

Action Officer: C. H. Baker  
Staff Division: AC/S, Facilities  
(Base Maintenance)

MAY 6 - 1987

Subj: CURRENT UTILITY PROJECTS

BACKGROUND: Camp Lejeune is serviced by twenty-two utility plants consisting of seven wastewater treatment plants, eight water treatment plants and seven steam generation plants. Base Maintenance Division and the Utilities Branch is actively engaged in the operation, maintenance, and planning of facilities to provide service to Marine Corps Base, Marine Corps Air Station, New River, Naval Hospital and tenant commands. Utilities services also include primary and secondary electricity and a computerized Utility Monitoring and Control System. As results of routine inspections and utility requirements studies, the following projects were developed to meet current and future requirements:

- Expansion of the Holcomb Boulevard Water Treatment Plant from 2,000,000 gal/day to 5,000,000 gal/day. Upon completion, the Tarawa Terrace and and Camp Johnson water treatment plants will be demolished. Water for these areas will be provided from the Holcomb Boulevard plant.
- Energy Monitoring and Control System. Expansion of existing monitoring system, adding 107 buildings, 41 steam and hot water boilers and four high lift pumps. The system will monitor and control various loads to reduce energy consumption.
- Repairs of Electrostatic Precipitators 1 and 2, Building 1700. Replace existing mechanical rappers with pneumatic type. Replace vibrators and provide new control system. Necessary to ensure compliance with air quality requirements.
- Sewage System Improvements. Provide new lift stations and force main from French Creek to Hadnot Point plant. Provide new sludge drying beds for Camp Geiger and Hadnot Point plants. Miscellaneous repairs to pumping stations.
- Replace Coal Conveying Equipment, Building 1700. Replace existing bucket type conveyor with a complete belt type conveyor, including a stacker.
- Replace Water and Sewer Mains and Provide Back Blow Preventors. Replace existing sewer mains in MCAS areas and replace water in main Amphibious area. Install back flow preventors at Buildings 1700, AS-4151, M-230, FC-202, BA-106, G-650 and 2615.
- Replace boilers, LCH-4014, AS-3502 and CG-1.
- Replace Feedwater Pumps, Steam Turbine and Controls, Building 1700. Replace four existing feedwater pumps with three new steam turbine driven pumps.



Subj: CURRENT UTILITY PROJECTS

- Replace Water Treatment Equipment, Building 670. Replace filter media in two filters and replace lime mixing and control equipment.

- Replace Service Pump Control Cable from SBA-108 to BA-138. Existing cable crosses Intracoastal Waterway and was damaged by a boat anchor.

- Renovation of the Rifle Range Central Heating Plant. Includes replacement of boilers, fuel storage tanks and associated equipment within the plant.

- Replacement of Boiler and Fuel Storage Tanks at the Officers' Club, Building 2615.

- Replacement of Main Electrical Substation for Camp Lejeune at Building 45. Project includes regulating of power to the Naval Hospital.

CURRENT STATUS:

- Expansion of the Holcomb Boulevard Water Treatment Plant is 95% complete.

- Energy Monitoring and Control System is 95% complete.

- Repairs of Electrostatic Precipitators 1 and 2, Building 1700 is 0% complete.

- Replace Coal Conveying Equipment. Building 1700 is 90% complete.

- Replace Water and Sewer Mains and Provide Back Flow Preventors is 25% complete.

- Replace Boilers, LCH-4014, AS-3502, and CG-1 is 25% complete.

- Replace Feedwater Pumps, Steam Turbine and Controls, Building 1700 is 0% complete.

- Replace Water Treatment Equipment, Building 670 is 0% complete.

- Replace Service Pump Control Cable From SBA-108 to BA-138 is 50% complete.

- Renovation of the Rifle Range Central Heating Plant is 95% complete.

- Replacement of Boiler and Fuel Storage Tanks at the Officers' Club, Building 2615 is 95% complete.

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Subj: CURRENT UTILITY PROJECTS

- Replacement of Main Electrical Substation at Building 45 is 0% complete.

FUTURE ACTION CONTEMPLATED:

- Expansion of the Holcomb Boulevard Water Treatment Plant is expected to be completed July 1987.

- Energy Monitoring and Control System is expected to be completed June 1987.

- Repairs of Electrostatic Precipitators 1 and 2, Building 1700 is expected to be completed October 1987.

- Sewage System Improvements is expected to be completed June 1988.

- Replace Coal Conveying Equipment, Building 1700 is expected to be completed October 1987.

- Replace Water and Sewer Main and Provide Back Flow Preventors expected to be completed December 1987.

- Replace Boilers, LCH-4014, AS-3502 and CG-1 is expected to be completed November 1987.

- Replace Feedwater Pumps, Steam Turbine and Controls, Building 1700 is expected to be completed December 1987.

- Replace Water Treatment Equipment, Building 670 is expected to be completed September 1987.

- Replace Service Pump Control Cable from SBA-108 to BA-1e8 is expected to be completed September 1987.

- Renovation of the Rifle Range Central Heating Plant is expected to be completed June 1987.

- Replacement of Boiler and Fuel Storage Tanks at the Officers' Club, Building 2615 is expected to be completed June 1987.

- Replacement of Main Electrical Substation at Building 45 is expected to be completed September 1988.

Department of the Interior, Bureau of Reclamation, Washington, D.C.

REPORT OF THE COMMISSIONER OF RECLAMATION

ON THE PROGRESS OF THE WORK OF THE BUREAU OF RECLAMATION

FOR THE YEAR ENDING DECEMBER 31, 1927

Presented to the Senate and House of Representatives

IN CONFORMANCE WITH THE ACT OF MARCH 3, 1879

AS AMENDED BY THE ACT OF MARCH 3, 1907

AND THE ACT OF MARCH 3, 1909

AS AMENDED BY THE ACT OF MARCH 3, 1909

AND THE ACT OF MARCH 3, 1909

27 May 87

Via: Director, Utilities Branch  
Deputy Base Maintenance Officer  
Director, Operations Branch

#### UTILITIES SERVICE CONTRACTS

1. Request your assistance in developing and contracting appropriate service type contracts for the following:

a. Semi-annual survey of radio control switches. POC, Pat Engle, extension 5642.

b. Semi-annual steam trap survey. POC, Pat Engle, extension 5642.

c. Grass cutting at utility plants, pump stations, water wells, swimming pools, lift stations, and surge ponds. POC, Mack Frazelle, extension 5988.

d. Ash removal and disposal at Central Steam Plant, Building 1700. POC, Kenneth Shepard, extension 3627.

e. Annual check and exercising of water valves. POC, Mack Frazelle, extension 5988.

f. Maintenance and repair of steam meters. POC, Pat Engle, extension 5642.

2. Additional information may be obtained from the designated POC.

C. H. BAKER



11300  
MAIN

11 Mar 87

Director, Utilities Branch

Director, Operations Branch

UTILITIES REPAIR PROJECTS *Fy 88*

Encl: (1) UTILITIES REPAIR PROJECTS

1. Request that the enclosed projects be submitted to Public Works for design.

D. L. SOUTHERLAND

11-11-50

Director, Federal Reserve Board

Washington, D.C.

Dear Sir:

Enclosed for you are two copies of a report on the operations of the Federal Reserve Bank of New York during the year 1949.

Sincerely,  
W. A. Rorer

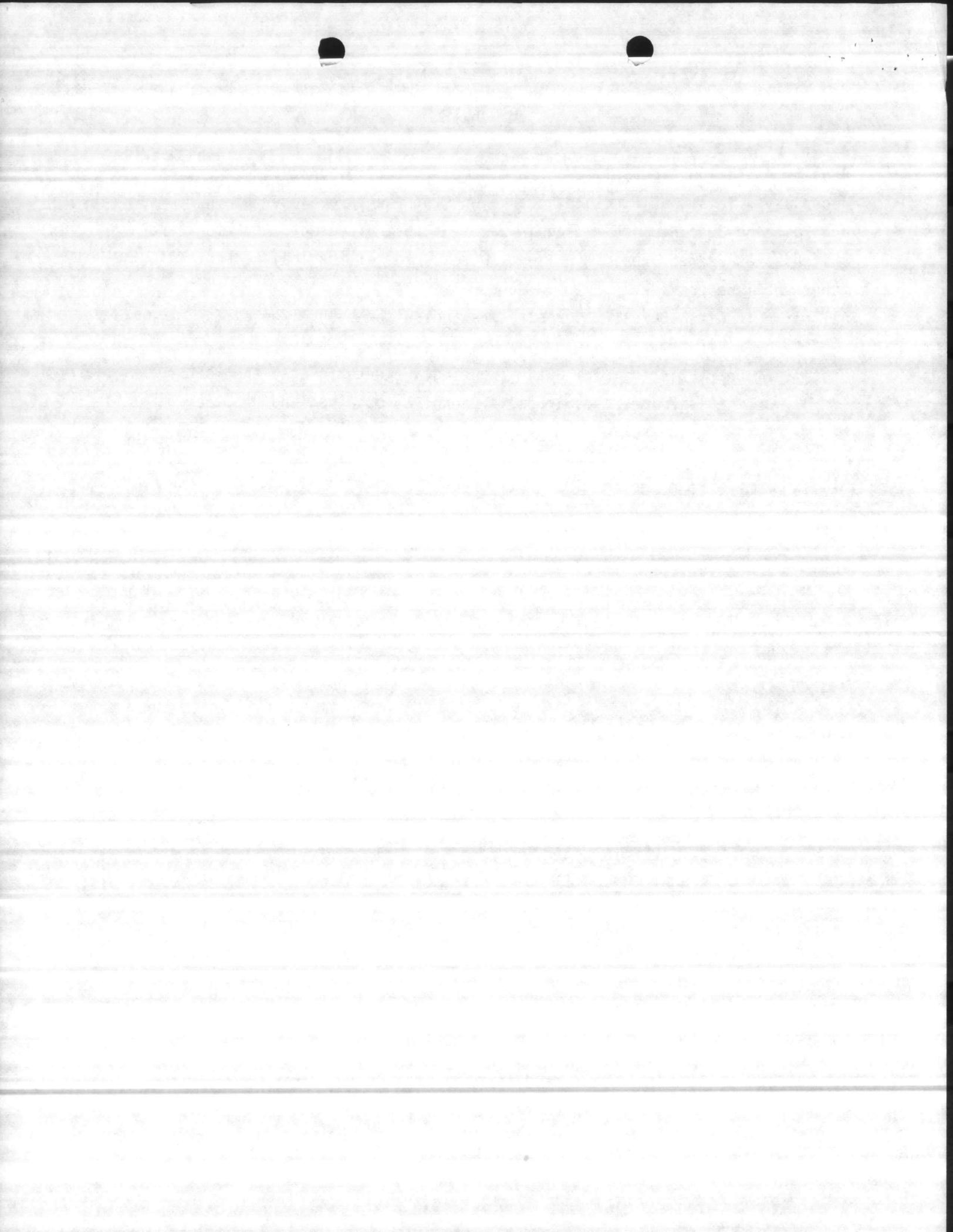
PROJECT

Replace explosion proof fixtures in basement of Building 22 and rewire as necessary. This shall include upper floors of the three supernating rooms and Building 32. Replace wiring in basement to include motor starters and switch boxes as required. New light switches for all explosion proof fixtures shall be provided.

All wiring, switch boxes, motor starters and switches shall be explosion proof.

Justification: Existing wiring and lighting are deteriorated and worn out in service. Repair parts cannot be obtained and replacement is necessary.

Estimated Cost: \$30,000.00



PROJECT

11 Feb, 1987

Subject: Replace wiring at existing wastewater lift stations

Numerous wastewater lift stations over the years have had their internal wiring corroded and failed starters etc. from corrosive atmosphere of methane. The below listed lift stations should have all internal wiring replaced with water tight conduit. All motor starters and hand-off-auto switches on pumps and wiring associated with automatic operations should be replaced. The lift stations subject to the above mentioned conditions are:

Buildings

TT-32

TT-34

M-241

S-E-23

2100

S-47

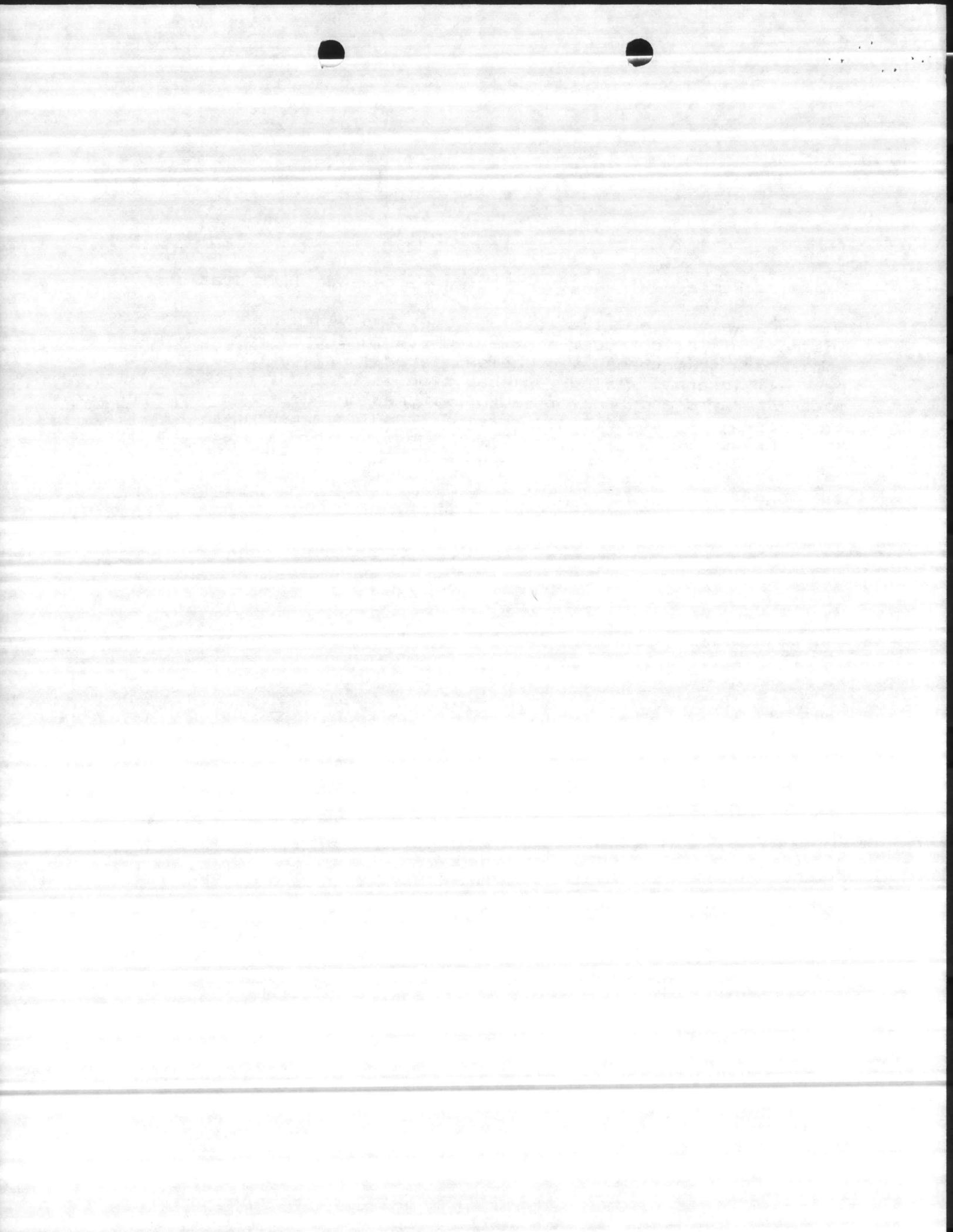
S-46

TC-563

TC-565

Estimated Cost is \$15,000.00

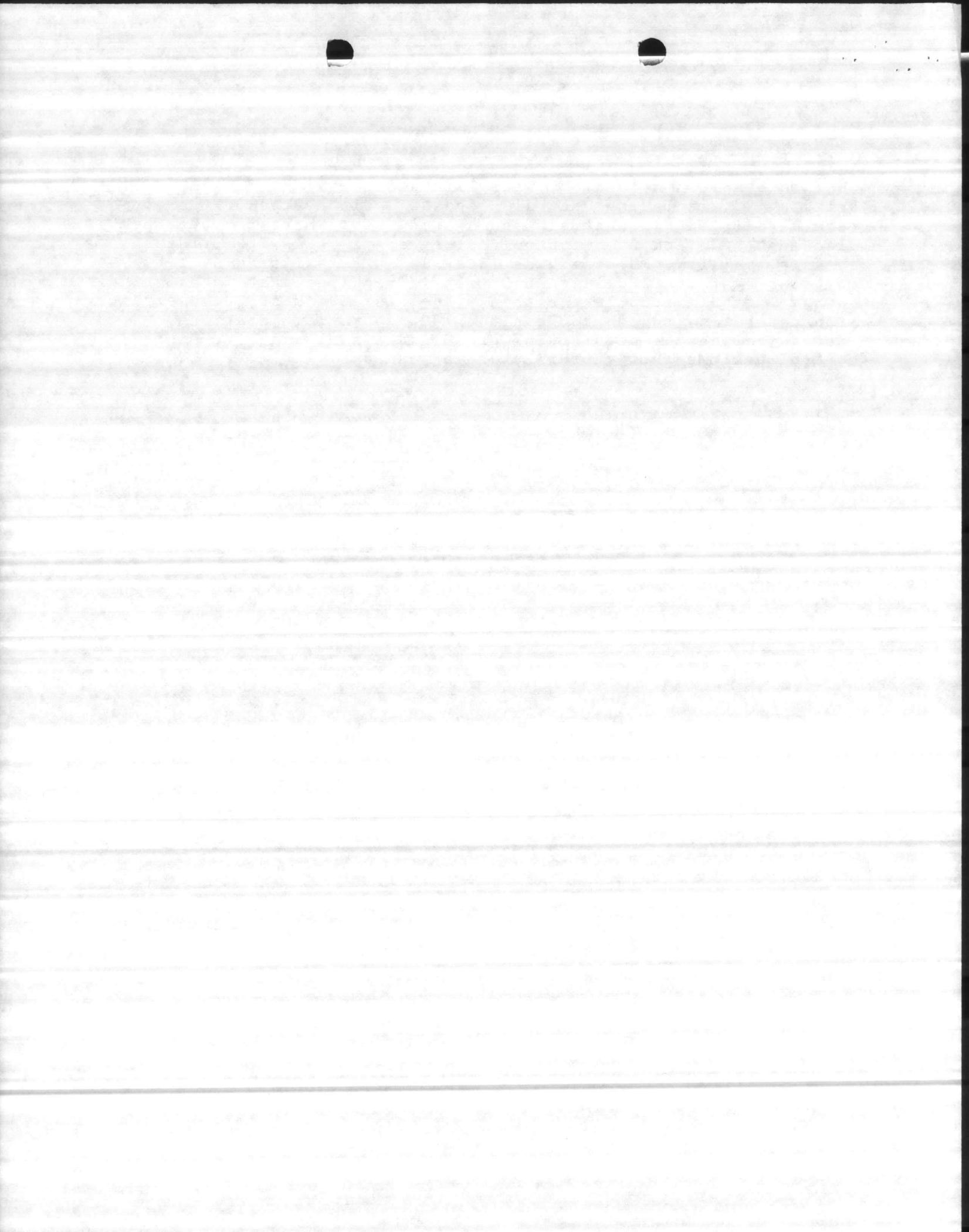
M



PROJECT

Replace obsolete Motorola sewage lift station alarm equipment at Building 22, including central processor, with state-of-the-art remote radio signal controls and alarms. This must include the placement of a computer control colorgraphic CRT with printer at this facility. System must interface with existing Utility's computer system at Building 670. It is required that 59 existing sewage lift stations be equipped with this equipment, with expansion capability to control/monitor 100 remote lift stations. Should include the acquisition of 10 additional complete spare control equipment units for future expansion.

Estimated Cost: 180,000

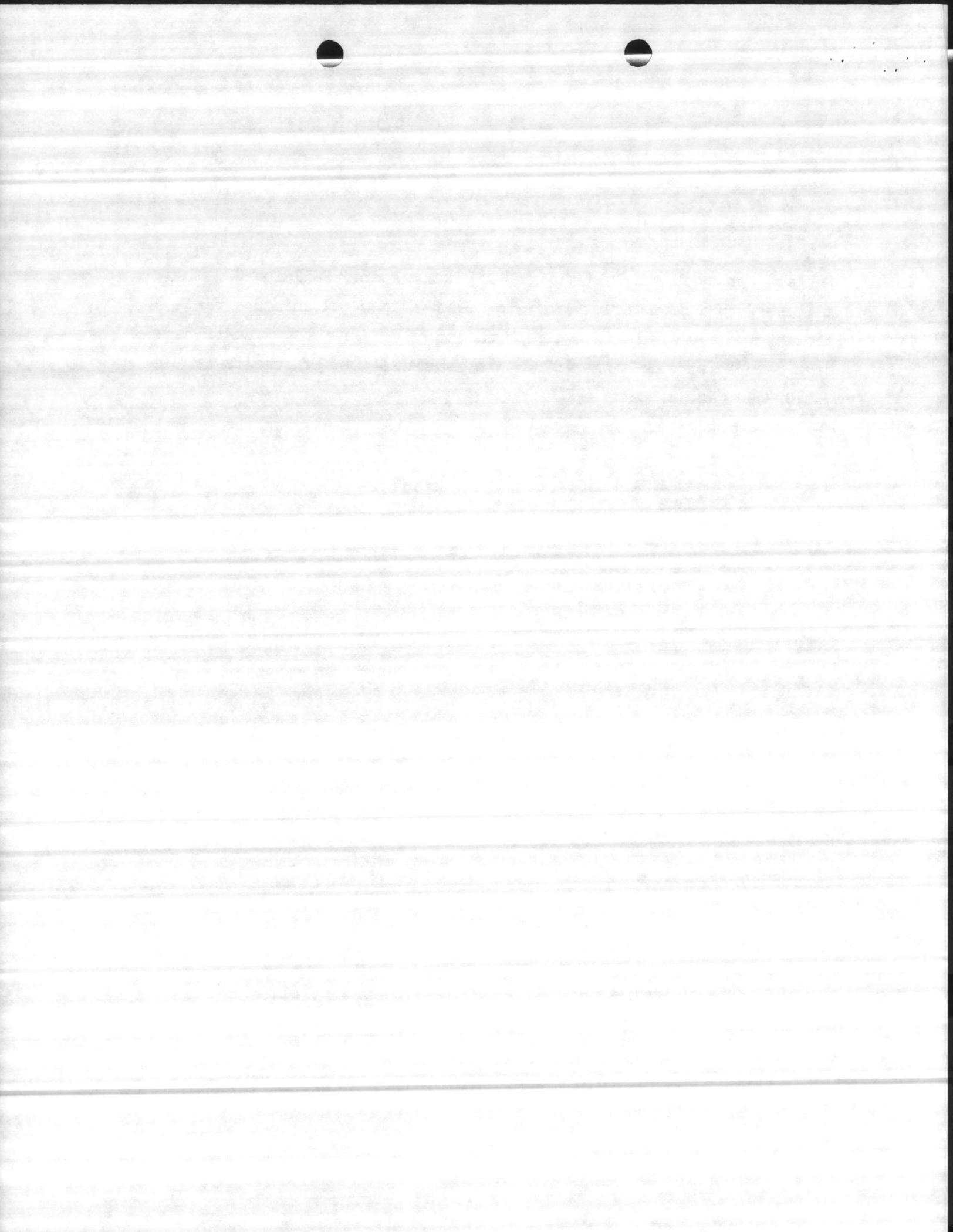


PROJECT

11 Feb. 1987

Replace Rotary Filter Distributors at Hadnot Point, Building 22. Two filters with a diameter of 170', to be hot dipped galvanized after fabrication. Distributors worn beyond economical repair. The filters have been in service since 1970. The estimated cost of repairs is \$65,000.00 per. filter.

Estimated Cost is \$130,000.00

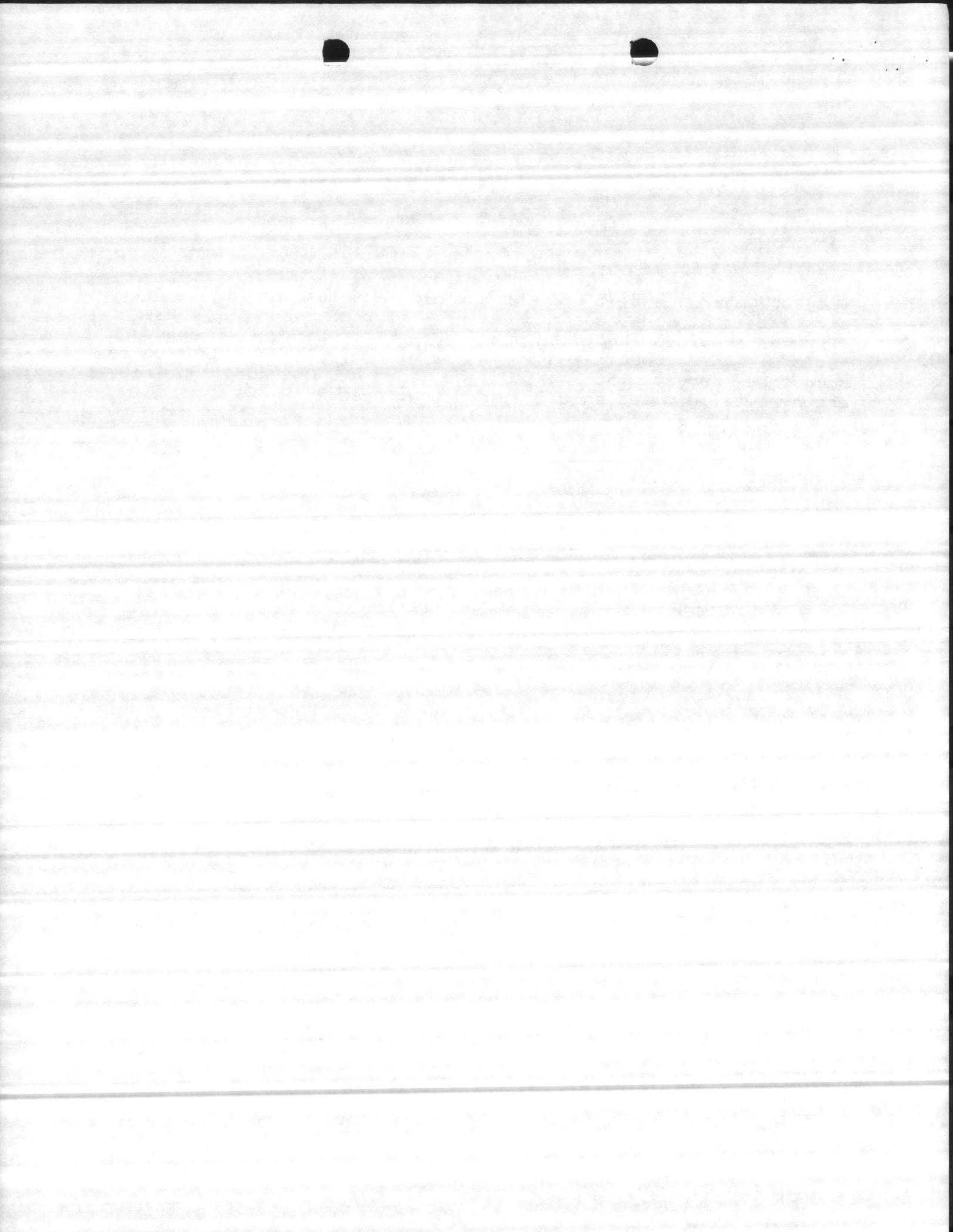


11 Feb. 1987

Subject: BA-138 Replace interior lighting

Subject water plant at present has old incandescent lighting with corroded light sockets and decaying electrical conduit. These fixtures should be replaced with vapor tight 4 ft. fluorescent tubes with new conduit and wiring as needed. Also main switch box should be inspected for possible replacement. Outdoor lighting around outside doors should also be replaced.

Estimated Cost is \$2,000.00



Bldg. 670

Subject: Replace 5 existing Simplex rate of flow transmitters.

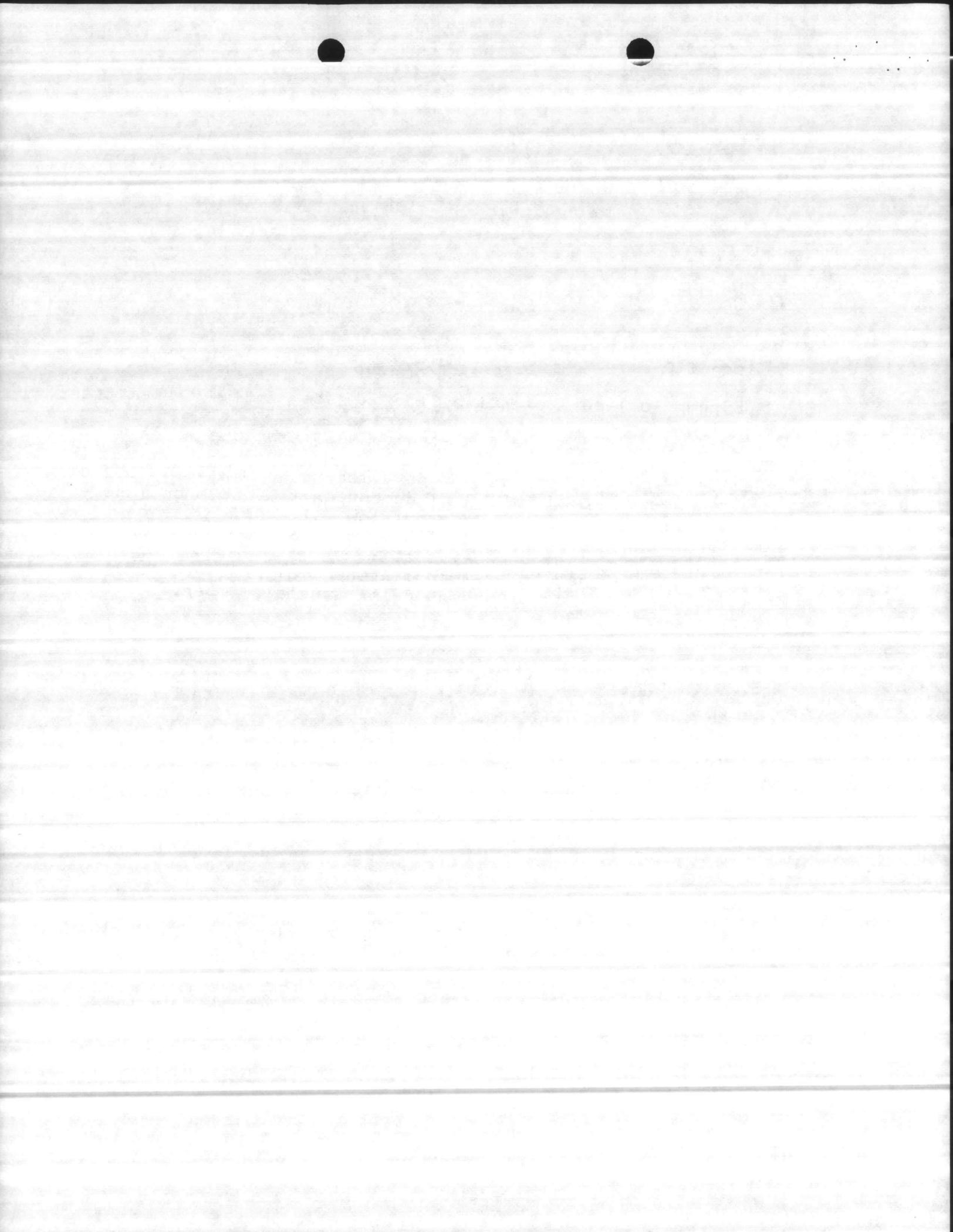
These transmitters are filled with the hazardous material, mercury.

Replacement units should not have mercury and have 3-15 p.s.i. output pneumatic signal. Replacement units should be labeled, Raw water, Delivered water, Rate of flow filter #1, Rate of flow filter #2, Backwash rate of flow. Outputs from units should be connected to existing receivers.

All units designed to measure differential pressure from primary devices. All units to be housed in materials impervious to corrosion.

Estimated Cost is \$50,000.00

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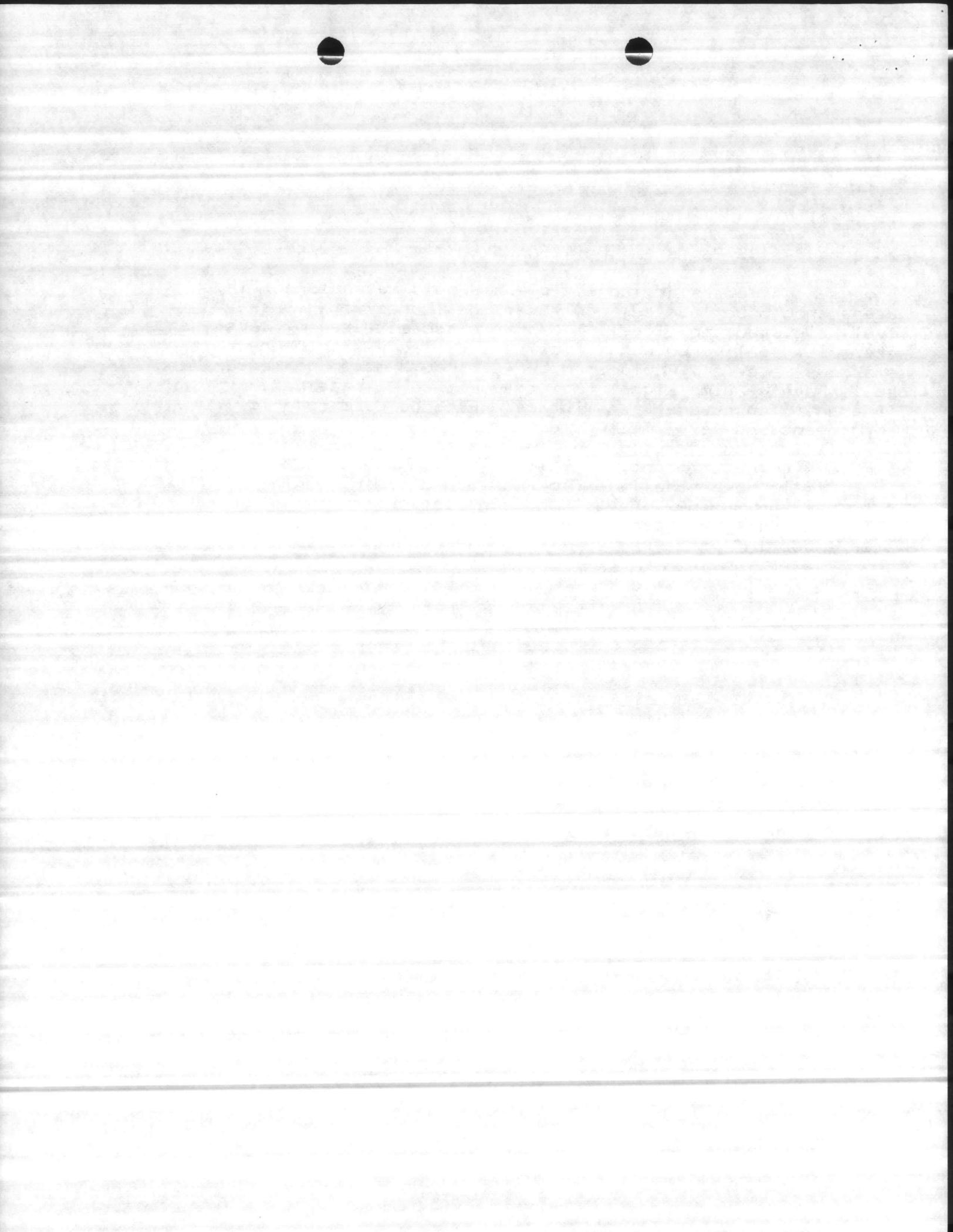
11 Feb, 1987

Subject: BA 138 Replace 4 existing transmitters and receivers

At present 4 meters at subject plant should be replaced. These meters should be labeled: raw water, delivered water, reservoir level, elevated tank level. Two of the subject transmitters (raw water flow, delivered water flow) are filled with mercury hazardous material. Replacement units should not have mercury and should have 4-20 ma signal from transmitter to receiver. Differential pressure transmitters are to be used for flow measurement and level measurement.

The unit labeled elevated tank level shall use radio telemetry from tank to water plant. The two units (raw water, delivered water) shall have totalized flow in 100 gals/min. engineering units. All units shall have 24 hr. charts for recording purposes. All units shall be housed in cabinets resistant to corrosion or water vapor infiltration.

Estimated Cost is \$40,000.00



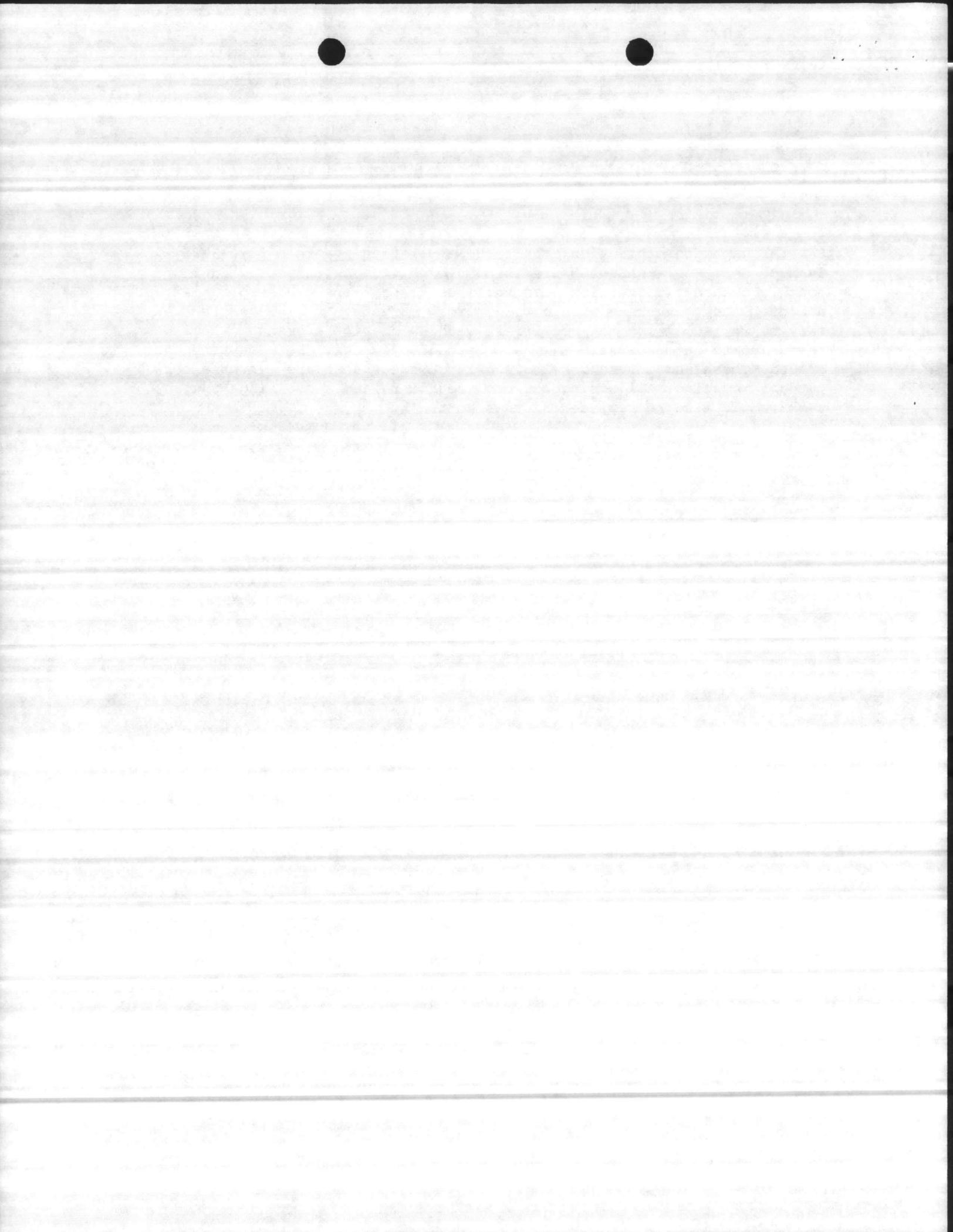
23 Feb, 1987

Subject: Replacement of cathodic protection rectifiers

Several cathodic protection rectifiers at elevated tanks S830, SBB25, SBA108, S-5, S29, MCAS 4130 are in poor condition as inspected during monthly cathodic protection reading. These rectifiers need replacement because they have been worn out in normal service. It is requested that they be replaced with new rectifiers with automatic reference cell installed to automatically maintain cathodic potential between tank and ground. These units should be housed in cabinets that are suitable for outdoor mounting. All wiring between rectifiers and anode rings inside tank should also be replaced in this contract.

Estimated Cost is \$30,000.00

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PROJECT

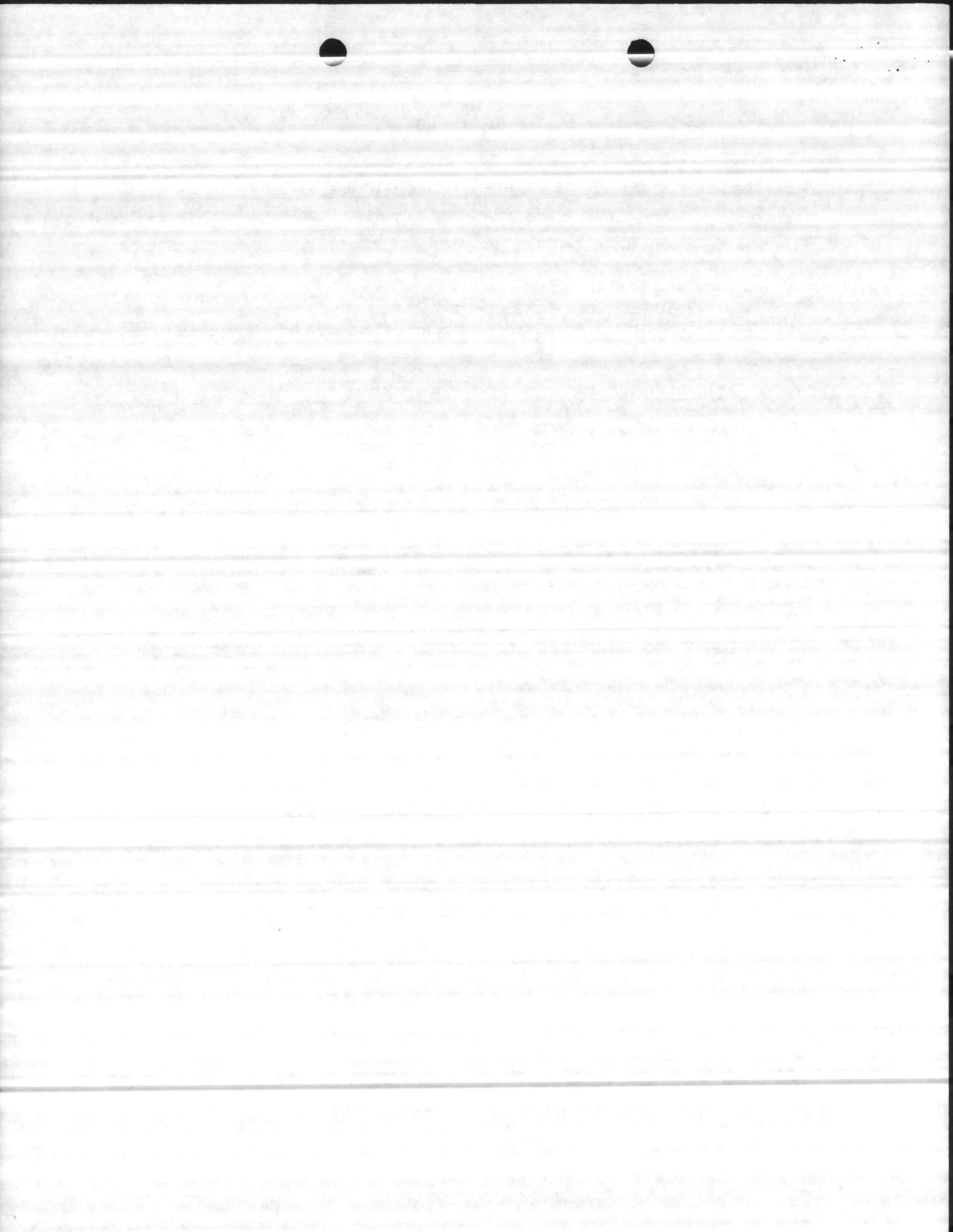
Building TT-39A

Replace all metal windows, frames and screens with new aluminum windows, frames and screens. Replace all outside doors and frames. Doors and windows should be of like configuration and material.

JUST: Old windows, doors and frames are rusted out with bent frames and will not open and close correctly. Repairs have been extensive.

Estimated Cost: \$3,000.00

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PROJECT

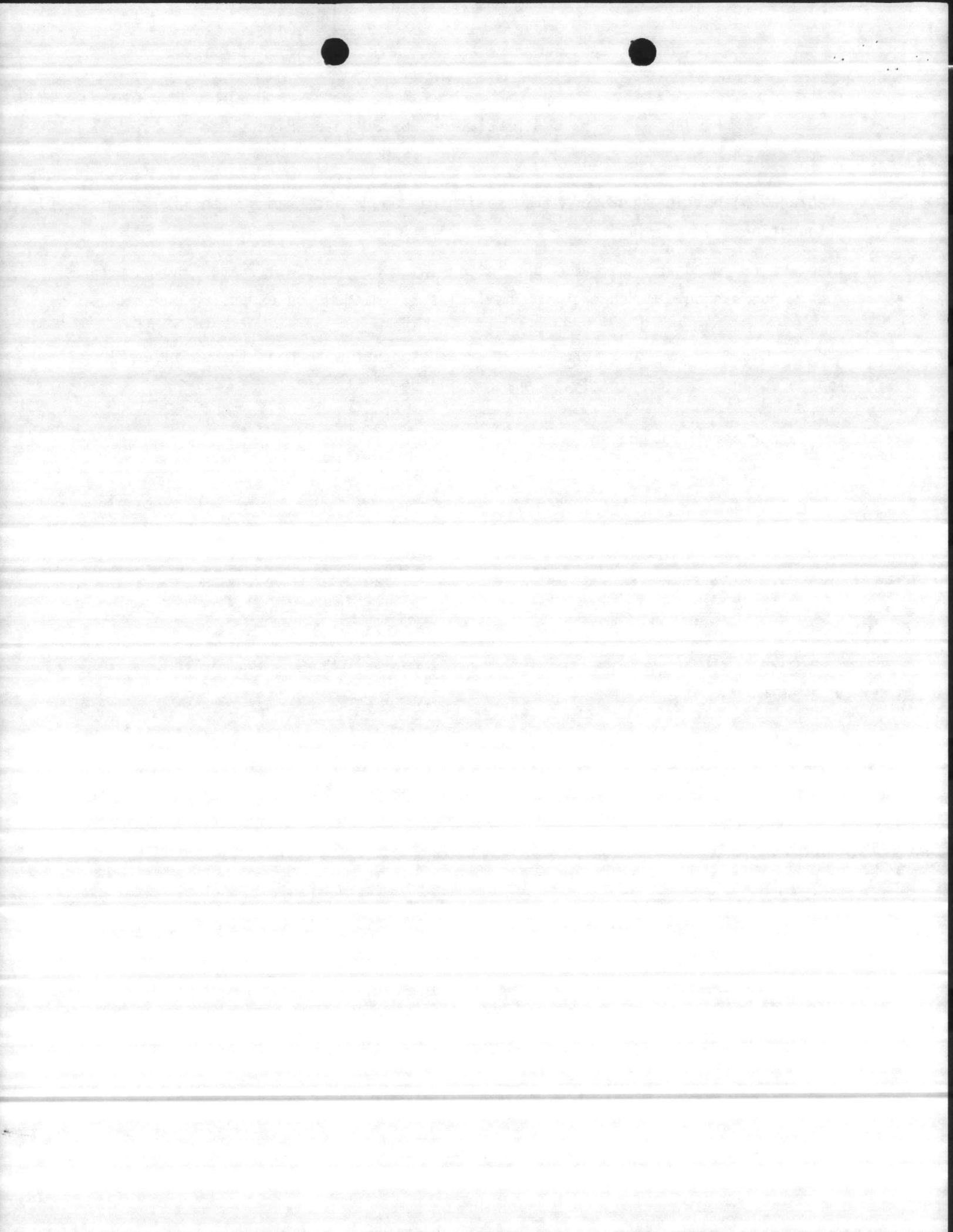
BUILDING BB-190 Water Plant

Replace (3) outside doors and frames with new doors and frames with like configuration and material.

Replace (8) windows and frames and screens with new windows, frames and screens. New windows should match existing newly install windows on expansion contract.

JUST: Old windows, doors and frames are rusted out with bent frames and will not open and close correctly. Repairs have been extensive.

Estimated Cost: \$5,000.00



PROJECT

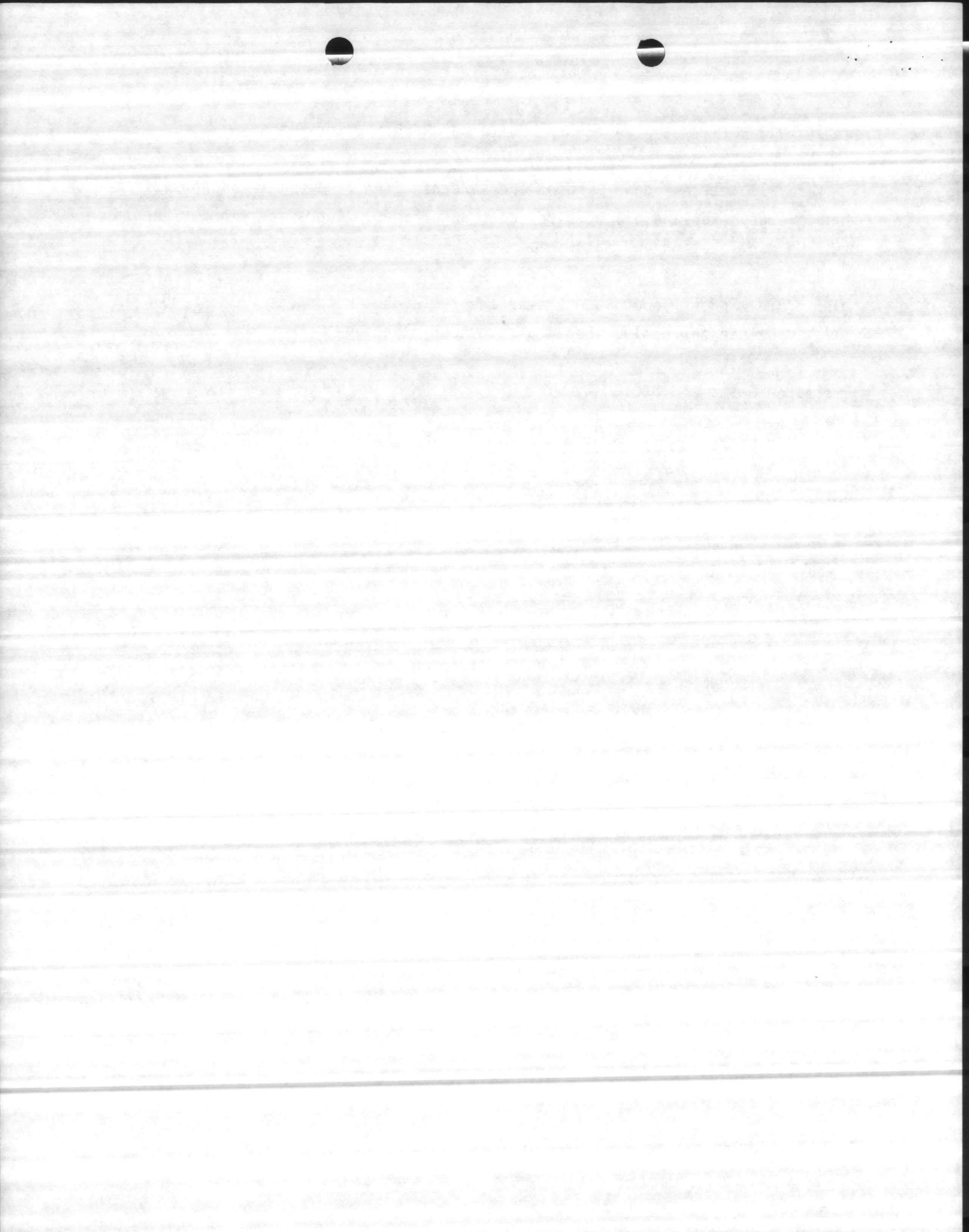
Building RR-85 Water Plant

Replace all metal windows, frames and screens with new aluminum windows, frames and screens. Replace all outside doors and frames. Doors and windows should be of like configuration and material.

JUST: Old windows, doors and frames are rusted out with bent frames and will not open and close correctly. Repairs have been extensive.

Estimated Cost: \$3,000.00

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PROJECT

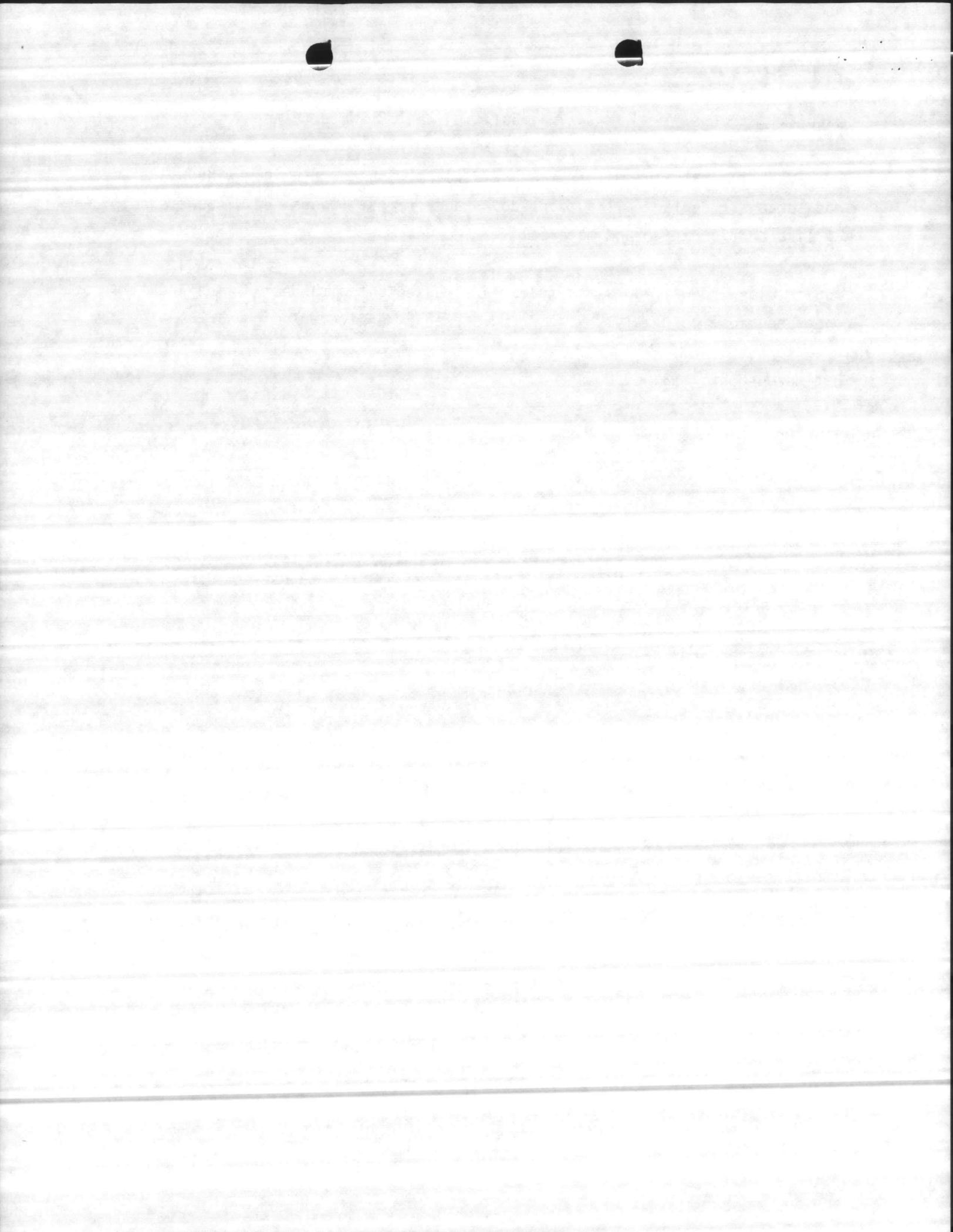
Building BA-138, Water Plant

Replace all metal windows, frames and screens with new aluminum windows, frames and screens. Replace all outside doors and frames. Doors and windows should be of like configuration and material.

JUST: Old windows, doors and frames are rusted out with bent frames and will not open and close correctly. Repairs have been extensive.

Estimated Cost: \$3,000.00

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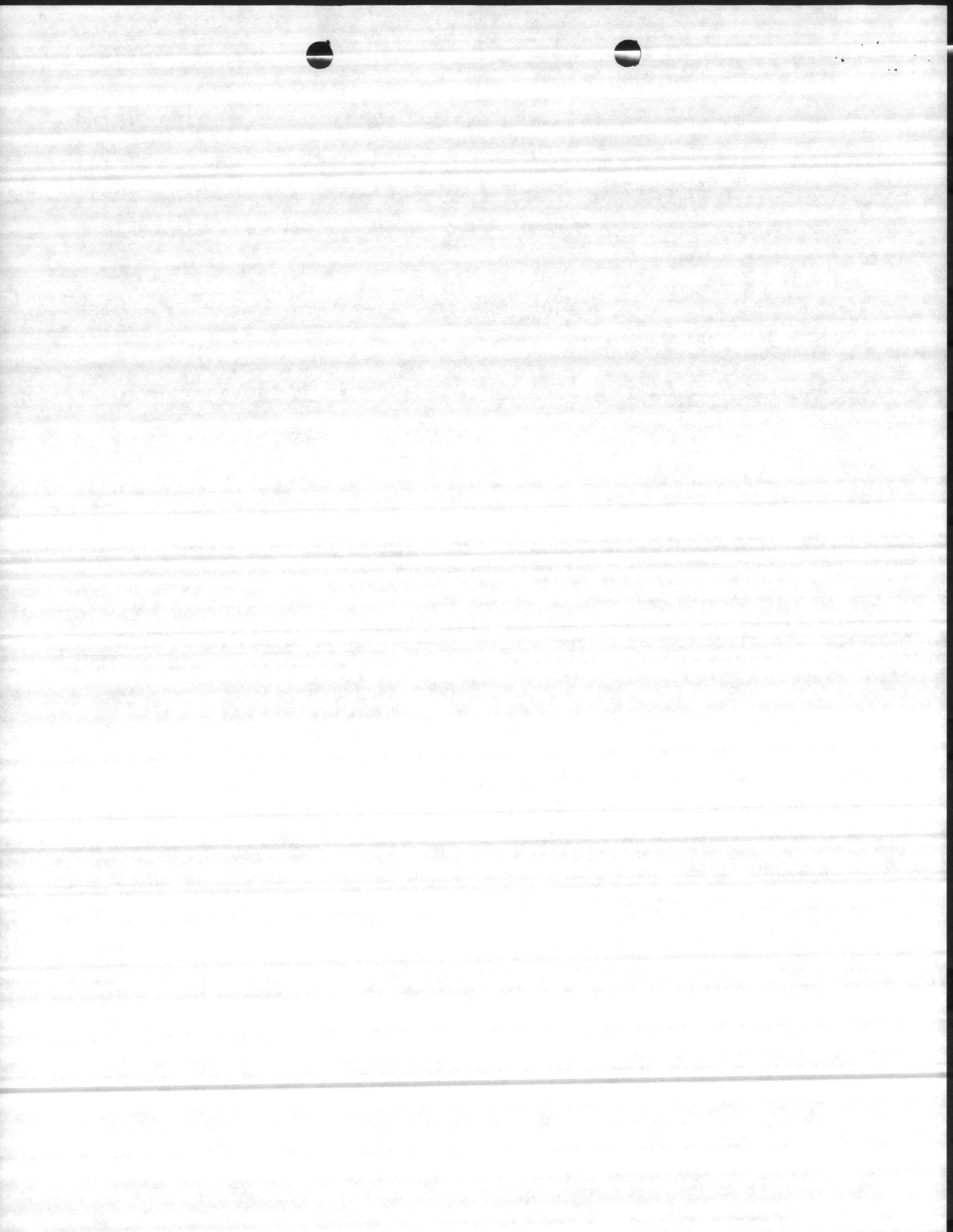
PROJECT

Raw Water Pumping Station on top of Raw Water Reservoir  
at Building 20.

Replace all metal windows, frames and screens with new aluminum windows, frames and screens. Replace all outside doors and frames. Doors and windows should be of like configuration and material.

JUST: Old windows, doors and frames are rusted out with bent frames and will not open and close correctly. Repairs have been extensive.

Estimated Cost: \$3,000.00



PROJECT

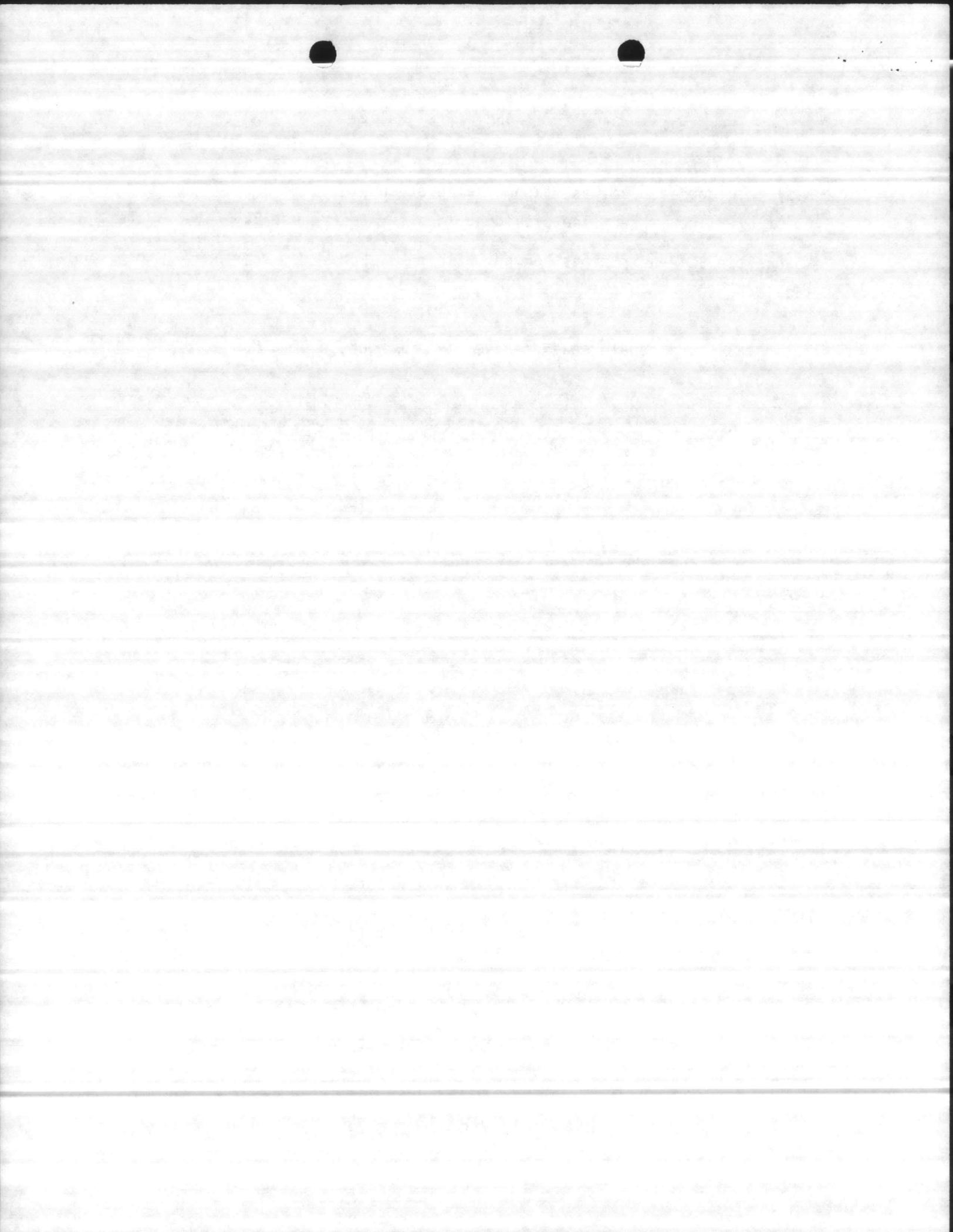
Install appropriate valves, tapping sleeves and tee's to install approximately 1400 ft of 8 inch water line providing loop for Courthouse Bay Water System.

Make one tie at Peach Street behind Building 210 and tie other end 3 inch line at Building 50.

Also install additional tee and valve at dirt road to Demo Range for future expansion.

The existing water distribution system at Courthouse Bay does not currently have a loop feed from (1) end of Courthouse Bay area to the other. Presently when a line or valve ruptures adjacent to the elevated tank, one whole area has to be secured. The approval and installation of this line will eliminate this problem and also eliminate present dead end lines at the end of both areas.

Estimated Cost is \$15,000.00



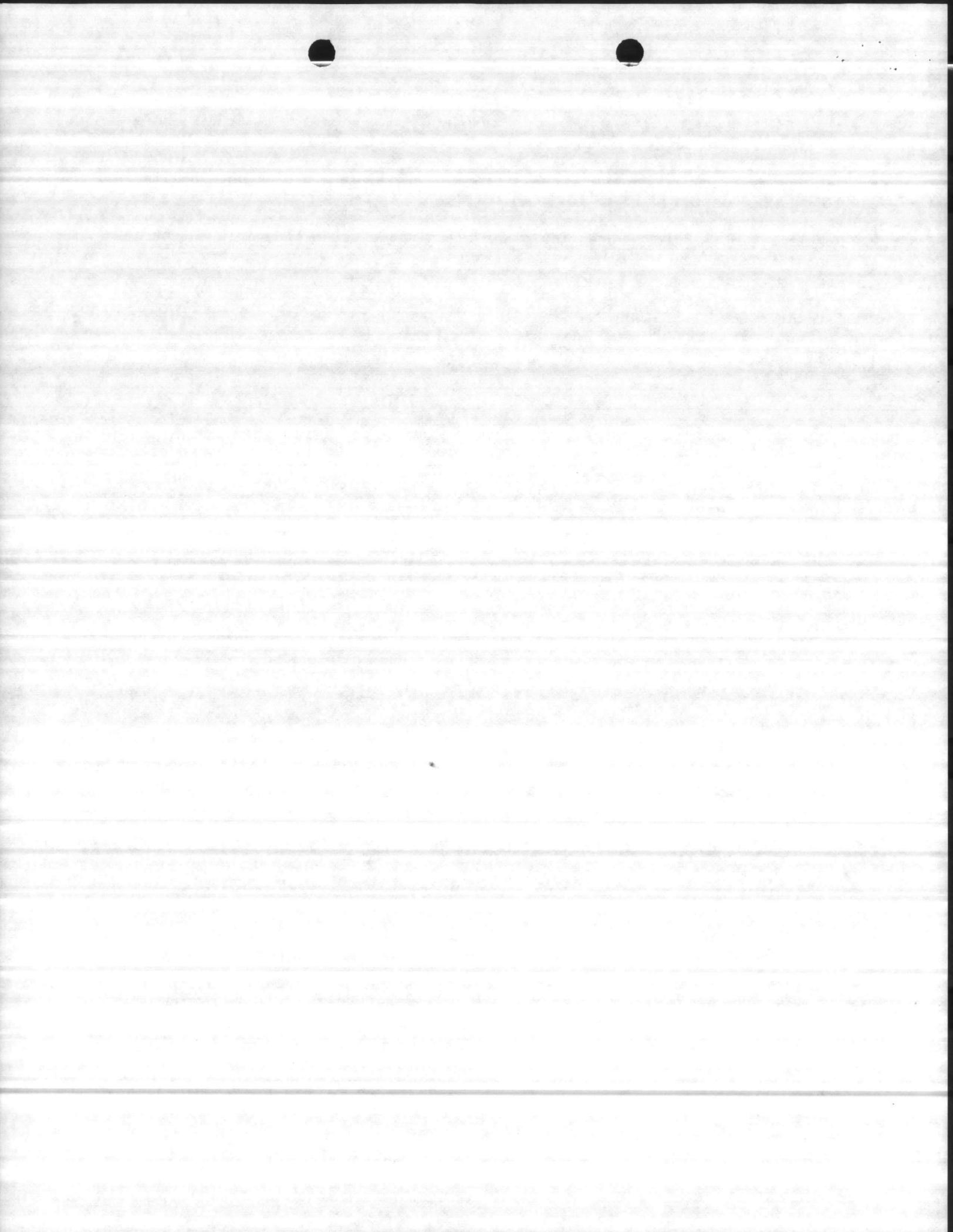
PROJECT

Replace stationary vacuum cleaner system, complete with piping and auxiliaries.  
Bldg 1700.

Justification: Unit is used for plant cleaning. Vacuum cleaner has been in  
use since 1942 and is worn out in service.

Estimated Cost: \$35,000

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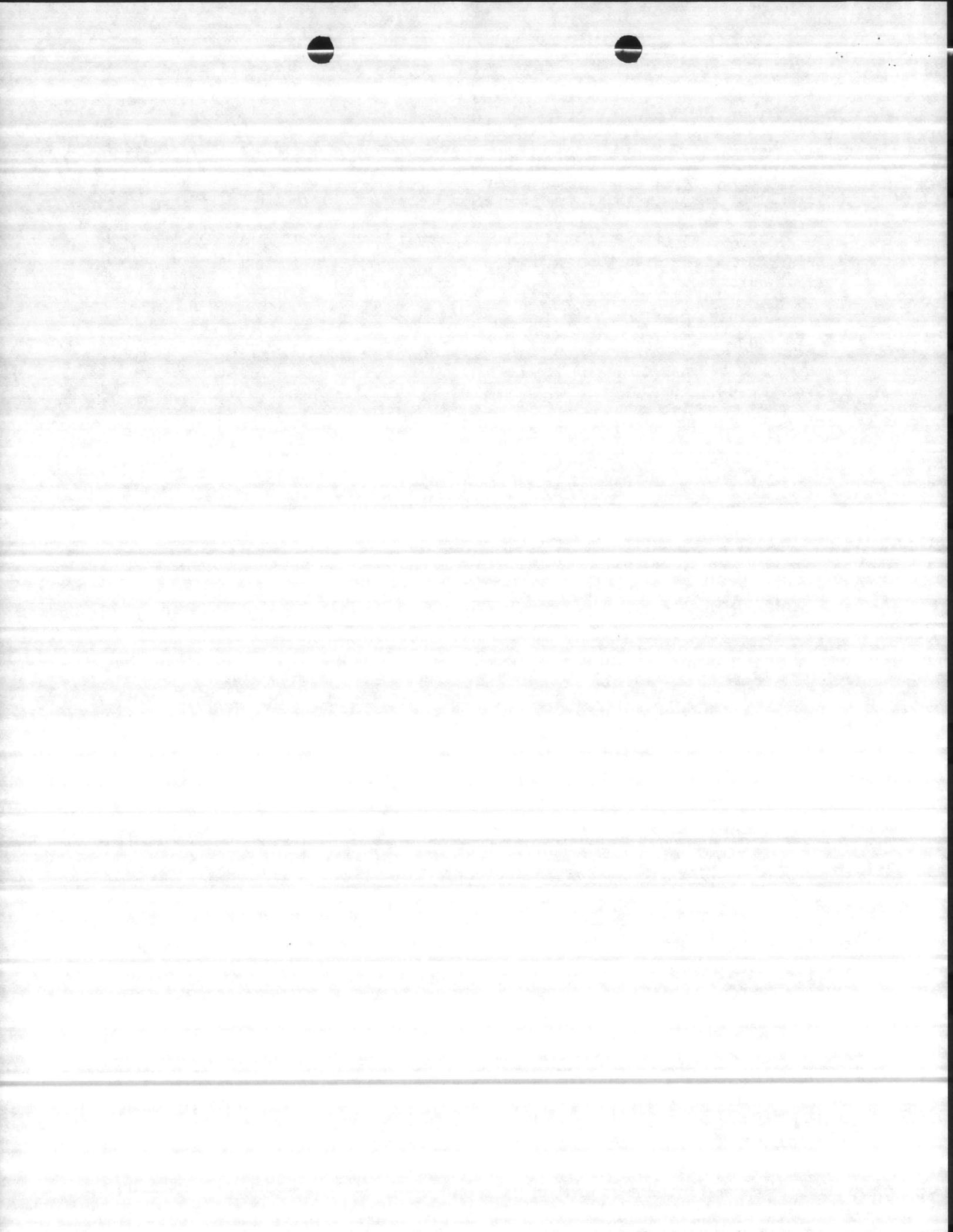
PROJECT

Replace Boiler No. 64 to include water pumps, oil pumps, valves, piping and other auxiliaries to make boiler completely functional. Bldg BA-106.

Justification: Boiler will not maintain load demand during winter months. Inspector's Boiler Report shows light scale, pitting, and tubes are thin due to rolling and combustion gases. Tube sheet has also been welded several times.

Estimated Cost: \$75,000

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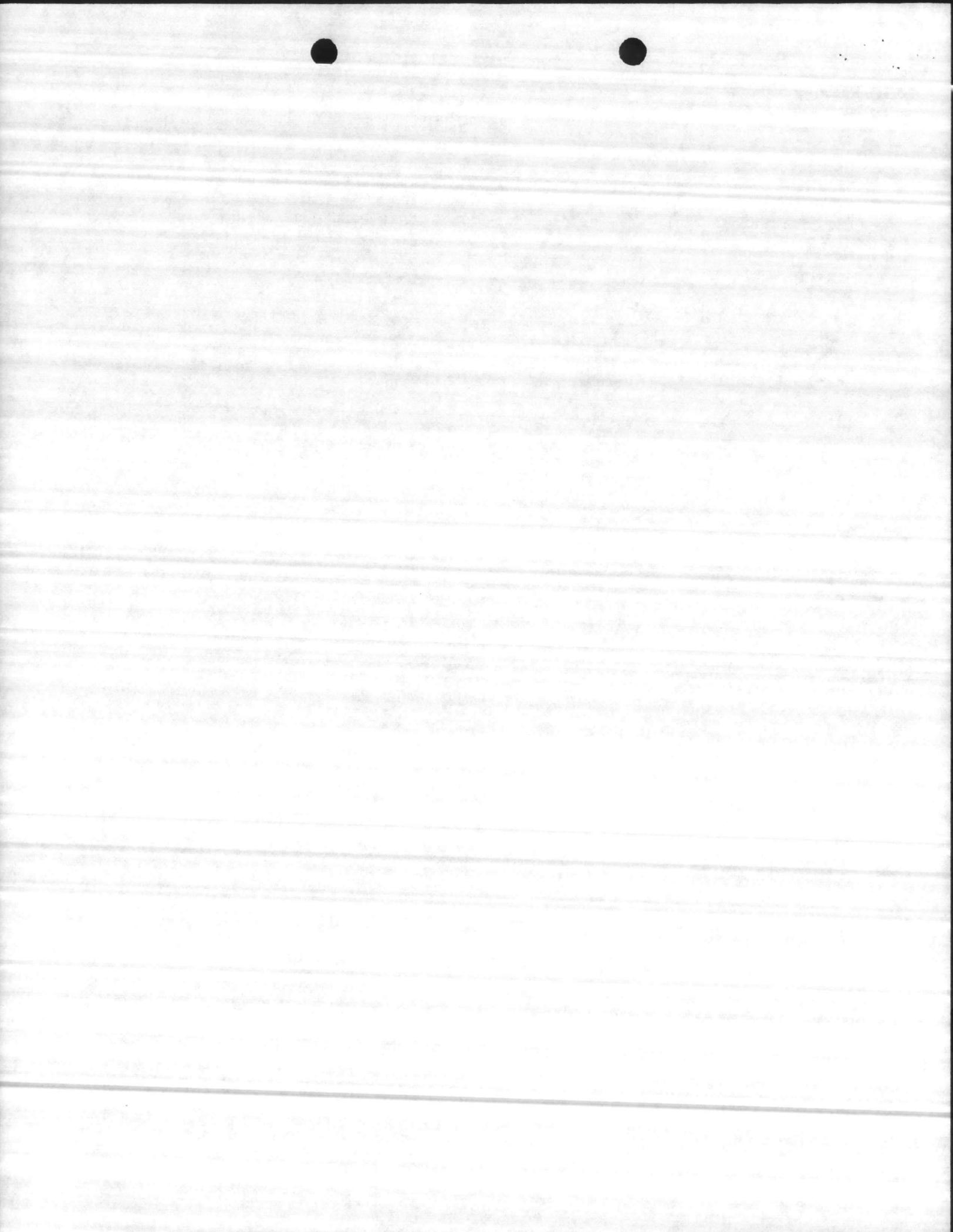
PROJECT

Replace low pressure drip tank, all related piping, traps and pumps. Bldg 1700.

Justification: Unit was installed in 1942. Unit worn out in service.

Estimated Cost: \$25,000

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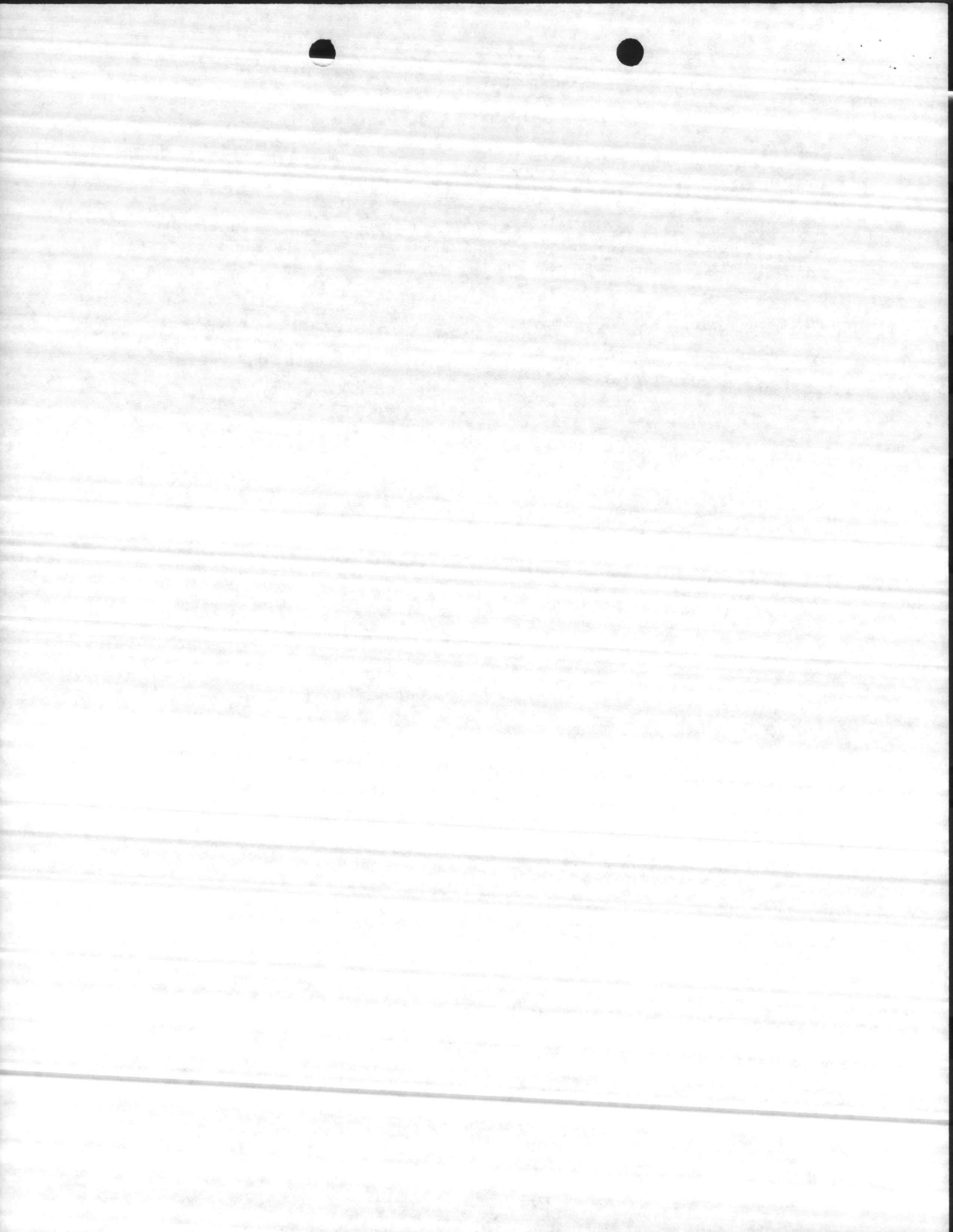
PROJECT

Replace seals and casing on Boiler No. 53. Bldg BB-9.

Justification: Boiler was built in 1978. Combustion gas leaks and elements have caused casing to get hot and holes have appeared in casing. Unit has been patched and welded until beyond repair.

Estimated Cost: \$30,000

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PROJECT

MARINE AIR STATION SEWER LINE

Replace approximately 800 feet of 8 inch sewer main and manholes from MEMQ 1237 on Monteith Street to manhole at MEMQ 1205 on Grier Street.

Estimated Cost: \$8,000.00

JUST: Main is constantly caving in and repairs have been extensive.

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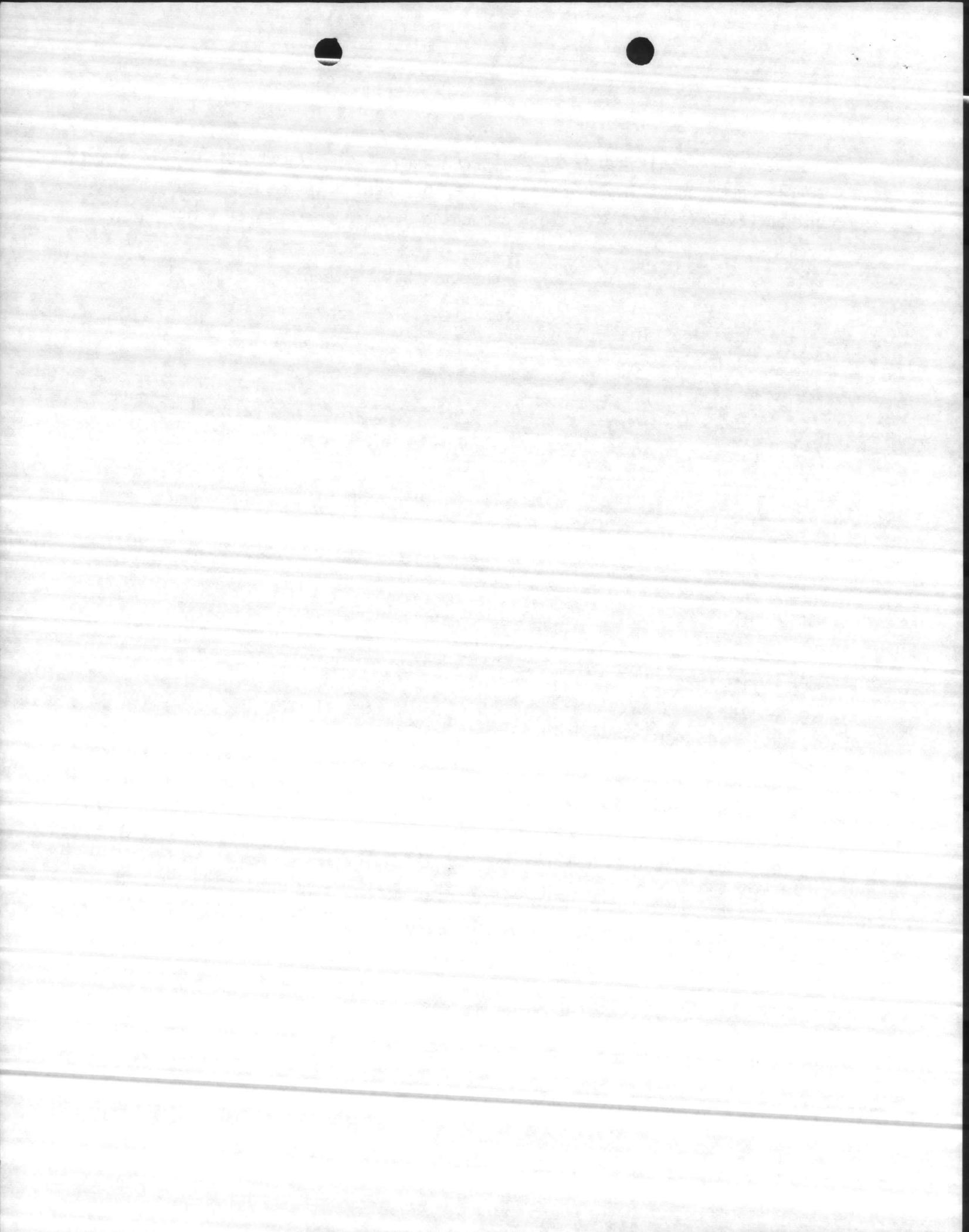


Replace approximately 500 yards of 8 inch sewer main from Building LCH 1408 (Manhole 598L) under Butler Street to manhole behind LCH 1509 (M.H.978L) and right approximately 100 yards of 10 inch to existing manhole (M.H.979L), at Midway Park.

Located on Print Sheet B - 8 of 73 sheets - Wastewater Collection Systems.

Estimated Cost is \$15,000.00

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PROJECT

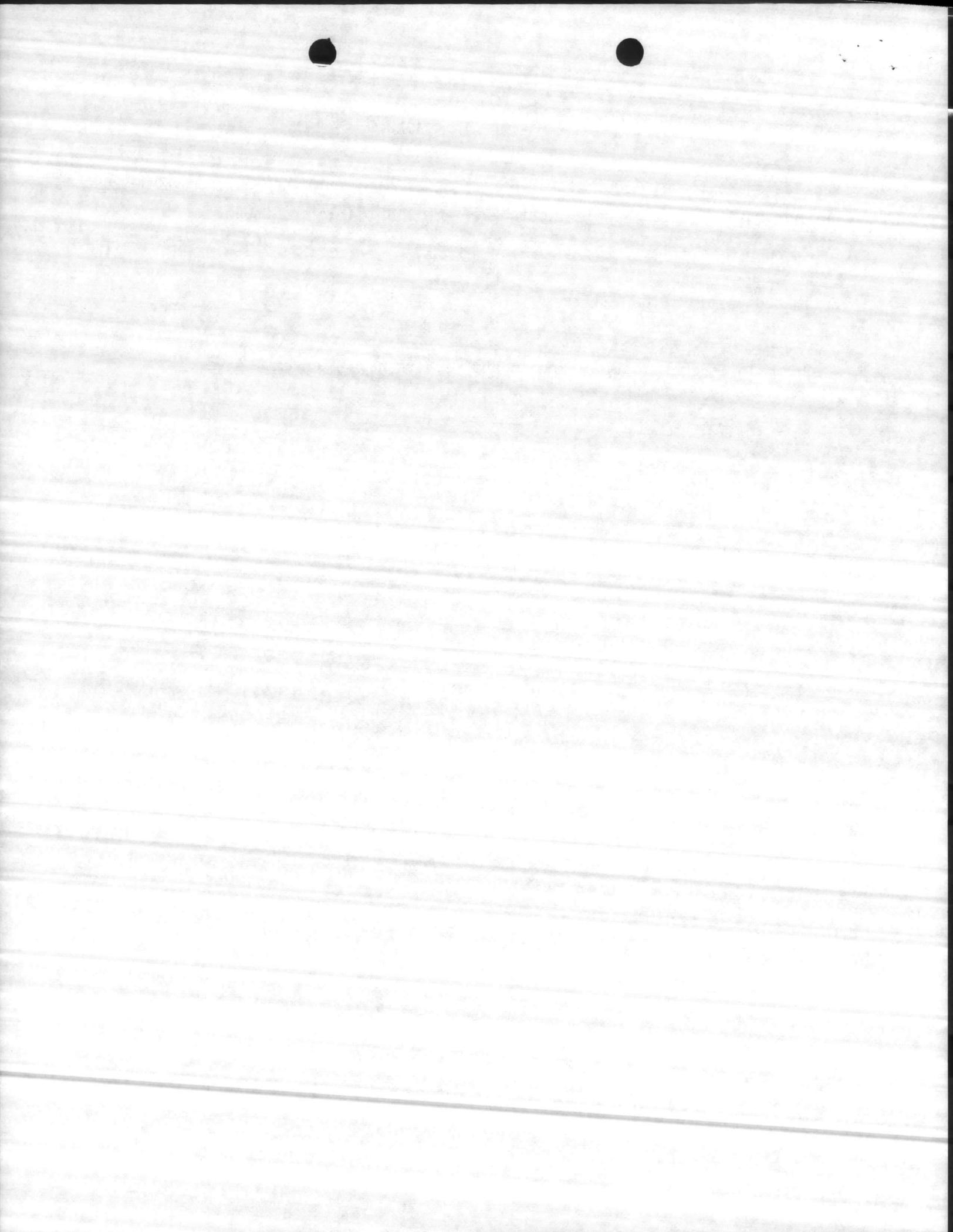
MARINE AIR STATION SEWER LINE

Replace approximately 800 feet of 8 inch sewer main and manholes from MEMQ 1269 on Radford Street to manhole located at MEMQ 1195 on Grier Street.

Estimated Cost: \$8,000.00

JUST: Main is constantly caving in and repairs have been extensive.

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BREWSTER BOULEVARD

Replace approximately 400 feet of 12 inch sewer main from manhole 848L through 837L to 275A.

Replace approximately 2000 feet of 15 inch sewer main from manhole 275A through 276A, 277A, 278A, 279A to 280A.

Located on Print Sheet B7 and C7 of 73 sheets - Wastewater Collection Systems

Justification: Line is badly deteriorated. Numerous caveins and breaks have occurred and repairs have been extensive.

Estimated Cost is: \$35,000.00

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