

**PRELIMINARY INITIAL
SITE ASSESSMENT**

**31.4-ACRE PROPERTY ALONG
TANQUE VERDE ROAD
FROM CATALINA HIGHWAY TO
HOUGHTON ROAD
TUCSON, ARIZONA**

Prepared for:

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INTRODUCTION

RS Engineering subcontracted WestLand Resources, Inc. (WestLand) on behalf of Pima County Department of Transportation to perform a Preliminary Initial Site Assessment (PISA) for an approximately 31.4-acre project area (“the Property”) in Tucson, Pima County, Arizona, as depicted in Figure 1. The Tanque Verde Road Property is generally the linear alignment of Tanque Verde Road, located between Catalina Highway and Houghton Road. The Property is generally referred to by the title of a previous study, the Environmental Assessment and Mitigation Report (EAMR). The proposed project will widen the two-lane roadway to a four-lane roadway and will include a curbed median, multi-use lanes, outside curbs, storm drains, landscaping, and pedestrian facilities.

PROJECT DESCRIPTION

The purpose of this investigation was to identify areas of potential contamination on the Property or sources for potential contamination migration from the immediately adjoining areas. This PISA was performed in accordance with the Arizona Department of Transportation PISA protocols and Pima County Department of Transportation guidance. This protocol requires review of readily available environmental records pertaining to the site and nearby properties, and a field visit to observe on-site conditions.

DESCRIPTION OF SUBJECT PROPERTY

The Property is located in portions of Sections 34, 35, and 36, Township 13 South, Range 15 East, and Sections 1, 2, and 3, Township 14 South, Range 15 East, of the Gila and Salt River Baseline and Meridian. It is partially within the incorporated limits of the city of Tucson, and partially within unincorporated Pima County (Figure 1). The Property consists of the right-of-way for Tanque Verde Road between Catalina Highway and Houghton Road.

The Property consists of a linear alignment for approximately 1.75 miles with an average width of 150 feet. The surficial material within the Property is alluvium of the Tanque Verde Creek valley. Tanque Verde Creek flows south of the Property in a western direction. The road alignment traverses the slope of the nearby drainage and the elevation range slopes gently to the east, from 2,560 to 2,600 feet above mean sea level. Stormwater runoff flows in a southwesterly direction toward Tanque Verde Creek.

Currently, the Property is used as a transportation (Tanque Verde Road) and utility line corridor. The Property is owned by Pima County. Detailed mapping of the Property, including all cross streets, easements, washes, and other landmarks are depicted in the roadway improvement engineering drawings prepared by RS Engineering and provided separately.

SITE RECONNAISSANCE

On January 22, 2008, WestLand environmental specialists Christopher Rife and Kate Fournier performed a site reconnaissance to assess existing environmental conditions on the Property. Photographs documenting pertinent site features are provided in Appendix C.

METHODOLOGY AND LIMITING CONDITIONS

The site reconnaissance was conducted by pedestrian and vehicular survey. WestLand's reconnaissance included the Property and observation of adjoining properties from publicly accessible areas.

The site reconnaissance was limited to a visual inspection of aboveground features that might suggest the presence or likely presence of recognized environmental conditions impacting the Property. The onsite reconnaissance does not provide information regarding potential sources of contamination below the ground surface. However, in cases of subsurface contamination, aboveground indicators such as obvious stress to plant life would be noted.

GENERAL SITE SETTING

The Property includes approximately 31.4 acres and contains a transportation and utility line corridor. Tanque Verde Road, several adjoining roads, and natural open space are included within the Property. Adjoining property consists of open space, residential development, and commercial development. No industrial property usage was noted on any adjoining property.

Brown and Lowe (1994)¹ identify the Property as occurring in the Arizona uplands subdivision of the Sonoran desertscrub biotic community. Dominant plant species observed in undisturbed portions of the Property include velvet mesquite (*Prosopis velutina*), desert broom (*Baccharis sarothroides*), and Engelmann's cholla (*Opuntia engelmannii*). Additional plant species observed include Palmer amaranth (*Amaranthus palmeri*), foothills palo verde (*Parkinsonia microphyllum*), blue palo verde (*P. floridum*), eucalyptus (*Eucalyptus* sp.), catclaw acacia (*Acacia greggii*), white-thorn acacia (*Acacia constricta*), desert hackberry (*Celtis reticulata*), and desert zinnia (*Zinnia acerosa*).

Undisturbed land along the right-of-way and in the vicinity of the Property displays physical and biological characteristics consistent with Brown and Lowe's description. There are numerous areas within and adjacent to the Property that are indicative of human-caused disturbance and generally include cleared and/or landscaped areas adjacent to the roadways and the roadways themselves.

¹ Brown, D.E. and C.H. Lowe. 1994. Biotic communities of the Southwest. Companion map to: Brown, D.E. (ed.). 1994. Biotic communities: southwestern United States and northwestern Mexico. University of Utah Press, Salt Lake City.

We made the following specific observations:

- Several buried utilities, including water, sewer, electrical boxes, transformers, and electric transmission lines with occasional single pole-mounted transformers were present within the Property. In addition, there were several culverts, concrete-lined channels, sewer manhole covers, and concrete and gabion-lined inlets located within the Property. Several vertically placed blue pipes were observed within the Property. These pipes were labeled as Big Fink Testing, a company that installs cathodic protection test stations. WestLand assumes that these pipes were probably installed to protect water pipelines.
- Additional anthropogenic disturbances and improvements were observed along Tanque Verde Road and include cleared land, landscaped areas, fence-lines, minor incidental household waste, and extremely small amounts of construction debris, namely concrete chunks. An adjoining property south of the Property, along a small drainage, contained a pile of concrete pieces used as erosion control for the channel's bank. This amount of construction debris is not considered to be a recognized environmental condition.
- Commercial properties, including several gas stations, were located west and north of the Property, near the intersection of Tanque Verde Road and Catalina Highway. These commercial properties are expected to contain minimal amounts of chemicals and are not considered recognized environmental conditions. Some of the commercial properties located in this area that may contain chemicals include Ace Hardware, Walgreens, and Patios Pools and Spas. Gas stations typically utilize underground storage tanks for fuel storage, and can be recognized environmental conditions. The closest gas station, Arizona Fuels, was located southwest of the Property, west of Catalina Highway, and contained approximately four underground storage tanks of diesel and gasoline fuels. No hazardous waste was observed on the Property and no industrial activity is currently located near the Property.
- North of the Property, near the eastern end, Tucson Water owns a parcel of land that contains an air pressure tank, electrical control panel, a building with signage identifying on-site storage of bleach, and a large transformer with evidence of leakage. This oil staining was only observed on the transformer itself and not on the pad. It is WestLand's opinion that the stained transformer is not a recognized environmental condition.

Hazardous Substances in Connection with Identified Uses

No hazardous substances in connection within identified uses were observed on the Property. There was no visible evidence of hazardous substances on or near the Property.

Hazardous Substance Containers and Unidentified Substance Containers

No hazardous substance or unidentified substance containers were observed on the Property or on adjoining properties.

Storage Tanks

No storage tanks were observed on the Property. Arizona Fuels, located west and southwest of the Property, stores approximately four underground tanks containing diesel and gasoline fuels. A building owned by Tucson Water north of the Property contained signage identifying storage of bleach.

PCB Equipment

Concern over the toxicity and persistence in the environment of polychlorinated biphenyls (PCBs) led Congress in 1976 to enact §6(e) of the Toxic Substances Control Act (TSCA) that included prohibitions on the manufacture, processing, and distribution in commerce of PCBs. Thus, TSCA legislated true “cradle to grave” (i.e., from manufacture to disposal) management of PCBs in the United States. If present, electrical transformers would provide the most likely potential for release of PCBs onto the Property. There were several transformers noted on-site and in the immediate vicinity of the Property but none appeared to be leaking, except for the one located north of the Property on land owned by Tucson Water. This transformer only had minor amounts of leakage (oil stains) on the transformer and showed no signs of leakage on the pad. None of the transformers located on or near the Property are recognized environmental conditions.

Solid Waste Disposal

The Resource Conservation Recovery Act (RCRA) was enacted by Congress in 1976 and amended in 1984. The Act’s primary goal is to protect human health and the environment from the potential hazards of waste disposal. Unauthorized solid waste disposal provides the potential for hazardous and regulated substances to impact a project area in the absence of generating activities. No evidence of solid waste disposal was observed on the Property.

REVIEW OF REGULATORY DATABASE REPORT

WestLand reviewed a variety of regulatory records to determine if any past uses of the Property or within the adjoining areas may have led to recognized environmental conditions at the Property.

STANDARD ENVIRONMENTAL RECORD SOURCES

WestLand contracted with Environmental Data Resources, Inc. (EDR) of Milford, Connecticut, to conduct an electronic search of regulatory agency databases for references to the Property and surrounding lands within ASTM-recommended search distances. The database information provided by EDR is summarized below. A copy of the EDR environmental report that describes the databases searched, the search distances, and the dates the databases were last updated is provided in Appendix B.

Federal and state ASTM-required databases and supplemental databases were searched by EDR, as were three EDR proprietary databases. The Property and nearby properties were not identified on any database searched by EDR. Table 1 lists the databases searched.

Table 1. Databases Searched

Acronym	Full Title	Type
NPL	National Priority List	Federal ASTM Standard
Proposed NPL	Proposed National Priority List Sites	Federal ASTM Standard
Delisted NPL	National Priority List Deletions	Federal ASTM Standard
NPL Liens	Federal Superfund Liens	Federal ASTM Standard
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System	Federal ASTM Standard
LIENS 2	Comprehensive Environmental Response, Compensation, and Liability Information System	Federal ASTM Standard
CORRACTS	Corrective Action Report	Federal ASTM Standard
RCRA LQG	RCRA Large Quantity Generator (of hazardous waste, over 1,000 kilograms per month)	Federal ASTM Standard
RCRA SQG	RCRA Small Quantity Generator (of hazardous waste, between 100 and 1,000 kilograms per month)	Federal ASTM Standard
RCRA TSDF	RCRA Treatment, Storage, and Disposal Facility	Federal ASTM Standard
RCRA CESQG	RCRA Conditionally Exempt Small Quantity Generator	Federal ASTM Standard
ERNS	Emergency Response Notification System	Federal ASTM Standard
HMIRS	Hazardous Materials Information Reporting System	Federal ASTM Standard
DOT OPS	Incident and Accident Data	Federal ASTM Standard
US ENG CONTROLS	Engineering Controls Site List	Federal ASTM Standard
US INST CONTROL	Sites with Institutional Controls	Federal ASTM Standard
DOD	Department of Defense Sites	Federal ASTM Standard
FUDS	Formerly Used Defense Sites	Federal ASTM Standard
US BROWNFIELDS	A Listing of Brownfield Sites	Federal ASTM Standard
US CDL	Clandestine Drug Labs	Federal ASTM Standard
CONSENT	Superfund (CERCLA) Consent Decrees	Federal ASTM Standard
ROD	Records of Decision	Federal ASTM Standard
UMTRA	Uranium Mill Tailings Sites	Federal ASTM Standard
DEBRIS REGION 9	Torres Marinez Reservation Illegal Dump Site Locations	Federal ASTM Standard
ODI	Open Dump Inventory	Federal ASTM Standard
TRIS	Toxic Chemical Release Inventory System	Federal ASTM Standard
TSCA	Toxic Substances Control Act	Federal ASTM Standard
FTTS	FIFRA/TSCA Tracking System – FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)	Federal ASTM Standard
SSTS	Section 7 Tracking Systems	Federal ASTM Standard
ICIS	Integrated Compliance Information System	Federal ASTM Standard
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Federal ASTM Standard
RADINFO	Radiation Information Database	Federal ASTM Standard
PADS	PCB Activity Database System	Federal ASTM Standard
LUCIS	Land Use Control Information System	Federal ASTM Standard
MLTS	Material Licensing Tracking System	Federal ASTM Standard
MINES	Mines Master Index File	Federal ASTM Standard
RAATS	RCRA Administrative Action Tracking System	Federal ASTM Standard
SPL	Superfund Program List	State or Local ASTM Supplemental
AZ WQARF	Water Quality Assurance Revolving Fund Sites	State or Local ASTM Supplemental

Table 1. Databases Searched

Acronym	Full Title	Type
SWF/LF	Directory of Solid Waste Facilities	State or Local ASTM Supplemental
SWTIRE	Solid Waste Tire Facilities	State or Local ASTM Supplemental
AOCONCERN	Superfund GIS Information	State or Local ASTM Supplemental
AUL	DEUR Database	State or Local ASTM Supplemental
AST	List of Aboveground Storage Tanks	State or Local ASTM Supplemental
AZ Spills	Hazardous Materials Logbook	State or Local ASTM Supplemental
VCP	Voluntary Remediation Program Sites	State or Local ASTM Supplemental
DRYCLEANERS	Drycleaner Facility Listing	State or Local ASTM Supplemental
AZ DOD	Department of Defense Sites	State or Local ASTM Supplemental
BROWNFIELDS	A Listing of Brownfield Sites	State or Local ASTM Supplemental
CDL	Clandestine Drug Labs	State or Local ASTM Supplemental
Dry Wells	Drywell Registration	State or Local ASTM Supplemental
Aquifer	Waste Water Treatment Facilities	State or Local ASTM Supplemental
WWFAC	Waste Water Treatment Facilities	State or Local ASTM Supplemental
AZ AIRS	Arizona AIRS Database	State or Local ASTM Supplemental
AZURITE	Repository Listing Remediated Sites	State or Local ASTM Supplemental
INDIAN RESERV	Indian Reservations	Tribal Records
INDIAN UST	Underground Storage Tanks on Indian Land	Tribal Records
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land	Tribal Records
Manufactured Gas Plants	Manufactured Gas Plants	EDR Proprietary

Six sites were identified in the searched corridor area around the Property. Many of the sites are listed in several databases and are listed separately. For the purposes of this report, each site is described and the databases in which it falls are listed. In addition, information about the chronology of events with regard to the site is described and information about its closure is included if available.

Tanque Verde Cleaners is located at 9105 East Tanque Verde Road, just south of the Property near the intersection of Catalina Highway. This site is listed within the CERC-NFRAP, RCRA-NonGen, FINDS, SHWS, Manifest, and Drycleaners databases. Of these databases, the only significant database indicating any potential recognized environmental condition would be SHWS. Very little information about this SHWS was provided in the EDR report but it was stated that a Preliminary Assessment/Site Investigation was performed. Tanque Verde Cleaners is listed as an open Drycleaners site. Tanque Verde Cleaners is also listed several times within the AZ Manifest database. Manifest waste was shipped on a variety of dates ranging from 2004 to 2005 and included several different wastes: a spent halogenated solvent, chromium, tetrachoroethylene, and trichloroethylene.

Hortons Cleaners, located at 8987 East Tanque Verde Road, just west of the intersection of Tanque Verde Road and Catalina Highway, is listed as a RCRA-NonGen, FINDS, and Drycleaners sites. Hortons Cleaners was closed as a Drycleaner site at an unknown date. Field reconnaissance determined that this property has gone out of business. The other databases listed are not considered to be indicators of recognized environmental conditions.

Chevron Station 96233, located at 8845 East Tanque Verde Road, approximately ¼ mile west of the Property, is listed as a RCRA-NonGen, FINDS, LUST, and UST sites. Of these databases, LUST and UST sites are possible indicators of recognized environmental conditions. Notification of Chevron as a LUST site began in 1996 and closed in 1998. Three tanks at Chevron were identified as UST sites. All three were recorded as being in use and not reported as closed.

Fast 1 Hour Photo, located at 9155 East Tanque Verde Road, just south of the Property and east of the intersection with Catalina Highway. This site is listed as RCRA-NonGen and FINDS sites. Field reconnaissance determined that this commercial property is likely no longer in business. This site is not expected to be sources of recognized environmental conditions.

Amity Circle Tree Ranch, located at 10500 East Tanque Verde Road approximately ¼ mile east of the Property is listed as a RCRA-NonGen site and is not expected to be a source of recognized environmental conditions.

Tanque Verde Mobil, located at 8980 East Tanque Verde Road, less than a 1/8th of a mile west of the Property was listed as a LUST site that closed in 2004 and 2005. Notification of a LUST site at Tanque Verde Mobil was made in 2003. It appears that two tanks historically leaked at Tanque Verde Mobil. ADEQ was notified that these tanks were leaking in 2003. In 2004 and 2005, when the soil tests met Tier 1 and 2 criteria the sites were closed. Tanque Verde Mobil also had six tanks listed as UST sites: Tank IDs 1, 2, 3, 4, 5, and 6. Tanks 1, 2, 3, and 4 were removed and closed in 2003. Tank 5 was reported to no longer be in use but information about its closure was not provided. Tank 6 was reported to be in use but no information about the date of closure or closure type was provided.

Circle K 2917, located at 8909 East Tanque Verde Road, about an 1/8th of a mile west of the Property, was listed as a LUST site and an UST site. It appears that two tanks at the Circle K leaked and were classified as LUST sites. Notification occurred in 1999 and closure took place in 2000. A suspected release case was notified and closed in 1999 but was determined to be a false alarm. These same two tanks were also registered as UST sites and closed in 1999.

The EDR Orphan Summary lists 12 sites unmappable by EDR due to inadequate information about their location. Based on WestLand's review of this list, all of the orphan sites are not sources of recognized environmental conditions potentially impacting the Property because they were either distant from the Property or closed in accordance with regulatory requirements.

CONCLUSIONS AND RECOMMENDATIONS

Based on findings of the ASTM environmental records search, the onsite Property reconnaissance, and the Property owner representative interview, WestLand has the following findings pertaining to the Property.

- No evidence leading to other potentially recognized environmental conditions was observed on the Property.
- The Property is not listed on any of the environmental databases that were searched. Six nearby sites were listed but do not pose any threat of environmental liability to the Property.
- Currently, the Property contains unoccupied parcels. Some nearby commercial land usage was identified near the western portion of the Property. Current residential land use occurs in all directions surrounding the Property.
- Linda Sagarnaja of Pima County Maps and Records stated that Tanque Verde Road, between Catalina Highway and Houghton Road, was established as a county road on April 7, 1941. She was not aware of the date that this section of road was paved. No other employees of Pima County that were contacted were able to provide a history of the Property.
- One environmental report, *Draft Environmental Assessment Report for Tanque Verde Road: Catalina Highway to Houghton Road*, prepared by RS Engineering and WestLand Resources, Inc. in 2002, was made available by the User. This report stated that the ADEQ LUST Project List and the Hazardous Unit Logbook were reviewed and no active or closed LUST sites were recorded in the Property vicinity. No hazardous spills were recorded in the Hazardous Response Logbook for the Property vicinity. In 2002, no sites that pose threat of environmental concern were identified.

This assessment has revealed no visible evidence of recognized environmental conditions in connection with the Property. No further investigation of the Property is recommended.

SIGNATURE OF ENVIRONMENTAL PROFESSIONAL



Christopher Rife, Senior Project Manager

August 7, 2008

Date

APPENDIX A

**COMPLETED
PISA FORM**

Preliminary Initial Site Assessment

Project No. _____ TRACS No. _____

Section I: Site Location Information

Assessor Parcel No. Multiple parcel numbers ADOT Parcel No. _____

Address/Route & Milepost Along Tanque Verde Road between Catalina Highway and Houghton Road

Section 34,35,36 Township 13 S Range 15 E $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$

And Sections 1,2,3 of Township 14 S, Range 15E

Latitude TP1 _____ Longitude _____

Site Characteristics: Past Land Use

Agriculture _____ Residential _____ Commercial _____ Industrial _____ Natural X

Vehicle Maintenance: _____ Chemical Storage: _____ UST System: _____

Septic System: _____ Water/Dry Well: _____ Pesticide/Herbicide _____

Other: Roadway

Section II: Site Surface Conditions

Dimensions: N/A Length 1.75 miles Width ~150'

Area: N/A _____ Sq. feet or _____ Sq. meters or 31.4 Acres

Topography: Relatively flat; 2,560 to 2,600 feet above mean sea level

Geology: Alluvium of the Tanque Verde Creek valley

Vegetation: Vegetation in undisturbed portions of the Property includes velvet mesquite (*Prosopis velutina*), desert broom (*Baccharis sarothroides*), Engelmann's cholla (*Opuntia engelmannii*), Palmer amaranth (*Amaranthus palmeri*), foothills palo verde (*Parkinsonia microphyllum*), blue palo verde (*P. floridum*), eucalyptus (*Eucalyptus* sp.), catclaw acacia (*Acacia greggii*), white-thorn acacia (*Acacia constricta*), desert hackberry (*Celtis reticulata*), and desert zinnia (*Zinnia acerosa*)

Structures: None

Utilities: Several buried utility lines for water and sewer, and aboveground electric power lines, are located within the right-of-way on both the north and south sides of the road. Aboveground evidence of these utility lines includes manhole covers, storm water culvert inlets and outlets, electrical boxes, transformers, and electric transmission lines.

Section III: Results of Database Review

No concerns on project Concerns on project _____
(Complete Section IV)

Section IV: Environmental Concerns

Observed: No evidence leading to any potentially recognized environmental conditions was
observed on the Property. _____

Suspected: None _____

Unusual Conditions: None _____

Section V: Recommendations

High Priority Phase 1: _____ Medium Priority Phase 1: _____ Low Priority Phase 1: _____

No additional survey required: Aerial Photograph Review: _____

Section VI: Comments

Consultant			
Name	Signature	Date	
ADOT			
Name	Signature	Date	

APPENDIX B

**REGULATORY
DATABASE
SEARCH
REPORT**

APPENDIX B-1

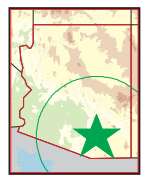
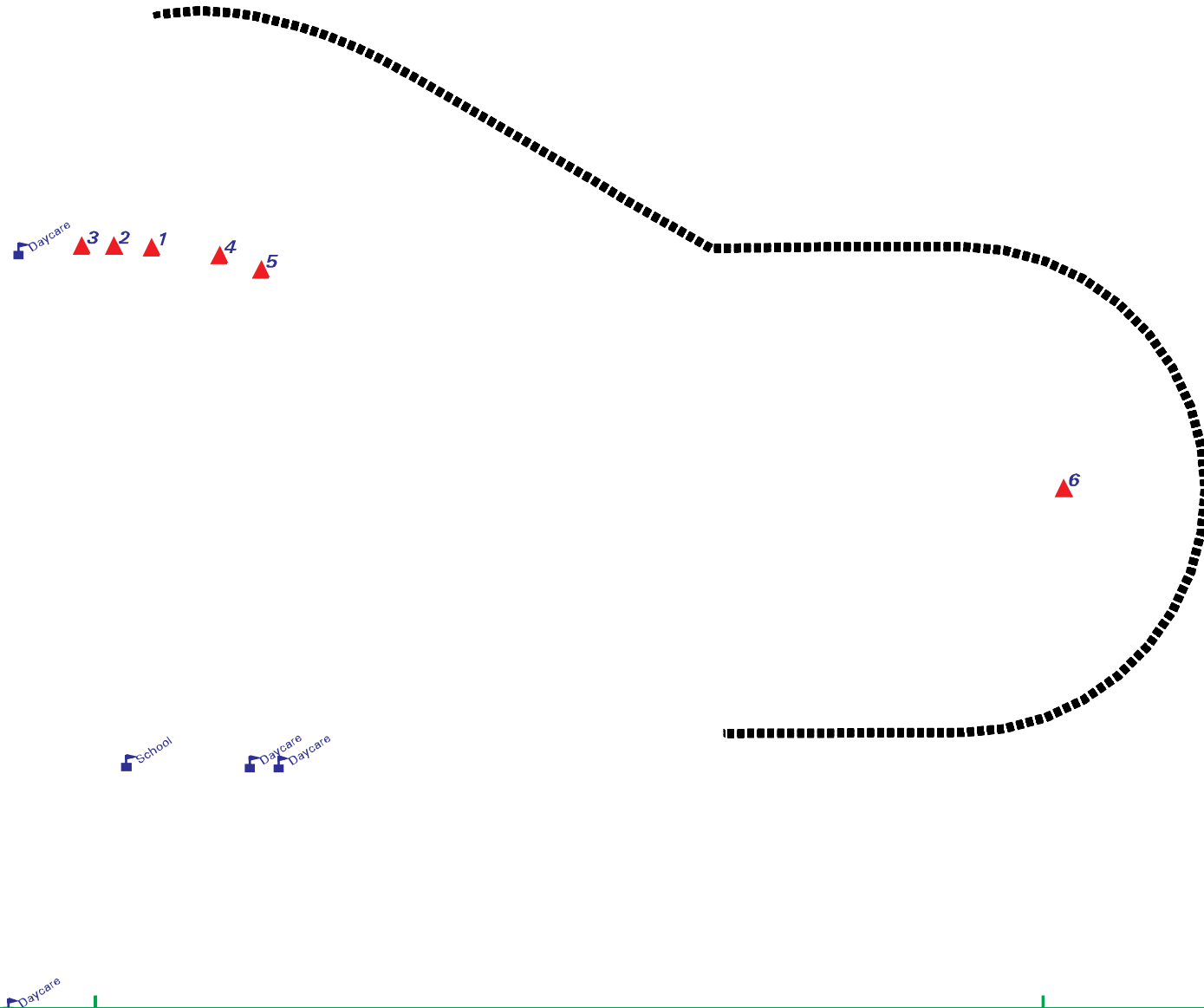
**EDR DATA MAP
CORRIDOR
STUDY**

APPENDIX B-2

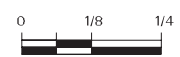
**CORRIDOR
MAP**

Tanque Verde EAMR

-  Listed Sites
-  Earthquake Epicenters (Richter 5 or greater)
-  Search Boundary
-  Roads
-  Major Roads
-  Waterways
-  Railroads
-  Contour Lines
-  Pipelines
-  Powerlines
-  Fault Lines
-  Water
-  Superfund Sites
-  Federal DOD Sites
-  Indian Reservations BIA
-  100-Yr Flood Zones



Tucson, AZ



Scale in Miles



APPENDIX C

**SITE
RECONNAISSANCE
PHOTOGRAPHS**