Marked Agendas
Approved Minutes
Approved Reports

The November 19, 2015 Development Review Board Meeting Agenda and Minutes can be found at

http://www.scottsdaleaz.gov/boards/development-review-board

DEVELOPMENT REVIEW BOARD REPORT

Meeting Date:	November 19, 2015	Item No. 3
General Plan Element:	*Character and Design*	
General Plan Goal:	*Determine the appropriateness of all development in terms of community goals, surrounding area character, and the specific context of the surrounding neighborhood.*	

ACTION

Scottsdale National Golf Club
3-PP-2015

Request to consider the following:

Request approval of a 2-parcel preliminary plat, with amended development standards, including the Natural Area Open Space plan, the cuts and fills exhibit, the Circulation master Plan (Local Area Infrastructure Plan - LAIP), the Preliminary Water and Wastewater Basis of Design Reports, the Master Drainage Plan, the Case Drainage Report, and the Case Grading and Drainage Report, for a golf course development and an Arizona Public Service electrical power substation, all on approximately 650 acres.

Related Policies, References:

32-ZN-1982, 113-ZN-1982, 55-ZN-1990, 55-UP-1997, 55-UP-1997#2, 2-MP-1998, 2-MP-1998#2, 5-GP-1999, 34-AB-2000, 11-TA-2000#3, 10-AB-2001, 23-DR-2003, 15-AB-2004, 5-PP-2004, 5-PP-2004#2, 499-SA-2005, 2-AB-2006, 11-PP-2007, 61-LL-2007, 249-SA-2007, 378-SA-2007, 446-SA-2007, 2-ZN-2008, 53-SA-2008, 6-ZN-2010, 4-GP-2010, 8-ZN-2010, 12-AB-2010, 11-GP-2011, 17-ZN-2011, 2-PP-2012, 7-UP-2012, 12-DR-2012, 87-LL-2013, 54-DR-2013, 5-PP-2014, 11-UP-2014, 1-AB-2015, 4-UP-2015, and 11-DR-2015.

1999 Dynamite Foothills Character Area Plan
2001 City of Scottsdale General Plan
2003 Scenic Corridor Design Guidelines
2004 Trails Master Plan
2004 Environmentally Sensitive Lands Ordinance
2008 Transportation Master Plan and LAIPS Plan

OWNER

Scottsdale National Golf Club, LLC	Arizona Public Service Company (APS)
Steve Gabbay	Ryan Weed
480-398-2525	602-285-4730

Action Taken _____

APPLICANT CONTACT

Steve Gabbay
Scottsdale National
480-398-2525

LOCATION

Generally located on the northeast corner of E. Rio Verde Drive and the N. 116th Street alignment

BACKGROUND

Zoning

The site consists of several individual single-family parcels and previously approved project areas. There are several zoning districts within the project boundary, including Single -family Residential, Environmentally Sensitive Lands (R1-190/ESL) District, Single-family Residential, Environmentally Sensitive Lands (R1-130/ESL) District, and Resort/Townhouse Residential, Environmentally Sensitive Lands (R-4R/ESL) District. Both the R1-190 and R1-130 zoning districts allow single-family residential uses; the R-4R zoning district allows resorts, hotels, townhomes, and municipal uses; all have an Environmentally Sensitive Lands zoning overlay. All zoning districts allow a golf course use upon receiving a Conditional Use Permit (CUP).

There have been four Conditional Use Permits (CUP) approved for the eastern 290 acres, of the 650-acre site. In January of 1998, the first of the two conditional use permits and Master Environmental Design Concept Plan (MEDCP) approvals established the golf course use on the "Golf Club Scottsdale" site. In 2002, a CUP request (55-UP-1997#2), MEDCP amendment (55-UP-1997#2), and associated development agreement (DA 2002-125-COS), were approved by the City Council. These cases modified the golf course use to expand the amenities and stipulated that there would not be any residential development on the "Golf Club Scottsdale" property. Two recently approved CUP cases are described later in this report.

In November of 2010, and November of 2012, the City Council approved two zoning map amendment cases that rezoned a majority of the central portion of the site from the Single-family Residential, Environmentally Sensitive Lands (R1-130/ESL and R1-190/ESL) zoning districts to the Resort/Townhouse Residential, Environmentally Sensitive Lands (R-4R/ESL) zoning district. These cases changed 137 acres, of a 213-acre, 51-lot subdivision, into a 324-unit resort. Thus establishing the "The Reserve Eco-Resort," with its casita units, resort lodge, and keyed room units.

General Plan

There are approximately 650 acres within the site boundary. The General Plan Land Use Element designates the properties within the Rural Neighborhoods, Resort/Tourism, McDowell Sonoran Preserve, and the Developed Open Space (Golf Course) Land Use category designations. There have

The Developed Open Space Land Use category includes public or private recreation areas such as golf courses and city parks. Additionally, the Economic Vitality Element of the General Plan seeks to sustain and strengthen Scottsdale's position as a premier international and national tourism destination and resort community.

Character Area Plan

The properties are located within the Dynamite Foothills Character Area boundary, which is designed to preserve the natural and visual qualities of the Sonoran Desert by using design qualities, building materials, and construction techniques that are sensitive to the desert environment. Projects located within the Dynamite Foothills Character Area should preserve natural open space areas, scenic and vista corridors, and support trail links and connections.

Conditional Use Permits

City Council approved two Conditional Use Permits (CUP) on the 650-acre site, Cases 11-UP-2014 and 4-UP-2015, which established two golf courses, ancillary golf course uses, and a Public Utility Building, and associated improvements, for an APS electrical substation. The golf course ancillary uses include a maintenance facility and yard, eighteen resort-style casita units (which will require separate review and permitting – 12-DR-2015), and a golf course club house (which will require separate review and permitting – 12-DR-2015). Approval of the golf course and substation applications (11-UP-2014 and 4-UP-2015) required the relocation of the existing APS substation, which is currently located on the northwest corner of E. Via Dona Road and N. 118th Street. The approved substation will provide additional power and back-up reliability to serve existing and planned uses in the generally undeveloped vicinity.

Context

The property is located on the northeast corner of E. Rio Verde Drive and the N. 116th Street alignment. The McDowell Sonoran Preserve is located to the north, east, and a portion of the south boundary of the site. Maricopa County is located approximately a mile and a half to the east of the site. Please refer to context graphics attached (Refer to Attachment #4).

Adjacent Uses and Zoning

- North: Single-family Residential, Environmentally Sensitive Lands, zoned R1-130/ESL and R1-190/ESL; McDowell Sonoran Preserve.
- South: Single-family Residential, Environmentally Sensitive Lands, zoned R1-190/ESL and R1-130/ESL; vacant lands.
- East: Single-family Residential, Environmentally Sensitive Lands, zoned R1-130/ESL; McDowell Sonoran Preserve.
- West: Single-family Residential, Environmentally Sensitive Lands, zoned R1-43/ESL, R1-70/ESL, and R1-190/ESL; vacant lands, single-family homes, and the Desert Crown III subdivision.

Key Items for Consideration

- The McDowell Sonoran Preserve located along the northern, south, and eastern boundaries
- Density over the 650-acre site will be significantly reduced
- Developer responsible for upgrading infrastructure to support golf courses and casita units.

- MEDCP and Development Agreement exists over the eastern 290 acres of the site
- Associated with Abandonment case 1-AB-2015

APPLICANTS PROPOSAL

Goal/Purpose of Request

The applicant requests the approval of a 2-lot subdivision, in conjunction with an abandonment application (1-AB-2015), which will allow the owners to establish a final plat that conforms to the previously approved CUP cases: 11-UP-2014 and 4-UP-2015. The proposed plat will create one parcel for the entire Scottsdale National Golf Club project site, and a parcel for the approved APS substation location.

In conjunction with the current preliminary plat request there are five other development applications and a Development Agreement (2011-049-COS). Relocation of an APS substation, from the northwest corner of E. Via Linda Road and N. 118th Street, to the northwest corner of E. Rio Verde Drive and N. 118th Street, will be completed through Case 4-UP-2015. The applicants/owners have also requested the abandonment of right-of-way adjacent to those parcels involved with the associated proposed APS project area (1-AB-2015). Additionally, the recordation of a final plat is required in order to: assemble the various parcels included in the CUP request, create the APS substation parcel, dedicate required right-of-way, and dedicate required NAOS and project related easements.

Previously the Development Review Board reviewed information about the irrigation lake reservoir, and cuts and fills, limited to eight feet in height. The applicant has now requested the approval of cuts and fills over 8 feet in height within this Environmentally Sensitive Lands (ESL) overlay area. A majority of the cuts and fills, with the exception of the lake reservoir, are also proposed as being credited as revegetated Natural Area Open Space areas. Cuts and fills will allow the excess fill, from the lake and other site locations, to remain on the site and be incorporated into the golf course design. Along the E. Rio Verde Drive frontage, north of the 100-foot scenic corridor, the cuts and fills are limited to 21 feet in height. This height limit will occur between the 100-foot scenic corridor and 300 feet of the property's front setback. The cuts and fills range from the allowed 8 feet, without DRB approval, to 46 feet in height (Refer to Exhibit B to Attachment #1).

Development Information

• Existing Use:	Golf Course, Resort, and Vacant Single-family lots
• Proposed Use:	Two Golf Courses, Two Club Houses, 18 Casita/Resort Units
• Buildings/Description:	Southwestern-style Architecture
• Parcel Size:	650 acres
• Building Height Allowed:	26 feet (29 ft. for mechanical - Approved in case 6-ZN-2010)
• Building Height Proposed:	26 feet (29 ft. for mechanical - Approved in case 6-ZN-2010)
• NAOS Required:	260.54 acres
• NAOS Provided:	263.86 acres

- Density Allowed: 355 Units (47 Single-family and 308 Resort Casita and Key Units)
- Density Proposed: 18 Resort Casita Units

IMPACT ANALYSIS

Land Use

Within the 650-acre site there is an existing golf course, an approved eco-resort subdivision community, an approved APS substation site, and unimproved single-family parcels.

Recent CUP approvals allow an additional 18-hole golf course, remodeling of the existing golf course, a maintenance facility, eighteen resort casita units, and the addition of a new golf course clubhouse. Although the entitlement still exists, the proposal would decrease the planned number of units for the 650 acres from 355 units to 18 units. The proposal would continue to be in conformance with the previously recorded development agreement, DA 2002-125-COS, with respect to no residential units allowed on the eastern 290 acres (Golf Club Scottsdale site). The existing clubhouse and golf course ramada units will be remodeled and updated.

The proposed clubhouse is identified as being be centrally located, to the east of the existing clubhouse, and accessed from the proposed 122nd Street entrance realignment. If approved the proposed maintenance facility will be located on the northeast corner of the E. Rio Verde Drive and N. 118th Street intersection. The proposed eighteen resort casita units will also be centrally located on the site, to the east of the identified clubhouse location. The resort casita units will all be located within the Resort/Townhouse Residential, Environmentally Sensitive Lands (R-4R/ESL) zoning district, and not within the DA 2002-125-COS development agreement area.

Estimated to be approximately 175,000 square-feet in area, the proposed clubhouse facility will include the actual clubhouse, proposed at 42,000 square-feet in size, underground parking, ancillary uses, and other amenities. Resort casita units will be utilized for those golf course participants that wish to continue their stay on the property over-night. The golf maintenance facility will house the grounds-keeping equipment and is proposed to be located near the proposed APS substation relocation site. The architecture for the clubhouse, casita units, and APS substation enclosure will require separate review and approval from the Development Review Board.

Traffic

As stated above, the proposed Conditional Use Permit request is association with a proposed abandonment request (1-AB-2015). The proposed abandonment request seeks to abandon all of the right-of-way adjacent to the project area. The abandonment request will require an amendment to the existing Transportation Master Plan Local Area Infrastructure Plan (LAIP). Staff has reviewed and is supportive with the associated abandonment case request.

Water/Sewer

Updated basis of water/wastewater reports and the sewer reports, for the site, have been conceptually acceptable to the City's Water and Sewer department. The applicant will be required to design, construct, and upgrade any water and sewer infrastructure that is necessary to provide services to the site. Golf course irrigation is coming from an existing reclaimed water system.

Public Safety

The proposal has been stipulated to provide the adequate street right-of-way dedications for all the right-of-way that shall remain as public access. Site plan shall meet all Fire Ordinance requirements. All drive aisles must support 83,000 lb. fire trucks, and internal circulation must accommodate a 55-foot turning radius for fire truck access and maneuverability. Additionally, a minimum 40-foot-wide Emergency and Service Access Vehicle Easement will be provided over all internal streets.

Open Space

Open spaces being provided include a variety of different functions such as perimeter buffering, natural areas, detention facilities, common open space, and drainage corridors. The site plan includes a variety of open spaces; including Natural Area Open Space (NAOS), revegetated NAOS, and landscaped open space. Much of the developed open space areas will use desert-like plant materials that will blend into the desert setting.

Associated with the design of the approved golf course the applicant is requesting the approval of cuts and fills over 8 feet, with a majority of the cuts and fills, proposed to be credited as revegetated Natural Area Open Space areas. The lake reservoir will be located within the area that has been previously disturbed by the Reserve Eco-Resort development. Proposed cuts and fills will allow the excess fill to remain on the site and be incorporated into the golf course design to delineate and emphasize washes and peaks for drainage purposes and visual impact.

Policy Implications

This preliminary plat is consistent in density, street alignment, and open space previously approved in the preliminary plat. All stipulations and ordinance requirements have been addressed. Approval of this request will enable the final plat to be recorded, establishing lots, streets, easements and common tracts.

Community Involvement

With the previous applications, the applicant conducted two neighborhood meetings, and met with individuals and groups whose interest is in the development of the property.

An open house was held on December 16, 2014, at the Four Seasons Resort. The applicant stated in the Citizen Involvement Report that nineteen people attended the Open House. The applicant has stated in their Citizen Review Report that the attendees were generally supportive, but that they had some concerns over the placement of the APS substation. A second open house was held on April 30, 2015, at the Four Seasons Resort. This open house was sponsored by APS, but had representatives from both parties present. The Citizen Review Report states that the outreach team was present to answer questions regarding this application as well as the project in general. None of the attendees had any questions regarding the abandonment.

On May 4, 2015, Staff met with various concerned citizens at the Desert Crown III homeowners association board meeting. Approximately a dozen people were present for the meeting. Staff presented the five associated cases, and opened the floor for questions and comments. The citizens did not have many comments or questions directly in regards to subject the golf course application (11-UP-2014). The comments related to the subject CUP were in relation to the location of the propose maintenance yard. The citizens were concerned with the noise created by the maintenance equipment and the hours of operation. Staff encouraged the residents to submit

emails for their subsequent staff reports, and to be in attendance at the Planning Commission and City Council hearings.

Many of the comments that staff received with the previous cases have been in regards to the relocation of the existing APS substation site.

With this application, notifications for this project were sent by the applicant and city staff to interested parties and to neighbors located within 1000 feet around the site. Staff has not received any comments in regards to this, or the abandonment, application.

Community Impact

The substation use is proposed to be relocated approximately a half-mile south of the existing location E. Via Dona and N. 118th Street. Currently, the APS site has an established pad and site wall improvements. The substation has not been improved with installation of equipment. The proposed substation site will be nearer to existing residential homes, but the overall proposed golf course site plan removes the residential units that would have been located immediately adjacent to the substation location. No residents will live adjacent to the substation. The proposed substation site will not be near to "future eventual" residential homes to the west.

Both City staff and APS have agreed that an amendment to the existing development agreement, DA 2011-049-COS, is appropriate to include the relocation of the substation's associated 69Kv and 12Kv power-line corridor. Development Agreement 2011-049-COS-A1 will keep in place the requirements for both parties for the power lines located within the McDowell Sonoran Preserve, and will be updated to include the responsibilities of APS and Scottsdale National Golf Club, LLC to bury all power-lines underground.

OPTIONS & STAFF RECOMMENDATION

Recommended Approach:

Staff recommends that the Development Review Board approve the proposed Preliminary Plat, per the attached stipulations, finding that the provisions of the Development Review Criteria and the Land Division Ordinance have been met.

RESPONSIBLE DEPARTMENT(S)

Planning and Development Services
Current Planning Services

STAFF CONTACT

Jesus Murillo Senior Planner 480-312-7849 E-mail: jmurillo@scottsdaleAZ.gov

APPROVED BY

Jesus Murillo, Report Author — Date 11/12/15

Steve Venker, Development Review Board Coordinator — Date 11/12/15
Phone: 480-312-2831 E-mail: svenker@ScottsdaleAZ.gov

Randy Grant, Director — Date 11/11/15
Planning and Development Services
480-312-2664, rgrant@scottsdaleaz.gov

ATTACHMENTS

1. Stipulations
   Exhibit A to Attachment 1 Preliminary Plat
   Exhibit B to Attachment 1 Cuts and Fills Exhibit
   Exhibit C to Attachment 1 Local Area Infrastructure Plans (LAIPs)
2. Applicant's Narrative
3. Context Aerial
3A. Aerial Close-Up
4. General Plan Map
5. Zoning Map
6. Zoning Districts Map
7. NAOS Plan
8. Scenic Corridor Map
9. Associated Golf Course, Club House, and Guest Casita Units Site Plan
10. Associated Abandonment Areas
11. Traffic Impact Mitigation Analysis (TIMA)
12. Citizen Involvement
13. City Notification Map

Stipulations for Case:
Scottsdale National Golf Club
Case: 3-PP-2015

These stipulations are intended to protect the public health, safety, welfare, and the City of Scottsdale.

APPLICABLE DOCUMENTS AND PLANS:

1. Except as required by the Scottsdale Revised Code, the Design Standards and Policies Manual (DSPM), and the other stipulations herein, the improvement plans and plat shall substantially conform to the following documents:
    a. The Preliminary Plat submitted by Wood/Patel and Associates, Inc., with a city staff date of 10-22-2015.
    b. All Amended Development Standards approved through The Reserve Eco-Resort (Cases 4-GP-201, 6-ZN-2010, 11-GP-2011, and 17-ZN-2011) still apply to those portion of the site zoned R-4R/ESL.
    c. The Natural Area Open Space (NAOS) analysis exhibit and plan submitted by Wood/Patel and Associates, Inc., with a city staff date of 10-22-2015.
    d. The cut and fill exhibit submitted by Wood/Patel and Associates, Inc., with a city staff date of 10-22-2015.
    e. The Circulation Master Plan (Local Area Infrastructure Plan - LAIP); submitted by Wood/Patel and Associates, Inc., approved on 10-22-2015.
    f. Master Drainage Plan for Scottsdale National Golf Club; submitted by Wood/Patel and Associates, Inc., accepted on 7-7-2015.
    g. Case Drainage Report for Scottsdale National Golf Club; submitted by Wood/Patel and Associates, Inc., accepted on 7-7-2015.
    h. Case Grading and Drainage Plan for Scottsdale National Golf Club; submitted by Wood/Patel and Associates, Inc., accepted on 7-7-2015.
    i. Preliminary Water and Wastewater Basis of Design Reports have been reviewed with comments by City of Scottsdale Water Resources Department staff.

RELEVANT CASES:

Ordinance

A. At the time of review, the applicable cases for the subject site were: 6-ZN-2010, 4-GP-2010, 8-ZN-2010, 12-AB-2010, 11-GP-2011, 17-ZN-2011, 2-PP-2012, 7-UP-2012, 12-DR-2012, 87-LL-2013, 54-DR-2013, 5-PP-2014, 1-AB-2015, 4-UP-2015, 11-DR-2015, and 11-UP-2014.

SUBDIVISION PLAT REQUIREMENTS

SUBDIVISION PLAT REQUIREMENTS

SUBDIVISION DESIGN

Ordinance

B. Final plat will be contingent on approval of the proposed associated abandonment case, Case 1-AB-2015.

C. The owner will be required to release and rededicate any existing easements (Natural Area Open Space Easement, Drainage Easement, Public Utility easement, etc.), that conflict with the approved and proposed cases (11-UP-2014, 4-UP-2015, 11-DR-2015, and 1-AB-2015).

DRB Stipulations

2. With the final plat, the project shall dedicate a minimum of 263.86 acres of Natural Area Open Space (NAOS) area for this project.

3. Provide a copy of the updated Development Agreement that was approved in conjunction with Conditional Use Permit Cases 11-UP-2014 and 4-UP-2015 (between the City of Scottsdale, APS, and YAM associated properties) with the final plat submittal.

STREETS AND RELATED DEDICATIONS:

DRB Stipulations

4. The owner must provide an in-lieu payment for one lane of improvement with curb and gutter on Rio Verde along the site frontage (Scottsdale Revised Code Sec. 47-36). The owner and City staff may agree to allow the construction of said improvements instead of the in-lieu payment. This agreement must be memorialized an administrative approval application.

5. The owner must dedicate to the City on the final plat 75 feet of right-of-way along E. Rio Verde Drive frontage; dedication shall extend from N. 116th Street to N. 118th Street.

6. The owner must dedicate to the City 20 feet of fee simple, half-street rights-of-way, and half cul-de-sacs, along the northern and western boundaries of parcel 216-74-008D.

7. The owner must dedicate 20 feet of fee simple, half-street rights-of-way, and half cul-de-sacs, along the southern and western boundaries of parcel 216-74-008C.

8. Prior to submitting final plat for review, the owner shall submit an updated Local Area Infrastructure Plan (LAIP) for this area for review and approval by City of Scottsdale Transportation Engineering Department staff.

9. The owner shall dedicate to the city on the final plat right-of-way over local streets per the updated LAIP reviewed and approved by City of Scottsdale Transportation Department staff. The updated LAIP shall be included in the associated abandonment request.

EASEMENTS DEDICATIONS:

Ordinance

D. The owner shall dedicate to the City on the final plat a sight distance easement over the sight distance triangle(s) in conformance Section 5.3 of the DS&PM.

DRB Stipulations

10. Each Vista Corridor, a watercourse with a peak flow rate of 750 cubic feet per second or greater, based on the 100 year – 2 hour rain event, shall be dedicated by the owner to the City as a continuous Vista Corridor easement on the final plat. The minimum width of the easement shall be one hundred (100) feet. Each easement shall include, at a minimum, any existing low flow channels, all major vegetation, and the area between the tops of the banks of the watercourse.
11. The owner shall dedicate to the City on the final plat a Scenic Corridor Easement for the Scenic Corridor setback width along E. Rio Verde Drive. The easement shall be a minimum of 100 feet wide, measured from the updated property line, after the dedication of additionally required right-of-way. Unless otherwise approved by the Development Review Board, the Scenic Corridor setback shall be left in a natural condition.
12. The owner shall dedicate to the City on the final plat a minimum 20-foot-wide public non-vehicle access easement, to accommodate an unpaved trail from E. Rio Verde Drive to E. Via Dona Road. The easement can be over the water easement. The alignment of the trail shall be subject to approval by the Transportation General Manager, or designee, prior to dedication.
13. The owner must dedicate a 20-foot-wide Waterline Easement, on the subject site's western boundary, along the N. 116th Street alignment.

ARCHAEOLOGICAL RESOURCES:

Ordinance

A. Any development on the property is subject to the requirements of Scottsdale Revised Code, Chapter 46, Article VI, Section 46-134 - Discoveries of archaeological resources during construction.

IMPROVEMENT PLANS REQUIREMENTS

WALLS AND FENCES:

DRB Stipulations

14. Walls within an Intersection & Driveway Sight Distance Triangle and/or a Traffic Safety Triangle shall conform with Section 5.3 of the DSPM.

Ordinance

15. All NAOS areas must provide a minimum 30-foot width and 4,000 square foot areas (consider dedicating the areas along the northern boundary of the property as NAOS instead of those areas between the proposed golf course holes).

DRB Stipulations

B. The owner must submit an administrative approval application to finalize the revegetation of the proposed cuts and fills areas that fall within the proposed Natural Area Open Space boundary. Revegetation plans must be approved before the recordation of the final plat.

16. NAOS that is dedicated over a Public Utility Easement shall be considered as revegetated NAOS.

LANDSCAPE DESIGN:

DRB Stipulations

17. Prior to the issuance of an encroachment permit, the owner shall submit landscape improvement plans that demonstrate how the salvaged vegetation from the site will be incorporated into the design of the landscape improvements.

EXTERIOR LIGHTING:

Ordinance

C. All exterior luminaires shall have integral lighting shield and be directed downward, landscape lighting is not permitted within the Environmentally Sensitive Lands Overlay area.

DRB Stipulations

18. All exterior luminaires shall meet all IES requirements for full cutoff, and shall be aimed downward and away from property line except for sign lighting.

19. Incorporate the following parking lot and site lighting into the project's design:

    Parking Lot and Site Lighting:

    a. The maintained average horizontal luminance level, at grade on the site, shall not exceed 1.0 foot-candles. All exterior luminaires shall be included in this calculation.

    b. The maintained maximum horizontal luminance level, at grade on the site, shall not exceed 4.0 foot-candles. All exterior luminaires shall be included in this calculation. All exterior luminaires shall be included in this calculation.

    c. The initial vertical luminance at 6-foot above grade, along the entire property line shall not exceed 0.1 foot-candles. All exterior luminaires shall be included in this calculation.

    d. The total lumen per luminaire shall not exceed 24,000 lumens.

DRAINAGE AND FLOOD CONTROL:

DRB Stipulations

20. Submit a final drainage report that demonstrates consistency with the DSPM and the case drainage report accepted in concept by the Stormwater Manager, or designee.

21. Demonstrate consistency with the accepted master drainage plan and report.

    a. For any design that modifies the accepted master drainage report, the owner shall submit a site-specific addendum to the final drainage report and plan, subject to review and acceptance by the Stormwater Manager, or designee.

    b. An addendum generated by the final drainage analysis for this site shall be added to the appendix of the final drainage report.

BRIDGES/WASH CROSSINGS AND HEAD WALLS:

DRB Stipulations

22. All headwalls and drainage structures shall be integrally colored concrete to blend with the color of the surrounding natural desert.

PATH, TRAILS AND RELATED IMPROVEMENTS:

Ordinance

D. The owner must construct and sign a 10-foot-wide, unpaved, trail within the proposed 20-foot-wide Non-motorized Public Access Easement, along the N. 116th Street Alignment. The trail will be located over the proposed Waterline Easement. Trail will be for the access of a future trail from E. Rio Verde Drive to the McDowell Sonoran Preserve (DSPM Section 8-3.202.B, Secondary Trails).

DRB Stipulations

23. Prior to the issuance of an encroachment permit, the owner shall submit improvement plans to construct a minimum 10-foot-wide unpaved multi-use trail from E. Rio Verde Drive to E. Via Dona Drive. The trail shall be located within the public non-motorized access easement to be dedicated over the 20-foot-wide water easement along the east side of the 116th Street alignment. The multi-use trail shall be designed in conformance with the Design Standards and Policies Manual. The owner shall provide signage for all paths per the DSPM. The location and design of the signs and markers shall be shown on the improvement plans.

WATER AND WASTEWATER STIPULATIONS

DRB Stipulations

24. Existing water and sewer service lines to this site shall be utilized, or shall be disconnected at the main and removed pursuant to the Water Resources Services Department requirements.

25. Before the improvement plan submittal to the Plan Review and Permit Services Division, the owner shall submit Final of Basis of Design reports (Water and Wastewater) to One Stop Shop for review and acceptance by City of Scottsdale Water Resources Department staff.

26. The existing water easement over the existing public water lines and the IWDS line along the N. 122nd Street alignment shall remain and new easements for all proposed public water and sewer improvements shall be dedicated to the City of Scottsdale on the final plat.

27. Prior to the final plan approval, the owner shall dedicate a 20-foot-wide water easement to the E. Via Dona Drive alignment connecting the north/south water easement.

28. Wastewater system, including lift station and force main, serving the existing clubhouse shall be privately owned, operated and maintained.

29. The City shall retain a water easement over the existing public water lines and the IWDS line along the 122nd Street alignment as it is noted to be abandoned.

ADDITIONAL ITEMS:

Ordinance

E. Preliminary plat must identify all easements as existing or proposed.

F. Preliminary plat must identify all easements consistent with stated comments above.

G. Preliminary plat must identify all access easements or access tracts.

H. Proposed 30-foot APS easement should extend to the proposed APS substation, located at the N. 118th Street and E. Rio Verde Drive intersection. Proposed APS easement shall not be located within the proposed Scenic Corridor Easement

DRB Stipulations

30. Provide project area entry design to show queuing distances being consistent with the Design Standards and Policies Manual Section 2-1, Figure 2.1-3.

31. Provided N. 118th Street design plans to show driveway standards and sight distance easement in accordance with Design Standards and Policies Manual Section 5-3, Figure 5.3-27 and 5.3-26.

32. Owner shall dedicate the required Drainage Easements with the final plat.

33. Owner shall dedicate Emergency and Service Vehicle Access easements over all drive aisles with the final plat.

34. Owner shall dedicate the ordinance requirement of Natural Area Open Space with the final plat.

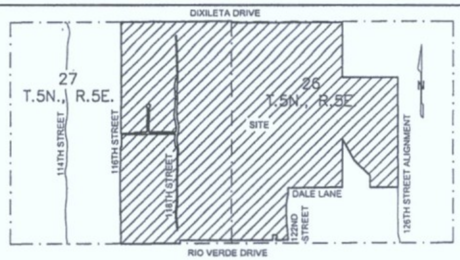
PARCEL DESCRIPTION

A PARCEL OF LAND LYING WITHIN SECTION 26 AND SECTION 27, TOWNSHIP 5 NORTH, RANGE 5 EAST, OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 27, A GENERAL LAND OFFICE (G.L.O.) BRASS CAP STAMPED T5N R5E S22 S23 S27 S26 1919, FROM WHICH THE NORTH QUARTER CORNER OF SAID SECTION 27, A G.L.O. BRASS CAP BENT SOUTH STAMPED 1/4 S22 S27 1919, BEARS SOUTH 89°41'44" WEST (BASIS OF BEARING), A DISTANCE OF 2639.65 FEET, SAID NORTHEAST CORNER BEING THE POINT OF BEGINNING;
THENCE ALONG THE WEST LINE OF GOLF CLUB SCOTTSDALE, AS SHOWN ON MAP OF DEDICATION ONE LOT PLAT (M.O.D.) RECORDED IN BOOK 583, PAGE 21, MARICOPA COUNTY RECORDS (M.C.R.), SOUTH 00°07'57" EAST, A DISTANCE OF 30.00 FEET, TO THE SOUTHERLY RIGHT-OF-WAY LINE OF DIXILETA ROAD AS SHOWN ON SAID M.O.D.;
THENCE LEAVING SAID WEST LINE, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, NORTH 89°53'55" EAST, A DISTANCE OF 2643.41 FEET, TO THE EASTERLY LINE OF SAID M.O.D.;
THENCE LEAVING SAID SOUTHERLY RIGHT-OF-WAY LINE, ALONG SAID EASTERLY LINE, SOUTH 00°05'24" EAST, A DISTANCE OF 1291.07 FEET;
THENCE NORTH 89°55'20" EAST, A DISTANCE OF 1321.06 FEET,
THENCE SOUTH 00°11'03" EAST, A DISTANCE OF 1342.33 FEET;
THENCE SOUTH 00°14'25" EAST, A DISTANCE OF 1298.58 FEET, TO THE SOUTHERLY LINE OF SAID GOLF CLUB SCOTTSDALE;
THENCE LEAVING SAID EASTERLY LINE, ALONG SAID SOUTHERLY LINE, SOUTH 89°58'03" WEST, A DISTANCE OF 661.63 FEET;
THENCE NORTH 00°14'54" WEST, A DISTANCE OF 287.80 FEET;
THENCE NORTH 46°03'18" WEST, A DISTANCE OF 531.99 FEET;
THENCE NORTH 29°20'43" WEST, A DISTANCE OF 575.90 FEET;
THENCE SOUTH 00°14'29" EAST, A DISTANCE OF 1159.37 FEET;
THENCE SOUTH 89°25'22" WEST, A DISTANCE OF 1303.89 FEET, TO THE EAST LINE OF SIERRA RESERVE, AS SHOWN ON FINAL PLAT RECORDED IN BOOK 1159, PAGE 45, M.C.R.;
THENCE LEAVING SAID SOUTHERLY LINE, ALONG SAID EAST LINE, SOUTH 06°05'59" EAST, A DISTANCE OF 56.99 FEET, TO THE BEGINNING OF A CURVE;
THENCE SOUTHERLY ALONG SAID CURVE, HAVING A RADIUS OF 486.81 FEET, CONCAVE WESTERLY, THROUGH A CENTRAL ANGLE OF 18°39'52", A DISTANCE OF 158.58 FEET, TO THE CURVE'S END;
THENCE SOUTH 12°33'53" WEST, A DISTANCE OF 101.32 FEET, TO THE BEGINNING OF A CURVE;
THENCE SOUTHERLY ALONG SAID CURVE, HAVING A RADIUS OF 654.88 FEET, CONCAVE EASTERLY, THROUGH A CENTRAL ANGLE OF 14°54'40", A DISTANCE OF 170.43 FEET, TO THE CURVE'S END;
THENCE SOUTH 02°20'47" EAST, A DISTANCE OF 343.05 FEET, TO THE BEGINNING OF A CURVE;
THENCE SOUTHERLY ALONG SAID CURVE, HAVING A RADIUS OF 1178.83 FEET, CONCAVE EASTERLY, THROUGH A CENTRAL ANGLE OF 06°09'16", A DISTANCE OF 126.62 FEET, TO A POINT OF REVERSE CURVATURE;
THENCE SOUTHERLY ALONG SAID CURVE, HAVING A RADIUS OF 1730.11 FEET, CONCAVE WESTERLY, THROUGH A CENTRAL ANGLE OF 06°36'58", A DISTANCE OF 199.78 FEET, TO THE CURVE'S END;
THENCE SOUTH 01°53'05" EAST, A DISTANCE OF 92.59 FEET, TO THE NORTH RIGHT-OF-WAY LINE OF DYNAMITE BOULEVARD, AS SHOWN ON SAID SIERRA RESERVE FINAL PLAT;
THENCE LEAVING SAID EAST LINE, ALONG SAID NORTH RIGHT-OF-WAY LINE, SOUTH 89°49'08" WEST, A DISTANCE OF 290.72 FEET;
THENCE LEAVING SAID NORTH RIGHT-OF-WAY LINE, NORTH 00°10'48" WEST, A DISTANCE OF 46.70 FEET;
THENCE SOUTH 89°59'26" EAST, A DISTANCE OF 21.35 FEET;
THENCE NORTH 00°10'52" WEST, A DISTANCE OF 67.76 FEET;
THENCE NORTH 49°41'41" WEST, A DISTANCE OF 11.16 FEET;
THENCE SOUTH 89°49'08" WEST, A DISTANCE OF 90.35 FEET;
THENCE SOUTH 00°10'52" EAST, A DISTANCE OF 121.64 FEET, TO SAID NORTH RIGHT-OF-WAY LINE;
THENCE SOUTH 89°49'08" WEST, A DISTANCE OF 977.56 FEET;
THENCE SOUTH 89°50'34" WEST, A DISTANCE OF 1227.97 FEET;
THENCE LEAVING SAID NORTH RIGHT-OF-WAY LINE, SOUTH 09°19'18" EAST, A DISTANCE OF 75.97 FEET, TO THE SOUTH LINE OF SAID SECTION 27;
THENCE ALONG SAID SOUTH LINE, SOUTH 89°50'34" WEST, A DISTANCE OF 1423.01 FEET, TO THE SOUTH QUARTER CORNER OF SAID SECTION 27 AND THE SOUTHWEST CORNER OF PARCEL 43 OF GOLDIE BROWN PINNACLE PEAK RANCH: UNIT THREE PARCEL MAP RECORDED IN BOOK 197, PAGE 24, M.C.R.;
THENCE LEAVING SAID SOUTH LINE, ALONG THE WEST LINE OF SAID PARCEL 43, NORTH 01°05'59" WEST, A DISTANCE OF 1347.30 FEET, TO THE NORTHWEST CORNER OF SAID PARCEL 43 AND THE SOUTHWEST CORNER OF PARCEL 38 OF SAID PARCEL MAP;
THENCE LEAVING SAID WEST LINE, ALONG THE WEST LINE OF SAID PARCEL 38, NORTH 00°36'41" EAST, A DISTANCE OF 962.24 FEET, TO THE SOUTHERLY RIGHT-OF-WAY LINE OF 116TH STREET, DESCRIBED IN DOCUMENT NO. 2001-1162121, M.C.R.,
THENCE LEAVING SAID WEST LINE, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, NORTH 89°34'08" EAST, A DISTANCE OF 20.00 FEET, TO THE EASTERLY RIGHT-OF-WAY LINE OF SAID 116TH STREET;
THENCE LEAVING SAID SOUTHERLY RIGHT-OF-WAY LINE, ALONG SAID EASTERLY RIGHT-OF-WAY LINE AND THE NORTHERLY PROLONGATION THEREOF, NORTH 00°36'41" EAST, A DISTANCE OF 331.00 FEET, TO THE NORTHERLY RIGHT-OF-WAY LINE OF SAID 116TH STREET;
THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE, SOUTH 89°34'08" WEST, A DISTANCE OF 20.00 FEET, TO THE SOUTHWEST CORNER OF PARCEL 26 OF SAID PARCEL MAP;
THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE, ALONG THE WEST LINE OF SAID PARCEL 26, NORTH 00°37'59" EAST, A DISTANCE OF 1311.94 FEET, TO THE NORTHWEST CORNER OF SAID PARCEL 26 AND THE SOUTHWEST CORNER OF PARCEL 21 OF SAID PARCEL MAP;
THENCE LEAVING SAID WEST LINE, ALONG THE WEST LINE OF SAID PARCEL 21, NORTH 00°36'01" WEST, A DISTANCE OF 1332.46 FEET, TO THE NORTH QUARTER CORNER OF SAID SECTION 27;
THENCE LEAVING SAID WEST LINE, ALONG THE NORTH LINE OF SAID SECTION 27, NORTH 89°41'44" EAST, A DISTANCE OF 2639.65 FEET, TO THE POINT OF BEGINNING.

PRELIMINARY PLAT
FOR
SCOTTSDALE NATIONAL GOLF CLUB
SCOTTSDALE, ARIZONA

LYING WITHIN SECTIONS 26 AND 27,
TOWNSHIP 5 NORTH, RANGE 5 EAST,
OF THE GILA AND SALT RIVER MERIDIAN,
MARICOPA COUNTY, ARIZONA



VICINITY MAP
-N.T.S.-

OWNER/DEVELOPER
SCOTTSDALE NATIONAL GOLF CLUB, INC.
C/O YAM MANAGEMENT
15475 N. 84TH STREET
SCOTTSDALE, ARIZONA 85260
PHONE: (480) 398-2525
FAX: (480) 907-7899

ENGINEER & SURVEYOR
WOOD, PATEL & ASSOCIATES, INC.
2051 W. NORTHERN AVENUE, SUITE 100
PHOENIX, ARIZONA 85021
PHONE: (602) 335-8500
FAX: (602) 335-8580
CONTACT: DARREL WOOD, P.E., R.L.S.

BENCHMARK
CITY OF SCOTTSDALE GPS #6341, A MARICOPA COUNTY BRASS CAP FLUSH IN MEDIAN LOCATED AT THE INTERSECTION OF 116TH STREET & RIO VERDE DRIVE, HAVING AND ELEVATION OF 2717.94, CITY OF SCOTTSDALE NAVD 88 DATUM

BASIS OF BEARING
THE BASIS OF BEARING IS THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 27, T.5N., R.5E., USING A BEARING OF SOUTH 89° 41' 44" WEST.

LEGEND & ABBREVIATIONS

BNDRY	PROJECT BOUNDARY
P.U.E.	PUBLIC UTILITY EASEMENT
U.E.	UTILITY EASEMENT
S.L.E.	SEWER EASEMENT
W.L.E.	WATER EASEMENT
R.E.	ROADWAY EASEMENT
I.E.E.	INGRESS EGRESS EASEMENT
N.M.P.A.E.	NON-MOTORIZED PUBLIC ACCESS EASEMENT
M.U.P.T.E.	MULTI USE PUBLIC TRAIL EASEMENT
N.A.O.S.	NATURAL AREA OPEN SPACE EASEMENT
D&F C.E.	DRAINAGE & FLOOD CONTROL EASEMENT
E.S.V.A.E.	EMERGENCY SERVICE VEHICLE ACCESS EASEMENT
R/W	RIGHT OF WAY
C/L	CENTER LINE
E/P	EDGE OF PAVEMENT
B/C	BACK OF CURB
(M)	MEASURED DISTANCE

PUBLIC UTILITIES

WATER	CITY OF SCOTTSDALE
SEWER	CITY OF SCOTTSDALE
ELECTRIC	ARIZONA PUBLIC SERVICE
TELEPHONE	CENTURY LINK
GAS	SOUTHWEST GAS COMPANY
CABLE TV	COX COMMUNICATIONS
WASTE DISPOSAL	CITY OF SCOTTSDALE

LOT TABLE

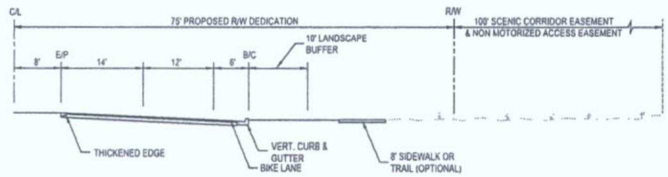
LOT NO.	ACRES	USE
1	659.51	GOLF COURSE
2	5.90	APS SUBSTATION

SHEET INDEX
1 - COVER SHEET
2 - PLAN SHEET
3 - EXISTING EASEMENT EXHIBIT
4 - 122nd STREET ENTRY EXHIBIT AND 118th STREET DRIVEWAY

ZONING
R-4R ESL
R1-130 ESL
R1-190 ESL

SITE DATA

GROSS AREA	- 665.41 AC
NET AREA	- 665.41 AC



DYNAMITE BLVD / RIO VERDE DRIVE
LOOKING WEST
NTS

SCOTTSDALE NATIONAL GOLF CLUB
PRELIMINARY PLAT
COVER SHEET

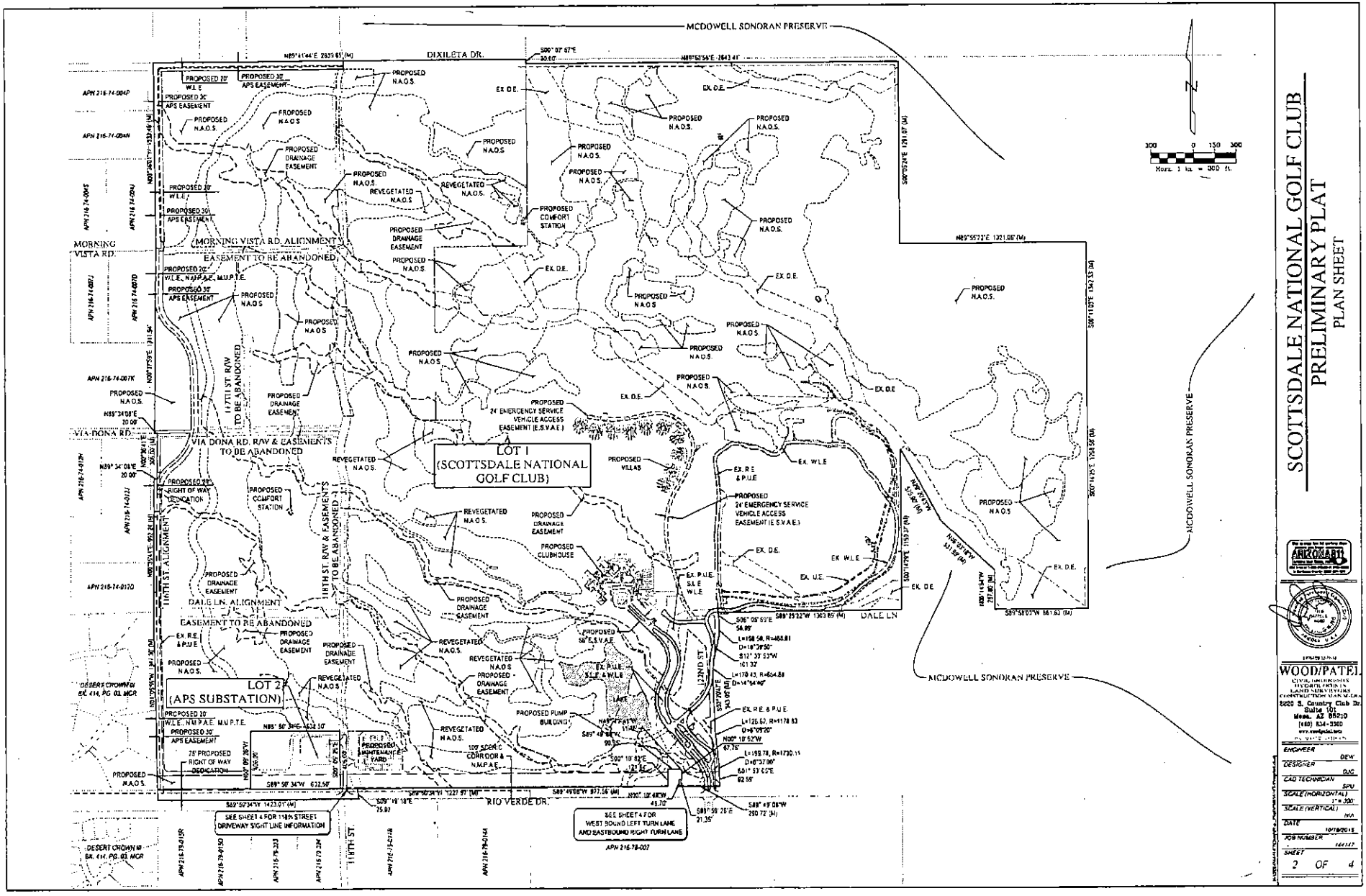
EXPIRES 12-21-18

WOOD/PATEL
CIVIL ENGINEERS
HYDROLOGISTS
LAND SURVEYORS
CONSTRUCTION MANAGERS
2220 S. Country Club Dr. Suite 101
Mesa, AZ 85210
(480) 834-3300
www.woodpatel.com

ENGINEER	DEW
DESIGNER	DJC
CAD TECHNICIAN	SPU
SCALE (HORIZONTAL)	N/A
SCALE (VERTICAL)	N/A
DATE	10/16/2015
JOB NUMBER	144147
SHEET	1 OF 4

Exhibit A to Attachment 1

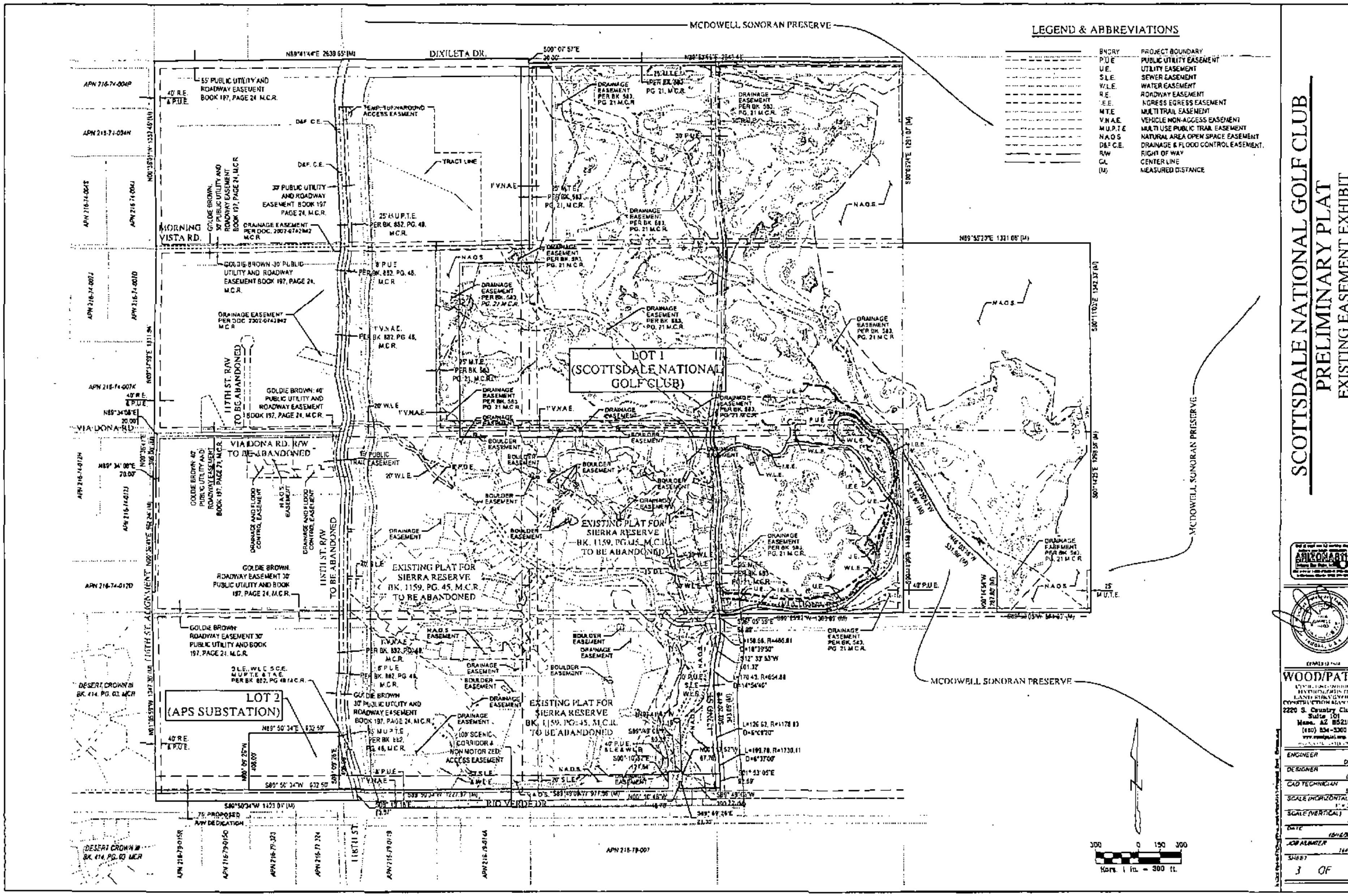
3-PP-2015
10/22/2015



SCOTTSDALE NATIONAL GOLF CLUB
PRELIMINARY PLAT
PLAN SHEET

WOOD/PATEL
CIVIL ENGINEERS
HYDROLOGISTS
LAND SURVEYORS
CONSTRUCTION MANAGERS
2920 S. Country Club Dr.
Suite 101
Mesa, AZ 85210
(480) 834-3300
www.woodpatel.com

ENGINEER	DEW
DESIGNER	DJG
CAD TECHNICIAN	SPU
SCALE (HORIZONTAL)	1" = 300'
SCALE (VERTICAL)	N/A
DATE	10/19/2015
JOB NUMBER	164117
SHEET	2 OF 4


SCOTTSDALE NATIONAL GOLF CLUB
PRELIMINARY PLAT
EXISTING EASEMENT EXHIBIT
LEGEND & ABBREVIATIONS
BNDRY PROJECT BOUNDARY
P.U.E. PUBLIC UTILITY EASEMENT
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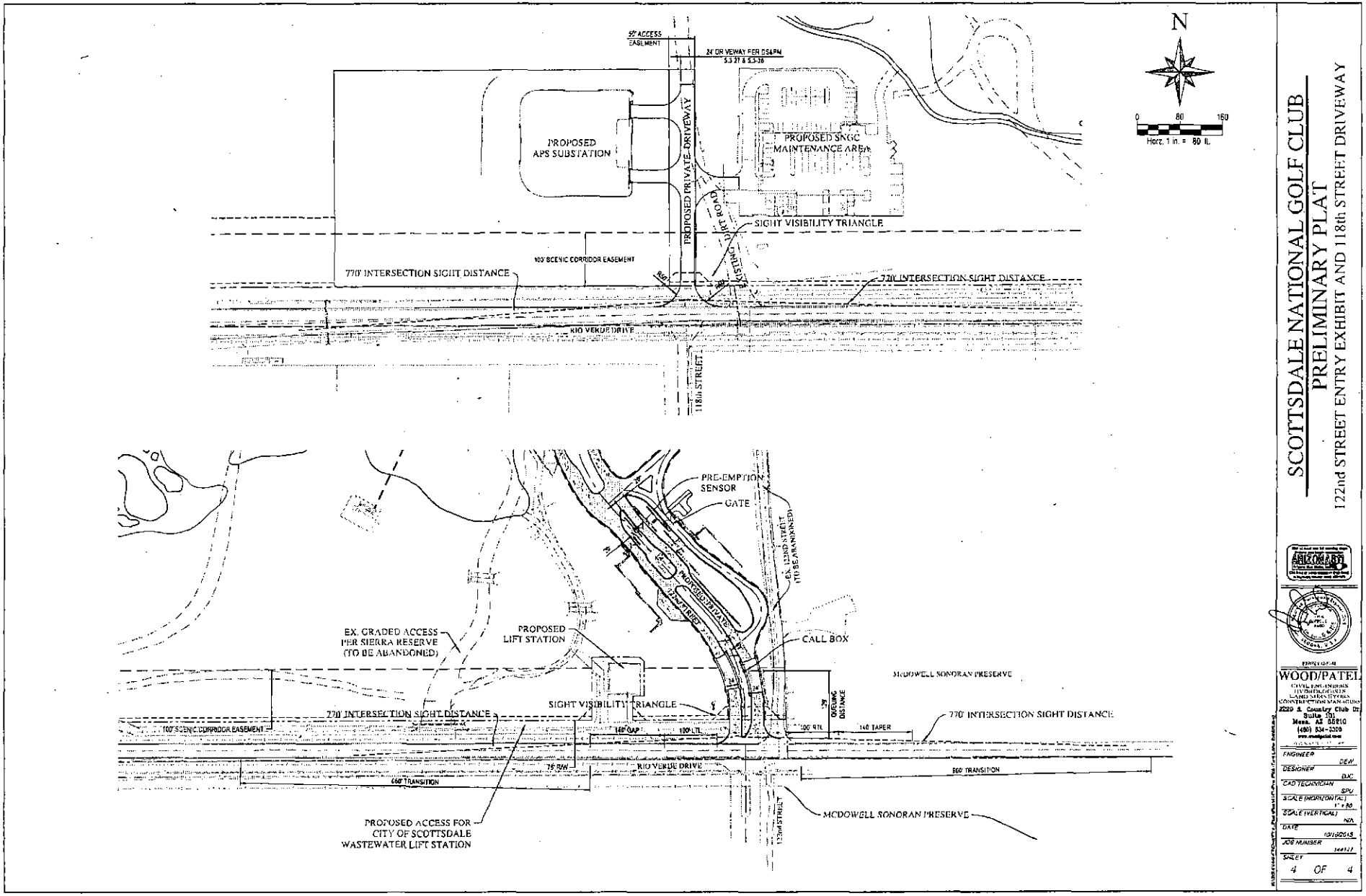
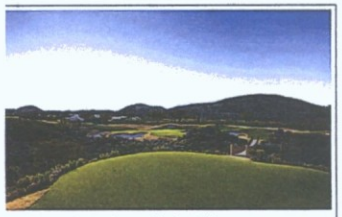
S.L.E. SEWER EASEMENT
W.L.E. WATER EASEMENT
R.E. ROADWAY EASEMENT
I.E.E. INGRESS EGRESS EASEMENT
M.T.E. MULTI TRAIL EASEMENT
V.N.A.E. VEHICLE NON-ACCESS EASEMENT
M.U.P.T.E. MULTI USE PUBLIC TRAIL EASEMENT
N.A.O.S. NATURAL AREA OPEN SPACE EASEMENT
D&F C.E. DRAINAGE & FLOOD CONTROL EASEMENT
R/W RIGHT OF WAY
C/L CENTER LINE
(M) MEASURED DISTANCE
MCDOWELL SONORAN PRESERVE
DIXILETA DR.
MORNING VISTA RD.
VIA DONA RD.
RIO VERDE DR.
116TH ST. ALIGNMENT
118TH ST.
122ND ST.
LOT 1 (SCOTTSDALE NATIONAL GOLF CLUB)
LOT 2 (APS SUBSTATION)
EXISTING PLAT FOR SIERRA RESERVE BK. 1159, PG. 45, M.C.R. TO BE ABANDONED
VIA DONA RD. R/W TO BE ABANDONED
116TH ST. R/W TO BE ABANDONED
118TH ST. R/W TO BE ABANDONED
55' PUBLIC UTILITY AND ROADWAY EASEMENT BOOK 197, PAGE 24 M.C.R.
GOLDIE BROWN 30' PUBLIC UTILITY AND ROADWAY EASEMENT BOOK 197, PAGE 24, M.C.R.
GOLDIE BROWN 40' PUBLIC UTILITY AND ROADWAY EASEMENT BOOK 197, PAGE 24, M.C.R.
DRAINAGE EASEMENT PER BK. 583, PG. 21 M.C.R.
BOULDER EASEMENT
100' SCENIC CORRIDOR & NON MOTOR ZED ACCESS EASEMENT
DESERT CROWN III BK. 414, PG. 03, MCR
75' PROPOSED R/W DEDICATION
300 0 150 300
Hor. 1 in. = 300 ft.
WOOD/PATEL
2220 S. Country Club Dr. Suite 101 Mesa, AZ 85210
ENGINEER DEW
DESIGNER DJC
CAD TECHNICIAN SPU
SCALE (HORIZONTAL) 1" = 300
SCALE (VERTICAL) N/A
SHEET 3 OF 4



SCOTTSDALE NATIONAL GOLF CLUB
PRELIMINARY PLAT
122nd STREET ENTRY EXHIBIT AND 118th STREET DRIVEWAY

WOOD/PATEL
CIVIL ENGINEERS
LAND DEVELOPERS
CONSTRUCTION MANAGERS
2320 S. Country Club Dr.
Suite 201
Mesa, AZ 85210
(480) 834-3300

ENGINEER	DEW
DESIGNER	DJC
CAD TECHNICIAN	SPU
SCALE (HORIZONTAL)	1" = 80
SCALE (VERTICAL)	N/A
DATE	10/19/2015
JOB NUMBER	144123
SHEET	4 OF 4

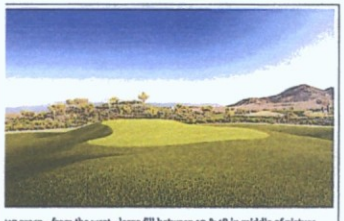


#9 tee - large cut in front of green

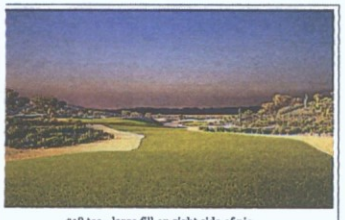
#10 - lower part of large fill on right

#12 green - from the north - large cut area on left side of pic

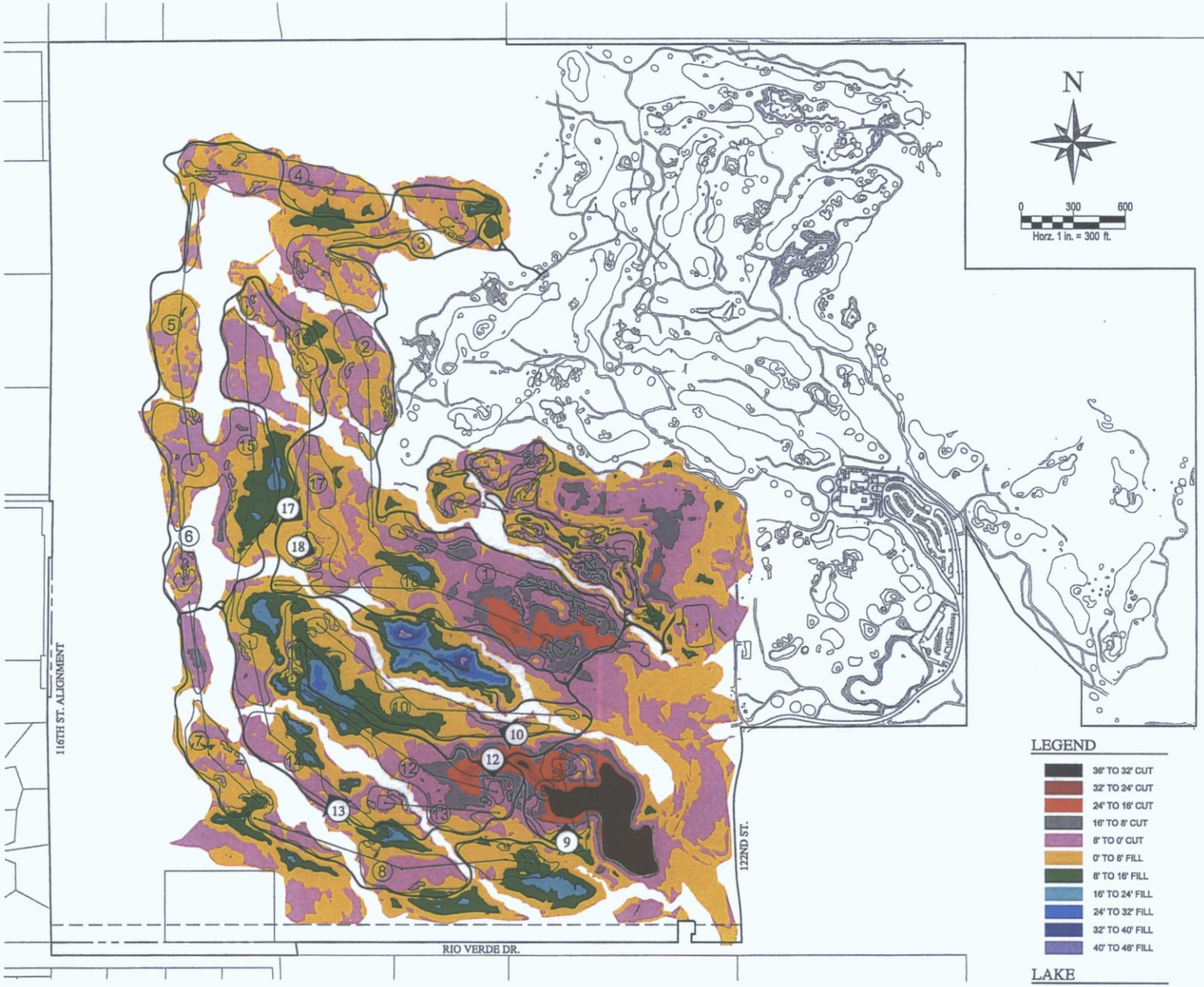
#13 approach - fill behind 11 green on right side of pic



17 green - from the west - large fill between 10 & 18 in middle of picture



#18 tee - large fill on right side of pic



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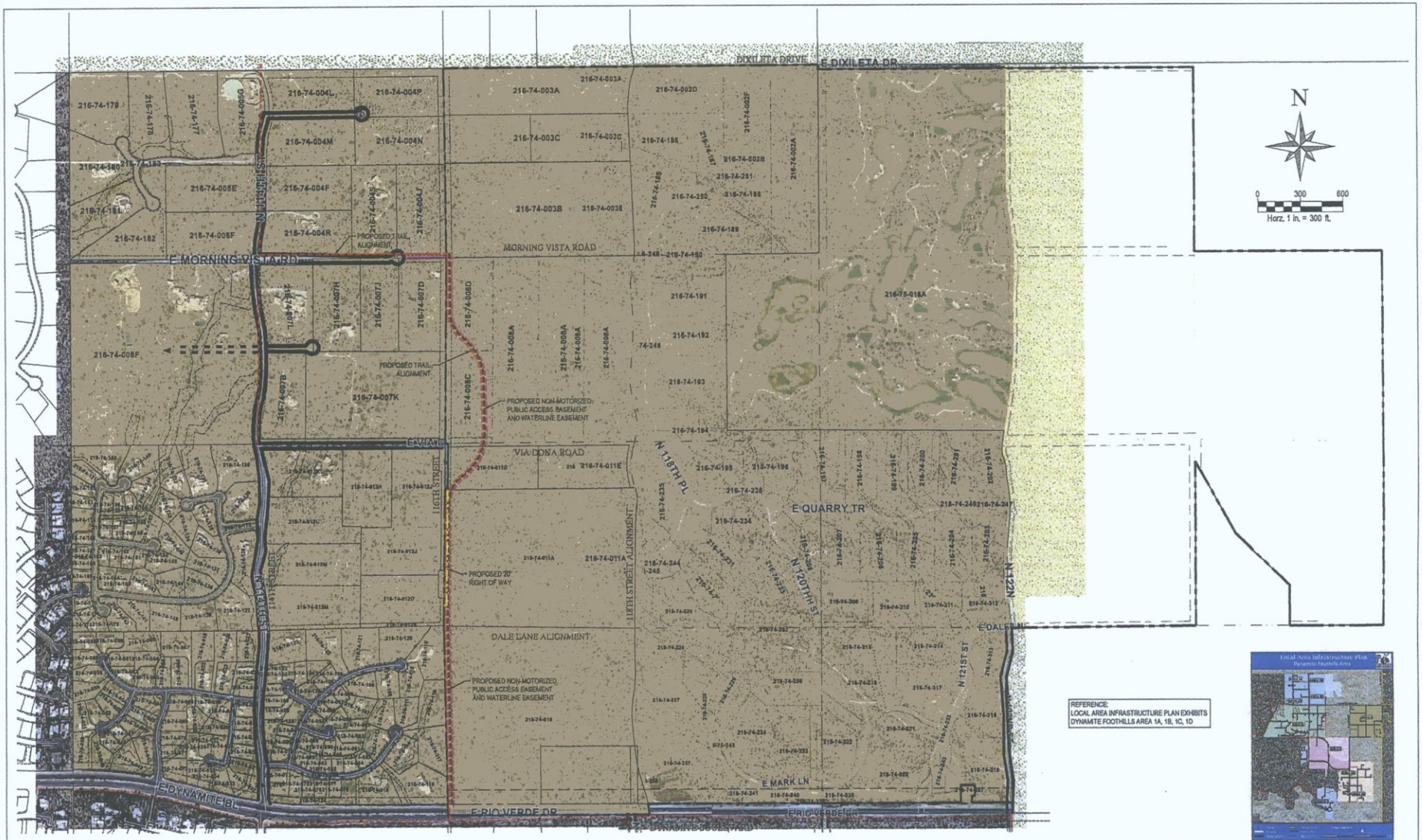
(602) 335-8500
WWW.WOODPATEL.COM
PHOENIX - MESA

SCOTTSDALE NATIONAL GOLF C

CUT AND FILL
TREATMENT EXHIBIT

DATE:	SCALE:	
10/30/2015	1" = 300'	SHEE
JOB NO.:	DESIGN: DC	1 OF
144147	DRAWN: SU	

Exhibit B to Attachment 1



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SCOTTSDALE NATIONAL GOLF CLUB

LAND AREA INFRASTRUCTURE PLAN
PROPOSED MODIFICATION EXHIBIT FOR
DALE LN, VIA DONA, MORNING VISTA

DATE:	SCALE:	
10/16/2015	1" = 300'	SHEET 1 OF 1
JOB NO.:	DESIGN: DC	
144147	DRAWN: SU	

Exhibit C
to Attachment 1

Scottsdale National Golf Club

Project Narrative

Preliminary Plat

YAM Management, LLC

Date: June 11, 2015

Revised August 28, 2015

Revised October 15, 2015

ATTACHMENT #2

3-PP-2015
10/22/2015

Request

This request is for Preliminary Plat approval associated with case 11-UP-2014, the Scottsdale National Golf Club ("SNGC"). Previously, approximately 30% of this site was entitled and then platted for residential development under case 2-PP-2012 (The Reserve/Sierra Reserve). The Final Plat was recorded in September 2013, Book 1159, Page 45. In addition, the entire 660-acre site is an assemblage of several other parcels outside of the initial Golf Club and Sierra Reserve Plat. As a result, SNGC is requesting approval of a replat that will facilitate the removal of the Sierra Reserve recorded plat and consolidate the entire project acreage into a comprehensive plat consisting of two lots. All required easements and tracts including those required for water and sewer improvements will be dedicated with the re-plat of this property. The two proposed lots include one for the entire golf course development and a second lot designated for the relocation of the future APS Substation to be located at the northwest corner of 118th & Dynamite.

Background

In September of 2013, Bob Parsons acquired The Golf Club Scottsdale (122nd Street & Dynamite Boulevard/Rio Verde Drive) and all of its assets with the hopes of reviving and reinvigorating a project that had been operating without stable leadership and financial commitment. In March of 2014, Bob Parsons acquired Sierra Reserve from Lyle Anderson and reunited two parcels that were separated 7 years ago. These are just the most recent investments that Bob has made in Arizona and, more specifically, Scottsdale over the last 15 years. During August of 2014, 145 acres to the West of the former Sierra Reserve property was also acquired with the plan of expanding the footprint of the Club across over 650 acres.

Mr. Parsons relocated to Scottsdale from Iowa in 1994 after selling his company, Parsons Technology, to Intuit for $64 million. In 1996 he started Jomax Technology which soon evolved into GoDaddy.com. Mr. Parsons headquartered his company in Scottsdale where it has grown to have almost $2 billion in sales and 2,500 AZ-based employees. In 2011 he sold a portion of the company, is now on the Board of Directors and still remains the company's single largest shareholder. During the sale process it was very important to Mr. Parsons that the company remained in AZ, specifically in Scottsdale.

After the sale of Go Daddy, Mr. Parsons created Scottsdale based YAM Worldwide. YAM Worldwide owns and operates a number of businesses, many of which are located in Scottsdale. Our Scottsdale-based businesses include Harley-Davidson of Scottsdale, Go AZ Motorcycles, Spookyfast Customs, BIG YAM, The Parsons Agency and Scottsdale National Golf Club (formerly The Golf Club Scottsdale). These businesses alone employ 270 people in the Scottsdale area. YAM Worldwide also owns YAM Properties, the owner and manager of over $200 million in commercial real estate, much of which is located

throughout Scottsdale. Finally, Bob and his wife Renee formed the Bob and Renee Parsons Foundation in 2012. To date the Foundation has given over $72 million to charities, most of which are local to Arizona and Scottsdale.

The Idea

Immediately after the acquisitions, we went to work to define Mr. Parsons' vision of SNGC and the investment he was willing to make. The property is unique; it is one of the few golf courses in the state that is not an integral piece of a Master Planned residential development. Instead, it is almost completely surrounded by the Scottsdale Sonoran Preserve which offers pristine views and peacefulness. We felt that this club should be a showcase for Scottsdale, not just locally, but nationally and internationally. The club has been rebranded as Scottsdale National Golf Club, incorporating "Scottsdale" and "National" into the name to emphasize how important Scottsdale is to the legacy of the club.

The property provides a spectacular canvas of over 650 acres, allowing us to create an exceptional facility that will be unrivaled, not only in the state of Arizona, but in the United States. The plan includes adding an additional 18-hole championship course, remodeling the current course, adding a dramatic Par 3 Course and, finally, designing and building a new clubhouse to support and enhance the overall facility.

The Golf Experience

Since one of the true advantages of our property is its pristine surroundings, we have determined that building an additional 18-hole championship golf course will enhance our ability to become a true "National" Golf Club. We would build the new golf course on the land acquired during 2014 and then continue to remodel the existing 18-hole golf course, remedying some of the mistakes that were made in the initial construction. Finally, we would develop a Par 3 course which would be for members use only, enhancing the uniqueness of the club. Many of the great national clubs have a Par 3 course including Augusta National (GA), Pine Valley (NJ), Olympic Club (CA), The Quarry (CA), Westchester Country Club (NY) and Atlanta Athletic Club (GA). There are countless others around the world.

With the membership we plan to attract, we feel that SNGC can be a significant driver of tourism dollars and corporate relocation activity.

The Clubhouse

The current clubhouse is woefully inadequate when it comes to amenities, service levels, functionality, location and overall presence. Delays in construction and a change in membership composition should have forced the owner to make adjustments to the design prior to construction. Unfortunately, with the lack of prospective members at the time and significant dollars already spent on designs and permitting, the owner decided to make only minor modifications.

We plan on rectifying those decisions. We plan on adding much needed square footage to ensure our members, guests and employees have the facility necessary to provide a world-class experience worthy of both the club and Scottsdale. Since these changes will require the construction of a new clubhouse, we have studied and settled on a slightly different location that would take better advantage of the scenic views and vistas of the property.

Some of the items we are proposing are as follows:

- Expanded dining areas for men, women and mixed parties
- Expanded private dining areas for larger parties and their guests
- Expanded locker rooms to accommodate a larger membership
- Expanded pro shop and administration facilities
- Underground parking to significantly reduce surface asphalt
- Underground storage for golf carts and service equipment

Overnight Accommodations for our Members

The great golf clubs of the world provide overnight accommodations for its members. Clubs such as Augusta National (GA), Pine Valley (NJ), Trump National (NJ), Loch Lomond (Scotland), Whisper Rock (AZ), Sand Hills (NE), Oakmont (PA), Cypress Point (CA), Castle Pines (CO) provide such accommodations. To ensure our inclusion in this category we feel it is important to offer this service as well. Pursuant to the approved Special Use Permit for Scottsdale National Golf Club (11-UP-2014) a total of 18 member overnight units were approved. These units will be accomplished as Villas which will be located in the in portions of the property zoned as R-4R ESL. The Villas will be accessory to the clubhouse. Food and concierge service will be provided through club facilities.

This Preliminary Plat is being processed with the golf course I concert with the aforementioned Golf Use Permit to remove the Sierra Reserve recorded Final Plat and consolidate the entire 650 acres of the Scottsdale National Golf Club property into one parcel so that the Golf Courses, Clubhouse and Villas can be developed as one comprehensive project.

Golf Course Cuts & Fills

The objective of the new Golf Course is to create a golf complex that is unique in comparison to the top courses in the country and creates an unparalleled golf experience for its members. In addition, there is an appreciation for the majestic beauty of the Sonoran Desert and its importance to the character of this course.

Unfortunately, aside from the previous development activities which have scarred the property, the property was also scarred by the 1996 Rio Fire. Regardless, Mr. Parsons' proceeded with his vision to create an extraordinary Golf Facility that will not only compete with the other top national facilities in the country, but will exceed expectations. To do this, reshaping of the existing terrain has become an important aspect to the design of the course. This includes creating mounding, rills, depressions and boulder outcroppings that provide character and visual interest to the landscape and significant strategic opportunities to the play of the course. By initial review the cuts and fills which are

proposed in some locations to be over 40 feet, seem extreme by typical Scottsdale standards. However, these are not typical cuts and fills. They are a product of re-shaping the terrain. In addition, the fills on the southern portion of the project have been restricted to 20 feet or less so as not to obstruct the view shed from Rio Verde Drive. Most importantly, these cuts and fills will be shaped to blend with adjacent topography and revegetated with a native Sonoran Palette in accordance with the Environmentally Sensitive Lands objectives so when complete they will appear to be a natural feature of the Sonoran Desert.

APS Via Dona Substation

As part of the golf course development, the future APS Via Dona substation is proposed to be relocated from its current approved location at the southwest corner of 118th and Via Dona to the northwest corner of 118th and Dynamite (approximately 0.5 miles directly south of the current location). A separate application for a public utility Use Permit application has been filed with the City by APS and is being processed concurrent with the SNGC Use Permit (11-UP-2015). The case number for the substation CUP is 4-UP-2015. The APS site will provide its own NAOS exclusive of the SNGC Property.

Abandonment

As part of the expansion of SNGC, additional land has been acquired west of the 118th Street alignment. As a result, SNGC has engaged in several discussions with the City's Planning, Preserve and Transportation staff regarding potential abandonment of rights-of-ways, roadway easements and public utility easements plus revisions to the City's Local Area Infrastructure Planning Studies (LAIPS) for the following:

- 118th Street-Rio Verde Drive to Dixileta Road
- 117th Street north of Via Dona
- East Via Dona Road- 116th Street to 118th Street
- Morning Vista Road-116th Street to 118th Street
- Dale Lane-116th Street to 118th Street
- Dixileta Road 116th Street to 118th Street
- 116th Street (east side) from Rio Verde Drive to Dixileta

An application for these abandonments has been filed concurrently with this Preliminary Plat application.

City of Scottsdale Golf Course Policy (1997)

- **GOAL 3** - *addressing strategies 3.1, 3.2, & 3.6*

Response: The golf course design will respect, preserve and showcase all existing environmentally sensitive areas, including native washes (protected 404's), rock outcroppings and specimen and/or rare native plant material. The grading concept for the course mimics the natural topography of the area and all drainage developed through grading will not only be compatible with its surrounding environment, but will also improve upon the ability to convey storm water and runoff through the property. The natural drainage patterns will remain intact and fully functioning, creating no impact to downstream

neighboring areas. All scenic wildlife corridors on property will not be impacted and remain as-is following golf course development.

- **GOAL 5** - *addressing strategies 5.1, 5.2, & 5.3*

Response: Both the existing and proposed location of SNGC is surrounded almost entirely by the McDowell Sonoran Preserve. The remainder of the surrounding area is bordered by land entitled with low density zoning. The golf course use is a perfect transition from the Preserve to the low density residential in the area. Additionally, this should be the last golf course built in North Scottsdale as we are acquiring the final share of water available through the existing delivery systems.

- **GOAL 6** - *addressing strategies 6.2 & 6.3*

Response: The proposed landscape palette on and around the new golf course will consist of only native species to the Sonoran Desert, planted in a natural manner to coexist with the surrounding context.

- **GOAL 10** - *addressing strategies 10.1, 10.3, 10.5*

Response: The existing golf course already provides a scenic and environmentally sensitive relationship with both the Preserve and the surrounding home sites. The NAOS requirements will be strictly adhered to, ensuring that we maintain the natural beauty of the desert landscape. Since we already oversee a golf course adjacent to the Preserve, we are extremely sensitive to the movement and habitats of wildlife with which we share our property. That will continue through the design and construction of the new golf course and ancillary facilities.

- **GOAL 11** - *addressing strategies 11.2, 11.4, 11.5, 11.6, 11.7*

Response: SNGC is a partner with the City of Scottsdale and Desert Mountain in the IWDS Pipeline Capacity Agreement. This agreement provides for four full golf course shares of which only three are being used. We have worked with the City of Scottsdale and Desert Mountain to acquire the additional, existing share in order to comply with the City's requirements. To this end we have outlined and begun to affect a variety of transactions and amendments that will be completed in conjunction with the CUP. Please feel free to reach out to the City of Scottsdale Water Resources for verification of our compliance and intent.

Scottsdale's Design Standards & Policies Manual

Scottsdale has established a set of guidelines for the design of public and private projects within the city. These guidelines are contained within the Design Standards and Policy Manual, commonly known as the DS&PM. The DS&PM is made up of 12 chapters all dealing with various areas of public and private development issues and is intended to provide direction during final design and preparation of the construction documents for development within the City of Scottsdale.

Detailed design for the SNGC expansion is in its initial stages as it moves forward toward the conditional approval for expansion of the facility. As a result, specific design is not complete at this time. However, the standards and policies conveyed by the DS&PM will be pursuant to following:

- Significant native site features such as washes, boulder outcrops and native vegetation will be left in their natural state as much as possible. Improvements that are required to natural washes will complement their natural function and appearance.

- Concrete for exposed drainage structures, sidewalks, curbs, gutters and driveways will be integrally colored to match the surrounding environment.

- Roadway cross-sections will comply with ESL (Environmentally Sensitive Lands) standards as illustrated in the DS&PM.

- Only local native rock will be used for erosion protection.

- Roadway and driveway alignments will be selected to minimize disruption to the natural drainage patterns of the site. Where crossings are necessary, detailed analysis will be done to ensure that there are no adverse impacts downstream to flow patterns, flow rates, erosion and sediment transport.

- Cut & fill slopes will be graded to blend back into the natural terrain. Where retaining walls are required heights will be kept to a minimum and terracing will be incorporated to avoid "tall" wall impacts.

- Emergency access will meet or exceed Scottsdale Fire Department requirements.

- Gated entrances will comply with the standards of figure 2.1-3 of the DS&PM.

- A majority of the parking will be provided underground to reduce unwanted visual impacts.

- Storm water storage basins and drainage channels will comply with DS&PM standards. In addition, they will be shaped to be "free-form" so as to blend into the natural desert surroundings. Landscape material will generally be native plants capable of surviving periodic inundation such as the species identified in section 2-1.903 of the DS&PM.

- To minimize impact, utility lines will be located in road and driveway corridors as much as possible. In cases where Utility lines cannot follow a road or driveway corridor, they will be located in easements or separate tracts and where desert materials are damaged due to the installation, re-vegetation will be provided.

Scottsdale's Sensitive Design Principles

The City has established a set of design principles, known as the Scottsdale's Sensitive Design Principles, to reinforce the quality of design in our community. The following Sensitive Design Principles are fundamental to the design and development of the proposed golf course development.

1. ***The design character of any area should be enhanced and strengthened by new development.***
   - *Building design should consider the distinctive qualities and character of the surrounding context and, as appropriate, incorporate those qualities in its design.*
   - *Building design should be sensitive to the evolving context of an area over time.*

Response: The development plan will maintain the scenic corridor along Dynamite/Rio Verde and provide 258+/- acres of NAOS. Preserving these amenities will contribute to the interconnectivity and relationship with the surrounding properties, provide opportunities for enhance view corridors and maintain wildlife corridors while respecting the existing topography.

2. ***Development, through appropriate siting and orientation of buildings, should recognize and preserve established major vistas, as well as protect natural features such as:***
   - *Scenic views of the Sonoran desert and mountains.*
   - *Archaeological and historical resources.*

Response: The development plan, which is primarily open space, maintains the scenic views of the Sonoran desert and mountains. An archaeological/cultural resources report was provided with the application.

3. ***Development should be sensitive to existing topography and landscaping.***
   - *A design should respond to the unique terrain of the site by blending with the natural shape and texture of the land while minimizing disturbances to the natural environment.*

Response: The proposed development respects the existing terrain and was designed in a manner to flow and integrate with the existing topography and native vegetation.

4. ***Development should protect the character of the Sonoran desert by preserving and restoring natural habitats and ecological processes.***

Response: The golf course development, which is primarily open space, naturally protects and enhances the natural habitats and ecological processes of the Sonoran desert.

5. ***The design of the public realm, including streetscapes, parks, plazas and civic amenities, is an opportunity to provide identity to the community and to convey its design expectations.***
   - *Streetscapes should provide continuity among adjacent uses through use of cohesive landscaping, decorative paving, street furniture, public art and integrated infrastructure elements.*

Response: The streetscape and preservation of the scenic corridor along Dynamite/Rio Verde will be maintained in a manner that is compatible with the existing character adhering to the requirements of the Environmentally Sensitive Lands Ordinance.

6. ***Developments should integrate alternative modes of transportation, including bicycles and bus access, within the pedestrian network that encourage social contact and interaction within the community.***

Response: Due to the location and proposed use this guideline is not directly applicable.

7. ***Development should show consideration for the pedestrian by providing landscaping and shading elements as well as inviting access connections to adjacent developments.***
   - *Design elements should be included to reflect a human scale, such as the use of shelter and shade for the pedestrian and a variety of building masses.*

Response: The clubhouse and guest accommodations are still under design but will place emphasis on shading the pedestrian through building form and landscaping, and providing meaningful outdoor spaces for the members.

8. ***Buildings should be designed with a logical hierarchy of masses:***
   - *To control the visual impact of a building's height and size.*
   - *To highlight important building volumes and features, such as the building entry.*

Response: The clubhouse and guest accommodations are still under design but will provide a logical hierarchy of masses blending the buildings within the natural desert character and terrain.

9. ***The design of the built environment should respond to the desert environment:***
   - *Interior spaces should be extended into the outdoors both physically and visually when appropriate.*
   - *Materials with colors and coarse textures associated with this region should be utilized.*
   - *A variety of textures and natural materials should be used to provide visual interest and richness, particularly at the pedestrian level. Materials should be used honestly and reflect their inherent qualities.*
   - *Features such as shade structures, deep roof overhangs and recessed windows should be incorporated.*

Response: The clubhouse and guest accommodations will respond to the desert environment through the use of materials, textures, color, design and landscape palette.

10. ***Developments should strive to incorporate sustainable and healthy building practices and products.***
    - *Design strategies and building techniques, which minimize environmental impact, reduce energy consumption, and endure over time, should be utilized.*

Response: The proposed golf course development will strive to incorporate sustainable and healthy building and landscape practices in order to reduce environmental impact and energy consumption.

11. ***Landscape design should respond to the desert environment by utilizing a variety of mature landscape materials indigenous to the arid region.***
    - *The character of the area should be emphasized through the careful selection of planting materials in terms of scale, density, and arrangement.*
    - *The landscaping should complement the built environment while relating to the various uses.*

Response: Landscaping of common areas will incorporate the ESLO low water use plant palette placed in a manner that is consistent with the established densities and sizes of the established desert character.

12. ***Site design should incorporate techniques for efficient water use by providing desert adapted landscaping and preserving native plants.***
    - *Water, as a landscape element, should be used judiciously.*
    - *Water features should be placed in locations with high pedestrian activity.*

Response: Low water use plant materials and preservation of native plants will be strictly implemented.

13. ***The extent and quality of lighting should be integrally designed as part of the built environment.***
    - *A balance should occur between the ambient light levels and designated focal lighting needs.*
    - *Lighting should be designed to minimize glare and invasive overflow, to conserve energy, and to reflect the character of the area.*

Response: Lighting will be integrally designed and adhere to Scottsdale's "dark sky" policies.

14. ***Signage should consider the distinctive qualities and character of the surrounding context in terms of size, color, location and illumination.***
    - *Signage should be designed to be complementary to the architecture, landscaping and design theme for the site, with due consideration for visibility and legibility.*

Response: Signage will be low-scale and appropriately placed within the proposed development.

Scottsdale's Environmentally Sensitive Lands Ordinance

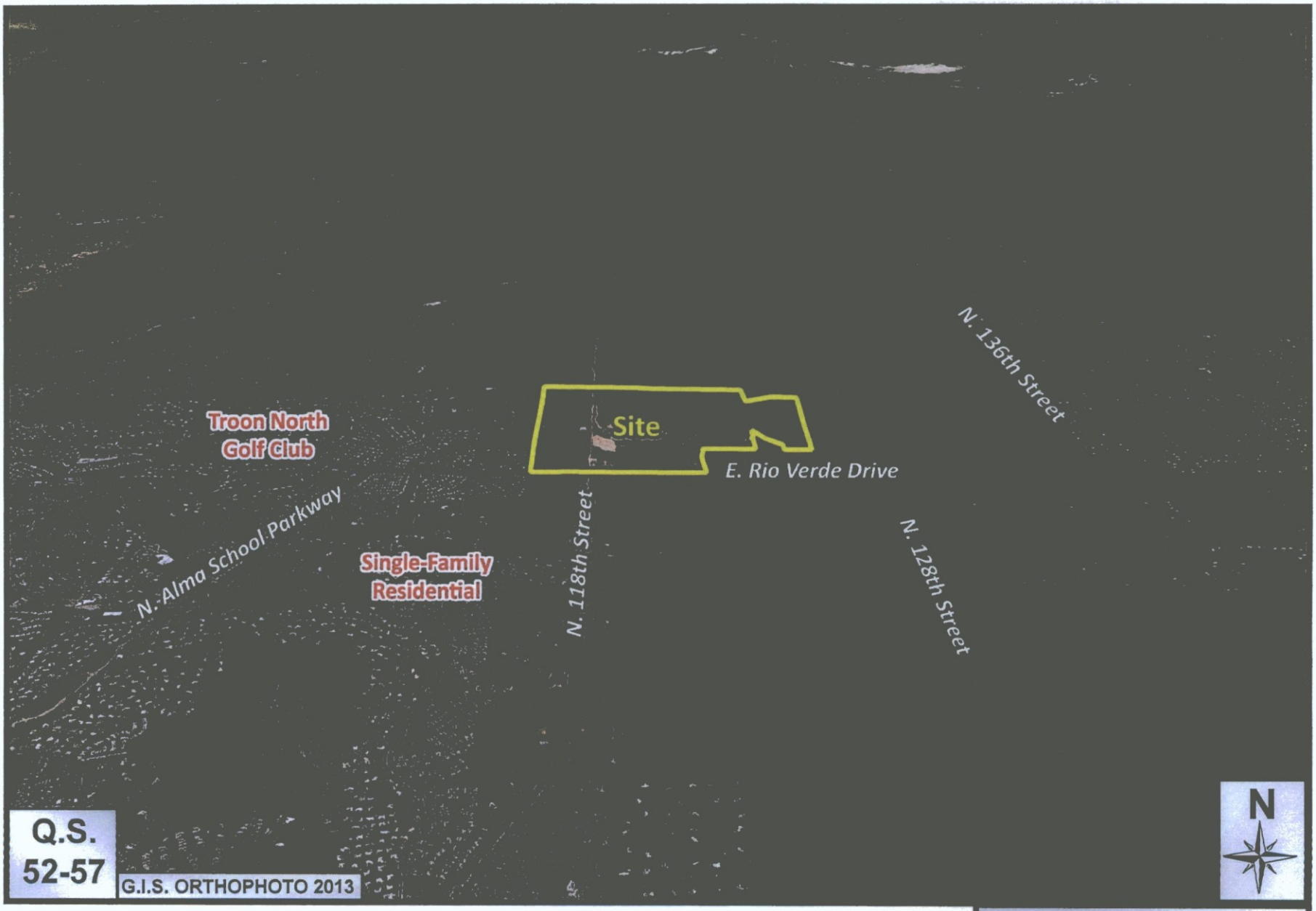
The Environmentally Sensitive Lands Ordinance (ESL or ESLO) was established "to identify and protect environmentally sensitive lands in the city and to promote the public health, safety and welfare by providing appropriate and reasonable controls for the development of such lands." The proposed development upholds the ESLO in the following ways:

- Preservation of the 100' wide scenic corridor along Dynamite/Rio Verde.
- Preservation of 258+/- acres of NAOS.
- Sensitive placement of golf holes, paths, clubhouse, guest accommodations, maintenance facilities and internal roadways to complement the natural landscape.
- Preserve undisturbed native vegetation and re-vegetate areas with ESLO desert plantings where disturbed by construction and the 1995 Rio Fire.
- Protect and preserve significant topographic features, large boulder outcroppings and vista corridors.
- Maintain wildlife habitats through preservation of natural washes and connective NAOS.
- Utilized desert appropriate architecture and materials through the integration of deep overhangs, recessed windows, indigenous building materials, and context appropriate color palette, to name a few.

Conclusion

In summary, this request for Preliminary Plat approval associated with case 11-UP-2014/SNGC will remove the recorded plat for Sierra Reserve and create two new lots. Previously, this site was entitled and platted for residential development under case 2-PP-2012 (The Reserve/Sierra Reserve) and the Final Plat was recorded in September 2013, Book 1159, Page 45. The two new lots will include one for the entire golf course development and a second lot designated for the future APS Substation to be located at the northwest corner of 118th and Dynamite. This Preliminary Plat is being processed with the golf course Use Permit.

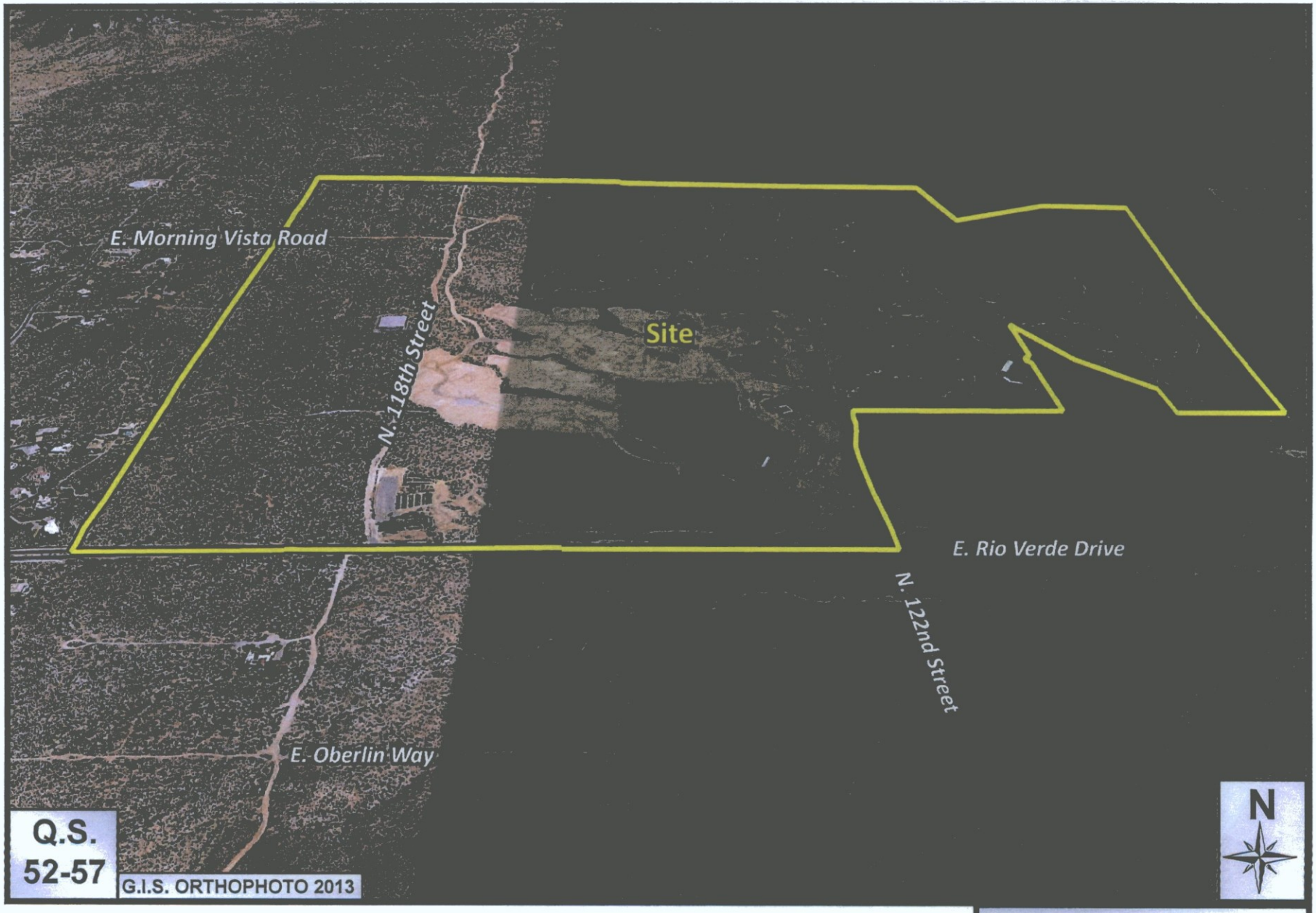
Scottsdale already has a place on the map of great golf destinations. With the plans we are putting forth and the investment we are willing to make, Scottsdale National Golf Club will help take that reputation to the next level.



Context Aerial

ATTACHMENT #3

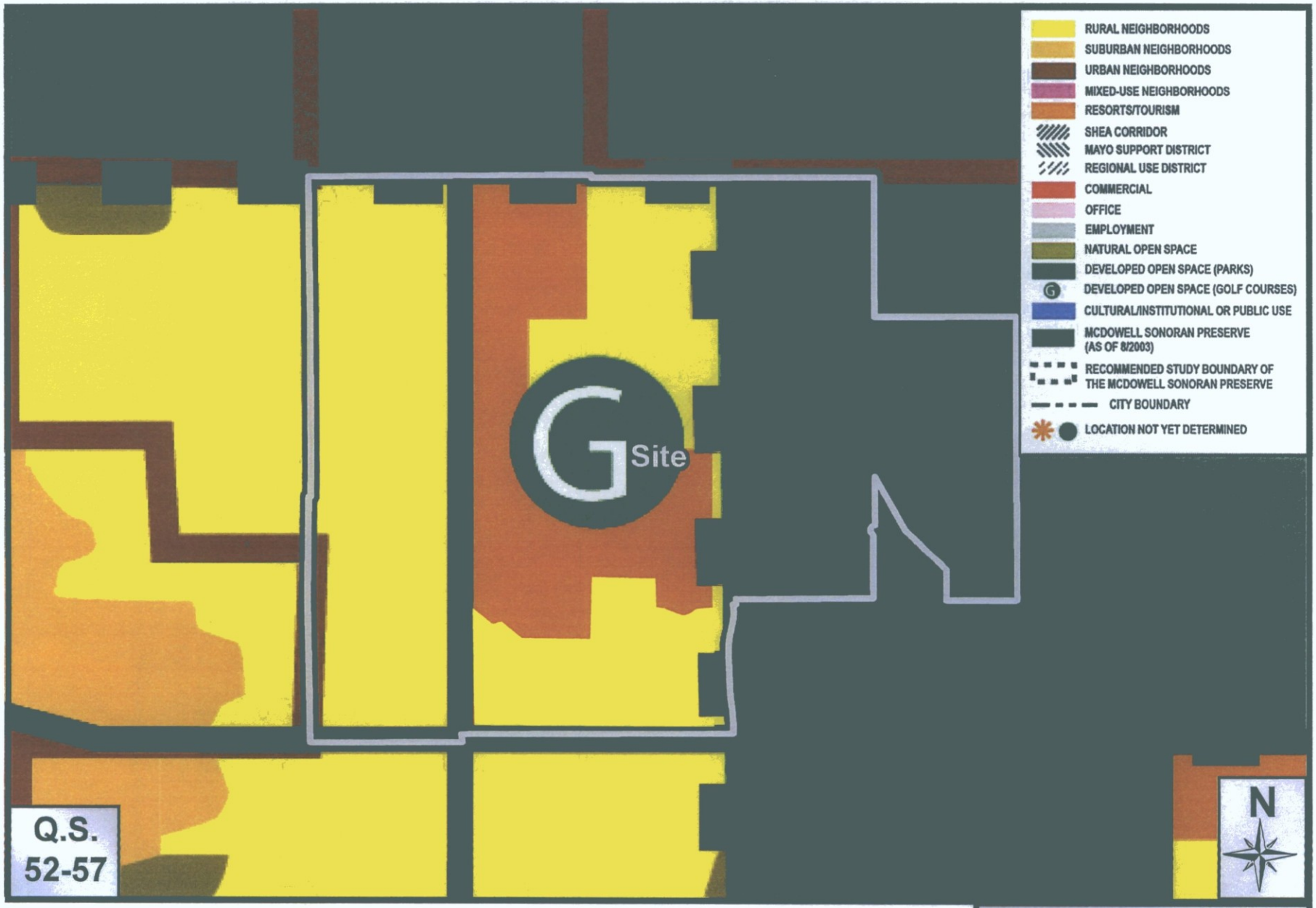
3-PP-2015



Close-Up Aerial

ATTACHMENT #3A

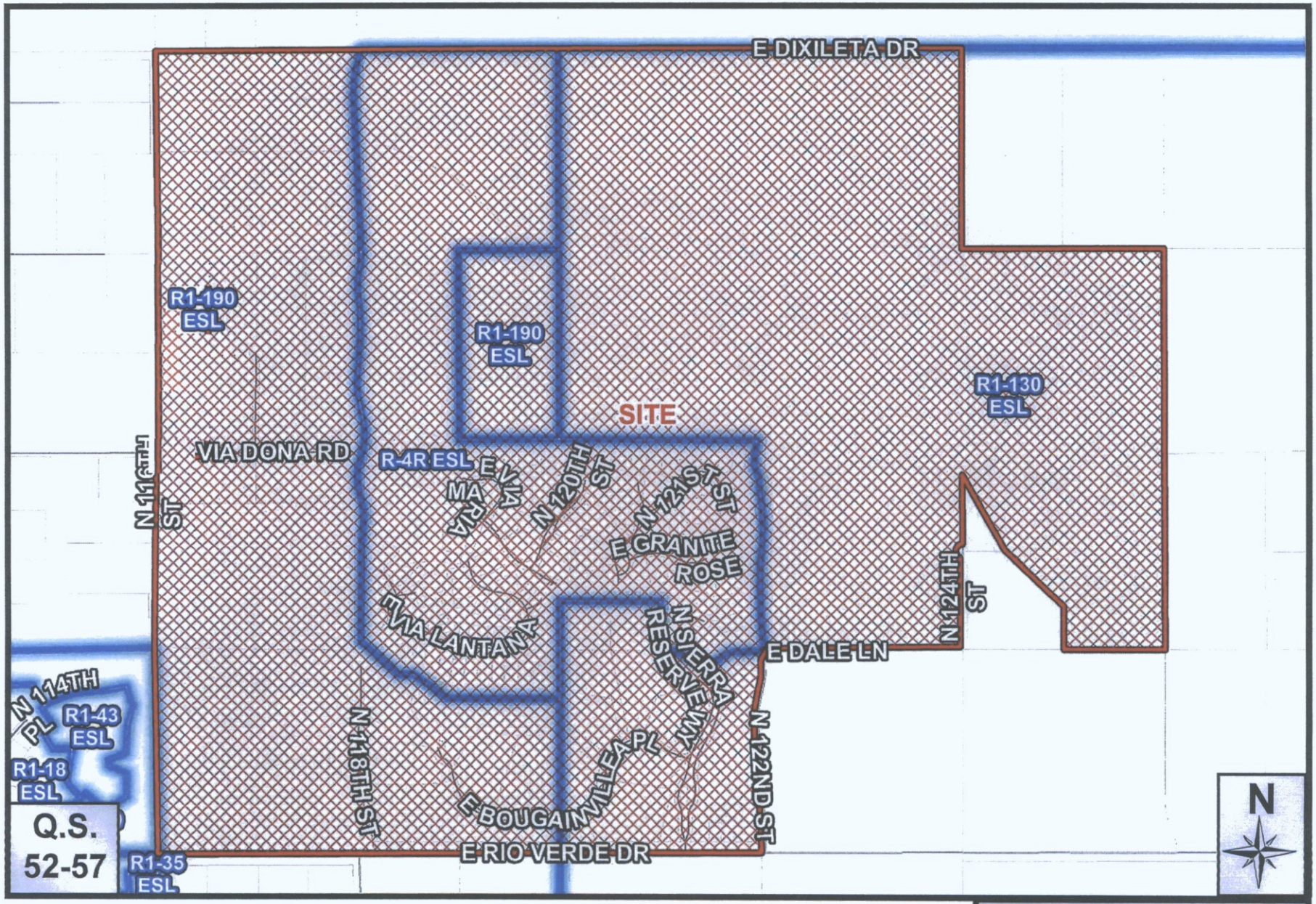
3-PP-2015



General Plan

ATTACHMENT #4

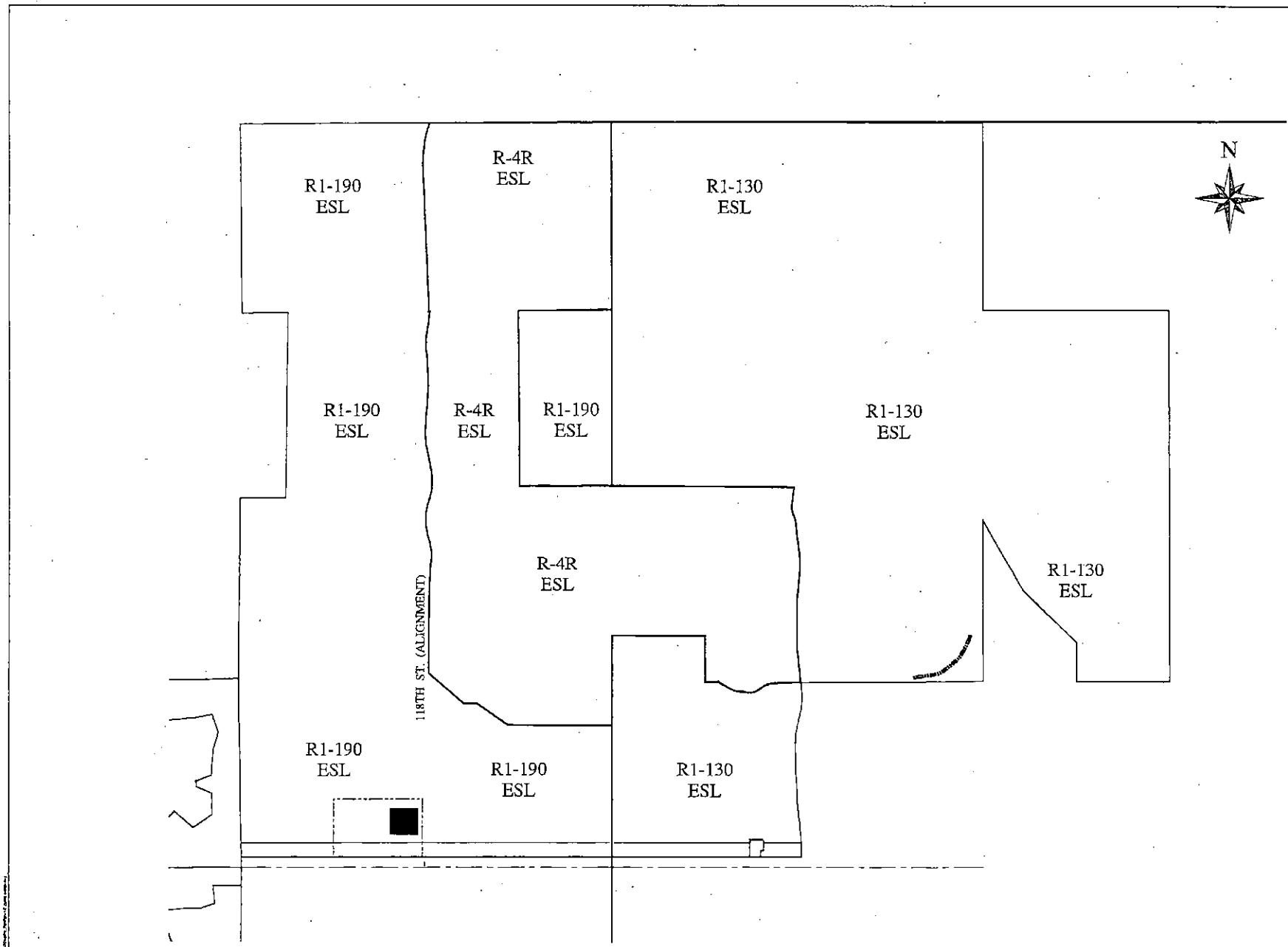
3-PP-2015



Zoning Map

ATTACHMENT #5

3-PP-2015



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ARIZONA811

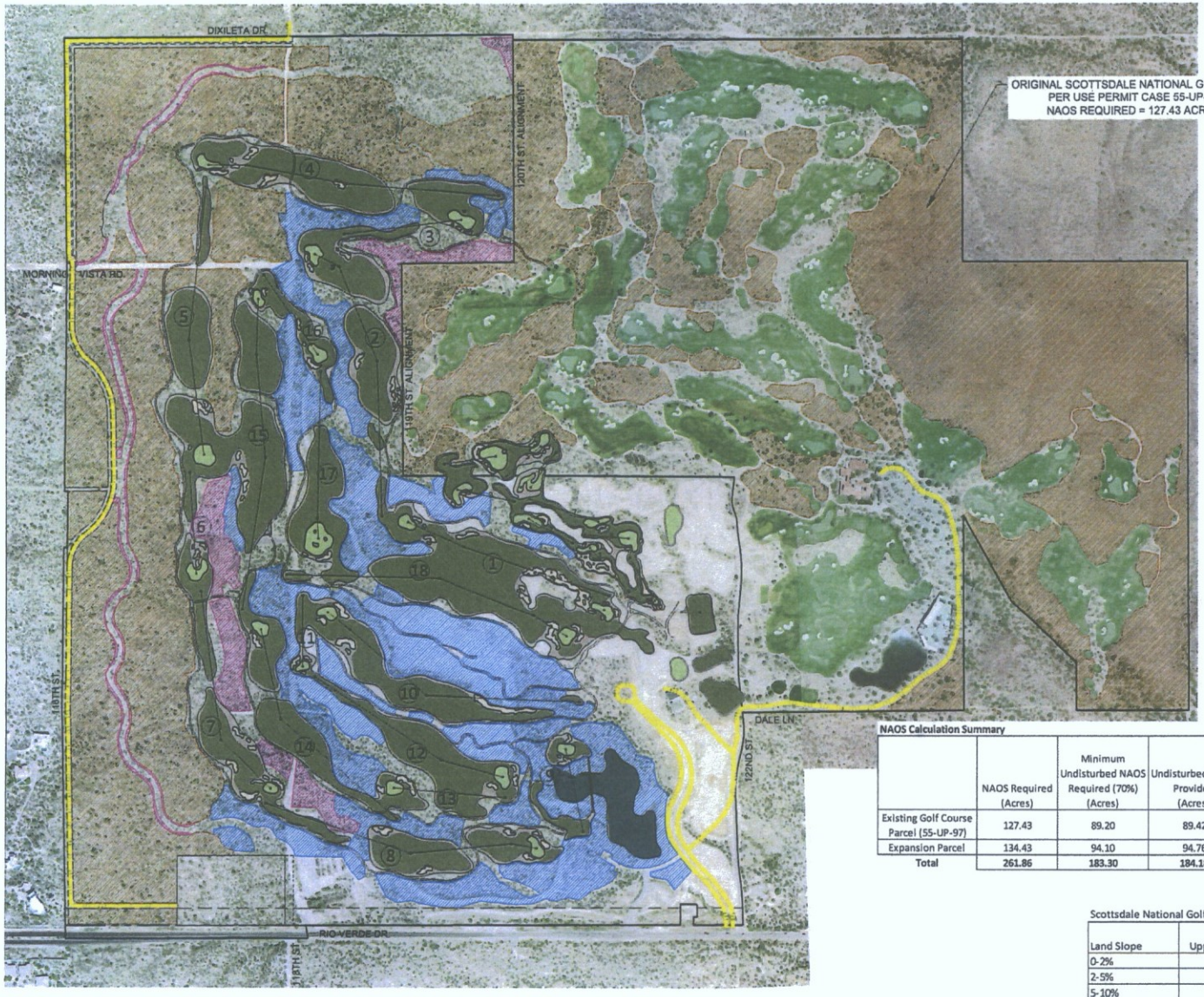
SCOTTSDALE NATIONAL GOLF CLUB

ZONING DISTRICTS EXHIBIT
FOR PRELIMINARY PLAT

REV	DESCRIPTION	DATE

SCALE (HORIZONTAL) 1" = 300'
SCALE (VERTICAL) N/A
DATE 10/30/2015
JOB NUMBER 144147.02
SHEET 1 OF 1

ATTACHMENT #6



SCOTTSDALE NATIONAL GOLF CLUB
NATURAL AREA OPEN SPACE PLAN
FOR PRELIMINARY PLAT

NAOS Calculation Summary

	NAOS Required (Acres)	Minimum Undisturbed NAOS Required (70%) (Acres)	Undisturbed NAOS Provided (Acres)	Minimum Additional NAOS to be Provided (Acres)	Revegitated NAOS Provided (30% of Required) (Acres)	Minimum Total NAOS Provided (Acres)
Existing Golf Course Parcel (55-UP-97)	127.43	89.20	89.42	38.23	38.23	127.65
Expansion Parcel	134.43	94.10	94.76	40.33	40.33	135.09
Total	261.86	183.30	184.18	78.56	78.56	262.74

Scottsdale National Golf Club Expansion - NAOS Calculation

Land Slope	Upper Desert	Area (Acres)	Percent Area	NAOS Required (Acres)
0-2%	25%	31.09	8.37%	7.77
2-5%	25%	53.35	14.36%	13.34
5-10%	35%	158.70	42.72%	55.55
10-15%	45%	92.67	24.94%	41.70
15-25%	45%	31.71	8.54%	14.27
Over 25%	45%	4.01	1.08%	1.81
		371.54	100.00%	134.43

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CIVIL ENGINEERS
HYDROLOGISTS
LAND SURVEYORS
CONSTRUCTION MANAGERS
2220 S. Country Club Dr.
Suite 101
Mesa, AZ 85210
(480) 834-3300
www.woodpatel.com

ENGINEER	DEW
DESIGNER	DJC
CAD TECHNICIAN	SPU
SCALE (HORIZONTAL)	1" = 300'
SCALE (VERTICAL)	N/A
DATE	10/16/2015
JOB NUMBER	144147
SHEET	1 OF 1

ATTACHMENT #7

3-PP-2015
10/22/2015

300 0 150 300
Horz. 1 in = 300 ft

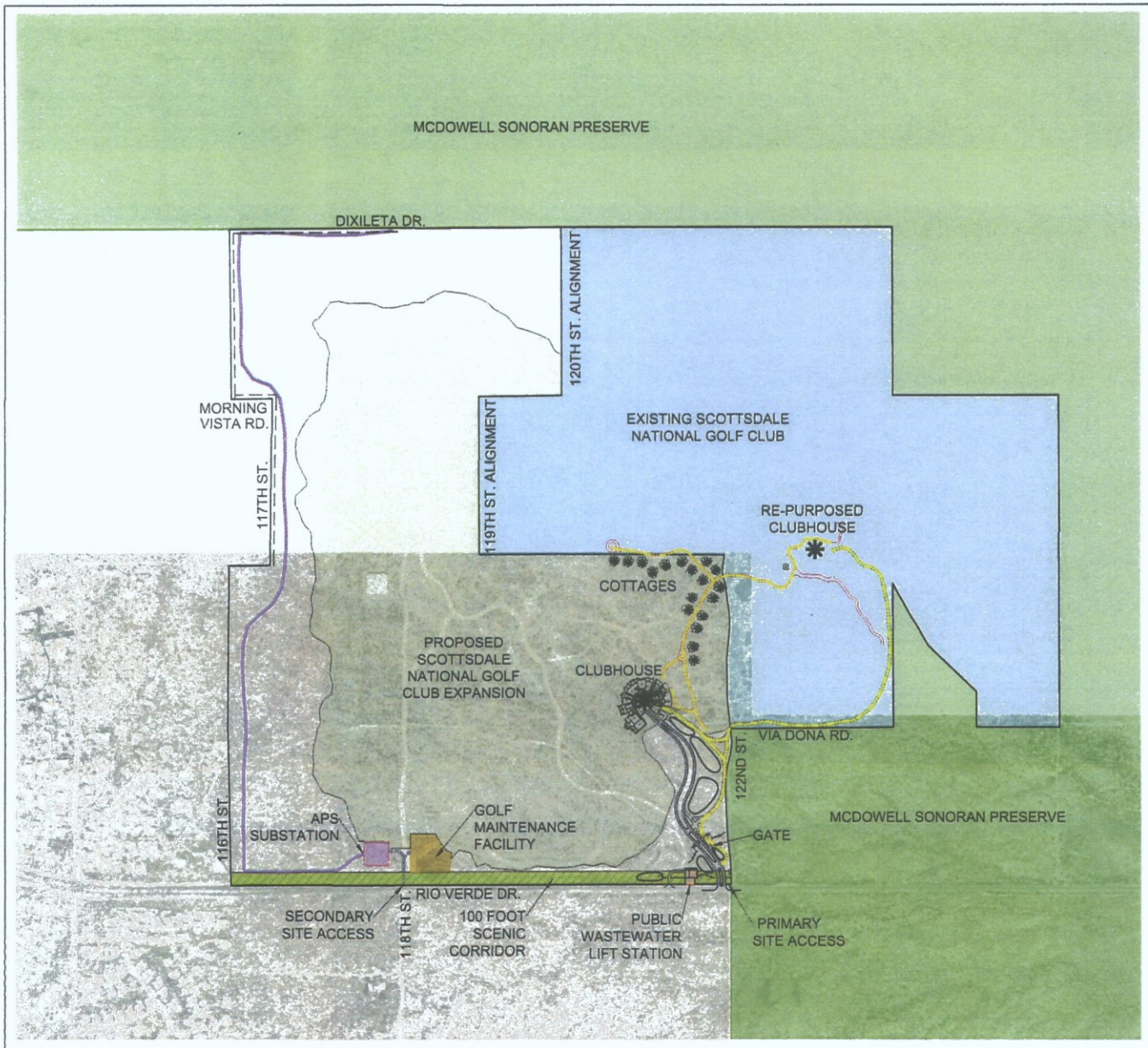
SCOTTSDALE NATIONAL GOLF CLUB
SCENIC CORRIDOR EXHIBIT
FOR PRELIMINARY PLAT

WOOD/PATEL
CIVIL ENGINEERS
HYDROLOGISTS
LAND SURVEYORS
CONSTRUCTION MANAGERS
2229 S. Country Club Dr.
Suite 101
Mesa, AZ. 85210
(480) 834-3300
www.woodpatel.com

ENGINEER	DWM
DESIGNER	DWM
CAD TECHNICIAN	CDE
SCALE (HORIZONTAL)	1" = 300'
SCALE (VERTICAL)	N/A
DATE	9/02/2015
JOB NUMBER	144147
SHEET	1 OF 1

3-PP-2015
9/02/15

ATTACHMENT #8



LEGEND

- PROJECT BOUNDARY LINE
- MEMBER'S DRIVE ACCESS TO CLUBHOUSE
- SERVICE, MAINTENANCE & EMERGENCY ACCESS
- UNDERGROUND UTILITY SERVICE CORRIDOR

LAND USE SUMMARY

LAND USE	ACRES
EXISTING SCOTTSDALE NATIONAL GOLF CLUB	290.9 Ac.
PROPOSED SCOTTSDALE NATIONAL GOLF CLUB EXPANSION	367.6 Ac.
TOTAL	658.5 Ac.
SCENIC CORRIDOR	
APS SUBSTATION	
GOLF MAINTENANCE FACILITY	

N

400 0 200 400
Horz. 1 in. = 400 ft.

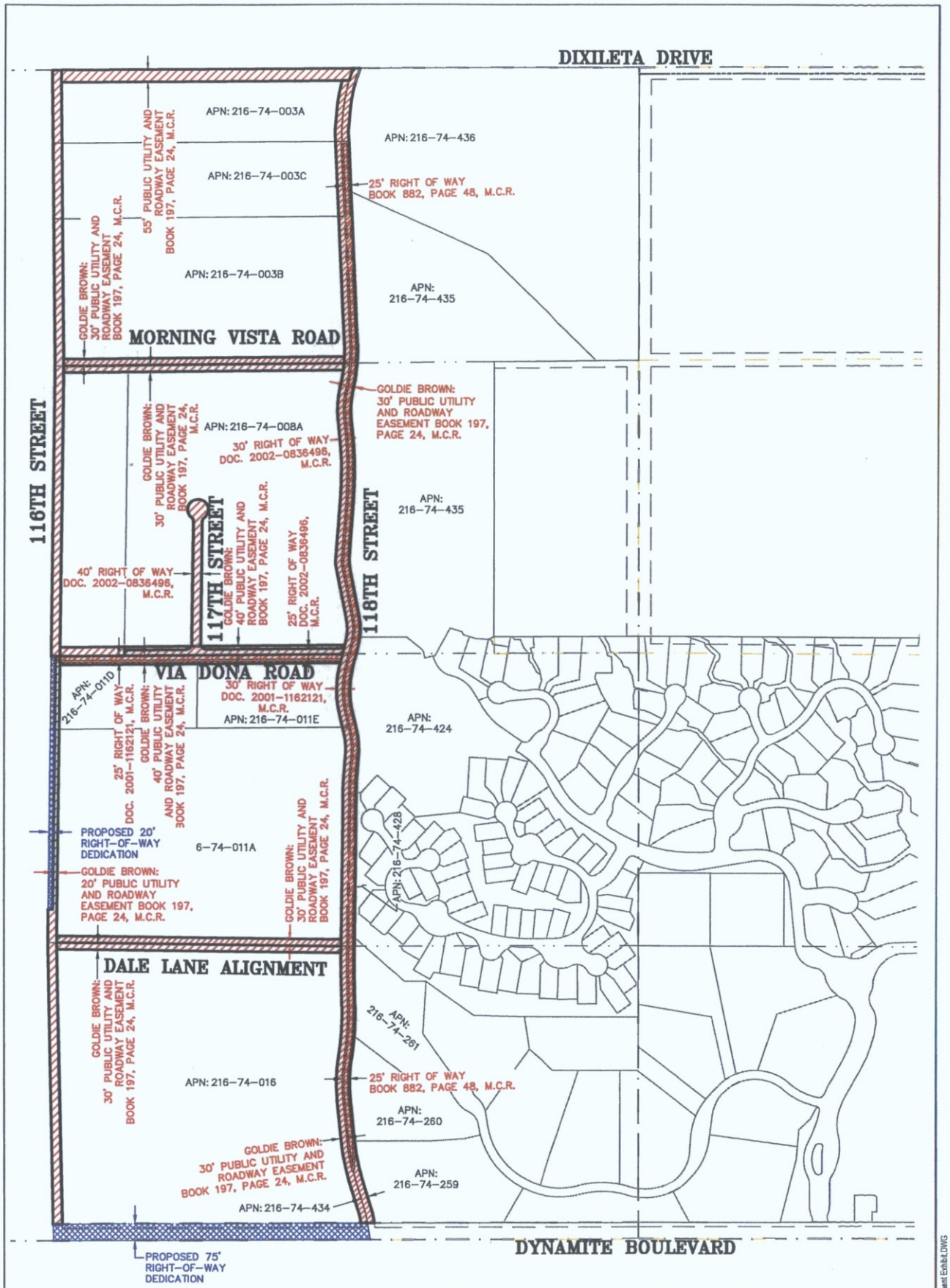
SCOTTSDALE NATIONAL GOLF CLUB
SITE PLAN
FOR PRELIMINARY PLAT

WOOD/PATEL
CIVIL ENGINEERS
HYDROLOGISTS
LAND SURVEYORS
CONSTRUCTION MANAGERS
2220 S. Country Club Dr.
Suite 101
Mesa, AZ 85210
(480) 834-3300
www.woodpatel.com

ENGINEER	DEW
DESIGNER	DVC
CAD TECHNICIAN	SPU
SCALE (HORIZONTAL)	1"= 400'
SCALE (VERTICAL)	N/A
DATE	4/01/2015
JOB NUMBER	144147
SHEET	1 OF 1

ATTACHMENT #9

3-PP-2015
4/3/2015



N

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SCOTTSDALE NATIONAL GOLF CLUB

ABANDONMENT EXHIBIT

DATE	SCALE	SHEET
10-01-2015	1" = 400'	1 OF 1
JOB NO.	DESIGN N/A	CHECK KMS
144147.83	DRAWN KMS	RFI # N/A

ATTACHMENT #10

N:\2014\144147\Survey\Exhibits\144147ED4R06 Abandonment Exhibit.DWG

Scottsdale National Golf Club Expansion

Traffic Impact and Mitigation Anlaysis

North of Rio Verde Drive,
East of 122nd Street
Scottsdale, Arizona

February 2015
CivTech Project No. 14-1350

Prepared for:

Land Development Services
7525 E. Camelback Road, Suite 104
SCottsdale, Arizona 85251

Submittal to:

City of Scottsdale

By:

CivTech

10605 North Hayden Road, Suite 140
Scottsdale, Arizona 85260
480-659-4250

ATTACHMENT #11

3-PP-2015
4/3/2015

SCOTTSDALE NATIONAL GOLF CLUB EXPANSION
TRAFFIC IMPACT AND MITIGATION ANALYSIS

North of Rio Verde Drive, West of 122nd Street
Scottsdale, Arizona

Prepared for:

Land Development Services
7525 E Camelback Rd
Suite 104
Scottsdale, Arizona 85251

For submittal to:

City of Scottsdale

Prepared by:

CivTech

CivTech, Inc.
10605 North Hayden Road
Suite 140
Scottsdale, Arizona 85260
(480) 659-4250

Expires 03.31.2016

March 2015
Project # 14-1350

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EXECUTIVE SUMMARY

The Scottsdale National Golf Club expansion is a development located northwest of the intersection of 122nd Street and Rio Verde Drive in Scottsdale, Arizona. The proposed development will expand the existing Scottsdale National Golf Club to the west by adding another 18-hole and a 9-hole course of par-3 greens. The old clubhouse and lodging units will be removed and a new clubhouse and cottage lodging units will be constructed. The new lodging units will consist of approximately 18 cottages, each with 4 separate 1 bedroom units for a total of 72 rooms. The individual units within each cottage have lock-off doors to adjoining units. All facilities are reserved for the club's members. The development is assumed to be built out in 2015.

The Scottsdale National Golf Club and its expansion will continue to use the existing entrance at the 122nd Street alignment. The entrance will be improved to provide eastbound left-turn and westbound right-turn deceleration lanes on Rio Verde Drive. The site plan also depicts a maintenance access at the 118th Street alignment for site maintenance and for the future APS electrical station. Within the site boundaries, 118th Street will be abandoned by the City to the developer and will be considered a private access.

Conclusions & Recommendations

The following conclusions and recommendations have been documented in this study:

- The proposed development is projected to generate approximately 994 daily trips, with approximately 59 trips occurring during the AM peak hour and 83 trips occurring during the PM peak hour.
- The capacity analyses of the existing year indicates that all approaches at the intersection of 122nd Street and Rio Verde Drive typically operate at LOS C or better during the AM and PM peak hours.
- The capacity analysis results in the 2015 build-out condition indicate that all study movements are anticipated to operate at LOS C or better during the peak hours with or without the proposed expansion.
- The City of Scottsdale provided a summary of 2002 to 2008 segment collision rates for the City. Collision rates occurring on the segment of Rio Verde Drive from 100 feet east of Alma School Road to 100 feet west of 136th Street were also provided.
    - All study segment collision rates on Rio Verde Drive between Alma School Road and 136th Street are less than one-quarter (1/4) the average rate for the City of Scottsdale.

- The City of Scottsdale also provided specific collision data for the more recent time frame spanning January 1, 2009 to June 30, 2014 and occurring on the same segment of Rio Verde Drive.
  - Of the 30 total collisions, 14 involved only a single vehicle. Of the remaining 16 collisions, 3 involved bicyclists/pedalcyclists.
  - All of the 30 collisions were neither fatal nor incapacitating.
  - Only 3 of the collisions were located at the existing entrance of Scottsdale National Golf Club.
  - From the collision manner data, only the single vehicle collision type appears to have an atypical proportion of collisions within the most recent years. There is no pattern or apparent similarities for the single-vehicle collisions.
  - Large scale mitigation potentially performed by the City of Scottsdale, such as roadway widening, may help reduce the likelihood of single vehicle collisions.
  - The proposed left- and right-turn deceleration lanes on Rio Verde Drive approaching the site entrance will remove turning traffic from travel lanes and promotes better turning characteristics helping decrease the chance of left-turn and rear-end type collisions.
- CivTech recommends that the proposed eastbound left-turn and westbound right-turn lanes on Rio Verde Drive approaching the entrance each provide a queue storage length of 100 feet.
- Sight distance should be provided at the proposed access based on the standards provided in the *City of Scottsdale's Design Standards and Policies Manual, 2010 Update*. The developer should ensure that adequate sight distance is provided at the intersections to allow safe left and right turning movements from the development. Landscaping should be maintained at a maximum of three feet in height. To maintain sight distance, tree branches should be trimmed lower than seven feet and maintained to meet current acceptable landscape requirements. Copies of the applicable standards are provided in **Appendix I** for reference.

INTRODUCTION

The Scottsdale National Golf Club, previously known as Golf Club Scottsdale, is located northwest of the intersection of 122nd Street and Rio Verde Drive in Scottsdale, Arizona. The proposed development will expand the club by adding another 18-hole and a 9-hole course of par-3 greens. A new clubhouse will be constructed with attached and/or detached lodging units. All facilities are reserved for the club's members. The vicinity of the site is shown in **Figure 1**.

Study Requirements

CivTech has been retained by Land Development Services to perform a Traffic Impact Mitigation Analysis according to the City of Scottsdale *Design Standards & Policies Manual*, Section 5-1. The purpose of this study is to address traffic and transportation impacts of the proposed development on the circulation of the surrounding streets and intersections. Specifically, the study objectives are the following:

1. To evaluate lane requirements on all existing roadways and at all existing intersections within the study area.
2. To determine future level of service for all intersections included within the study and recommend capacity related improvements, if any.
3. To determine necessary lane configurations at all intersections included within the study to provide acceptable future levels of service.
4. To evaluate the need for future traffic control changes within the proposed development and at the major entry points, if any.
5. To evaluate the traffic safety of the study roadways and intersections and potential influences the development may have on roadway safety.
6. To evaluate the need for auxiliary lanes at stop and signal controlled intersections.

Study Category

The proposed development is anticipated to generate less than 100 vehicle trips during the weekday AM or PM peak hour and less than the approved development plan for the site. Therefore, a Category 2 TIMA is not required. The developer has requested a Category 2 TIMA to ensure acceptable traffic conditions near the development.

Study Area

A Category 2 development normally requires a minimum study area of all major intersections within 1 mile of the site. This study will analyze the existing intersection of 122nd Street and Rio Verde Drive.

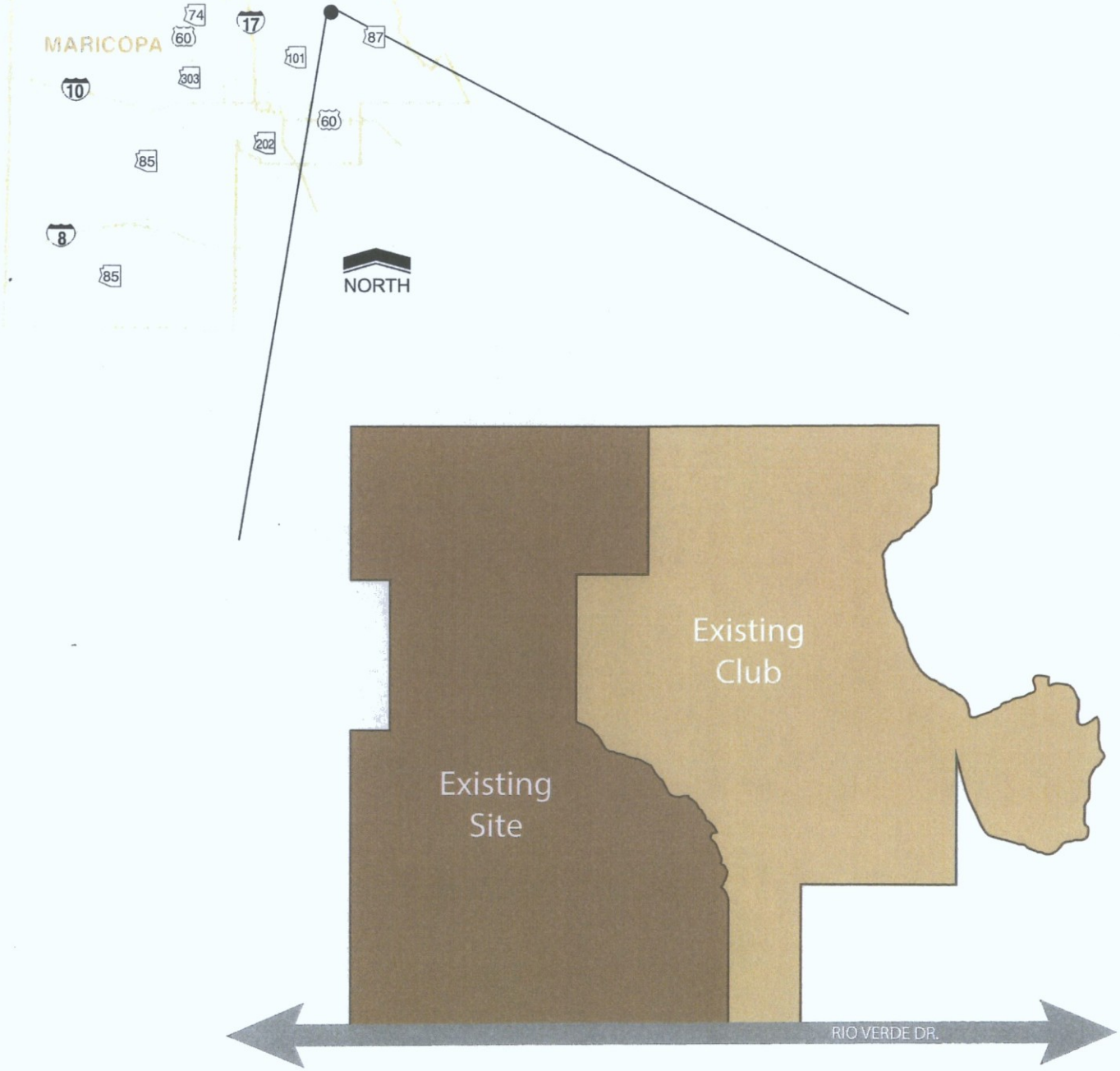


Figure 1: Vicinity Map

Horizon Year

A Category 2 study requires an analysis of the existing year and full build-out year. This evaluation assumes that the site will be built-out at full occupancy during its assumed opening year, 2015. Therefore, this study will perform analyses for the exiting year, 2014 and the opening year, 2015.

Time Periods

Standard AM and PM peak hours were chosen to analyze the busiest traffic hours of Rio Verde Drive. Analyses performed for this study were completed for both the AM and PM peak hours which typically occur between 7:00 AM and 9:00 AM and again from 4:00 PM and 6:00 PM.

EXISTING CONDITIONS

EXISTING LAND USE

The Scottsdale National Golf Club is located northwest of the intersection of 122nd Street and Rio Verde Drive in Scottsdale, Arizona. The proposed development will expand the club on the vacant land to the west. The site of the expansion was previously approved to be developed with luxury residential housing and a resort hotel. The previously approved development completed some gradation before halting construction.

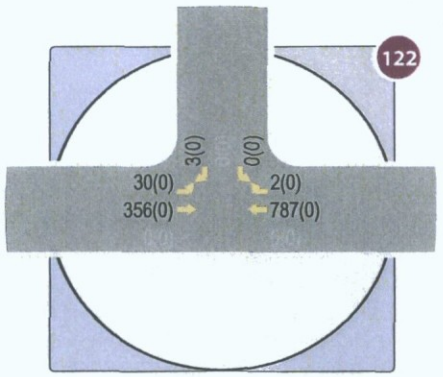
The nearest existing residential subdivision is located approximately ¼-mile to the west. The Scottsdale McDowell Sonoran Preserve is located to the north, east and southwest of the site.

EXISTING ROADWAY NETWORK

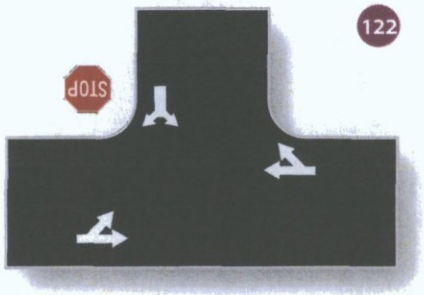
The existing roadway network within the study area includes Rio Verde Drive. All other roads are local roads and are not anticipated to be majorly affected by the development.

Rio Verde Drive is an east-west roadway that begins at Cave Creek Road in Phoenix as Dynamite Boulevard. The roadway travels east through Scottsdale, where within the vicinity of the site it is also called Rio Verde Drive, and passes the site and into the Community of Rio Verde. According to the classification map included in the City of Scottsdale's *Master Transportation Plan, updated 2008*, Rio Verde Drive is classified as a rural, minor arterial along its entire length within Scottsdale. Within the study area, Rio Verde Drive has a posted speed limit of 50 mph and consists of 1 travel lane in each direction.

The intersection of **122nd Street and Rio Verde Drive** operates as a 3-legged intersection with the southbound approach stop controlled. All approaches consist of a single general purpose lane. The existing lane geometry and traffic controls within the project area are depicted in **Figure 2**.



122nd Street Driveway & Rio Verde Drive



LEGEND

NORTH

XX(XX) - AM(PM) Peak Hour Traffic Volumes

Thru or Turning Movement

Stop Sign

Speed Limit

X,XXX Average Daily Traffic Volume

Figure 2: Existing Conditions

EXISTING TRAFFIC VOLUMES

Turning movement counts at the study intersection of 122nd Street and Rio Verde Drive were conducted between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM on Tuesday, October 21, 2014. The resulting AM and PM peak hour traffic volumes in the existing condition are shown on **Figure 2**. Detailed intersection turning movement counts for the recorded volumes are provided in **Appendix B**.

ANALYSIS OF EXISTING CONDITIONS

The concept of level of service (LOS) uses qualitative measures that characterize operational conditions within the traffic stream. The individual levels of service are described by factors that include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations A through F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Levels of service for intersections are defined in terms of delay ranges. **Table 1** lists the level of service criteria for signalized and unsignalized intersections.

Table 1 – Level of Service Criteria

Level of Service	Control Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

Source: Exhibit 18-4 and Exhibit 19-1, *Highway Capacity Manual 2010*

Peak hour capacity analyses have been conducted for the study intersection based on its existing configuration and entering traffic volumes using the methodologies presented in the *Highway Capacity Manual* (HCM), using Traffix software. The overall and approach levels of service are reported for signalized intersections.

The resulting levels of service for the existing conditions are summarized in **Table 2**. The existing conditions analysis has been included in **Appendix C**.

Table 2 – Existing Level-of-Service Summary

ID	Intersection	Control	Approach	AM	PM
122	122nd Street. & Rio Verde Dr.	1-way stop (SB)	SB shared	C	B
			EB shared	A	A
			WB shared	A	A

The capacity analyses of the existing year indicates that all approaches at the intersection of 122nd Street and Rio Verde Drive typically operate at LOS C or better during the AM and PM peak hours.

PROPOSED DEVELOPMENT

The proposed development will expand the existing Scottsdale National Golf Club to the west by adding another 18-hole and a 9-hole course of par-3 greens. The old clubhouse and lodging units will be removed and a new clubhouse and cottage lodging units will be constructed. The new lodging units will consist of approximately 18 cottages, each with 4 separate 1 bedroom units for a total of 72 rooms. The individual units within each cottage have lock-off doors to adjoining units. All facilities are reserved for the club's members. The layout of the site is illustrated in **Figure 3**. The proposed development is assumed to have a build-out year/opening year of 2015.

SITE ACCESS

The Scottsdale National Golf Club and its expansion will continue to use the existing entrance at the 122nd Street alignment. The entrance will be improved to provide eastbound left-turn and westbound right-turn deceleration lanes on Rio Verde Drive. The site plan also depicts a maintenance access at the 118th Street alignment for site maintenance and for the future APS electrical station. Within the site boundaries, 118th Street will be abandoned by the City to the developer and will be considered a private access.

TRIP GENERATION

PROPOSED DEVELOPMENT

Future trips generated by the expansion were estimated utilizing the data given in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition* report and the methodology discussed in the *ITE Trip Generation Handbook, 2nd Edition.* The ITE's *Trip Generation Manual* report contains data collected by various transportation professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information for daily and peak hour trips.

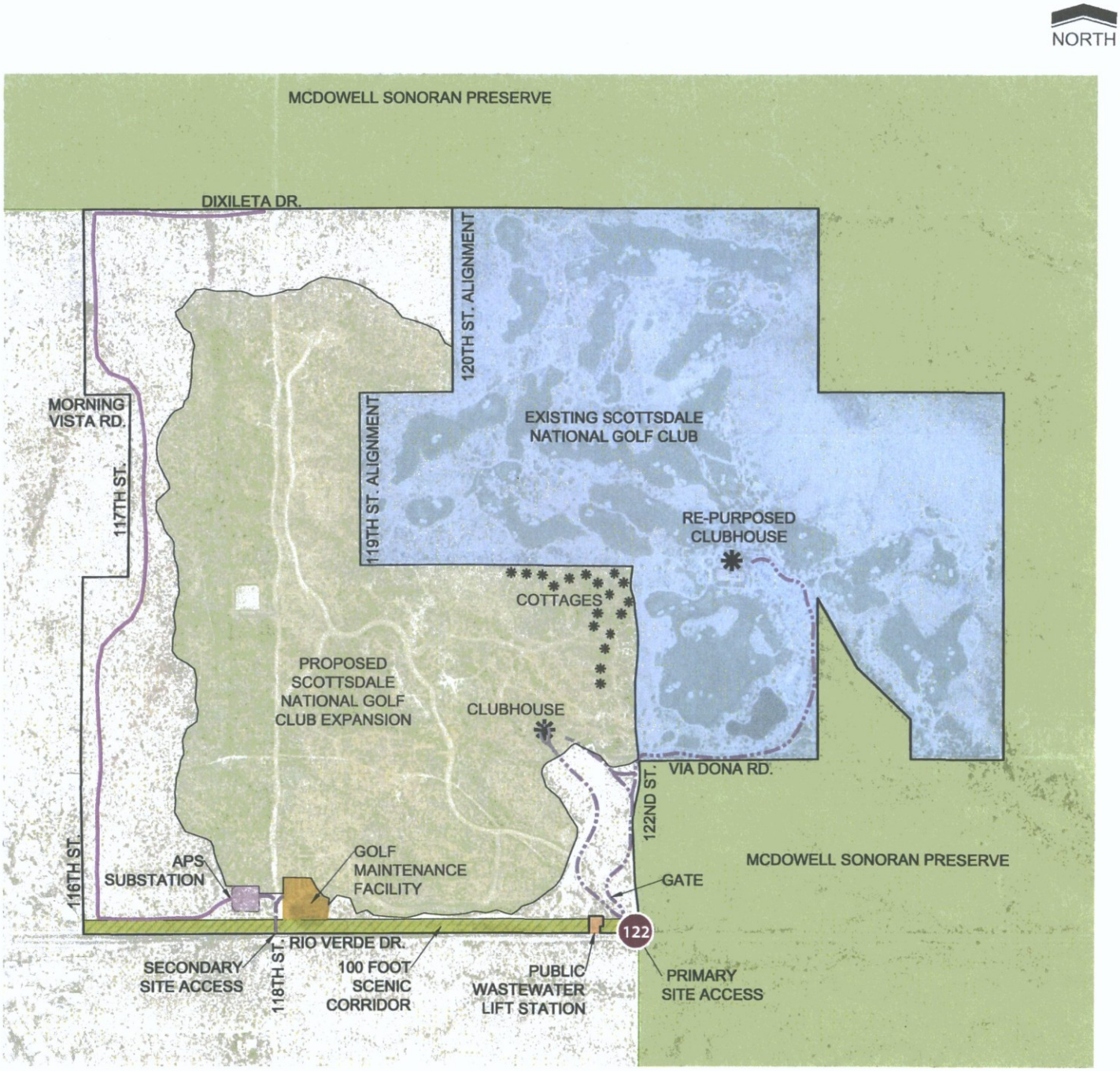


Figure 3: Site Plan and Access

The proposed site will include a total of 27 new golf holes and 72 overnight units. *Trip Generation Manual* does not have rates specific to private golf clubs so general golf course rates were applied. Similarly, the trips generated by the club's overnight lodging for members is anticipated to be different that the applied resort hotel rates. As such, the projected trip generation is greater than what is expected, providing a conservative analysis. **Table 3** summarizes the trip generation potential of the proposed redevelopment. Since a large percentage of lodging guests are anticipated to be patrons of the golf course(s), a 25 percent interaction factor was applied. Detailed trip generation worksheets are included in **Appendix D** to this report.

Table 3 – Trip Generation of Proposed Site

Land Use	Land Use Code	Size	Units	Weekday Trips Generated						
				Daily Total	AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total
Golf Course	430	27	Holes	966	44	12	56	40	39	79
Overnight Lodging	330	72	Units	360	17	6	23	13	18	31
Interaction - 25%				*(332)*	*(15)*	*(5)*	*(20)*	*(13)*	*(14)*	*(27)*
TOTAL EXTERNAL TRIPS				**994**	**46**	**13**	**59**	**40**	**43**	**83**

The proposed development is projected to generate approximately 994 daily trips, with approximately 59 trips occurring during the AM peak hour and 83 trips occurring during the PM peak hour.

PREVIOUSLY APPROVED DEVELOPMENT

The site was previously approved for a development named The Reserve or the Sierra Reserve. As such, a number of trips were expected to be generated by the approved development plan. These expected trips, as estimated within *The Reserve Traffic Impact and Mitigation Analysis*, are displayed and compared in **Table 4**.

Table 4 – Trip Generation of Proposed Site

Development	Type	Weekday Trips Generated[1]						
		Daily Total	AM Peak Hour			PM Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total
The Reserve	Estate Lots, Casitas & Resort Hotel	2,006	59	120	179	113	81	194
Scottsdale Notional Golf Club Expansion	Golf Course & Overnight Member Lodging	994	46	13	59	40	43	83
Differences, Amount		-1,012	-13	-107	-120	-73	-38	-111
Differences, Percent		-50%	-22%	-89%	-67%	-65%	-47%	-57%

The approved trip generation of The Reserve was estimated using the 8th edition of ITE's *Trip Generation* as the 9th edition was not published at the time.

The previously approved Sierra Reserve development plan was anticipated to generate approximately 2,006 daily trips with 179 trips occurring during the AM peak hour and 194 trips during the PM peak hour. The proposed development is anticipated to generate approximately 1,012 (50%) fewer daily trips, with approximately 120 (67%) fewer trips occurring during the AM peak hour and 111 (57%) fewer trips during the PM peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

The existing traffic to/from Scottsdale National Golf Club indicates an east/west directional split of approximately 5/95 during the AM peak hour and 18/82 during the PM peak hour. For purposes of this study, a directional distribution of 15 percent to/from the east and 85 percent to/from the west was applied. The site generated trips as shown in **Table 4** were distributed on the roadway network based on the directional distribution described above. Site generated traffic during the AM and PM peak hours at the study intersection are shown in **Figure 4**.

FUTURE BACKGROUND TRAFFIC

The determination of the background traffic volumes in future horizon years is often assumed to be the product of a growth factor and the existing traffic volumes. Historical daily traffic volumes were taken from the City of Scottsdale traffic count website to estimate an average annual growth rate. The City of Scottsdale's website provides average daily traffic (ADT) volumes along selected segments and ADT volumes entering selected intersections, updated in 2-year increments starting in 2004.

Segment ADT volumes along Rio Verde Drive near 118th Street were considered. Changes to traffic volumes varied throughout these years. The average annual growth rate from 2004 to 2006 was 0.7 percent. For purposes of this study, a conservative 2.0 percent growth rate was applied to the roadway network to approximate possible future growth.

This particular area of Scottsdale is known to be a popular place for winter homes. This causes an increase in local population and traffic. *The Arizona Republic* reported that the retirement communities of Sun City (27,500 homes), Sun City West (12,000 homes), Sun City Grand (9,800 homes) and Pebble Creek, Goodyear (4,200 homes) experience a summertime drops in population by approximately 40 percent, 50 percent, 33 percent and 37 percent, respectively. This corresponds to a seasonal factor of 1.67, 2.00, 1.49 and 1.59, respectively. Also, the Scottsdale National Golf Club indicated that a 70 percent increase is expected from October, when traffic counts were performed, to their peak season. To be conservative within this TIMA, a seasonal factor of 1.67 was applied within the future projections and analyses.

Growth rate calculations can be found in **Appendix E**. Projected background traffic volumes for 2015 are shown in **Figure 4**.

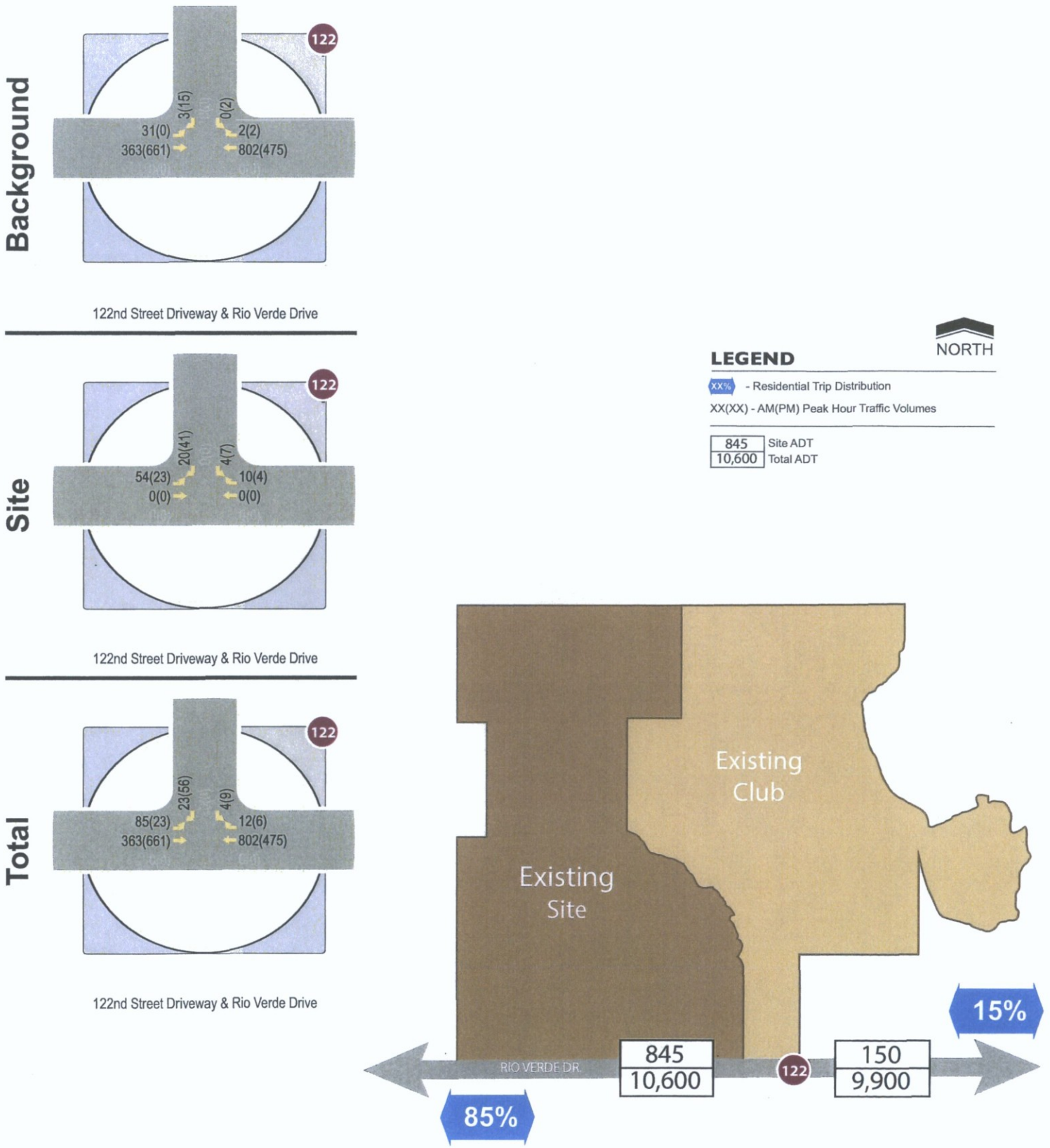


Figure 4: 2015 Site Generated, Background and Total Traffic Volumes

TOTAL TRAFFIC

Total traffic was determined by adding the site generated traffic to the projected background traffic. Total AM and PM peak hour traffic for 2015 is shown in **Figure 4**.

TRAFFIC AND IMPROVEMENT ANALYSIS

TURN LANE WARRANTS

The City of Scottsdale requires a left-turn lane to be provided at intersections of roadways that are classified as major collectors and arterials. A right-turn lane is required at intersections of roadways that are classified as major arterials. Rio Verde Drive is classified as a rural, minor arterial. City of Scottsdale staff has requested and the developer agreed to also provide a westbound right-turn lane on Rio Verde Drive approaching the site entrance.

INTERSECTION CAPACITY ANALYSIS

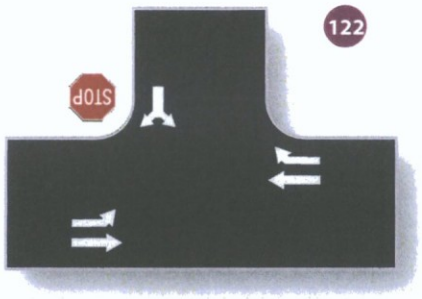
Peak hour capacity analyses were conducted for the study intersection using the methodologies discussed previously.

For purpose of comparison, two analyses were completed: one for a background traffic scenario (no-build) and one for total traffic scenario (build). The intersection movement levels of service yielded for the 2015 analysis year are summarized in **Table 5**. The level-of-service analyses are based on proposed geometrics as shown in **Figure 5**. Analysis worksheets for the 2015 no build and build-out scenarios can be found in **Appendix F**.

Table 5 – 2015 Future Intersection Level-of-Service Summary

ID	Intersection	Control	Approach	No Build LOS		Build LOS	
				AM	PM	AM	PM
121	121st St. & Rio Verde Dr.	1-way stop (SB)	SB shared	C	B	C	C
			EB left	A	A	A	B
			EB thru	A	A	A	A
			WB thru/right	A	A	A	A

The capacity analysis results in the 2015 build-out condition indicate that all study movements are anticipated to operate at LOS C or better during the peak hours with or without the proposed expansion.



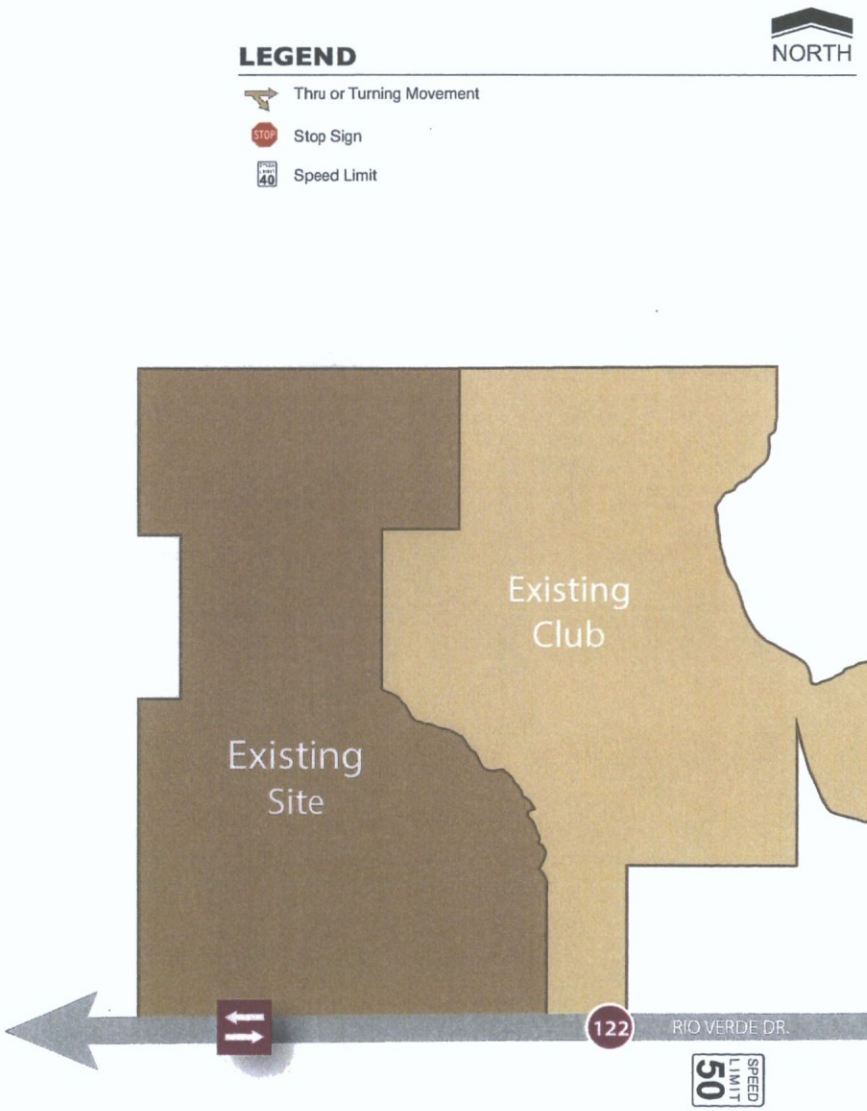


Figure 5: Proposed Lane Configuration and Traffic Control

SAFETY ANALYSIS

The City of Scottsdale provided a summary of 2002 to 2008 segment collision rates for the City. Collision rates occurring specifically on the segment of Rio Verde Drive from 100 feet east of Alma School Road to 100 feet west of 136th Street were also provided.

The 2008 Segment Collision Rates and Volume table indicate that there were 9 total accidents on Dynamite Boulevard between Pima Road and Alma School Road in 2008, which equates to a segment collision rate of 0.60 collisions per million vehicle miles. There was 1 accident on Dynamite Boulevard between Alma School Road and 136th Street in 2008, which equates to a segment collision rate of 0.08 collisions per million vehicle miles.

Table 6 displays the segment collision rates for the segment of Dynamite Boulevard between Pima Road and Alma School Road and between Alma School Road and 136th Street for the years 2002 to 2008 as compared against the City of Scottsdale's average segment collision rate. Collision data is included in **Appendix G**.

Table 6 – Segment Collision Rates

Segment Collision Rates	2008	2006	2004	2002
Average for the City of Scottsdale	1.28	1.87	1.84	1.49
Rio Verde Drive, between Alma School Road and 136th Street Collision Rate	0.08	0.07	0.28	0.37

All study segment collision rates on Rio Verde Drive between Alma School Road and 136th Street are less than one-quarter (1/4) the average rate for the City of Scottsdale.

The City of Scottsdale also provided specific collision data for the more recent time frame spanning January 1, 2009 to June 30, 2014 and occurring on the same segments of Rio Verde Drive. The records indicate that the segment experienced 4 collisions in 2009, 5 collisions in 2010, 8 collisions in 2011, 7 collisions in 2012, 2 collisions in 2013 and 4 collisions in 2014 (until June 30th). Of the 30 total collisions, 14 involved only a single vehicle. Of the remaining 16 collisions, 3 involved bicyclists. All of the 30 collisions were neither fatal nor incapacitating. There is no pattern or apparent similarities for the single-vehicle accidents. **Table 7** displays the collision types per year. Collision data is included in **Appendix G**.

Table 7 – Segment Collision Rates

Collision Type	2009	2010	2011	2012	2013	Jan-Jun, 2014	Total
Single Vehicle	2	4	3	3		2	14
Angle		1	2		2	2	7
Side Swipe	1		1	3(1)			5
Rear End	1(1)		1	1(1)			3
Left Turn			1				1
Total	**4**	**5**	**8**	**7**	**2**	**4**	**30**
Total at Existing Entrance	**1**			**2**			**3**

Note: The number of collisions at the existing Scottsdale National Golf Club entrance per collision type are indicated in superscript within parentheses.

From the collision manner data, only the single vehicle collision type appears to have an atypical proportion of collisions within the most recent years. Of the 14 single vehicle collisions, 7 (50%) occurred during daylight hours, 5 (36%) occurred during twilight (1 during civil twilight, 2 during nautical twilight and 2 during astronomical twilight) and 2 (14%) during night hours. Weather conditions at the time of the incidents were not provided. Impairments to the driver's physical condition were cited in 3 (21%) of the 14 incidents.

Large scale mitigation potentially performed by the City of Scottsdale, such as roadway widening, may help reduce the likelihood of single vehicle collisions. The proposed left- and right-turn deceleration lanes on Rio Verde Drive approaching the site entrance will remove turning traffic from travel lanes and promotes better turning characteristics helping decrease the chance of left-turn and rear-end type collisions.

QUEUING ANALYSIS

A queuing analysis for left turns was performed for intersection turn lanes under stop or signal control adjacent to the development site, according to the methodology documented in AASHTO's *A Policy on Geometric Design of Highways and Streets*. The intersections were analyzed to determine the left turn storage requirement to accommodate the expected traffic volumes at build-out.

The formulas used for the calculations are stated following and the resulting queue storage requirements are summarized in **Table 8**. The queue storage calculations can be found in **Appendix H**.

For unsignalized intersections, the storage length is determined by the following formula:
Storage Length = [(veh/hr)/(30 periods/hr)] x 25 feet

Table 8 – 2023 Lane Queue Storage Length

ID	Intersection	Intersection Control	Approach	Existing Storage	Calculated Storage	Recommended Storage
121	121st Street Driveway & Rio Verde Dr.	1-way stop (SB)	EB Left WB Right	-' -'	75' 25'	(1) 100' (1) 100'

(1) Per the City of Scottsdale's *Design Standards and Policies Manual*, Section 5-3.206, the standard vehicle storage length for a deceleration lane is 150 feet with a 100-foot minimum.

CivTech recommends that the proposed eastbound left-turn and westbound right-turn lanes on Rio Verde Drive approaching the entrance each provide a queue storage length of 100 feet.

SIGHT DISTANCE

Adequate sight distance must be provided at the intersections to allow safe turning movements into and out of the development. A sight triangle is the area encompassed by the line of sight from a stopped vehicle on the minor roadway to the approaching vehicle on the major roadway; there must be sufficient unobstructed sight distance along both approaches of a street or driveway intersection and across their included corners to allow operators of vehicles to see each other in time to prevent a collision. There must also be sufficient sight distance along the major street to allow a driver intending to turn left into the site to see an oncoming vehicle in the opposing direction.

Sight distance should be provided at the proposed access based on the standards provided in the *City of Scottsdale's Design Standards and Policies Manual, 2010 Update*. The developer should ensure that adequate sight distance is provided at the intersections to allow safe left and right turning movements from the development. Landscaping should be maintained at a maximum of three feet in height. To maintain sight distance, tree branches should be trimmed lower than seven feet and maintained to meet current acceptable landscape requirements.

Figures depicting the method and sight distance requirements are provided in the City of Scottsdale's *Design Standards and Policies Manual, 2010 Update*. Copies of the applicable standards are provided in **Appendix I** for reference.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations have been documented in this study:

- The proposed development is projected to generate approximately 994 daily trips, with approximately 59 trips occurring during the AM peak hour and 83 trips occurring during the PM peak hour.

- The capacity analyses of the existing year indicates that all approaches at the intersection of 122nd Street and Rio Verde Drive typically operate at LOS C or better during the AM and PM peak hours.

- The capacity analysis results in the 2015 build-out condition indicate that the 122nd Street southbound approach to Rio Verde Drive is anticipated to operate at LOS C or better during the peak hours with or without the proposed expansion.

- The City of Scottsdale provided a summary of 2002 to 2008 segment collision rates for the City. Collision rates occurring on the segment of Rio Verde Drive from 100 feet east of Alma School Road to 100 feet west of 136th Street were also provided.

  - All study segment collision rates on Rio Verde Drive between Alma School Road and 136th Street are less than one-quarter (1/4) the average rate for the City of Scottsdale.

- The City of Scottsdale also provided specific collision data for the more recent time frame spanning January 1, 2009 to June 30, 2014 and occurring on the same segment of Rio Verde Drive.

  - Of the 30 total collisions, 14 involved only a single vehicle. Of the remaining 16 collisions, 3 involved bicyclists/pedalcyclists.

  - All of the 30 collisions were neither fatal nor incapacitating.

  - Only 3 of the collisions were located at the existing entrance of Scottsdale National Golf Club.

  - From the collision manner data, only the single vehicle collision type appears to have an atypical proportion of collisions within the most recent years. There is no pattern or apparent similarities for the single-vehicle collisions.

  - Large scale mitigation potentially performed by the City of Scottsdale, such as roadway widening, may help reduce the likelihood of single vehicle collisions.

- The proposed left-turn deceleration lane on Rio Verde Drive approaching the site entrance will remove left-turning traffic from travel lanes and promotes better turning characteristics.

- CivTech recommends that the proposed eastbound left-turn and westbound right-turn lanes on Rio Verde Drive approaching the entrance each provide a queue storage length of 150 feet.

- Sight distance should be provided at the proposed access based on the standards provided in the *City of Scottsdale's Design Standards and Policies Manual, 2010 Update*. The developer should ensure that adequate sight distance is provided at the intersections to allow safe left and right turning movements from the development. Landscaping should be maintained at a maximum of three feet in height. To maintain sight distance, tree branches should be trimmed lower than seven feet and maintained to meet current acceptable landscape requirements. Copies of the applicable standards are provided in **Appendix I** for reference.

LIST OF REFERENCES

A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, Washington, D.C., 2011.

Design and Safety of Pedestrian Facilities, Institute of Transportation Engineers, Washington, D.C., March 1998.

Design Standards and Policies Manual, 2010 Update, City of Scottsdale

Highway Capacity Manual. Transportation Research Board, National Research Council, Washington, D.C., 2010.

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Street Classification Map, City of Scottsdale website, 2008.

Transportation and Land Development, Stover, V. G. and Koepke, F. J., Institute of Transportation Engineers, Washington, D.C, 1988.

Trip Generation Manual 9th Edition, Institute of Transportation Engineers, Washington, D.C, 2012.

TECHNICAL APPENDICES

APPENDIX A	**CITY OF SCOTTSDALE REVIEW COMMENTS**
APPENDIX B	**EXISTING TRAFFIC COUNT DATA**
APPENDIX C	**EXISTING PEAK HOUR CAPACITY ANALYSIS**
APPENDIX D	**TRIP GENERATION**
APPENDIX E	**BACKGROUND GROWTH RATE CALCULATIONS**
APPENDIX F	**2015 PEAK HOUR CAPACITY ANALYSIS**
APPENDIX G	**CITY OF SCOTTSDALE COLLISION DATA**
APPENDIX H	**QUEUE LENGTH ANALYSIS**
APPENDIX I	**CITY OF SCOTTSDALE DESIGN STANDARDS AND POLICIES**

APPENDIX A

CITY OF SCOTTSDALE REVIEW COMMENTS

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Item No.	Reviewer	Code	Review Comment	Response
1.	Phillip Kercher & John Bartlett	1	**Page 5 – Existing Roadway description –** Posted speed limit on Rio Verde Drive is 50 miles per hour.	The correct speed limit is now included in the roadway description.
2.	Phillip Kercher & John Bartlett		**Page 6 – Fig. 2 –** Provide the existing ADT volume on Rio Verde Drive.	ADT is now displayed.
3.	Phillip Kercher & John Bartlett	1	**Page 6 – Fig. 2 –** Stop Symbol not shown for southbound approach.	Stop symbol is now displayed.
4.	Phillip Kercher & John Bartlett		**Page 7 – Existing Traffic Volumes –** The increase in existing traffic volumes by two thirds seems arbitrary, especially since the traffic counts were performed in October. City staff's preference would be to analyze a future year using a growth rate and perhaps a seasonal factor to account for potential increases in traffic volumes.	In response to this comment, this seasonal factor is no longer applied to existing traffic volumes. The discussion has been clarified and moved to the *Future Background Traffic* section. The study continues to apply a growth factor for future volumes.
5.	Phillip Kercher & John Bartlett		**Page 8 – Site Access –** Rio Verde is classified as a minor arterial street, which includes raised medians. What is the separation between the proposed site entrance and the existing 120th Street, and is this enough distance to provide left turn lanes and median openings for both? The site entrance should align with 120th Street to ensure full access when Rio Verde is improved.	The developer now proposes the main entrance to remain at its existing location at the 121st Street alignment. TIMA has been updated accordingly.
6.	Phillip Kercher & John Bartlett	1	**Page 10 – Table 4 –** Daily volume for Scottsdale National should be 994, not 966.	Item now displays correctly.

Reviewed Date: 2014-12-XX-
CivTech Received Date: 2014-12-26-
CivTech Entered Date: 2015-01-08-
CivTech Response Date: 2015-02-19-

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Item No.	Reviewer	Code	Review Comment	Response
7.	Phillip Kercher & John Bartlett		**Page 13 – Right Turn Lane –** Single travel lane in the westbound direction with a posted speed limit of 50 miles per hour. A right-turn deceleration lane should be constructed on the westbound approach to the project access.	The recommended westbound right-turn lane from Rio Verde Drive to the site access is now proposed.
8.	Phillip Kercher & John Bartlett		**Page 8 – Fig. 3 –** Proposed realignment of 118th Street will require additional coordination with City staff. Other options for the alignment of 118th Street should be explored and discussed.	Upon discussion and coordination with City of Scottsdale staff, the maintenance access will be at the 118th Street alignment. Within the site boundaries, 118th Street will be privatized and realigned.

Reviewed Date: 2014-12-XX-
CivTech Received Date: 2014-12-26-
CivTech Entered Date: 2015-01-08-
CivTech Response Date: 2015-02-19-

APPENDIX B

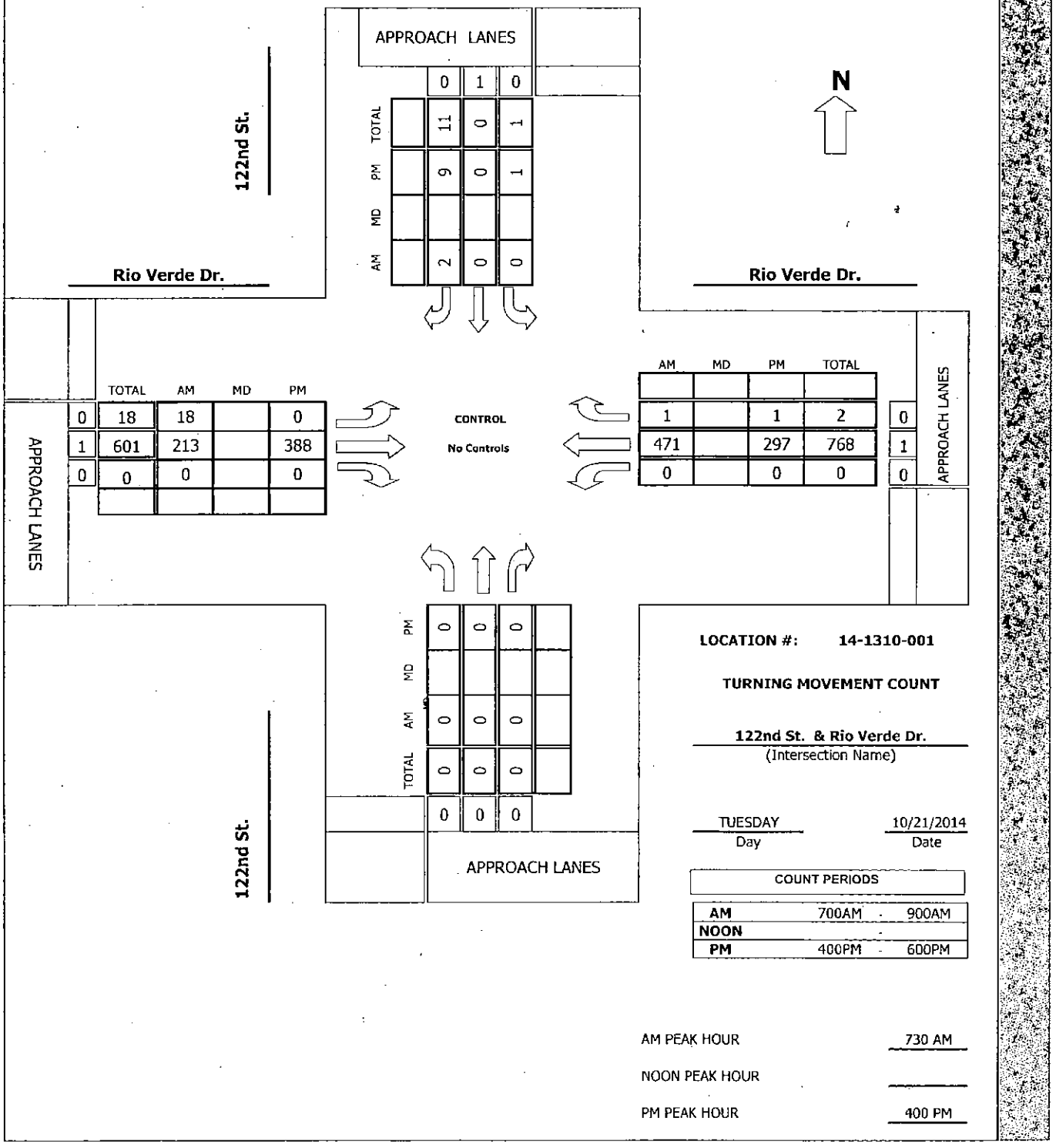
EXISTING TRAFFIC COUNT DATA

Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 14-1310-001

TMC SUMMARY OF 122nd St. & Rio Verde Dr.



LOCATION #: 14-1310-001

TURNING MOVEMENT COUNT

122nd St. & Rio Verde Dr.
(Intersection Name)

TUESDAY (Day) 10/21/2014 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 730 AM

NOON PEAK HOUR

PM PEAK HOUR 400 PM

Snowbirds bring annual population boom to West Valley

Philip Haldiman, The Republic | azcentral.com *1:56 p.m. MST October 27, 2014*

(Photo: Mark Henle/The Republic)

Charlotte Confer stays busy as the volunteer coordinator at Banner Del E. Webb Medical Center in Sun City West, as organizing a corps of volunteers to support a large medical facility can be challenging.

Her job gets a little easier this time of year, however, because snowbirds, who make up 20 percent of her volunteer staff, are making their return migration.

When the snowbirds— people who live in Arizona in the winter and cooler locales in the summer — leave, she needs to fill in the gaps and get creative with scheduling.

"And then you also have regular local volunteers who are taking vacations during those times. Some locals might be gone for a month at a time, so you're filling many different shifts with many different people," she said.

West Valley residents are well aware of the increase in traffic when the snowbirds return, but many cities and organizations rely on them as part of the volunteer force, as well as a source of revenue for some communities.

Vicki Gerber, senior manager of volunteer resources at Banner Boswell in Sun City, said active adults are very dedicated, working at least once or twice a week and who often have key assignments working directly with patients and the public, such as at the nursing unit or the information desk.

"They are not casual volunteers," Gerber said. "We're delighted when they get back, and we really do feel it when they leave."

One way organizations are able mitigate the loss of the snowbirds is through student and adult volunteers during the summer.

Peoria officials say although they see a slight uptick in volunteerism this time of year, an overall well-balanced age demographic in the population helps to meet the need year-round.

They do see a noticeable increase in traffic at some facilities, however.

Jackie Stanley, supervisor at Rio Vista Recreation Center, said seniors have been a big driver in the advent of Peoria's pickleball program. Since it debuted in August 2013, the program has grown from two courts every Tuesday and Thursday to as many as four courts. Friday night games have been added for younger adults.

The city started with eight to 10 players each day and now has up to 25 depending on the time of year, she said.

"Numbers can be impacted by time of year, first in summer when it's too hot for some to play outdoors and then when snowbirds come in early winter," she said.

While 17.3 percent of Peoria's population is 60 years old or older, the demographic is 23.6 percent in Surprise, according to the 2010 U.S. census.

In Surprise, revenues are higher from October to May, compared with the rest of the year.

Vice Mayor Skip Hall attributes much of this to the snowbirds. Surprise definitely feels the absence of that demographic while they are away, he said.

The city is close to the retirement communities of Sun City and Sun City West and home to Sun City Grand. The three communities have a combined population of about 85,000 adults.

Snowbirds have a tremendous effect on Surprise's economy, dining out and shopping at the city's retailers, Hall said.

"We welcome them with open arms when they return," Hall said.

Both their annual return to the Valley and their departure in the spring has an effect on public safety, according to Sgt. Mike Donovan, a spokesman for the Surprise Police Department.

When the winter visitors leave, the city's seasonal population can decrease by 30 percent, so certain communities within Surprise become targets of criminal activity, such as burglary and theft, he said. .

Conversely, he added, during snowbird season, the population increases, meaning more vehicles on the streets.

"Getting accustomed to the heavier volume of traffic is sometimes difficult for some people to get acclimated to," Donovan said. "This heavier traffic volume contributes to an increase in traffic collisions and other traffic-related incidents."

Retirement communities in the West Valley offer a variety of programs for their residents throughout the year, and officials with those communities say the schedule generally slows down during the summer, when some communities lose up to 50 percent of their population.

Gary Sorrels, a sales manager with PebbleCreek, a 2,300-acre retirement community in Goodyear, said more than 60 percent of the 7,000 residents are year-round, but returning snowbirds have a noticeable effect.

"Upon their return, PebbleCreek quickly begins buzzing with an increase in restaurant, golf course and clubhouse activity, and also an increase in meeting-room rentals, weekend concerts, DJ/dances" and other activities, Sorrels said.

Randy Robinson, a 12-year resident of Sun City West, said he spends the hot months in Sequim, Wash., a city of more than 6,000 people, northwest of Seattle on the Olympic Peninsula.

Robinson, 69, was a factory manager for Boeing in the Seattle area and has been a snowbird for as long as he has lived in Sun City West.

He lives near a golf course in both places, but has many more neighbors here.

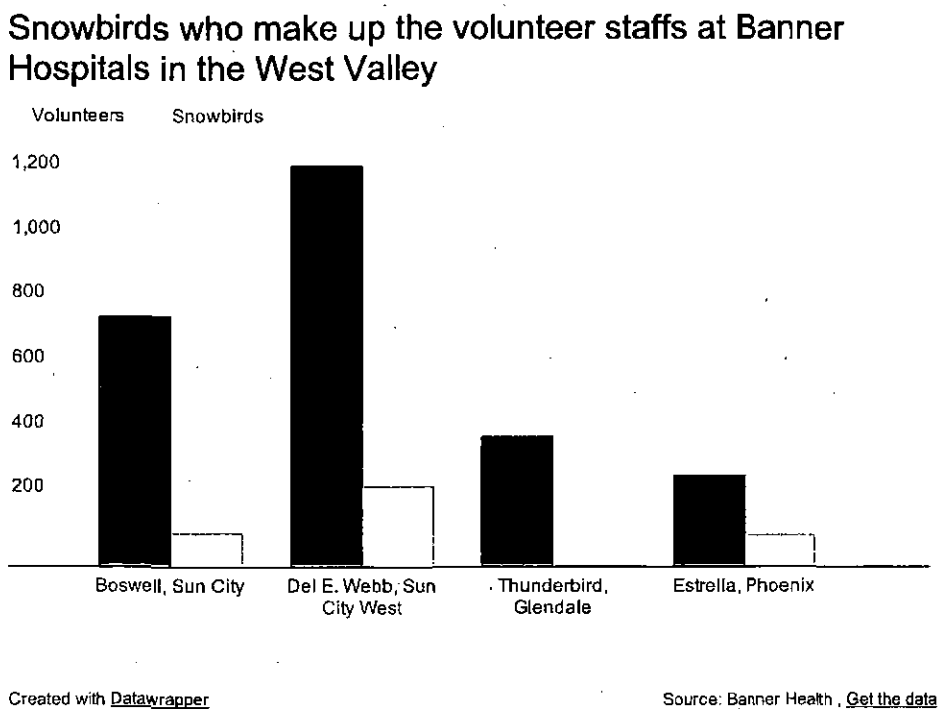
Still, there's not much traffic inside the master-planned community in the Northwest Valley, and he said living here gives him the best of both worlds — the lushness of the Pacific Northwest and the comfortable winters of the Southwest desert.

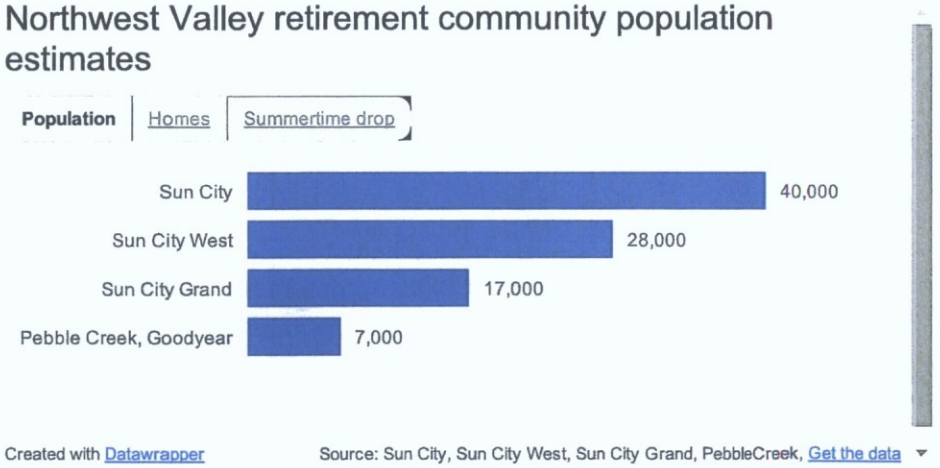
"I like both places. For me, the weather is about the same year-round, and that's why I do it," he said.

Banner medical centers

Banner Health relies heavily on volunteers, a large portion of whom are active adults.

The organization had 5,730 volunteers last year in Arizona, equaling about $17 million in free labor or service. About one-third of those come from Boswell and Del E. Webb, which are staffed by many active adults.





How many snowbirds make up the volunteer staffs at Banner hospitals in the West Valley:

Boswell, Sun City

Volunteers: 770.

owbirds: 100.

el E. Webb, Sun City West

lunteers: 1,233.

owbirds: 247.

hunderbird, Glendale

lunteers: 400.

owbirds: 3.

trella, Phoenix

Volunteers: 280.

Snowbirds: Up to 98.

Source: Banner Health

NW Valley retirement community population estimates

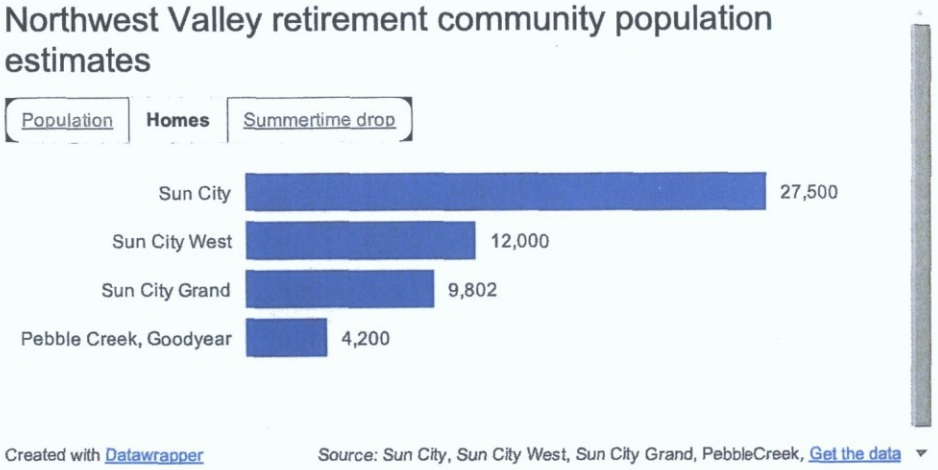
Sun City

Population: 40,000.

Homes: 27,500.

Summertime drop: 40 percent.

Sun City West



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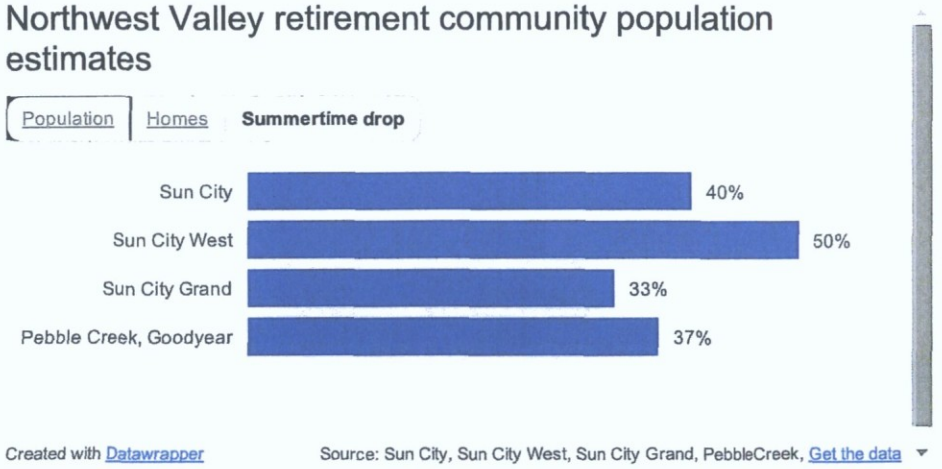

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owbirds: Up to 98.

urce: Banner Health

W Valley retirement community population estimates

un City

pulation: 40,000.

mes: 27,500.

Summertime drop: 40 percent.

Sun City West

Population: 28,000.

Homes: About 12,000.

Summertime drop: Up to 50 percent.

Sun City Grand

Population: 17,000.

Homes: 9,802.

Summertime drop: 33 percent.

PebbleCreek, Goodyear

Population: 7,000.

Homes: more than 4,200.

Summertime drop: 37 percent.

Sources: *Sun City, Sun City West, Sun City Grand and PebbleCreek*

Read or Share this story: http://azc.cc/1wsMi8p

APPENDIX C

EXISTING PEAK HOUR CAPACITY ANALYSIS

Scottsdale National Golf Club
2014 Existing
AM Peak Hour

Scenario Report

Scenario:	AM
Command:	AM
Volume:	AM
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	AM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Scottsdale National Golf Club
2014 Existing
PM Peak Hour

Scenario Report

Scenario:	PM
Command:	PM
Volume:	PM
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	PM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Scottsdale National Golf Club
2014 Existing
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #122 122nd Street Driveway & Rio Verde Drive

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: C[15.3]

Street Name:	122nd Street Driveway						Rio Verde Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	0	1	0 1	0	0 0	0 0	0	1 0
Volume Module:												
Base Vol:	0	0	0	0	0	2	18	213	0	0	471	1
Growth Adj:	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
Initial Bse:	0	0	0	0	0	3	30	356	0	0	787	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	0	0	4	33	395	0	0	874	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	4	33	395	0	0	874	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	875	876	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	352	779	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	352	779	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	15.3	9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			15.3			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

Note: Queue reported is the number of cars per lane.

Scottsdale National Golf Club
2014 Existing
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #122 122nd Street Driveway & Rio Verde Drive

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.9]

Street Name:	122nd Street Driveway						Rio Verde Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1!	0 0	0 0	1	0 0	0 0	0	1 0
Volume Module:												
Base Vol:	0	0	0	1	0	9	0	388	0	0	279	1
Growth Adj:	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
Initial Bse:	0	0	0	2	0	15	0	648	0	0	466	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	2	0	17	0	720	0	0	518	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	17	0	720	0	0	518	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1239	1239	519	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	196	177	561	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	196	177	561	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	473	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	12.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			12.9			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

APPENDIX D

TRIP GENERATION CALCULATIONS

Land Use	ITE LUC	ITE Land Use Name	Quantity	Units	AM Distribution In	AM Distribution Out	PM Distribution In	PM Distribution Out
Golf Course	430	Golf Course	27	Holes	79%	21%	51%	49%
Resort Hotel	330	Resort Hotel	72	Rooms	72%	28%	43%	57%

Land Use	ADT Avg Rate	ADT Total	AM Peak Hour Avg Rate	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour Avg Rate	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Golf Course	35.74	966	2.06	44	12	56	2.92	40	39	79
Resort Hotel	5.00	360	0.31	17	6	23	0.42	13	18	31
TOTALS		**1,326**		**61**	**18**	**79**		**53**	**57**	**110**

Notes: *1. This trip generation calculation is provided for the entire development without applied volume reductions taken as part of this study. If applicable, trips net of interaction and pass-by trips are shown below.*

	Daily Percentage	Daily Trips	AM Peak Hour Percentage	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour Percentage	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Interaction/Internal Capture	Factor	25%	25%				25%			
	Differences	332		15	5	20		13	14	27
	Net Trips	994		46	13	59		40	43	83

CivTech

APPENDIX E

BACKGROUND GROWTH RATE CALCULATIONS

Average Growth Rates

Location of counts: Dynamite Blvd. / Rio Verde Dr. near 118th St.
Source(s): City of Scottsdale Average Daily Traffic Volumes Segments, 2004-2010

	Year	Volume
Beginning	12/1/2004	9,100
End	12/1/2012	9,600
Avg Growth Rate		0.7%
Expansion Factor		1.055

For Traffic Impact and Mitigation Analysis:

Average Growth Rate 2%

Per-Year Multiplier 1.020

Year	Expansion Factor(s)	
2014	1.000	
2015	1.020	<- Expansion factor to opening
2016	1.040	
2017	1.061	
2018	1.082	
2019	1.104	
2020	1.126	
2021	1.149	
2022	1.172	
2023	1.195	
2024	1.219	
2025	1.243	
2026	1.268	
2027	1.293	
2028	1.319	

APPENDIX F

2015 PEAK HOUR CAPACITY ANALYSES

Scottsdale National Golf Club
2015 AM Peak Hour

Scenario Report

Scenario:	AM
Command:	AM
Volume:	AM
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	AM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Scottsdale National Golf Club
2015 PM Peak Hour

Scenario Report

Scenario:	PM
Command:	PM
Volume:	PM
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	PM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Scottsdale National Golf Club
2015 AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #122 122nd Street Driveway & Rio Verde Drive

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: C[15.6]

Street Name:	122nd Street Driveway						Rio Verde Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1! 0	1	0	1	0	0	1
Volume Module:												
Base Vol:	0	0	0	0	0	2	18	213	0	0	471	1
Growth Adj:	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
Initial Bse:	0	0	0	0	0	3	31	363	0	0	802	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	0	0	4	34	403	0	0	891	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	4	34	403	0	0	891	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	891	893	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	344	768	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	344	768	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	15.6	9.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			15.6			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

Note: Queue reported is the number of cars per lane.

Scottsdale National Golf Club
2015 PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #122 122nd Street Driveway & Rio Verde Drive

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[13.1]

Street Name:	122nd Street Driveway						Rio Verde Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	1! 0	1	0	1	0	0	1
Volume Module:												
Base Vol:	0	0	0	1	0	9	0	388	0	0	279	1
Growth Adj:	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
Initial Bse:	0	0	0	2	0	15	0	661	0	0	475	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	2	0	17	0	734	0	0	528	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	17	0	734	0	0	528	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1262	1262	528	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	189	171	554	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	189	171	554	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	465	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			13.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Scottsdale National Golf Club
2015 AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #122 122nd Street Driveway & Rio Verde Drive

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: C[18.2]

Street Name:	122nd Street Driveway						Rio Verde Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1!	0 0	1 0	1	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	0	0	2	18	213	0	0	471	1
Growth Adj:	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
Initial Bse:	0	0	0	0	0	3	31	363	0	0	802	2
Added Vol:	0	0	0	2	0	12	39	0	0	0	0	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	15	70	363	0	0	802	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	2	0	17	77	403	0	0	891	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	17	77	403	0	0	891	10
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1449	1449	891	901	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	146	132	344	763	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	134	119	344	763	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.05	0.10	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	292	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	18.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			18.2			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

Note: Queue reported is the number of cars per lane.

Scottsdale National Golf Club
2015 PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #122 122nd Street Driveway & Rio Verde Drive

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[15.0]

Street Name:	122nd Street Driveway						Rio Verde Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1!	0 0	1 0	1	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	1	0	9	0	388	0	0	279	1
Growth Adj:	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
Initial Bse:	0	0	0	2	0	15	0	661	0	0	475	2
Added Vol:	0	0	0	6	0	37	34	0	0	0	0	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	8	0	52	34	661	0	0	475	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	9	0	58	38	734	0	0	528	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	9	0	58	38	734	0	0	528	9
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1338	1338	528	537	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	170	154	554	1042	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	166	149	554	1042	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.05	0.00	0.10	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	426	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	15.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			15.0			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

Note: Queue reported is the number of cars per lane.

APPENDIX G

CITY OF SCOTTSDALE COLLISION DATA

CivTech

CITY OF SCOTTSDALE '13 -'14 COLLISION SUMMARY

REPORT #	DATE YYMMDD	TIME HHMM	NORTH / SOUTH ST.	TYPE	EAST WEST ST.	TYPE	DIR FROM	DIST FROM	INJ. SEV #1	INJ. SEV #2	PHYS. COND. #1	PHYS. COND. #2	VIOLATION #1	VIOLATION #2	ACTION #1	ACTION #2	TRAV. DIR. #1	TRAV. DIR. #2	MANNER OF COLLISION	COMMENTS
13-24833	131029	1042	113	ST	DYNAMITE	BL	AT		1	1	0	0	7	1	4	1	WB	WB	3	
13-25248	131102	1754	111	ST	DYNAMITE	BL	AT		2	1	0	0	2	1	5	1	EB	EB	2	
14-04558	140226	0557	128	ST	RIO VERDE	DR	E	200	2		0		97		11		EB		1	
14-10867	140515	0751	120	ST	RIO VERDE	DR	E	200	1	1	0	0	2	1	1	2	WB	WB	4	
14-11036	140517	0908	120	ST	RIO VERDE	DR	AT		99	3	99	0	99	0	1	97	WB	WB	4	HIT AND RUN
14-14229	140629	2054	120	ST	RIO VERDE	DR	E	324	1		0		1		1		EB		1	

KEY

INJury SEVerity: 1=NO INJURY, 2=POSSIBLE INJURY, 3=NON-INCAPACITATING INJURY, 4=INCAPACITATING INJURY, 5=FATAL INJURY, 99=NOT REPORTED / UNKNOWN

PHYSical CONDition: 0=NO APPARENT INFLUENCE, 1=ILLNESS, 2=PHYSICAL IMPAIRMENT, 3=FELL ASLEEP / FATIGUED 4=ALCOHOL, 5=DRUGS, 6=MEDICATIONS, A=NO TEST GIVEN, B=TEST GIVEN, C=TEST REFUSED, D=TESTING UNKNOWN, 97=OTHER, 99=UNKNOWN

VIOLATION: 0=NO IMPROPER ACTION, 1=SPEED TOO FAST FOR CONDITIONS, 2=EXCEEDED LAWFUL SPEED 3=FAILED TO YIELD RIGHT-OF-WAY, 4=FOLLOWED TOO CLOSELY. 5=FAILED TO OBEY STOP SIGN, 6=FAILED TO STOP FOR RED SIGNAL, 7=DISREGAREDED TRAFFIC SIGNAL 8=MADE IMPROPER TURN, 9=DROVE/RODE IN OPPOSING TRAFFIC LANE, 10=KNOWINGLY OPERATED WITH FAULTY / MISSING EQUIPMENT, 11=REQUIRED MOTORCYCLE SAFETY EQUIPMENT NOT USED, 12=PASSED IN NO PASSING ZONE, 13=UNSAFE LANE CHANGE, 14=FAILED TO KEEP IN PROPER LANE, 15=DISREGARDED PAVEMENT MARKINGS, 16=OTHER UNSAFE PASSING, 17=INATTENTION/DISTRACTION, 18=DID NOT USE CROSSWALK, 19=WALKED ON WRONG SIDE OF ROAD, 20 ELECTRONIC COMMUNICATIONS DEVICE, 97=OTHER, 99 UNKNOWN

VIOLATION: 1=NO IMPROPER ACTION, 2=SPEED TOO FAST FOR CONDITIONS, 3=EXCEEDED LAWFUL SPEED 4=FOLLOWED TOO CLOSELY. 5=RAN STOP SIGN, 6=DISREGAREDED TRAFFIC SIGNAL7=MADE IMPROPER TURN, 8=DROVE/RODE IN OPPOSING TRAFFIC LANE, 9=KNOWINGLY OPERATED WITH FAULTY / MISSING EQUIPMENT, 10=REQUIRED MOTORCYCLE SAFETY EQUIPMENT NOT USED, 11=PASSED IN NO PASSING ZONE, 12=UNSAFE LANE CHANGE, 13=FAILED TO KEEP IN PROPER LANE, 14=DISREGARDED PAVEMENT MARKINGS, 15=OTHER UNSAFE PASSING, 16=INATTENTION/DISTRACTION, 17=DID NOT USE CROSSWALK, 18=WALKED ON WRONG SIDE OF ROAD, 19 ELECTRONIC COMMUNICATIONS DEVICE, 97=OTHER, 99 UNKNOWN

ACTION: 1=GOING STRAIGHT AHEAD, 2=SLOWING IN TRAFFICWAY, 3=STOPPED IN TRAFFICWAY, 4=MAKING LEFT TURN, 5=MAKING RIGHT TURN, 6=MAKING U-TURN, 7=OVERTAKING/PASSING, 8=CHANGING LANES, 9=NEGOTIATING A CURVE, 10=BACKING, 11=AVOIDING VEH/OBJ/PED/CYCLIST/ANIMAL, 12=ENTERING PARKING POSITION, 13=LEAVING PARKING POSITION, 14=PROPERLY PARKED, 15=IMPROPERLY PARKED, 16=DRIVERLESS MOVING VEHICLE, 17=CROSING ROAD, 18=WALKING WITH TRAFFIC, 19=WALKING AGAINST TRAFFIC, 20=STANDING, 21=LYING, 22=GETTING ON OR OFF VEHICLE, 23=WORKING ON/PUSHING VEHICLE, 24=WORKING ON ROAD, 97=OTHER, 99=UKNOWN

MANNER OF COLLISION: 1=SINGLE VEHICLE, 2=ANGLE (front to side) SAME DIRECTION, 3=ANGLE (front to side) OPPOSITE DIRECTION, 4=ANGLE (front to side) RIGHT ANGLE, 5=ANGLE - DIRECTION NOT SPECIFIED, 6=REAR END, 7=HEAD-ON, 8=SIDESWIPE, SAME DIRECTION, 9=SIDESWIPE, OPPOSITE DIRECTION, 10=REAR-TO-SIDE 11=REAR-TO-REAR 97=OTHER 99=UNKNOWN D=U-Turn, @=Pedestrian, #=Pedalcycle

TOTAL **6**

CITY OF SCOTTSDALE '11 -'12 COLLISION SUMMARY

REPORT #	DATE YYMMDD	TIME HHMM	NORTH / SOUTH ST.	TYPE	EAST WEST ST.	TYPE	DIR FROM	DIST FROM	INJ. SEV. #1	INJ. SEV. #2	PHYS. COND. #1	PHYS. COND. #2	VIOLATION #1	VIOLATION #2	ACTION #1	ACTION #2	TRAV. DIR. #1	TRAV. DIR. #2	MANNER OF COLLISION	COMMENTS
11-02977	110206	0827	111	PL	DYNAMITE		AT		3	1	0	0	3	0	4	1	S	E	4	
11-06537	110318	0228	128	ST	RIO VERDE	DR	AT				99		97		10		EB		1	
11-12259	110522	0902	118	ST	RIO VERDE	DR	E	50	1	3	0	0	13	0	1	97	W	W	6	CAR-BIKE
11-13300	110601	1900	132	ST	RIO VERDE	DR	W	3000	1	1	0	0	8	0	6	1	W	W	4	
11-09398	110419	1646	122	ST	RIO VERDE	DR	E	150	99	1	99	0	9	0	1	1	W	E	9	HIT & RUN
11-20249	110829	1135	113	ST	RIO VERDE		N	200	1		0	0	99	1	1	14	NB	WB	2	
11-27694	111123	1336	114TH	ST	RIO VERDE		AT			1	0	0	97	1	1	1	NB	WB	3	RIO BECOMES DYNAMITE ON W
11-22552	110926	1136	128	ST	RIO VERDE		W	2640	1		0		97		1		WB		1	
12-01081	120114	0803	ALMA SCHOOL		DYNAMITE		E	187	1	1	0	0	12	1	1	1	EB	EB	6	
12-15231	120706	2045	128TH	ST	RIO VERDE	DR	W	350	3		4		13		1		EB		1	DUI
12-15361	120708	0435	122ND	ST	RIO VERDE	DR	AT		99	3	99	0	15	1	1	1	EB	EB	6	BICYCLE HIT AND RUN
12-04630	120226	1117	128TH	ST	RIO VERDE		W	100	99	4	99	0	99	1	99	97	WB	WB	6	HIT & RUN VEH2 BIKE
12-14448	120626	1133	122	ST	RIO VERDE		AT		1	1	0	0	2	1	1	4	EB	EB	4	
12-16860	120729	1315	114	ST	DYNAMITE		W	64	99		99		99		1		WB		1	HIT & RUN
12-06364	120318	1519	128TH	ST	RIO VERDE		W	500	1		0		2		1		EB		1	
11-30566	111227	1753	136TH	ST	RIO VERDE		W	2640	1		0		1		1		EB		1	

REPORT #	DATE YYMMDD	TIME HHMM	NORTH / SOUTH ST.	TYPE	EAST WEST ST.	TYPE	DIR FROM	DIST FROM	INJ. SEV. #1	#2	PHYS. COND. #1	#2	VIOLATION #1	#2	ACTION #1	#2	TRAV. DIR. #1	#2	MANNER OF COLLISION	COMMENTS

KEY

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VIOLATION: 0=NO IMPROPER ACTION, 1=SPEED TOO FAST FOR CONDITIONS, 2=EXCEEDED LAWFUL SPEED 3=FAILED TO YIELD RIGHT-OF-WAY, 4=FOLLOWED TOO CLOSELY. 5=FAILED TO OBEY STOP SIGN, 6=FAILED TO STOP FOR RED SIGNAL, 7=DISREGAREDED TRAFFIC SIGNAL 8=MADE IMPROPER TURN, 9=DROVE/RODE IN OPPOSING TRAFFIC LANE, 10=KNOWINGLY OPERATED WITH FAULTY / MISSING EQUIPMENT, 11=REQUIRED MOTORCYCLE SAFETY EQUIPMENT NOT USED, 12=PASSED IN NO PASSING ZONE, 13=UNSAFE LANE CHANGE, 14=FAILED TO KEEP IN PROPER LANE, 15=DISREGARDED PAVEMENT MARKINGS, 16=OTHER UNSAFE PASSING, 17=INATTENTION/DISTRACTION, 18=DID NOT USE CROSSWALK, 19=WALKED ON WRONG SIDE OF ROAD, 20 ELECTRONIC COMMUNICATIONS DEVICE, 97=OTHER, 99 UNKNOWN

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ACTION: 1=GOING STRAIGHT AHEAD, 2=SLOWING IN TRAFFICWAY, 3=STOPPED IN TRAFFICWAY, 4=MAKING LEFT TURN, 5=MAKING RIGHT TURN, 6=MAKING U-TURN, 7=OVERTAKING/PASSING, 8=CHANGING LANES, 9=NEGOTIATING A CURVE, 10=BACKING, 11=AVOIDING VEH/OBJ/PED/CYCLIST/ANIMAL, 12=ENTERING PARKING POSITION, 13=LEAVING PARKING POSITION, 14=PROPERLY PARKED, 15=IMPROPERLY PARKED, 16=DRIVERLESS MOVING VEHICLE, 17=CROSING ROAD, 18=WALKING WITH TRAFFIC, 19=WALKING AGAINST TRAFFIC, 20=STANDING, 21=LYING, 22=GETTING ON OR OFF VEHICLE, 23=WORKING ON/PUSHING VEHICLE, 24=WORKING ON ROAD, 97=OTHER, 99=UKNOWN

MANNER OF COLLISION: 1=SINGLE VEHICLE, 2=ANGLE (front to side) SAME DIRECTION, 3=ANGLE (front to side) OPPOSITE DIRECTION, 4=ANGLE (front to side) RIGHT ANGLE, 5=ANGLE - DIRECTION NOT SPECIFIED, 6=REAR END, 7=HEAD-ON, 8=SIDESWIPE, SAME DIRECTION, 9=SIDESWIPE, OPPOSITE DIRECTION, 10=REAR-TO-SIDE 11=REAR-TO-REAR 97=OTHER 99=UNKNOWN D=U-Turn, @=Pedestrian, #=Pedalcycle

TOTAL **16**

January 1, 2011 to June 21, 2011

KEY

INJury SEVerity: 1=NO INJURY, 2=POSSIBLE INJURY, 3=NON-INCAPACITATING INJURY, 4=INCAPACITATING INJURY, 5=FATAL INJURY, 99=NOT REPORTED / UNKNOWN

PHYSical CONDition: 0=NO APPARENT INFLUENCE, 1=ILLNESS, 2=PHYSICAL IMPAIRMENT, 3=FELL ASLEEP / FATIGUED 4=ALCOHOL, 5=DRUGS, 6=MEDICATIONS, A=NO TEST GIVEN, B=TEST GIVEN, C=TEST REFUSED, D=TESTING UNKNOWN, 97=OTHER, 99=UNKNOWN

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MANNER OF COLLISION: 1= SINGLE VEHICLE, 2=ANGLE (front to side) SAME DIRECTION, 3=ANGLE (front to side) OPPOSITE DIRECTION, 4=ANGLE (front to side) RIGHT ANGLE, 5=ANGLE - DIRECTION NOT SPECIFIED, 6=REAR END, 7=HEAD-ON, 8=SIDESWIPE, SAME DIRECTION, 9= SIDESWIPE, OPPOSITE DIRECTION, 10=REAR-TO-SIDE 11=REAR-TO-REAR 97=OTHER 99=UNKNOWN D=U-Turn, @=Pedestrian, #=Pedalcycle

June 22, 2011 to December 31, 2012

KEY

INJury SEVerity: 1=NO INJURY, 2=POSSIBLE INJURY, 3=NON-INCAPACITATING INJURY, 4=INCAPACITATING INJURY, 5=FATAL INJURY, 99=NOT REPORTED / UNKNOWN

PHYSical CONDition: 0=NO APPARENT INFLUENCE, 1=ILLNESS, 2=PHYSICAL IMPAIRMENT, 3=FELL ASLEEP / FATIGUED 4=ALCOHOL, 5=DRUGS, 6=MEDICATIONS, A=NO TEST GIVEN, B=TEST GIVEN, C=TEST REFUSED, D=TESTING UNKNOWN, 97=OTHER, 99=UNKNOWN

VIOLATION: 1=NO IMPROPER ACTION, 2= SPEED TOO FAST FOR CONDITIONS, 3=EXCEEDED LAWFUL SPEED 4=FOLLOWED TOO CLOSELY, 5=RAN STOP SIGN, 6=DISREGAREDED TRAFFIC SIGNAL 7=MADE IMPROPER TURN, 8=DROVE/RODE IN OPPOSING TRAFFIC LANE, 9=KNOWINGLY OPERATED WITH FAULTY / MISSING EQUIPMENT, 10=REQUIRED MOTORCYCLE SAFETY EQUIPMENT NOT USED, 11=PASSED IN NO PASSING ZONE, 12=UNSAFE LANE CHANGE, 13=FAILED TO KEEP IN PROPER LANE, 14=DISREGARDED PAVEMENT MARKINGS, 15=OTHER UNSAFE PASSING, 16=INATTENTION/DISTRACTION, 17=DID NOT USE CROSSWALK, 18=WALKED ON WRONG SIDE OF ROAD, 19 ELECTRONIC COMMUNICATIONS DEVICE, 97=OTHER, 99 UNKNOWN

ACTION: 1=GOING STRAIGHT AHEAD, 2=SLOWING IN TRAFFICWAY, 3= STOPPED IN TRAFFICWAY, 4=MAKING LEFT TURN, 5=MAKING RIGHT TURN, 6=MAKING U-TURN, 7=OVERTAKING/PASSING, 8=CHANGING LANES, 9=NEGOTIATING A CURVE, 10=BACKING, 11=AVOIDING VEH/OBJ/PED/CYCLIST/ANIMAL, 12=ENTERING PARKING POSITION, 13=LEAVING PARKING POSITION, 14=PROPERLY PARKED, 15=IMPROPERLY PARKED, 16=DRIVERLESS MOVING VEHICLE, 17=CROSING ROAD, 18=WALKING WITH TRAFFIC, 19=WALKING AGAINST TRAFFIC, 20=STANDING, 21=LYING, 22=GETTING ON OR OFF VEHICLE, 23=WORKING ON/PUSHING VEHICLE, 24=WORKING ON ROAD, 97=OTHER, 99=UKNOWN

MANNER OF COLLISION: 1=SINGLE VEHICLE, 2=ANGLE (front to side, other than left turn), 3=LEFT TURN, 4=REAR END (front to rear), 5=HEAD-ON (front to front, other than left turn), 6=SIDESWIPE, SAME DIRECTION, 7=SIDESWIPE, OPPOSITE DIRECTION, 8=REAR-TO-SIDE, 9=REAR TO REAR, 97=OTHER, 99=UNKNOWN

CITY OF SCOTTSDALE '09 -'10 COLLISION SUMMARY

REPORT #	DATE YYMMDD	TIME HHMM	NORTH / SOUTH ST.	TYPE	EAST WEST ST.	TYPE	DIR FROM	DIST FROM	INJ. SEV. #1	INJ. SEV. #2	PHYS. COND. #1	PHYS. COND. #2	VIOLATION #1	VIOLATION #2	ACTION #1	ACTION #2	TRAV. DIR. #1	TRAV. DIR. #2	MANNER OF COLLISION	COMMENTS
09-02647	090129	0652	122	ST	RIO VERDE	DR	AT		1	1	0	0	1	0	1	4	E	E	6	3 VEH
09-01058	090112	0902	132	ST	RIO VERDE	DR	E	540	1		0		1		1		E		1	
09-16295	090615	1902	114	ST	RIO VERDE	DR	E	500	1	1	0	0	13	13	1	1	E	E	8	
10-00694	100108	0458	113	ST	DYNAMITE		AT		1		0		0		1		W		1	
10-04349	100217	1914	111	PL	DYNAMITE		AT		1	1	0	0	8	0	6	1	E	E	2	
10-05105	100226	0048	114	ST	DYNAMITE		E	140	3		4		14		1		W		1	DUI M
10-08309	100402	1751	128	ST	RIO VERDE		E	1320	3		2		97		1		E		1	
09-22512	090825	0954	128	ST	RIO VERDE		E	1157	2		0		1		11		W		1	
10-21915	100905	1946	122	ST	RIO VERDE		W	528	1		0		0		1		E		1	.CAR-DEER

KEY

INJury SEVerity: 1=NO INJURY, 2=POSSIBLE INJURY, 3=NON-INCAPACITATING INJURY, 4=INCAPACITATING INJURY, 5=FATAL INJURY, 99=NOT REPORTED / UNKNOWN

PHYSical CONDition: 0=NO APPARENT INFLUENCE, 1=ILLNESS, 2=PHYSICAL IMPAIRMENT, 3=FELL ASLEEP / FATIGUED 4=ALCOHOL, 5=DRUGS, 6=MEDICATIONS, A=NO TEST GIVEN, B=TEST GIVEN, C=TEST REFUSED, D=TESTING UNKNOWN, 97=OTHER, 99=UNKNOWN

VIOLATION: 0=NO IMPROPER ACTION, 1=SPEED TOO FAST FOR CONDITIONS, 2=EXCEEDED LAWFUL SPEED 3=FAILED TO YIELD RIGHT-OF-WAY, 4=FOLLOWED TOO CLOSELY, 5=FAILED TO OBEY STOP SIGN, 6=FAILED TO STOP FOR RED SIGNAL, 7=DISREGAREDED TRAFFIC SIGNAL 8=MADE IMPROPER TURN, 9=DROVE/RODE IN OPPOSING TRAFFIC LANE, 10=KNOWINGLY OPERATED WITH FAULTY / MISSING EQUIPMENT, 11=REQUIRED MOTORCYCLE SAFETY EQUIPMENT NOT USED, 12=PASSED IN NO PASSING ZONE, 13=UNSAFE LANE CHANGE, 14=FAILED TO KEEP IN PROPER LANE, 15=DISREGARDED PAVEMENT MARKINGS, 16=OTHER UNSAFE PASSING, 17=INATTENTION/DISTRACTION, 18=DID NOT USE CROSSWALK, 19=WALKED ON WRONG SIDE OF ROAD, 20 ELECTRONIC COMMUNICATIONS DEVICE, 97=OTHER, 99 UNKNOWN

ACTION: 1=GOING STRAIGHT AHEAD, 2=SLOWING IN TRAFFICWAY, 3=STOPPED IN TRAFFICWAY, 4=MAKING LEFT TURN, 5=MAKING RIGHT TURN, 6=MAKING U-TURN, 7=OVERTAKING/PASSING, 8=CHANGING LANES, 9=NEGOTIATING A CURVE, 10=BACKING, 11=AVOIDING VEH/OBJ/PED/CYCLIST/ANIMAL, 12=ENTERING PARKING POSITION, 13=LEAVING PARKING POSITION, 14=PROPERLY PARKED, 15=IMPROPERLY PARKED, 16=DRIVERLESS MOVING VEHICLE, 17=CROSING ROAD, 18=WALKING WITH TRAFFIC, 19=WALKING AGAINST TRAFFIC, 20=STANDING, 21=LYING, 22=GETTING ON OR OFF VEHICLE, 23=WORKING ON/PUSHING VEHICLE, 24=WORKING ON ROAD, 97=OTHER, 99=UKNOWN

MANNER OF COLLISION: 1=SINGLE VEHICLE, 2=ANGLE (front to side) SAME DIRECTION, 3=ANGLE (front to side) OPPOSITE DIRECTION, 4=ANGLE (front to side) RIGHT ANGLE, 5=ANGLE - DIRECTION NOT SPECIFIED, 6=REAR END, 7=HEAD-ON, 8=SIDESWIPE, SAME DIRECTION, 9=SIDESWIPE, OPPOSITE DIRECTION, 10=REAR-TO-SIDE 11=REAR-TO-REAR 97=OTHER 99=UNKNOWN D=U-Turn, @=Pedestrian, #=Pedalcycle

TOTAL **9**

2008 Segment Collision Rates and Volumes, Sorted by Location

2008 Average Segment Collision Rate = 1.28 collisions per million vehicle miles

PRIMARY STREET	FROM	TO	VOLUME	LENGTH	NO. OF COL	COL RATE
DYNAMITE	PIMA	ALMA SCHOOL	13,700	3.00	9	0.60
DYNAMITE	ALMA SCHOOL	136TH	10,600	3.25	1	0.08
DIXILETA	SCOTTSDALE	PIMA	1,800	2.00	2	1.52
LONE MOUNTAIN	SCOTTSDALE	PIMA	4,600	2.00	1	0.30
WESTLAND	SCOTTSDALE	PIMA	4,800	2.00	0	0.00
WESTLAND/LEGEND TR	PIMA	STAGECOACH PASS	3,500	2.65	0	0.00
CAREFREE	56TH	60TH	16,800	0.50	2	0.65
CAREFREE	60TH	SCOTTSDALE	16,500	1.50	4	0.44
STAGECOACH PASS	PIMA	LEGEND TRAIL	2,700	0.50	1	2.03
STAGECOACH PASS	LEGEND TRAIL	LONE MOUNTAIN	2,400	1.90	0	0.00
CAVE CREEK	DESERT MOUNTAIN	BARTLETT DAM	1,600	3.00	0	0.00

2008-1988 Segment Collision Rates, Sorted by Location

Average Segment Collision Rates:

2008=1.28 2006= 1.87 2004= 1.84 2002=1.49 2000=1.68 1998=1.70 1996=1.67 1994=1.69 1992=1.68 1990=1.14 1988=1.86

PRIMARY STREET	FROM	TO	COL RATE 08	06	04	02	00	98	96	94	92	90	88
PINNACLE PEAK	SCOTTSDALE	MILLER	0.34	3.35	1.75	0.96	1.61	0.87	1.09	1.28	0.55	0.39	
PINNACLE PEAK	MILLER	PIMA	0.54	2.24	1.41	0.96	1.61	0.87	1.09	1.28	0.55	0.39	
PINNACLE PEAK	PIMA	CHURCH	0.00	1.37	0.69	0.75	0.98	0.70	0.00				
HAPPY VALLEY	SCOTTSDALE	PIMA	2.28	0.00	1.05	0.55							
HAPPY VALLEY	PIMA	ALMA SCHOOL	0.55	0.63	0.50	0.71	0.15	0.38	0.57	0.95	0.78	0.31	
JOMAX	SCOTTSDALE	PIMA	0.86	0.86	0.00	0.00	0.76	0.86					
DYNAMITE	56TH	64TH	0.23	0.00	0.48	0.54							
DYNAMITE	64TH	SCOTTSDALE	0.26	0.30	0.66	0.54							
DYNAMITE	SCOTTSDALE	PIMA	0.00	0.57	1.18	0.28	0.60	0.75	0.00	0.98	0.00	0.00	0.00
DYNAMITE	PIMA	ALMA SCHOOL	0.60	0.30	0.51	1.01	0.68	1.03	1.65	1.17	0.00	0.00	0.00
DYNAMITE	ALMA SCHOOL	136TH	0.08	0.07	0.28	0.37							
DIXILETA	SCOTTSDALE	PIMA	1.52	0.00	0.00	0.87							
LONE MOUNTAIN	SCOTTSDALE	PIMA	0.30	0.29	0.00	0.00	0.00	0.00	0.00	0.00			
WESTLAND	SCOTTSDALE	PIMA	0.00	1.37									
WESTLAND/LEGEND TR	PIMA	STAGECOACH PASS	0.00	0.00									
CAREFREE	56TH	60TH	0.65	0.61	1.08	0.73	0.59	0.93	0.84	0.47	0.00		
CAREFREE	60TH	SCOTTSDALE	0.44	0.23	0.26	0.73	0.59	0.93	0.84	0.47	0.00		
STAGECOACH PASS	PIMA	LEGEND TRAIL	2.03	3.22	0.00	0.00	4.57	0.00					
STAGECOACH PASS	LEGEND TRAIL	LONE MOUNTAIN	0.00	0.00									
CAVE CREEK	DESERT MOUNTAIN	BARTLETT DAM	0.00	0.46	0.00	0.35	0.24	0.33					

2008 Intersection Collision Data, Sorted by Location

2008 Average Intersection Collision Rate = 0.53 collisions per million vehicles entering intersection

N/S STREET	E/W STREET	VOLUME	NO. OF COL	COL RATE
VIA LINDA	CHOLLA	12,200	0	0.00
104TH	SHEA	41,100	2	0.13
104TH	CHOLLA	2,800	0	0.00
104TH	CACTUS	5,600	3	1.47
104TH	SWEETWATER	2,400	0	0.00
108TH	VIA LINDA	10,600	1	0.26
ALMA SCHOOL	HAPPY VALLEY	16,300	1	0.17
ALMA SCHOOL	DYNAMITE	16,400	4	0.67
FRANK LLOYD WRIGHT	SHEA	57,300	18	0.86
FRANK LLOYD WRIGHT	VIA LINDA	44,200	9	0.56
FRANK LLOYD WRIGHT	CACTUS	31,200	7	0.61
FRANK LLOYD WRIGHT	SWEETWATER	32,300	0	0.00
FRANK LLOYD WRIGHT	THUNDERBIRD	31,500	1	0.09
FRANK LLOYD WRIGHT	RAINTREE	32,900	2	0.17
124TH	MOUNTAIN VIEW	2,500	1	1.10
124TH	SHEA	43,900	10	0.62
124TH	VIA LINDA	18,200	3	0.45
130TH	SHEA	42,800	5	0.32
130TH/132ND	VIA LINDA	7,200	0	0.00
136TH	SHEA	38,600	2	0.14
136TH	VIA LINDA	10,100	3	0.81

2008 - 1988 Intersection Collision Rate Comparison, Sorted by Location

Average Intersection Collision Rates:

2008=0.53 2006=0.64 2004=0.66 2002=0.54 2000=0.53 1998=0.52 1996=0.53 1994=0.58 1992=0.53 1990=0.56 1988=0.66

N/S STREET	E/W STREET	COL RATE 08	06	04	02	00	98	96	94	92	90	88
104TH	CHOLLA	0.00	1.01	0.00	0.00	0.00	0.00	0.59	0.70			
104TH	CACTUS	1.47	1.40	0.00	0.00	2.13	0.74	1.89	0.51	0.83	0.00	
104TH	SWEETWATER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
108TH	VIA LINDA	0.26	0.45	0.24	1.05	0.23	0.00					
ALMA SCHOOL	HAPPY VALLEY	0.17	0.50	0.50	0.19	0.00	0.00	0.00	0.00			
ALMA SCHOOL	DYNAMITE	0.67	1.26	0.45	0.96	2.70	1.77	0.00	3.04			
FRANK LLOYD WRIGHT	SHEA	0.86	0.80	0.94	0.38	0.45	0.31	0.70	0.31	0.29	0.96	
FRANK LLOYD WRIGHT	VIA LINDA	0.56	0.92	0.61	0.50	0.35	0.80	0.49	0.73			
FRANK LLOYD WRIGHT	CACTUS	0.61	0.74	0.51	0.86	0.43	0.52	0.75	0.43			
FRANK LLOYD WRIGHT	SWEETWATER	0.00	0.59	0.21	0.00	0.33	0.00	0.19	0.00			
FRANK LLOYD WRIGHT	THUNDERBIRD	0.09	0.65	0.33	0.00	0.12	0.12	0.00	0.30			
FRANK LLOYD WRIGHT	RAINTREE	0.17	0.30	0.40	0.20	0.24	0.71					
124TH	MOUNTAIN VIEW	1.10	0.86	3.42	0.83	0.00	0.00	1.95	1.61			
124TH	SHEA	0.62	0.49	0.78	0.60	0.51	0.19	0.38	0.37			
124TH	VIA LINDA	0.45	0.77	0.48	0.30	0.43	0.46	0.00	0.30			
130TH	SHEA	0.32	0.32	0.50	0.21	0.28	0.07					
130TH/132ND	VIA LINDA	0.00	0.00	0.00	0.00	0.00	0.00					
136TH	SHEA	0.14	0.43	0.36	0.42	0.30	0.32	0.09	0.00			
136TH	VIA LINDA	0.81	0.29	0.35	0.35	2.08						

APPENDIX H

QUEUE LENGTH ANALYSIS

Unsignalized Intersection
2015

Average Vehicle Length (ft): 25

Equation Used: storage length = 2 x (vehicles/hour)/(60 minutes/hour) x average vehicle length

Intersection	Approach	AM Peak (veh/hr)	Midday Peak	PM Peak (veh/hr)	Veh per 2 minutes	Storage Length (ft)
121st Street Driveway & Rio Verde Drive	EB Left	70	0	34	3	75
	WB Right	9	0	8	1	25

APPENDIX I

CITY OF SCOTTSDALE DESIGN STANDARDS AND POLICIES

CivTech

B. Angle of Intersection

A right-angle intersection provides the shortest crossing distance for intersecting traffic streams. It also provides the most favorable condition for drivers to judge the relative position and speed of intersecting vehicles. Where special conditions exist, intersection angles may diverge from a right-angle by a maximum of 2 degrees (up to 4 degrees with approval of the Transportation Department) on arterial streets and major collector streets; and by a maximum of 4 degrees (up to 15 degrees with approval of the Transportation Department) on minor and local collector streets, couplets and local streets.

C. Alignment and Profile

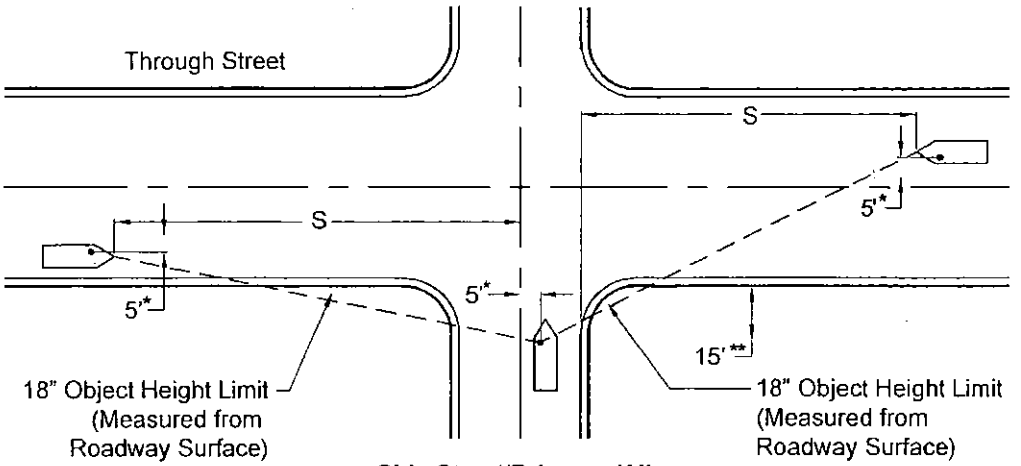
Intersections occurring on horizontal or crest vertical curves are undesirable. When there is latitude in the selection of intersection locations, vertical or horizontal curvature should be avoided. A line or grade change is frequently warranted when major intersections are involved. If a curve is unavoidable, it should be as flat as site conditions permit. Where the grade of the through roadway is steep, flattening through the intersection is desirable as a safety measure.

The maximum profile grade through an intersection is 6 percent for arterials and collector streets and 8 percent for local streets. The intersecting streets' profiles and cross slopes need to be coordinated with one another to ensure a safe and comfortable driving surface. Typically this may mean extending grades through the intersection for approximately 75 feet to 150 feet. Short vertical curves may be necessary in lieu of grade breaks.

D. Intersection and Driveway Sight Distance

In order to provide the opportunity for vehicles at an intersection to safely cross or make left or right turns onto a through street, **adequate sight distance must be provided**. Sight distance must also be provided for left turning traffic turning from the main street as described in AASHTO Intersection Sight Distance Case F. If opposing left turn lanes are present, the opposing left turns must be off-set in a positive way to allow for sight distance when opposing vehicles are present. See Figure 5.3-28 and Figure 5.3-29 for options. Sight distance should be based on the design speed for the roadway. Design speeds for new roadways should conform to those identified in Section 5-3.100 and Appendix 5-3A and Appendix 5-3B. Typically design speeds are 10 m.p.h. higher than the anticipated posted speed limit. The sight distance requirements outlined below are required for all private and public street intersections and at all intersections of driveways onto public or private streets. Internal driveway intersections on private property are excluded from these requirements.

Figure 5.3-26 depicts the technique used to determine the driver's eye location and an approaching vehicle; a line is then drawn to connect these 2 points. Continuous unobstructed line of sight must be provided along this line and throughout the approach to the intersection, providing an unobstructed sight triangle to the side street driver. Sight lines are to be drawn on roadway and landscaping plans to represent the areas that must be free of all objects and topography in excess of 18 inches above the roadway surface, however, certain vegetation will be allowed. Vegetation placed within the sight triangle will be of a low variety that remains below 18 inches when mature. Trees can be considered within the triangle as long as the canopies are above 8 feet, they are a single trunk variety, and they are not spaced in a configuration that creates a "picket fence" effect.



Side Street/Driveway/Alley
(Applies to stop controlled side street or all approaches to a signalized intersection for right-on-red traffic.

* 5 feet measured to nearest lane line or centerline.

**15 feet measured from face-of-curb or edge-of-travelway.

S = Intersection sight distance in feet on drivers left and right for right turns, left turns and through traffic. (See *2004 AASHTO Geometric Design of Highways and Streets* for additional sight distance requirements.)

(See Appendix 5-3A, Appendix 5-3B and Appendix 5-3C for distance S.)

FIGURE 5.3-26 INTERSECTION & DRIVEWAY DEPARTURE SIGHT DISTANCE REQUIREMENTS

1. Right-Angle Intersections

Right-angle intersections are those whose legs meet at an angle of 88 to 90 degrees. For these right-angle intersections the sight distances shown in Appendix 5-3A, Appendix 5-3B and Appendix 5-3C are to be used with Figure 5.3-26 to calculate the sight triangle. Appendices 5-3A and 5-3B present the intersection sight distances for all street classifications which were determined assuming passenger car traffic. Appendix 5-3C presents the sight distance requirements for varying roadway widths and design speeds for passenger cars, single unit trucks and combination trucks. If high volumes of truck traffic are anticipated, sight distances given in Appendix 5-3C will be used. Sight distances for vehicles turning left from the main street should also be considered and calculated based on the *AASHTO Geometric Design of Highways and Streets.*

2. Skewed Intersections

For skewed intersections where the intersection angles are less than 88 degrees, sight distances must be calculated in accordance with the procedures described in *AASHTO's Geometric Design of Highways and Streets.* Skewed intersection design must include appropriate design for pedestrian crossings and the location of curb ramps.

3. Intersections Within or Near a Curve

Sight distance measurements, identified as S in Figure 5.3-26, need to follow the curved street alignment when the intersection is within or near a horizontal curve.

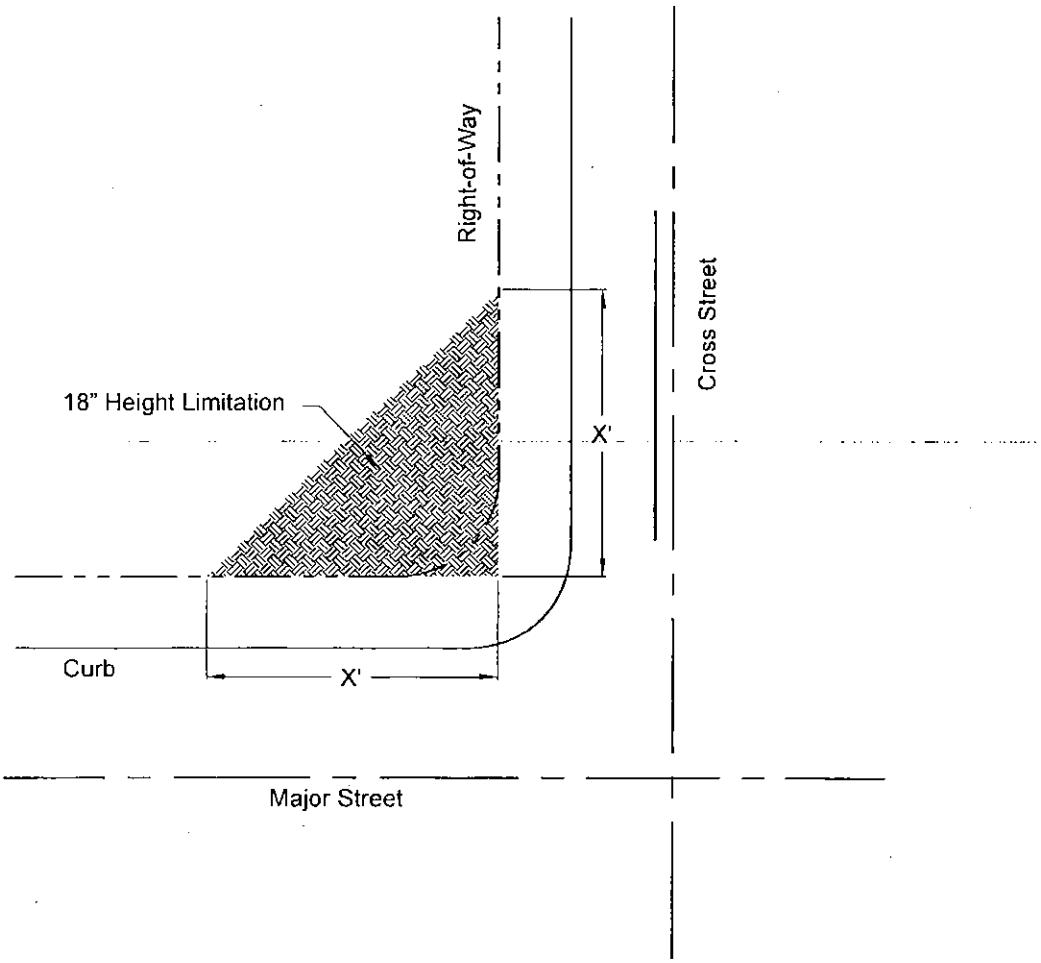
4. Traffic Safety Triangles

Traffic Safety Triangles should be used as a means to limit the height of structures, vegetation and other improvements on corner properties immediately adjacent to intersections. **Safety triangles are not to be used as a substitute for intersection sight distance!** Safety triangles provide additional visibility around corners for all intersection approaches and should be applied to the design of perimeter walls and

landscape features. Items within the safety triangle cannot be higher than 18" measured from the roadway surface. Figure 5.3-27 depicts the method used to determine the safety triangle location. The sight distance requirements contained in both Figure 5.3-26 and Figure 5.3-27 are applied at all corner lots.

5. Right-of-Way at Corners

A minimum of 25-foot radius rights-of-way shall be dedicated at street intersections to provide room for traffic control and sight distance.



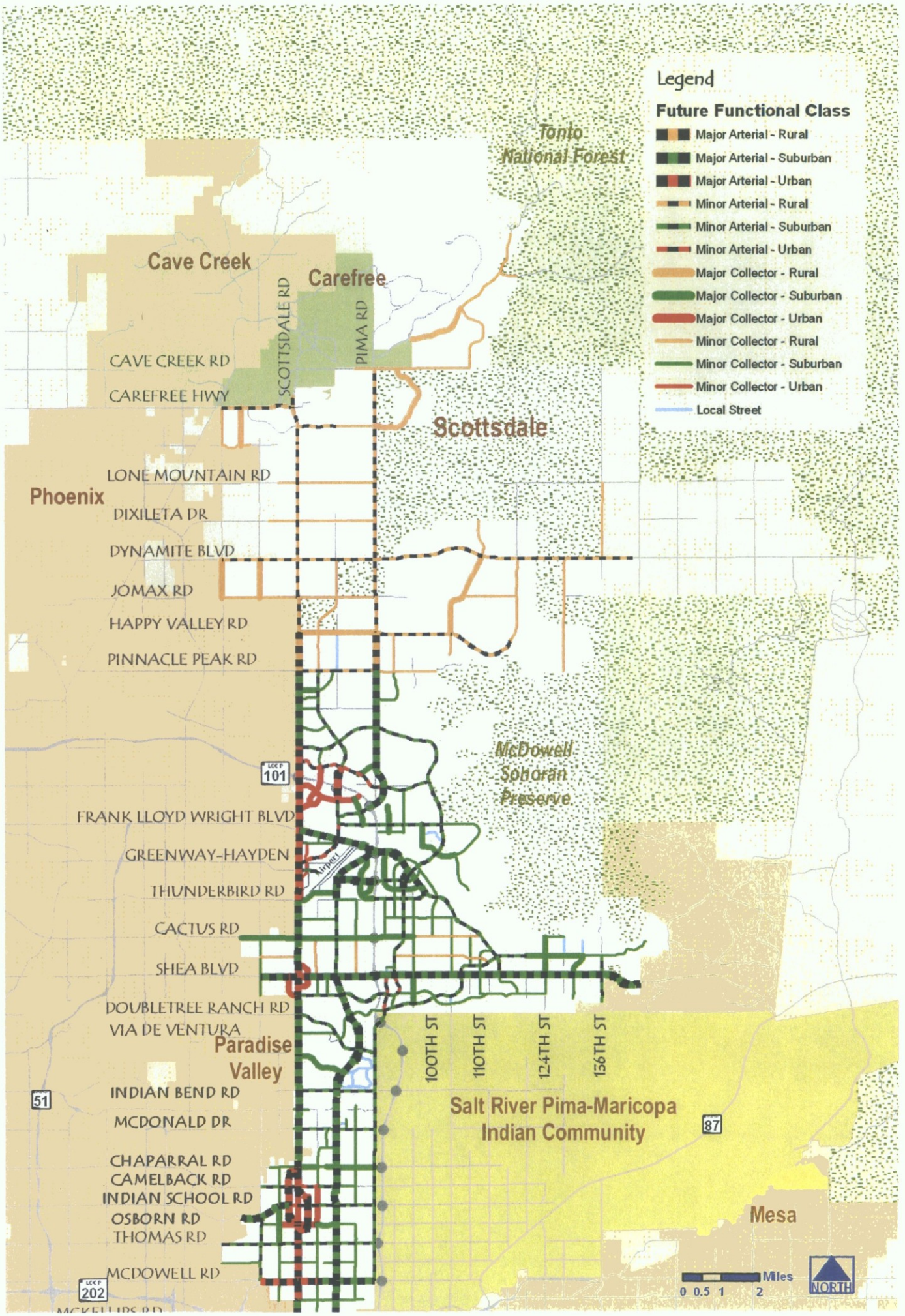
Major Street Classification	X (in feet)
Parkway, Expressway, Arterials, Major Collector	25
Minor Collector	35
* Local Streets	35 / 60 / 70

* If the standard right-of-way (46 ft. local residential, 60 ft. local collector) is not available, the safety triangle (X) shall measure 60 ft. on local residential streets and 70 ft. on local collector streets from the centerlines of the streets.

FIGURE 5.3-27 TRAFFIC SAFETY TRIANGLE ON CORNER PROPERTY

E. Auxiliary Lanes

An exclusive turning lane permits separation of conflicting traffic movements and removes turning vehicles from the flow of through traffic. Figure 5.3-28 and Figure 5.3-29 depict the


Legend
Future Functional Class
Major Arterial - Rural
Major Arterial - Suburban
Major Arterial - Urban
Minor Arterial - Rural
Minor Arterial - Suburban
Minor Arterial - Urban
Major Collector - Rural
Major Collector - Suburban
Major Collector - Urban
Minor Collector - Rural
Minor Collector - Suburban
Minor Collector - Urban
Local Street
Tonto National Forest
Cave Creek
Carefree
SCOTTSDALE RD
PIMA RD
CAVE CREEK RD
CAREFREE HWY
Scottsdale
Phoenix
LONE MOUNTAIN RD
DIXILETA DR
DYNAMITE BLVD
JOMAX RD
HAPPY VALLEY RD
PINNACLE PEAK RD
McDowell Sonoran Preserve
101
FRANK LLOYD WRIGHT BLVD
GREENWAY-HAYDEN
Airport
THUNDERBIRD RD
CACTUS RD
SHEA BLVD
DOUBLETREE RANCH RD
VIA DE VENTURA
Paradise Valley
100TH ST
110TH ST
124TH ST
156TH ST
51
INDIAN BEND RD
MCDONALD DR
Salt River Pima-Maricopa Indian Community
87
CHAPARRAL RD
CAMELBACK RD
INDIAN SCHOOL RD
OSBORN RD
THOMAS RD
Mesa
MCDOWELL RD
202
Miles
0 0.5 1 2
NORTH

TECHNICAL SOLUTIONS

CITIZEN REVIEW & NEIGHBORHOOD INVOLVEMENT REPORT
Scottsdale National Golf Club
March 23, 2015

Overview

This Citizen Review Report is being performed in association with a request for an amendment to the already approved site plan for Scottsdale National Golf Club located at 29001 N. 122nd Street. The amendment calls for a reconfiguration of the golf course and an addition of 367.6+/- acres to add additional golf holes. The underlying zoning will not change with this request. This Citizen Review Report will be updated throughout the process.

The entire project team is sensitive to the importance of neighborhood involvement and creating a positive relationship with property owners, residents, business owners, homeowners associations, and other interested parties. Communication with some of these parties has already begun and will be ongoing throughout the process. Work on compiling stakeholders and preparing for the neighborhood outreach began prior to the application filing and will continue throughout the process. Communication with impacted and interested parties may take place with verbal, written, electronic, and door-to-door contact.

Community Involvement

The outreach team has been communicating with neighboring property owners, HOA's, and community members by telephone, one-on-one meetings and small group meetings. Members of the outreach team will continue to be available to meet with any neighbors who wish to discuss the project. Additionally, they will be contactable via telephone and/or e-mail to answer any questions relating to the project.

Surrounding property owners, HOA's and other interested parties were noticed via first class mail regarding the project. The distribution of this notification met the City's requirements as specified in the Citizen Review Checklist. This notification contained information about the project, as well as contact information. This contact person will continue to provide,

ATTACHMENT #12

3-PP-2015
4/3/2015

4350 East Camelback Road, Suite G-200 • Phoenix, AZ 85018 • (602) 957-3434 • FAX: (602) 955-4505 • Em

as needed, additional information and the opportunity to give feedback. The notification also contained information regarding a neighborhood Open House that was held on December 16th, 2014 at The Four Seasons Resort for those who wished to learn more about the project. The site and time was posted with the Early Notification Sign prior to the Open House.

Nineteen interested people attended the Open House. Attendees were generally supportive of the project, with a couple of neighbors with questions regarding the placement and setback of the APS substation. There has been additional follow up with neighbors since the Open House regarding these issues.

Additionally, surrounding property owners were notified via first class mail of the application for preliminary plat review at an upcoming Development Review Board meeting. This notification included information about the preliminary plat application and contact information for the developer as well as the City, if they had questions.

A vital part of the outreach process is to allow people to express their concerns and understand issues and attempt to address them in a professional and timely matter. As previously stated the entire team realizes the importance of the neighborhood involvement process and is committed to communication and outreach for the project.

ATTACHMENTS:

Notification Letter

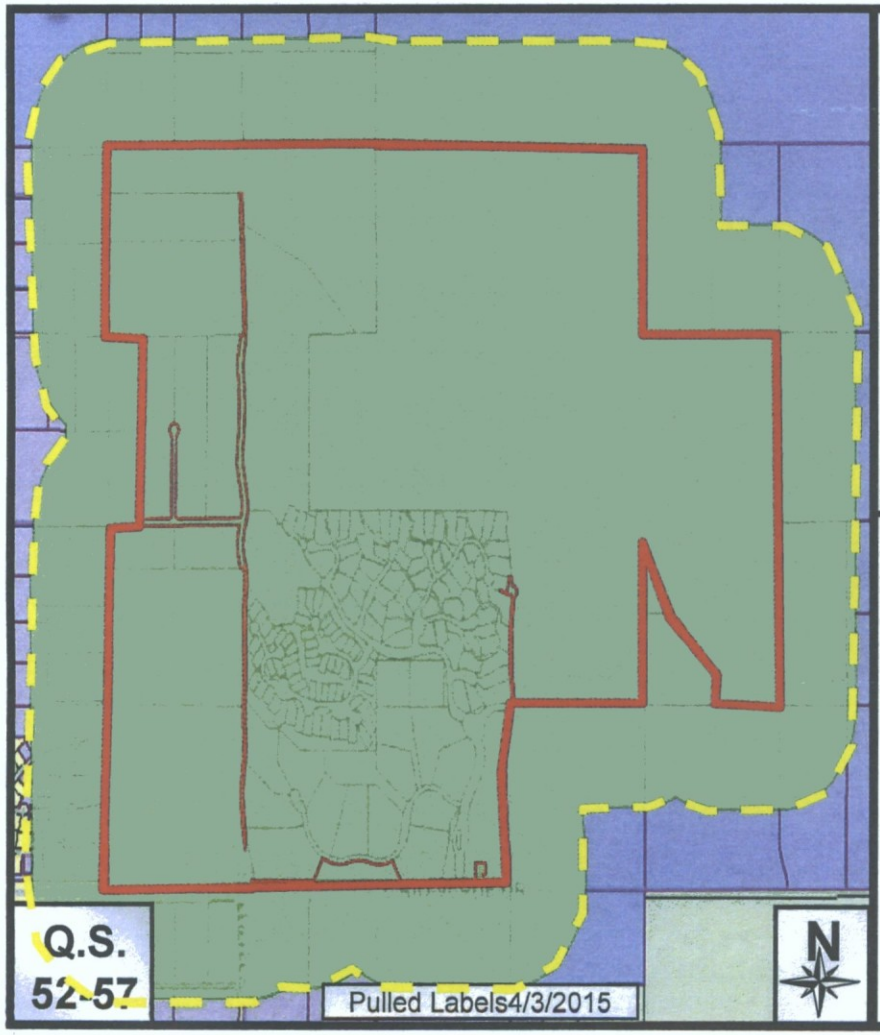
Notification List

Affidavit of Posting
Sign-in Sheets

Comment Cards

Prelim Plat Letter

City Notifications – Mailing List Selection Map



Map Legend:

Site Boundary

Properties within 750-feet
118 Postcards

Additional Notifications:

- Interested Parties List
- Adjacent HOA's
- P&Z E-Newsletter
- Facebook
- Twitter
- City Website-Projects in the hearing process

Scottsdale National Golf Club

3-PP-2015

ATTACHMENT #13