

COMMITTED TO VISION

Diversity allows us to serve our clients during each phase of a project, including advance/preliminary planning services, design and finally construction oversight.



COMMERCIAL | INDUSTRIAL | RESORTS | HOTELS | EDUCATIONAL FACILITIES

Commercial/Industrial Development Qualifications

Background and Experience

One of the cornerstones of success at RBF Consulting (RBF) has been the firm's involvement in the planning, engineering design and construction of commercial and industrial developments. RBF was involved in many of the early commercial / industrial projects incorporating the total planned development concept. Components of these projects include commercial, retail, hotel, restaurant, entertainment, and industrial uses.

RBF's experienced staff of registered planners, civil engineers, designers and surveyors have the ability to provide engineering design solutions to the client's needs in the areas of traffic circulation and control, utilities, water supply, sewage disposal and site grading and drainage.

RBF has the depth of staff and the experience level required to complete complex engineering designs on an accelerated time schedule in order to meet the requirements of our clients.

RBF has long recognized the need for cost-effective engineering design in the commercial / industrial development sector, and has responded with engineering work products that are not only timely in their completion, but also cost conscious in their design.

Representative projects include:

- Arizona Biltmore Grill Expansion (Phoenix, AZ)
- Avondale Auto Mall (Avondale, AZ)
- Brown and Brown Nissan (Chandler, AZ)
- Buckeye Elementary School (Sundance, Buckeye, AZ)
- Buckeye Industrial Park (Buckeye, AZ)
- Buckeye LDS Church (Buckeye, AZ)
- Buckeye Parkway Center (Buckeye, AZ)
- Casa Grande Regional Shopping Center (Casa Grande, AZ)
- Combined Arms Military Operations Training Facility (Twenty-nine Palms, CA)
- Compass Center Office Building (Phoenix, AZ)
- Foothills Corporate Park (Phoenix, AZ)
- Gateway Crossing (Avondale, AZ)
- Hall of Flame Fire Fighter Museum (Phoenix, AZ)
- Harrah's Ak-Chin Casino Hotel Expansion (Maricopa, AZ)
- JLE Manufacturing (Pinal County, AZ)
- Liberty Vistas 303 Business Park (Goodyear, AZ)
- Marriott's Canyon Villa at Desert Ridge Timeshares (Phoenix, AZ)
- Mesa Market Place (Maricopa County, AZ)
- Paradise Valley Marketplace (Phoenix, AZ)
- Peoria High School (Peoria, AZ)
- Permanent Party Dormitory (Luke Air Force Base, AZ)
- Pete and Mac's Animal Hospital (Avondale, AZ)
- San Tan Ford (Gilbert, AZ)
- Sarival LDS Church (Goodyear, AZ)
- Tolleson Town Center (Tolleson, AZ)
- Tucson Medical Center East Campus Expansion (Tucson, AZ)
- Tucson Medical Center Pediatric Expansion (Tucson, AZ)

Services Provided:

PRE-DEVELOPMENT

- *Due Diligence*
- *Financial Feasibility Studies*
- *Project Financing*

PLANNING AND ENTITLEMENTS

- *Master Planning and Design*
- *Specific Plans*
- *General Plan Amendments*
- *Zone Changes and Conditional Use Permits*
- *NEPA Approvals*

CIVIL / STRUCTURAL ENGINEERING

- *Survey and Mapping*
- *Water and Sewer System*
- *Street and Highway Design*
- *Utilities Master Planning*
- *Grading and Drainage*
- *Flood Control*
- *Environmental Resource Protection*
- *Cost Estimating*
- *GIS*

CONSTRUCTION

- *Field Surveys*
- *Contract Administration*
- *Inspection / Observation*
- *Cost Control and Estimating*
- *Value Engineering / Analysis*
- *Scheduling and Management*
- *Construction Mitigation Monitoring*

Arizona Biltmore Grill Expansion

Phoenix, AZ

RBF provided civil engineering and surveying services for the renovation and expansion of the Grill at the Arizona Biltmore Resort and Spa. The project involved renovating and expanding the existing 4,800 sf enclosed restaurant to 8,800 sf with an additional 1,500 sf outdoor patio. The expansion will include a new structural system and complete exterior enclosure while preserving the historic finish materials to reuse during the renovation.

RBF's work included topographic surveying, grading and drainage, and utility design. Design challenges included creating a design that preserved the existing landscaping and architecture of the historic site while bringing the renovated restaurant into compliance with current codes, as well as, meeting a strict schedule so that construction would occur during off-peak times for the resort.

Highlights:

- Civil Engineering
- Topographic Surveying

Reference:

Pyramid Project Management,
LLC
555 Winderley Place, Suite 300
Maitland, FL 32751
Mr. Wade Fischer,
407/571-6983



Avondale Auto Mall

Avondale, AZ

RBF provided civil engineering, water and wastewater engineering, surveying (ALTA and topographic), traffic engineering, and landscape design services for the new 100-acre Avondale Auto Mall. The site was designed to accommodate 12 dealerships and is located south of I-10 between 99th and 107th Avenues in Avondale, Arizona.

RBF conducted preliminary and final engineering addressing the drainage, water, sewer, roadway, traffic, lighting, and geotechnical issues. From the preliminary engineering and analyses, we developed and issued design concept reports, a traffic study, water and sewer needs analysis reports, preliminary lighting layouts, and a geotechnical report. The final designs for the project included three and a half miles of major sewer extension, three miles of water main extension to the site, one mile of water line within the site, one and a half miles of off-site street improvements, one mile of street improvements within the development, street lighting plans, signing and striping plans, grading, drainage, NPDES, platting, and landscaping plans.

RBF undertook the coordination efforts for the project. The agencies involved the City of Avondale, the Town of Tolleson, ADOT, MCDOT, and the Maricopa County Department of Environmental Services. RBF has provided preliminary engineering, construction documents and construction staking services for nearly all of the dealerships in the Auto Mall.

Highlights:

- Complete Site Design including Grading, Drainage, Water, Sewer, Traffic, Roadway, and Landscaping
- Technical Assistance during Construction
- Multi-Agency Coordination

Reference:

Automotive Investment Group
1300 E Camelback Rd.
Phoenix, AZ 85014-3312
Mr. Mike Pacheco,
602/230-1051



Buckeye Parkway Center

Buckeye, AZ

RBF provided preliminary and final engineering design and survey services for an 80 acre commercial retail development located at the Airport Road / I-10 Traffic Interchange. Preliminary project services included: A.L.T.A. survey; Topographic Survey; Preparation of Water and Sewer Master Plans; Preparation of a Traffic Impact Study; Preparation of a

Master Drainage Report; And assisting the project architect with obtaining site plan approval. Final project design services included the preparation of plans, specifications and estimates for: Onsite paving, grading, and drainage; Onsite storm drain, and underground retention; Onsite domestic water, and fire line; Onsite sewer lines; Preparation of an Address Map for the site; Preparation of a Final Plat for the site and Map of Dedication for the adjoining roadways; The creation and submission to FEMA of a Conditional and Final Letter of Map Revision to adjust the floodplain on the site; Traffic Signal design; Retaining wall and flood wall design; One half mile of full arterial street improvements for Roosevelt Street; Two Thirds of a mile of full arterial street improvements for Airport Road; Three quarters of a mile of two lane roadway for Airport Road; Signing and striping plans for the aforementioned roadways; 14,000 linear feet of combined offsite sewer ranging in size from 10" to 24" inch; 16,500 linear feet of combined offsite water distribution and transmission mains ranging in size from 12" to 20"; Full design of two wells; Full design of the Airport Road Water Campus.



Highlights:

- Civil Engineering Services
- Construction Management and Inspection Services
- ALTA Survey and Topographic Survey
- Water and Sewer Master Plans
- Traffic Impact Study
- Master Drainage Report
- PS&E for onsite paving, grading, and drainage, onsite storm drain and underground retention, onsite and offsite water distribution and transmission mains, onsite and offsite sewer
- Creation and submission to FEMA of a Conditional and Final Letter of Map Revision
- Traffic Signal Design
- Retaining Wall and Flood Wall Design
- Signing and Striping Plans
- Full design of two wells
- 1 mile of full arterial street improvements
- 3/4 of a mile of two lane roadway for Airport Road

Project challenges included: Creating a comprehensive water and sewer solution for both this project site and the surrounding properties. Coordinating with Arizona Department of Transportation on their existing Airport Road off-ramp from Interstate 10; Rerouting of Interstate 10 drainage around the project site and coordinating with the Flood Control District of Maricopa County with regards to the adjacent Tuthill channel; Designing floodwalls adjacent to the Tuthill channel; Designing the water system to meet large fire flow demands required by the proposed tenants of the project; Providing a second point of access to the site by extending Airport Road from Roosevelt Street to Yuma Road via a 2 lane rural roadway; and, Addressing arsenic maximum contaminant levels in the groundwater through an arsenic treatment system at the water campus. These plans were coordinate through the Town of Buckeye, Arizona Department of Transportation, Maricopa County Department of Transportation, FEMA, Flood Control District of Maricopa County and Maricopa County Environmental Services.

Casa Grande Regional Shopping Center

Casa Grande, AZ

The Casa Grande Regional Shopping Center encompasses over 760 acres and is the premiere commercial development within the City of Casa Grande. The subject property consists of approximately 395 acres located immediately east of Interstate 10, bounded by the Promenade Shopping Mall (a Westcor Development) to the south, Kortsen Road (Kleck Road) to the north, and Mission Parkway to the east. Also included in this acreage total is an out parcel located near the northwest corner of Florence Boulevard and Hacienda Road.

The Casa Grande Regional Shopping Center is a true mixed-use development. Upon ultimate buildout the property will contain single large retail uses, multiple use shopping centers, an automall, hotels, a hospital, medical office/support facilities, as well as an appropriate mixture of residential uses and densities. RBF provided entitlement, planning, site design, transportation design, survey, and civil engineering services for this project. Work included the design of a master site plan, coordinating the design of both offsite and onsite infrastructure improvements as well as consulting with the client on the development of a freeway traffic interchange and freeway overpass to service the property.

Highlights:

- 761-Acre Mixed-Use Development
- Land Planning / Entitlement / Theming / Signage
- Auto Mall / Medical Campus / Retail / Residential
- Transportation Issues / Interchange / Overpass

Reference:

Insight Holdings
2200 Paseo Verde Parkway
Suite 330
Henderson, NV 89052
Mr. Jim Zeiter, 702/436-3133



Desert Samaritan Hospital Office Building

Mesa, AZ

RBF provided civil engineering and surveying services for the construction of a five story medical office building and a seven story parking structure on the Desert Samaritan Hospital Campus.

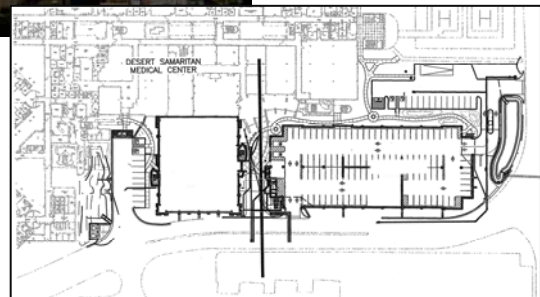
The scope of work performed by RBF included a topographic survey of the site, grading and drainage plans, water and sewer design, fire protection design, demolition plans and the creation of the storm water management plan. The Project also included the relocation of existing utilities and drainage appurtenances in order to accommodate the new office building and parking structure.

Highlights:

- Civil Engineering
- Utility Relocation
- Topographic Surveying

Reference:

Orcutt/Winslow Partnership
3003 N Central Ave
Phoenix, AZ 85012
602/257.9029



Gateway Crossing

Avondale, AZ

RBF provided professional consultant services including design plans for onsite and offsite improvements for this 29-acre commercial development located at the southwest corner of 99th Avenue and McDowell Road. Onsite improvements included paving, drainage, and storm drain; along with the sewer and water systems for this commercial retail site. Offsite improvements included half street improvements for 99th Avenue and McDowell Road.

RBF undertook the coordination efforts for the project. The agencies involved the City of Avondale, the Town of Tolleson, ADOT, Salt River Project, and the Maricopa County Department of Environmental Services. RBF has provided preliminary engineering, construction documents and construction staking services for the project.

Highlights:

- Complete Site Design including Grading, Drainage, Water, Sewer, Traffic, and Roadway
- Multi-Agency Coordination
- Construction Surveying Services



Harrah's Ak-Chin Casino Hotel Expansion

Maricopa, AZ

RBF performed onsite civil design and surveying services for the addition of a new five story hotel to the existing hotel and casino complex. The new hotel replaced portions of existing open areas and parking. Project scope included topographic survey, existing utility coordination, a precise grading, drainage and paving plan, and water and sewer plans. Plans were coordinated through the Ak-Chin Indian Community, and Pinal County.

Highlights:

- Topographic Surveying
- Precise Grading & Drainage
- Onsite Water, Sewer & Fireline
- EPA Compliance
- SWPPP & Storm Water Management Plan

Reference:

RSP Achitects
502 South College Avenue, Suite 203
Tempe, AZ 85281-3747
Shane Lucero, 480/889-2000



Liberty Vistas 303 Business Park

Goodyear, AZ

RBF worked with Liberty Property Trust to develop a 110-acre industrial site in Goodyear, Arizona. The project will have 5 buildings and over 1.7 million square feet of building area. To facilitate Liberty's tight building schedule, RBF worked with the architect and other subconsultants to split the plans into 2 phases.

To complete the work needed for the site plan, Liberty Vistas had to have extensive offsite drainage studies. RBF was able to accomplish this using data from the ADMS, FEMA, and HEC models created by the engineers to quantify the flows impacting the site. RBF also worked with the city engineers to develop an innovative low-flow channel that helped the client maximize useable area onsite.

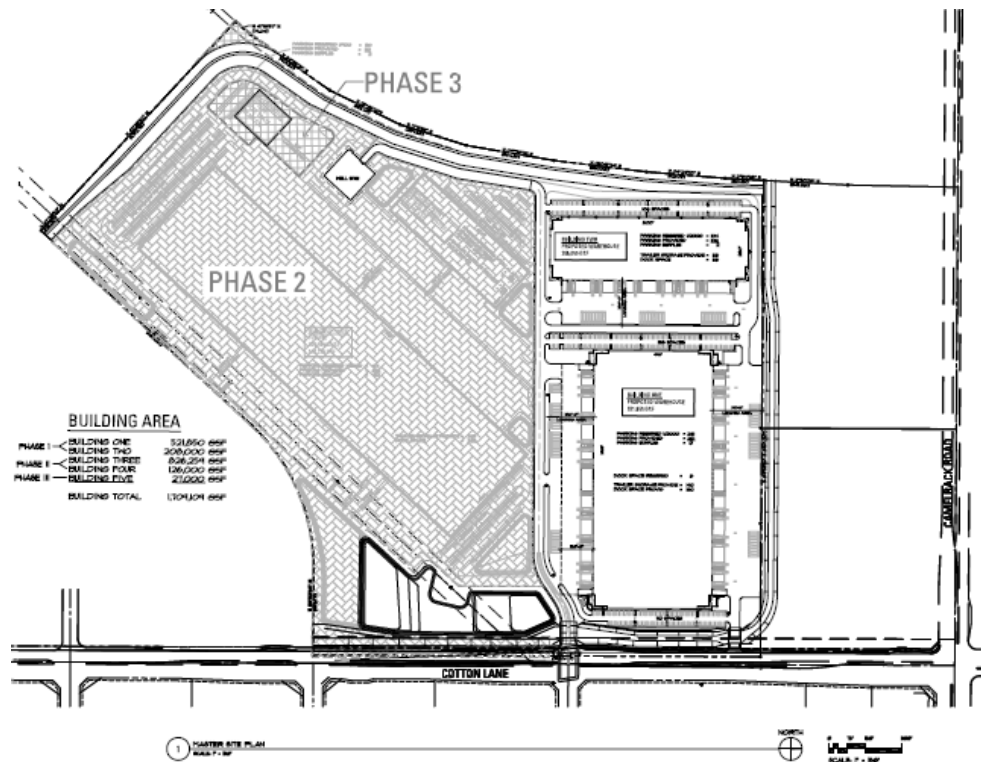
RBF prepared master water and sewer reports and drainage reports. In addition, RBF assisted the client by coordinating with surrounding developments to establish demands and costs for a well site on the property, including plans for all the transmission and distribution lines to make the site feasible.

Highlights:

- 260 Acres (393 Lots) of Residential Development
- Grading, Paving, Water, Sewer, and Stormwater Plans

Reference:

Liberty Property Trust
Eight Penn Center
1628 John F Kennedy Blvd.,
Suite 1100
Philadelphia, PA 19103
Mr. Bill Fisher, AIA,
215/787-8072



Marriott's Canyon Villas at Desert Ridge

Scottsdale, AZ

RBF provided professional consulting services for a six-phase timeshare resort development within the Desert Ridge Master Plan. The project is on a 22-acre site and includes 252 condominium units. RBF worked closely with the developer, the City of Phoenix, the Desert Ridge Design Review Board, and the neighborhood to design the project. Close coordination was also needed with the State Land Department, who was responsible for overseeing storm water pollution prevention and 404 permits for the Desert Ridge community. The site mostly drains into a 404 permit-designated wash. Our services included survey, grading and drainage, cost estimates, offsite water, onsite water and sewer, storm water plans, dry utility layout and coordination, mapping, and construction administration. The Canyon theme for landscaping includes many rock formations and waterfalls requiring close coordination with the landscape architect. The project also included coordination with the adjacent JW Marriott Hotel development and golf course.

Highlights:

- 22-acre Site, 252 Condominium Units
- Extensive Coordination with Developer, City of Phoenix, Desert Ridge Design Review Board, State Land Department, Community, Landscape Architect for Canyon Theme, and Adjacent JW Marriott Hotel Development and Golf Course
- Survey, Grading/Drainage, Cost Estimates, Offsite Water, Onsite Water/Sewer, Storm Water Plans, Dry Utility Layout/Coordination, Mapping, and Construction Administration

Reference:

Marriott Ownership Resorts, Inc.
7400 Shadow Ridge Road
Palm Desert, CA 92211
Mr. Dan French, 760/779-0133



Permanent Party Dormitory

Luke Air Force Base, AZ

RBF provided civil engineering, surveying and landscape architecture services for the design-build construction of a Permanent Party Dormitory on Bong Lane at Luke Air Force Base. The project involved demolition of two outdated facilities and the construction of a new 108-room dormitory to house officers in training. Site amenities include a basketball court, volleyball court, pavilion picnic areas and new parking.

RBF's work included topographic surveying, construction staking and grading, drainage, utility and landscaping design. The unique design presented by the team expanded and relocated parking options to create additional areas for the base to construct another dormitory building in the future. Storm water systems included bio-retention basins that allowed the project to meet water quality goals for LEED® Certification. RBF also designed vehicular setbacks in accordance with AT/FP guidelines.

Highlights:

- Civil Engineering
- Topographic Surveying
- Landscape Architecture

Reference:

Straub Construction
5256 S. Mission Road, Suite 310
Bonsall, CA
Mr. Quinn Tom, 760/414-9000



P-971A&C Combined Arms Military Operations on Urban Terrain (CAMOUT) Phases I and II

MCAGCC Twentynine Palms, CA

The U.S. Marine Corps was in need of a training facility that could accommodate a 7,000-troop Marine Air-Ground Task Force to help train Marines in urban warfare. With a majority of the world's population living in urban cities, towns and villages, the battlefield of the future will predominantly be in an urban environment. Urban warfare presents unique and complex challenges in areas of weaponry and tactical operations, as well as humanitarian relief and peacekeeping operations.

The Combined Arms Military Operations in Urban Terrain (CAMOUT) being developed in three phases at the Marine Corps Air Ground Combat Center is expected to be complete in 2010 to accommodate urban warfare training needs. At build out, the project will feature more than 1,500 MOUT structures.

RBF provided civil design, construction surveying and construction support for Phase I of this design build project, which consists of 44 one- to five-story steel-framed and concrete buildings. The faux "city" is focused on development of an urban core with middle-eastern aesthetics, dirt roads, and a dry river-wash crossing. The existing dry river, which is up to 80 feet wide in some areas, was incorporated as a project feature. RBF prepared a dry river wash plan and a storm drain/earthen bridge plan to cover vehicular and pedestrian traffic over the dry river wash.

The civil engineering work included existing record drawing research, conceptual and final design, a hydrology study, Storm Water Pollution Prevention Plan, and grading and drainage plans. Hydrology included a combination of surface drainage and limited underground storm drains over approximately nine urban developed blocks in the Urban Core District of the MOUT. Due to the density of the proposed development, small retaining walls and stepped buildings were also required.

RBF is currently providing design services for Phase II which will be three times the size of Phase I. Phase II design also includes an extension of the dry river wash and additional dry river crossings with one "blown-out" crossing. The combined Phases I and II projects covers approximately 145 acres.



Highlights:

- Designed Facility to help Train Marines in Urban Warfare
- Existing Record Drawing Research
- Hydrology Study
- Grading and Drainage Plan
- Dry River Wash Plan
- Storm Drain/Earthen Bridge Plan
- Horizontal Control Plan
- Detail Plan
- Storm Water Pollution Prevention Plan
- Operation and Maintenance Support Information (OMSI) Exhibits
- Basis of Design
- Final Record Drawings
- Field Survey

References:

Soltek Pacific (Client)
2424 Congress Street, Suite A
San Diego, CA 92110-2888
Mr. Willy Naylor, 619/296-6247

NAVFAC Central IPT (Owner)
Mr. Vernon Hunt, 619/532-3158

