

The Augusta Sanitary District

Long Range Plan Covers Approximately 48 Miles of Lateral and Trunk Sewers

THE Augusta Sanitary District was formulated by an act of the State Legislature, approved by the voters of the city and active operation of the system taken over January 1, 1960. The lateral and trunk sewers approximated 48 miles in length with disposal facilities consisting of several large septic tanks, Bond Brook and the Kennebec River.

During 1960 and early 1961 several engineering consultants were interviewed, as it was apparent from the beginning that an integrated long range plan was required, for an orderly expansion and reinforcement program. The District and the engineering firm of Whitman and Howard, Inc., entered into a contract July 1961 for this long range plan.

With the passage of the classification of the Kennebec River by the 100th Legislature, the District and their consultants, Whitman & Howard agreed upon a plan for the construction of the interceptors and treatment plant in three phases.

An application for federal and state aid was submitted to the State Water Improvement Commission for the first phase, which included an interceptor sewer for the southerly and westerly side of the Kennebec River, an interceptor for the Kennedy Brook area and treatment facilities. A Federal and State Grant was obtained and

The cover of this issue shows an aerial photo of the newly completed City of Augusta Sewage Treatment Plant. The plant site, immediately south of the city's major athletic field, is located in an old sand and gravel pit known as Britt's Gully. The State Buildings are readily seen in the background.

the construction planning started. In February 1962 bids were advertised and let. Contract #1 was awarded to Owen W. Taylor & Son of Winthrop, Maine for the interceptor piping. Contract #2 was awarded to Nalews-Miller of Meredith, N.H. and Windsor, Vt. for the treatment facilities. Work on both contracts commenced during May 1962. Progress photo A, looking East and photo B, looking South were taken in August 1962. Everyone associated with the work jokingly referred to this period as the "World War I Battle of Britt's Gully" with trenches and craters everywhere. However, one can note the foundation for the Control Building and form work for the Digestors well advanced.

Progress photo C looking South and photo D looking East were taken in December 1962. Photos E show the erection of the precast columns and precast prestressed roof deck. The use of these materials hastened the completion of the work and in March of 1963 after 11 months of construction the plant was put in operation.

Concurrently a second Federal and State Grant was obtained to carry out phase 2. This phase consisted of the main west bank interceptor, Bond Brook Interceptor and the State Hospital Interceptor together with the addition of a second clarifier at the treatment plant. Contracts 3A and 3B, awarded in March 1963 to Cianchette Brothers, Inc. of Pittsfield, Maine, covered all work on the main west bank interceptor, Bond Brook interceptor and the second clarifier at the Plant. Contract 3C awarded in June 1963 to Ross Construction Co., Inc., of Augusta, Maine covered the State Hospital interceptor.

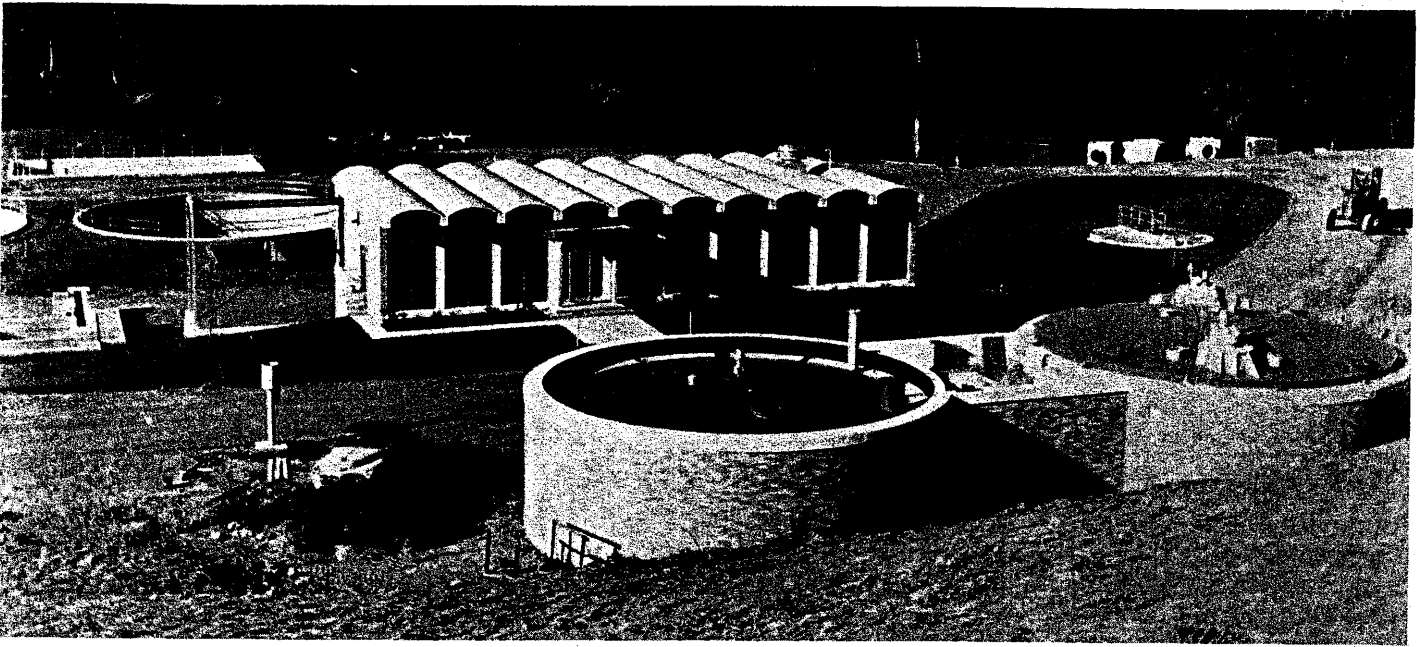
Part of Contract 3A included 5000 feet of 42 inch reinforced concrete pipe immediately adjacent to the Maine Central Railroad southbound rails. Rail traffic proceeded during this stretch of construction with the exception of one all day, all night, half the following day, rain, snow, and sleet period, where both main line tracks were crossed in open cut.

Contract 3B included, along with the piping, three underground pumping stations to serve small low lying areas. Each station includes two electric driven open

SANITARY DISTRICT — Page 5



Early stages of construction at the Augusta Treatment Plant showing — Control Building Foundation, center, and sludge digesters, right.



SANITARY DISTRICT — From Page 1

impellor sewage pumps with controls. They are housed in a circular steel tank. Each is a very compact package. Entrance is gained by an entrance tube four feet in diameter equipped with a ladder.

Phase 2 was completed in the late fall of 1963 with the additional sewage flow entering the Plant in October 1963. The accompanying photograph shows the digestors in the foreground, Control Building and Detritor midway and the circular clarifiers and rectangular chlorine detention chamber in the background.

It is interesting to note the following photograph taken around 1900 shows the Britt home from which the area derives the name. The Britt home was reportedly built by a Hessian soldier following the Revolutionary War. The house was located on the lower right hand corner of the aerial photograph.



The third phase was recently completed following another federal and state grant in aid. Contract 4 was awarded to Cianchette Brothers, Inc., of Pittsfield, Maine during January 1964. This work included the main east bank interceptor and the final enlargement of the treatment plant including an 80 foot clarifier, sludge thickener

and elutriation tanks and second vacuum filter. The sewerage flow was introduced to the plant in September 1964.

The following sketch shows flow pattern at the plant. Any structures marked "future" now exist.

The total cost for the three phases is \$2,750,235.10 including land acquisition. The State and Federal grants have amounted to \$1,530,000. This works out to 55.6% of cost borne by the State and Federal Governments and 44.4% by the District.

The District derives its operating revenue in the form of a sewer rental or sewer service charge. For example the established charge to a single family dwelling is \$40.00 per year. Commercial establishments pay on the basis of their maximum quarterly water consumption of the previous year, the minimum charge being \$40.00 per year.

The sewerage system in Augusta is a combined sewer system. The treatment plant is designed to handle up to two and one half times the dry weather flow. All flow enters through a coarse bar screen where sticks, cans, etc. are removed. The detritors follow, where sand and grit is removed. Excessive flows caused by rainfall is overflowed at this point and directed either to the chlorine detention chamber or river depending upon the quantity. The flow then enters the comminutors (grinders) and any objects that pass the bar screen are broken up. The next path of the flow is to the clarifiers where the settleable solids are removed by settling, the liquid effluent overflowing to the chlorine detention chamber. The solids are then pumped to a sludge thickening tank and subsequently further pumped to the primary digester, and then, by overflow or transfer, to the secondary digester. The resulting digested sludge is dewatered by the vacuum filtration process. The dewatered sludge produced to date has been used for a soil conditioner at the plant.

The equipment and structures are painted with many colors employed to present an eye catching effect to the layman and color coding to the experienced. Neatness and cleanliness is the byword of the plant personnel.

The Augusta Sanitary District maintains to any and all an open door for visitors.

BOARD OF COMMISSIONERS

Chester G. Bridge — Chairman
 Alfred J. Lacasse — Treasurer
 James B. Caswell — Clerk

SUPT. & ENGINEER

Oliver G. Coulling

ASS'T. SUPERINTENDENT

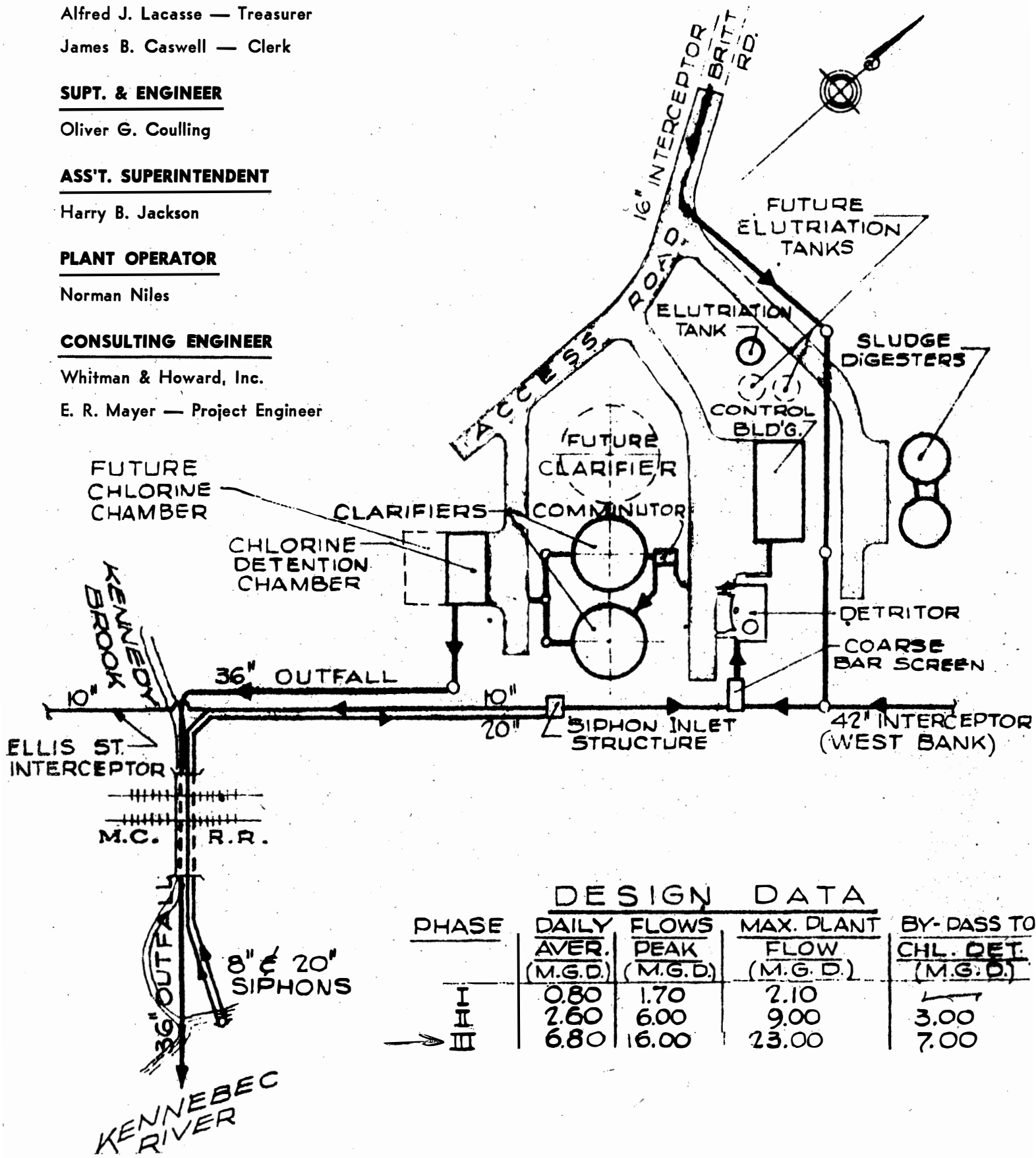
Harry B. Jackson

PLANT OPERATOR

Norman Niles

CONSULTING ENGINEER

Whitman & Howard, Inc.
 E. R. Mayer — Project Engineer



DESIGN DATA

PHASE	DAILY FLOWS		MAX. PLANT FLOW (M.G.D.)	BY-PASS TO CHL. DET. (M.G.D.)
	AVER. (M.G.D.)	PEAK (M.G.D.)		
I	0.80	1.70	2.10	—
II	2.60	6.00	9.00	3.00
III	6.80	16.00	23.00	7.00