

The Historic City Ditch

**Littleton and Colorado's
Historical Heritage**

By Larry Borger



On the right is the flowing City Ditch south of Ridge Road in Littleton in 2024. The Littleton Community Trail is on the left. The City Ditch is the oldest man made environmental feature in the Colorado Front Range which still works as originally designed. It was surveyed by Richard Little in 1860 and was dug between 1864 and 1867. It is the oldest irrigation ditch on the South Platte River and proved the feasibility of large scale irrigated agriculture in Colorado. Water flowed in this Ditch Park past Littleton to irrigate farm land south of Denver and fill the irrigation lakes in Washington and City Parks in Denver for over 100 years.

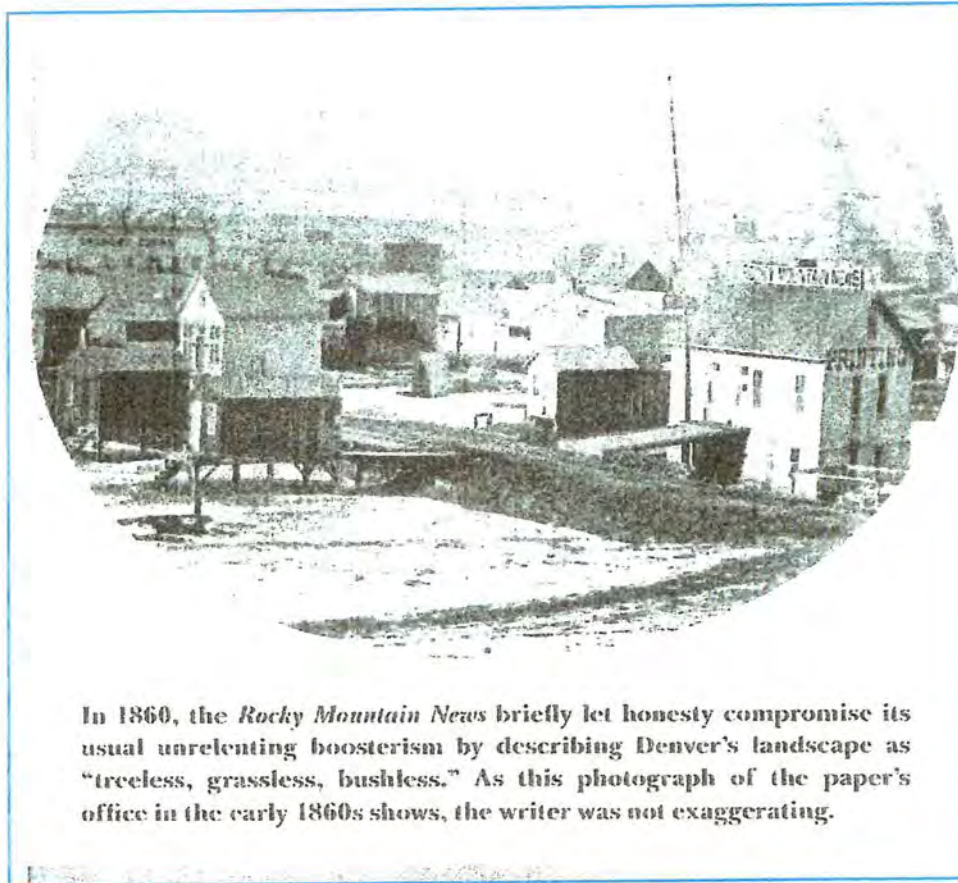


Figure 2: At the time the City Ditch was dug, Denver was a fledgling frontier collection of mostly log cabins. From the time the Ditch first flowed with water, it would be 3 years before the arrival of the railroads in 1870, or 10 years before the advent of barbed wire in the 1880's, or a half century before inter-city surfaced roads in the 20th Century. The "59'ers" were 600 miles from "the States" a journey of 10 days to 2 weeks by stagecoach.

Photo source unknown.

This area is "almost wholly unfit for
cultivation and of course uninhabitable
by people depending upon agriculture"

Major Stephen Long, 1820



In 1860, the *Rocky Mountain News* briefly let honesty compromise its usual unrelenting boosterism by describing Denver's landscape as "treeless, grassless, bushless." As this photograph of the paper's office in the early 1860s shows, the writer was not exaggerating.

Figure 3: Treeless, grassless, bushless Denver, 1860. The City boosters knew that for their little city to be attractive to folks, "from the States", it needed greenery and greenery needed water.

Photocopied from, *The First Hundred Years*, Robert Perkin, Doubleday, page 218.



Figure 4: William Byers, 1831 - 1903, Pioneer Founder and Longtime Editor of the *Rocky Mountain News*. The first edition of the *News* was published in Denver April 22, 1859. Byers was a supporter of irrigated farming and knew that if his fledging city on the dusty prairie was to flourish, it needed trees and trees needed irrigation water to survive. He was a board member of the Capitol Hydraulic Company, which built the City Ditch.

Photo from Robert L. Perkin, *The First Hundred Years, An Informal History of Denver and the Rocky Mountain News*, Doubleday and Company, Garden City New York, 1959, p. 432.



Figure 5: Richard Little, 1829 - 1899, Surveyor and Construction Manager of the City Ditch, Creator and Owner of the Rough and Ready Flour Mill, and Founder of Littleton, Colorado

Sketch courtesy Littleton Museum

PRIVATE LAWS
OF THE
TERRITORY OF KANSAS,

PASSED AT THE SPECIAL SESSION

OF THE

LEGISLATIVE ASSEMBLY OF 1860:

BEGUN AT THE

CITY OF LECOMPTON,

JANUARY 19, 1860, AND HELD AND CONCLUDED

AT THE

CITY OF LAWRENCE.

PUBLISHED BY AUTHORITY.

S. A. MEDARY, PRINTER.

Transfer of
stock.

SEC. 4. The stock and shares of the company shall be deemed personal property, and the said company may, by by-laws, prescribe rules for the transfer of the same by each individual shareholder or stockholder.

SEC. 5. This act to be in force from and after its passage.

GUSTAVUS A. COLTON,

Speaker of House of Representatives.

W. W. UPDEGRAFF,

President of the Council.

Approved February 27, 1860.

S. MEDARY,

Governor.

CHAPTER CCXIV.

AN ACT to incorporate the Capital Hydraulic Company of Arapahoe county.

Be it enacted by the Governor and Legislative Assembly of Kansas Territory:

SECTION 1. That A. C. Hunt, Charles H. Gratiot, John A. Clark, Thomas Pollock, Henry Allen, William M. Slaughter, Richard Sopris, A. P. Vasquez, A. Sagendorf, W. N. Byers, H. H. Scovill, Jr., J. A. McDonell, F. Z. Solomon, John H. Wing, and their legal associates, are hereby created and declared a body corporate and politic, under the name and style of the "Capital Hydraulic Company," and by that name and style may sue and be sued, plead and defend in any court of this territory, may have perpetual succession, grant and receive by its corporate name, purchase and sell, hire and lease property, real, personal and mixed, in all lawful ways; may have a corporate seal, may alter the same at pleasure, and may make by-laws for the regulation of its business, not inconsistent with the constitution of the United States and the laws of this territory.

SEC. 2. Said company shall have the power and exclusive right to direct the water from the bed of the South Platte river at any point they may select between the Platte canon and the mouth of Cherry creek, and also to direct the water from the bed of Cherry creek at any point within six miles of its mouth, and to conduct the water from both said streams by canal or ditch across the plains or intervening lands to the

Corporators name
and powers.

May direct the
waters of the
South Platte.

cities of Auraria, Denver and Highland, in the county of Arapahoe, territory of Kansas, and have the exclusive privilege of using and controlling the same for mechanical, agricultural, mining and city purposes.

SEC. 3. The capital stock of said company shall consist of five hundred thousand dollars, but it may commence operations when one hundred thousand dollars are subscribed. Its liabilities shall at no time exceed fifty thousand dollars.

SEC. 4. The officers of said company shall consist of a president, vice president, secretary and treasurer, and four directors, who shall be elected at the annual meeting of the company, to be held on the last Tuesday in November, who shall constitute a board of directors, and a majority of them shall constitute a quorum for the transaction of business.

SEC. 5. This act shall take effect and be in force from and after its passage.

GUSTAVUS A. COLTON,

Speaker of House of Representatives.

W. W. UPDEGRAFF,

President of the Council.

Approved February 21, 1860.

S. MEDARY,

Governor.

CHAPTER CCXV.

AN ACT to incorporate the Arapahoe County Improvement Association.

Be it enacted by the Governor and Legislative Assembly of the Territory of Kansas, as follows:

SECTION 1. That Silas O. Hemenway, Richard Sopris, Wm. M. Slaughter, William O'Donnell, Edward W. Wynkoop, Wm. J. King, and Joseph McCibben, and their associates and successors, are hereby constituted a body politic and corporate, in law and in fact, by the name and style of the Arapahoe County Improvement Association, and by that name shall have perpetual succession; may sue and be sued, plead and be impleaded, defend and be defended against; may make and use a common seal, and alter the same at their pleasure; shall, by the name and style aforesaid, be able and capable of purchasing, receiving, holding, having and enjoying, to the use of said association, lands, tenements, heredita-

Name and pow-
ers.

Corporators.

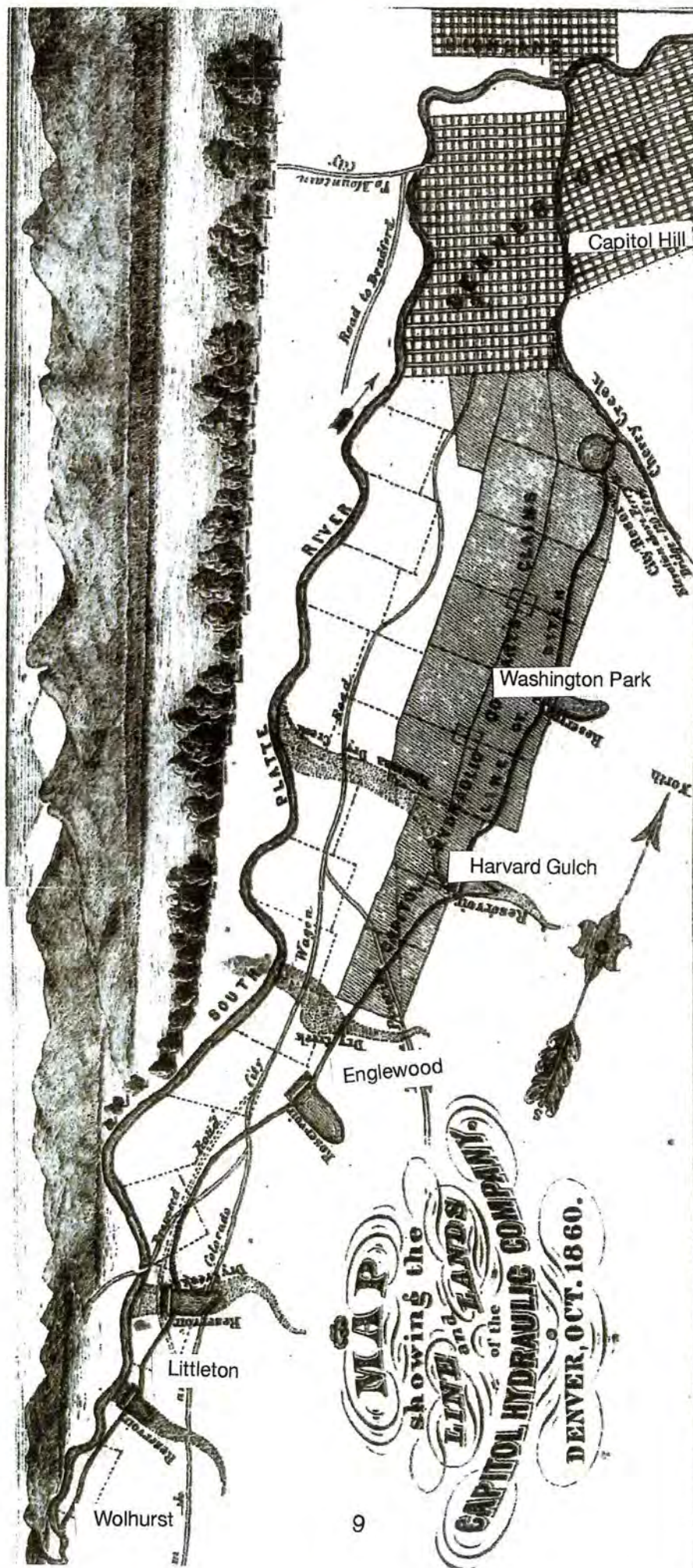


Figure 7: Detailed survey on the 1860 Stock Certificate showing the location today of Wolhurst, Englewood, Harvard Gulch, Washington Park and Capitol Hill.



Figure 8: This Denver street scene taken by W. H. Jackson is likely from the mid 1870's to early 1880's, based on the estimated age of the young trees. A careful examination shows lateral irrigation ditches adjacent to the street with rows of young trees between the street and sidewalk. Note that individual homes have a bridge over the ditch to allow access to a carriage in the street. The ditch water would have stimulated the trees to grow in the arid climate.

Photo courtesy of History Colorado



Fig. 8. : Fourteenth Street Denver circa 1880's. Note the small lateral ditch with water at lower right and the footbridges across it, including one with steps to make it easier to board a carriage. The mature trees show the positive effect the irrigation water had for their survival and growth.

Photo by William H. Jackson, courtesy Western History Collection of Denver Public Library



Figure 9: 1913 Boathouse at Smith Lake in Washington Park today. The Lake, originally filled with water from the City Ditch in 1867, is arguably the oldest man-made recreational body of water in the Denver area, still in active use. Photo by author.



Figure 10: The City Ditch in Denver's Washington Park today. South Downing Street on left. Washington Park and the City Ditch there were listed on the National Register of Historic Places in 1976. Today, the irrigation water in the City Ditch in Washington Park continues to flow north in a pipeline in the Ditch's original alignment to fill the lakes at the Denver Country Club and City Park. The water from those lakes is then pumped into sprinkler systems to irrigate those historic green spaces. The actual water in the Ditch is reclaimed water from the Metro Wastewater facility which has been treated to a high level. It is a wise use of a scarce resource in our arid climate.

Photo by author.

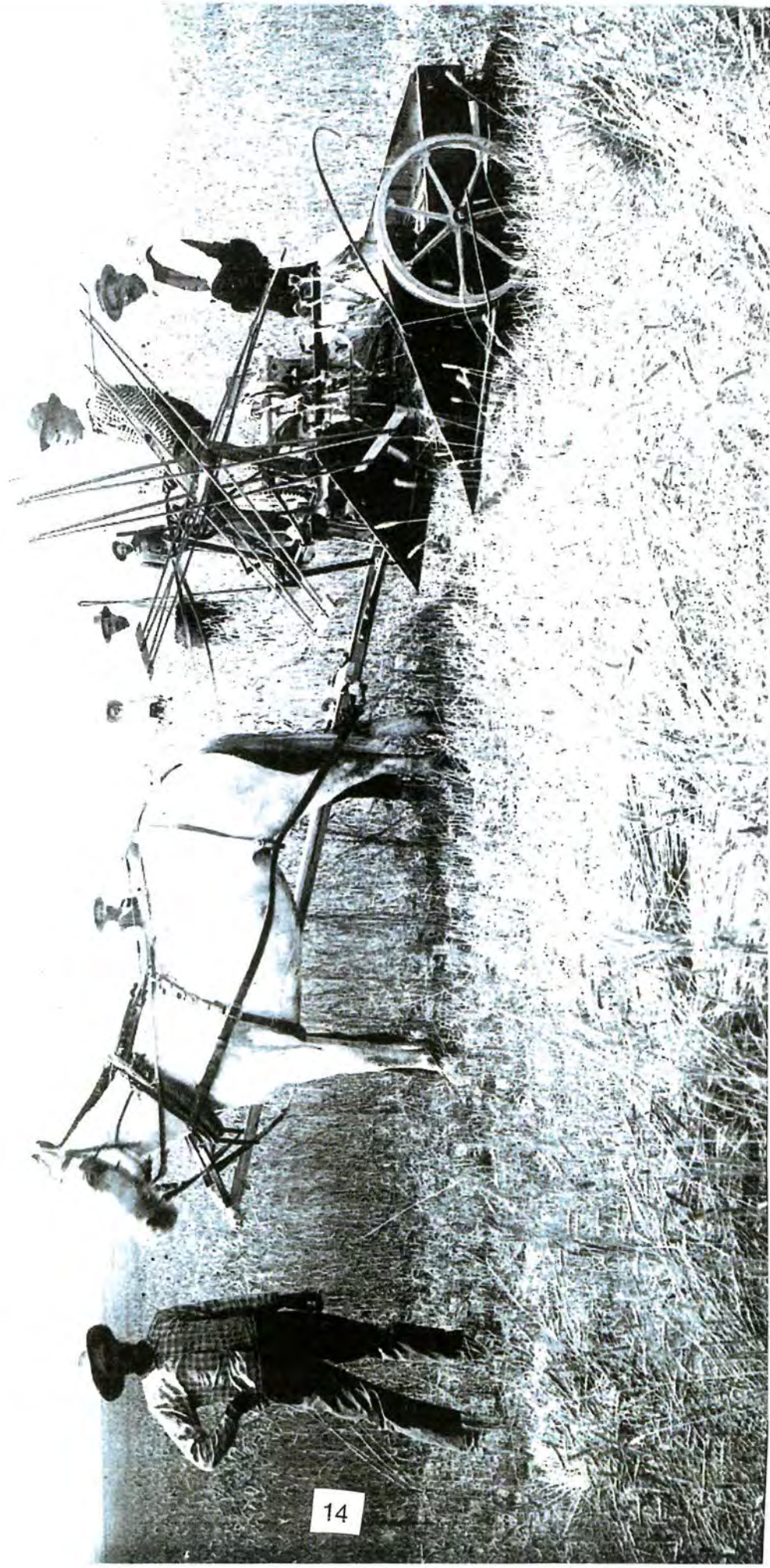


Fig.11. Harvesting wheat in the mid 19th Century.



Fig 12. Water powered **Rough and Ready Mill** photographed in 1926. Located at what is today Bowles Avenue and South Santa Fe in Littleton. The mill, created by Richard Little, was an economic engine promoting farming in the South Platte River valley and the development of Littleton. Originally constructed in 1867, the mill burned and was rebuilt twice but after burning a third time in 1959, it was never rebuilt.

Photo from Engineering Archives of Denver Water

Littleton circa 1917

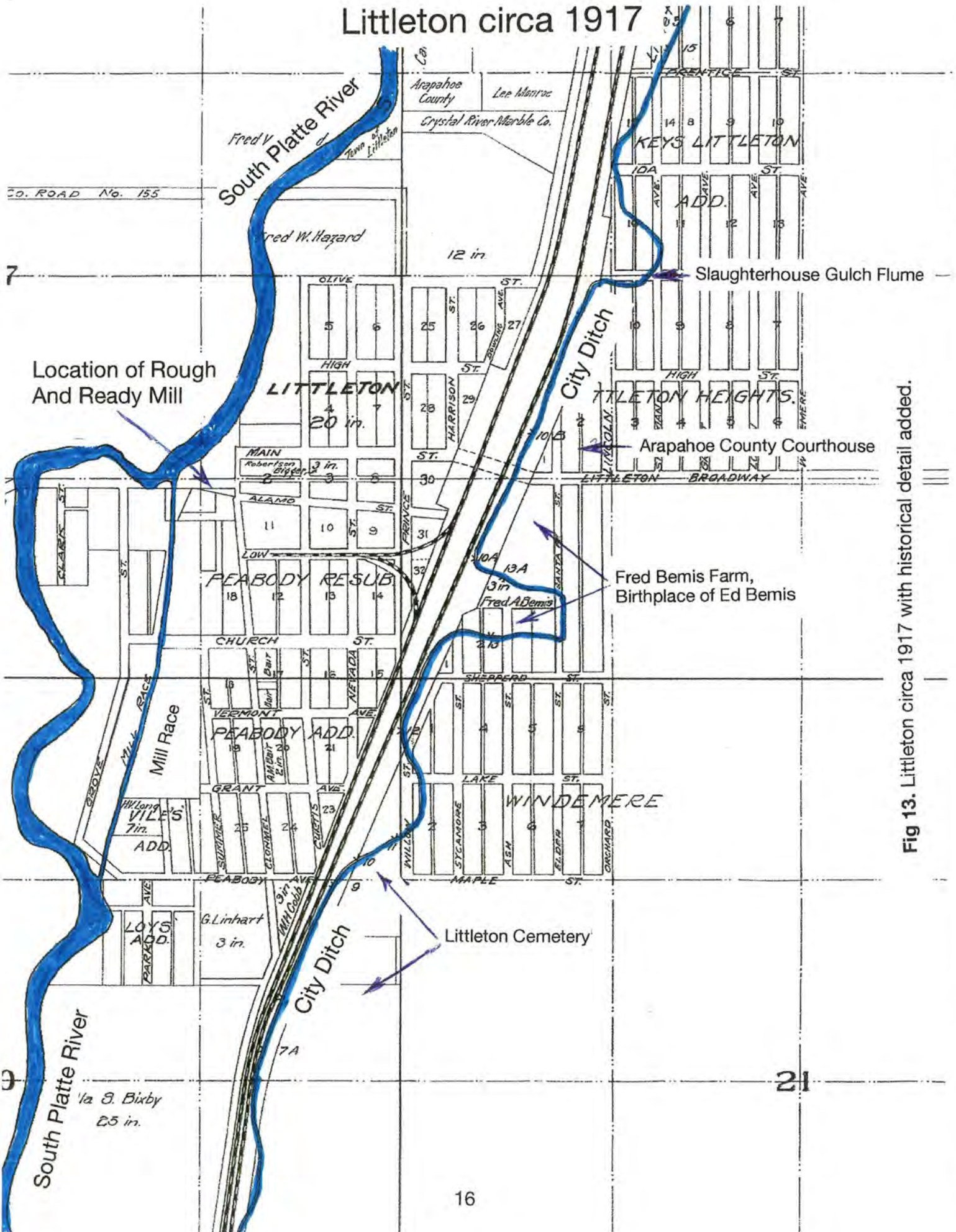


Fig 13. Littleton circa 1917 with historical detail added.



Figure 14: City Ditch in Littleton south of Ridge Road today. The Littleton Community Trail is at the left. The Ditch is in its original alignment, with flowing water, as when originally dug more than 150 years ago. Photo by author.



Figure 15 City Ditch Flume over Slaughterhouse Gulch in Littleton today. This is in Slaughterhouse Gulch Park, north of the Depot Arts Center. In the 1860's, before the arrival of the railroads in Denver, costs to ship structural iron from "the States" would have been prohibitive and the original structures of this type would have been made of wood. It has been speculated that this particular structure dates from the mid-1940's. Photo by author.



Figure 16: The City Ditch in Littleton, north of Slaughterhouse Gulch, today. The flowing ditch is in the same alignment as Richard Little surveyed it and supervised its construction between 1864 and 1867. Photo by author.



Figure 17: Parshall Flume located in the ditch just above its crossing of Big Dry Creek. Patented by Dr. Ralph L Parshall, a CSU professor in 1922, the invention made possible very accurate measurements of flowing water. Flumes of this type ended years of controversy over how much water was actually being used by ditch irrigators compared to their entitlement. Photo by author.



Figure 18: City Ditch **Flume over Big Dry Creek** in Englewood today. The paved trail shown in the photograph along the Creek connects the Highline Canal Trail in Greenwood Village with the Mary Carter Greenway Trail along the South Platte River.

Original flumes of this type would very likely have been made of wood. The Ditch was completed and water in the Ditch first flowed all the way to Cherry Creek in 1867. This was 3 years before the railroads were completed to Denver. Before that it would have been prohibitively expensive to ship heavy sheet iron and steel in freight wagons across the prairie from the East.

Existing Littleton Community Trail / City Ditch

(January, 2025)



Littleton circa 1917

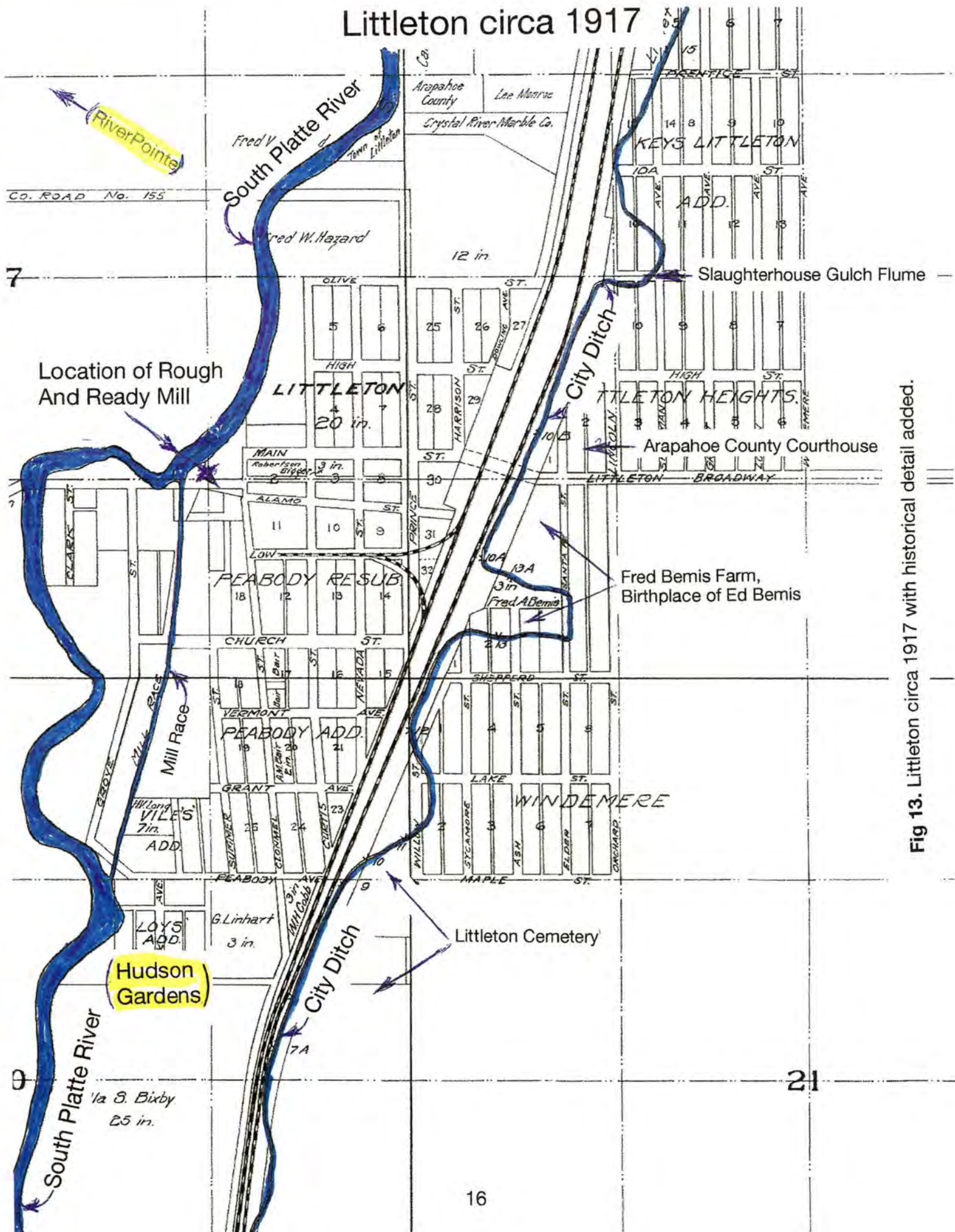


Fig 13. Littleton circa 1917 with historical detail added.

LETTER TO THE EDITOR

How was the City Ditch dug?

Your reporter Isabel Guzman did a very good job of describing the issues surrounding the City of Englewood's project for piping the historic City Ditch through Littleton, and offering to deed the then-surplus flume at Slaughterhouse Gulch to the City of Littleton for future preservation or demolition. Although perhaps not of any significance to the current discussion, I want to correct one error in Ms. Guzman's otherwise excellent story and ask your readers for help in getting to the bottom of a really big issue ... "How was the ditch, 4 feet deep, 6 feet wide and 26 miles long, actually dug between December 1864 and May 1867?"

The oft-repeated quote in the story is that "the City Ditch was dug by hand." The error was not in the reporting but the research by the original historian. A more diligent scholar would have found the following clipping from the Rocky Mountain News of Dec. 7, 1864:

"Something New — A mammoth four wheel outfit, partaking partly of the appearance of a fire engine, an artillery wagon, a mowing machine and a colossal steam plow came into town last evening. We found out its appropriate use, to wit, a machine to dig the Capitol Hydraulic Ditch, that is to be. This said machine has two mammoth hind wheels and two miniature front ones, with a lot of frame and iron mechanism between ...

"Suffice it to say that it is J.W. Smith's great Rotary Canal Builder, (or as they call it elsewhere, a Railroad Excavator,) with which the Capitol Ditch is soon to be made. It cost at the manufactory, in Quincy, Illinois, \$1,200* and the freight on it here cost another \$1,300* more. When worked by eight or ten yoke of cattle, it will do the work of a hundred men per day. Another of these machines will shortly be received here by Mr. Smith, who has the contract for building that ditch aforesaid."

*(That is equivalent to \$24,400 and \$26,400 in today's dollars. Emphasis added. ed.)

That is pretty good contemporary evidence that the ditch was dug with mammoth machines. All that is lacking is a photograph of a machine actually in action to prove it. Photography was a lively art form in 1864, witness Matthew Brady's recording of the Civil War. But search as I might, I can find no such historic photograph. That, dear reader, is where you come in. Perhaps you remember seeing a Facebook photo or have a cousin in Quincy, Ill., who might know someone. Please help find the missing photograph which will prove that it was a "state of the art machine" which dug a large ditch 26 miles long in only two and a half years, at the time the Civil War.

Larry Borger, Littleton

The writer is a Littleton amateur historian whose essay "The Historic City Ditch" can be found on the internet by searching for Denver Public Library, City Ditch.