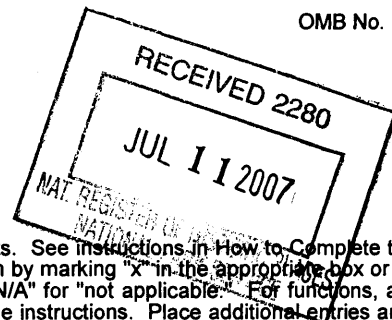


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United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM



This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Turnbull Canal System

other names/site number South Canal/Gabardy Canal, Gabordy Canal; North Canal/Turnbull Canal/VO7056

2. Location

street & number Linear resource -- see accompanying maps not for publication

city or town New Smyrna Beach vicinity

state Florida code FL county Volusia code 127 zip code 32168

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Barbara C. Mattick / DSHPO 6/20/2007
Signature of certifying official/Title Date

Florida Department of State, Division of Historical Resources, Bureau of Historic Preservation
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register See continuation sheet
- determined eligible for the National Register See continuation sheet.
- determined not eligible for the National Register See continuation sheet.
- removed from the National Register.
- other, (explain) _____

for Daniel J. Vidar 8/24/07
Signature of the Keeper Date of Action

Turnbull Canal System
Name of Property

Volusia Co., FL
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property
(Check only one box)

- buildings
- district
- site
- structure
- object

Number of Resources within Property
(Do not include any previously listed resources in the count)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	total

Name of related multiple property listings
(Enter "N/A" if property is not part of a multiple property listing.)

Number of contributing resources previously listed in the National Register

Archaeological Resources of the 18th-Century Smyrna Settlement
of Dr. Andrew Turnbull, Volusia Co., FL, 1766-1777

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

Industry/Processing/Extraction/waterworks/canal system

Current Functions
(Enter categories from instructions)

Industry/Processing/Extraction/waterworks/canal system

7. Description

Architectural Classification
(Enter categories from instructions)

n/a

Materials
(Enter categories from instructions)

foundation n/a
walls _____
roof _____
other _____

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- Criteria A, B, C, D with checkboxes and descriptions.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- Criteria A through G with checkboxes and descriptions.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- Documentation checkboxes: preliminary determination, previously listed, designated landmark, recorded by Historic American Buildings Survey, recorded by Historic American Engineering Record.

Areas of Significance

(Enter categories from instructions)

- Exploration/Settlement, Archaeology/Historic -- Non-aboriginal

Period of Significance

A.D. 1766-1777

Significant Dates

A.D. 1766-1777

Significant Person

n/a

Cultural Affiliation

British Period - A.D. 1763-1783

Architect/Builder

n/a

Primary location of additional data:

- State Historic Preservation Office, Other State Agency, Federal agency, Local government, University, Other

Name of Repository

#

10. Geographical Data

Acreege of Property Approximately 9

UTM References

(Place additional references on a continuation sheet.)

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See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Robert J. Austin, Roger T. Grange, Jr., Dorothy L. Moore/Archaeologists & Barbara E. Mattick, Chief

organization Bureau of Historic Preservation date May 2007

street & number R.A. Gray Building, 500 S. Bronough Street telephone 850-245-6333

city or town Tallahassee state FL zip code 32399-0250

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A Sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items

(check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Various

street & number _____ telephone _____

city or town _____ state _____ zip code _____

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and amend listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reduction Projects (1024-0018), Washington, DC 20503.

United States Department of the Interior
National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 7 Page 1

Turnbull Canal System, VO7056, Volusia County, Florida
Smyrna Settlement Multiple Properties Nomination
DESCRIPTION

SUMMARY

Property Type: Structure (Canals), Property Type F.2.

Present Appearance

The Turnbull Canal System is made up of three major canals and several smaller canals and ditches. Included within this nomination are the three primary components: the South or Gabardy (Gabordy) Canal, the North or Turnbull Canal, and Turnbull's Grand Canal (Figures 1-4). The Gabardy Canal (Figures 1 and 2) is partially included within the modern South Canal that is the dividing line between the cities of New Smyrna Beach and Edgewater (Figures 5-8). It is believed that the Gabardy name used for this canal is derived from Antonio Gabardi, one of the original Italian immigrant colonists, who most likely lived near the canal (Roselli 1975:32). The segment of the modern South Canal from Riverside Drive to the F. E. C. Railroad line (T17S, R34E, Section 49) has been altered by the construction of concrete bulkheads and a culvert under U.S. Highway 1; however, this segment does represent the alignment of the original Gabardy Canal and continues to serve a similar function. A northern lateral of the Gabardy Canal that may have been constructed after the abandonment of the Smyrna Settlement in 1778, extended all the way to Spruce Creek. Portions of this lateral are visible today in several locations. These segments have been incorporated into the modern drainage system and maintenance activities have no doubt modified their original appearance. The setting for parts of the canal system has been altered, particularly in the downtown area, but the other aspects of integrity are good. The canal system as a whole retains its defining features as a canal, and the canal system as a whole conveys its significance as an important feature in the early settlement of New Smyrna Beach.

The North Canal begins in downtown New Smyrna Beach (T17S, R34E, Section 41) and extends from Riverside Drive west to Wallace Road (Figures 1 and 3). The eastern portion of the original canal from Myrtle Avenue to Riverside Drive lies underneath a concrete sidewalk on the north side of Canal Street (Figure 9). The sidewalk was constructed over the canal in the 1920s. The downtown portion of the canal east of U.S. 1 was modified during the city's 1992 Streetscape Project when it was filled with a mixture of sand and concrete and drainage was diverted to a new concrete culvert and drainage system that was installed under Canal Street. The segment from U. S. 1 to Myrtle Avenue retains its original alignment, although it is covered by a sidewalk (Figure 10). The exposed portion from just west of Myrtle Avenue to Wallace Road also retains its original alignment, but has been reduced in width from its original size (Figure 11). It currently functions as a drainage ditch. Originally, the North Canal extended to the west of Wallace Road and connected with Turnbull's Grand Canal. This westernmost section was apparently destroyed by the construction of Wallace Road and a shopping center. The present canal extends underneath Wallace Road (Figure 12) and parallels the shopping center parking lot, ending at a large retention pond. However, this western end of the modern canal does not appear to follow the original orientation of the North Canal, which turned to the south to enter the Hull Grant in its northeast corner (see discussion below).

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CONTINUATION SHEET**

Section number 7 Page 2

**Turnbull Canal System, VO7056, Volusia County, Florida
Smyrna Settlement Multiple Properties Nomination
DESCRIPTION**

Turnbull's Grand Canal originally extended from Turnbull Bay south through Turnbull's "Back Swamp," eventually ending at the South Canal (Figures 1 and 4). This canal ran along an existing waterway (today's Turnbull Creek) and well-preserved canal segments are still in existence (Figures 13-14), although some of these have been modified by post-colonial ditching activities and continued maintenance (Figure 15). Visual elements of the canal are present beginning just north of Pioneer Trail, where it forms the corporate boundary of New Smyrna Beach, south to Mission Road, where it ends just southwest of the Sugar Mill Ruins Campground. A small canal segment located south of Pioneer Trail (Figures 4 and 16) also is included in this nomination since it is believed to be part of a branch of the Grand Canal that appears as early as 1803 (see discussion below). This branch ends at Otter Boulevard although originally it ran through the northwest corner of the Napier Grant. It is not known if the original sections to the southwest of Otter Boulevard still exist. Several other canals and ditches may have been excavated by Turnbull's workers, but further documentary and archaeological research are necessary to confirm this association.

Setting

Although the various canals that make up the Turnbull Canal System maintain their original alignments, they are located within the growing City of New Smyrna Beach and surrounding lands. Those portions closest to the Indian River tend to be located in residential or commercial areas, while those portions located in Turnbull's "Back Swamp" tend to exist in less developed areas. All of the canals currently function as water-control devices that carry storm water and runoff to the Intracoastal Waterway (Indian River) or Turnbull Bay, which empties into the Indian River via Spruce Creek.

Historical Accounts

An extensive network of canals is visible today running through many areas of New Smyrna Beach, the northern portion of Edgewater, and portions of unincorporated Volusia County. It has been presumed that many of these were hand-dug by Andrew Turnbull's workers to drain swampy land, irrigate agricultural fields, and transport people and goods. This is based in part on an account by Williams (1837:139) that refers to Turnbull's drainage of an area called "Turnbull's Swamp," which extended from Spruce Creek to approximately five miles south of New Smyrna. Williams stated that two large canals were cut three miles back into the swamp from the Hillsborough (i.e., Indian) River, and another was cut nearly the same distance into Spruce Creek. He also stated that the canals were connected by ditches that drained the swamp in every direction. It has yet to be determined, however, if all of the canals and ditches referred to by Williams were excavated by Turnbull's workers. Ambrose Hull received two grants totaling 2,600 acres in 1801 following Britain's transfer of Florida to Spain. Both of his grants were located within the former Turnbull/Duncan grants. Hull may have extended some of Turnbull's drainage/irrigation system for his own agricultural purposes.

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**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 7 Page 3 **Turnbull Canal System, VO7056, Volusia County, Florida
Smyrnea Settlement Multiple Properties Nomination
DESCRIPTION**

The earliest known documents that refer to Turnbull's canal system are the two eighteenth-century maps that were recently discovered in Scotland (Anonymous c. 1770; Delaire n.d.). Both maps illustrate a canal in the spot where the Gabardy (South) Canal exists today and the Delaire map shows a bridge over the canal where the settlement's central road crosses the waterway (Figure 17), although there is no visible evidence of this feature today. The canal feature is labeled "Drain" on both maps: "Drain from the ponds at the Back of the hammock land into Hillsborough River" (Anonymous c. 1770) and "A Drain to carry the Water from Ye ponds at ye back of The Hammock Land" (Delaire n.d.).

The Gabardy Canal is the only canal shown on these maps, both of which are believed to date to around 1770. The most likely explanation for this is that construction of the remainder of the extensive canal system was not begun until 1774, when Turnbull began to adopt what he called "the Egyptian mode of watering" after a severe drought (BCO, Shelburne Papers, Vol. III; Moore and Ste. Claire 1999:43-44). Schafer (2001:137) has documented information regarding Turnbull's canals that was conveyed in 1774 and 1775 by David Yeats and Frederick Mulcaster to Governor Grant in Scotland. Yeats and Mulcaster were St. Augustine residents who frequently visited the Smyrnea plantation. They advised that Turnbull had workers draining swamp lands west of the hammock lands along the river. In another visit by Mulcaster in the first quarter of 1775, he stated that he saw a large field of sugar cane in what was formerly swampland and decided "the drains...are a great work." What he saw was a complex drainage network that irrigated indigo fields during dry periods, drained excess water from swamps and marshes, and allowed sugar cane cultivation.

Turnbull's Grand Canal is shown on an 1803 Spanish map of New Smyrna and vicinity (Figure 18). What may be a secondary canal branching to the west of the main course of the Grand Canal also is shown on this map. The Grand Canal next appears on George Clarke's 1817 map of Ambrose Hull's Grant (Figure 19). Clarke's map shows a road connecting "Turnbull's Back Swamp" to "Ambrose Hull's House" and "Turnbull's Palace." There is a "Cedar Bridge" depicted where the road crosses what appears to be a canal or drainage. This cedar bridge, or its presumed location, appears on several later maps (see discussion below). An 1828 map of Hull's land claim (Anonymous 1828) shows four canal or road segments, each depicted by double parallel lines. Two are on the eastern boundary of the Hull claim, one is on the northern boundary and appears to be the western end of the North Canal, and one is near the southwest corner. The northern and eastern features also appear on the 1850 Burr map and are discussed below.

In their 1990 study of Old Fort Park and the Turnbull Canal System for the City of New Smyrna Beach, Griffin and Steinbach (1990) conducted extensive map research in an attempt to identify the original locations and alignments of Turnbull's canals. They also consulted the field notes of the original U.S. government surveys of T17S, R33E and T17S, R34E (Ming1835a; Burr 1850a) for any references to canals. They transferred this information to a base map of existing canals prepared by the Volusia County Mosquito Control District and then used this composite map to identify preserved segments within the city limits. The maps that proved most

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Section number 7 Page 4 **Turnbull Canal System, VO7056, Volusia County, Florida
Smyrna Settlement Multiple Properties Nomination
DESCRIPTION**

useful were the original government land office surveys, or GLOS maps (Ming 1835b, 1835c; Burr 1850b, 1850c), and an 1874 coastal survey map (U. S. Coast Survey 1874). Since their study was limited to the corporate limits of New Smyrna Beach, the authors did not discuss canals located beyond these boundaries. However, they note that “a number of references to canals lying outside and generally to the west of the city were encountered in the field notes. It appears likely that the majority of these can be associated with what is known as Turnbull’s Back Swamp” (Griffin and Steinbach 1990:38).

F. L. Ming was apparently responsible for surveying the boundaries of townships and sections, but he also surveyed the boundaries of several grants, including those of Ambrose Hull, Thomas Napier, Geronimo Alvarez, and Jose Sanchez. Ming’s map of T17S, R33E shows three canals (Figure 20). These include the western segment of the North Canal and the northern portion of Turnbull’s Grand Canal. The third canal is located in the southeast corner of Section 36, near the southern boundary of one of Hull’s grants. This would place it in the general vicinity of modern Edgewater Junction. The canal extends to the north for about one mile and then turns to the east. At about its midpoint is a second, lateral canal that extends to the southeast. An arrow at the east end of the main canal indicates that it continued to the northeast, into the next township. From the orientation of the canal, it appears that it may have eventually intersected with the Gabardy Canal to the northeast. Unfortunately, the adjacent map of T17S, R34E, also surveyed by Ming in 1835 (Figure 21), does not show either of these two canals. Moreover, the township to the south (T18S, R33E) was not surveyed until 1843, after the Second Seminole War (Washington 1843), and it too fails to show any canals in its northeast corner where the 1835 lateral canal should have extended. The Grand Canal is shown entering the eastern edge of the Napier Grant; however, the position of the grant is skewed too far to the west. Later maps (Burr 1850b; USGS 1956, PR 1988) show the correct placement of Napier’s grant boundaries with the Grand Canal entering the Napier Grant along its north boundary near the grant’s northeast corner (see Figure 22). Ming’s map of T17S, R34E does not show the Gabardy Canal, although both the North and South (Gabardy) canals are shown on an 1839 map of the area by J. W. Phelps (Figure 23). The North Canal also is shown on an 1838 military map of the area (Anonymous 1838).

Interestingly, a map of T17S, R33E and T17S, R34E on file at the Ormond Beach Library and identified as an 1835 survey by F. L. Ming (1835d), appears to be a different map than the two GLOS maps referred to above (Figure 24; the map, which is drawn on linen, appears to be an original GLOS map based on Ming’s survey notes). This one provides more detail, including a canal in the northwest corner of the Napier Grant that extends towards the Grand Canal and a canal at the east boundary of the Hull Grant that is crossed by a “cedar bridge.” The former canal may be the canal shown on the 1803 map branching off from the Grand Canal (see Figure 18). The second canal is located south of the sugar mill now contained within New Smyrna Sugar Mill State Historic Site. The cedar bridge appears to be the same one illustrated on Clarke’s 1817 map (Figure 19), although Ming shows a canal running to the northeast while Clarke depicts this as a road. On the Ming map, the Napier Grant is correctly positioned and the Grand Canal crosses the north, rather than the east, boundary.

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**Turnbull Canal System, VO7056, Volusia County, Florida
Smyrne Settlement Multiple Properties Nomination
DESCRIPTION**

In 1850, David H. Burr re-surveyed T17S, R33E and T17S, R34E for the purpose of including all Spanish land claims. His map of T17S, R34E (Burr 1850b) clearly shows both the North Canal and the Gabardy Canal (Figure 25). The North Canal also is shown on the map of T17S, R33E extending into the land claim of Thomas Napier (Burr 1850c; see Figure 22). This corresponds with Ming's earlier map of this township as well as the 1828 map of the Hull Grant and verifies that the segment within the Napier grant is in fact part of the North Canal. Burr also shows what appears to be a new canal near Napier's northern boundary that extends to the northeast toward Turnbull's Grand Canal. The Grand Canal is shown as a drainageway extending south from Turnbull Bay and is not labeled. The two linear features that appear on the 1828 map of the Hull Grant referred to above also are present on the Burr map. The northern feature crosses Hull's eastern boundary and proceeds to the northeast. A "cedar bridge" is depicted at this intersection and the bridge appears to be same bridge that is illustrated on Clarke's 1817 map of Hull's Grant and the second 1835 map by Ming (see Figures 19 and 24). The orientation of the linear feature on Burr's map matches fairly closely the orientation of the "Road to Swamp" illustrated by Clarke, leading to the conclusion that Burr's feature is a road, not a canal; however, as noted above, Ming labels this feature as a canal. Interestingly, the orientation of the linear feature on the 1828 map is to the northwest, paralleling Hull's eastern boundary, rather than to the west as is shown on the 1817, 1835, and 1850 maps. Whether this is meant to depict another road or a canal is uncertain. The smaller linear feature on the east boundary is in the same location as shown on the 1828 map.

Griffin and Steinbach (1990:39-41) used the 1874 Coastal Survey map to identify a northern extension of the Gabardy Canal (Figure 26). They place its origin near present-day Palmetto Court where it intersected with the main east-west segment of the Gabardy Canal. From there it trended north and west before taking a northerly course, intersecting with the North Canal near modern Milford Place and then continuing north before ultimately terminating near the mouth of Spruce Creek. No laterals or branches off of this north-south canal are evident on the 1874 map, nor does the North Canal extend farther west than its intersection with this canal (Griffin and Steinbach 1990:39). None of the Ming or Burr maps or field notes indicates a canal or ditch in this location, although they do mention a swamp or low marsh. Griffin and Steinbach (1990:41) conclude that this canal was constructed sometime between 1850 and 1873.

An undated map of the Napier Grant and the northern one-third of the Hull Grant by Charles F. Hopkins provide some additional details on the possible extent of Turnbull's canal system in this area. The map apparently was made sometime after 1888 since the A. & W. Railroad line is shown. According to MacLeod and Murdock (1994), the A. & W. Railroad was incorporated in that year and absorbed the existing Blue Springs Railroad line from Blue Springs to Mosquito Inlet. A note on the Hopkins map also indicates that it represents a re-survey of the Napier Grant. A second note implies that Hopkins may have used Ming's 1835 survey notes to reestablish boundaries and features. The Hopkins map (Figure 27) shows the Kings Road and several canals, including the canal segments that appear in the Ming and Burr maps of these grants (compare with Figures 19, 23, and 25). These segments include the canal in Napier's northwest corner, Turnbull's Grand Canal, and the canal in Napier's southeast corner. The North Canal is shown terminating at the Grand Canal,

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**NATIONAL REGISTER OF HISTORIC PLACES
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**Turnbull Canal System, VO7056, Volusia County, Florida
Smyrna Settlement Multiple Properties Nomination
DESCRIPTION**

which extends to the south through the Hull Grant. A lateral canal extends to the southeast from the intersection of the North and Grand canals, paralleling the eastern border of the Hull Grant and coming very near the location of the "cedar bridge." This lateral is very likely the canal that is shown on maps as early as 1817 being crossed by the cedar bridge (see Figure 19). It is not certain whether the Hopkins map represents conditions existing at the time of his survey or whether it is a recreation of features recorded by Ming but no longer present when Hopkins surveyed the grant. Despite these problems, it is possible to assign tentative dates to some canal features shown on the Hopkins map through comparison with the 1817, 1828, 1835, and 1850 maps.

The Grand Canal is shown in a general way as early as 1803 (Figure 18) while the western extension of the North Canal appears as early as the 1817 Clarke map (see Figure 19) and continues to appear as a major feature on most later maps. From this it is reasonable to conclude that the intersection of these two canals dates to at least 1817 and that the southern extension of the Grand Canal shown on the Hopkins map also dates to at least 1817. The canal lateral that extends from the North Canal and travels south, paralleling the eastern boundary of the Hull Grant, intersects with an "old road" that crosses the canal at the location of the "cedar bridge" that appears on the second Ming map, the Burr map, and the 1817 Clarke map. This is the modern Mission Road (formerly Turnbull Hammock Road). Whether the bridge existed when Hopkins conducted his survey is not known; however, its location was known and continued to be shown on maps as late as 1929 (Volusia County 1929). From this it is reasonable to conclude that the southern lateral was present as early as 1817 and may, in fact, be the canal segment shown crossing under the cedar bridge on the 1817 Clarke map (see Figure 19). None of the other canals shown on the Hopkins map connects to any documented early canals. Although they may represent late eighteenth or early nineteenth-century canals, there is no way to verify this at present.

By the early twentieth century, portions of the North Canal had been lined with coquina and stone bridges also had been built across it in several locations (Luther 1990). Since the area had become the hub of New Smyrna's commercial district, the open canal posed an impediment to continued development and was covered over with a concrete boxed culvert in the 1920s. In 1993 the canal segment from U. S. 1 to Riverside Drive was filled with sand and concrete and drainage was diverted to a newly constructed culvert underneath Canal Street.

Previous Investigations

In 1992, SouthArc, Inc. conducted a cultural resource assessment survey of Canal Street for the City of New Smyrna Beach (Dickinson and Wayne 1992). The City was planning a streetscape project for its downtown area along Canal Street. Prior to this project, the original North Canal, which was covered by a sidewalk, continued to serve as a subterranean drainage system but had become unstable. The City proposed filling the existing North Canal between U.S. Highway 1 and the waterfront just east of Riverside Drive with concrete and constructing a new drainage system down the center of Canal Street. Test excavations were conducted within the corridor for the new canal and an associated retention pond. Although a prehistoric shell midden was encountered near the waterfront, no evidence of colonial-period activity was discovered during the testing. The

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**Turnbull Canal System, VO7056, Volusia County, Florida
Smyrna Settlement Multiple Properties Nomination
DESCRIPTION**

following year, SouthArc, Inc. performed a mitigative excavation of the midden (Dickinson and Wayne 1993). No colonial-period artifacts or features were encountered during that project. Also in 1993, SouthArc, Inc. was retained to document the canal prior to its being stabilized by concrete (SouthArc, Inc. 1993). SouthArc's investigation focused on a 110-foot long vaulted section at the Sams Avenue and Canal Street intersection which had not been covered by the concrete box culvert. Photographs and measured drawings of the concrete and coquina arches were made. It was concluded that the arches were probably constructed c. 1912 (SouthArc, Inc. 1993:20).

As part of its 1998 survey of Turnbull-related archaeological sites, SEARCH recorded the Airport Canal as a feature associated with the Smyrna Settlement (Austin et al. 1999). The colonial-period assignment of this canal, which has been cut into natural coquina bedrock, was based primarily on its location and the fact that the coquina bedrock appeared to have been cut by hand with primitive tools. However, this canal does not appear on any known historic map. Its earliest appearance is on a 1943 aerial photograph that shows today's New Smyrna Beach Municipal Airport area (Volusia County 1943). Given the size of the canal and the fact that it connects with Turnbull's Grand Canal, it is surprising that it does not appear on the 1835, 1850, or 1874 maps cited above, nor does it appear on a c. 1916 coastal survey map, although both the North and South canals are present (United States Department of Commerce c. 1916). At present, the Airport Canal is considered to be a 20th century feature, perhaps dug when the airport was constructed in the early 1940s. If additional research reveals that the Airport Canal is in fact a colonial-period canal, it will be added to this nomination. SEARCH also conducted shovel testing on private property near the eastern end of the South Canal, but recovered no colonial-period artifacts from this location.

In 2001, Janus Research conducted a cultural resource survey of property that was intended to be developed as a Wal-Mart store (Janus Research 2001). This property is contained in the northwest corner of the Thomas Napier Grant and several canals and ditches were identified during the survey. Additional work was conducted in 2002, including the excavation of a cross-section of one canal that was to be impacted by development (Janus Research 2002). The canals that are located on the Wal-Mart property were recorded under Florida Master Site File number 8VO7213, Napier 1, and were interpreted as "part of a larger irrigation system established by Dr. Andrew Turnbull for his New Smyrna colony during the brief British period of Florida" (Janus Research 2002:25). However, the report offers no definitive proof that the canals in question date to the eighteenth century. Identification of the canals as Turnbull-related appears to have been based on the same undated Hopkins map referred to above. None of the canal segments within the Wal-Mart property can be traced back to earlier maps, thus an eighteenth-century origin for these canals remains unconfirmed.

SEARCH conducted test excavations in 2002 in Myrtle Avenue Park near the intersection of the North Canal with the canal shown on the 1874 U. S. Coast Survey map referred to above. One test unit located four meters east of the canal and nine meters south of Canal Street encountered a black sand stratum between 18 and 37 cm below ground surface. Within this stratum were three pieces of lead glass, possibly dating to the colonial

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period. However, no other colonial artifacts were recovered from this or 16 other test units excavated in the park and the adjacent private property located to the west of the canal.

Boundaries and Content

Gabardy (South) Canal. The original alignment of the Gabardy Canal extended from Riverside Drive west to at least the modern F.E.C. Railroad line and may have connected with the Grand Canal (Figures 1 and 2). It also may have included a north-south lateral that extended all the way to Spruce Creek; however, the date of this lateral, portions of which are observable today, has been difficult to determine. Therefore, it has not been included in this nomination. The width of the Gabardy Canal varies from about 15 to 30 feet. The original width of the Gabardy Canal is not known. It has been altered during modern times by the construction of concrete bulkheads and a culvert under U.S. Highway 1. Its total length from Riverside Drive to the F. E. C. Railroad line is about .44 miles.

North (Turnbull) Canal. The North Canal originally extended from modern Riverside Drive west past modern Wallace Road to connect with the Grand Canal. According to Burr's survey notes of 1850, the canal at that time varied in width from 26.5 feet to 33 feet. Today, the exposed segments average about 10 feet wide. Total length, from Riverside Drive to Wallace Road, is about 1.65 miles. The portion east of U. S. 1 has been filled with a mixture of sand and concrete. The portion between U. S. 1 and Myrtle Avenue has been covered by a sidewalk.

Grand Canal. Turnbull's Grand Canal originally extended from Turnbull Bay south to the Gabardy Canal. The canal is visible today from just north of Pioneer Trail to Mission Road, a distance of about 2.43 miles. The southern extension connecting to the Gabardy Canal may exist, but has not been identified to date. The canal is referred to today as Turnbull Creek. The western extension that begins just south of Pioneer Trail extends to Otter Boulevard, a distance of about .31 miles.

Present Condition

All of the canal segments included in this nomination are in good condition and follow their original alignments, but most have been modified due to continued maintenance. The most dramatic modifications have occurred to the North (Turnbull) Canal. The eastern segment from U. S. 1 to Riverside Drive has been filled with a mixture of sand and concrete and drainage has been diverted to a new system underneath Canal Street. However, the sand-and-concrete fill is not solid like conventional concrete and could be easily removed. The segment from U. S. 1 west to Myrtle Avenue was covered over in the 1920s, but still continues to serve as a water control device. The segment from Myrtle Avenue west to Wallace Road is exposed but has been reduced considerably in width. Except for the filled segment, the canal remains in good condition. The Gabardy (South) Canal also is in good condition but has been modified by the placement of concrete bulkheads and

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culverts. The width and depth of the segment east of U.S. 1 may also have been modified, although this is uncertain since the exact width and depth of the historic canal are not known. The segment west of U.S. 1 to the F. E. C. Railroad appears to be in relatively intact condition. The segment that connects the Gabardy Canal to the Grand Canal is rumored to exist in densely wooded land north of 10th Street, but this has not been verified. Finally, the Grand Canal remains in excellent condition, although portions have been widened and deepened. These include a 0.4 mile segment at the beginning of the canal to just south of Pioneer Trail and a 0.22 mile segment between Jungle Road and SR 44. As mentioned above, the southern-most extension, linking this canal to the Gabardy Canal may exist but has not been documented to date. The western extension off of Otter Boulevard is in good condition, although the segment that connects to the Grand Canal south of Pioneer Trail may have been modified by the excavation of an adjacent retention pond. Other than the setting in some parts, the canal system maintains its integrity to a high degree.

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SIGNIFICANCE**

SUMMARY

Significant under Criteria A and D (See Multiple Property Documentation Form, Section F: Property Type F.2).

Historical documentary research indicates that several original elements of Turnbull's original canal system remain intact, although in a modified condition. The South (Gabardy) Canal is the best documented of these canals, with two eighteenth-century maps showing its presence and location (Anonymous c. 1770; Delaire n.d.). The North Canal and the Grand Canal appear on several maps dating to the early nineteenth-century (Anonymous 1803, 1828; Ming 1835c; Phelps 1839; Burr 1850c). While it could be argued that these two canals were constructed after the Smyrnea Settlement was abandoned, this seems unlikely given the documented large-scale efforts by Turnbull to drain the low-lying, swampy interior for agriculture (Williams 1837:139; Schaefer 2001:137). Other plantation owners appear to have been very interested in both the scale and effectiveness of Turnbull's enterprise (Schaefer 2001:137). Because of the importance of Turnbull's Canal System to the economic infrastructure of the Smyrnea Settlement, it is significant under **Criteria A and D** of the National Register of Historic Places at the local, state, and national levels. The setting has been altered in some parts of the system, but the other aspects of integrity are intact to a high degree. The canal system still meets the other aspects of integrity and retains its defining features as a canal and its ability to convey its significance (see photos).

HISTORICAL SIGNIFICANCE - EXPLORATION AND SETTLEMENT (Criterion A)

Turnbull's Canal System is considered significant for its association with Andrew Turnbull's eighteenth-century colonial settlement of Smyrnea. As one of the largest colonial experiments in British East Florida, and the origin of modern New Smyrna Beach, the Smyrnea Settlement is significant to local, statewide, and national history. Turnbull's Canal system is a unique and well-preserved material reflection of this important historical event.

ARCHAEOLOGICAL RESEARCH SIGNIFICANCE (Criterion D)

The archaeological research significance of the Turnbull Canal System is based on the potential to contribute to a better understanding of colonial-period settlement organization, economic organization, and technology. The canal system also represents a unique resource among the archaeological sites associated with the Smyrnea Settlement. The fact that the canal system provides a visible reminder of the Smyrnea Settlement makes it an excellent choice for public interpretation purposes.

Settlement Organization. The various canal segments retain their original alignments and the South (Gabardy) Canal in particular has served an important function as a landmark for correlating early historic maps with the modern landscape. Additional documentary research and field investigations may enable other segments to be

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identified and added to the canal system in the future. These data can be used in combination with structure-level data from other sites within the settlement to contribute to an understanding of community and regional settlement patterning.

Economic Organization. Turnbull's Canal System was a major component of his attempt to establish an economic infrastructure for the fledgling colony. The canals were used for both drainage and irrigation, enabling crops such as indigo, rice, sugar cane, and cotton to be grown. Historical and archaeological investigation of the canal system should provide new insights into the role that the canal system played in the agricultural activities of the colony. The effects of the drought years on crop production also could be addressed using historical and archaeological data associated with this system.

Technology. Additional study of Turnbull's Canal System can enhance understanding of eighteenth-century technology and its role in both the Smyrnea Settlement and British colonial East Florida. For example, excavation of canal segments would provide information on how the canals were constructed as well as how they functioned. This information would be important to understanding how Turnbull utilized the technology of the day to achieve desired results.

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- 1835c *Fr. Township No. 17 Range No. 34 S & E, Land District East Territory of Florida*. Map on file, Florida Department of Environmental Protection, Division of State Lands, Tallahassee.
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MISCELLANEOUS DOCUMENTS

LIST OF FIGURES

Figure 1. USGS 7.5' New Smyrna Beach and Edgewater quadrangle maps showing the locations of preserved segments of the Turnbull Canal System.

Figure 2. Aerial photograph showing the location of the South (Gabardy) Canal (DOQQ aerial photograph Q4108SE downloaded from Florida Department of Environmental Protection Land Boundary Information System www.labins.org).

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- Figure 3. Aerial photograph showing the location of the North (Turnbull) Canal (DOQQ aerial photograph Q4108NE downloaded from Florida Department of Environmental Protection Land Boundary Information System www.labins.org).
- Figure 4. Aerial photograph showing the locations of preserved segments of Turnbull's Grand Canal (DOQQ aerial photograph Q4108SW downloaded from Florida Department of Environmental Protection Land Boundary Information System www.labins.org).
- Figure 5. View to the west of the Gabardy or South Canal from the bridge at Riverside Drive, near the east end of the canal (Photo 1).
- Figure 6. View to the east of the Gabardy or South Canal from the bridge at Magnolia Street (Photo 2).
- Figure 7. View to the east of the Gabardy or South Canal from the bridge at Palmetto Court (Photo 3).
- Figure 8. View to the east of the Gabardy or South Canal from the F.E.C. Railroad bridge near the west end of the canal (Photo 4).
- Figure 9. View to the west of Canal Street in downtown New Smyrna Beach. The North Canal is located underneath the sidewalk on the north side of the street (Photo 5).
- Figure 10. View to the east of the North Canal where it emerges from underneath Myrtle Avenue (Photo 6).
- Figure 11. View to the east of the North Canal at the intersection of Canal Street and Pioneer Trail (Photo 7).
- Figure 12. View to the east of the North Canal (vegetation to the left of the utility pole) where it disappears underneath Wallace Road (Photo 8).
- Figure 13. View to the south of Turnbull's Grand Canal from bridge on Pioneer Trail. Split in the canal is the far background (Photo 9).
- Figure 14. View to the north of Turnbull's Grand Canal from north side of State Road 44 (Photo 10).
- Figure 15. View to the north of Turnbull's Grand Canal from bridge on Pioneer Trail showing modified section of the canal (Photo 11).
- Figure 16. View to the northeast from Otter Boulevard of a branch of Turnbull's Grand Canal (Photo 12).
- Figure 17. Detail of eighteenth-century map of the Smyrnea Settlement showing the South Canal ("Drain"), a bridge, and an indigo works (D) (Delaire n.d. Illustration used by permission of the Duncan Archive in Dundee City Archives, Dundee, Scotland).
- Figure 18. 1803 map of New Smyrna and vicinity showing Turnbull's Grand Canal and possible western lateral (Anonymous 1803; reproduced from Adams et al. 1997:Figure 3).
- Figure 19. Copy of a portion of 1817 map of the Ambrose Hull Grant showing a "Cedar Bridge" crossing what is probably a Turnbull-era canal (Clarke 1817).
- Figure 20. 1835 U.S. government General Land Office Survey (GLOS) map of T17S, R33E showing the locations of several canals presumed to have been dug by Andrew Turnbull's workers (Ming 1835b).
- Figure 21. 1835 U.S. government General Land Office Survey (GLOS) map of T17S, R34E (Ming 1835c). Note the absence of any canals on this map. Compare with Figure 23.
- Figure 22. 1850 U.S. government General Land Office Survey (GLOS) map of T17S, R33E showing three colonial-period canals (Burr 1850b). Note that the orientation of the Napier Grant has been

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corrected to the east and that the Grand Canal now enters the grant at its north boundary. Compare with Figure 19.

- Figure 23. 1839 map of East Florida showing the North (Turnbull) and South (Gabardy) canals (Phelps 1839).
- Figure 24. 1835 map by F. L. Ming of T17S, R33E and T17S, R34E on file at the Ormond Beach Library in Ormond Beach. This map provides more detail than the 1835 GLOS maps, including at least two additional canal segments.
- Figure 25. 1850 U.S. government General Land Office Survey (GLOS) map of T17S, R34E showing the North and South canals and a "cedar bridge" (Burr 1850c).
- Figure 26. 1874 coastal survey map of the New Smyrna Beach area showing a northern extension of the Gabardy Canal (U. S. Coast Survey 1874). The North Canal also is shown.
- Figure 27. Undated map of the Napier Grant and the northern one-third of the Hull Grant showing several canals (Hopkins n.d.).

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GEOGRAPHICAL DATA**

Verbal boundary description: The Turnbull Canal System consists of three primary canals and one lateral canal that remain observable and in good condition. The Turnbull or North Canal extends from Riverside Drive west to Wallace Road, a distance of about 1.65 miles. The Gabardy or South Canal extends from Riverside Drive west to the F.E.C. Railroad line, a distance of about .44 miles. The Grand Canal extends from just north of Pioneer Trail south to Mission Road, a distance of 2.43 miles. A segment of the Grand Canal's western lateral begins just south of Pioneer Trail and extends to the west-southwest for a distance of .31 miles, ending at Otter Boulevard. These boundaries are shown in Figures 1-4.

Boundary Justification: The site boundaries are restricted to the physical limits of the canal segments that remain preserved today. Within these boundaries are contained the physical remains identified through documentary research and field investigations.

UTM Coordinates

		Zone	Easting	Northing
Gabardy (South) Canal	1	17	507920	3208180
	2	17	508560	3208360
Turnbull (North) Canal	1	17	505580	3209500
	2	17	506180	3209830
	3	17	506520	3210110
	4	17	507660	3210620
Grand Canal	1	17	504100	3211020
	2	17	504600	3209220
	3	17	504770	3209090
	4	17	505050	3209020
	5	17	505120	3208860
	6	17	505120	3208730
	7	17	505350	3208140
	8	17	505730	3207800
Grand Canal, W Lateral	1	17	504100	3210520
	2	17	504020	3210360
	3	17	503830	3210220
	4	17	503800	3210060

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INVENTORY OF PHOTOGRAPHS (See Figures 2-4 for photo locations).

1. Turnbull Canal System, 8VO7056 - View of Gabardy Canal from Riverside Drive bridge (Figure 5).
 2. Southwest corner of 10th St. and Riverside Dr., New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing west
 7. 1 of 12 (Exposure #9, Roll #02049-17)
-
1. Turnbull Canal System, 8VO7056 - View of Gabardy Canal from Magnolia Street bridge (Figure 6).
 2. Southeast corner of 10th St. and Magnolia St., New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing east
 7. 2 of 12 (Exposure #8, Roll #02049-17)
-
1. Turnbull Canal System, 8VO7056 - View of Gabardy Canal from Palmetto Court bridge (Figure 7).
 2. Southeast corner of 10th St. and Palmetto Court, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing east
 7. 3 of 12 (Exposure #13, Roll #02049-17)
-
1. Turnbull Canal System, 8VO7056 - View of Gabardy Canal from F.E.C. Railroad bridge (Figure 8).
 2. Southeast corner of 10th St. and F.E.C. Railroad line, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing east
 7. 4 of 12 (Exposure #8, Roll #02049-17)

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 2. Canal Street and Riverside Drive, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing west
 7. 5 of 12 (Exposure #5, Roll #02049-16)
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1. Turnbull Canal System, 8VO7056 - View of North Canal at Myrtle Avenue (Figure 10).
 2. Northwest corner of Canal Street and Myrtle Avenue, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing east
 7. 6 of 12 (Exposure #1, Roll #02049-18)
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1. Turnbull Canal System, 8VO7056 - View of North Canal at Pioneer Trail (Figure 11).
 2. Canal Street and Riverside Drive, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing east
 7. 7 of 12 (Exposure #11, Roll #02049-16)
-
1. Turnbull Canal System, 8VO7056 - View of North Canal at Wallace Road (Figure 12).
 2. Northwest corner of Ross Lane and Wallace Road, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing west
 7. 8 of 12 (Exposure #14, Roll #02049-16)

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1. Turnbull Canal System, 8VO7056 - View of the Grand Canal at Pioneer Trail (Figure 13).
 2. Pioneer Trail Bridge across Turnbull Creek, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing south
 7. 9 of 12 (Exposure #21, Roll #02049-16)
-
1. Turnbull Canal System, 8VO7056 - View of the Grand Canal at SR 44 (Figure 14).
 2. SR 44 across Turnbull Creek, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing north
 7. 10 of 12 (Exposure #17, Roll #02049-16)
-
1. Turnbull Canal System, 8VO7056 - View of the modified Grand Canal at Pioneer Trail (Figure 15).
 2. Pioneer Trail Bridge over Turnbull Creek, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing north
 7. 11 of 12 (Exposure #22, Roll #02049-16)
-
1. Turnbull Canal System, 8VO7056 - View of west branch of the Grand Canal (Figure 16).
 2. Otter Boulevard, New Smyrna Beach, Florida.
 3. Robert Austin
 4. 8/8/2003
 5. Southeastern Archaeological Research, Inc.
 6. Facing northeast
 7. 12 of 12 (Exposure #19, Roll #02049-16)

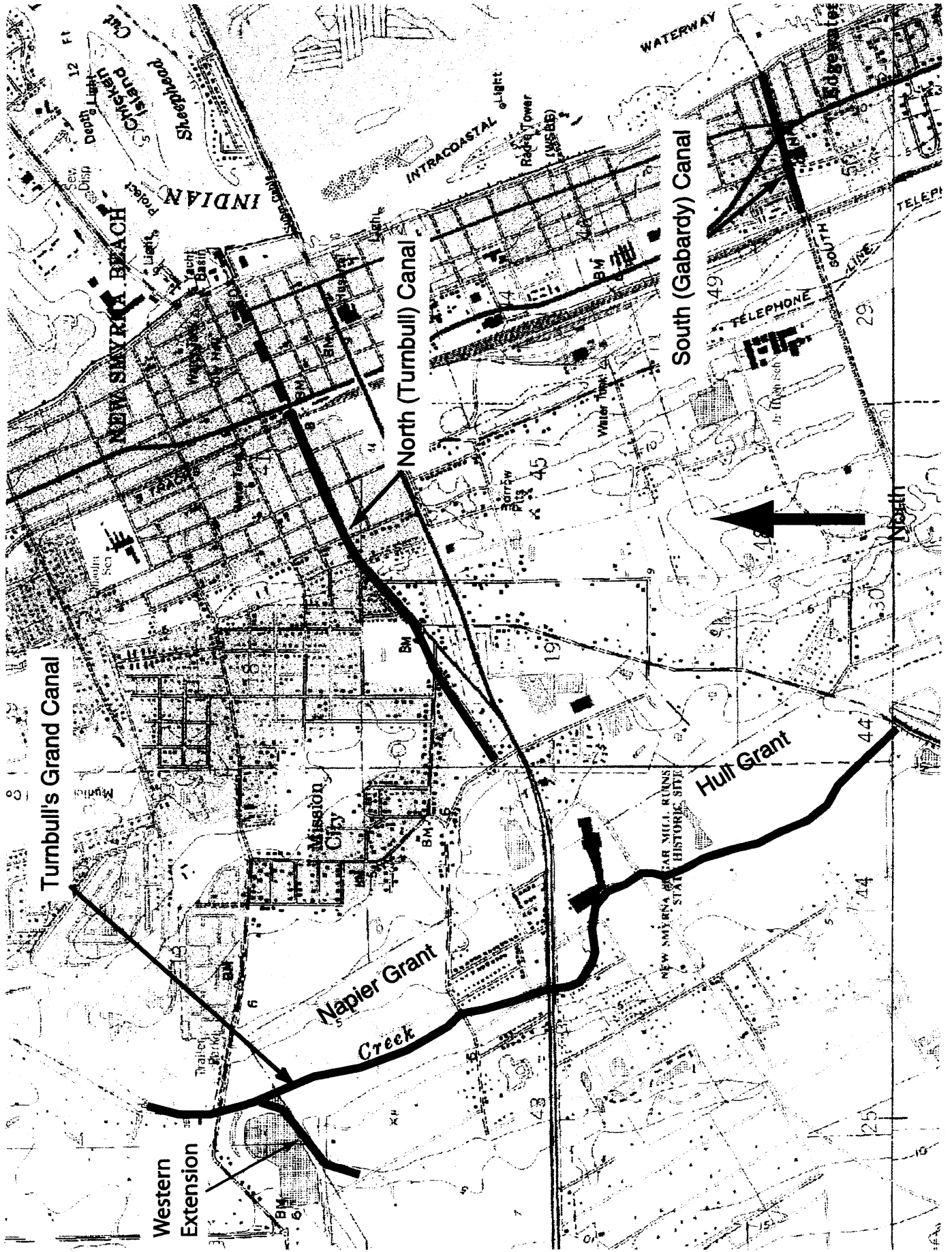


Figure 1. USGS 7.5' New Smyrna Beach and Edgewater quadrangle maps showing preserved segments of the Turnbull Canal System.



Figure 2. Aerial photograph of the South (Gabardy) Canal showing site boundaries (DOQQ aerial photograph Q4108SE downloaded from Florida Department of Environmental Protection Land Boundary Information System www.labins.org).

North (Turnbull) Canal



Figure 3. Aerial photograph of the North (Turnbull) Canal showing site boundaries (DOQQ aerial photographs Q4108SW and Q4108SE downloaded from Florida Department of Environmental Protection Land Boundary Information System www.labins.org).

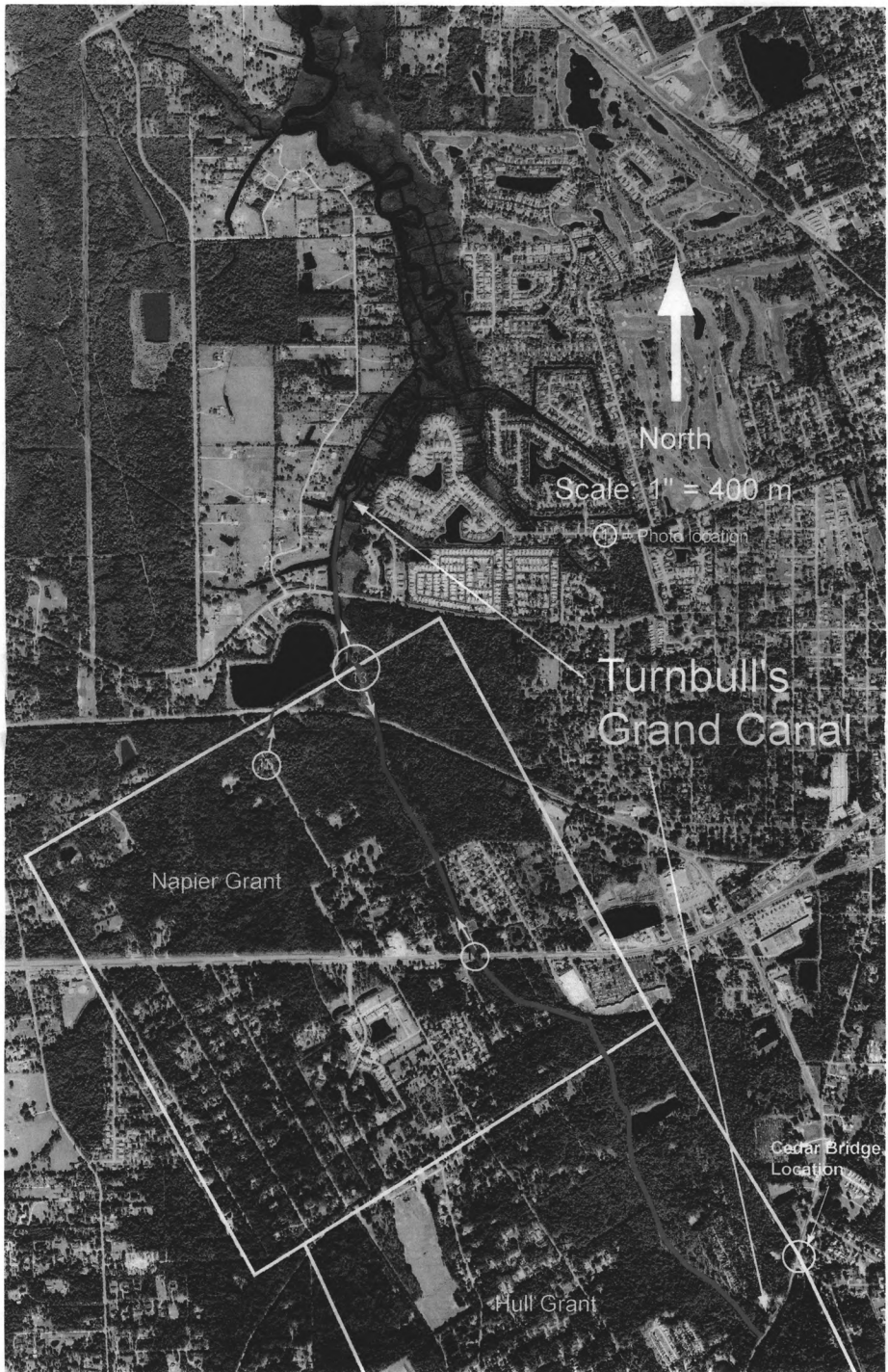


Figure 4. Aerial photograph showing the locations of preserved segments of Turnbull's Grand Canal (DOQQ aerial photograph QE4108SW downloaded from Florida Department of State Land Boundary Information System www.labins.org).

Turnbull Canal System, New Smyrna Beach, Volusia Co., FL

FOR FIGURES 5-16, SEE PHOTOS 1-12.

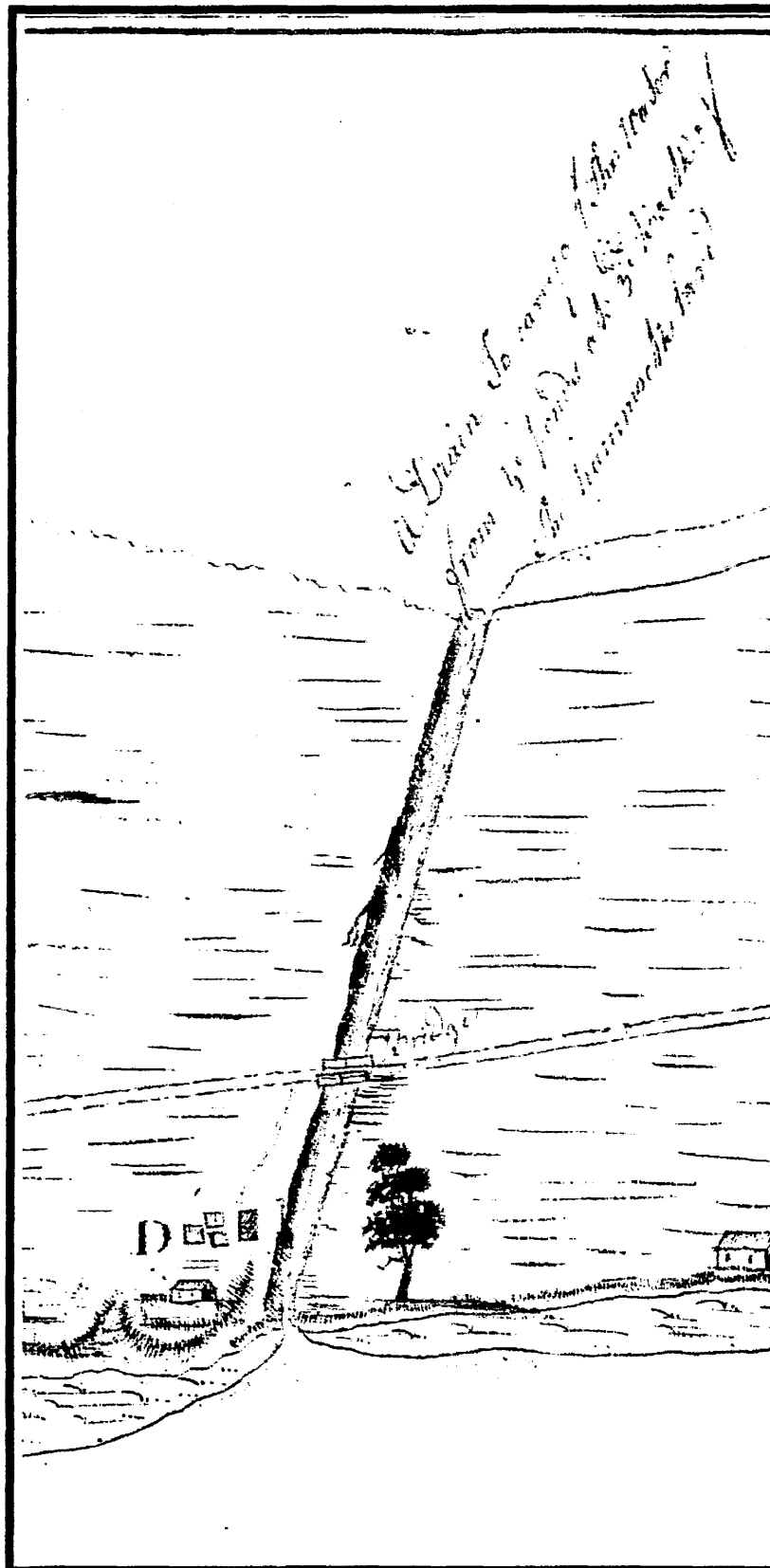


Figure 17. Detail of an eighteenth-century map of the Smyrnea Settlement showing the South Canal ("Drain"), a bridge, and an indigo works (D) (Delineavit n.d. Illustration used by permission of the Duncan Archive in Dundee City Archives, Dundee, Scotland).

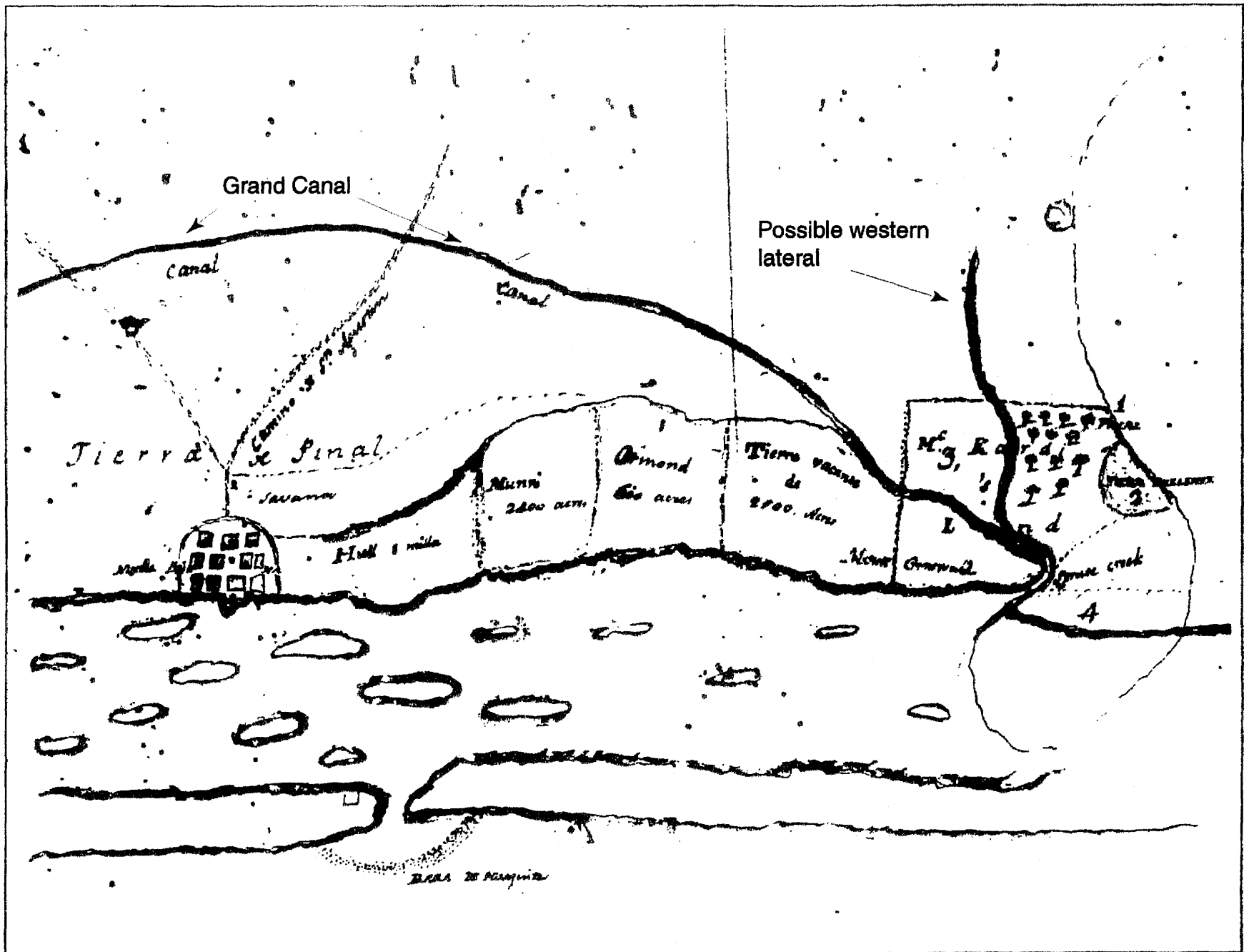


Figure 18. 1803 map of New Smyrna and vicinity showing Turnbull's Grand Canal and possible western lateral (Anonymous 1803; reproduced from Adams et al. 1997 Figure 3).

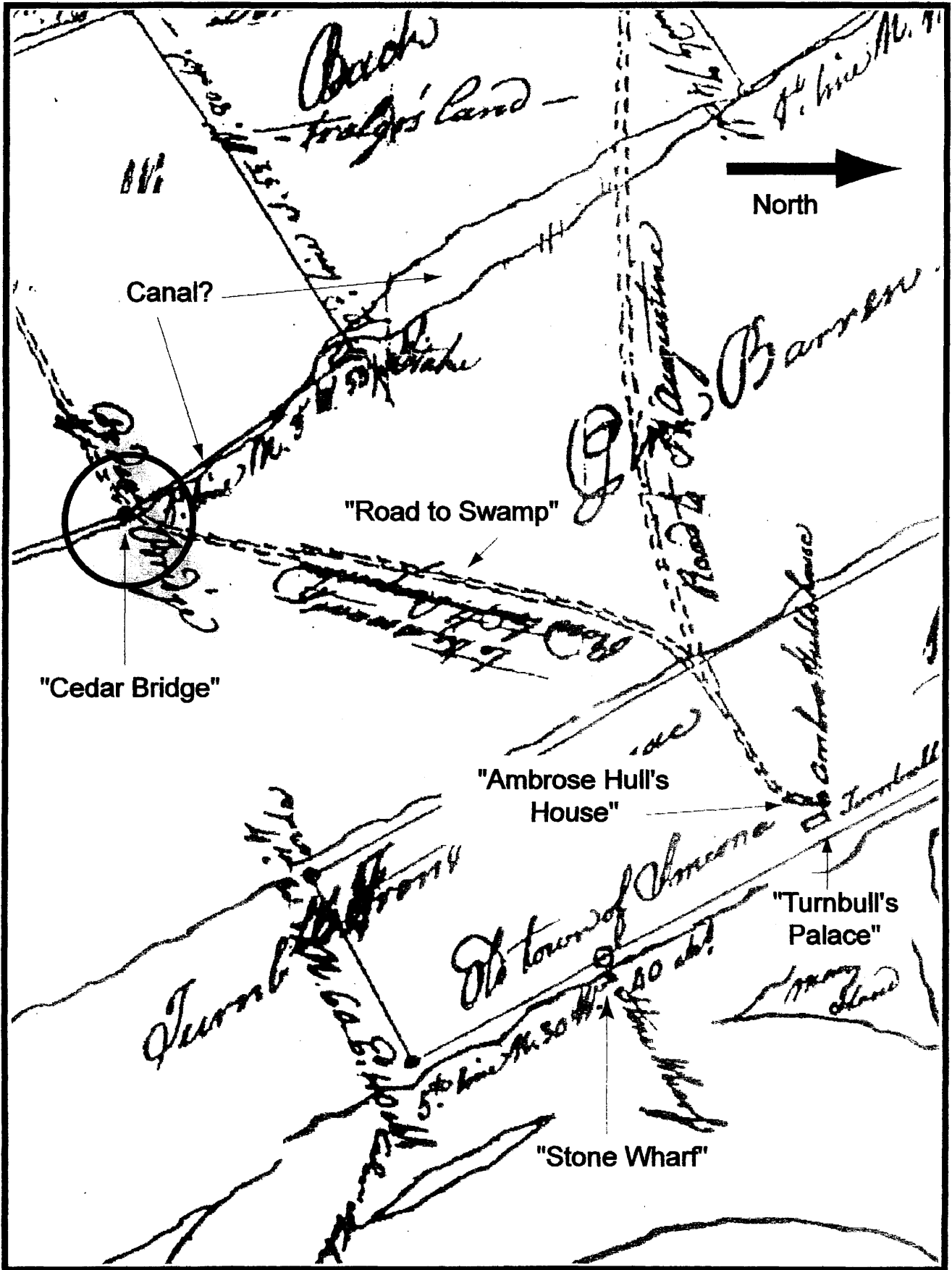


Figure 19. Copy of a portion of 1817 map of the Ambrose Hull Grant showing a "Cedar Bridge" crossing what is probably a Turnbull-era canal (Clarke 1817).

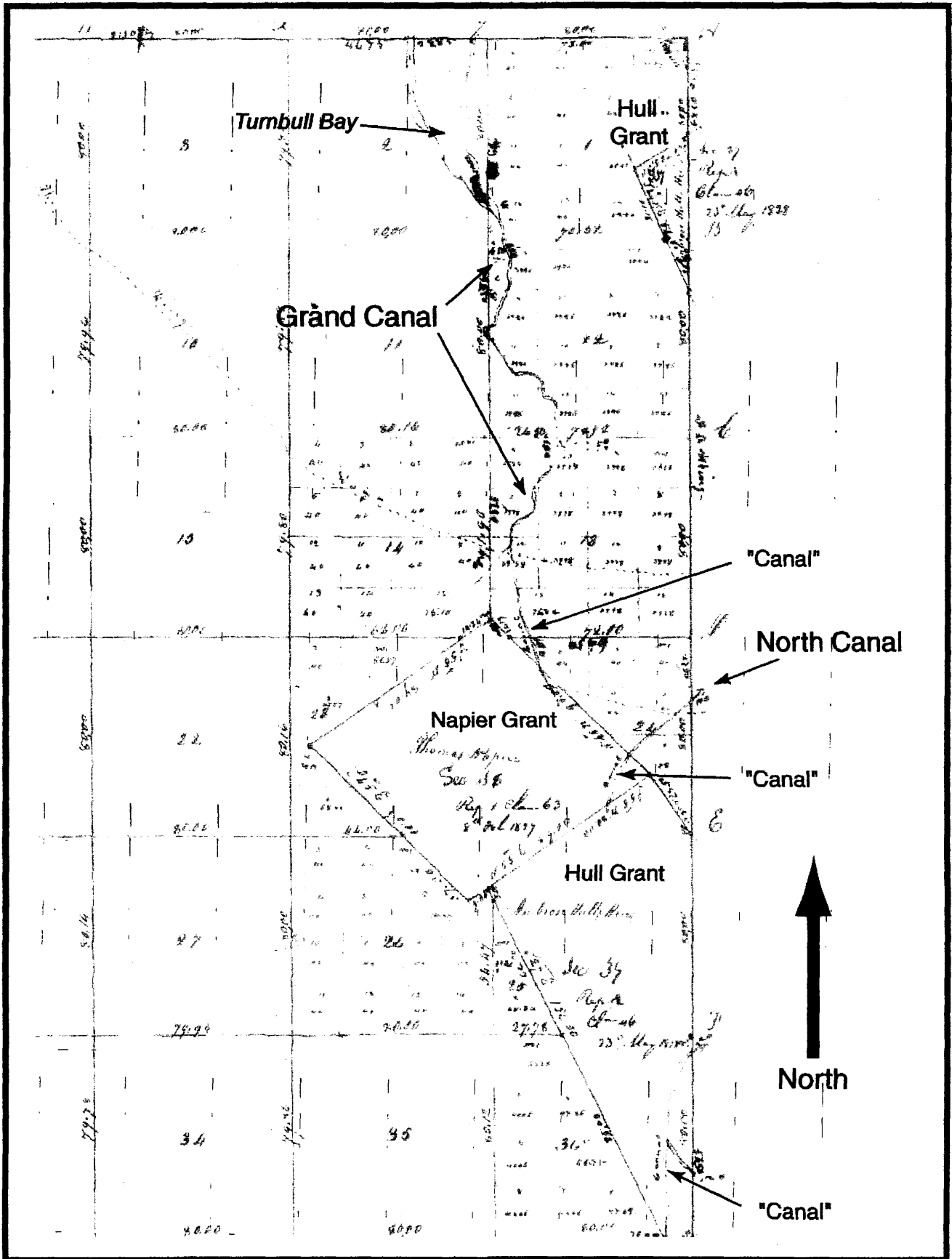


Figure 20. 1835 U.S. Government General Land Office Survey (GLOS) map of T17S, R33E showing three colonial-period canals (Ming 1835b).

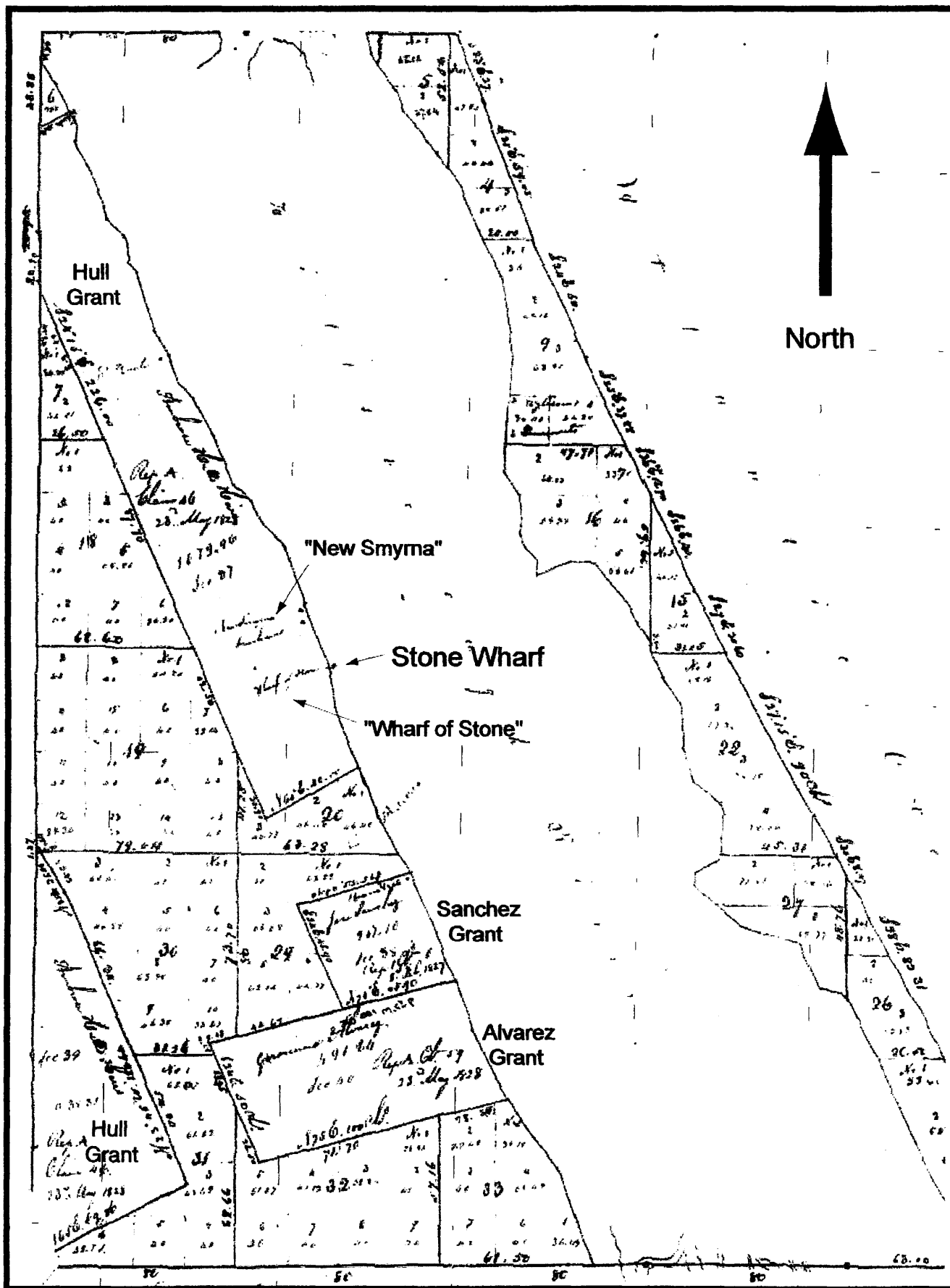


Figure 21. 1835 U.S. Government General Land Office Survey (GLOS) map of T17S, R34E (Ming 1835c). Note the absence of any canals on this map. Compare with Figure 23.

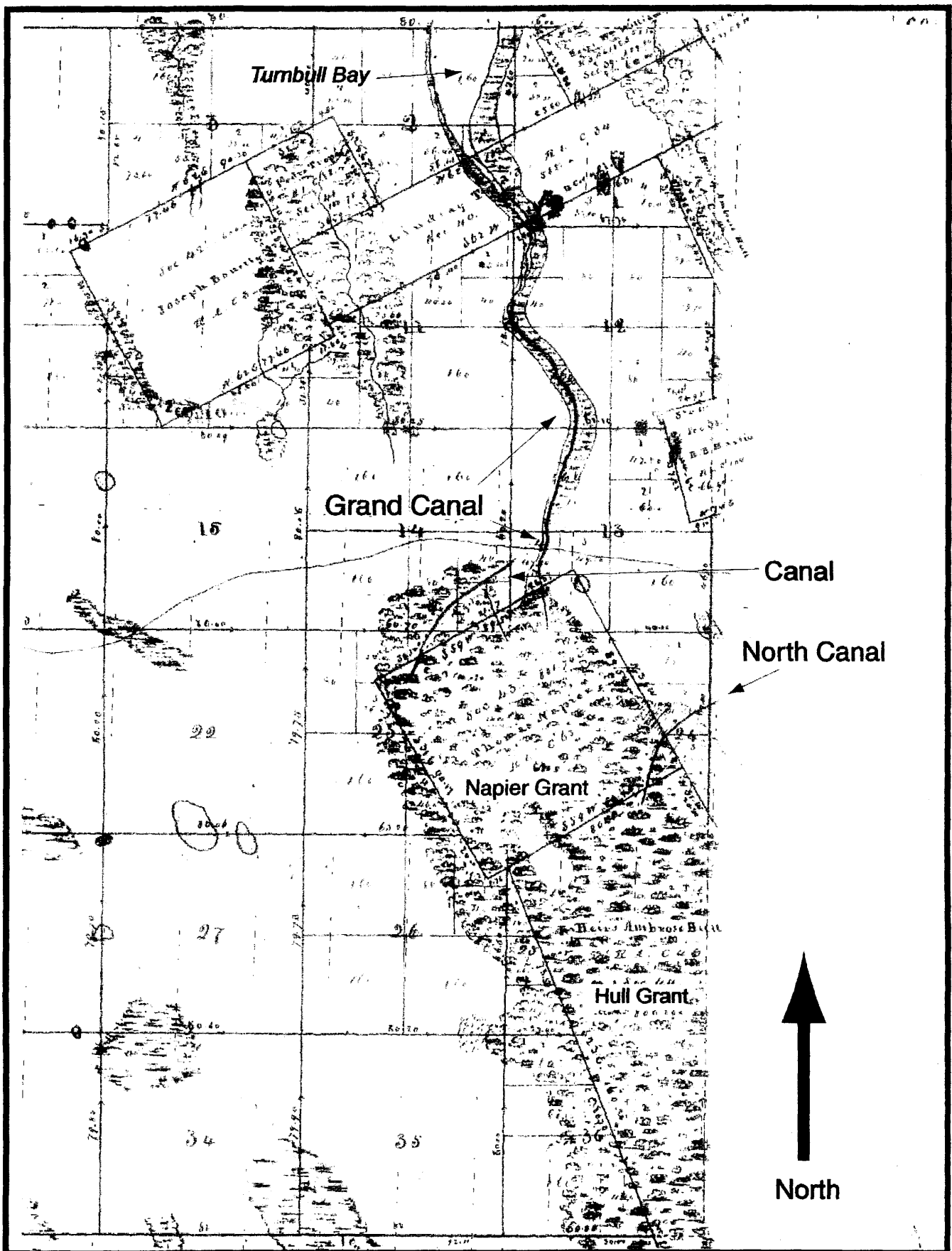


Figure 22. 1850 U.S. Government General Land Office Survey (GLOS) map of T17S, R33E showing three colonial-period canals (Burr 1850b). Note that the orientation of the Napier Grant has been corrected to the east and that the Grand Canal now enters that grant at its north boundary. Compare with Figure 20.

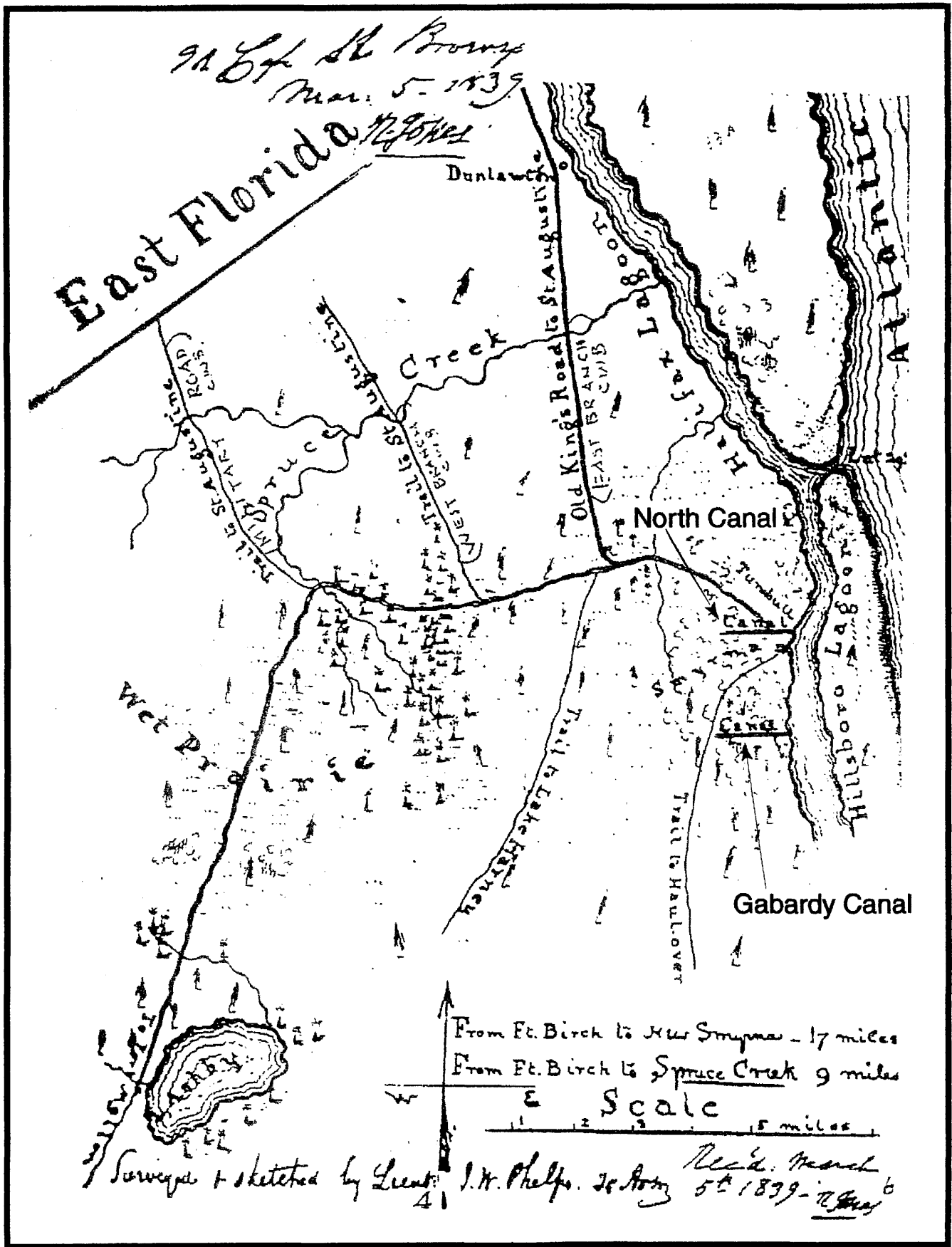


Figure 23. 1839 map of East Florida showing the North (Turnbull) and South (Gabardy) canals (Phelps 1839).



Figure 24. Portion of 1835 map by F. L. Ming of 17S, R33E and T17S, R34E on file at the Ormond Beach Library in Ormond Beach. This map provides more detail than the 1835 GLOS maps, including at least two additional canal segments.

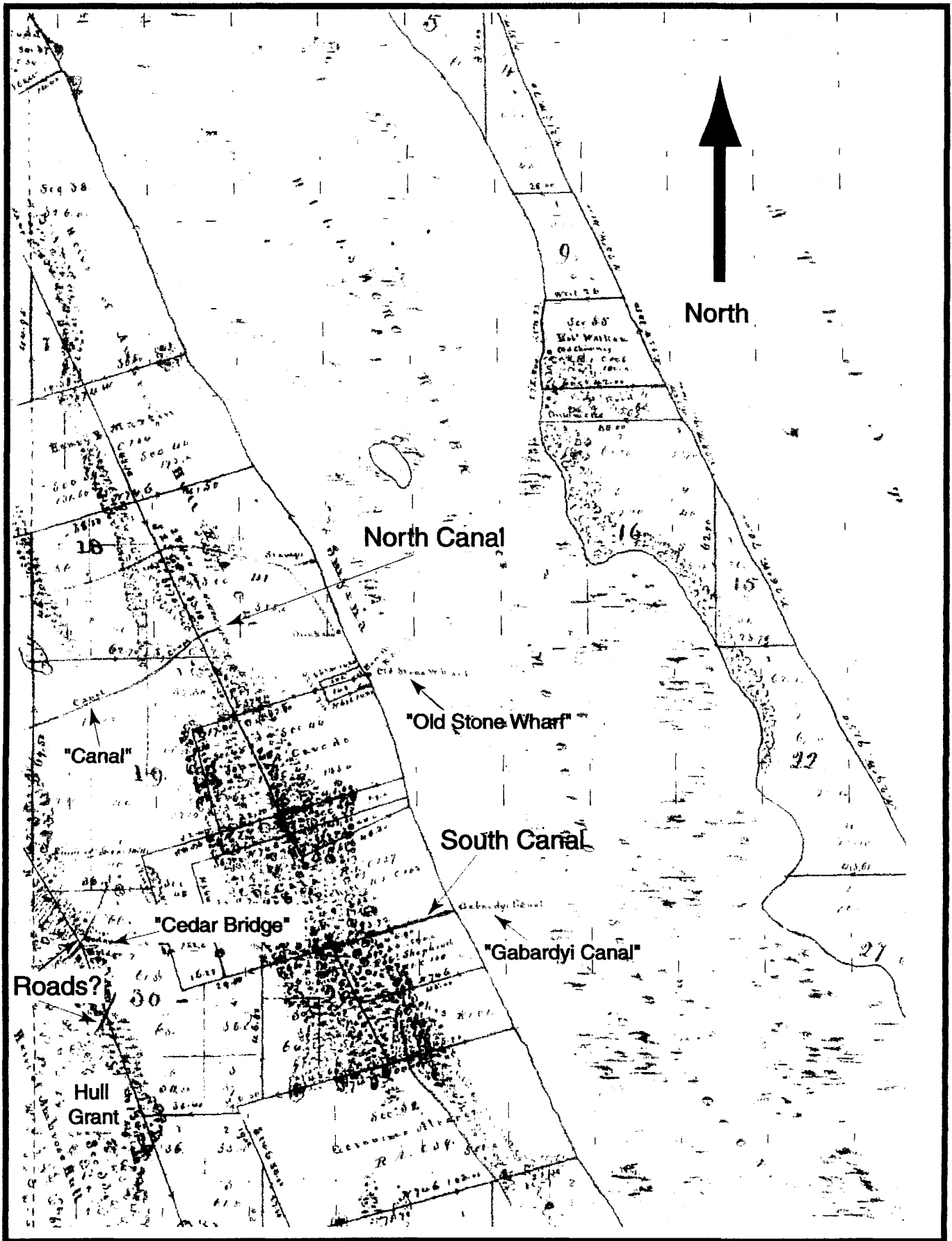


Figure 25. 1850 U.S. Government General Land Office Survey (GLOS) map of T17S, R34E showing the North and South Canals and a "cedar bridge" (Burr 1850c).

Possible extension
of Gabardy Canal

North
Canal

Gabardy
Canal



Figure 26. 1874 coastal survey map of the New Smyrna Beach area showing a northern extension of the Gabardy Canal (U. S. Coast Survey 1874).

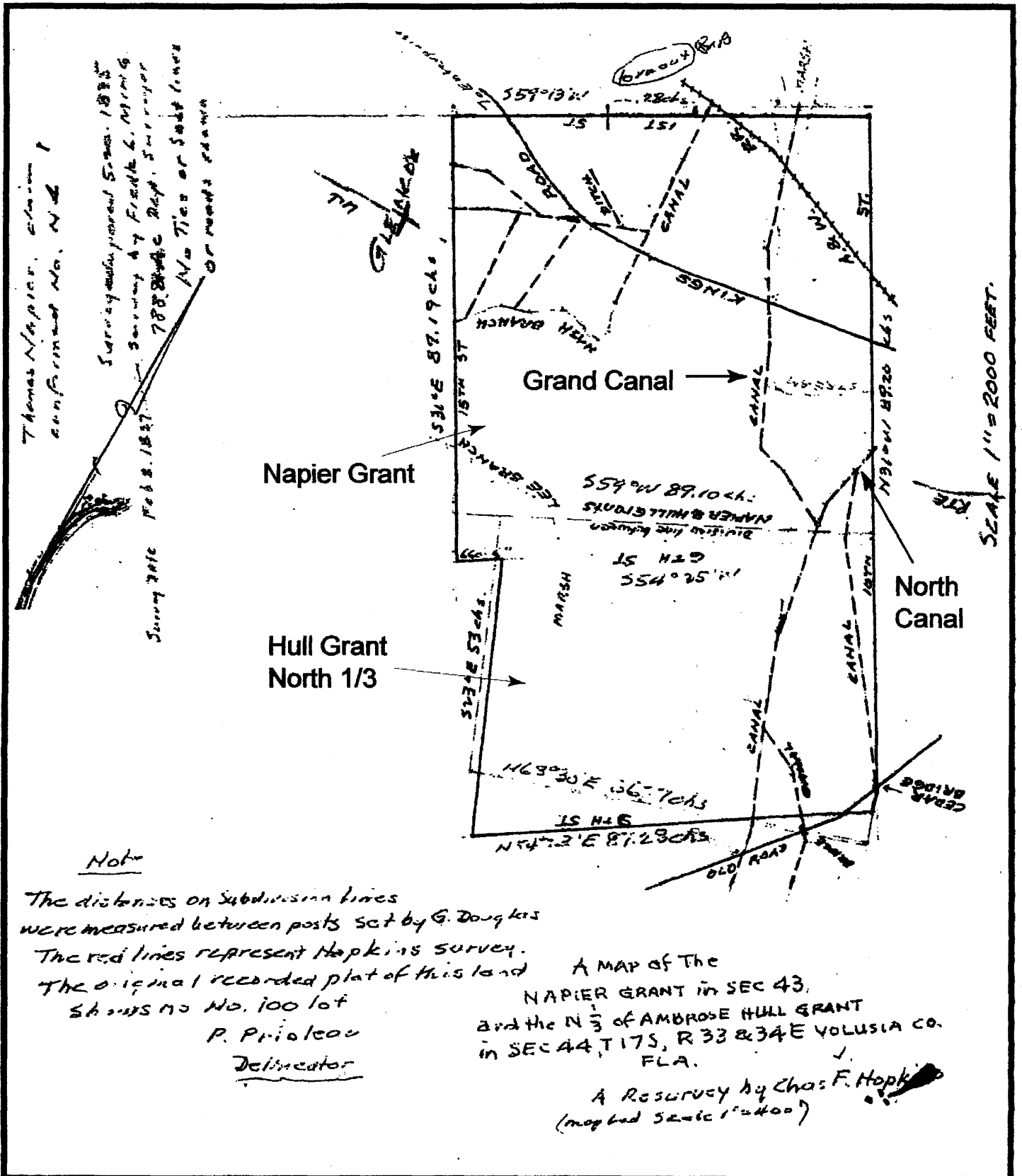


Figure 27. Undated map of the Napier Grant and the northern one-third of the Hull Grant showing several canals (Hopkins n.d.)