

# Geophysical Survey of North Greenwood Cemetery

Clearwater, Florida.  
City of Clearwater



Prepared for:  
City of Clearwater

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# 1. Introduction

The following is a report on the Geophysical Survey of the North Greenwood Cemetery. Between February 6 and 13, 2020, Cardno conducted a Ground Penetrating Radar (GPR) survey, in Clearwater, Pinellas County, Florida on land currently owned by the City of Clearwater, the Pinellas County School Board (Pinellas Board of Public Instruction [PBPI]), and the Homeless Empowerment Program (Homeless Emergency Project, Inc. [HEP]). Cardno worked in concert with the Florida Public Archaeology Network (FPAN) and T2 Utility Engineers Inc., (T2) a former subsidiary and legacy company of Cardno, Inc.

An unnamed African American Cemetery, dating to the 1940s and early 1950s, was once located on the property. The cemetery had undergone a relocation process to an alternate location in Dunedin, FL in 1954. The objective of the GPR survey was to determine if the cemetery had been relocated in its entirety. The unnamed cemetery now referred to as the North Greenwood Cemetery, once spanned what is currently Holt Avenue directly south of its present intersection with Engman Street in Clearwater, Township 29S, Range 15E, Section 10. The location and extent of the cemetery has been reconstructed from historic maps and legal descriptions georeferenced with current aerial photographs (Figure 1 and Figure 2). Covering 1.54-acres, the boundary of the cemetery extended on either side of Holt Avenue, measuring 383 ft. east-west and 208 ft. north south. The historic boundaries of the North Greenwood Cemetery now fall within two separate parcels. To the west of city-owned Holt Avenue on the PBPI parcel (Pinellas County parcel 10-29-15-00000-130-0400) and to the east of Holt Avenue on the HEP parcel (Pinellas County parcel 10-29-15-00000-130-0300).

Recent investigations into locating lost cemeteries by Clearwater/Upper Pinellas NAACP in conjunction with the Clearwater Heights Reunion Committee, prompted discussions with the City of Clearwater regarding the outcome of the 1954 relocation of North Greenwood Cemetery. Research on the North Greenwood cemetery included identifying the historic boundaries of the cemetery based on plat maps, legal descriptions, historic aerial imagery, and official records. Field survey was designed based on the estimated cemetery boundary and informed by research into the historic context of the site and subsequent land use as well as prior surveys conducted by Cardno and FPAN on historic cemeteries.

Within the estimated cemetery boundary, the HEP parcel has remained relatively undeveloped with the exception of parking lots and mobile homes. However, between 1961 and 1962 a school building which now stands vacant was erected on the PCBI parcel within the estimated cemetery boundary. In February 2020, city roads along with the HEP and PCBI parcels were surveyed, using GPR technology, within the documented boundaries of the North Greenwood Cemetery. An additional buffer area was scanned outside of the cemetery boundary, extending up to 100 ft. to the north, west, and south. Areas surveyed included open grass lots, parking lots, Holt Avenue, portions of Engman Street, and spaces around the footprint of the school building. Based on these landscape features, Cardno chose to apply both a TerraSIRch SIR® System-3000 (SIR 3000) single-channel GPR unit manufactured by Geophysical Survey Systems Inc. (GSSI), and larger 32 antennae Stream-C and 36 antennae Stream-EM devices.

The following report discusses processing and analysis of the complete data set collected during field survey from the various GPR devices employed at the North Greenwood Cemetery. Findings from Cardno's geophysical survey suggest that a number of burials remain in their original interment location at the North Greenwood Cemetery site. Additionally, this report covers recommendations for additional GPR survey and ground truthing based on the decisions made through consultation amongst the various land owners and community members with a stake in the future of the North Greenwood Cemetery site.

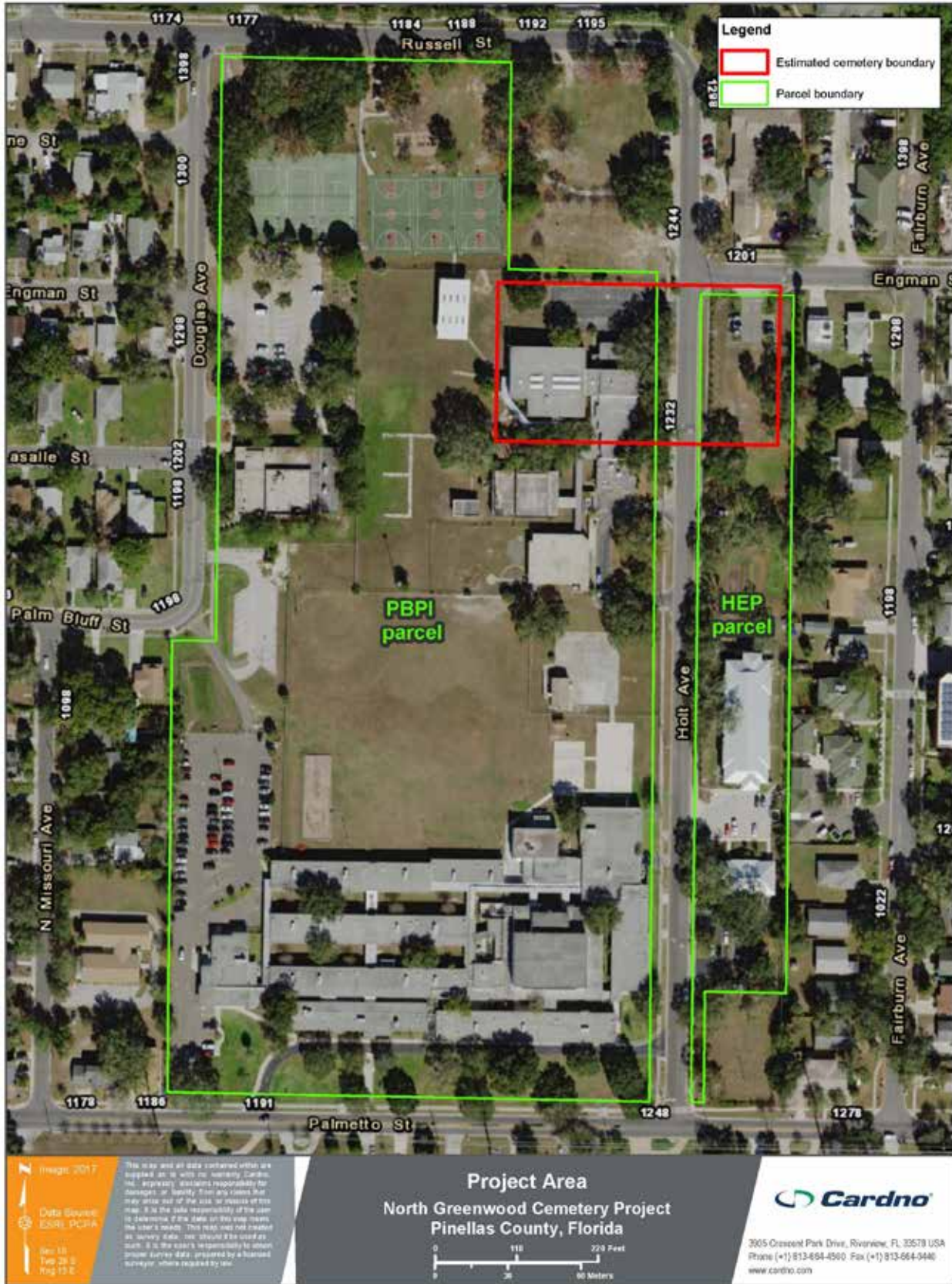


Figure 1 Project location in Clearwater, Pinellas County, Florida, showing parcel boundaries



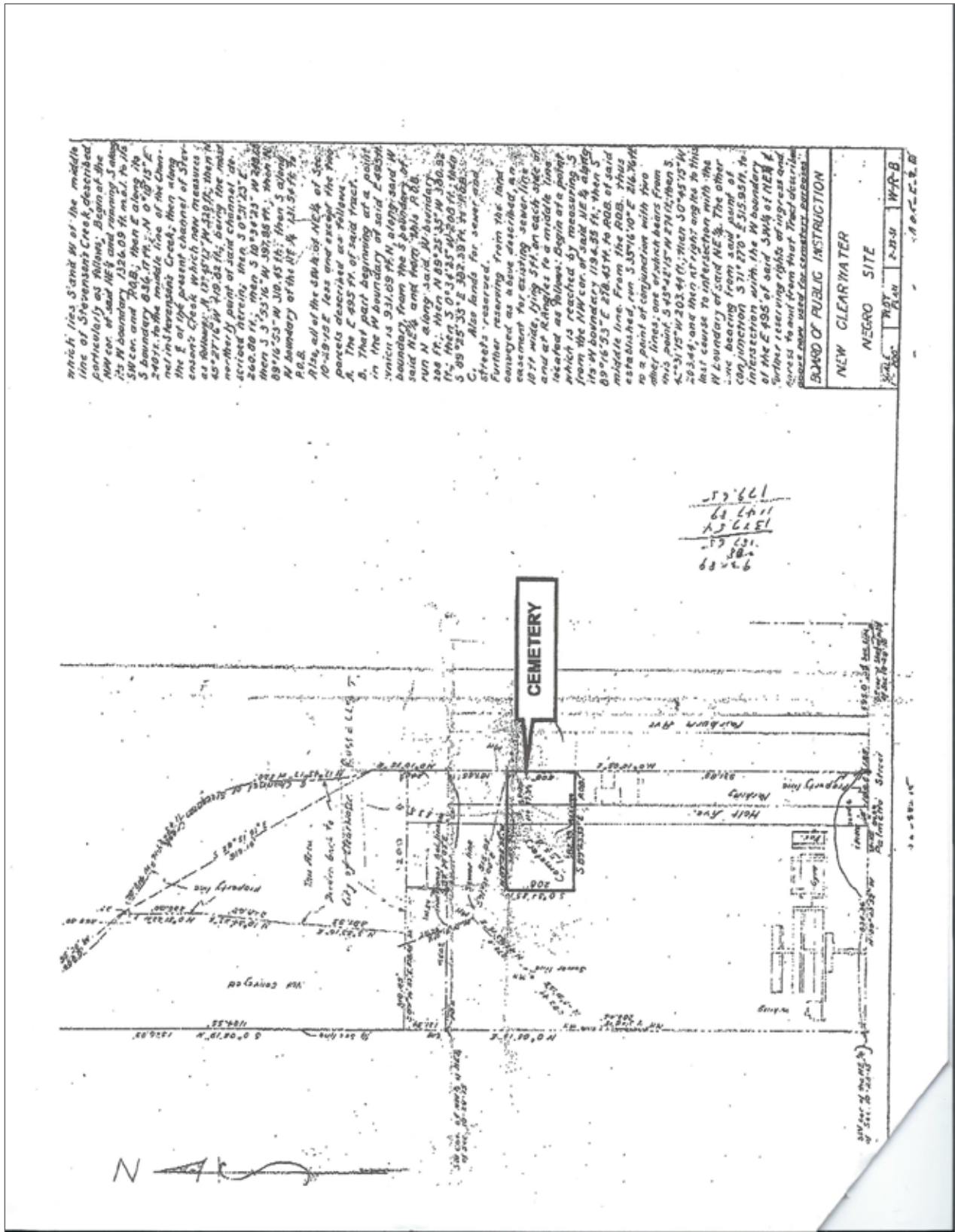


Figure 2 1951 plat map of North Greenwood Cemetery

## 2. Background Research

### North Greenwood Cemetery History

Notes on nomenclature: While “African American” is most generally in use as the accepted term today, historically other names have been used. When a direct quotation or proper name is in this discussion, the one from the source material is used, whether it is “colored,” “negro,” “black,” or “African American.” For example, the cemetery, which is now referred to as the North Greenwood Cemetery, was historically referred to as “colored cemetery” or “negro cemetery” in board minutes and newspapers from the historic period. Also, in the citations, the original newspaper name that was used at the time the article was published is used, even if that paper has since changed its name (for example, *St. Petersburg Times* became the *Tampa Bay Times* in 2011).

The property on which the cemetery and Pinellas High School would later be built was platted as part of the Country View Estates in September 1925 by owners and developers, Edwards and Holt, Inc. A corporation based out of Nassau County, New York, Edwards and Holt formed in 1924 with Clarence A. Edwards as President and F.A. Wood as Secretary. The company purchased the acreage, which was located in Section 10, Township 29 South, Range 15 East, from D.D. Bigger in June 1924. Formed to take advantage of the Florida Land Boom of the 1920s, the company soon faltered in the decline of the real estate market. None of the lots in the subdivision had sold by August 13, 1928 when the land was advertised for sale at a public auction held in September due to the owner’s inability to pay the back taxes of \$274.14. The entity dissolved in 1936 (Pinellas County Clerk of Court, 1925, Plat Book 12, Page 35; Division of Corporations, State of Florida, 2020, “Records Search,” [www.sunbiz.org](http://www.sunbiz.org); *St. Petersburg Times*, “Realty Transfers,” 6 June 1924; *St. Petersburg Times*, “Legal Notice: Country View Estates,” 13 August 1928).

The City of Clearwater acquired the vacant property and, over the following two decades, proposed its use as a means to combat racial tensions over recreational facilities and overcrowding in African American institutions. Located on the periphery of an established African American neighborhood, the parcel incorporated approximately 30 acres and was situated south of Stevenson Creek, near existing City recreational facilities and African American churches and schools.

In the late 1930s, racial tensions mounted in Clearwater regarding African American use of public recreational facilities. In May 1938, over 200 hooded members of the Ku Klux Klan halted an in-progress African American baseball game at Green Field. At the time, the field was limited to use by people of color only on Sunday afternoons and three weekday evenings; the buildings and restroom facilities were not open for their use. The different races were not allowed to use the different parts of the park at the same time. Immediately after the event, the City Recreation Board canceled existing recreational programs for African Americans and voted to build a new field dedicated for “colored use only” on the property north of Palmetto Street and west of Douglas Avenue, which had “recently come into the possession of the City.” Within a few days, the City Commission authorized expenditure of the funds for the construction of a temporary athletic field at the site. The new field would be a few blocks northeast of the existing Green Field baseball facilities. City Manager A.C. Nichols announced that he would recommend a W.P.A. funded project for “complete Negro recreational facilities.” Recreation board member Frank Booth noted a need for a swimming pool for Negroes indicating that “they were not allowed to bathe in the gulf of bay [sic] and a pool should be provided. Several Negroes have been drowned in a swimming hole in Stevenson’s creek, next to the city dump” (*St. Petersburg Times*, “Negroes to Get New Ball Field at Clearwater: Board Acts after Visit by Klan,” 21 May 1938; *St. Petersburg Times*, “Negro Recreational Field Authorized at Clearwater,” 24 May 1938).

With population growth during the 1920s and 1930s, the City’s African American churches, schools, and cemeteries experienced overcrowding and pressure to relocate due to the desired expansion of white neighborhoods. In 1940, the Clearwater City Commission acknowledged that “the cemetery being used for the burial of Negroes in Clearwater is inadequate and not well located for the purpose.” To alleviate that pressure, the Commission adopted a resolution on January 2 to establish a new African American cemetery on the subject property, which consisted of about 1.5 acres platted as part of the Country View Estates. The resolution included a clause stating, “that after the above described property has been placed in suitable condition for use as a Negro Cemetery, no burials of negroes shall be permitted in Clearwater other than on the above described property” (Clearwater City Commission, resolution on file Clearwater Historical

Society, 2 January 1940; *St. Petersburg Times*, "Pinellas County News," 20 December 1939). The earliest available aerial, which is from 1942, shows the rough definition of the cemetery area with the rest of the parcel occupied by open land with trails and an old citrus grove. Holt Avenue, still an unpaved road which had been included on the Country View Estates plat, bisected the eastern portion of the cemetery (Figure 3).



Figure 3. Location of North Greenwood Cemetery on 1942 aerial (FDOT 1942).

Local African American schools also underwent a difficult period during the 1930s with failing school buildings, lack of materials, and overcrowding. Pinellas County was created from Hillsborough County in 1911 at which time the public schools were already separated, with white and black students taught in separate facilities. In Clearwater, the Northward Elementary School (labeled as Greenwood Park Grammar School on the 1929 Sanborn; renamed Curtis Elementary School in 1942) had opened in 1925 at the corner of Greenwood Avenue and Marshall Street, northwest of the new temporary ballfield and cemetery. Initially expanding to accommodate middle school pupils, the education of high school age students started in 1931 with the first graduating class matriculating in 1934. At the time, the only other African American high school in the county was Gibbs High in St. Petersburg, which served the southern half of the peninsula. Located on Madison Street in Clearwater, the new senior high school incorporated two concrete block buildings housing classrooms and a library and two frame buildings serving as vocational and home economics space; by the late 1940s, they were described as obsolete and temporary structures which were completely inadequate (Sanborn Map Company 1929; Hawkins 1962:14; Nemzek in Costrini 1987:87; Rooks and Lightfoot 2002:43).

Discussions of where to build a new high school for African American students living in the northern half of the county started in earnest after the close of World War II meant an end to building material shortages and an expanding African American population. In December 1947, Superintendent of Schools G.V. Fuguitt stated that "Few people realize it but Clearwater has a problem in its expanding Negro population. The Negroes are completely surrounded by white subdivisions and many of the new white subdivisions have been built in areas once planned for Negro expansions...The problem becomes acute when you start looking around for a site of more than 20 acres for a Negro high school." The existing facilities were described as obsolete and a fire hazard with a street running through the campus (*St. Petersburg Times*, "Board to Consider Site for Pinellas Negro High School" by Ralph Sumner, 14 December 1947).

At their February 11, 1948 meeting, the Board of Public Instruction noted that they had received a letter from the City of Clearwater concerning an over twenty acre parcel on Palmetto Street "which they think would be a very suitable location for the contemplated Negro Central High School" (Pinellas County Board of Public Instruction, Regular Meeting Minutes on file Clearwater Historical Society, 11 February 1948). The Board agreed to give the City's proposal further consideration when provided with the maps and details. The *Tampa Tribune* reported that the School Board was evaluating two sites for the placement of the new high school, both of which were within 200 yards of the Clearwater city dump. One included the subject parcel along Palmetto Street adjacent to the African American ballpark and cemetery, while the other was located north of Stevenson Creek on Betty Lane (*Tampa Tribune*, "Pinellas Eyes Negro School Sites Near City Dump," 5 Feb 1948). The *St. Petersburg Times* reported that the site contained an African American cemetery "which may have to be moved to a location in one corner of the site" (*St. Petersburg Times*, "Negro School Site Acceptance Seen," 26 February 1948). At a special session of the Board of Public Instruction held on March 3, the entity discussed the receipt of an official offer from the Clearwater City Commission indicating that the City was willing to sell the 30.5 acre site to the Board for an African American high school and recommended establishing an appraisal board to set a value for the property (Pinellas County Board of Public Instruction, Regular Meeting Minutes on file Clearwater Historical Society, 3 March 1948). The appraisal board was authorized in May to establish a price for the site which included the "Negro ball park, a Negro cemetery and the city dump, which will be abandoned" (*Tampa Tribune*, "Lang Opposes Buying Negro School Site," 13 May 1948). The school board purchased the property in June for \$15,875 (*Tampa Tribune*, "Clearwater Sells Negro School Site," 22 June 1948).

Simultaneously, efforts proceeded to build recreational facilities for African Americans. In September 1949, the Chamber of Commerce undertook a campaign to determine how the \$25,220 of excess money from the City's overcharged utility taxes would be used. City property owners had an option of a refund or to put the money toward the construction of a new city pier on Clearwater Beach or for the installation of a pool for the African American population. Local attorney Ralph Richards, who served as the chairman of the Negro Pool Committee, stated that "In a community surrounded by water and boasting of its miles of splendid beaches, the Negroes have no place whatever where they can swim or bathe" (*Clearwater Sun*, "City Pier, Negro Pool Backers Seek Aid from Refunds," 18 September 1949). He dedicated a full page advertisement to the effort (Figure 4). By September, the pool fund held \$10,000, which was enough to start, but not finish, the pool. The campaign to build a pool had started two years prior through the efforts

of the Protestant and Catholic youth groups working together to raise funds. Other community groups subsequently held events to raise money. According to the 1949 newspaper article,

a five acre site for the pool has been obtained and dedicated as a permanent Negro recreation area. It is located between Palmetto Street and Stevenson's Creek in the northeast sector for the city. This is a large tract and will afford room for an athletic field and a new Negro school in addition to the pool. The site was secured by the joint action of the City Commission and the Pinellas County School Board (*Clearwater Sun*, "City Pier, Negro Pool Backers Seek Aid from Refunds," 18 September 1949).

Although the article indicates that engineer Leo Butler and architect Roy Wakeling were designing the pool and dressing rooms without compensation, a 1953 article indicates that city engineer Sidney Lickton drew the detailed plans for the pool after visiting other swimming pools in the state (*Clearwater Sun*, "City Pier, Negro Pool Backers Seek Aid from Refunds," 18 September 1949; *St. Petersburg Times*, "Negro Pool Plan to be Studied at Clearwater," 5 October 1953).

Twenty-four

The Sun, Clearwater, Florida, Sunday, September 18, 1949

# HELP BUILD the Negro Swimming Pool

The drive to build a swimming pool for the colored people of Clearwater was started about two years ago. The first substantial contribution was obtained by the young people of our local churches, Protestants and Catholics working together, who held a Tag Day for the benefit of the pool. Shortly thereafter the Skipperette Club held a dance and contributed the proceeds to the pool fund.

Contributions have continued to come in from local citizens and organizations until the fund now stands at nearly ten thousand dollars. This is enough to make a start on the pool, but not nearly enough to finish it. Professional builders say that a pool of the size needed here, together with water purification equipment and dressing rooms, will cost about thirty thousand dollars.

Cooperation of public spirited local citizens will save money on the cost of this pool. Mr. Leo Butler, engineer, is designing the pool, and Mr. Roy Wakeling, architect, is designing the dressing rooms and making the overall plan, all without any compensation whatever. Local firms have offered to furnish materials at a substantial discount. With this splendid cooperation it is hoped that the entire cost of the completed project will not exceed twenty-five thousand dollars.

A five acre site for the pool has been obtained and dedicated as a permanent colored recreation area. This was accomplished by the joint action of the Clearwater City Commission and the Pinellas County Board of Public Instruction, and both bodies are entitled to the thanks of the community for their prompt and generous help.

The young people of our churches have continued to push this project. They held a second Tag Day last winter, and have helped in many other ways. Clearwater negroes have contributed over a thousand dollars out of their own pockets, thus showing how interested they are in the project. But more substantial financial help must be secured, and a golden opportunity is now offered by the utility tax refund.

The City is now mailing out return postcards in connection with the refund of utility taxes amounting to a total of about twenty-five thousand dollars. To contribute your refund to the negro pool fund, you simply mark your card to that effect and mail it back to the City. Work on the pool will be started this fall. If a substantial portion of the utility tax money is returned to the City for the benefit of the pool, the entire project can be completed this winter and be ready for use next spring.

In a community surrounded by water and boasting of its miles of splendid beaches, the negroes have no place whatever where they can swim or bathe. Your committee feels that they are entitled to this swimming pool as a matter of simple justice. The contribution of your utility tax refund to this project will be sincerely appreciated.

**Ralph Richards, Chairman**  
Negro Pool Committee

Figure 4. Advertisement promoting funding for the pool for African Americans (*Clearwater Sun*, 18 September 1949).

In July 1953, the Pinellas County Board of Public Instruction tentatively agreed to the removal of the cemetery from the school site in order to enable the City of Clearwater to construct the pool north of the proposed buildings for the new school (*Tampa Tribune*, Ralph Sumner, "2 Developers May Give Sites for

St. Petersburg Schools," 9 July 1953). On August 3, 1953, the Mayor Herbert Brown presented a letter to the City Commission from the Pinellas Superintendent of Public Instruction, Floyd Christian, suggesting a land swap in which the school board would receive the existing cemetery plot and the school board would convey the parcel to the north to the City for the construction of a pool for African Americans. The City would relocate the graves, and the overall parcel would be used to create a new Negro athletic and recreation field north of the proposed Negro high school building. The City would also grade and pave the street on the north side of the school site. Although the proposal had not been presented to the Board of Public Instruction, Superintendent Christian indicated that he would be pleased to address the matter with the board if the City Commission was interested. The City Commission agreed regarding the location of the proposed swimming pool and other recreational facilities and expressed a willingness to work out the details (Clearwater City Commission, meeting minutes on file Clearwater Historical Society, 3 August 1953; *St. Petersburg Times*, "Clearwater Goes to Polls on Special Acts Set. 15," 4 August 1953).

In October 1953, City Manager Francis Middleton reported to the Clearwater City Commission that the main delay in construction of the swimming pool was the slow removal of the cemetery. Officials had finally agreed that the site of the cemetery, which was estimated to contain over 200 graves, was the best place for the pool, which had originally been planned for a site closer to the creek on a lower elevation. At the time, the plan was to relocate the graves to the east side of Holt Avenue across from the proposed swimming pool site. However, the task of finding relatives of the deceased to sign legal agreements for the move was proving a difficult job (*Tampa Tribune*, Ralph Sumner, "Clearwater Negro Pool Plan Pushed," 3 October 1953). In December, the City advertised for bids for the construction of the pool (*Tampa Tribune*, "Clearwater Seeking Bids for Building Negro Pool," 20 December 1953).

On March 15, 1954, the Clearwater City Commission discussed the proposal by the Pinellas County Board of Public Instruction (later Pinellas County School Board) to exchange properties in the vicinity of the proposed new African American high school. At the meeting, "the City Attorney read the part of the proposal which suggested that the City pay all of the expenses in connection with removing all of the graves from the cemetery property to other properties within one year....It was agreed that the commission would meet with the School Board to discuss the matter" (Clearwater City Commission, meeting minutes on file Clearwater Historical Society, 15 March 1954). In May, the School Board approved the land trade (*St. Petersburg Times*, "Teacher Retires after 40 Years: Contract Given," 13 May 1954).

In 1954, the United States Supreme Court *Brown v. the Board of Education* said that separate educational facilities and systems were unconstitutional. Ongoing litigation moving through the federal courts in 1954 and 1955 did not provide clear directions for the timeframe or means by which desegregation should be achieved. In 1956, the state superintendent gave the responsibility to local school boards (Schnur 1991). According to historian Jim Schnur in his article, "Desegregation of Public Schools in Pinellas County, Florida,"

...Superintendent Floyd T. Christian thought the courts would permit Pinellas schools to remain segregated if the district acted in good faith to upgrade facilities in black neighborhoods. Realizing that organizations such as the National Urban League could offer proof that the school board knowingly operated overcrowded and substandard schools for blacks, district officials decided to respond to *Brown* by construction Gibbs Junior College and nine new black schools between 1954 and 1963. By September 1956, Christian boasted that such improvements made schools 'separate but really equal' (Schnur 1991).

Pinellas High School was one of these schools. On May 16, 1954, *St. Petersburg Times* author Steve Douglass profiled the ongoing construction of the 25-acre school and recreation center in Clearwater. The article, complete with photographs, called it "one of the finest Negro school and recreation centers in the South." More than half completed, the \$300,000 school would feature three wings with a combination gymnasium and auditorium able to seat 500. The school was built to accommodate 350 students and 14 faculty with completion estimated to be in September. The City's African American baseball field, operated by the Clearwater Recreation Department, was recently completed north of Russell Street. Its bleachers could hold 250 people. Also operated by the City's Recreation Department, construction on the Holt Avenue Pool started early in May. The pool would reach a depth of over ten ft. and would extend 82 ft. by 42 ft. wide with diving boards and a bath house on the east. The poured concrete bath house would feature a railed spectator area on the roof. It was anticipated to be completed in August at a cost of \$52,000. A



wading pool for toddlers would be north of the main pool (*St. Petersburg Times*, Steve Douglass, "One of South's Finest Negro Schools, Recreation Centers Rises at Clearwater," 16 May 1954; *Tampa Tribune*, "Clearwater Seeking Bids for Building Negro Pool," 20 December 1953). Plans from July 1954 show the anticipated development of the Pinellas High School site (Figure 5; Pinellas County Board of Public Instruction 1954).

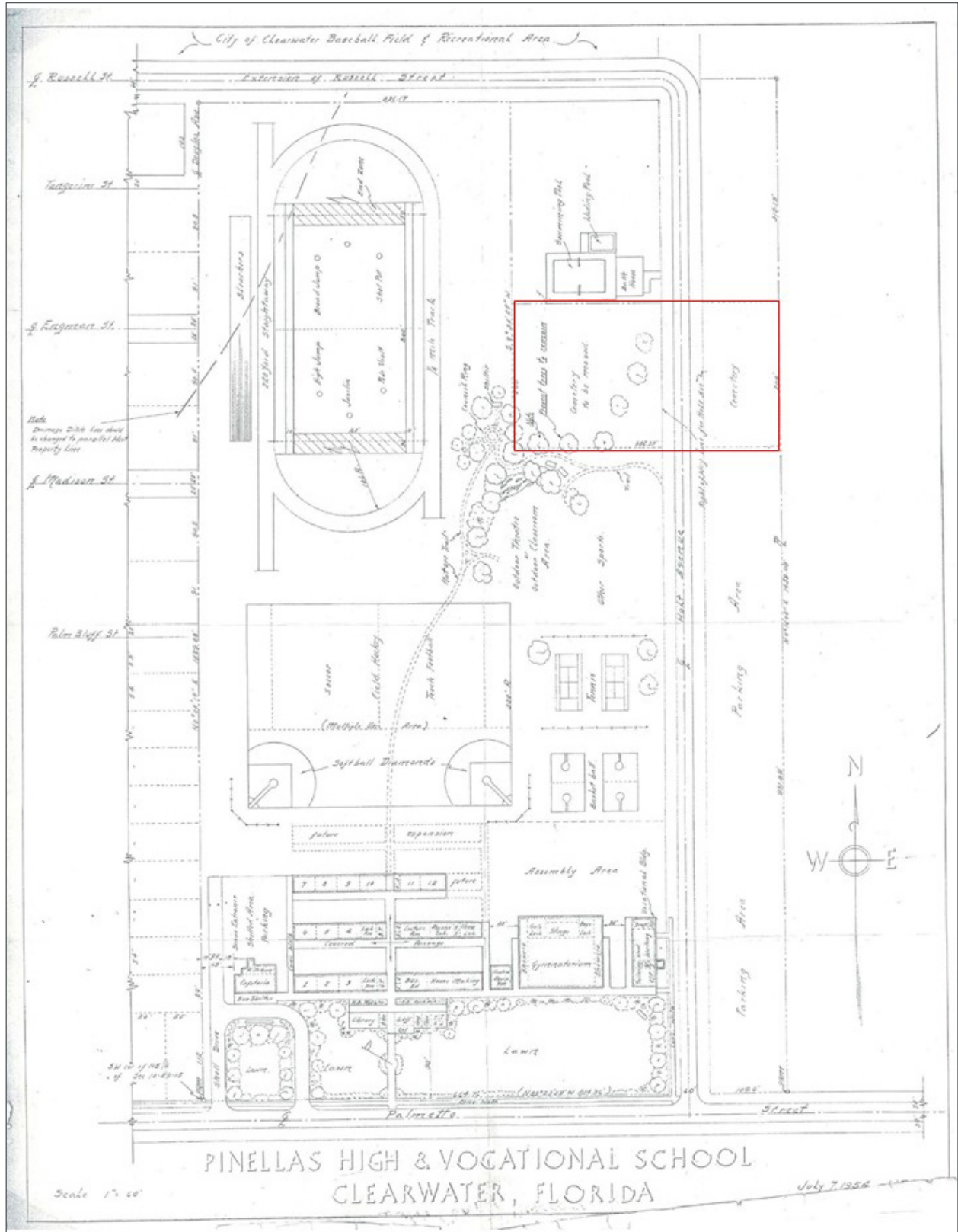


Figure 5. 1954 Site Plan for Pinellas High School. Site of “Cemetery to be Removed” denoted in red (Pinellas County Board of Public Instruction, 1954).

Also in May 1954, the City Commission received a proposal from Chester B. and Ruth McMullen, Jr. to establish a 20-acre colored cemetery on the northeast corner of Rosery Road and South Highland Avenue. Although the Commission initially agreed providing a contract valued at \$9,000, local residents protested and filed a suit to stop the development indicating that installation of a cemetery in the midst of the white neighborhood would constitute a nuisance and a health menace since well water would be affected by drainage from the cemetery. Newspapers reported that residents also feared a decrease in property values in the all-white neighborhood. The Circuit Court issued an injunction pending a hearing in June. These issues led the City Commission to rescind their support by June as they did not want to be party to litigation on the matter. Commissioner Guy Kennedy remarked that the "City did not want to be delayed indefinitely while the matter was in court but that the City must be free to negotiate on some other area since the City was obligated to move the graves from the present Colored Cemetery to make the present cemetery site available to the School Board for use within two years" (Clearwater City Commission, meeting minutes on file Clearwater Historical Society, 7 June 1954). In July, the Circuit Court issued a permanent injunction for the development of a cemetery at Highland Avenue and Rosery Road (Clearwater City Commission, meeting minutes on file Clearwater Historical Society, 3 May and 17 May 1954, 7 June 1954; *St. Petersburg Times*, "Court Blocks Plan for Negro Cemetery," 21 May 1954; *Tampa Tribune*, "Moving of Clearwater Negro Cemetery Enjoined," 21 May 1954; *St. Petersburg Times*, "Waterfront Site Offered for Sale to Clearwater," 8 June 1954; *St. Petersburg Times*, "Court Hearing is Today on Transfer of Bodies," 16 June 1954; *St. Petersburg Times*, "Negro Cemetery Location Court Hearings Recessed," 17 June 1954; *St. Petersburg Times*, "Permanent Injunction Bars Negro Cemetery," 23 July 1954; *Tampa Tribune*, "Clearwater Board to Face Negro Cemetery Site Issue," 6 June 1954; *Tampa Tribune*, "Clearwater Drops Negro Cemetery Deal After Suit," 8 June 1954).

On August 2, 1954, Chester B. and Ruth McMullen, Jr., along with Milton H. Jones, presented a proposal to the Clearwater City Commission to establish a 20-acre colored cemetery at a new site along Belcher Road (County Road 70) east of Dunedin on Lots 17-20 of the Pinellas Groves Subdivision in Section 24, Range 15 East, Township 28 South. As part of the agreement, the City would move an estimated 350 graves from the current City-owned colored cemetery to the new cemetery at a cost of \$25 for each space. The contract called for payment of \$4,500 down and \$2,500 before the bodies would be reinterred. It was estimated that the bodies would be able to be moved within 60 days. City Clerk Harry G. Wingo noted that,

The city did not have a complete record of the bodies buried in the old graveyard. 'Some of the Negroes were just buried there without taking the trouble to buy a \$10 lot from the city.' Wingo explained. He said an old Negro caretaker had most of the records 'in his head' (*Tampa Tribune*, "Clearwater Makes New Deal on Moving Negro Cemetery," 3 August 1954).

The Commission unanimously agreed to move forward with the contract. Although local residents again started to protest the establishment of a cemetery at the new location as a health hazard, the County Health Department issued a report in September that stated the cemetery would cause no danger from a health standpoint and would not contaminate Curlew Creek. Initially known as Pinellas Memorial Park, the cemetery would become known as Parklawn Burial Estates and later as Parklawn Cemetery (Clearwater City Commission, meeting minutes on file Clearwater Historical Society, 2 August 1954; *St. Petersburg Times*, "New Negro Cemetery Proposal Accepted," 3 August 1954; *St. Petersburg Times*, "Cemetery Plan is Protested at Bell Haven," 9 August 1954; *St. Petersburg Times*, "Dunedin Chamber Asked to Aid in Cemetery Fight," 12 August 1954; *Tampa Tribune*, "East Dunedin Group Fights Negro Cemetery Proposal," 17 August 1954; *St. Petersburg Times*, "Dunedin Area Residents Protest Negro Cemetery," 8 September 1954; *St. Petersburg Times*, "Cemetery Meets Heath Rulings, Officials Say," 23 September 1954; *St. Petersburg Times*, "Dunedin Cemetery," 22 January 1967; Pinellas County Clerk of Court, Deed Book 1491, Page 209, Official Record Book 563, Page 434, Official Record Book 656, Page 209, Official Record Book 518, Page 418, Official Record Book 7739, Page 211, Official Record Book 18865, Page 2323, Official Record Book 18913, Page 2447).

On August 22, 1954, the *Tampa Tribune* reported that the transfer of the burials was underway with three bodies already moved and the rest to be relocated at "a pace of several per day" (*Tampa Tribune*, "Negro Graves in Clearwater Being Moved to New Site," 22 August 1954). The following day, at the August 23, 1954 City Commission meeting, City Attorney Charles Phillips, Jr. read a letter from the Larkins Funeral Home of Clearwater with a proposal to move the estimated 350 existing bodies from the present "Colored Cemetery in Clearwater" to the new "Colored Cemetery" at a rate of \$23.25 each plus \$3.00 for an "outside

box." The City would also pay McMullen and Jones, as the owners of the cemetery, an additional \$25 for each burial space. Tombstones would be moved at an additional cost. Mayor Herbert Brown noted that these arrangements had been made by the City of Clearwater for the reinternment of the bodies located in the School Board and Swimming Pool property area. If any relatives of the deceased wanted to have the body buried elsewhere, they could do so at their own expense using a different funeral director. One resident, Mrs. Ruby Mitchell, "appeared before the Commission stating that her son was buried in the present cemetery site and that she was making an effort to acquire grave space in Bay Pines and that she felt that she should not have to pay for the removal of his remains." The Mayor suggested she speak with the City Manager to make arrangements. The Commission then approved the Memorandum of Agreement with Larkins Funeral Home with the amendment that Larkins be required to keep accurate records and other funeral directors be allowed to move bodies if paid by the family (Clearwater City Commission, meeting minutes on file Clearwater Historical Society, 23 August 1954; *St. Petersburg Times*, "Clearwater Council Okays Shift of Cemetery Bodies," 24 August 1954; *Tampa Tribune*, "Clearwater Cemetery-Moving Contractor Denies His Firm 'Fought' to Get Business," 27 August 1954).

Williams Funeral Home protested that they had been given no chance to bid on the contract, while David Larkins of Larkins Funeral Home asserted that city officials sought him for the work. The City Attorney maintained that the City's competitive bidding law had not been violated and the contract was awarded to Larkins Funeral Home (Clearwater City Commission, meeting minutes on file Clearwater Historical Society, 23 August 1954; *St. Petersburg Times*, "Clearwater Council Okays Shift of Cemetery Bodies," 24 August 1954; *Tampa Tribune*, "Clearwater Cemetery-Moving Contractor Denies His Firm 'Fought' to Get Business," 27 August 1954). The August 27, 1954 edition of the *Tampa Tribune* noted that "although more than a half dozen bodies already have been moved from the city cemetery, City Clerk Harry Wingo said today that the contract had not been signed by him and filed officially at city hall" due to amendments made to the contract. Emily Knerr, the official registrar for the State Board of Health, reported that Larkins Funeral Home had "obtained one blanket permit to move the 350 bodies" (*Tampa Tribune*, "Clearwater Cemetery-Moving Contractor Denies His Firm 'Fought' to Get Business," 27 August 1954).

The Holt Avenue Pool officially opened on August 28, 1954 "with impressive ceremonies attended by an estimated 1000 happy Negro citizens as leaders of both of the races made speeches....Negroes joyously celebrated the opening of the pool today with religious chants, music by the Negro high school band and patriotic recitations" (Figure 6; *Tampa Tribune*, "Clearwater Opens \$60,000 Swim Pool for Negroes," by Ralph Sumner, 29 August 1954). It was anticipated that the Pinellas High School would open the following month for the 1954-55 school term. A football stadium was planned for the site of the cemetery once the bodies were relocated. Prior to the opening of the pool, African American residents of Clearwater either had to travel to swim at the South Mole in St. Petersburg or to lakes in Hillsborough County due to a lack of pools or beaches in the area dedicated for their use. According to Booker Taylor, the new manager of the pool, fewer than five out of every 100 African American women of Clearwater knew how to swim. (*Tampa Tribune*, "Clearwater Opens \$60,000 Swim Pool for Negroes," by Ralph Sumner, 29 August 1954; *St. Petersburg Times*, "Clearwater Pool Opens With Capacity Crowd Attending," 30 August 1954).



**Figure 6. Opening ceremonies at the Holt Avenue Pool with principal speaker Ralph Richards addressing crowds lining the sun deck and bath house (*St. Petersburg Times*, “Clearwater Pool Opens With Capacity Crowd Attending,” 30 August 1954).**

The construction of the pool was largely realized through the efforts of local attorney Ralph Richards, who served as the chairman of the Negro Pool Committee. Richards moved to Clearwater in 1927, opening his own law firm and later serving eight years as City Attorney and four years as a municipal judge. He was active in civic and fraternal organizations, focusing especially on improving the lives of local African American residents. He worked seven years to raise around \$25,000 for the construction of the pool, an amount which was matched by the City. He was apparently inspired after watching law enforcement arrest two young African American boys for swimming in a dirty creek on the Clearwater golf course. As founder of the Clearwater Federal Savings and Loan Association, Richards was also active in rehabilitating housing in the black community, sponsoring scholarships and trusts for black students and black colleges, and supporting the Community Pride Nursery, which his wife, Harriet, founded. In large part due to his efforts, the Holt Avenue Pool was dedicated in 1954. As part of the opening ceremonies, Clearwater Mayor Herbert Brown announced plans to pave Holt Avenue and open Russell Street to improve access to the pool (*St. Petersburg Times*, “Ralph Richards dies at 86 in Panama” by Robert Henderson, 25 May 1980; *St. Petersburg Times*, “Negro Pool Plan to be Studied at Clearwater,” 5 October 1953; *St. Petersburg Times*, “Clearwater’s Negro Recreation Program Termed Best in History,” 2 June 1955; *Tampa Tribune*, “Clearwater Negro Pool Plan Pushed,” by Ralph Sumner, 3 October 1953; *St. Petersburg Times*, “Clearwater Pool Opens With Capacity Crowd Attending,” 30 August 1954). Interestingly, similar efforts were ongoing in St. Petersburg, where the Jennie Hall Pool opened in June 1954. Again, officials chose to build a new pool rather than integrate existing municipal swimming facilities. It was named after benefactress Jennie L. Hall, a white retiree from the Midwest who donated \$25,000 to the City of St. Petersburg for the construction of a swimming pool for African Americans. Construction on the pool started in 1953 by Logan Construction of Tampa, while the pool house was built by St. Petersburg contractor Edward S. Moore & Son (Elwyn 2011).

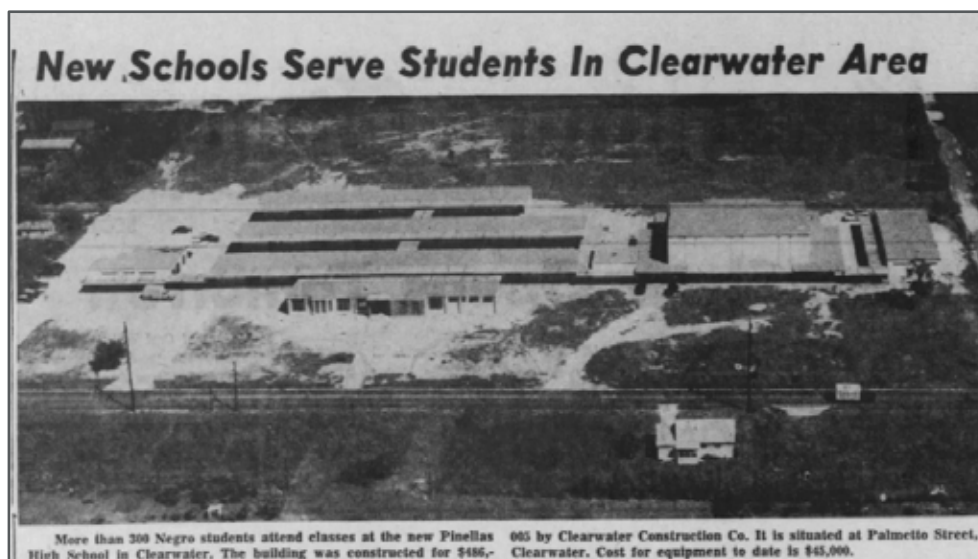
In September 1954, the Board of Public Instruction, the Clearwater City Commission, and the Pinellas County Board of County Commissioners entered into an agreement regarding the land swap. The school board agreed to deed the land north of the African American Cemetery to the City of Clearwater for the swimming pool. In exchange, the City would deed to the Board of Public Instruction the parcel known as the African American Cemetery, and the City would pay all expenses in connection with removing the graves from the cemetery within two years from the date of the agreement. For its part, the County agreed to open up and pave Russell Street and resurface Holt Street. The deeds for the property would be placed in escrow to be held until sufficient proof was furnished that the City had removed all of the graves. Failure

to furnish such proof within two years would make the transaction null and void (Pinellas County Clerk of Court, Deed Book 1515, Page 80).

At the October 4, 1954 Clearwater City Commission meeting, the City Manager, Francis Middleton, requested approval of a work order for removal of bodies in the Colored Cemetery to the new cemetery. At that point, approximately 75 had been moved with an anticipated 375 total. The Commission approved the work order with the total cost not to exceed \$20,000. The City Commissioners also considered annexation of the Pinellas High School and Holt Avenue Pool property as it was still outside of the city limits (Clearwater City Commission, meeting minutes on file Clearwater Historical Society, 4 October 1954; *St. Petersburg Times*, "Band Uniform Item to Come Before Board," 4 October 1954).

Relocation of the bodies continued into October. On October 10, 1954, the Vital Statistics Bureau, which handled disinterment permits, reported that each year they typically handled 50 requests to transfer a body from one cemetery to another. However, recently, their office had been "swamped with requests due to the City of Clearwater condemning a Negro cemetery. 'It meant transferring several hundreds of graves,' Mrs. Knerr said" (*St. Petersburg Times*, "Vital Statistics Bureau Keeps Track of Residents from Birth to Burial," 10 Oct 1954). However, no disinterment permits for the relocation have been found during recent research efforts.

The *St. Petersburg Times* issue of 17 October 1954 included an aerial photo as the new Pinellas High School neared completion (Figure 7). Located on 25.29 acres, the new facility was designed by architect P.F. Kennard and headed by Principal S.W. Curtis. When opened, 344 students attended which rapidly grew to 715 pupils by 1962. Built at a cost of \$486,005 by the Clearwater Construction Co., it served as the African American junior and senior high school for northern Pinellas County until desegregation (*St. Petersburg Times*, "New Schools Serve Students in Clearwater Area," 17 October 1954; Hawkins, 1962:61; Nemzek in Costrini 1987:86-88).



**Figure 7. Newspaper article with aerial photo of the Pinellas High School soon after opening (*St. Petersburg Times*, "New Schools Serve Students in Clearwater Area," 17 October 1954).**

In December, the Clearwater City Commission annexed the area west of Holt Avenue between Stevenson Creek and Palmetto Street where the new Pinellas High School, the Holt Avenue Pool, and the baseball park were located. City Manager Francis Middleton reported that "the transfer of bodies from the old Negro cemetery to a new one, northeast of Dunedin, was complete." The City Commission was now ready for the transfer of land to the school board (*Tampa Tribune*, "Clearwater Annexes Negro Swimming Pool, Park Area," by Ralph Sumner, 21 December 1954). On January 17, 1955, the Clearwater City Attorney reported to the City Commission that the exchange of deeds with the Pinellas County Board of Public Instruction regarding the swimming pool and cemetery site had been accomplished (Clearwater City Commission,

meeting minutes on file Clearwater Historical Society, 17 January 1955; Pinellas County Clerk of Circuit Court, Deed Book 1515, Page 80).

The 1957 aerial shows the location of the Pinellas High School at the southern end of the lot and the Holt Avenue pool along the northern edge of the former cemetery (Figure 8). In April 1957, the City engineering department received authorization to plan and advertise for the construction of a new recreational building north of the Holt Avenue pool at Russell and Holt Avenue. It was anticipated that the structure would consist of a 50 ft. x 60 ft. prefabricated metal building set on a concrete floor and plumbing. Alternatively, bids were also accepted for concrete block construction (*St. Petersburg Times*, "Clearwater Negro Recreation Center Gets Plans and Bid Authorization," 16 April 1957).

In February 1959, the Board of Public Instruction agreed to lease land across from the Pinellas High School, the Holt Avenue Pool, and the Holt Avenue Youth Center to the Community Pride Nursery for \$1 per year. The daycare planned for the construction of a \$15,000 building on the site. The nursery, which operated through funding from the United Community Fund of Upper Pinellas, could not open for the 1958-59 school year because their building was condemned as a fire hazard thus necessitating the need for a new structure (*St. Petersburg Times*, "School Board Provides Site for Community Pride Nursery," 7 February 1959).



Figure 8. Location of North Greenwood Cemetery on 1957 aerial (FDOT 1957). Note the Pinellas High School at the south end of the lot, and the pool north of the cemetery.



Palmetto Elementary School was built on top of the former cemetery site in 1961-62. Designed by Bruce & Parrish, the structure originally incorporated 12 classrooms and was built by Ardee at a cost of \$274,300. Leonard Summers was the first principal. An aerial from 1962 shows the new recreation center north of the pool and the construction of Palmetto Elementary School on top of the site of the former cemetery (Figure 9; Hawkins 1962:71; Scheffer and Konrad in Costrini, 1987:98-99). At the same time, a new library catering to the African American populace was built across from Palmetto Elementary School and Pinellas High School on the northeast corner of Holt Avenue and Palmetto Street. The original branch library had opened in 1949 at the corner of Pennsylvania Avenue and Palmetto Street, but additional space was needed by the 1960s. A neon sign advertised it as the "Negro Branch Library" (*St. Petersburg Times*, "She Nursed the Library to Maturity," by Lisa Pelamati, 21 February 1995).

In July 1966, the City Commission noted that Holt Avenue and Russell Street had never been formally dedicated as street right-of-way and adopted Resolution 66-86 to do so. As part of the description for Holt Avenue, the land was described as beginning at the "northeast corner of the Negro Cemetery" (Pinellas County Clerk of Circuit Court, Official Record Book 2426, Page 593).

As part of the county's plan to desegregate schools, Pinellas High School closed in 1968. When the School Board directed School Superintendent Thomas Southard to phase out Pinellas High School, it was the last segregated school in the county. After the closure at the end of the 1967-68 school year, the building was converted to the Clearwater Comprehensive Junior High School (later Clearwater Intermediate School). Focusing on vocational training, students later built several of the storage buildings on the campus (Nemzek in Costrini, 1987:88; Valerie Kalfrin, "Remembering Pinellas High School," 28 February 2012, Patch.com, <https://patch.com/florida/clearwater/ev--remembering-pinellas-high-school>; Earl Emmons, *Tampa Tribune*, "Comprehensive Junior High School Planned," 10 May 1968; *St. Petersburg Times*, "School Board Approves Administration Proposal," 27 June 1968). In 1985, students at Palmetto Elementary were divided by zone and dispersed to a number of surrounding elementary schools; the Curtis Fundamental Elementary School moved into the former Palmetto Elementary building on Holt Avenue (Hawkins 1962:71; Scheffer and Konrad in Costrini, 1987:98-99).

Over the years, additions enlarged the schools, while new tennis and basketball courts expanded the sport offerings on the recreational fields. The 1964 Plan, which was updated in 1977, shows the library, a softball diamond, shuffleboard courts, and horseshoe pits on the property as well (Figure 10; Pinellas County Board of Public Instruction 1964). However, the buildings started to decline and become obsolete in the new century. The City's Holt Avenue Pool was demolished between 2002 and 2004, while the recreation center disappeared between 2013 and 2015. The North Greenwood Branch Library building was removed between 2007 and 2008. Curtis Fundamental Elementary School closed. With the rediscovery of lost African American graves throughout the region in recent months, the local NAACP called for survey to confirm that all of the burials were moved to Parklawn Memorial Cemetery in Dunedin in 2019. In an article by reporter Paul Guzzo, Robert Young, the 75-year-old owner of Smith-Youngs Funeral Home in Clearwater, worked as a grave digger for the funeral home that moved the bodies as a teenager. Although he did not work on that particular job, he indicated that only the graves with markers were moved. According to him, "the cemetery was located on a portion of land that is parking spaces....extending across what is today Holt Ave." (*Tampa Bay Times*, by Paul Guzzo, "Graves Moved, Records Show," 17 December 2019).



Figure 9. Location of North Greenwood Cemetery on 1962 aerial (FDOT 1962). Note Pinellas Elementary within the bounds of the former cemetery site, while Pinellas High School is at the south end of the lot, and the pool and recreation park are north of the former cemetery site.

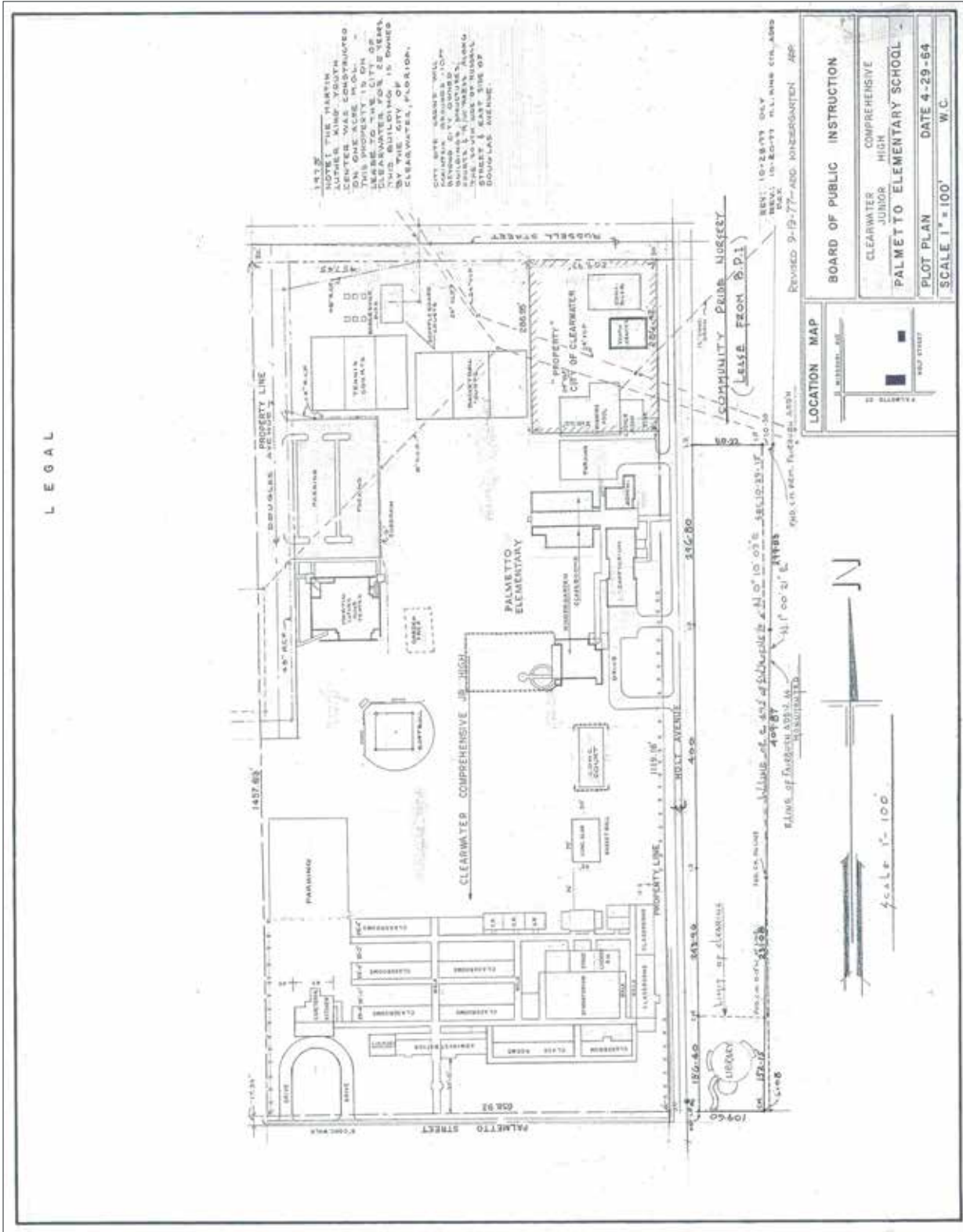


Figure 10. 1964 Site Plan for Palmetto Elementary School and Clearwater Comprehensive Junior High School, updated to 1977 (Pinellas County Board of Public Instruction 1964).

### 3. Geophysical Research Design

The geophysical research design was informed by the historic context provided above, background research, aerial photography, and historic maps. Research suggested that the North Greenwood Cemetery site had a relatively high potential of containing extant burials. Relocating a cemetery in its entirety requires a full accounting of all individuals interred as well as accurate burial location records. Generally, twentieth century cemeteries are associated with and in most cases co-located with a church or funeral services company. In these cases, documentation may be available to assist with relocation efforts. The North Greenwood Cemetery was owned by the City of Clearwater and as such had no known direct association with a church or funeral services company. Research has yet to locate City of Clearwater register of burials, plot maps, or other records pertaining to individuals interred at the cemetery. Furthermore, during its tenure as an active cemetery, North Greenwood had no official name; it was referred to simply as the Negro Cemetery or the Clearwater Negro Cemetery. The lack of documentation for an unnamed African American cemetery during Florida's segregation era would have severely hindered a complete relocation of the burials. As such, any exhumation process would have had to rely solely on the presence of headstones, markers, or other indications on the surface to locate a burial for removal. Utilizing these means of identification increases the likelihood that a number of burials would be left undiscovered and remain in place. Therefore, Cardno expected that extant burials would likely be identified within the survey area.

In general, targeted survey areas were identified as 'priority', "overlap", and "buffer" (Figure 11). Priority areas are those areas that fall within the estimated footprint of North Greenwood Cemetery as based on historic maps and legal descriptions. Overlap areas are those areas surveyed by two or more GPR devices. Buffer areas are those areas scanned that extend up to 100 ft. beyond the priority areas to assist in accurate boundary delineation. Areas surveyed within the priority target area were selected to maximize overall coverage with an emphasis on expediting field data collection.

Within the survey area, the landscape posed several advantages and challenges. A portion of the area is covered by open grassy lots interrupted by parking lots, roads, and concrete curbs. The largest contiguous open grassy area lies to the east of Holt Avenue on the HEP parcel; the second largest area lies northwest and west of the school building. Smaller open grassy lots are located directly north and east of the school building. These open areas were considered favorable to known GPR capabilities, as previously demonstrated in similar surveys of cemeteries by Cardno and FPAN staff.

The remaining areas are covered in asphalt road surfaces, concrete slab sidewalks, and asphalt parking spaces. Reinforced concrete slab and utilities present a challenge to GPR survey, as they could obscure any potential signatures of graves. Other parts of the targeted survey area present challenges of access (i.e. below the school building) and overhead cover (i.e. dense tree canopy) that can block satellite coverage necessary for high accuracy survey equipment.

Based on these landscape features, Cardno chose to apply both a TerraSIRch SIR® System-3000 (SIR 3000) single-channel GPR unit manufactured by Geophysical Survey Systems Inc. (GSSI), and larger 32 antennae Stream-C and 36 antennae Stream-EM devices. The SIR 3000 unit has been used repeatedly by FPAN staff to identify and delineate graves in local cemeteries and across Florida. This device as operated by FPAN, offered the advantage of previous proven effectiveness, maneuverability in certain project areas, and relatively low cost of operation. The Stream devices, operated by T2 Utility Engineers Inc., have a proven capability of deep subsurface imaging that is often used to explore areas of complicated overlapping utilities beneath roads. Cardno has successfully employed these devices in previous cemetery application. The multichannel Stream technology was favored for portions of the project area that may lie beneath the concrete and utilities on Holt Avenue, Engman Street, and parking lots. In addition, Stream systems offered increased speed of survey and real-time GPS tracking, which allows for rapid interpretation of results. Both the SIR 3000 and Stream systems were used to survey the majority of the targeted survey areas, with overlap areas on both parcels. This allowed for autonomous multi-instrumental confirmation of any subsurface anomalies that were detected by both machines.



Figure 11 Project Area showing GPR survey target areas

## 4. Geophysical Survey

### Project Area Refined

In early February 2020 fieldwork commenced for the North Greenwood Cemetery with the project area defined by an estimated boundary derived from its legal description and a 1951 plat map titled *New Clearwater Negro Site* georeferenced with 2017 aerial imagery and current Pinellas County parcel boundaries (Figure 2). Between February 27 and March 3, 2020 Cardno received site survey maps and architectural plans from PBPI upon request. A 1993 highly detailed site survey prepared by Silvie & Co. Land Surveyors for the School Board of Pinellas County (PBPI) includes adjoining plat maps as well as the estimated location of the North Greenwood Cemetery with accurate dimensions (Figure 12). Survey monuments identified on the 1951 and 1993 maps were georeferenced and overlaid with current Pinellas County parcel boundaries in order to refine the North Greenwood Cemetery boundaries and the project area. A discrepancy notation on the 1993 Silvie & Co. map between *Platted Line* and *Occupied Line* along the eastern edge of the cemetery boundary helped create a reference line for comparison across all three locational data sets. With found monuments and parcel boundary lines in agreement, the estimated cemetery boundary was adjusted. Overall, only minor adjustments were made to the original estimated cemetery boundary, approximately 11 feet were added to the east boundary inclusive of wide boundary marks found on the 1951 plat (Figure 13). As the cemetery was still active in 1951, the boundaries as platted in 1951 are favored; however, this does not suggest that the 1993 cemetery boundaries should be excluded or ignored. While the fieldwork was guided by the initial estimated cemetery boundary, the results in this report are discussed in reference to the adjusted cemetery boundary (Figure 14).

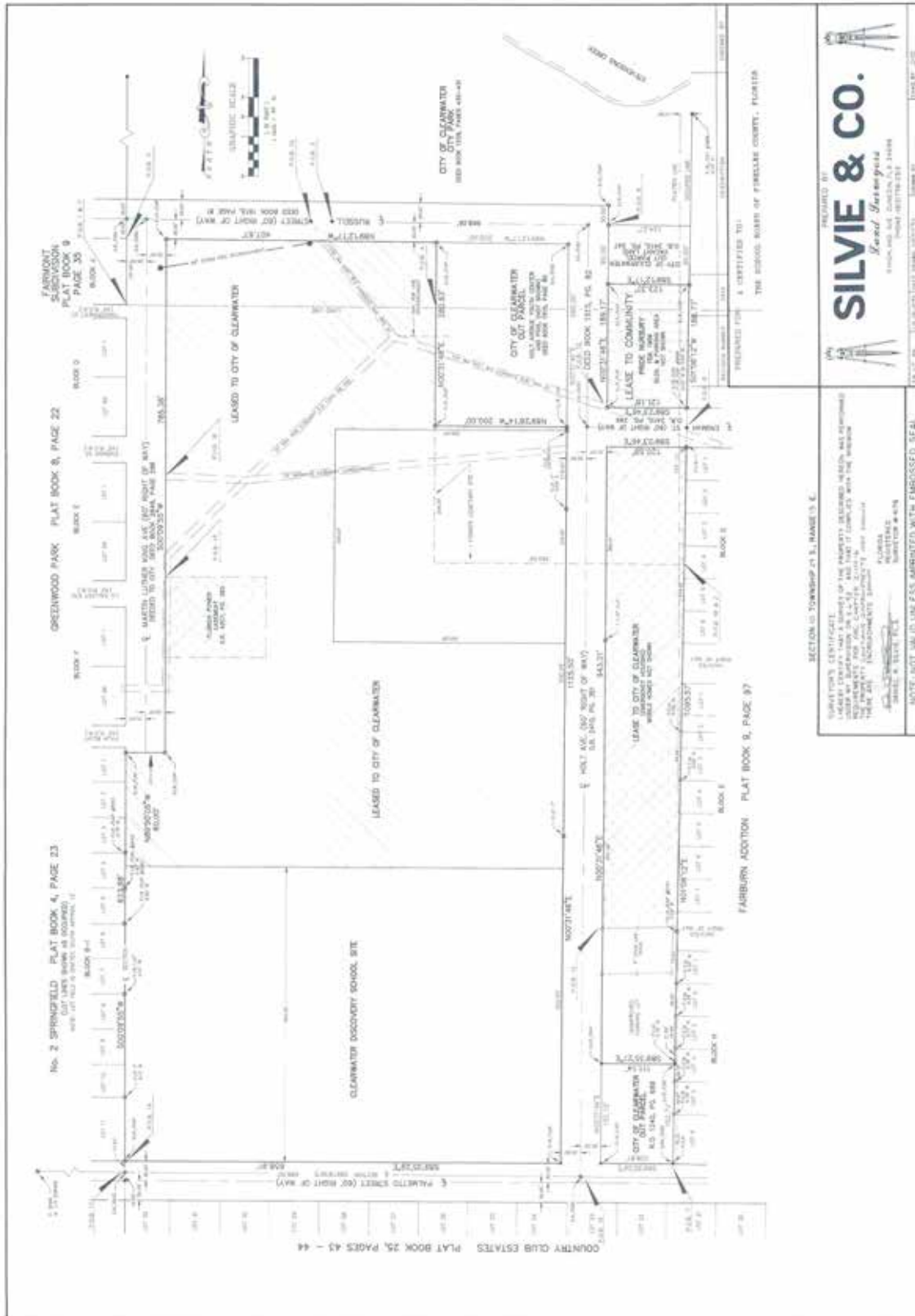


Figure 12 1993 Silvie & Co. site survey, prepared for the School Board of Pinellas County, Florida

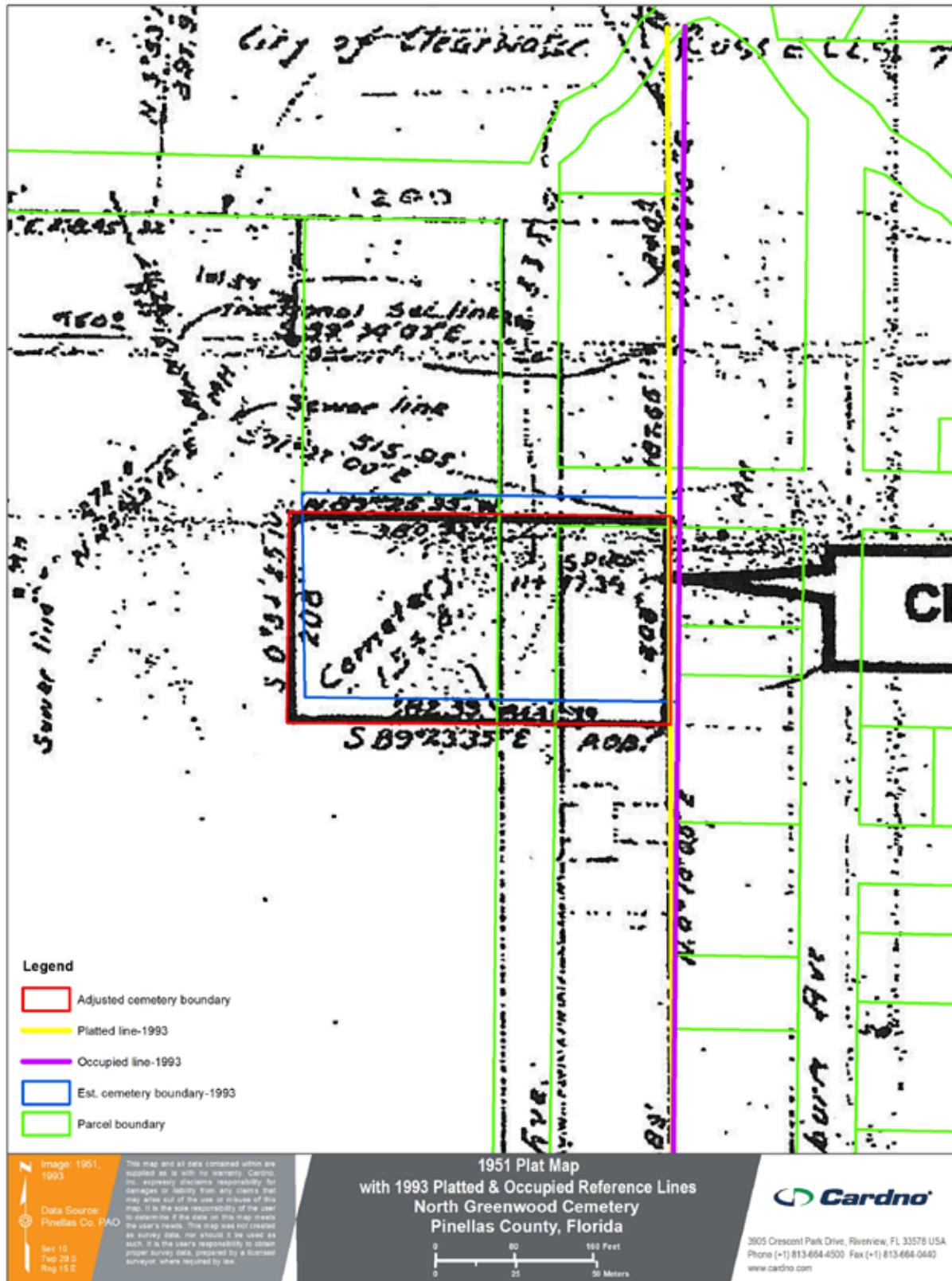


Figure 13 1951 plat map showing 1993 site survey *Platted* and *Occupied* reference lines with current Pinellas County parcel boundary overlay





Figure 14 North Greenwood Cemetery project, showing adjusted cemetery boundary

## Geophysical Survey Coverage

Geophysical survey was conducted between February 6 and February 13, 2020. The SIR 3000 GPR system was operated by Rebecca O'Sullivan MA, RPA, of the Florida Public Archaeological Network (FPAN). In the following descriptions, these results are referred to as the FPAN survey. The multi-array Stream-C and Stream-EM systems were operated by T2, a former subsidiary of Cardno, referred to here as the T2 survey. In total, GPR coverage extended over approximately 8135 square meters of ground surface within the priority target area and the buffer target area. The T2 survey covered approximately 5210 square meters, and the FPAN survey covered approximately 2925 square meters (Figure 15). Overlap areas subjected to GPR survey by both FPAN and T2 systems account for roughly 17 percent 1375 (m<sup>2</sup>) of the surveyed area (Figure 16). These overlap target areas were intended to provide multi-instrumental verification. Should any grave-like anomalies be detected by either system, these areas of overlap provide the opportunity for the anomalies to be verified by the other system.

However, a number of areas were covered by one GPR system only. FPAN grids 1 to 6 focused on covering the small grass lots around the footprint of the school building on the PCBI parcel. These areas are narrow and include obstruction from vegetation and the built environment, which restricts the use of the larger T2 systems. Conversely, the T2 survey systems were applied exclusively to test open areas that are covered by thick concrete road slab, sidewalks, and a variety of utilities. Because the T2 systems allows for a relatively faster speed of survey, it was used to expand survey coverage in the buffer target area outside of the estimated cemetery boundary. T2 zones 1, 2, 5, and 8 extended up to 100 ft. north and south of the estimated cemetery boundary along Holt Avenue, Engman Street and grass lots accessible by the larger T2 systems.



Figure 15 Combined FPAN and T2 GPR survey areas, showing buffer target area



Figure 16 Overlap areas of FPAN and T2 GPR survey areas

## 5. Survey Results

Cardno's geophysical survey efforts required segmentation of the project area into smaller sections for scanning by GPR devices. FPAN established separate grids for each area surveyed, totaling eight grids within the priority target area. Similarly, T2 defined separate areas of survey as zones, totaling nine zones across the survey area. Three categories of anomalies were established. Grave-like anomalies refer to areas that present as objects with the expected dimensions, depth, and orientation of coffins. Areas of possible graves refer to areas of subsurface disturbance with a high likelihood of containing graves or that once contained graves. Areas of disturbance refer to isolated areas of indeterminate subsurface disturbance that warrant further investigation.

### FPAN GPR Survey Results

On February 6, 7, and 12 of 2020, FPAN staff conducted a Ground Penetrating Radar (GPR) survey of selected areas within the designated project area using a SIR-3000 GPR manufactured by GSSI, Inc and outfitted with a 400-MHz antenna. Eight grids were completed in total, with grids 1 to 6 located on the west side of Holt Avenue, and grids 7 and 8 on the east side (Figure 17). GPR survey areas varied in size but all data were collected in the same manner: uni-directional north-south transects spaced at 0.25 meters east-west along the baseline, with 512 samples per scan, and a time window of 50ns. Given the capabilities and limitations of the SIR 3000 unit, we designed the survey to optimize our ability to detect potential subsurface historic cemetery features and burials. With Christian burials graves are often laid out in an east-west orientation approximately two to six feet beneath the surface. By using north-south survey transects we hoped to cross any potential burials at a perpendicular angle across their short axis, allowing for the clearest possible reflections. The relatively small transverse interval, 0.25 meters between each survey transect, was also necessary due to the potential for smaller graves within the cemetery. Survey transect intervals should generally be designed to be smaller than the long axis of the potential objects being studied.

The SIR 3000 data were post-processed by archaeologist Rebecca O'Sullivan using GSSI's Radan 7 software package. Each transect was processed using the following steps, then brought together to create a "3D" or horizontal-view of each survey area: 1) Time Zero Correction, 2) Full-Pass Background Removal, 3) Gain Adjustment, 4) FIR High-Low Bandpass Filter, and 5) Kirchhoff Migration to resolve hyperbolas into their point sources (all depth slices show the result of these processing steps but radargrams are shown prior to migration so that the original hyperbolas are visible). Depth slice images were created for every 10 cm in increasing depth below the ground surface, intermediate slices were created as needed or when distinct anomalies were observed between the 10 cm intervals.

An overview of potential anomalies located during the survey is illustrated in Figure 17. GPR can provide an idea of the location and depth of buried objects, but the technology itself cannot distinguish between those objects. In order to pick out potential anomalies that might be of interest to the current survey project we focused on GPR returns that appear consistent with historic burials: rectangular objects oriented east/west, limited in size/area, and at a depth consistent with historical burials. Due to historical records of many graves being moved from the cemetery in the past we also marked areas of possible graves and buried objects that could contain burials or coffin fragments, but are less clear. As with any remote sensing survey, it is impossible to say with complete certainty what an anomaly is without excavation or ground truthing. Buried objects like roots or pipes are also present throughout the survey area and can complicate the interpretation of the data. In marking individual grave-like anomalies, areas of possible graves, and areas of disturbance we hope to indicate priority areas for further investigation.



Figure 17 FPAN GPR survey results

## FPAN Grids 1 & 2

Grid 1 was located just to the west of Holt Avenue and east of the school building. Several trees and bushes were within the survey area, but the majority of the grid was grass-covered. Between 10 and 90 centimeters below surface (cmbs), extensive roots are visible within the GPR depth slices (Figure 18), but starting at 90 cmbs to around 140 cmbs grave-like anomalies appear. There is a more defined cluster of these anomalies close to the northeast corner of the school building with at least four possible burials. Two additional areas appear more disturbed, with less defined anomalies overall, but still have some characteristics consistent with possible burials (for all grids, see Figure 17 for locations of individual grave-like anomalies marked in solid red, and areas of possible graves/related disturbance marked in a dashed red line). These dashed areas might contain some intact burials, or could be evidence of grave removal dating back to the 1950s.

Grid 2 was located just to the south of grid 1, on the south side of the paved walkway leading up to the school entrance. The survey area contained several trees, a planting bed, flagpole, and a small sidewalk, while the rest was grass-covered. Between 0-40 cmbs a larger amount of tree roots are visible, especially on the south end of the grid (Figure 19). Starting around 30 cmbs a small pipe or other utility crosses grid 2 east/west; all the grave-like anomalies are located to the north of this more modern intrusion. Below the roots, at around 100 cmbs and going down to 160 cmbs, rectangular anomalies are visible within the GPR depth slices. Some of these objects are more defined than others, some seem more irregular or possibly disturbed, but this area north of the pipe should be prioritized for further investigation and ground truthing.

Based on information from a local informant who spoke with FPAN staff during survey work at the site, the areas of grid 1 and 2, along with the grid 7 area on the other side of Holt Avenue, had marked burials prior to construction of the nearby pool and later school building. Because of this, and the distinct features of the anomalies detected in this same area, these locations should be prioritized for further ground truthing to identify the nature of the anomalies described here.

## FPAN Grids 3 & 4

Grid 3 was located on the northwest side of the project area, just outside the chain link fence. The area is grass covered, with the only obstruction being a pair of parallel bars from an old playground in the north half of the survey grid. No grave-like anomalies were observed in grid 3. The main disturbances observed within grid 3 are related to buried pipes and other utilities. In Figure 20, a large pipe is visible around 90 cmbs, and a smaller utility line is visible at around 50 cmbs.

Grid 4 was located just to the south of grid 3, close to the west side of the school building. The area is crisscrossed by concrete sidewalks as well as a covered patio area on the east side of the survey grid. No grave-like anomalies were observed in grid 4. Several pipes or utility lines were observed at around 40 cmbs, but otherwise the area does not appear to have any cemetery related features or disturbances (Figure 20).

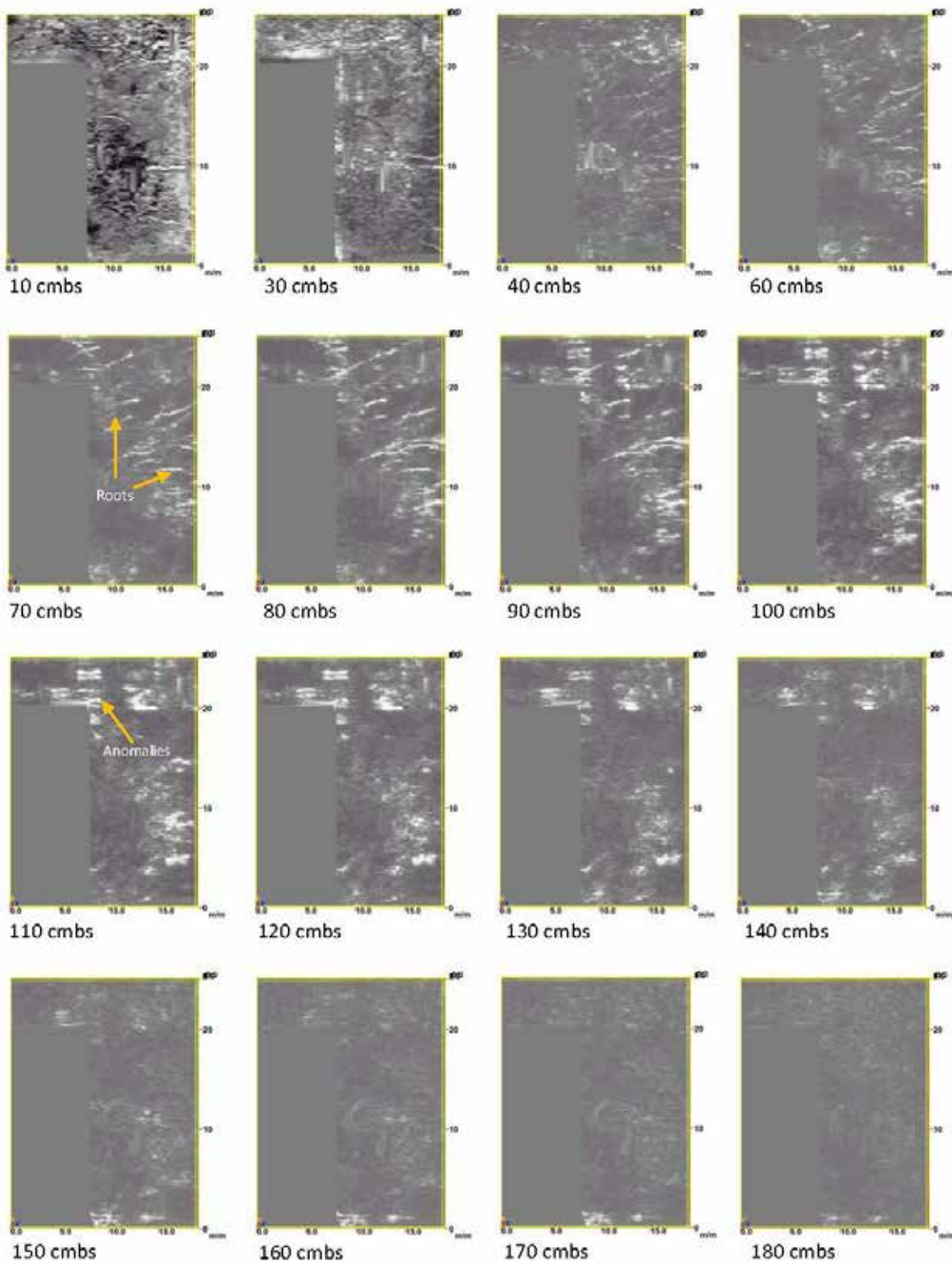


Figure 18 Depth slices for FPAN Grid 1



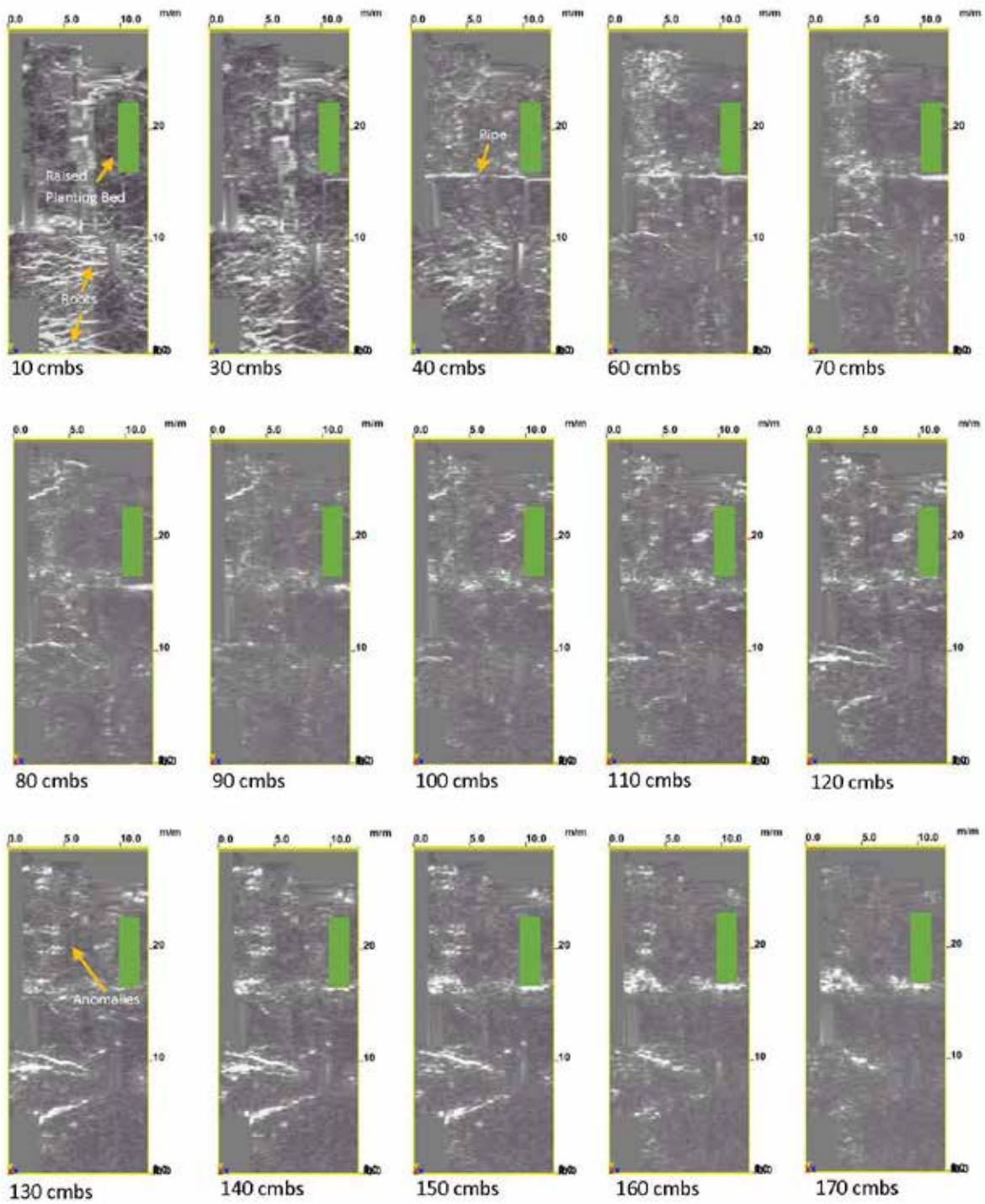


Figure 19 Depth slices for FPAN Grid 2. Raised planting area is marked in green

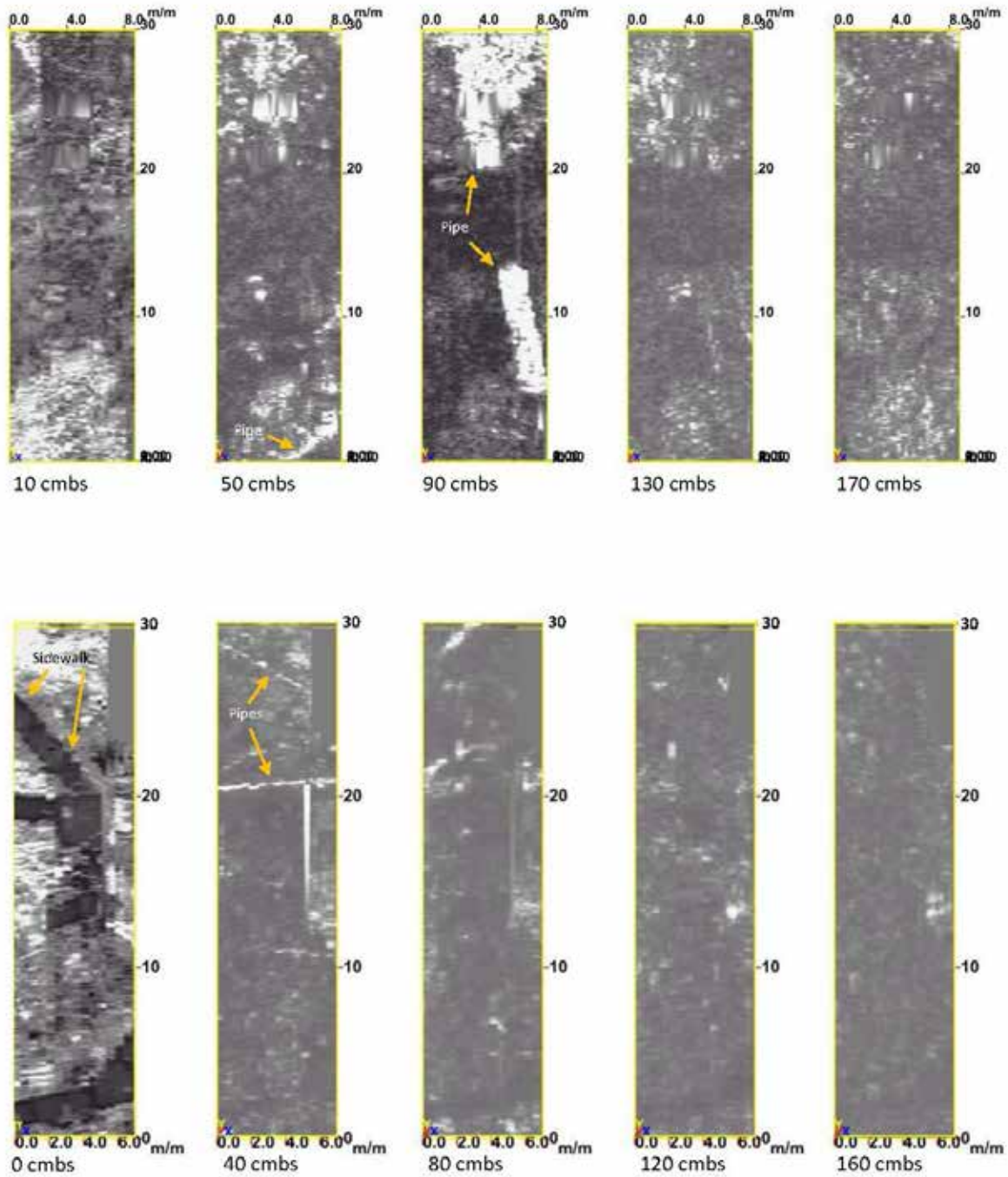


Figure 20 Depth slices for FPAN Grid 3 (top) and Grid 4 (bottom)

## FPAN Grids 5 & 6

Grid 5 was located on the north side of the school building, from an alcove area on the east side of the grid to an exterior staircase on the west side. A pipe observed more clearly in Grid 6 (described below) appears to continue through Grid 5 between 100-140 cmbs (Figure 21). Between 90-140 cmbs the survey area is full of multiple anomalies, many of which are consistent with burials. At least 6 of these are more defined individual rectangular objects, although the entire Grid 5 area warrants further investigation or ground truthing.

Grid 6 was located on the north side of the school building, just to the west of Grid 5. The area is completely grass covered, with the only obstruction being a mature oak tree in the north half of the grid. No defined grave-like anomalies were observed in Grid 6 (Figure 22). The main disturbances in Grid 6 are in the southern portion of the survey area, right up against the school building. An assortment of buried pipes/drains are visible in this area between 60-160 cmbs and continue east toward Grid 5. In the northeast corner of Grid 6 there is an area of disturbance (between 110-150 cmbs) that might warrant some more investigation. They are not rectangular, but are located at a depth where possible burials have been detected elsewhere on the property.

## FPAN Grids 7 & 8

Grid 7 was located on the east side of Holt Avenue, in a grassy area used for parking and large container storage. Much like grid 1 and 2, this area was also a high priority for GPR survey due to information from an informant who indicated that this area had marked burials when he visited as a child. Between 60 to 120 cmbs multiple grave-like anomalies are visible within grid 7, mostly on the west side (Figure 23). Around 19 possible graves are well-defined, but other areas of buried objects should also be investigated further. These anomalies are oriented east/west and organized in neat rows and groupings. Also of interest are two relatively large areas of compacted earth visible as large white shapes in Figure 23 starting around 60 cmbs. These might be due to the excavation or trenching of an area that was then refilled, or some other disturbance that led to ground compaction. These areas are directly adjacent to grave-like anomalies and might have resulted in past disturbance to historic burials. Because of the presence of possible burials, the Grid 7 area should be prioritized for further investigation to determine the nature of the detected anomalies. Grid 8 was located just north of grid 7, on the east side of Holt Avenue. The area is grassy, with some plantings, and surrounds a paved parking lot. No grave-like anomalies were observed in grid 8, although there are two areas of disturbance that might warrant further investigation out of an abundance of caution (Figure 24). Several small pipes or large roots are visible on the west side of grid 8. Areas of buried objects or disturbance are visible on the eastern and western extensions of grid 8, toward the north end of the survey area. No individual grave-like objects were observed, but the depth of these anomalies is around the same as those observed in grid 7.

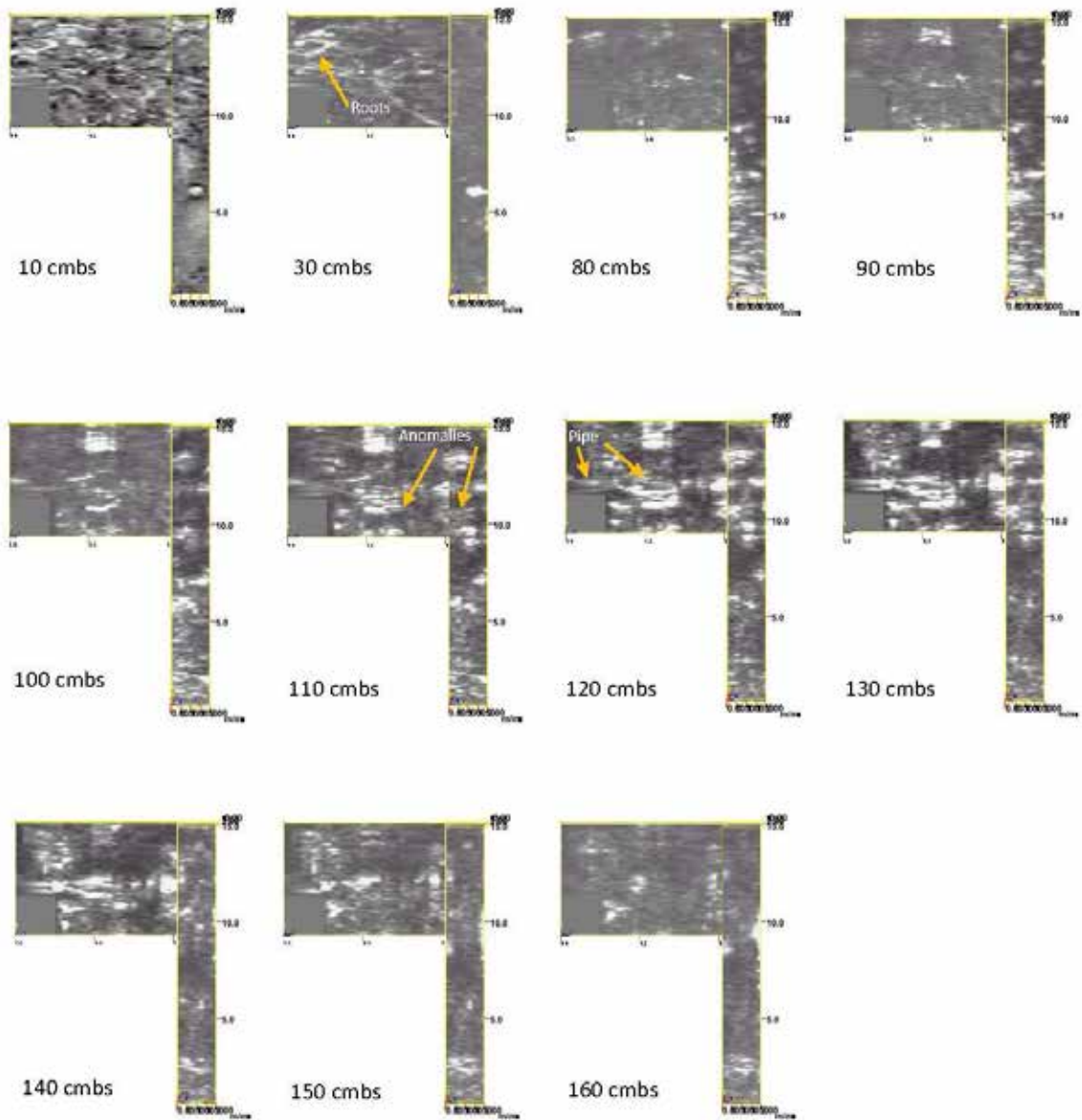


Figure 21 Depth slices for FPAN Grid 5

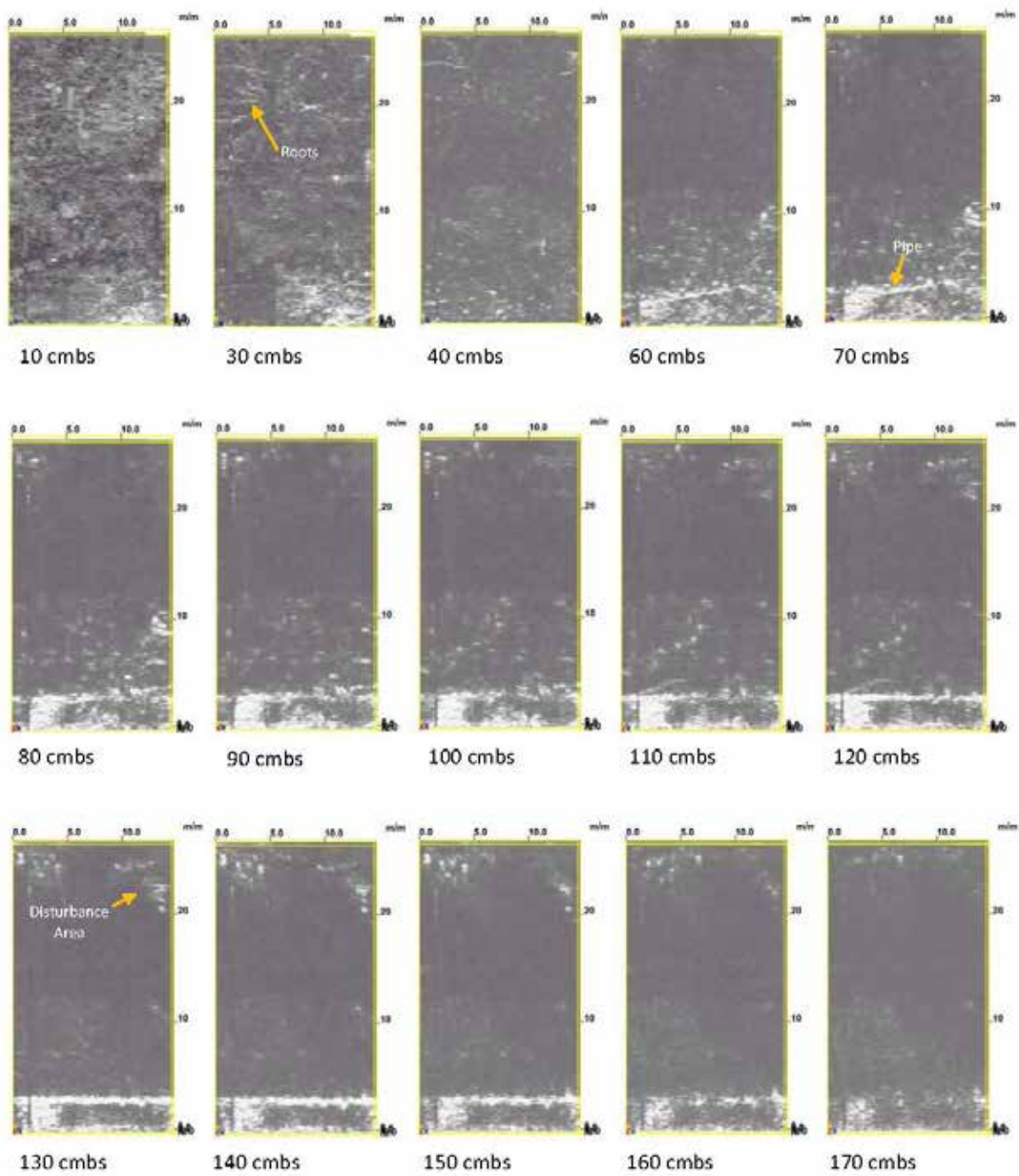


Figure 22 Depth slices for FPAN Grid 6

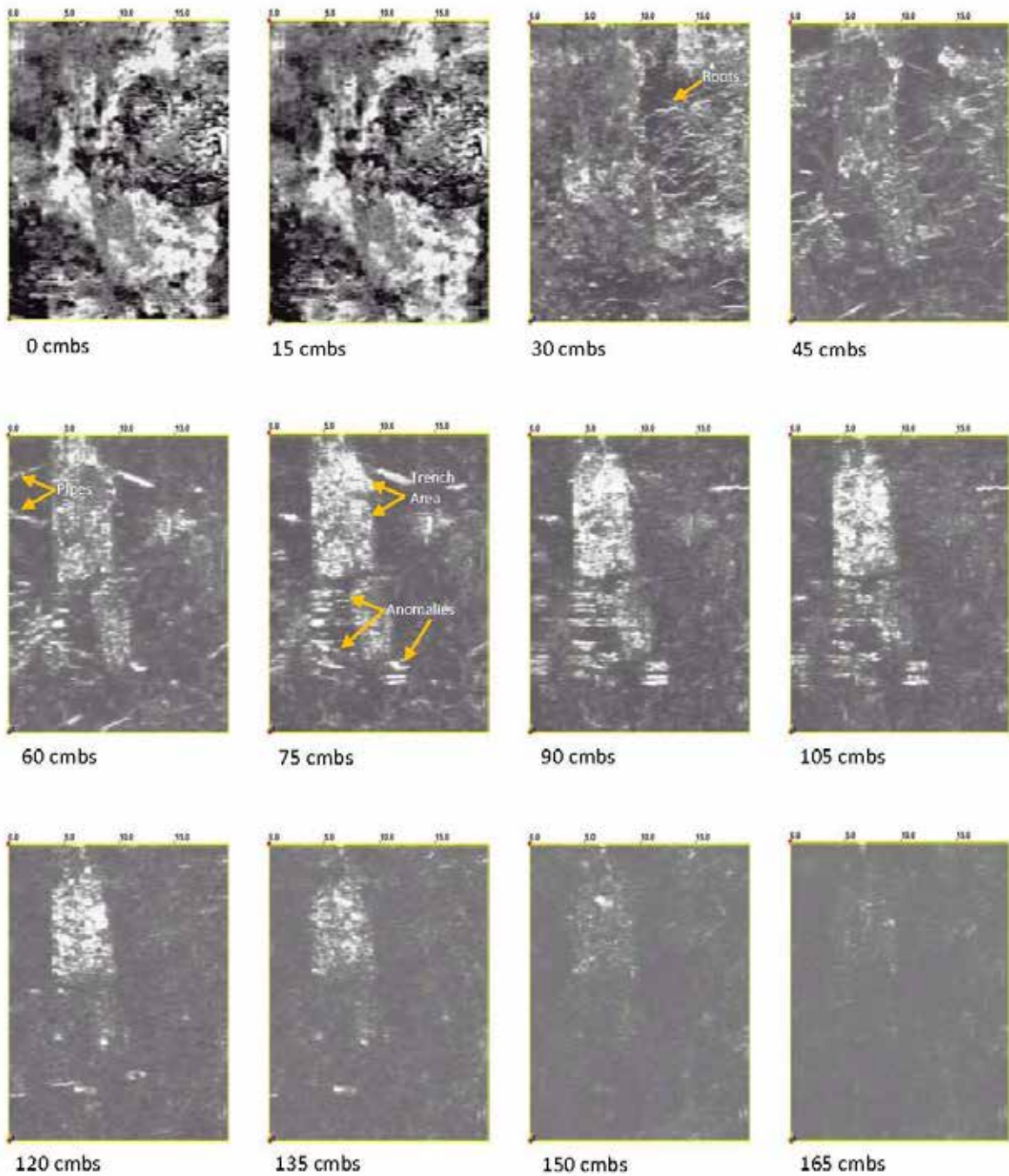


Figure 23 Depth slices for FPAN grid 7

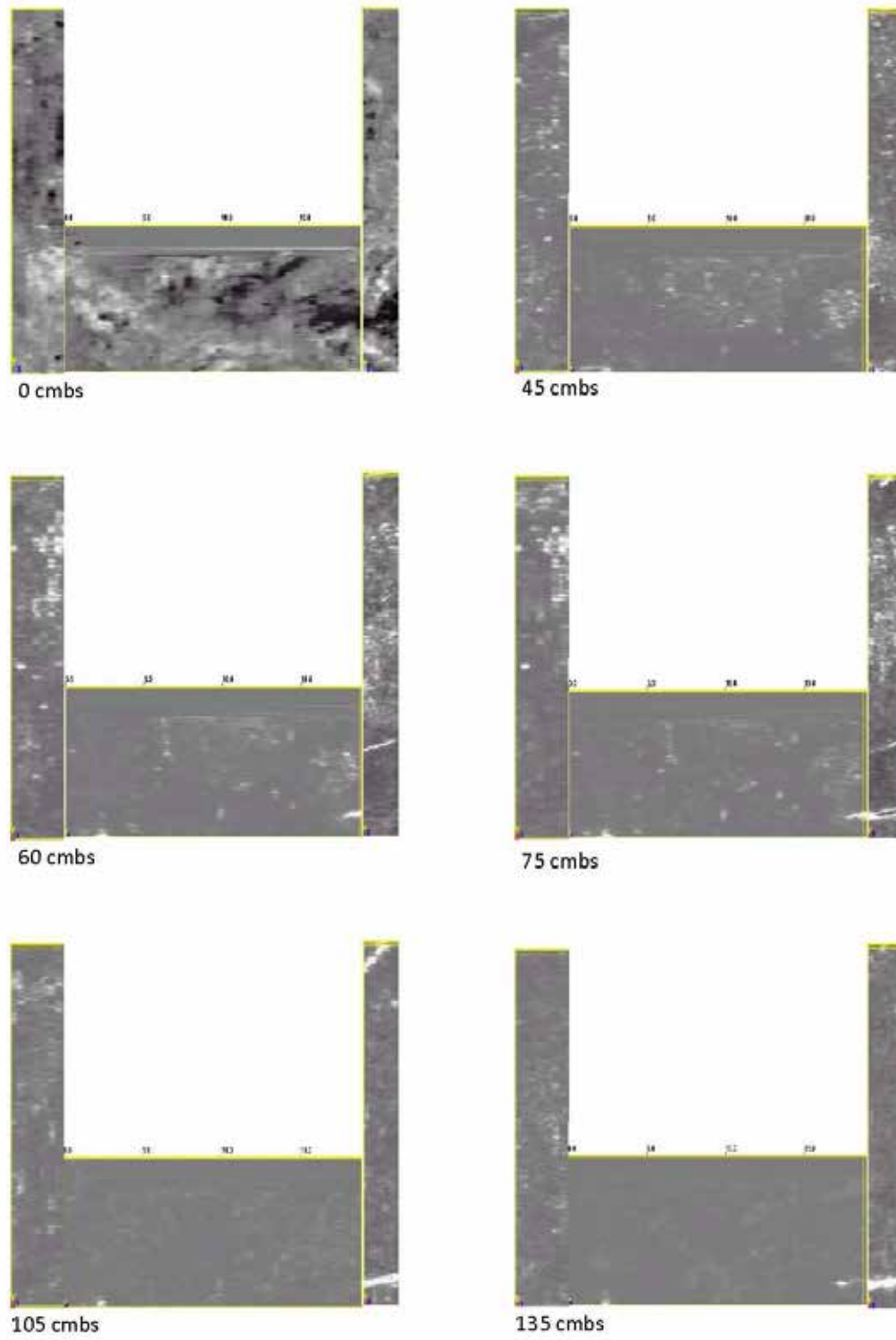
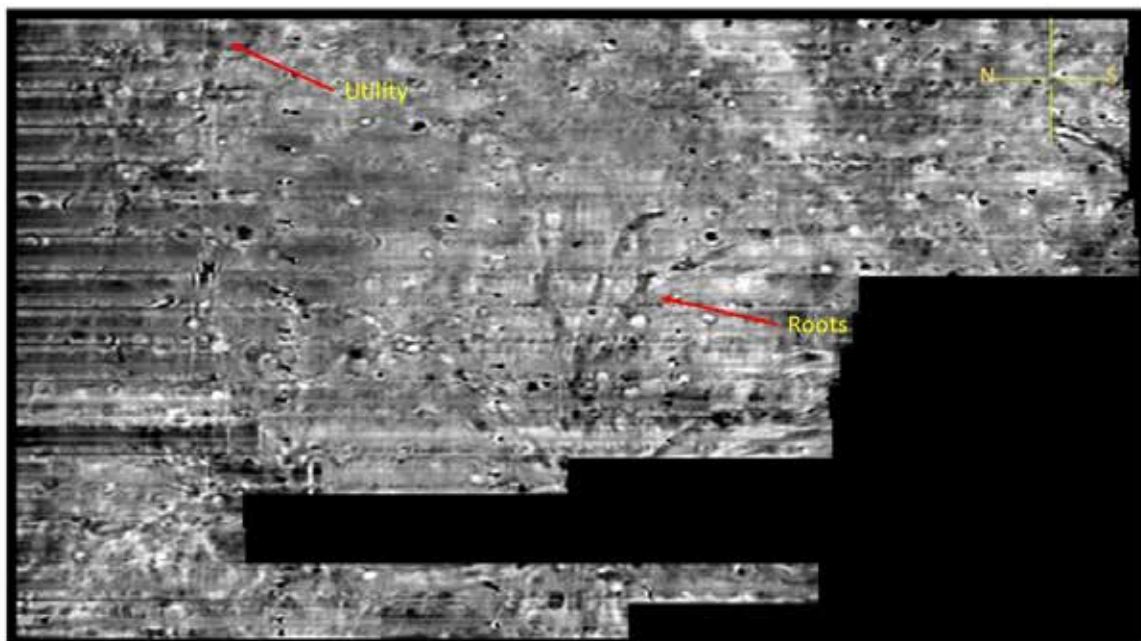


Figure 24 Depth slices for FPAN Grid 8

## T2 GPR Survey Results

T2 survey data from Stream-C and Stream-EM systems were analyzed through visual examination of depth slices. Depth slices represent a horizontal image or “slice” of all radar reflections that were returned from a given depth, across a survey area. In the present data set, depth slices were generated for every 20 millimeters (0.78 in./0.066 ft.) of increasing depth below ground surface (Figure 25). In general, areas of subsurface anomalies were examined by T2 GPR analysts with the purpose of eliminating objects or disturbances related to utilities. Areas of disturbance not attributed to utilities were then outlined by general polygons that indicate the locations of anomalies or clusters of anomalies. Archaeologists then reexamined those areas to distinguish and demarcate discreet anomalies with the expected size, depth, and orientation of an extant burial. Grave-like anomalies presented as rectangular reflections that stand out in contrast to the surrounding subsurface matrix. The grave-like anomalies are typically 6 to 8 feet in length and approximately 2 to 3 feet in width. They range in depth from 2.9 to 6.40 feet deep.



**Figure 25** Example of depth slice from Zone 5 at 0321 mm (-1.06 ft) below surface, showing root matrix and utilities

Overall, approximately 20 grave-like anomalies were detected by T2 survey (Figure 26). Fifteen of these anomalies were found in areas that are not overlapped by FPAN survey. T2 survey analysis found no further grave-like anomalies below the roads, sidewalks or former site of the swimming pool (zones 1, 6, 7, and 3 respectively). The lack of findings in these areas is not surprising. Although unpaved, Holt Avenue (T2 zone 1) existed more or less in its present location bisecting the cemetery while it was active. It is unlikely any burials would have been interred below the location of the road, where it existed at that time. Further, multiple utilities run below the current paved roads and sidewalks (T2 zone 1, and 6-7) in this area, which can obscure imagery of grave-like anomalies from GPR systems. According to reports the swimming pool established in 1954 north of the cemetery boundary (T2 zone 3) had a water depth of 10-ft.; therefore, the overall depth of the pool structure would have exceeded the depth of burial shafts if any were present in the footprint of the pool. Additionally, heavy subsurface disturbance due to pool construction and its subsequent demolition obscures subsurface imagery in that area. However, we must stress that hindrances to GPR scanning capabilities does not conclusively indicate that no extant burials or human remains exist in these areas.



## T2 Zones 2 & 4

T2 zones 2 and 4 cover the parking lots on the PCBI and HEP parcels. T2 Zone 2 is located north of the school building on the PCBI parcel. Survey in zone 2 collected images of a linear disturbance, approximately 20 feet wide, oriented east to west across the center of the parking lot. This disturbance is discussed in detail in the Additional Findings section. All zone 2 grave-like anomalies were observed at 3.5 to 5.7 feet deep (1.06 to 1.73 m). Immediately north of the disturbance along the northern boundary of the depth slice four grave-like anomalies have been identified. Although separate grave-like anomalies have been identified, the entire northern section of zone 2 scans present as an area of possible graves or that once contained graves. Immediately south of the linear disturbance, approximately seven grave-like anomalies are present extending in two parallel lines from the disturbance toward the southern edge of Zone 2. These lines of grave-like anomalies and an adjacent area of possible graves to the west appear to meet grave-like anomalies identified in FPAN Grid 5 immediately south of the T2 zone.

T2 zone 4 is a parking lot on the HEP parcel accessed via Engman Street. This zone also includes a narrow linear scan that covers the western edge of the grass lot on the HEP parcel. All zone 4 grave-like anomalies were observed at 2.9 to 4.6 feet deep (.88 to 1.40 m). Survey in Zone 4 collected images of four grave-like anomalies and an area of possible graves below the parking lot. In the T2 zone 4 scan of the narrow strip on the western edge of the HEP parcel, seven partial views of subsurface disturbance are identified. When this narrow strip is compared to adjacent T2 zone 8 and FPAN grid 7 immediately east of T2 zone 4, the four southernmost anomalies appear to meet the four grave-like anomalies in FPAN Grid 7. This suggests that these four partial views are the terminus of the four grave-like anomalies in FPAN Grid 7. The remaining three disturbances to the north in zone 4 are designated as areas of possible graves due to the concentration of findings in this area.

## T2 Zones 5 & 8

T2 zone 5 and 8 are located on grass lot within the HEP parcel and extend up to 100 ft. south into the buffer target area. The majority of T2 zone 8 covers the grass lot that falls within the primary target area inside the cemetery boundary. In this section, large areas of possible graves have been identified, many of which coincide with FPAN Grid 7 findings and are therefore verified by multi-instrumental confirmation. These areas of possible graves are observed at 2.9 to 5.8 feet deep (0.88 to 1.76 m). Zone 5 within the cemetery boundary identified a single area of disturbance along the southern boundary of the cemetery. Outside of cemetery boundary within the buffer target area, T2 Zone 5 and 8 identified two adjacent areas of disturbance. The nature of these areas of disturbance is unclear. Similarities in these disturbances to those found within the primary target area (FPAN Grid 8 and T2 Zone 5) suggest that they warrant further investigation in order to determine if the disturbance is related to cemetery activities. Cardno recommends at minimum additional GPR scanning in this area, which would help determine if more extensive verification measures such as ground-truthing are necessary.

## T2 Zone 9

T2 Zone 9 is located in a grass lot at the northeast corner of the school building on the PCBI parcel. Zone 9 also falls within an overlap target area (FPAN Grid1). In this zone, four grave-like anomalies and two areas of possible graves have been identified. All zone 9 grave-like anomalies were observed at 3.8 to 5.2 feet deep (1.15 to 1.58 m). These areas concur with FPAN Grid 1 findings and are therefore verified by multi-instrumental confirmation.

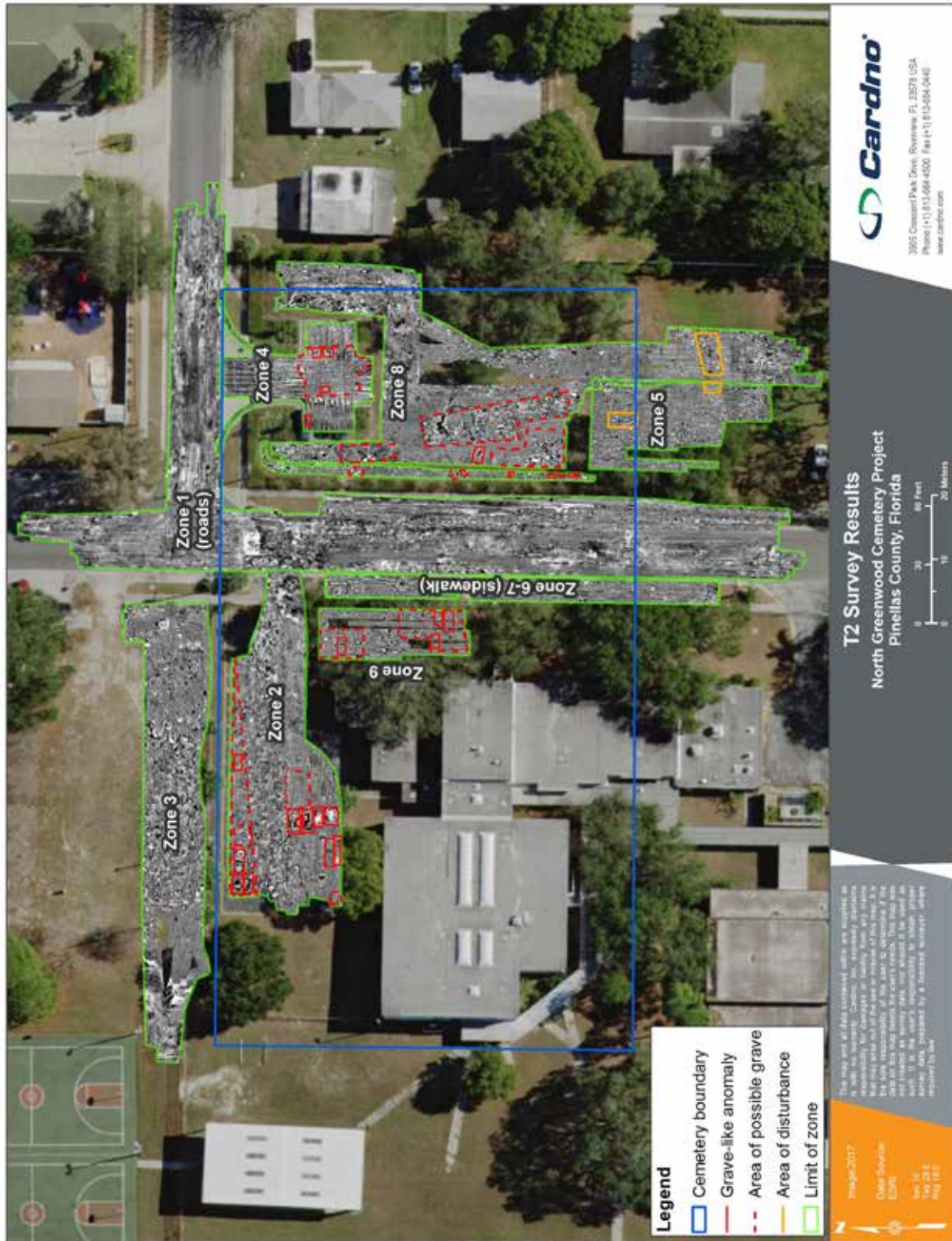


Figure 26 T2 GPR survey results

## Combined Survey Results and Additional Findings

### Combined Survey Results

Results of the combined Cardno surveys of the North Greenwood Cemetery identified 54 grave-like anomalies along with nineteen areas of possible graves and an additional five areas of disturbance across the survey area.

The analysis of data from the FPAN survey (grids 1, 2, 5, and 7) returned images of 36 grave-like anomalies (Figure 17). In areas of the T2 survey (zones 2, 4, and 8) 20 images of grave-like anomalies were identified (Figure 26). Of the 20 identified in T2 zones, five are found in overlap areas with FPAN survey. Six grave-like anomalies are in alignment with FPAN findings; therefore, they do not add to the overall count. These grave-like anomalies show east-west grave alignment in organized rows as would be expected within a Christian-style cemetery. Larger areas of possible graves were identified by both FPAN and T2 surveys. Clusters of grave-like anomalies are observed adjacent to Holt Avenue and in close proximity to the school building. In the majority of overlapping survey, anomalies detected by the FPAN survey were verified by results of the T2 survey. In other words, anomalies were detected in the same location and at the same depth by both survey systems (Figure 27).

The pattern of relatively organized grave-like anomalies surrounded by or in close proximity to areas of disturbance, strongly suggests that graves were removed in those locations. The high degree of disturbance and inconclusive results of GPR analysis in these areas of possible graves may be clarified by minimally invasive archaeological testing (ground truthing). Ground truthing generally entails the removal of soil to verify the nature of an anomaly identified by GPR survey. Often it includes small-scale excavation of an area in order to establish the presence or absence of human remains without removing or otherwise disturbing any remains if present.

The built environment at the southwest corner of the cemetery boundary precluded GPR scanning in proximity to the south elevation of the school building. Obstructions due to the built environment include; sidewalks, metal walkway shelters, planters and poured concrete picnic tables among others. However, additional GPR scanning is recommended within the buffer target area at this location in order to delineate the cemetery boundary.

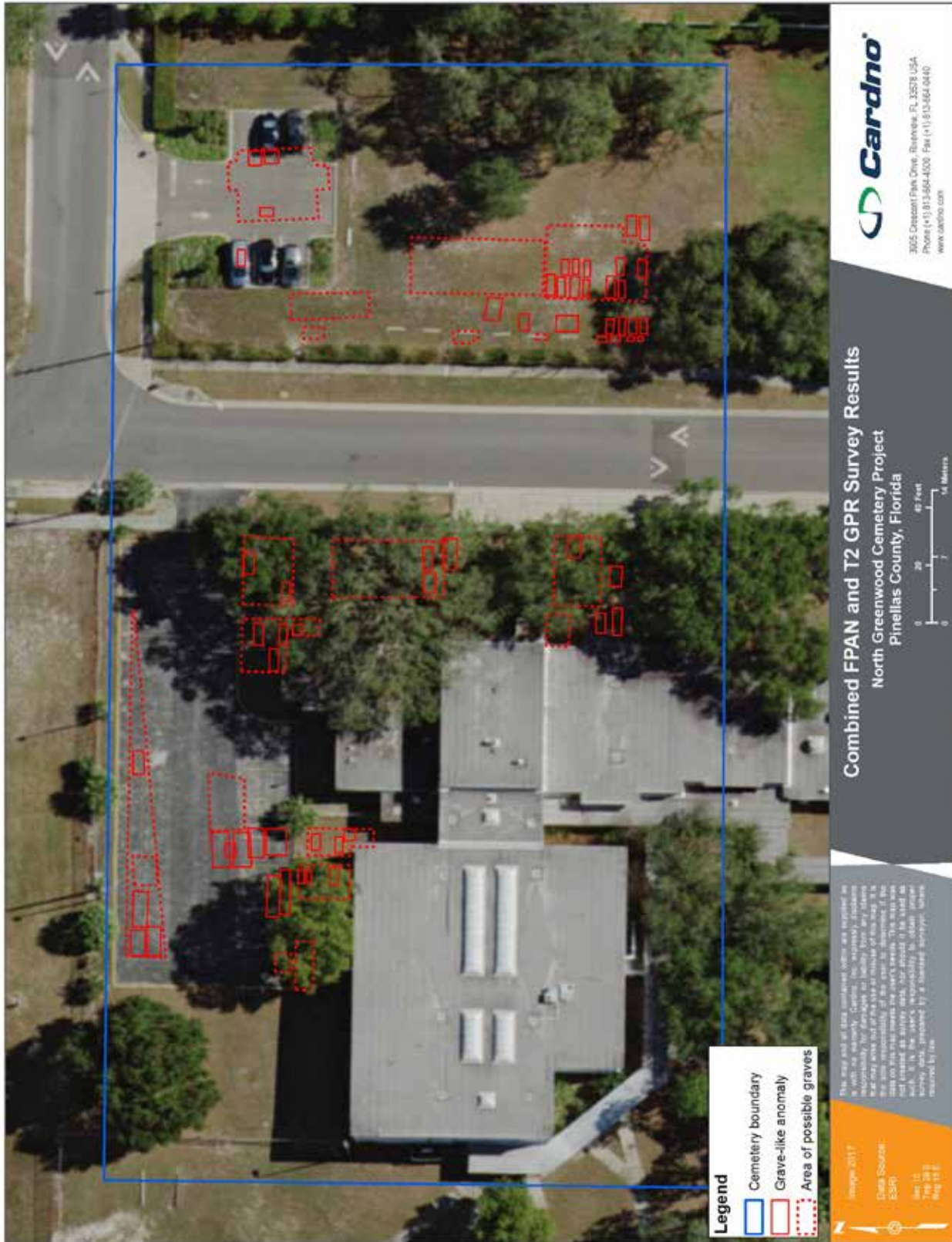


Figure 27 Combined Cardno GPR survey results, showing grave-like anomalies and areas of possible graves

## Additional Findings

The footprint of the existing school building covers a large portion of the survey area within the PBPI parcel. It is likely that a number of additional grave-like anomalies will be present beneath the footprint of the school building. This interpretation is bolstered by the presence of the grave-like anomalies adjacent to the building (FPAN grids 1, 2 and 5). Particularly at the northeast corner (grid 1), the anomalies do not appear intruded upon by the construction of the building, suggesting that they may extend beneath the building intact.

After the 1954 relocation, subsequent development of the PCBI and HEP parcels along with city streets and utilities did not result in the documentation of exposed human remains. However, in a recent 10 News WTSP interview with a 79-year-old local resident, the man reports he saw human remains uncovered during utility work in the parking lot north of the school in the 1980's (Morrow, Emerald. "There are human remains here': Neighbor remembers bones 30 years after city said graves were moved." 10 News, February 17, 2020). Prior to the news report, the local informant approached a member of Cardno's field crew at the project area. During that interview, the informant stipulated that the utilities work that exposed human remains at the site occurred in 1985. GPR survey results reveal subsurface disturbance north of the school below the parking lot and northwest of the building. The 1993 Silvie & Co. site survey identifies a 10-foot drainage easement (unrecorded) beginning at the east edge of the parking lot extending west and terminating at the west edge of the PBPI parcel. When the FPAN Grid 3 and T2 Zone 2 are viewed along with the 1993 site survey, the subsurface disturbances and drainage easement align (Figure 28). The linear white object shown in FPAN Grid 3 is a severed sewage pipe that extends from the northwest corner of the school toward a pipe junction further north. A Topographic Survey for Palmetto Elementary School prepared by George F. Young, Inc. on July 19, 1984, illustrates that the sewage pipe, was intact at that time (Figure 29). The T2 Zone 2 shows east-west subsurface disturbance along the same path as the drainage easement. It is important to note that T2 Zone 2 survey results show grave-like anomalies that appear to be truncated by the subsurface disturbance below the parking lot.

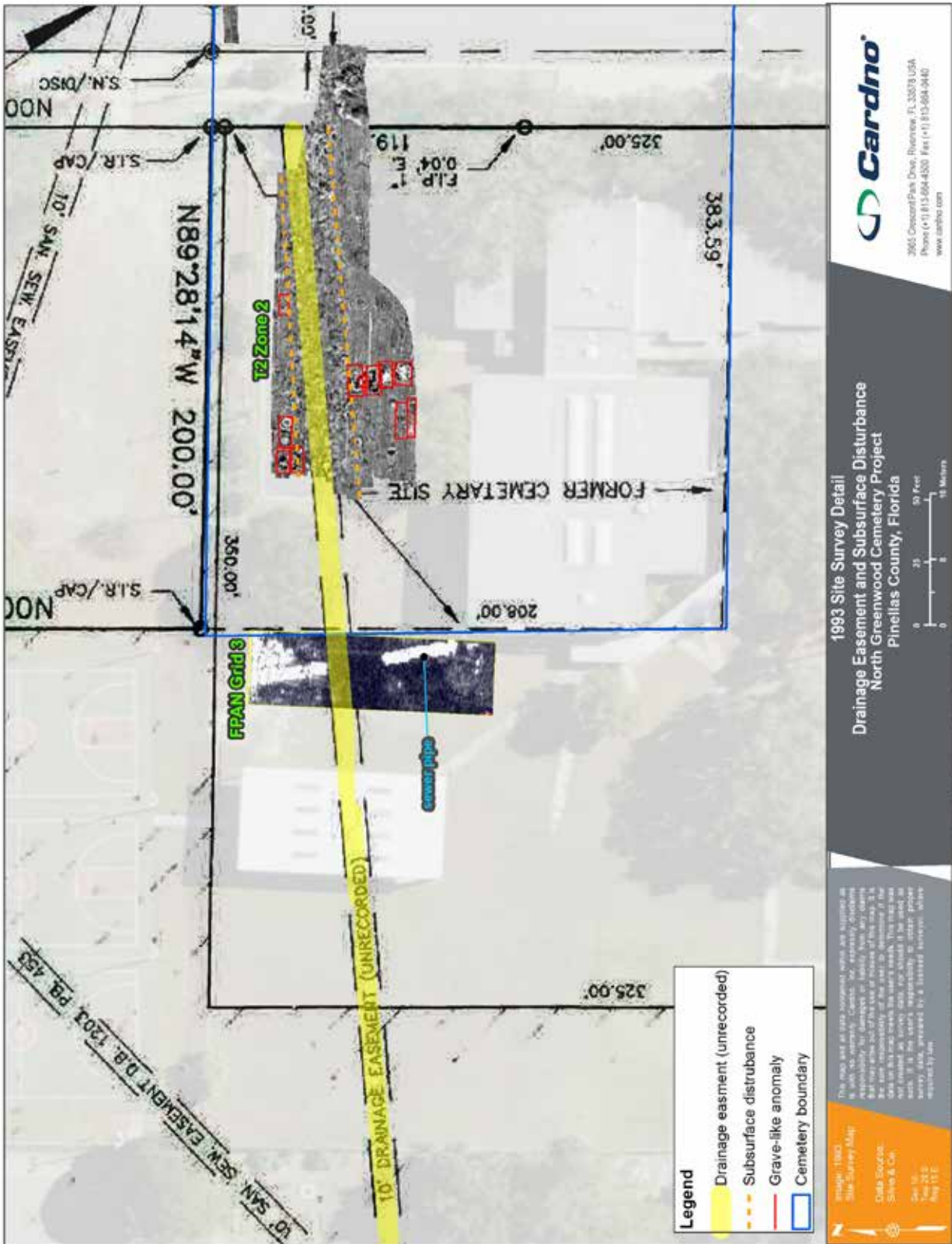


Figure 28 1993 site survey map showing 10' Drainage Easement (unrecorded) with FPAN grid 3 and T2 zone 2 disturbances

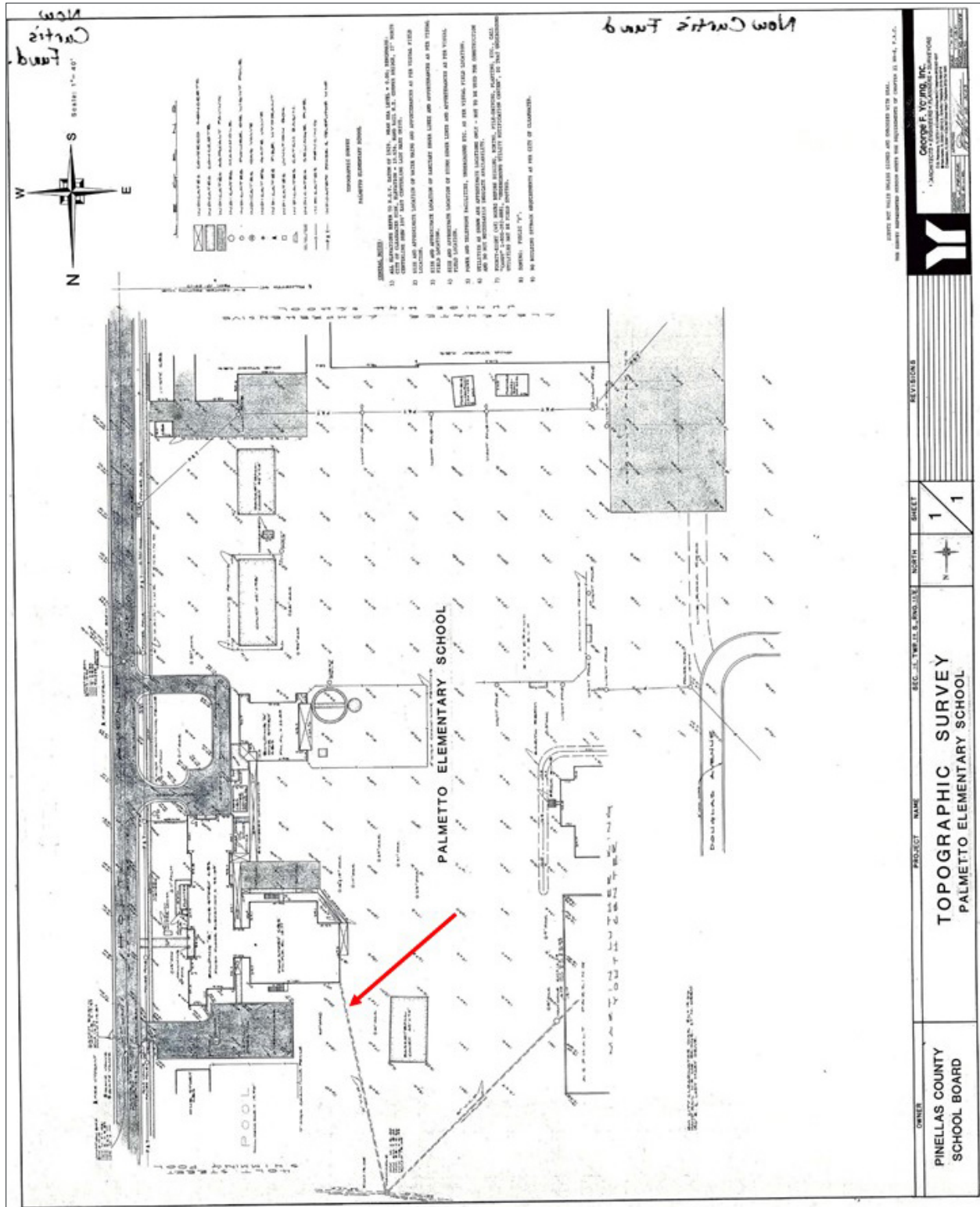


Figure 29 1984 Topographic Survey prepared by George F. Young, Inc., intact sewer line denoted with red arrow

While the discovery of human remains at the North Greenwood Cemetery site may have gone undocumented or simply unnoticed during the construction of the school, Cardno's GPR survey data may offer insight. Results indicate potentially intact grave-like anomalies may extend under the footprint of the school building. According to Pinellas County Property Appraiser records, the school building is constructed on a Spread/Mono Footing with a slab on grade foundation. In warm climates with well-drained sandy soils such as Florida, perimeter trench footers would not need to exceed a depth of two feet with a four-inch thick poured concrete foundation. This type of foundation would require minimally intrusive surface grading for the poured concrete foundation and footers on which the building rests.

A review of final approved site and architectural plans for the school building provided necessary details about its construction. Site plans created by Bruce and Parrish Architects dated 1961 were provided by PCBI to Cardno upon request. The plans identify the type and depth of the foundation and footers along with the existing topography (contour lines) around the building and planned modifications to the topography. This information was then used to calculate an approximate depth of the buildings footers. In 1961, the existing elevation of the ground surface immediately under and around the building ranged from 18 to 21 feet Above Sea Level (ASL). The plans reveal that below the footprint of the building, the 20-foot ASL surface grade was to be maintained or extended (Figure 30). These plans indicate site preparation involved elevating the ground surface in order to level the grade rather than a surface stripping process. Foundation plans indicate the building rests on 12-inch footers and a 4-6 inch poured concrete floor (Figure 31 and Figure 32).

On the plans, elevations above sea level are specified at the top of the footer, terminal depth of footers are calculated by adding the additional 12-inches of footer to arrive at the height above sea level for the bottom of the footer. Comparing the terminal depth of the footer to the surrounding topography, we obtain an approximate depth of the footers below the ground surface. Along the whole of the east elevation and the east end of the north elevation, the footers do not exceed approximately 2.6 feet below surface. The grave like anomalies in these areas (grid 1, 2, and 5) are identified at 3.60 to 4.59 feet below surface.

Therefore, it is possible that extant burials in these locations were not disturbed during construction of the school. A shallow foundation aids in explaining why human remains may not have been discovered during construction and why the abutting grave-like anomalies appear unmolested. It also suggests additional undisturbed extant burials may be present under the school building. Likewise, the HEP parcel to the east was largely undeveloped with the exception of mobile homes (1975–1994) and resurfacing for asphalt parking lots within the cemetery boundary. This type of land use generally has a low likelihood of ground disturbance at the depth of the average grave-like anomaly.



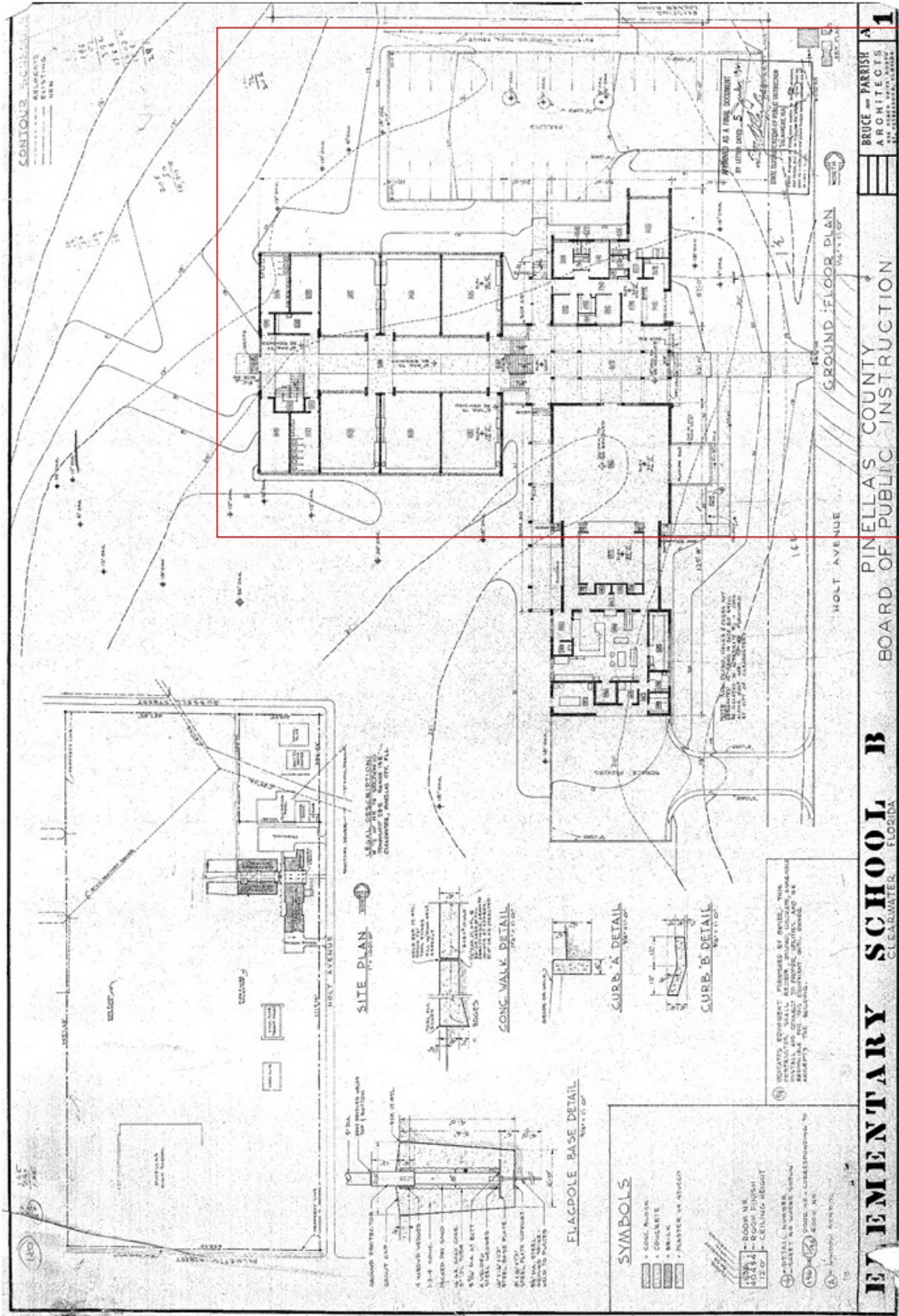


Figure 30 1961 architectural plans of school building page A1, showing contour lines and cemetery boundary denoted in red

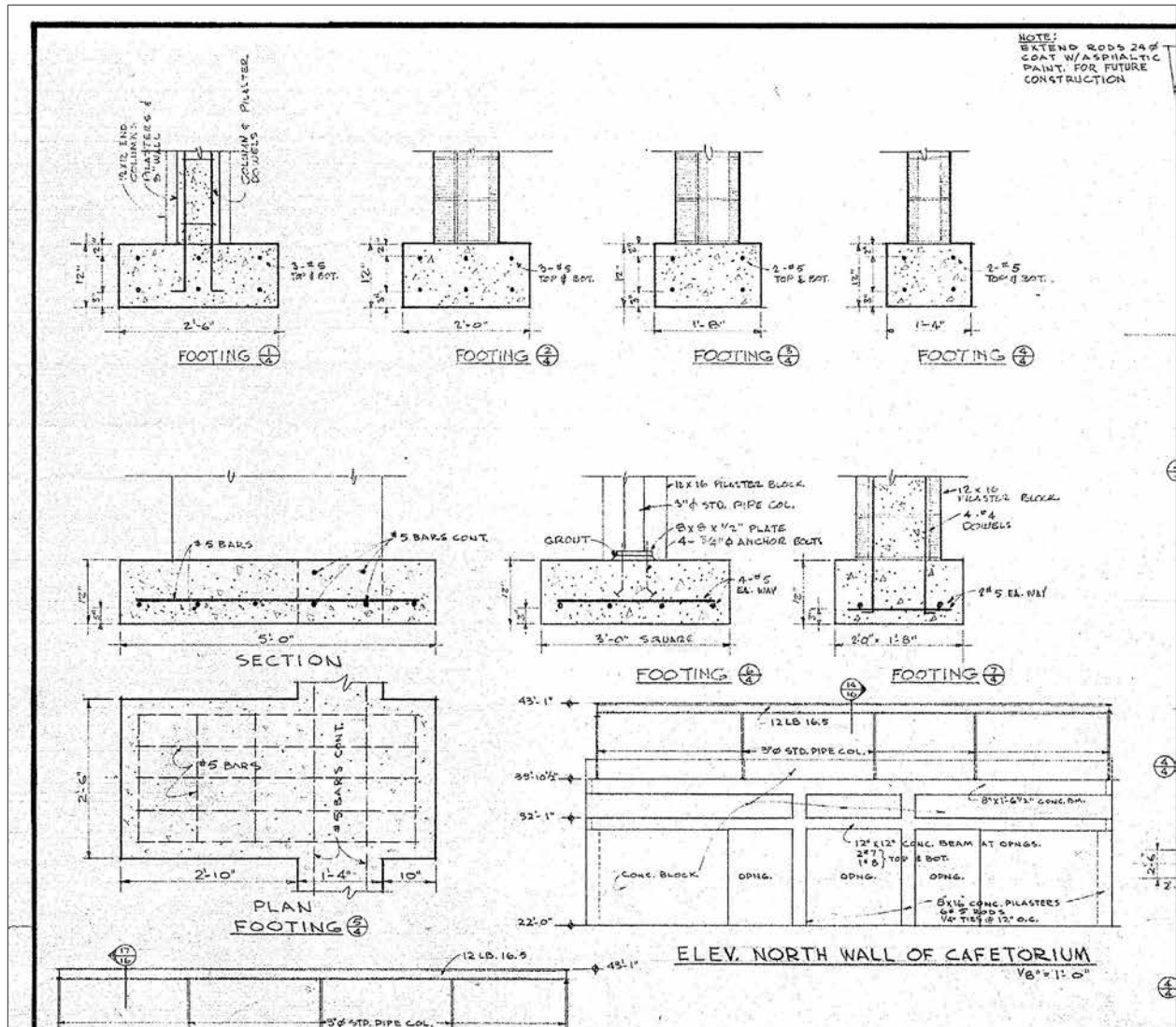


Figure 31 Detail of 1961 architectural plans page A4, showing footing dimensions

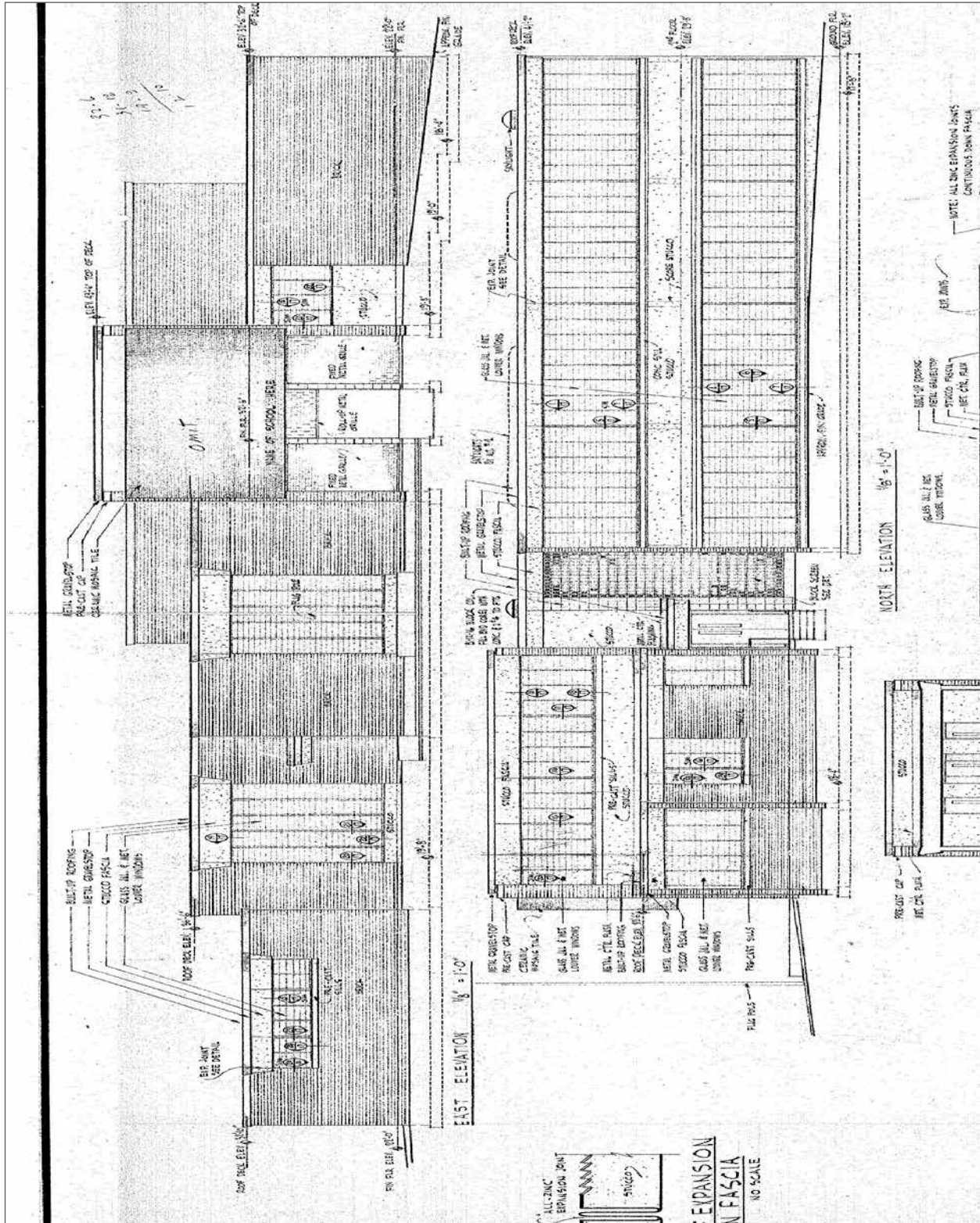


Figure 32 Detail of 1961 architectural plans page A3, showing east and north elevation footing elevation

## 6. Summary and Recommendations

### Summary

Between February 6 and 13, 2020, Cardno conducted geophysical survey of the North Greenwood Cemetery, in Clearwater, Florida. The survey was performed on behalf of City of Clearwater with the express intention of identifying the presence of extant burials at the North Greenwood cemetery site that failed to be moved during the relocation efforts of 1954. The work was designed based on the estimated cemetery boundary and informed by research into the historic context of the site and subsequent land use as well as prior surveys conducted by Cardno and FPAN on historic cemeteries. Approximately 54 subsurface anomalies consistent with graves have been identified at 2.45 – 6.40 feet below surface. Imagery of the 54 grave-like anomalies include complete and incomplete views due to their location within the survey grid. Nineteen areas of possible graves, that is, areas of subsurface disturbance surrounding grave-like anomalies or in close proximity have been identified. The exact nature of these nineteen disturbance areas cannot be determined using GPR technology; however, the disturbances may indicate areas where burials have been removed. Eight additional isolated indeterminate areas of disturbance have been identified which warrant further investigation. The above anomalies have been identified on both the PBPI and HEP parcels, primarily located adjacent to Holt Avenue and skirting the footprint of the school building. Several distinct grave-like anomalies meet the footprint of the school building at its northeast corner. Anomalies detected by the FPAN survey were verified by results of the T2 survey in overlap locations. This allowed for autonomous multi-instrumental confirmation of any subsurface anomalies that were detected by both machines.

### Recommendations

Based on the findings in this report, Cardno has developed a list of actionable items, recommendations, and preliminary work plans to be addressed moving forward. Pertinent procedures and regulations that affect decisions regarding the future of the North Greenwood Cemetery site are also included. It is important to note that community consultation remains a high priority item; collaboration will be paramount in developing a framework for any decisions or plans that may affect the North Greenwood Cemetery site. The outcome of consultation proceedings will inform the detailed work plan developed by Cardno. Further, Cardno recommends that consultation occur prior to or in concurrence with release of information contained in this report to the media.

#### • **Community Consultation**

Based on the results of this survey, Cardno recommends the City of Clearwater begin immediate consultation proceedings with community representatives and relevant organization leaders as well as seeking guidance from legal counsel for moderating purposes. In light of recent global events and social distancing procedures, it is understood that a delay in effective community consultation will result in a delay in decisions addressing the North Greenwood Cemetery and that full consultation proceedings should resume when normal activities resume. Relevant organizations and representatives may include but are not limited to the following:

- Clearwater/Upper Pinellas NAACP via Zebbie D. Atkinson IV
- Clearwater Heights Reunion Committee and other civic groups
- Pastor Carlton Childs and local religious establishments
- Descendants of individuals likely interred at North Greenwood Cemetery
- Pinellas County School Board
- Homeless Empowerment Program

- **Establish a Point of Contact with the City of Clearwater**

Cardno recommends that the City of Clearwater assign a Point of Contact (POC) between the city and the general public, community groups, and the press. The POC should have continuing access to the public relations department, the city attorney, and the Mayor's office. The POC will be called on to speak for the city and should be comfortable working with the press. They should also serve on the Greenwood Advisory committee, if developed, and would be called on to speak for the city in discussions including consultation proceedings with community representatives and relevant organization leaders, as well as seek guidance from legal counsel for moderating purposes.

- **Coordination with Adjacent Landowners**

Nearby landowners may be concerned that the knowledge of the cemetery may present an impairment to their property ownership. We recommend that the City coordinate with nearby landowners so that they can receive information on findings and copies of any final survey to show that the original cemetery boundary was not on or adjacent to their property. Additionally, any future GPR testing could require landowner permission.

- **State of Florida (SHPO) Consultation**

The State of Florida has specific reporting requirements if human remains are discovered or suspected. Chapter 872 Florida Statutes outlines the procedures for managing the inadvertent discovery of an unmarked human burial. The procedure is designed to comply with state laws concerning deceased persons in the State of Florida. Cardno has developed a series of procedures if a City of Clearwater employee or contractor identifies or suspects an unmarked and/or unregistered grave, funerary objects, or object of cultural patrimony. The office of the State Archaeologist and Chapter 872 coordinator should be contacted as outlined in **Section 7 - Procedure for Discovery of Unmarked Human Burials**.

- **Additional GPR Survey**

Cardno recommends additional areas within and around the boundary of the North Greenwood Cemetery be subjected to further GPR survey (Figure 33). A second phase of GPR survey is necessary to clarify delineation of extant burials in un-surveyed areas surrounding clusters of grave-like anomalies revealed during the initial survey. It is important to note that many of these areas contain obstacles from the built environment and vegetation that dramatically hinder the speed of survey. Complete coverage of accessible spaces in buffer areas along the cemetery boundary will allow for a more comprehensive delineation of the cemetery boundary. Substantiating the boundaries of the cemetery through GPR survey will be vital information in decisions regarding the future of the North Greenwood Cemetery property. Expanded GPR survey would also assist in determining if areas of disturbance identified within the cemetery and outside the cemetery boundary are the result of cemetery interment and removal activities. If less invasive measures of verification through GPR survey are not conducted in these areas, more intensive ground truthing measures would be necessitated. Additional GPR survey in recommended areas will aid in refining the focus of a final ground truthing plan. While scanning areas below the footprint of the school building would provide data essential to future work procedures, the building has been posted with warnings regarding the presence of hazardous gas. Testing through the floor of the building would require verification that hazards have been removed in order to ensure a safe working environment for crewmembers. Based on the findings in this report and in lieu of scans below the building footprint, the area should be addressed with caution and assumed to contain a number of extant burials.



Figure 33. Project area showing generalized areas of proposed additional GPR survey and completed GPR

- **Ground-truthing to verify GPR survey results**

Ground truthing as used in this report is; “the removal of soil or overburden to verify the nature of an anomaly identified by GPR, probing, or other means.” It generally entails the removal of soil using an archaeological method to verify the nature of an anomaly identified by GPR survey without unnecessary disturbance. In this instance, it includes the small-scale excavation of an area in order to both determine the nature of a disturbance as well as establish the presence or absence of human remains. It is often the case that GPR testing does not reveal the presence of all graves in a given area. Physically locating graves on the edge of the cemetery is essential to understanding the boundaries and exact location of this cemetery.

Ground truthing takes place in two stages, delineation and excavation. Delineation generally entails the removal of overburden in excess of 12 inches above the top of the anomaly will be removed using careful mechanical stripping of specific area. Proposed mechanical stripping is a method that is typically employed to expose and map the tops of “grave shafts” as they may appear in cemeteries. Mechanical stripping involves the broad horizontal exposure of near surface soils in a relatively large strip. A medium sized excavator (e.g. CAT 305 series) outfitted with a flat-bladed steel bucket is used to carefully scrape back the upper layers of soil in a controlled manner, to reveal the presence of grave shafts. Grave shafts are the telltale rectangular impressions left behind in the soil when a grave has been dug, and then infilled to cover the underlying coffin. Soils that are removed often become mixed with deeper soils and other materials resulting in a mottled, discolored fill that stands out against lighter rain-washed soils surrounding the grave shaft. This is the signature as it has been observed in the sandy soils of the Tampa Bay region. Generally, this method will allow for the identification of burial shafts, their location and extent thus informing and directing the excavation stage. Excavation would be undertaken by hand using flat bladed steel shovels, trowels, and other hand tools. The objective of the excavation stage is to verify GPR findings through physical confirmation of the presence or absence of extant burials or human remains within grave-shafts and areas of possible graves. Selected areas will be excavated only to the depth necessary to verify and document findings. Generally, this method will allow for the identification of extant human remains without unnecessary disturbance of those remains.

Cardno has identified several preliminary areas that warrant further investigation through ground truthing (Figure 34). These areas are preliminary pending the outcome of additional GPR survey, which may result in modifications to these areas. The current selected areas minimize or avoid the necessity of removing asphalt or concrete pavement and focus on areas that are located below grass lots. Each area is easily accessible by the heavy machinery utilized in the mechanical stripping stage and allows for management of the back dirt generated by the ground truthing process. On both the HEP and PCBI parcels, areas have been selected where the presence of grave-like anomalies are likely. These locations also include areas of possible graves or where graves were once located. Along the southern portion of the cemetery, larger work areas have been identified. Ground truthing here will serve a twofold purpose 1) to verify the presence of extant burials and 2) physical verification of the cemetery boundary. Areas of disturbance within the cemetery boundary have also been selected for ground truthing in order to determine the nature of these subsurface disturbances and rule out the presence of human remains in those locations.



Figure 34 Project area showing preliminary areas recommended for ground truthing



· **Development of Final Work Plan and Future Report Preparation and Submittal**

Once a decision is reached in consultation with all parties involved, we recommend that a work plan be developed and submitted to the Florida Division of Historical Resources (DHR) for review, in anticipation of Federal and State requirements. We also recommend that the work plan be submitted to Pinellas County. The Work Plan will include the historical record of the cemetery and documentation of the consultation process for future reviewers. The work plan will also memorialize the steps taken to meet the requests of the various consultation parties.

As any future development of the site may eventually engage Federal action under USACE, HUD, or other agencies it may become subject to National Historic Preservation Act Section 106 review. In anticipation of future Federal or State requirements, the results of the cultural resource assessment survey (CRAS) will be presented in a technical report for submittal to the City of Clearwater and the Florida (SHPO) for review and comment. The report will be in compliance with the Florida DHR Chapter 1A-46 Archaeological and Historical Report Standards and Guidelines. The report will include, as appropriate, sections outlining the purpose of the survey, a description of the environmental setting, a cultural context for the area, results of the background research, details of field and laboratory methods used, and survey results including detailed technical maps of and archaeological remains or excavations that are conducted. The report will also include Cardno's recommendations for resource evaluations and either project recommendations.

· **Potential Building Demolition and Abandonment of Utilities Guidance**

The final report will include guidance/plan for potential demolition of the structures and asphalt surfaces at the Cemetery location. Any building demolition should be carried out following a written plan based in part on our final report, but developed specifically with the demolitions contractor contracted by the city to demolish the existing structure. The building foundation likely consists of poured concrete footers extending down approximately 12-32 inches below the ground surface. Generally, above grade demolition (i.e. roofs and walls) should be carried out so that all of the debris can be pushed to the interior of the structure, onto the foundational slab of reinforced concrete. This is a common practice in sensitive areas—for instance, when a building must be removed from an adjacent structure—but it will need to be specified to contractors.

Work to clear above-grade rubble should be carried out from the roads, driveways, and sidewalks bordering the building. Following above-grade clearing, the slab can be broken with a hydraulic machine, and reinforced steel can be cut to remove the slab in pieces. It is essential that this stage be monitored by a professional archaeologist. Following removal of slab, the first course of concrete block risers can be removed, if first broken by hydraulic equipment. This process should also be carefully monitored by an archaeologist.

Abandoned utilities in the vicinity of the cemetery will need to be cut and capped on either end, which will require digging down to the depth of the utility line in two places. In place abandonment of utilities should take into consideration the results of archaeological survey, so that any utilities excavation can take place in areas where graves are not thought to exist. Excavation to reach utilities should be monitored by a professional archaeologist.

## 7. Procedure for Discovery of Unmarked Human Burials

The following section outlines the procedures for managing the inadvertent discovery of an unmarked human burial. The procedure is designed to comply with Chapter 872 Florida Statutes. The following is intended for discovery that takes place either during monitored slab removal, or archaeological excavation with hydraulic machinery.

### Immediate Response

If the monitor or any City of Clearwater employee or contractor identifies or suspects an unmarked and/or unregistered grave, funerary objects, or object of cultural patrimony, all ground disturbing, construction, or other activity around the immediate area of the discovery shall cease.

1. Upon discovery, Cardno, City of Clearwater, and other contractor employees will comply with applicable laws and regulations including Chapter 872 of the 2017 Florida Statutes, Offenses Concerning Dead Bodies and Graves.
2. A 25 ft. radius will be implemented around the point of discovery. Steps will be taken to mark the area of the discovery and stabilize and protect the discovered resource until it can be evaluated and impacts assessed. Efforts shall be made to protect the discovery from looting and vandalism. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.
3. The monitor and/or Construction Manager will immediately notify a City of Clearwater contact via telephone.
4. The monitor will assess the discovery immediately and will ensure that any and all human remains, sacred objects, and objects of cultural patrimony will be treated with dignity and respect. Remains will be covered with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed.
5. If Cardno's staff archaeologists are unable to determine that the remains are greater than 75 years of age, then the monitor and City of Clearwater will notify law enforcement as expeditiously as possible, who in turn will notify the District Medical Examiner and the State Archaeologist.
6. The local law enforcement and/or Medical Examiner will determine jurisdiction. If the remains have been buried less than 75 years, or are possibly involved in a criminal investigation, the Medical Examiner has jurisdiction. If the remains have been buried more than 75 years and are not involved in a criminal investigation, the State Archaeologist has jurisdiction.
  - a. The coroner, with assistance of law enforcement personnel, will determine if the discovery is forensic (i.e., it constitutes a crime scene). If the coroner determines the remains are non-forensic, they will report that finding to Florida State Archaeologist.
  - b. If the matter is referred to the Florida SHPO, the State Archaeologist will determine the treatment, including mitigation and disposition of the unmarked human burial or unregistered grave. The State Archaeologist will conduct all consultation with affected parties as to the future preservation, excavation, and disposition of the remains.
7. If the remains are determined to be archaeological (i.e. greater than 75 years old), the monitoring archaeologist/Cardno's staff bioarchaeologist will immediately contact the State Archaeologist. After consultation with the State Archaeologist, excavation may proceed in order to determine if there are additional adjacent burials. Upon estimation of the number of human burials present, Cardno will proceed according to the state Archaeologist guidance.

8. The site will be secured by screened fencing that can be locked. After the area is stabilized and secured, project work can proceed elsewhere on the project area.

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