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I. Wayne Cox

*Center for Archaeological Research*

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ARCHAEOLOGICAL MONITORING AT ESPADA ROAD ACEQUIA CROSSING,  
SOUTH SAN ANTONIO, BEXAR COUNTY, TEXAS

I. Wayne Cox

Texas Antiquities Committee Permit No. 1145

Center for Archaeological Research  
The University of Texas at San Antonio®  
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## ABSTRACT

In July of 1992, the Center for Archaeological Research at the University of Texas at San Antonio was contracted to monitor the installation of a water line crossing the Espada *acequia* at the intersection of Espada Road and Camino Coahuilteca in south San Antonio. Upon notification in May of 1993 that the project was to be accomplished, an archaeologist from the center met with representatives from the Engineering and Installation section of the San Antonio City Water System and arranged for an archaeologist to be in attendance during critical phases of the installation. The project fieldwork was initiated on June 1, 1993. The installation crews excavated beneath the course of the *acequia* and installed a twelve inch iron pipe through which the six inch pipeline was introduced six feet below the *acequia*. The work was accomplished without incident and no artifacts or historical structures were encountered. No further work is required at this time.

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## INTRODUCTION

In July of 1992, Mr. Lee J. Chegin, Director of Engineering for the San Antonio Water System, contacted the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) requesting monitoring of the installation of a water main along Espada Road in south San Antonio. The acting director of the CAR, Jack D. Eaton, evaluated the proposal and determined that the primary area of concern was where the line was to cross the historic *acequia* (Spanish irrigation ditch) at the intersection of Espada Road and Camino Coahuilteca at the southwest corner of Mission San Francisco de la Espada (Fig. 1). The agency entered into a contract that provided for an experienced archaeologist from the CAR to monitor the installation when the work was to be performed. During the last week of May, 1993, the CAR was alerted by Steven Renneker of the Water System that the work was to be conducted on June 1, 1993. Staff archaeologist Wayne Cox met with representatives of the engineering staff and the field installation crew to coordinate the monitoring effort. The critical phase of the installation of the water main was performed on 1 June, as planned with no medicating circumstances. No artifact were recovered and all field notes and photographs are on file at the CAR-UTSA.

## PREVIOUS INVESTIGATIONS

Mission Espada has had several small-scale investigations conducted during the past twenty years, generally designed to answer specific questions during repairs or stabilization of the structures. Anne Fox conducted test excavations at the base of the fortification tower at the southeast corner of the compound in 1976 and in the area north of the chapel in 1981 (Fox and Hester 1976, Fox 1981). In March of 1977, Dan Scurlock of the Texas Historical Commission (THC) directed excavation on the lime kilns north of the mission walls. Frances Meskill of the CAR-UTSA conducted excavations within the southeast corner of the Plaza in 1992 (Meskill 1992).

## HISTORICAL BACKGROUND

In 1724, Brigadier Pedro de Rivera y Villalon was dispatched by the viceroy to inspect and evaluate the frontier defenses of New Spain. The tour lasted until June of 1728, and covered over eight thousand miles. Among his recommendations were the reduction of the East Texas garrisons and the relocation of the three Querétaran missions to new sites on the Colorado River, near present day Austin. Viceroy Antonio de Aviles, the Marques de Casafuente, acting on the recommendations, reduced the Presidios and moved the missions in July of 1730. That location was not acceptable to Father Paredas, the guardian of the Franciscan college at Querétaran, and the missions were again moved to the San Antonio River basin on March 5, 1731. Nuestra Señora de la Purisima Concepción de los Hainai became Nuestra Señora de la Purisima Concepción de Acuña, and was located between San Antonio de Valero and the new site of San José y San Miguel. San José de los Nazonis, now San Juan Capistrano, and San Francisco de los Neches, now San Francisco de Espada, were assigned lands further to the south. Because of the necessity for the mission to become self-sufficient as quickly as possible, one of the first considerations was the construction of the *acequia* (water ditch), so that the fields could be established and crops planted as soon as possible. Therefore, one of the first project initiated was the construction of the *acequia*. The exact date this was begun is not recorded; however, the *acequia* was in operation by February of 1740, for the fields were reported as newly planted in the spring of that year and a report by Fray Fernández de Santa Ana comments on the "five very abundant withdrawals from the river", referring to the *acequias* that had been established for all of the missions of the San Antonio valley (Santa Ana 1740). The *acequia* for Mission San Francisco de Espada began at a dam spanning the river midway between missions San José and San Juan, diverting water into the channel along the western side of the San Antonio River. This dam, the last of the functioning spanish colonial dams, is constructed of limestone and lime mortar, and arches downstream of the river flow. At a point 1.49 miles down the *acequia* it became necessary to construct an aqueduct to convey the water over Piedras (Six-Mile) Creek; it remains as the only surviving stone aqueduct. It was described in 1772 as a "...conduit of lime and stone of thirty-eight varas (105.5 feet) in length; six (16.6 feet) in height; with its diamond point, and two arches, which allow the currents of said creek to pass..." (Sáenz de Gumiel 1772). The diamond point referred to is the pointed projection of the central pier that

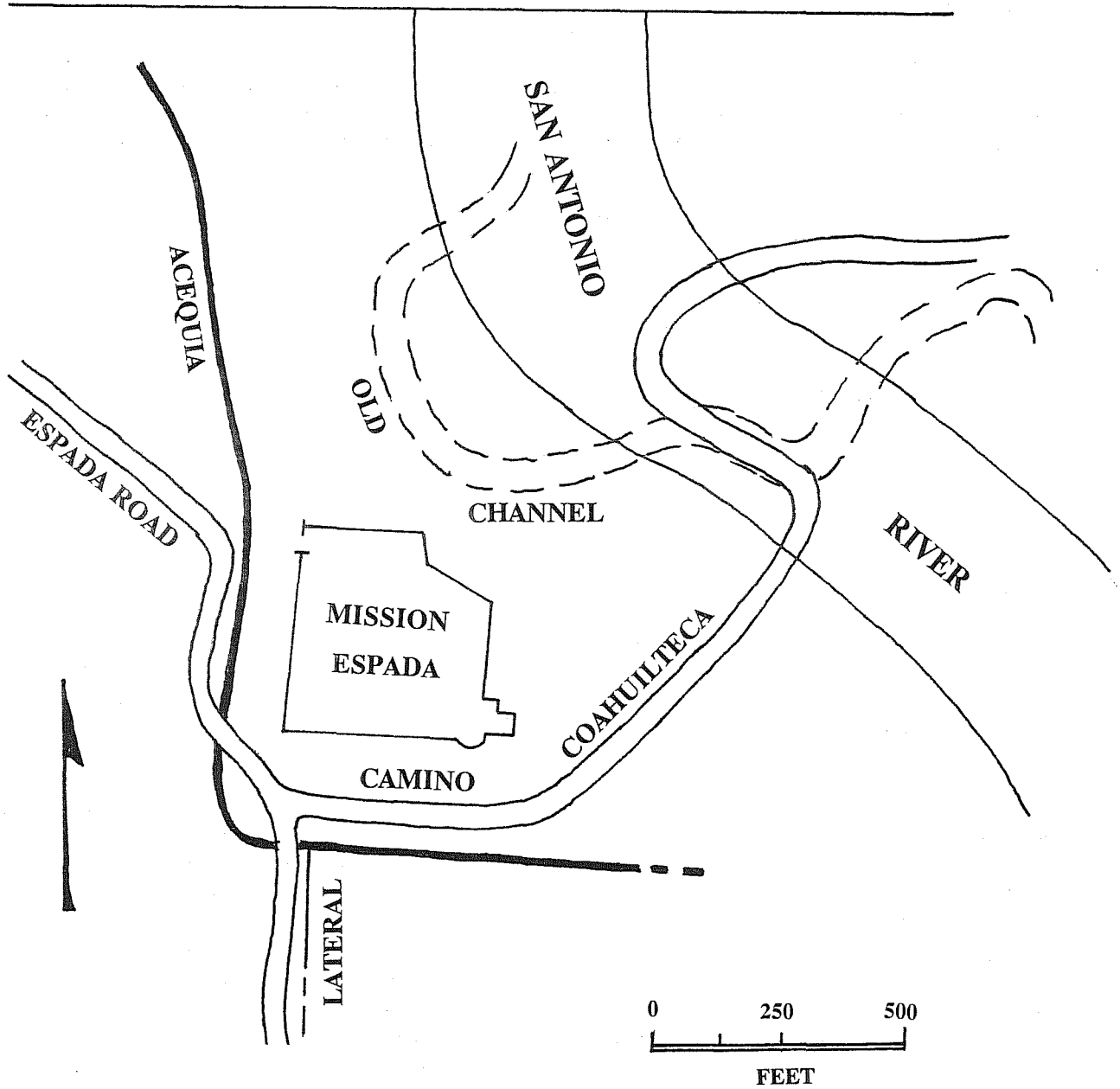


Figure 1. Location Map of the Area Monitored. Indicated is the location of the acequia.

diverted the pressure of the stream away from the support for the two arches. The *acequia* continues south to the mission and beyond for a total length of approximately three and one-quarter miles.

Near the turn of the nineteenth century the missions were secularized and their lands divided among the residents of the mission. Excess lands were also procured by Spanish and Anglo-American settlers. They cultivated the fields, built mills along the river, and the small settlements that grew about each of the missions were composed of the mission's descendants and the new settlers. Over time the mission structures deteriorated, and were remodelled or converted to other uses. Only the chapels remained as parish churches. The fields were all divided among the various families. The basis principals and rules of the operation of the *acequias* remained in force, and the canals continued to serve their purpose of irrigating the crops of the area. Today only the Espada *acequia* continues in operation, a small remnant of over two hundred and fifty years of Spanish tradition.

### MONITORING OPERATION

The installation crew arrived at the intersection of Espada Road and Camino Coahuilteca at approximately 0900, June 1, prepared to begin the connection of the water main on the north side of the street. Once the main line was located they directed their attention toward the area of the *acequia* crossing. The ditch at that point flows toward the south, parallel to the western edge of Espada Road, and just to the south of the intersection the *acequia* turns toward the east and parallel to Camino Coahuilteca. The ditch at that point is unlined and averages eight feet at the top, five feet at the bottom, with a depth of four feet. Immediately to the east of the turn, approximately eight feet east of Espada, are located the remains of a water diversion gate dressed with concrete with an upright cedar post still in place. To the west of the gate was the stone-lined entrance into a diversion lateral that once channeled water to a lateral that ran south parallel with Espada Road on the eastern edge. That channel has not be used for a number of years. The water still flows unimpeded through the gate structure and continues eastward almost to the San Antonio River, and then turns south to irrigate the fields below.

The banks of the *acequia* on the west are clear and the water flows unimpeded, but the branch on the east along Camino Coahuilteca is heavily overgrown with wild Mustang grape, giant ragweed and grasses among tall native Black walnut, Pecan, Hackberry and Chinaberry trees. At the point where the *acequia* passes under the roadway the ditch has been encased in two thirty-six inch concrete pipes; it was at this point the water main was to be installed. The crew began by excavating a ditch to the north of the *acequia* some twenty feet in length to a depth of nine feet with a Ford 555B backhoe with extension arm. The soil in that area is classified as Frio clay loam, which is calcareous clay loam of a light brown color to a depth of approximately forty-five inches, then grading into a lighter reddish brown loam over yellow clay at approximately ninety-five inches (Bynum 1982). A similar ditch, but only ten feet in length, was then excavated on the south side. The soil was then carefully removed under the *acequia* until only about two feet of soil separated the two ditches. The crew then installed a twelve inch plastic wrapped iron pipe which was leveled and then pushed through into the southern ditch. This pipe serving to support the *acequia* allowed the six-inch main to be inserted and pass under the *acequia*. At this point the *acequia* had been safely passed and monitoring was concluded.

### RECOMMENDATIONS

During the operation there were no artifacts exposed and no further historic structures exposed. The integrity of the *acequia* was not effected and the flow was uninterrupted by the construction. Since the water main installation was completed to a point beyond the vicinity of the historic waterway, no further action is required or recommended.

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