	18.2	1.000	444	0.11	0.2	0.0	18.5	B		
T	0.36	0.30	19.2	1.000	1085	0.11	0.2	0.0	19.4	B	19.2	B
Westbound												
L	0.16	0.44	12.8	1.000	572	0.11	0.1	0.0	12.9	B		
T	0.68	0.30	21.5	1.000	1085	0.25	1.7	0.0	23.2	C	21.7	C
R	0.32	0.30	19.0	1.000	485	0.11	0.4	0.0	19.4	B		
Northbound												
L	0.34	0.41	21.5	1.000	444	0.11	0.5	0.0	22.0	C		
T	0.73	0.27	23.2	1.000	982	0.29	2.9	0.0	26.1	C	25.0	C
R	0.12	0.27	19.2	1.000	438	0.11	0.1	0.0	19.3	B		
Southbound												
L	0.18	0.41	19.1	1.000	444	0.11	0.2	0.0	19.2	B		
TR	0.86	0.27	24.3	1.000	957	0.39	8.3	0.0	32.6	C	31.4	C

Intersection delay = 24.9 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach	M	M	M	M
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	31.0	31.0	29.0	29.0
Effective permitted green time for LT lane group, g(s)	18.0	18.0	16.0	16.0
Opposing effective green time, go (s)	21.0	21.0	19.0	19.0
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	2	2	2	2
Adjusted LT flow rate, VLT (veh/h)	95	91	151	80
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	735	390	827	721
Lost time for LT lane group, tL	5.00	5.00	5.00	5.00
Computation				
LT volume per cycle, LTC=VLTC/3600	1.85	1.77	2.94	1.56
Opposing lane util. factor, fLUo	0.952	0.952	0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	7.51	3.98	8.45	7.36
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.70	0.70	0.73	0.73
gq, (see Exhibit C16-4,5,6,7,8)	8.38	1.29	11.22	8.59
gu=g-gq if gq>=gf, or = g-gf if gq<gf	9.62	16.71	4.78	7.41
n=Max(gq-gf)/2,0)	4.19	0.65	5.61	4.29
PTHo=1-PLTo	1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	2.68	1.92	2.93	2.64
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.22	0.22	0.25	0.25
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.22	0.48	0.25	0.25
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.222	0.484	0.250	0.250

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No				
Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT	0.000	0.000	0.000	0.000
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
LT volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo	0.952	0.952	0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0)				
PTHo=1-PLTo				
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+P1)/g				
gdiff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				

For special case of single-lane approach opposed by multilane approach, see text.

* If P1>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg
OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		95	91	151	80
v/c ratio from Capacity Worksheet, X		0.21	0.16	0.34	0.18
Protected phase effective green interval, g (s)		13.0	13.0	13.0	13.0
Opposing queue effective green interval, gq		8.38	1.29	11.22	8.59
Unopposed green interval, gu		9.62	16.71	4.78	7.41
Red time r=(C-g-gq-gu)		39.0	39.0	41.0	41.0
Arrival rate, qa=v/(3600(max[X,1.0]))		0.03	0.03	0.04	0.02
Protected ph. departure rate, Sp=s/3600		0.501	0.501	0.501	0.501
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.22	0.28	0.44	0.28
XPerm		0.71	0.31	1.13	0.60
XProt					
Case		4	4	5	4
Queue at beginning of green arrow, Qa		0.00	0.00	0.28	0.00
Queue at beginning of unsaturated green, Qu		1.25	1.02	2.19	1.10
Residual queue, Qr		0.00	0.00	0.00	0.00
Uniform Delay, d1		18.2	12.8	21.5	19.1

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
L	0.0	0.00		18.2	0.00	0.0	0.0	18.5
T	0.0	0.00		19.2	0.00	0.0	0.0	19.4
	0.0						0.0	
Westbound								
L	0.0	0.00		12.8	0.00	0.0	0.0	12.9
T	0.0	0.00		21.5	0.00	0.0	0.0	23.2
R	0.0	0.00		19.0	0.00	0.0	0.0	19.4
Northbound								
L	0.0	0.00		21.5	0.00	0.0	0.0	22.0
T	0.0	0.00		23.2	0.00	0.0	0.0	26.1
R	0.0	0.00		19.2	0.00	0.0	0.0	19.3
Southbound								
L	0.0	0.00		19.1	0.00	0.0	0.0	19.2
TR	0.0	0.00		24.3	0.00	0.0	0.0	32.6
	0.0						0.0	

Intersection Delay 24.9 sec/veh Intersection LOS C

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound			Northbound			Southbound		
LaneGroup	L	T		L	T	R	L	T	R	L	TR	
Init Queue	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Flow Rate	95	204		91	386	157	151	378	52	80	434	
So	1900	1900		1900	1900	1900	1900	1900	1900	1900	1900	
No.Lanes	1	2	0	1	2	1	1	2	1	1	2	0
SL	1002	1900		1291	1900	1615	1071	1900	1615	1071	1850	
LnCapacity	444	569		572	569	485	444	515	438	444	502	
Flow Ratio	0.1	0.1		0.1	0.2	0.1	0.1	0.2	0.0	0.1	0.2	
v/c Ratio	0.21	0.36		0.16	0.68	0.32	0.34	0.73	0.12	0.18	0.86	
Grn Ratio	0.44	0.30		0.44	0.30	0.30	0.41	0.27	0.27	0.41	0.27	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3	3	3	3	3	3	3	
Pltn Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF2	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Q1	1.1	3.1		1.0	6.6	2.4	1.8	6.7	0.8	0.9	8.0	
kB	0.4	0.4		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
Q2	0.1	0.2		0.1	0.9	0.2	0.2	1.0	0.0	0.1	2.0	
Q Average	1.2	3.3		1.1	7.5	2.5	2.0	7.7	0.8	1.0	10.1	
Q Spacing	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	
Q Storage	140	300		200	400	200	90	200	175	120	340	
Q S Ratio	0.2	0.3		0.1	0.5	0.3	0.6	1.0	0.1	0.2	0.7	
70th Percentile Output:												
fB%	1.2	1.2		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
BOQ	1.4	4.0		1.3	8.8	3.0	2.4	9.1	1.0	1.2	11.8	
QSRatio	0.3	0.3		0.2	0.6	0.4	0.7	1.1	0.1	0.3	0.9	
85th Percentile Output:												
fB%	1.6	1.6		1.6	1.5	1.6	1.6	1.5	1.6	1.6	1.5	
BOQ	1.9	5.2		1.7	11.4	4.0	3.2	11.8	1.3	1.6	15.2	
QSRatio	0.3	0.4		0.2	0.7	0.5	0.9	1.5	0.2	0.3	1.1	
90th Percentile Output:												
fB%	1.8	1.7		1.8	1.7	1.8	1.8	1.7	1.8	1.8	1.6	
BOQ	2.1	5.8		1.9	12.5	4.5	3.6	12.9	1.4	1.8	16.5	
QSRatio	0.4	0.5		0.2	0.8	0.6	1.0	1.6	0.2	0.4	1.2	
95th Percentile Output:												
fB%	2.1	2.0		2.1	1.9	2.0	2.0	1.9	2.1	2.1	1.8	
BOQ	2.4	6.7		2.3	14.1	5.2	4.1	14.6	1.7	2.1	18.5	
QSRatio	0.4	0.6		0.3	0.9	0.6	1.1	1.8	0.2	0.4	1.4	
98th Percentile Output:												
fB%	2.6	2.5		2.6	2.3	2.5	2.6	2.3	2.6	2.6	2.2	
BOQ	3.1	8.3		2.9	16.9	6.4	5.2	17.4	2.1	2.7	21.7	
QSRatio	0.5	0.7		0.4	1.1	0.8	1.4	2.2	0.3	0.6	1.6	

ERROR MESSAGES

East bound right does not exist but has green time.

HCS+: Signalized Intersections Release 5.21

Analyst: MEM
Agency: Mathieu Eng. Corp.
Date: 5/24/2019
Period: PM Peak Hour
Project ID: Benedictine Monastery Apts.
E/W St: 5th-6th Street

Inter.:
Area Type: All other areas
Jurisd: City of Tucson
Year : 2019 Existing

N/S St: Country Club Rd.

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	1	1	2	1	1	2	0
LGConfig	L	T		L	T	R	L	T	R	L	TR	
Volume	210	777		132	557	195	99	825	57	128	729	93
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vol						0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		21.0	8.0	0.0				19.0	8.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	483	1805	0.46	0.44	19.8	B		
T	1085	3618	0.76	0.30	25.5	C	24.3	C
Westbound								
L	444	1805	0.32	0.44	20.7	C		
T	1085	3618	0.55	0.30	21.1	C	20.9	C
R	485	1615	0.43	0.30	20.3	C		
Northbound								
L	444	1805	0.24	0.41	21.7	C		
T	982	3618	0.89	0.27	35.1	D	32.8	C
R	438	1615	0.14	0.27	19.5	B		
Southbound								
L	444	1805	0.31	0.41	22.2	C		
TR	965	3556	0.91	0.27	36.7	D	34.7	C

Intersection Delay = 28.3 (sec/veh) Intersection LOS = C

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: PM Peak Hour
Intersection:
Area Type: All other areas
Jurisdiction: City of Tucson
Analysis Year: 2019 Existing
Project ID: Benedictine Monastery Apts.
E/W St: 5th-6th Street N/S St: Country Club Rd.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	210	777		132	557	195	99	825	57	128	729	93
% Heavy Veh	0	0		0	0	0	0	0	0	0	0	0
PHF	0.94	0.94		0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PK 15 Vol	56	207		35	148	52	26	219	15	34	194	25
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900		1900	1900	1900	1900	1900	1900	1900	1900	
ParkExist												
NumPark												
No. Lanes	1	2	0	1	2	1	1	2	1	1	2	0
LGConfig	L	T		L	T	R	L	T	R	L	TR	
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vol						0			0			0
Adj Flow	223	827		140	593	207	105	878	61	136	875	
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000			0.000	1.000		0.000	1.000		0.113	
Peds Bikes		0			0			0			0	
Buses	0	0		0	0	0	0	0	0	0	0	
%InProtPhase	0.0			0.0			0.0			0.0		

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Arriv. Type	3	3		3	3	3	3	3	3	3	3	
Unit Ext.	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext of g	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ped Min g		3.2			3.2			3.2			3.2	

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		21.0	8.0	0.0				19.0	8.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	210	777		132	557	195	99	825	57	128	729	93
PHF	0.94	0.94		0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj flow	223	827		140	593	207	105	878	61	136	776	99
No. Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Lane group	L	T		L	T	R	L	T	R	L	TR	
Adj flow	223	827		140	593	207	105	878	61	136	875	
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs	0.000			0.000	1.000		0.000	1.000		0.113		

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T		L	T	R	L	T	R	L	TR	
So	1900	1900		1900	1900	1900	1900	1900	1900	1900	1900	
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
fW	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fHV	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fG	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fP	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fBB	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fA	1.000	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
fLU	1.000	0.952		1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
fRT		1.000			1.000	0.850		1.000	0.850		0.983	
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Sec.	0.304			0.222			0.250			0.250		
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000			1.000	1.000		1.000	1.000		1.000	
S	1805	3618		1805	3618	1615	1805	3618	1615	1805	3556	
Sec.	577			422			475			475		

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		75	1805	# 0.04	0.186	335	0.22
Perm		148	577	0.26	0.257	148	1.00
Left	L	223			0.44	483	0.46
Prot							
Perm							
Thru	T	827	3618	0.23	0.30	1085	0.76
Right							
Westbound							
Prot		31	1805	0.02	0.186	335	0.09
Perm		109	422	# 0.26	0.257	109	1.00
Left	L	140			0.44	444	0.32
Prot							
Perm							
Thru	T	593	3618	0.16	0.30	1085	0.55
Right	R	207	1615	0.13	0.30	485	0.43
Northbound							
Prot		0	1805	0.00	0.186	335	0.00
Perm		105	475	0.22	0.229	109	0.96
Left	L	105			0.41	444	0.24
Prot							
Perm							
Thru	T	878	3618	0.24	0.27	982	0.89
Right	R	61	1615	0.04	0.27	438	0.14
Southbound							
Prot		27	1805	# 0.01	0.186	335	0.08
Perm		109	475	0.23	0.229	109	1.00
Left	L	136			0.41	444	0.31
Prot							
Perm							
Thru	TR	875	3556	# 0.25	0.27	965	0.91
Right							

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.56
Total lost time per cycle, L = 7.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.62

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.46	0.44	19.1	1.000	483	0.11	0.7	0.0	19.8	B		
T	0.76	0.30	22.2	1.000	1085	0.31	3.2	0.0	25.5	C	24.3	C
Westbound												
L	0.32	0.44	20.3	1.000	444	0.11	0.4	0.0	20.7	C		
T	0.55	0.30	20.5	1.000	1085	0.15	0.6	0.0	21.1	C	20.9	C
R	0.43	0.30	19.7	1.000	485	0.11	0.6	0.0	20.3	C		
Northbound												
L	0.24	0.41	21.5	1.000	444	0.11	0.3	0.0	21.7	C		
T	0.89	0.27	24.5	1.000	982	0.42	10.6	0.0	35.1	D	32.8	C
R	0.14	0.27	19.3	1.000	438	0.11	0.1	0.0	19.5	B		
Southbound												
L	0.31	0.41	21.9	1.000	444	0.11	0.4	0.0	22.2	C		
TR	0.91	0.27	24.6	1.000	965	0.43	12.0	0.0	36.7	D	34.7	C

Intersection delay = 28.3 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach	M	M	M	M
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	31.0	31.0	29.0	29.0
Effective permitted green time for LT lane group, g(s)	18.0	18.0	16.0	16.0
Opposing effective green time, go (s)	21.0	21.0	19.0	19.0
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	2	2	2	2
Adjusted LT flow rate, VLT (veh/h)	223	140	105	136
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	593	827	875	878
Lost time for LT lane group, tL	5.00	5.00	5.00	5.00
Computation				
LT volume per cycle, LTC=VLTC/3600	4.34	2.72	2.04	2.64
Opposing lane util. factor, fLUo	0.952	0.952	0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	6.06	8.45	8.94	8.97
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.70	0.70	0.73	0.73
gq, (see Exhibit C16-4,5,6,7,8)	5.25	10.58	12.48	12.57
gu=g-gq if gq>=gf, or = g-gf if gq<gf	12.75	7.42	3.52	3.43
n=Max(gq-gf)/2,0)	2.63	5.29	6.24	6.28
PTHo=1-PLTo	1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	2.33	2.93	3.08	3.09
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.22	0.22	0.25	0.25
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.30	0.22	0.25	0.25
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.304	0.222	0.250	0.250

For special case of single-lane approach opposed by multilane approach, see text.

* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.

** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.

For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No
Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
LT volume per cycle, LTC=VLTC/3600
Opposing lane util. factor, fLUo 0.952 0.952 0.952 0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg
OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		223	140	105	136
v/c ratio from Capacity Worksheet, X		0.46	0.32	0.24	0.31
Protected phase effective green interval, g (s)		13.0	13.0	13.0	13.0
Opposing queue effective green interval, gq		5.25	10.58	8.48	8.57
Unopposed green interval, gu		12.75	7.42	4.00	4.00
Red time r=(C-g-gq-gu)		39.0	39.0	44.5	44.4
Arrival rate, qa=v/(3600(max[X,1.0]))		0.06	0.04	0.03	0.04
Protected ph. departure rate, Sp=s/3600		0.501	0.501	0.501	0.501
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.23	0.28	0.45	0.46
XPerm		1.22	1.05	0.92	1.17
XProt					
Case		5	5	4	5
Queue at beginning of green arrow, Qa		0.65	0.11	0.00	0.31
Queue at beginning of unsaturated green, Qu		2.74	1.93	1.55	2.00
Residual queue, Qr		0.00	0.00	0.00	0.00
Uniform Delay, d1		19.1	20.3	21.5	21.9

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
L	0.0	0.00		19.1	0.00	0.0	0.0	19.8
T	0.0	0.00		22.2	0.00	0.0	0.0	25.5
	0.0						0.0	
Westbound								
L	0.0	0.00		20.3	0.00	0.0	0.0	20.7
T	0.0	0.00		20.5	0.00	0.0	0.0	21.1
R	0.0	0.00		19.7	0.00	0.0	0.0	20.3
Northbound								
L	0.0	0.00		21.5	0.00	0.0	0.0	21.7
T	0.0	0.00		24.5	0.00	0.0	0.0	35.1
R	0.0	0.00		19.3	0.00	0.0	0.0	19.5
Southbound								
L	0.0	0.00		21.9	0.00	0.0	0.0	22.2
TR	0.0	0.00		24.6	0.00	0.0	0.0	36.7
	0.0						0.0	

Intersection Delay 28.3 sec/veh Intersection LOS C

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound			Northbound			Southbound		
LaneGroup	L	T		L	T	R	L	T	R	L	TR	
Init Queue	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Flow Rate	223	434		140	311	207	105	461	61	136	459	
So	1900	1900		1900	1900	1900	1900	1900	1900	1900	1900	
No.Lanes	1	2	0	1	2	1	1	2	1	1	2	0
SL	1092	1900		1002	1900	1615	1071	1900	1615	1071	1867	
LnCapacity	483	569		444	569	485	444	515	438	444	506	
Flow Ratio	0.2	0.2		0.1	0.2	0.1	0.1	0.2	0.0	0.1	0.2	
v/c Ratio	0.46	0.76		0.32	0.55	0.43	0.24	0.90	0.14	0.31	0.91	
Grn Ratio	0.44	0.30		0.44	0.30	0.30	0.41	0.27	0.27	0.41	0.27	
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3		3	3	3	3	3	3	3	3	
Pltn Ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF2	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Q1	2.6	7.7		1.6	5.1	3.2	1.3	8.6	0.9	1.6	8.6	
kB	0.4	0.4		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
Q2	0.3	1.3		0.2	0.5	0.3	0.1	2.5	0.1	0.2	2.7	
Q Average	3.0	8.9		1.8	5.6	3.5	1.4	11.1	1.0	1.8	11.3	
Q Spacing	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	
Q Storage	140	300		200	400	200	90	200	175	120	340	
Q S Ratio	0.5	0.7		0.2	0.3	0.4	0.4	1.4	0.1	0.4	0.8	
70th Percentile Output:												
fB%	1.2	1.2		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
BOQ	3.5	10.5		2.1	6.6	4.2	1.6	13.1	1.1	2.2	13.3	
QSRatio	0.6	0.9		0.3	0.4	0.5	0.5	1.6	0.2	0.4	1.0	
85th Percentile Output:												
fB%	1.6	1.5		1.6	1.5	1.6	1.6	1.5	1.6	1.6	1.5	
BOQ	4.7	13.6		2.8	8.6	5.5	2.2	16.8	1.5	2.9	17.0	
QSRatio	0.8	1.1		0.4	0.5	0.7	0.6	2.1	0.2	0.6	1.2	
90th Percentile Output:												
fB%	1.7	1.7		1.8	1.7	1.7	1.8	1.6	1.8	1.8	1.6	
BOQ	5.2	14.8		3.1	9.5	6.1	2.4	18.1	1.7	3.2	18.4	
QSRatio	0.9	1.2		0.4	0.6	0.8	0.7	2.3	0.2	0.7	1.4	
95th Percentile Output:												
fB%	2.0	1.9		2.0	1.9	2.0	2.1	1.8	2.1	2.0	1.8	
BOQ	6.0	16.7		3.6	10.8	7.0	2.8	20.3	2.0	3.7	20.5	
QSRatio	1.1	1.4		0.5	0.7	0.9	0.8	2.5	0.3	0.8	1.5	
98th Percentile Output:												
fB%	2.5	2.2		2.6	2.4	2.5	2.6	2.1	2.6	2.6	2.1	
BOQ	7.4	19.7		4.6	13.1	8.7	3.5	23.6	2.5	4.6	23.9	
QSRatio	1.3	1.6		0.6	0.8	1.1	1.0	3.0	0.4	1.0	1.8	

ERROR MESSAGES

East bound right does not exist but has green time.

HCS+: Signalized Intersections Release 5.21

Analyst: MEM
Agency: Mathieu Eng. Corp.
Date: 5/24/2019
Period: AM Peak Hour
Project ID: Benedictine Monastery Apts.
E/W St: Speedway Blvd.

Inter.:
Area Type: All other areas
Jurisd: City of Tucson
Year : 2021 Total Traffic
N/S St: Country Club Rd.

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	75	1050	71	195	1564	133	200	645	170	200	621	135
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P	P			NB	Left	P	P		
Thru	P					Thru	P			
Right	P					Right	P			
Peds						Peds				
WB Left	P	P			SB	Left	P	P		
Thru	P					Thru	P			
Right	P					Right	P			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	22.0	9.0	0.0				16.0	9.0	0.0	
Yellow	2.0	3.0					2.0	3.0		
All Red	0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	470	1805	0.18	0.47	21.0	C		
T	1627	5176	0.72	0.31	24.0	C	23.4	C
R	508	1615	0.16	0.31	18.0	B		
Westbound								
L	470	1805	0.46	0.47	23.8	C		
T	1627	5176	1.07	0.31	67.1	E	59.2	E
R	508	1615	0.29	0.31	19.6	B		
Northbound								
L	470	1805	0.47	0.39	25.2	C		
T	827	3618	0.87	0.23	37.8	D	33.8	C
R	369	1615	0.51	0.23	28.6	C		
Southbound								
L	470	1805	0.47	0.39	26.0	C		
T	827	3618	0.83	0.23	35.4	D	32.2	C
R	369	1615	0.41	0.23	26.3	C		

Intersection Delay = 40.6 (sec/veh) Intersection LOS = D

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: AM Peak Hour
Intersection:
Area Type: All other areas
Jurisdiction: City of Tucson
Analysis Year: 2021 Total Traffic
Project ID: Benedictine Monastery Apts.
E/W St: Speedway Blvd. N/S St: Country Club Rd.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	75	1050	71	195	1564	133	200	645	170	200	621	135
% Heavy Veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PK 15 Vol	21	292	20	54	434	37	56	179	47	56	173	38
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ParkExist												
NumPark												
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	83	1167	79	217	1738	148	222	717	189	222	690	150
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0	0	0	0	0	0	0	0
%InProtPhase	0.0			0.0			0.0			0.0		

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	3	3	3	3	3	3	3	3	3	3	3	3
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P	P			NB	Left	P	P		
	Thru	P					Thru	P			
	Right	P					Right	P			
	Peds						Peds				
WB	Left	P	P			SB	Left	P	P		
	Thru	P					Thru	P			
	Right	P					Right	P			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		22.0	9.0	0.0				16.0	9.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	75	1050	71	195	1564	133	200	645	170	200	621	135
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj flow	83	1167	79	217	1738	148	222	717	189	222	690	150
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj flow	83	1167	79	217	1738	148	222	717	189	222	690	150
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	T	R	L	T	R	L	T	R
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lanes	1	3	1	1	3	1	1	2	1	1	2	1
fW	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fHV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fG	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fP	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fBB	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fLU	1.000	0.908	1.000	1.000	0.908	1.000	1.000	0.952	1.000	1.000	0.952	1.000
fRT		1.000	0.850		1.000	0.850		1.000	0.850		1.000	0.850
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Sec.	0.211			0.211			0.308			0.308		
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000
S	1805	5176	1615	1805	5176	1615	1805	3618	1615	1805	3618	1615
Sec.	400			400			585			585		

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		0	1805	0.00	0.200	361	0.00
Perm		83	400	0.21	0.271	109	0.76
Left	L	83			0.47	470	0.18
Prot							
Perm							
Thru	T	1167	5176	0.23	0.31	1627	0.72
Right	R	79	1615	0.05	0.31	508	0.16
Westbound							
Prot		108	1805	# 0.06	0.200	361	0.30
Perm		109	400	0.27	0.271	109	1.00
Left	L	217			0.47	470	0.46
Prot							
Perm							
Thru	T	1738	5176	# 0.34	0.31	1627	1.07
Right	R	148	1615	0.09	0.31	508	0.29
Northbound							
Prot		113	1805	# 0.06	0.200	361	0.31
Perm		109	585	0.19	0.186	109	1.00
Left	L	222			0.39	470	0.47
Prot							
Perm							
Thru	T	717	3618	# 0.20	0.23	827	0.87
Right	R	189	1615	0.12	0.23	369	0.51
Southbound							
Prot		113	1805	0.06	0.200	361	0.31
Perm		109	585	0.19	0.186	109	1.00
Left	L	222			0.39	470	0.47
Prot							
Perm							
Thru	T	690	3618	0.19	0.23	827	0.83
Right	R	150	1615	0.09	0.23	369	0.41

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.66
Total lost time per cycle, L = 4.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.70

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.18	0.47	20.2	1.000	470	0.50	0.8	0.0	21.0	C		
T	0.72	0.31	21.2	1.000	1627	0.50	2.7	0.0	24.0	C	23.4	C
R	0.16	0.31	17.3	1.000	508	0.50	0.7	0.0	18.0	B		
Westbound												
L	0.46	0.47	20.6	1.000	470	0.50	3.2	0.0	23.8	C		
T	1.07	0.31	24.0	1.000	1627	0.50	43.1	0.0	67.1	E	59.2	E
R	0.29	0.31	18.1	1.000	508	0.50	1.5	0.0	19.6	B		
Northbound												
L	0.47	0.39	21.8	1.000	470	0.50	3.4	0.0	25.2	C		
T	0.87	0.23	26.0	1.000	827	0.50	11.8	0.0	37.8	D	33.8	C
R	0.51	0.23	23.6	1.000	369	0.50	5.0	0.0	28.6	C		
Southbound												
L	0.47	0.39	22.6	1.000	470	0.50	3.4	0.0	26.0	C		
T	0.83	0.23	25.7	1.000	827	0.50	9.7	0.0	35.4	D	32.2	C

R	0.41	0.23	23.0	1.000	369	0.50	3.3	0.0	26.3	C

Intersection delay = 40.6 (sec/veh) Intersection LOS = D

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach	M	M	M	M
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	33.0	33.0	27.0	27.0
Effective permitted green time for LT lane group, g(s)	19.0	19.0	13.0	13.0
Opposing effective green time, go (s)	22.0	22.0	16.0	16.0
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	3	3	2	2
Adjusted LT flow rate, VLT (veh/h)	83	217	222	222
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	1738	1167	690	717
Lost time for LT lane group, tL	5.00	5.00	5.00	5.00
Computation				
LT volume per cycle, LTC=VLTC/3600	1.61	4.22	4.32	4.32
Opposing lane util. factor, fLUo	0.908	0.908	0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	12.41	8.33	7.05	7.32
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.69	0.69	0.77	0.77
gq, (see Exhibit C16-4,5,6,7,8)	19.00	9.99	8.61	9.29
gu=g-gq if gq>=gf, or = g-gf if gq<gf	0.00	9.01	4.39	3.71
n=Max(gq-gf)/2,0)	9.50	5.00	4.31	4.64
PTHo=1-PLTo	1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	7.99	4.35	2.57	2.63
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.21	0.21	0.31	0.31
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.21	0.21	0.31	0.31
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00) or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.211	0.211	0.308	0.308

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No
Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
LT volume per cycle, LTC=VLTC/3600
Opposing lane util. factor, fLUo 0.908 0.908 0.952 0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg
OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		83	217	222	222
v/c ratio from Capacity Worksheet, X		0.18	0.46	0.47	0.47
Protected phase effective green interval, g (s)		14.0	14.0	14.0	14.0
Opposing queue effective green interval, gq		15.00	9.99	8.61	5.29
Unopposed green interval, gu		4.00	9.01	4.39	4.00
Red time r=(C-g-gq-gu)		37.0	37.0	43.0	46.7
Arrival rate, qa=v/(3600(max[X,1.0]))		0.02	0.06	0.06	0.06
Protected ph. departure rate, Sp=s/3600		0.501	0.501	0.501	0.501
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.53	0.23	0.48	0.39
XPerm		0.61	1.60	1.63	2.19
XProt					
Case		4	5	5	5
Queue at beginning of green arrow, Qa		0.00	1.26	1.34	1.88
Queue at beginning of unsaturated green, Qu		1.20	2.83	3.18	3.21
Residual queue, Qr		0.00	0.00	0.00	0.00
Uniform Delay, d1		20.2	20.6	21.8	22.6

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
L	0.0	0.00		20.2	0.00	0.0	0.0	21.0
T	0.0	0.00		21.2	0.00	0.0	0.0	24.0
R	0.0	0.00		17.3	0.00	0.0	0.0	18.0
Westbound								
L	0.0	0.00		20.6	0.00	0.0	0.0	23.8
T	0.0	0.00		24.0	0.00	27.7	0.0	67.1
R	0.0	0.00		18.1	0.00	0.0	0.0	19.6
Northbound								
L	0.0	0.00		21.8	0.00	0.0	0.0	25.2
T	0.0	0.00		26.0	0.00	0.0	0.0	37.8
R	0.0	0.00		23.6	0.00	0.0	0.0	28.6
Southbound								
L	0.0	0.00		22.6	0.00	0.0	0.0	26.0
T	0.0	0.00		25.7	0.00	0.0	0.0	35.4
R	0.0	0.00		23.0	0.00	0.0	0.0	26.3

Intersection Delay 40.6 sec/veh Intersection LOS D

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound			Northbound			Southbound		
LaneGroup	L	T	R	L	T	R	L	T	R	L	T	R
Init Queue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Rate	83	428	79	217	638	148	222	376	189	222	362	150
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
No.Lanes	1	3	1	1	3	1	1	2	1	1	2	1
SL	996	1900	1615	996	1900	1615	1218	1900	1615	1218	1900	1615
LnCapacity	470	597	508	470	597	508	470	434	369	470	434	369
Flow Ratio	0.1	0.2	0.0	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1
v/c Ratio	0.18	0.72	0.16	0.46	1.07	0.29	0.47	0.87	0.51	0.47	0.83	0.41
Grn Ratio	0.47	0.31	0.31	0.47	0.31	0.31	0.39	0.23	0.23	0.39	0.23	0.23
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3	3	3	3	3	3	3	3
Pltn Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1	0.9	7.4	1.1	2.5	12.4	2.2	2.9	7.0	3.2	2.9	6.7	2.5
kB	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.5
Q2	0.1	1.6	0.1	0.5	10.3	0.2	0.5	2.6	0.5	0.5	2.2	0.3
Q Average	1.0	8.9	1.2	2.9	22.7	2.4	3.4	9.6	3.7	3.4	8.9	2.8
Q Spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q Storage	140	300	300	200	400	200	90	200	175	120	340	100
Q S Ratio	0.2	0.7	0.1	0.4	1.4	0.3	1.0	1.2	0.5	0.7	0.7	0.7
70th Percentile Output:												
fB%	1.3	1.2	1.3	1.3	1.2	1.3	1.3	1.2	1.2	1.3	1.2	1.3
BOQ	1.3	10.9	1.6	3.7	27.3	3.0	4.3	11.7	4.6	4.3	10.8	3.5
QSRatio	0.2	0.9	0.1	0.5	1.7	0.4	1.2	1.5	0.7	0.9	0.8	0.9
85th Percentile Output:												
fB%	1.6	1.5	1.6	1.6	1.4	1.6	1.6	1.4	1.5	1.6	1.5	1.6
BOQ	1.7	13.0	2.0	4.6	31.9	3.8	5.3	13.9	5.7	5.3	12.9	4.4
QSRatio	0.3	1.1	0.2	0.6	2.0	0.5	1.5	1.7	0.8	1.1	0.9	1.1
90th Percentile Output:												
fB%	1.9	1.6	1.9	1.8	1.5	1.8	1.8	1.6	1.7	1.8	1.6	1.8
BOQ	1.9	14.2	2.3	5.2	34.2	4.4	6.0	15.1	6.4	6.0	14.1	5.0
QSRatio	0.3	1.2	0.2	0.7	2.1	0.5	1.7	1.9	0.9	1.3	1.0	1.3
95th Percentile Output:												
fB%	2.4	1.8	2.4	2.2	1.6	2.2	2.1	1.7	2.1	2.1	1.8	2.2
BOQ	2.4	15.8	2.9	6.3	36.6	5.4	7.2	16.8	7.7	7.2	15.7	6.1
QSRatio	0.4	1.3	0.2	0.8	2.3	0.7	2.0	2.1	1.1	1.5	1.2	1.5
98th Percentile Output:												
fB%	2.9	2.0	2.9	2.5	1.7	2.6	2.5	1.9	2.4	2.5	2.0	2.6
BOQ	2.9	17.4	3.5	7.4	39.0	6.3	8.4	18.4	8.9	8.4	17.3	7.2
QSRatio	0.5	1.5	0.3	0.9	2.4	0.8	2.3	2.3	1.3	1.8	1.3	1.8

ERROR MESSAGES

No errors to report.

HCS+: Signalized Intersections Release 5.21

Analyst: MEM
Agency: Mathieu Eng. Corp.
Date: 5/24/2019
Period: PM Peak Hour
Project ID: Benedictine Monastery Apts.
E/W St: Speedway Blvd.

Inter.:
Area Type: All other areas
Jurisd: City of Tucson
Year : 2021 Total Traffic
N/S St: Country Club Rd.

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	138	1667	184	188	1320	201	241	852	220	217	665	124
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A	A			NB	Left	A	A		
Thru	A					Thru	A			
Right	A					Right	A			
Peds						Peds				
WB Left	A	A			SB	Left	A	A		
Thru	A					Thru	A			
Right	A					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	23.0	8.0	0.0				17.0	8.0	0.0	
Yellow	2.0	3.0					2.0	3.0		
All Red	0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	444	1805	0.34	0.47	22.0	C		
T	1701	5176	1.09	0.33	73.8	E	65.1	E
R	531	1615	0.38	0.33	18.5	B		
Westbound								
L	444	1805	0.47	0.47	23.4	C		
T	1701	5176	0.86	0.33	26.9	C	25.5	C
R	531	1615	0.42	0.33	18.8	B		
Northbound								
L	444	1805	0.60	0.39	25.7	C		
T	879	3618	1.08	0.24	79.9	E	61.0	E
R	392	1615	0.62	0.24	26.7	C		
Southbound								
L	444	1805	0.54	0.39	24.4	C		
T	879	3618	0.84	0.24	32.6	C	29.6	C
R	392	1615	0.35	0.24	22.5	C		

Intersection Delay = 47.0 (sec/veh) Intersection LOS = D

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: PM Peak Hour
Intersection:
Area Type: All other areas
Jurisdiction: City of Tucson
Analysis Year: 2021 Total Traffic
Project ID: Benedictine Monastery Apts.
E/W St: Speedway Blvd. N/S St: Country Club Rd.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	138	1667	184	188	1320	201	241	852	220	217	665	124
% Heavy Veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PK 15 Vol	38	463	51	52	367	56	67	237	61	60	185	34
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ParkExist												
NumPark												
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	153	1852	204	209	1467	223	268	947	244	241	739	138
%InSharedLn												
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	0			0			0			0		
Buses	0	0	0	0	0	0	0	0	0	0	0	0
%InProtPhase	0.0			0.0			0.0			0.0		

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	3	3	3	3	3	3	3	3	3	3	3	3
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

PHASE DATA

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru	A					Thru	A			
	Right	A					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		23.0	8.0	0.0				17.0	8.0	0.0	
Yellow		2.0	3.0					2.0	3.0		
All Red		0.0	2.0					0.0	2.0		

Cycle Length: 70.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	138	1667	184	188	1320	201	241	852	220	217	665	124
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj flow	153	1852	204	209	1467	223	268	947	244	241	739	138
No. Lanes	1	3	1	1	3	1	1	2	1	1	2	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj flow	153	1852	204	209	1467	223	268	947	244	241	739	138
Prop LTs	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	T	R	L	T	R	L	T	R
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lanes	1	3	1	1	3	1	1	2	1	1	2	1
fW	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fHV	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fG	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fP	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fBB	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fLU	1.000	0.908	1.000	1.000	0.908	1.000	1.000	0.952	1.000	1.000	0.952	1.000
fRT		1.000	0.850		1.000	0.850		1.000	0.850		1.000	0.850
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Sec.	0.200			0.200			0.286			0.286		
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000
S	1805	5176	1615	1805	5176	1615	1805	3618	1615	1805	3618	1615
Sec.	380			380			543			543		

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot		44	1805	0.02	0.186	335	0.13
Perm		109	380	0.29	0.286	109	1.00
Left	L	153			0.47	444	0.34
Prot							
Perm							
Thru	T	1852	5176	# 0.36	0.33	1701	1.09
Right	R	204	1615	0.13	0.33	531	0.38
Westbound							
Prot		100	1805	# 0.06	0.186	335	0.30
Perm		109	380	0.29	0.286	109	1.00
Left	L	209			0.47	444	0.47
Prot							
Perm							
Thru	T	1467	5176	0.28	0.33	1701	0.86
Right	R	223	1615	0.14	0.33	531	0.42
Northbound							
Prot		159	1805	# 0.09	0.186	335	0.47
Perm		109	543	0.20	0.200	109	1.00
Left	L	268			0.39	444	0.60
Prot							
Perm							
Thru	T	947	3618	# 0.26	0.24	879	1.08
Right	R	244	1615	0.15	0.24	392	0.62
Southbound							
Prot		132	1805	0.07	0.186	335	0.39
Perm		109	543	0.20	0.200	109	1.00
Left	L	241			0.39	444	0.54
Prot							
Perm							
Thru	T	739	3618	0.20	0.24	879	0.84
Right	R	138	1615	0.09	0.24	392	0.35

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.76
Total lost time per cycle, L = 4.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.81

Control Delay and LOS Determination

Appr/ Lane Grp	Ratios v/c	Ratios g/C	Unf Del d1	Prog Adj Fact	Lane Grp Cap	Incremental Factor k	Incremental Del d2	Res Del d3	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound												
L	0.34	0.47	21.5	1.000	444	0.11	0.5	0.0	22.0	C		
T	1.09	0.33	23.5	1.000	1701	0.50	50.3	0.0	73.8	E	65.1	E
R	0.38	0.33	18.1	1.000	531	0.11	0.5	0.0	18.5	B		
Westbound												
L	0.47	0.47	22.6	1.000	444	0.11	0.8	0.0	23.4	C		
T	0.86	0.33	22.0	1.000	1701	0.39	4.8	0.0	26.9	C	25.5	C
R	0.42	0.33	18.3	1.000	531	0.11	0.5	0.0	18.8	B		
Northbound												
L	0.60	0.39	23.3	1.000	444	0.19	2.3	0.0	25.7	C		
T	1.08	0.24	26.5	1.000	879	0.50	53.4	0.0	79.9	E	61.0	E
R	0.62	0.24	23.6	1.000	392	0.21	3.1	0.0	26.7	C		
Southbound												
L	0.54	0.39	23.0	1.000	444	0.14	1.4	0.0	24.4	C		
T	0.84	0.24	25.2	1.000	879	0.38	7.4	0.0	32.6	C	29.6	C

R	0.35	0.24	21.9	1.000	392	0.11	0.5	0.0	22.5	C

Intersection delay = 47.0 (sec/veh) Intersection LOS = D

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach	M	M	M	M
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)	33.0	33.0	27.0	27.0
Effective permitted green time for LT lane group, g(s)	20.0	20.0	14.0	14.0
Opposing effective green time, go (s)	23.0	23.0	17.0	17.0
Number of lanes in LT lane group, N	1	1	1	1
Number of lanes in opposing approach, No	3	3	2	2
Adjusted LT flow rate, VLT (veh/h)	153	209	268	241
Proportion of LT in LT lane group, PLT	1.000	1.000	1.000	1.000
Proportion of LT in opposing flow, PLTo	0.00	0.00	0.00	0.00
Adjusted opposing flow rate, Vo (veh/h)	1467	1852	739	947
Lost time for LT lane group, tL	5.00	5.00	5.00	5.00
Computation				
LT volume per cycle, LTC=VLTC/3600	2.98	4.06	5.21	4.69
Opposing lane util. factor, fLUo	0.908	0.908	0.952	0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)	10.47	13.22	7.55	9.67
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g	0.0	0.0	0.0	0.0
Opposing platoon ratio, Rpo (refer Exhibit 16-11)	1.00	1.00	1.00	1.00
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]	0.67	0.67	0.76	0.76
gq, (see Exhibit C16-4,5,6,7,8)	15.07	20.00	9.57	14.00
gu=g-gq if gq>=gf, or = g-gf if gq<gf	4.93	0.00	4.43	0.00
n=Max(gq-gf)/2,0)	7.53	10.00	4.78	7.00
PTHo=1-PLTo	1.00	1.00	1.00	1.00
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]	1.00	1.00	1.00	1.00
EL1 (refer to Exhibit C16-3)	5.98	9.03	2.69	3.30
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g	0.20	0.20	0.29	0.29
gdiff=max(gq-gf,0)	0.00	0.00	0.00	0.00
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)	0.20	0.20	0.29	0.29
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT	0.200	0.200	0.286	0.286

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C 70.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				

Number of lanes in opposing approach, No
Adjusted LT flow rate, VLT (veh/h)
Proportion of LT in LT lane group, PLT 0.000 0.000 0.000 0.000
Proportion of LT in opposing flow, PLTo
Adjusted opposing flow rate, Vo (veh/h)
Lost time for LT lane group, tL
Computation
LT volume per cycle, LTC=VLTC/3600
Opposing lane util. factor, fLUo 0.908 0.908 0.952 0.952
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				
Permitted Right Turns				
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				

OCCbicg
OCCr
Number of cross-street receiving lanes, Nrec
Number of turning lanes, Nturn
ApbT
Proportion right-turns, PRT
Proportion right-turns using protected phase, PRTA
Right turn adjustment, fRpb

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

		EBLT	WBLT	NBLT	SBLT
Cycle length, C	70.0 sec				
Adj. LT vol from Vol Adjustment Worksheet, v		153	209	268	241
v/c ratio from Capacity Worksheet, X		0.34	0.47	0.60	0.54
Protected phase effective green interval, g (s)		13.0	13.0	13.0	13.0
Opposing queue effective green interval, gq		15.07	16.00	9.57	10.00
Unopposed green interval, gu		4.93	4.00	4.43	4.00
Red time r=(C-g-gq-gu)		37.0	37.0	43.0	43.0
Arrival rate, qa=v/(3600(max[X,1.0]))		0.04	0.06	0.07	0.07
Protected ph. departure rate, Sp=s/3600		0.501	0.501	0.501	0.501
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)		0.43	0.53	0.48	0.53
XPerm		1.15	1.57	2.01	1.81
XProt					
Case		5	5	5	5
Queue at beginning of green arrow, Qa		0.31	1.20	2.13	1.70
Queue at beginning of unsaturated green, Qu		2.21	3.08	3.91	3.55
Residual queue, Qr		0.00	0.00	0.00	0.00
Uniform Delay, d1		21.5	22.6	23.3	23.0

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
L	0.0	0.00		21.5	0.00	0.0	0.0	22.0
T	0.0	0.00		23.5	0.00	37.8	0.0	73.8
R	0.0	0.00		18.1	0.00	0.0	0.0	18.5
Westbound								
L	0.0	0.00		22.6	0.00	0.0	0.0	23.4
T	0.0	0.00		22.0	0.00	0.0	0.0	26.9
R	0.0	0.00		18.3	0.00	0.0	0.0	18.8
Northbound								
L	0.0	0.00		23.3	0.00	0.0	0.0	25.7
T	0.0	0.00		26.5	0.00	17.0	0.0	79.9
R	0.0	0.00		23.6	0.00	0.0	0.0	26.7
Southbound								
L	0.0	0.00		23.0	0.00	0.0	0.0	24.4
T	0.0	0.00		25.2	0.00	0.0	0.0	32.6
R	0.0	0.00		21.9	0.00	0.0	0.0	22.5

Intersection Delay 47.0 sec/veh Intersection LOS D

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound			Northbound			Southbound		
LaneGroup	L	T	R	L	T	R	L	T	R	L	T	R
Init Queue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Rate	153	679	204	209	538	223	268	497	244	241	388	138
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
No.Lanes	1	3	1	1	3	1	1	2	1	1	2	1
SL	941	1900	1615	941	1900	1615	1151	1900	1615	1151	1900	1615
LnCapacity	444	624	531	444	624	531	444	461	392	444	461	392
Flow Ratio	0.2	0.4	0.1	0.2	0.3	0.1	0.2	0.3	0.2	0.2	0.2	0.1
v/c Ratio	0.34	1.09	0.38	0.47	0.86	0.42	0.60	1.08	0.62	0.54	0.84	0.35
Grn Ratio	0.47	0.33	0.33	0.47	0.33	0.33	0.39	0.24	0.24	0.39	0.24	0.24
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3	3	3	3	3	3	3	3
Pltn Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1	1.7	13.2	3.0	2.4	9.8	3.4	3.6	9.7	4.2	3.2	7.2	2.2
kB	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.3
Q2	0.2	10.5	0.3	0.3	2.3	0.3	0.5	7.6	0.5	0.4	1.7	0.2
Q Average	1.9	23.7	3.3	2.7	12.1	3.7	4.1	17.2	4.8	3.6	8.9	2.4
Q Spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q Storage	140	300	300	200	400	200	90	200	175	120	340	100
Q S Ratio	0.3	2.0	0.3	0.3	0.8	0.5	1.2	2.2	0.7	0.8	0.7	0.6
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
BOQ	2.2	27.4	3.9	3.2	14.2	4.4	4.9	20.1	5.7	4.3	10.5	2.9
QSRatio	0.4	2.3	0.3	0.4	0.9	0.5	1.4	2.5	0.8	0.9	0.8	0.7
85th Percentile Output:												
fB%	1.6	1.4	1.6	1.6	1.5	1.6	1.6	1.5	1.6	1.6	1.5	1.6
BOQ	3.0	34.0	5.2	4.2	18.2	5.7	6.5	25.3	7.4	5.7	13.5	3.8
QSRatio	0.5	2.8	0.4	0.5	1.1	0.7	1.8	3.2	1.1	1.2	1.0	0.9
90th Percentile Output:												
fB%	1.8	1.5	1.7	1.7	1.6	1.7	1.7	1.6	1.7	1.7	1.7	1.8
BOQ	3.3	36.1	5.7	4.7	19.6	6.4	7.2	27.0	8.2	6.3	14.7	4.2
QSRatio	0.6	3.0	0.5	0.6	1.2	0.8	2.0	3.4	1.2	1.3	1.1	1.1
95th Percentile Output:												
fB%	2.0	1.7	2.0	2.0	1.8	2.0	2.0	1.7	2.0	2.0	1.9	2.0
BOQ	3.8	39.4	6.6	5.4	21.9	7.3	8.2	29.8	9.4	7.2	16.5	4.9
QSRatio	0.7	3.3	0.5	0.7	1.4	0.9	2.3	3.7	1.3	1.5	1.2	1.2
98th Percentile Output:												
fB%	2.6	1.9	2.5	2.5	2.1	2.5	2.4	2.0	2.4	2.5	2.2	2.5
BOQ	4.8	44.1	8.2	6.7	25.3	9.0	10.1	33.9	11.4	8.9	19.5	6.1
QSRatio	0.9	3.7	0.7	0.8	1.6	1.1	2.8	4.2	1.6	1.9	1.4	1.5

ERROR MESSAGES

No errors to report.

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: City of Tucson
Units: U. S. Customary
Analysis Year: 2021 Total Traffic
Project ID: Benedictine Monastery Apts.
East/West Street: Driveway 2
North/South Street:
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		966	5	7	892	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		1073	5	7	991	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 1		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	11		15			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	12		16			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		7	12		16			
C(m) (vph)		655	216		492			
v/c		0.01	0.06		0.03			
95% queue length		0.03	0.18		0.10			
Control Delay		10.6	22.6		12.6			
LOS		B	C		B			
Approach Delay				16.9				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: City of Tucson
Units: U. S. Customary
Analysis Year: 2021 Total Traffic
Project ID: Benedictine Monastery Apts.
East/West Street: Driveway 2
North/South Street:
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1275	10	14	1021	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		1416	11	15	1134	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 1		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	17		10			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	18		11			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		15	18		11			
C(m) (vph)		483	144		378			
v/c		0.03	0.13		0.03			
95% queue length		0.10	0.42		0.09			
Control Delay		12.7	33.5		14.8			
LOS		B	D		B			
Approach Delay				26.4				
Approach LOS				D				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: City of Tucson
Units: U. S. Customary
Analysis Year: 2021 Total Traffic
Project ID: Benedictine Monastery Apts.
East/West Street: Driveway 1
North/South Street:
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		960	5	5	898	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		1066	5	5	997	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 1		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	11					
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	12		18			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		5	12		18			
C(m) (vph)		658	218		494			
v/c		0.01	0.06		0.04			
95% queue length		0.02	0.17		0.11			
Control Delay		10.5	22.5		12.6			
LOS		B	C		B			
Approach Delay				16.5				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: MEM
Agency/Co.: Mathieu Eng. Corp.
Date Performed: 5/24/2019
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: City of Tucson
Units: U. S. Customary
Analysis Year: 2021 Total Traffic
Project ID: Benedictine Monastery Apts.
East/West Street: Driveway 1
North/South Street:
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1268	10	10	1028	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		1408	11	11	1142	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 1		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	17		17			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	18		18			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		11	18		18			
C(m) (vph)		486	146		381			
v/c		0.02	0.12		0.05			
95% queue length		0.07	0.41		0.15			
Control Delay		12.6	33.1		14.9			
LOS		B	D		B			
Approach Delay				24.0				
Approach LOS				C				

APPENDIX B

Turning Movement Counts

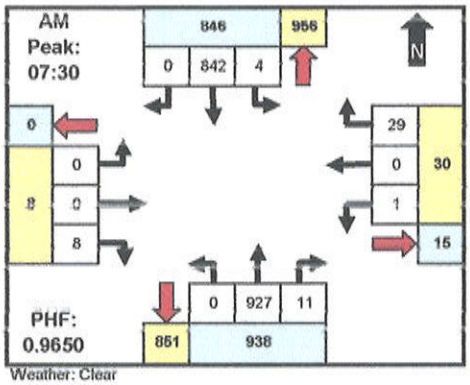
TRAFFIC RESEARCH & ANALYSIS, INC.

Specializing in Traffic Data Collection

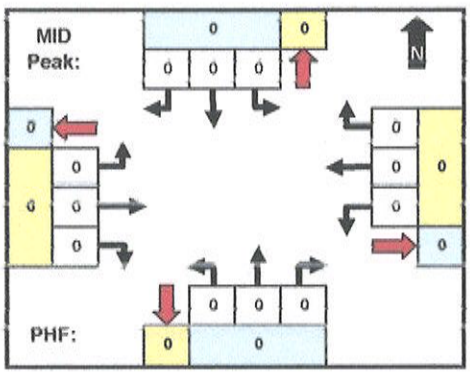
Traffic Research & Analysis, Inc.
3844 East Indian School Road
Phoenix, AZ 85018
(602) 840-1500

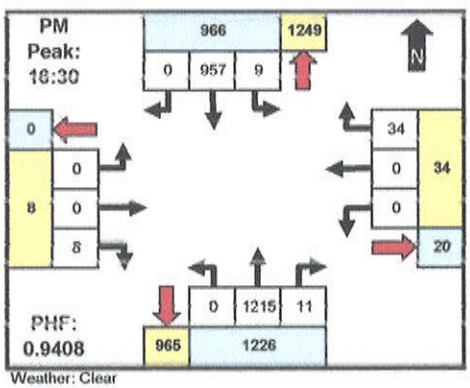
Intersection ID: 1900645
Count Date: 1/31/2019

N COUNTRY CLUB RD & E 3RD ST



Weather: Clear





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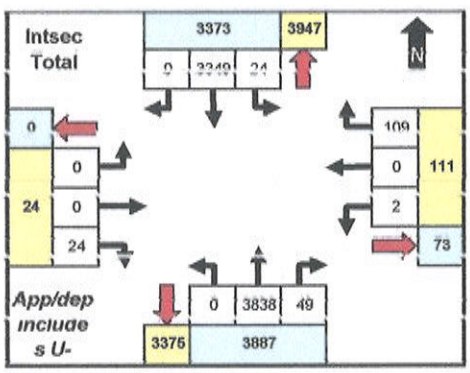

	North		East		South		West		
	App	Dep	App	Dep	App	Dep	App	Dep	Total
AM	846	956	30	15	938	851	8	0	1822
MID	0	0	0	0	0	0	0	0	0
PM	966	1249	34	20	1226	965	8	0	2234
Total	3373	3947	111	73	3887	3375	24	0	7395

	From North (SB)					From East (WB)					From South (NB)					From West (EB)					INTSEC
	N COUNTRY CLUB RD					E 3RD ST					N COUNTRY CLUB RD					E 3RD ST					
Time	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	TOTAL
0:00																					0
0:15																					0
0:30																					0
0:45																					0
1:00																					0
1:15																					0
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6:00																					0
6:15																					0
6:30																					0
6:45																					0
07:00	0	110	0	0	0	0	0	4	0	0	0	94	1	0	0	0	0	0	0	0	209
07:15	1	144	0	0	3	1	0	7	0	4	0	143	2	0	0	0	0	1	0	0	306
07:30	3	198	0	0	3	1	0	7	0	3	0	246	1	0	0	0	0	1	0	0	463
07:45	0	233	0	0	3	0	0	8	0	5	0	225	4	0	0	0	0	1	0	0	479
08:00	1	194	0	0	4	0	0	8	0	4	0	238	1	0	1	0	0	2	0	0	453
08:15	0	217	0	0	1	0	0	6	0	2	0	218	5	0	0	0	0	4	0	1	454
08:30	3	209	0	0	4	0	0	2	0	3	0	239	2	0	0	0	0	0	0	0	462
08:45	1	185	0	0	2	0	0	2	0	2	0	200	0	0	0	0	0	2	0	2	396
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16:00	0	226	0	0	4	0	0	7	0	4	0	244	8	0	0	0	0	0	0	0	493
16:15	1	234	0	0	7	0	0	5	0	4	0	257	3	0	2	0	0	2	0	0	515
16:30	2	228	0	0	4	0	0	6	0	3	0	295	2	0	0	0	0	1	0	0	541
16:45	2	238	0	0	3	0	0	6	0	3	0	276	1	0	0	0	0	3	0	2	534
17:00	3	235	0	0	0	0	0	6	0	0	0	332	6	0	0	0	0	1	0	0	583
17:15	2	256	0	0	3	0	0	16	0	6	0	312	2	0	0	0	0	3	0	0	600
17:30	3	213	0	0	2	0	0	9	0	2	0	273	6	0	0	0	0	0	0	0	508
17:45	2	229	0	0	3	0	0	10	0	1	0	246	5	0	0	0	0	3	0	0	499
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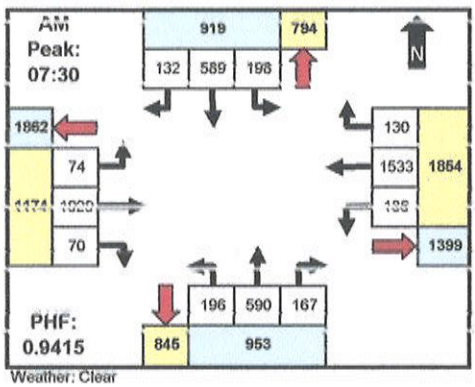
23:00																					0

TRAFFIC RESEARCH & ANALYSIS, INC.
Specializing in Traffic Data Collection

Traffic Research & Analysis, Inc.
3844 East Indian School Road
Phoenix, AZ 85018
(602) 840-1600

Intersection ID: 1900646
Count Date: 1/31/2019

N COUNTRY CLUB RD & E SPEEDWAY BLVD



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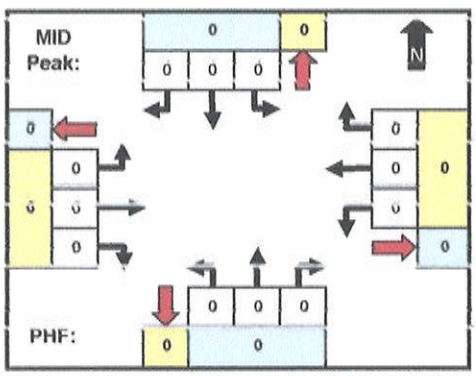

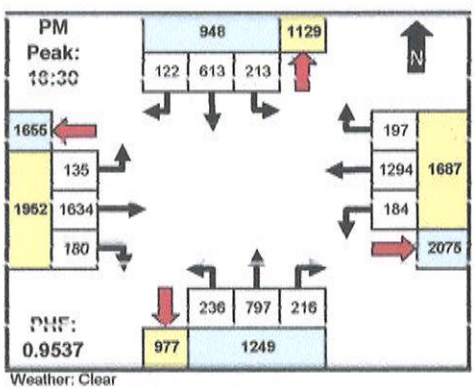

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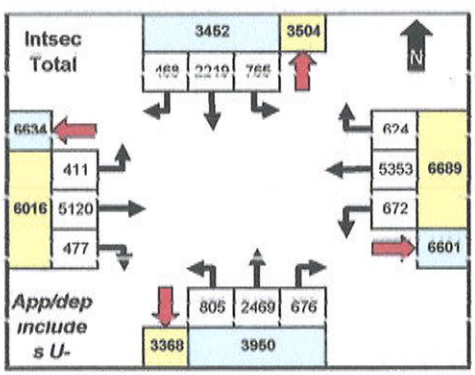

	North		East		South		West		
	App	Dep	App	Dep	App	Dep	App	Dep	Total
AM	919	794	1854	1399	953	845	1174	1862	4900
MID	0	0	0	0	0	0	0	0	0
PM	948	1129	1687	2075	1249	977	1952	1655	6836
Total	3452	3504	6689	6601	3950	3368	6016	6634	20107

	From North (SB) N COUNTRY CLUB RD					From East (WB) E SPEEDWAY BLVD					From South (NB) N COUNTRY CLUB RD					From West (EB) E SPEEDWAY BLVD					INTSEC
Time	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	TOTAL
0:00																					0
0:15																					0
0:30																					0
0:45																					0
1:00																					0
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6:45																					0
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07:30	48	142	28	0	3	51	434	33	1	2	57	136	56	0	1	14	292	11	1	3	1313
07:45	66	169	37	0	4	39	373	28	1	2	51	151	44	0	4	23	237	16	0	2	1247
08:00	40	111	30	0	2	46	394	41	3	1	50	148	37	0	3	14	280	30	0	1	1231
08:15	44	167	37	0	3	50	332	28	0	5	38	155	30	0	5	23	220	13	0	4	1154
08:30	42	128	30	0	2	45	417	45	2	1	59	146	42	0	6	25	259	34	1	2	1286
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16:15	55	158	34	0	3	38	293	55	8	3	54	172	50	0	3	38	395	42	0	3	1404
16:30	50	146	42	0	3	41	361	54	3	4	57	173	54	0	1	32	419	40	1	4	1485
16:45	58	128	28	0	2	53	277	44	1	2	59	186	50	0	8	37	361	50	1	11	1356
17:00	53	157	27	0	4	43	339	49	3	3	58	209	59	0	4	31	454	50	1	0	1544
17:15	52	182	25	0	2	47	317	50	5	1	62	229	53	0	4	35	400	40	0	1	1505
17:30	59	126	27	0	2	40	314	64	4	5	56	181	43	0	2	28	485	36	0	3	1475
17:45	48	141	24	0	6	39	232	40	3	6	47	162	51	0	1	35	297	39	0	1	1172
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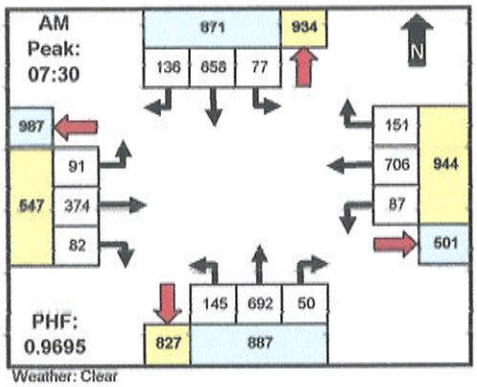
TRAFFIC RESEARCH & ANALYSIS, INC.

Specializing in Traffic Data Collection

Traffic Research & Analysis, Inc.
3844 East Indian School Road
Phoenix, AZ 85018
(602) 840-1500

Intersection ID: 1900644
Count Date: 1/31/2019

N COUNTRY CLUB RD & EAST 5TH/6TH STREET



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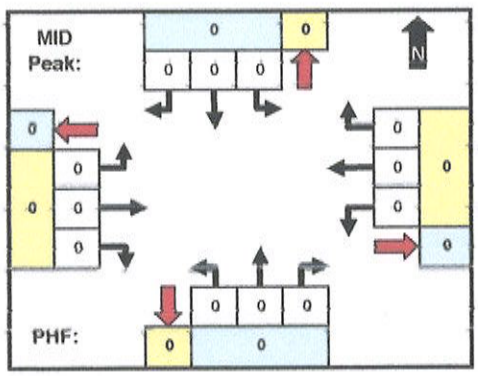

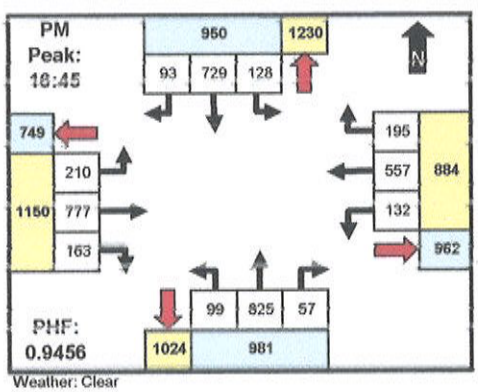

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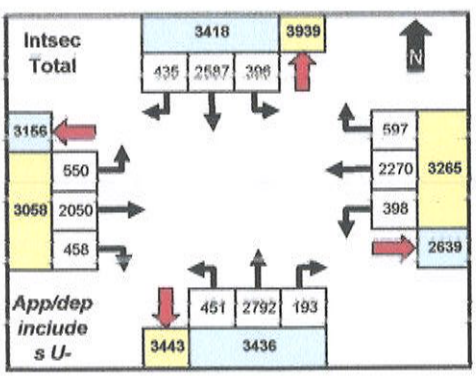

	North		East		South		West		
	App	Dep	App	Dep	App	Dep	App	Dep	Total
AM	871	934	944	501	887	827	547	987	3249
MID	0	0	0	0	0	0	0	0	0
PM	950	1230	884	962	981	1024	1150	749	3956
Total	3418	3939	3265	2639	3436	3443	3097	3136	13177

Time	From North (SB) N COUNTRY CLUB RD					From East (WB) EAST 5TH STREET					From South (NB) N COUNTRY CLUB RD					From West (EB) EAST 6TH STREET					INTSEC
	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	TOTAL
0:00																					0
0:15																					0
0:30																					0
0:45																					0
1:00																					0
1:15																					0
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6:00																					0
6:15																					0
6:30																					0
6:45																					0
07:00	10	89	20	0	0	12	82	8	0	0	12	82	4	0	0	10	44	8	0	0	381
07:15	11	101	30	0	12	20	119	20	0	13	19	137	12	0	1	22	72	5	0	0	594
07:30	13	158	43	0	4	18	167	35	0	5	35	192	13	0	0	24	96	20	0	1	824
07:45	28	172	27	0	1	23	205	43	0	2	31	152	14	0	1	29	100	17	0	0	845
08:00	19	150	28	0	3	22	182	39	0	3	37	172	10	0	1	18	96	26	0	4	810
08:15	17	178	38	0	2	24	152	34	0	1	42	176	13	0	0	20	82	19	0	0	798
08:30	21	161	35	0	0	19	134	39	0	0	31	165	7	0	0	24	79	36	0	1	752
08:45	22	138	29	0	0	17	140	38	0	1	28	152	6	0	1	16	56	22	0	1	667
9:00																					0
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15:45																					0
16:00	39	185	14	0	1	26	116	37	0	1	25	155	13	0	0	48	160	38	0	4	862
16:15	29	185	23	0	1	23	145	43	0	2	30	191	13	0	2	42	147	33	0	2	911
16:30	17	184	26	0	0	29	125	32	0	0	38	211	17	0	2	49	155	25	0	1	911
16:45	36	179	20	0	0	24	132	43	0	0	21	196	17	0	1	53	187	34	0	3	946
17:00	26	181	25	0	0	43	145	50	0	0	21	215	20	0	1	60	179	53	0	2	1021
17:15	41	194	24	0	2	34	145	46	0	3	29	225	9	0	0	50	212	36	0	3	1053
17:30	25	175	24	0	1	31	135	56	0	2	28	189	11	0	0	47	199	40	0	0	963
17:45	42	157	29	0	0	33	146	34	0	2	24	182	14	0	0	38	186	46	0	2	935
18:00																					0
18:15																					0
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18:45																					0
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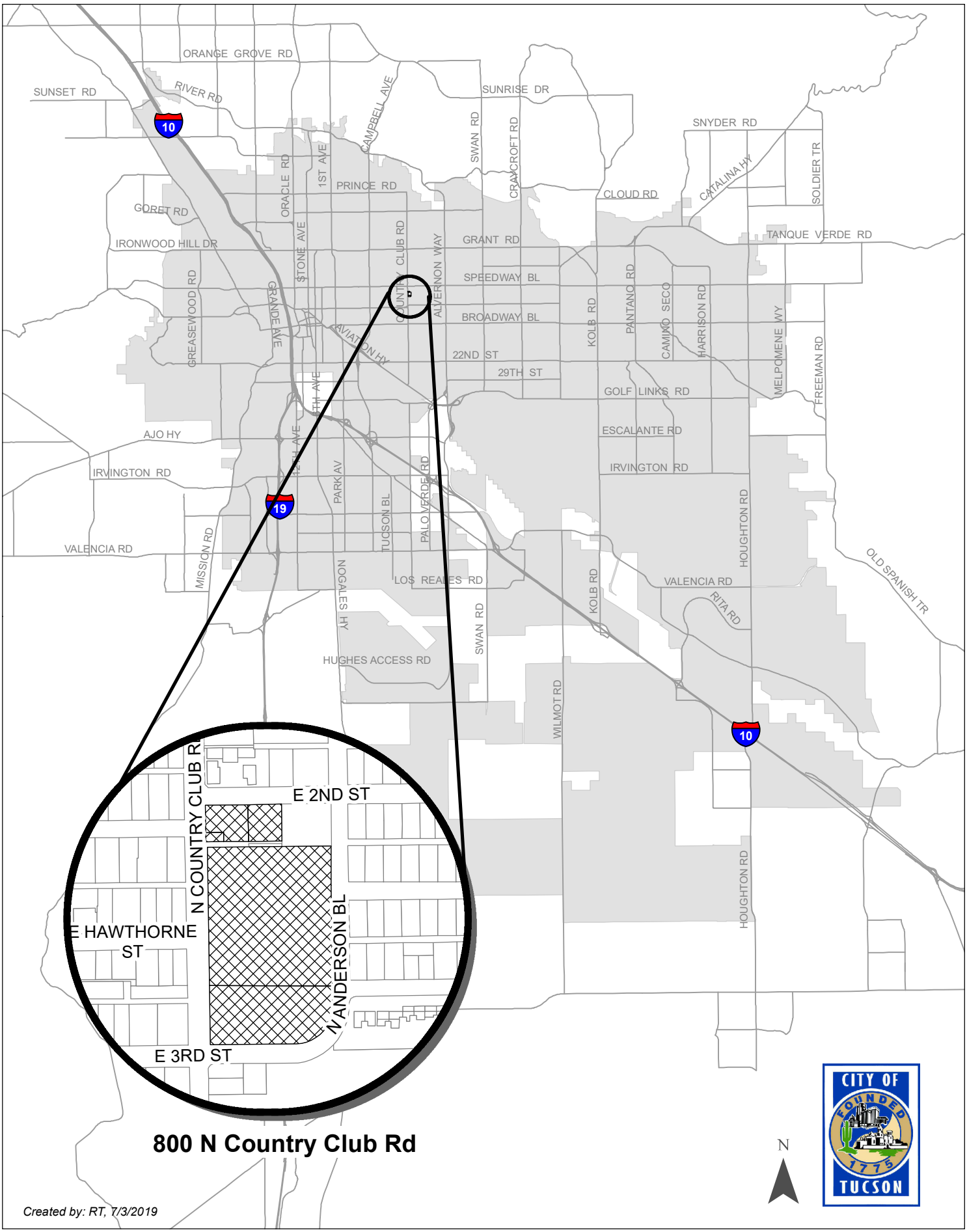
22:30																					0
22:45																					0
23:00																					0

C9-19-06 -Benedictine Monastery

Rezoning Request: From O-3/R-3 to PAD



C9-19-06 + C9-19-07 -Benedictine Monastery

Area of Rezoning: O-3/R-3 to HL

Area of Rezoning: O-3/R-3 to PAD

Address: 800 N Country Club Rd.
Base Maps: Twp.14S Range 14E Sec. 9
Ward: 6

0 75 150 Feet

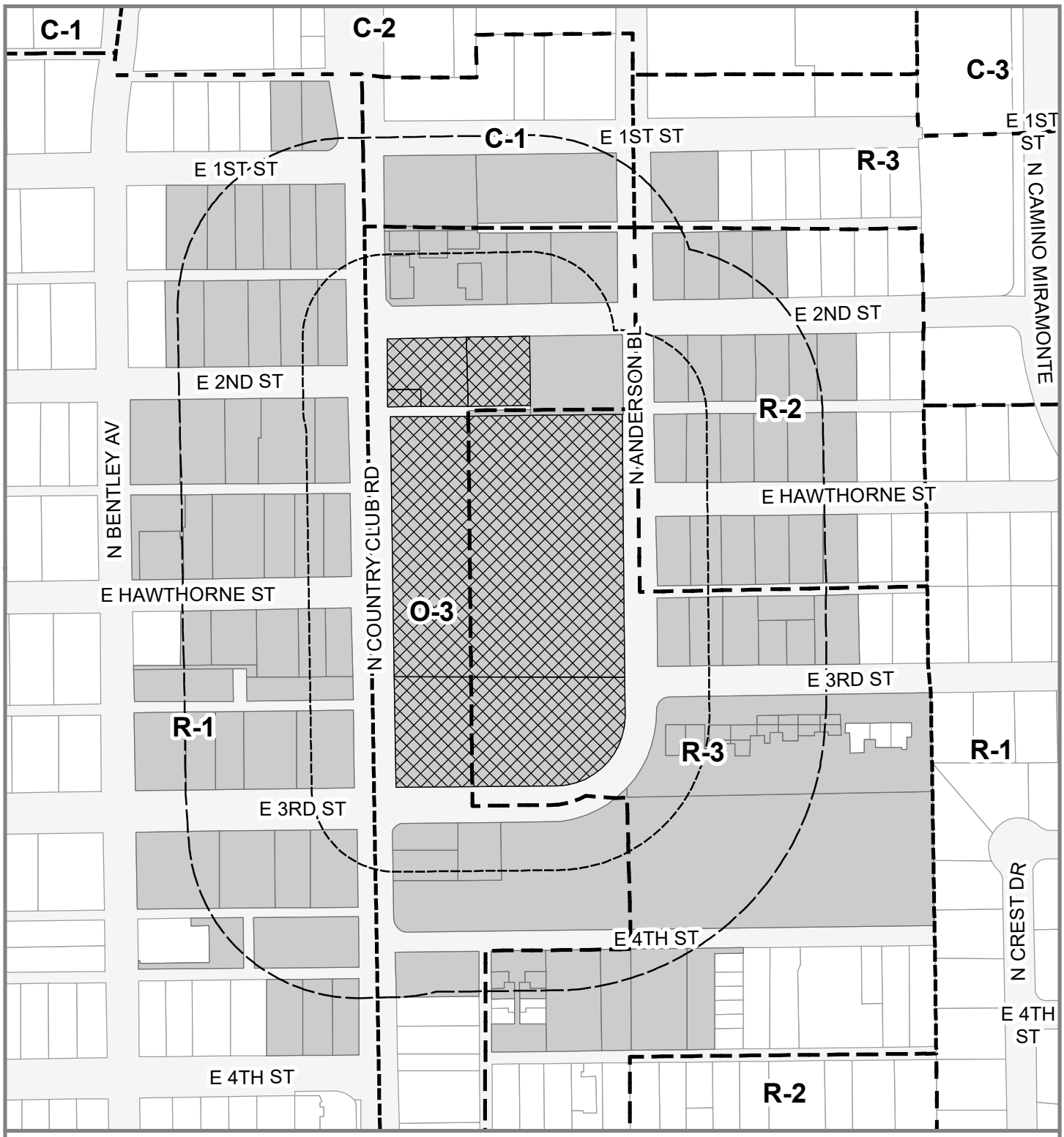
1 inch = 150 feet

N

Created by: SK, 7/3/2019

C9-19-06 -Benedictine Monastery

Rezoning Request: From O-3/R-3 to PAD



Area of Rezoning: O-3/R-3 to PAD

Protest Area (150 ft. radius)

Notification Area (300 ft. Radius)

Zone Boundaries

Properties Notified

Address: 800 N Country Club Rd.
Base Maps: Twp.14S Range 14E Sec. 9
Ward: 6

Feet
0 125 250
1 inch = 250 feet

N

Created by: RT, 7/3/2019

Approval – Protest Form

If you wish to submit a written protest or approval, this form is provided for your convenience. Print your comments below, sign your name, and mail to the City of Tucson Planning and Development Services Department, Entitlements Section, 201 N. Stone Avenue, P.O. Box 27210, Tucson, Arizona 85726-7210. The number of approvals and protests along with protest calculations will be reported at the Zoning Examiner's public hearing. This form is not the City of Tucson Public Hearing Notice.

Protests from 20% of the property owners within 150' of the whole perimeter of the property being rezoned, including BOTH 20% of the property by area and 20% of the number of lots with 150', require an affirmative vote of ¾ of the Mayor and Council (5 of 7 council members) to approve the rezoning or special Exception ordinance. Public rights-of-way and the area/lot of the proposed rezoning are included in the protest calculations. Calculations will be provided to the Mayor and Council.

Case: C9-19-06 Benedictine Monastery (PAD) – Country Club Road, O-3 and R-3 to PAD (Ward 6)

_____
Property Owner(s) (PLEASE PRINT)

☐ APPROVE the proposed rezoning/special exception
☐ PROTEST the proposed rezoning/special exception

Reason:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

OWNER(S) SIGNATURES	PLEASE PRINT PROPERTY ADDRESS	PLEASE PRINT YOUR MAILING ADDRESS

Date _____

Place
Stamp
Here

City of Tucson
Planning and Development Services Department
Entitlements Section
201 N. Stone
P.O. Box 27210
Tucson, Arizona 85726-7210

C9-19-06

Expose this flap - Affix stamp and return

City of Tucson
Planning and Development Services
Department - Entitlements Section
201 N. Stone Avenue
P.O. BOX 27210
Tucson, Arizona 85726-7210

C9-19-06
IMPORTANT LAND USE CHANGE NOTICE ENCLOSED