

CAPITAL IMPROVEMENTS PROGRAM SUMMARY

SA #40

(1) Department Enterprise Activities

(2) Division Sewer Utility - (Anchorage Bowl Area)

(3) PROJECT TITLE(S)	TOTAL PROJECT COST (4)	TO BE FUNDED (IN THOUSANDS) (5)					(6)	(7)	(8)	(9)	(10)	(11)	
		G/O BONDS	REVENUE BONDS	FEDERAL	STATE	OTHER *	1977	1978	1979	1980	1981	1982	
Interceptors	7400.0	5550.0		**1850.0			3300.0	800.0	600.0	1600.0	450.0	650.0	
Trunks	11350.0	8513.0		**2837.0			950.0	2250.0	1275.0	1700.0	3800.0	1375.0	
Laterals	6600.0	4950.0		**1650.0			1600.0	1000.0	1000.0	1000.0	1000.0	1000.0	
Repair & Rehabil.	9936.0	9936.0					436.0	1225.0	1375.0	3000.0	3400.0	500.0	
New Equipment	958.0	958.0					278.0	113.0	109.0	181.0	160.0	117.0	
Sewer System Eval.	300.0	300.0					300.0						
Land for Expansion	400.0	400.0					400.0						
TOTAL (12)	36944.0	30607.0			6337.0		7264.0	5388.0	4359.0	7481.0	8810.0	3642.0	
* OTHER SOURCE OF FUNDS (13)		FUNDING (14)											
** State Grant Funds are received only after local funds have been spent.		General Obligation Bonds					5801.5	4375.5	3640.0	6406.0	7497.5	2886.5	
		Revenue Bonds											
		Federal											
		State					1462.5	1012.5	719.0	1075.0	1312.5	755.5	
		Other											
		TOTAL					7264.0	5388.0	4359.0	7481.0	8810.0	3642.0	

CAPITAL PROJECT ESTIMATE SA #40

(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Interceptors -(Anchorage Bowl Area)

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands					
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)	
(11) Equipment (Moveable)									
(12) Land									
(13) Buildings									
(14) Other Improvements	6,492.0		2,895.0	702.0	526.0	1,404.0	395.0	570.0	
(15) Overhead	908.0		405.0	98.0	74.0	196.0	55.0	80.0	
TOTAL	7,400.0		3,300.0	800.0	600.0	1,600.0	450.0	650.0	
(16) Source of Funds									
Bonds - <u>G/O</u>	5,550.0		2,475.0	600.0	450.0	1,200.0	337.5	487.5	
Grants - <u>State** (See Note On Operational Summary Sheet)</u>	1,850.0		825.0	200.0	150.0	400.0	112.5	162.5	
TOTAL	7,400.0		3,300.0	800.0	600.0	1,600.0	450.0	650.0	

(17) Gross Floor Area N/A Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ N/A
 (19) Project Status Preliminary Design

(20) Architectural and Engineering Fees: 9%
 (21) Percent of Building Cost N/A %
 (22) Estimated Start Date January 1, 1977
 (23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

1977-This item includes construction of necessary interceptors for the Anchorage Bowl Area.

1--78" West Interceptor \$2,193.0

2--36" Southeast Interceptor/
to E-2 Trunk 702.0
\$2,895.0

1978-Southeast Interceptor -E-2 to E-3 \$702.0

1979-Southeast Interceptor - E-3 to O'Malley Road \$526.0

1980-Southeast Interceptor -
O'Malley Road to E-4 \$1,404.0

1981-Southeast Interceptor -
E-4 to E-6 \$ 395.0

1982-Southeast Interceptor -
E-6 to 1/2 mile south of Huffman Road
\$ 570.0

CAPITAL PROJECT ESTIMATE SA #40

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(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Trunks - (Anchorage Bowl Area)

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands				
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	9,955.0		833.0	1,974.0	1,118.0	1,491.0	3,333.0	1,206.0
(15) Overhead	1,395.0		117.0	276.0	157.0	209.0	467.0	169.0
TOTAL	11,350.0		950.0	2,250.0	1,275.0	1,700.0	3,800.0	1,375.0
(16) Source of Funds								
Bonds - G/O	8,513.0		712.5	1,687.5	956.0	1,275.0	2,850.0	1,032.0
Grants - State ** (See Note on Summary Sheet)	2,837.0		237.5	562.5	319.0	425.0	950.0	343.0
Operational								
TOTAL	11,350.0		950.0	2,250.0	1,275.0	1,700.0	3,800.0	1,375.0

(17) Gross Floor Area N/A Sq. Ft.(18) Building Cost Per Sq. Ft. \$ N/A(19) Project Status Preliminary Engineering(20) Architectural and Engineering Fees: 9%(21) Percent of Building Cost N/A %(22) Estimated Start Date January 1, 1977(23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

1977-

This item includes construction of trunk lines (10" and larger) in the Anchorage Bowl Area.

1. 12" and 18" A-2 Trunk / to Kulis	\$307.0
2. 16" and 24" "C" Street Trunk / Extend to "C" Street	\$241.0
3. 14" E-2 Trunk	\$109.0
4. 10" and 12" D-3 Subtrunk	\$176.0
	<u>\$833.0</u>

*Refer to following page for projects after 1977

* Trunk Projects After 1977

1978	Trunk E-3	\$505.0
	Trunk E-1-1 (E-1-1-1 to E-1-1-2)	987.0
	"C" Street Trunk - Eureka Street	241.0
	Trunk C-3	<u>241.0</u>
		\$1,974.0
1979	Trunk E-1-1-2	198.0
	"C" Street Trunk to Old Seward Highway	307.0
	Trunk C-5-2	<u>613.0</u>
		\$1,118.0
1980	Trunk E-4	219.0
	Trunk E-1 (Lake Otis to E-1-2)	1,184.0
	Trunk E-1-2	<u>88.0</u>
		\$1,491.0
1981	Trunk E-5	877.0
	Trunk C-6	1,579.0
	Trunk C-7	<u>877.0</u>
		\$3,333.0
1982	Trunk E-6	176.0
	Trunk E-1 (E-1-2 to E-1-3)	482.0
	Trunk E-1-3	<u>548.0</u>
		\$1,206.0

CAPITAL PROJECT ESTIMATE SA #40

1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Laterals - (Anchorage Bowl Area)

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands				
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	5,789.0		1,404.0	877.0	877.0	877.0	877.0	877.0
(15) Overhead	811.0		196.0	123.0	123.0	123.0	123.0	123.0
TOTAL	6,600.0		1,600.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
(16) Source of Funds								
Bonds - G/O	4,950.0		1,200.0	750.0	750.0	750.0	750.0	750.0
Grants - State** (See Note on Summary Sheet)	1,650.0		400.0	250.0	250.0	250.0	250.0	250.0
Operational								
TOTAL	6,600.0		1,600.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0

(17) Gross Floor Area N/A Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ N/A
 (19) Project Status Final Design

(20) Architectural and Engineering Fees: 9%
 (21) Percent of Building Cost N/A %
 (22) Estimated Start Date January 1, 1977
 (23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

1977--
 This item includes construction of lateral sewer lines in areas where property owners have petitioned for service.

1. Stein LID 83
2. Lloyd LID 80
- 74 3. Creekside LID 77
- 74 4. Westgate Park LID 60
5. "C" Street Industrial LID 75
- 74 6. Pleasant Valley LID 76
- 74 7. McGill LID 81
- 88 MAZ LID 1977-1

\$ 94.0
 99.0
 120.0
 410.0
 224.0
 221,750.0
 200.0
 35,750
 \$1,404.0

1978-Anticipated LID's -- \$877.0
 1979-Anticipated LID's -- \$877.0
 1980-Anticipated LID's -- \$877.0
 1981-Anticipated LID's -- \$877.0
 1982-Anticipated LID's -- \$877.0

Anticipated LID's

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CAPITAL PROJECT ESTIMATE SA #40

(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Repair and Rehabilitation-(Anchorage Bowl Area)

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands					
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)	
(11) Equipment (Moveable)									
(12) Land									
(13) Buildings									
(14) Other Improvements	8,716.0		382.0	1,075.0	1,206.0	2,632.0	2,982.0	439.0	
(15) Overhead	1,220.0		54.0	150.0	169.0	368.0	418.0	61.0	
TOTAL	9,936.0		436.0	1,225.0	1,375.0	3,000.0	3,400.0	500.0	
(16) Source of Funds									
Bonds - <u>G/O</u>	9,936.0		436.0	1,225.0	1,375.0	3,000.0	3,400.0	500.0	
Grants - _____									
Operational _____									
TOTAL	9,936.0		436.0	1,225.0	1,375.0	3,000.0	3,400.0	500.0	

(17) Gross Floor Area N/A Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ N/A
 (19) Project Status Preliminary Engineering

(20) Architectural and Engineering Fees: 9%
 (21) Percent of Building Cost N/A %
 (22) Estimated Start Date January 1, 1977
 (23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

1977- This item includes construction of necessary repair and rehabilitation of existing sewer lines in the Anchorage Bowl Area.

1. Reline 12" line on south side of Campbell Lake	\$176.0
2. New outfall for Campbell Lake Pump Station	26.0
3. Resize Mountain View Meter	4.0
4. Emergencies	<u>176.0</u>
	\$382.0

**Refer to the following page for projects after 1977

** Repair and Rehabilitation Project After 1977

1978	Relay Rovenna St. line north	154.0
	Kuik Interceptor Replacement-9th Ave. North	482.0
	Rehabilitation of Fish Creek Trunk	263.0
	Emergencies	<u>176.0</u>
		\$1,075.0
1979	Tie Fish Creek Trunk into 84" Interceptor	329.0
	Knik Interceptor Replacement-9th Ave. South	438.0
	Rehabilitation of Fish Creek Trunk	263.0
	Emergencies	<u>176.0</u>
		\$1,206.0
1980	Reline Campbell Creek Trunk - Lift Station to Dimond Boulevard	2,193.0
	Rehabilitation of Fish Creek Trunk	263.0
	Emergencies	<u>176.0</u>
		\$2,632.0
1981	Reline Campbell Creek Trunk-Dimond to N.E. Interceptor	2,543.0
	Rehabilitation of Fish Creek Trunk	263.0
	Emergencies	<u>176.0</u>
		\$2,982.0
1982	Rehabilitation of Fish Creek Trunk	263.0
	Emergencies	<u>176.0</u>
		\$ 439.0

CAPITAL PROJECT ESTIMATE SA #40

(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: New Equipment -(Anchorage Bowl Area)

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands				
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)
(11) Equipment (Moveable)	841 .0		244 .0	99.0	96.0	159.0	140.0	103.0
(12) Land								
(13) Buildings								
(14) Other Improvements								
(15) Overhead	117 .0		34 .0	14.0	13.0	22.0	20.0	14.0
TOTAL	958 .0		278 .0	113.0	109.0	181.0	160.0	117.0
(16) Source of Funds								
Bonds - <u>G/O</u>	958 .0		278 .0	113.0	109.0	181.0	160.0	117.0
Grants - _____								
Operational _____								
TOTAL	958 .0		278.0	113.0	109 .0	181.0	160 .0	117 .0

(17) Gross Floor Area N/A Sq. Ft.(18) Building Cost Per Sq. Ft. \$ N/A(19) Project Status No(20) Architectural and Engineering Fees: N/A(21) Percent of Building Cost N/A %(22) Estimated Start Date In Progress(23) Estimated Completion Date Continuing

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

1977--Replacement and purchase of new equipment as existing equipment is worn out or new equipment is needed to upgrade existing fleet.

Maintenance	175.0
Treatment Plant	30.0
Engineering	-0-
Customer Service	39.0
	<u>\$ 244.0</u>

(Refer to following page for breakdown)

New Equipment - 1977

Maintenance

1. Replace 1968 Case backhoe #0719 with Droit 40 on rubber	\$84.0
2. New 10-12 yard dump truck	40.0
3. Replace pickup trucks #2226, #2279, #2240, 2312 with ½ Ton pickup trucks	17.0
4. Replace truck #4002 with a 42,000 GVW Truck with van for boiler.	18.0
5. Rebuild Cleaver Brook boiler	6.0
6. Replace Sedans #1762, #1811 with ½ Ton compact pickups with canopies	10.0
	<hr/>
	\$175.0

Treatment Plant

1. Replace 3/4 Ton Pickup #2405 with a compact pickup with canopy	\$5.0
2. Replace ½ Ton pickup #2221 with a compact pickup	5.0
3. Replace Sedan (L-4) with similar vehicle	5.0
4. New 1½ Ton flatbed	15.0
	<hr/>
	\$30.0

Customer Service

1. Replace 2 pickups with a compact pickup and a van, both with radios	\$13.0
2. Purchase 1 small jack hammer on trailer for dye test crew	1.0
3. Purchase 5 compact trucks with radios for on property inspection crew.	25.0
	<hr/>
	39.0

Total	\$244.0
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CAPITAL PROJECT ESTIMATE SA #40

(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Sewer System Evaluation -(Anchorage Bowl Area

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands					
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)	
(11) Equipment (Moveable)									
(12) Land									
(13) Buildings									
(14) Other Improvements	263.0		263.0						
(15) Overhead	37.0		37.0						
TOTAL	300.0		300.0						
(16) Source of Funds									
Bonds - <u>G/O</u>	300.0		300.0						
Grants - _____									
Operational _____									
TOTAL	300.0		300.0						

(17) Gross Floor Area N/A Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ N/A
 (19) Project Status Sewer System Survey Complete

(20) Architectural and Engineering Fees: N/A
 (21) Percent of Building Cost N/A %
 (22) Estimated Start Date January 1, 1977
 (23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

This study (an examination of the sewerage system to determine where excess infiltration is occurring) is a requirement of our discharge permit. Also included in this project is a study of the downtown area to determine future sizing requirements.

CAPITAL PROJECT ESTIMATE SA #40

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(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Land Acquisition - (Anchorage Bowl Area)

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands				
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)
(11) Equipment (Moveable)								
(12) Land	351 .0		351 .0					
(13) Buildings								
(14) Other Improvements								
(15) Overhead	49 .0		49 .0					
TOTAL	400 .0		400 .0					
(16) Source of Funds								
Bonds - <u>G/O</u>	400 .0		400 .0					
Grants - _____								
Operational _____								
TOTAL	400 .0		400 .0					

(17) Gross Floor Area N/A Sq. Ft.(18) Building Cost Per Sq. Ft. \$ N/A(19) Project Status Current(20) Architectural and Engineering Fees: N/A(21) Percent of Building Cost N/A %(22) Estimated Start Date January 1, 1977(23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

This project is to purchase land for the expansion of the Water & Sewer Utility Facilities located at 3000 Arctic Boulevard.

CAPITAL IMPROVEMENTS PROGRAM SUMMARY

(1) Department Enterprise Activities

SA #50

(2) Division Sewer Utility - (Eagle River Area)

(3) PROJECT TITLE(S)	TOTAL PROJECT COST (4)	TO BE FUNDED (IN THOUSANDS) (5)						(6)	(7)	(8)	(9)	(10)	(11)
		G/O BONDS	REVENUE BONDS	FEDERAL	STATE	OTHER *		19_77	19_78	19_79	19_80	19_81	19_82
Sewage Treatment Facility Expansion	2000.0	250.0		1500.0	* 250.0			2000.0					
Trunks	1975.0	1481.0			**494.0			775.0			1200.0		
Laterals	2080.3	1560.2			**520.1			680.3	400.0	400.0	200.0	200.0	200.0
TOTAL (12)	6055.3	3291.2		1500.0	1264.1			3455.3	400.0	400.0	1400.0	200.0	200.0
* OTHER SOURCE OF FUNDS (13)		FUNDING (14)											
		General Obligation Bonds						1341.2	300.0	300.0	1050.0	150.0	150.0
		Revenue Bonds											
		Federal						1500.0					
		State						614.1	100.0	100.0	350.0	50.0	50.0
		Other											
		TOTAL						3455.3	400.0	400.0	1400.0	200.0	200.0

CAPITAL PROJECT ESTIMATE

SA #50
(Eagle River Area)Page 246(1) Department and Division: Enterprise Activities (Sewer Utility)(2) Project Title: Sewage Treatment Facility Expansion

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	1,754 .0		1,754.0					
(15) Overhead	246 .0		246.0					
TOTAL	2,000 .0		2,000.0					
(16) Source of Funds								
Bonds - <u>G/O</u>	250 .0		250.0					
Grants - <u>State** & Federal</u>	1,750 .0		1,750.0					
Special ** (See Note on Summary Sheet)								
TOTAL	2,000 .0		2,000.0					

(17) Gross Floor Area N/A Sq. Ft.(18) Building Cost Per Sq. Ft. \$ N/A(19) Project Status Preliminary Engineering(20) Architectural and Engineering Fees: 9%(21) Percent of Building Cost N/A %(22) Estimated Start Date January 1, 1977(23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

This includes expanding the existing treatment facility to provide for future growth.

1. Treatment Facility Expansion \$1,754.0

CAPITAL PROJECT ESTIMATE

SA #50

(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Trunks - (Eagle River Area)

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands				
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements								
(15) Overhead	1,733.0		680 .0	-0-	-0-	1,053 .0	-0-	-0-
TOTAL	1,975.0		775 .0			1,200 .0		
(16) Source of Funds								
Bonds - G/O	1,481.0		581 .0			900 .0		
Grants - State ** (See Note on Operational Summary Sheet)	494.0		194 .0			300 .0		
TOTAL	1,975.0		775.0			1,200.0		

(17) Gross Floor Area N/A Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ N/A
 (19) Project Status Preliminary Engineering

(20) Architectural and Engineering Fees: 9%
 (21) Percent of Building Cost N/A %
 (22) Estimated Start Date January 1, 1977
 (23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

1977
 This item includes construction of a 24" trunk line approximately 5,900 feet in length from the interceptor south to Eagle River Road.

1. 24" Trunk Line/Interceptor - Eagle River Road \$680.0

1980

1. Extend existing trunk approximately one mile along Eagle River Road \$658.0

2. Extend the trunk approximately 3/4 mile north of existing line from the treatment facility - \$395.0

CAPITAL PROJECT ESTIMATE

SA #50

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(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Laterals - (Eagle River Area)

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	1,824.0		597.0	351.0	351.0	175.0	175.0	175.0
(15) Overhead	256.3		83.3	49.0	49.0	25.0	25.0	25.0
TOTAL	2,080.3		680.3	400.0	400.0	200.0	200.0	200.0
(16) Source of Funds								
Bonds - G/O	1,560.2		510.2	300.0	300.0	150.0	150.0	150.0
Grants - State ** (See Note on Summary)	520.1		170.1	100.0	100.0	50.0	50.0	50.0
Operational								
TOTAL	2,080.3		680.3	400.0	400.0	200.0	200.0	200.0
(17) Gross Floor Area <u>N/A</u> Sq. Ft.				(20) Architectural and Engineering Fees: <u>9%</u>				
(18) Building Cost Per Sq. Ft. \$ <u>N/A</u>				(21) Percent of Building Cost <u>N/A</u> %				
(19) Project Status <u>Preliminary Engineering</u>				(22) Estimated Start Date <u>January 1, 1977</u>				
				(23) Estimated Completion Date <u>December, 1977</u>				
(24) Project Description and Justification (Continue on Additional Sheets. Same Size)								
1977 - This item consists of construction of 8" sewer lines to serve areas that have requested sewer service.								
1. Eagle Heights LID 50-8	\$126.0			1978 - Anticipated LID's - \$350.0				
2. ACE LID 50-9	136.0 ✓			1979 - Anticipated LID's - 350.0				
3. Eagle River Ranchett	<u>335.0</u>			1980 - Anticipated LID's - 175.0				
	\$597.0			1981 - Anticipated LID's - 175.0				
				1982 - Anticipated LID's - 175.0				

CAPITAL IMPROVEMENTS PROGRAM SUMMARY

(1) Department Enterprise Activities

(2) Division Sewer Utility

SA #60
(Girdwood Area)

(3) PROJECT TITLE(S)	TOTAL PROJECT COST (4)	TO BE FUNDED (IN THOUSANDS) (5)					(6)	(7)	(8)	(9)	(10)	(11)	
		G/O BONDS	REVENUE BONDS	FEDERAL	STATE	OTHER *							
Sewage Treatment Facility	1800.0	225.0		1350.0	225.0	1800.0							
Trunks	1300.0	162.5		975.0	162.5	1300.0							
Laterals	2600.0	1950.0			**650.0	1800.0			200.0	200.0	200.0	200.0	
2.5 Million in G.O. Bonds Presently Authorized but not sold.													
TOTAL (12)	5700.0	2337.5		2325.0	1037.5	4900.0			200.0	200.0	200.0	200.0	
* OTHER SOURCE OF FUNDS (13)		FUNDING (14)											
** State Grant Funds are received only after local funds have been spent.		General Obligation Bonds					1841.4						
		Revenue Bonds					1737.5		150.0	150.0	150.0	150.0	
		Federal					3968.2						
		State					2325.0		50.0	50.0	50.0	50.0	
		Other					837.5						
		TOTAL					4900.0		200.0	200.0	200.0	200.0	

Revised
7/26/77
SA-77-229

CAPITAL PROJECT ESTIMATE SA #60
(Girdwood Area)

(1) Department and Division: Enterprise Activities (Sewer Utility)

(2) Project Title: Sewage Treatment Facility

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands				
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	3975.0	1,575.0	3,975.0					
(15) Overhead	425.0	225.0	425.0					
TOTAL	4,400.0	1,800.0	4,400.0					
(16) Source of Funds								
Bonds - G/O	550.0		550.0					
Grants - State & Federal	225.0							
Operational	1,575.0		3,850.0					
TOTAL	4,400.0	1,800.0	4,400.0					

Revised
AD-
7/26/77 c

(17) Gross Floor Area N/A Sq. Ft.
(18) Building Cost Per Sq. Ft. \$ N/A
(19) Project Status Phase II Engineering

(20) Architectural and Engineering Fees: 9%
(21) Percent of Building Cost N/A %
(22) Estimated Start Date January 1, 1977
(23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

This item includes construction of a sewage treatment facility for the Girdwood/Alyeska Area.

1. Sewage Treatment Facility \$ 3,975.0

CAPITAL PROJECT ESTIMATE

SA #60
(Girdwood Area)

(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Trunks

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	1,140.0 783.0		1,140.0 108.0					
(15) Overhead	160.0 108.0		160.0 108.0					
TOTAL	1,300.0 891		1,300.0 891					
(16) Source of Funds								
Bonds - _____	162.5 111.4		162.5 111.4					
Grants - State & Federal	1,137.5		1,137.5					
- Operational			779.6					
TOTAL	1,300.0 891		1,300.0 891					

Revised
10-17-77
7/26/77

(17) Gross Floor Area N/A Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ N/A
 (19) Project Status Phase II Engineering

(20) Architectural and Engineering Fees: 9%
 (21) Percent of Building Cost N/A %
 (22) Estimated Start Date January 1, 1977
 (23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

This includes construction of a trunk system for the Girdwood/Alyeska Area.

1. Trunks \$ ~~783.0~~ 783.0

CAPITAL PROJECT ESTIMATE SA #60
(Girdwood Area)

(1) Department and Division: Enterprise Activities (Sewer Utility) (2) Project Title: Laterals

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	2,279 .0		1,579 .0		175 .0	175 .0	175 .0	175 .0
(15) Overhead	321 .0		221 .0		25 .0	25 .0	25 .0	25 .0
TOTAL	2,600 .0		1,800 .0 <i>2,360.0</i>		200 .0 <i>200 .0</i>	200 .0	200 .0	200 .0
(16) Source of Funds								
Bonds - <u>G/O</u>	1,950 .0		1,350 .0		150 .0	150 .0	150 .0	150 .0
Grants - <u>State (**See Note on Summary Sheet)</u>	650 .0		450 .0		50 .0	50 .0	50 .0	50 .0
TOTAL	2,600 .0		1,800 .0 <i>2,360.0</i>		200 .0	200 .0	200 .0	200 .0

(17) Gross Floor Area N/A Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ N/A
 (19) Project Status Phase II Engineering

(20) Architectural and Engineering Fees: 9%
 (21) Percent of Building Cost N/A %
 (22) Estimated Start Date January 1, 1977
 (23) Estimated Completion Date December 31, 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

1977-This item includes construction of lateral sewers for the Girdwood/Alyeska Area.

1. LID 60-1 \$1,579.0

1979-Anticipated additional development southwest of LID 60-1 — \$175.0

1980-Anticipated additional development southwest of LID 60-1 — \$175.0

1981-Anticipated additional development southeast of Community Center — \$175.0

1982-Anticipated additional development along Crow Creek Road — \$175.0

CAPITAL IMPROVEMENTS PROGRAM SUMMARY

(1) Department Enterprise Activities

(2) Division Sewer Utility - Treatment Section, Treatment Plant

(3) PROJECT TITLE(S)	TOTAL PROJECT COST (4)	TO BE FUNDED (IN THOUSANDS) (5)					(6)	(7)	(8)	(9)	(10)	(11)
		G/O BONDS	REVENUE BONDS	FEDERAL	STATE	OTHER *						
							19_77	19_78	19_79	19_80	19_81	19_82
Laboratory	54.0	54.0					31.0	14.0		9.0		
Pretreatment	319.0	239.0			* 80.0					319.0		
Collection	4366.0	3275.0			*1091.0					4366.0		
Thickening	163.0	122.0			* 41.0		163.0					
Dewatering	517.0	388.0			* 129.0		216.0			301.0		
Sludge Incinerator	1083.0	812.0			* 271.0			1083.0				
Incinerator Repair	139.0	139.0								139.0		
Scum Incinerator	570.0	428.0			* 142.0			570.0				
Heat Recovery	268.0	201.0			* 67.0			268.0				
Building Modifications	903.0	677.0			* 226.0		185.0	74.0		644.0		
New Buildings	2497.0	1873.0			* 624.0					2497.0		
Fuel Facility	24.0	24.0					24.0					
Operations Equipment	362.0	362.0					345.0	17.0				
Expansion Equipment	627.0	470.0			* 157.0					627.0		
Maintenance Equipment	87.0	87.0					57.0			30.0		
TOTAL (12)	11,979.0	9,151.0			2828.0		1021.0	2026.0		8932.0		
* OTHER SOURCE OF FUNDS (13)		FUNDING (14)										
*State Grant Funds if Available		General Obligation Bonds					954.0	1546.0		6782.0		
		Revenue Bonds										
		Federal										
		State					67.0	480.0		2150.0		
		Other										

		TOTAL					1021.0	2026.0		8932.0		

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Laboratory

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands				
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)
(11) Equipment (Moveable)	39.0		27.0	12.0				
(12) Land								
(13) Buildings	8.0					8.0		
(14) Other Improvements								
(15) Overhead @ 14%	7.0		4.0	2.0		1.0		
TOTAL	54.0		31.0	14.0		9.0		
(16) Source of Funds								
Bonds - G.O.	54.0		31.0	14.0		9.0		
Grants -								
- Operational								
TOTAL	54.0		31.0	14.0		9.0		

(17) Gross Floor Area _____ Sq. Ft.

(20) Architectural and Engineering Fees: None

(18) Building Cost Per Sq. Ft. \$ _____

(21) Percent of Building Cost _____ %

(19) Project Status _____

(22) Estimated Start Date 1977

(23) Estimated Completion Date 1980

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

- (11) Equipment - 1977 (a) Atomic Absorption Spectrophotometer at \$17,000, required for near-continuous analyses for toxic heavy metals in treatment plant influent and effluent, and from various sources within sewerage system.
- (b) Automatic sample collection, refrigeration, and storage equipment at \$10,000, required for obtaining and preserving additional samples for analyses. Both (a) and (b) are related to increasingly stringent demands by regulatory agencies for sophisticated water quality monitoring procedures, and are related also to Municipal control over sewer system usage as discussed in the Sewer Tariff.
- 1978 - Gas Chromatograph, required for frequent analyses for greases and oils, hydrocarbons, and other organic constituents of collected sewage samples.
- (13) Buildings - 1980 - Additional cabinets and counter space in existing laboratory, to improve test procedure efficiency.

CAPITAL PROJECT ESTIMATE

Treatment Plant Solids Processing,

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(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Pretreatment Facilities

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	280.0					280.0		
(14) Other Improvements								
(15) Overhead @ 14%	39.0					39.0		
TOTAL	319.0					319.0		
(16) Source of Funds								
Bonds - <u>G.O.</u> @ 75%	239.0					239.0		
Grants - <u>State</u> @ 25%	80.0					80.0		
- Operational								
TOTAL	319.0					319.0		

(17) Gross Floor Area _____ Sq. Ft.

(20) Architectural and Engineering Fees: \$28.0

(18) Building Cost Per Sq. Ft. \$ _____

(21) Percent of Building Cost 10 %

(19) Project Status _____

(22) Estimated Start Date Engineering, 1980 - Construction, 1981(23) Estimated Completion Date Construction - 1982

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - Three mechanically raked bar screens in present treatment plant headworks building, together with solids grinding, storage, and conveying equipment. This equipment package will replace existing in-flow screenings/grinding devices, and will reduce solids loadings on clarifiers and permit direct disposal to incinerators of screenings, without additional downstream processing.

CAPITAL PROJECT ESTIMATE

Page 256

(1) Department and Division: Sewer Utility - Treatment Section (2) Project Title: Treatment Plant Solids Processing, Sludge Collection and Related Facilities

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	3,830.0					3,830.0		
(14) Other Improvements								
(15) Overhead @ 14%	536.0					536.0		
TOTAL	4,366.0					4,366.0		
(16) Source of Funds								
Bonds - G.O. @ 75%	3,275.0					3,275.0		
Grants - State @ 25%	1,091.0					1,091.0		
Operational								
TOTAL	4,366.0					4,366.0		

(17) Gross Floor Area 43,537 Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ 100.28
 (19) Project Status _____

(20) Architectural and Engineering Fees: \$383
 (21) Percent of Building Cost 10 %
 (22) Estimated Start Date Engineering, 1980 - Construction, 1981
 (23) Estimated Completion Date Construction, 1982

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

- (13) Buildings -
- Three additional primary clarifiers with scum and sludge collection devices, required to offset increasingly hydraulic and solids loadings on existing treatment plant. These units will be part of a major plant expansion required in time period indicated.
 - One additional pump building to house three new primary sludge pumps and related control and other equipment required by additional clarifiers.
 - Additional utilidor linking new clarifiers and pump building, as well as existing facilities. Utilidor would carry all piping and electrical conduits and provide all-weather access to same for operations and maintenance.
 - One additional solids grinder and grit separator/classifier unit, to be installed in existing building, in support of existing grit removal facilities.

CAPITAL PROJECT ESTIMATE

Treatment Plant Solids Processing,

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Sludge Thickening Facilities

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	143.0		143.0					
(14) Other Improvements								
(15) Overhead @ 14%	20.0		20.0					
TOTAL	163.0		163.0					
(16) Source of Funds								
Bonds - <u>G.O. @ 75%</u>	122.0		122.0					
Grants - <u>State @ 25%</u>	41.0		41.0					
* Operational								
TOTAL	163.0		163.0					

(17) Gross Floor Area 1,257 Sq. Ft.(18) Building Cost Per Sq. Ft. \$ 129.69

(19) Project Status _____

(20) Architectural and Engineering Fees: \$14.0(21) Percent of Building Cost 10 %(22) Estimated Start Date Engineering and Construction - 1977(23) Estimated Completion Date 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - One additional primary sludge thickening structure, with scum and sludge collection and pumping devices, and with interconnections to existing thickening and pumping facilities. This addition will provide currently required support for existing thickener which is periodically overloaded, and will allow for an anticipated continuing increase in solids loadings as the sewer system expands.

CAPITAL PROJECT ESTIMATE

Treatment Plant Solids Processing,

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Solids Dewatering Facilities

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	454.0		190.0			264.0		
(14) Other Improvements								
(15) Overhead @ 14%	63.0		26.0			37.0		
TOTAL	517.0		216.0			301.0		
(16) Source of Funds								
Bonds - G. O. @ 75%	388.0		190.0			264.0		
Grants - State @ 25%	129.0		26.0			37.0		
- Operational								
TOTAL	517.0		216.0			301.0		

(17) Gross Floor Area 4,800 Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ 55.00 (1980)
 (19) Project Status _____

(20) Architectural and Engineering Fees: \$45.0
 (21) Percent of Building Cost 10 %
 (22) Estimated Start Date Engineering and Construction - 1977
 (23) Estimated Completion Date Construction - Filter, 1977 - Dry. Bed, 1980

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - 1977 - One additional vacuum filter unit, with vacuum and filtrate pumps, and chemical feed, solids conveying, and all related equipment, to support existing filter unit which presently operates under an overload condition much of the time, and which has no vitally needed backup equipment. This equipment would be installed in space provided for same in an existing building.
 1980 - Add large, divided, sludge drying bed with drainage, all-weather protection, truck access, and provision for adequate ventilation. This facility would support vacuum filter system when one of those units was out of service, and would provide another means for processing sludge solids prior to incineration.

CAPITAL PROJECT ESTIMATE

Treatment Plant Solids Processing
Sludge Incineration Facilities

Page 259

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Sludge Incineration Facilities

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	950.0			950.0				
(14) Other Improvements								
(15) Overhead @ 14%	133.0			133.0				
TOTAL	1,083.0			1,083.0				
(16) Source of Funds								
Bonds - <u>G. O. @ 75%</u>	812.0			812.0				
Grants - <u>State @ 25%</u>	271.0			271.0				
Operational								
TOTAL	1,083.0			1,083.0				
(17) Gross Floor Area _____ Sq. Ft.				(20) Architectural and Engineering Fees: <u>\$95.0</u>				
(18) Building Cost Per Sq. Ft. \$ _____				(21) Percent of Building Cost <u>10</u> %				
(19) Project Status _____				(22) Estimated Start Date <u>Engineering and Construction - 1978</u>				
				(23) Estimated Completion Date <u>Construction - 1979</u>				
(24) Project Description and Justification (Continue on Additional Sheets. Same Size)								
(13) Buildings - One additional multiple hearth sludge incinerator, similar to existing unit and installed in same building, with all related indicating, recording, operating, controlling and safety equipment and provision for connection to a heat recovery system. This unit is required no later than 1979, to provide support for existing incinerator which currently operates under an overload condition much of the time; to permit an extended shutdown of present unit for major repairs and equipment replacement; and to provide capability to dispose of increasing solids volume that is relative to expansion of the community sewer system.								

CAPITAL PROJECT ESTIMATE

Treatment Plant Solids Processing,

Page 260

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Sludge Incinerator Repair

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)	122.0					122.0		
(12) Land								
(13) Buildings								
(14) Other Improvements								
(15) Overhead @ 14%	17.0					17.0		
TOTAL	139.0					139.0		
(16) Source of Funds								
Bonds - <u>G. O. @ 100%</u>	139.0					139.0		
Grants - _____								
Operational _____								
TOTAL	139.0					139.0		

(17) Gross Floor Area _____ Sq. Ft.

(20) Architectural and Engineering Fees: None

(18) Building Cost Per Sq. Ft. \$ _____

(21) Percent of Building Cost _____ %

(19) Project Status _____

(22) Estimated Start Date 1980(23) Estimated Completion Date 1980

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(11) Equipment - Remove all worn out refractory and insulating materials, as well as cast steel rotating members from inside incinerator. Replace same with new materials, and repair exhaust gas stack, gas scrubbing unit, and all related incinerator equipment. Existing incinerator will have been in operation 8 years at time of programmed repair. It is anticipated that unit will be very much in need of repair by that time, but such work can only be done after a second incinerator has been installed.

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Solids Processing,
Scum Incineration Facilities

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	500.0			500.0				
(14) Other Improvements								
(15) Overhead @ 14%	70.0			70.0				
TOTAL	570.0			570.0				
(16) Source of Funds								
Bonds - <u>G. O. @ 75%</u>	428.0			428.0				
Grants - <u>State # 25%</u>	142.0			142.0				
• Operational								
TOTAL	570.0			570.0				
(17) Gross Floor Area <u>1,800</u> Sq. Ft.				(20) Architectural and Engineering Fees: <u>\$50.0</u>				
(18) Building Cost Per Sq. Ft. \$ <u>316.67</u>				(21) Percent of Building Cost <u>10</u> %				
(19) Project Status _____				(22) Estimated Start Date <u>Engineering and Construction - 1978</u>				
				(23) Estimated Completion Date <u>Construction - 1979</u>				
(24) Project Description and Justification (Continue on Additional Sheets. Same Size)								
(13) Buildings - Add new building to treatment plant site, designed similar to all other major structures and so located as to be suitable for intended purpose. Install incineration unit designed specifically for disposal of very volatile grease and oil portion of sewage solids, thereby reducing loading on sludge incinerator and eliminating problems related to the combustion of two materials with very different characteristics. Include with installation a large scum holding tank, positive displacement pumps, control, indicating and recording equipment, exhaust gas quality control devices and provision for connection to a heat recovery system.								

CAPITAL PROJECT ESTIMATE

Treatment Plant Solids Processing,
Heat Recovery FacilitiesPage 262

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Heat Recovery Facilities

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	235.0			235.0				
(14) Other Improvements								
(15) Overhead @ 14%	33.0			33.0				
TOTAL	268.0			268.0				
(16) Source of Funds								
Bonds - <u>G.O. @ 75%</u>	201.0			201.0				
Grants - <u>State @ 25%</u>	67.0			67.0				
- Operational								
TOTAL	268.0			268.0				

(17) Gross Floor Area _____ Sq. Ft.

(20) Architectural and Engineering Fees: \$24.0

(18) Building Cost Per Sq. Ft. \$ _____

(21) Percent of Building Cost 10 %

(19) Project Status _____

(22) Estimated Start Date Engineering - 1978(23) Estimated Completion Date Construction - 1979

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - Add heat exchangers and all related piping, pumping, and heat utilization equipment necessary to extract and use heat from sludge and scum incineration processes. Recovered heat would be used to help meet substantial heating requirements of all treatment plant buildings, as well as to condition sludge and scum for later processing. Heat surplus to indicated needs would be discharged to plant influent flow, thereby improving settling characteristics of sewage solids. A measurable overall increase in plant operating efficiency, and reduction in operating costs would result.

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section (2) Project Title: Treatment Plant Building Modifications

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19__77 (5)	Estimated Requirements in Thousands				
				19__78 (6)	19__79 (7)	19__80 (8)	19__81 (9)	19__82 (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	792.0		65.0		565.0			
(14) Other Improvements								
(15) Overhead @ 14%	111.0		9.0		79.0			
TOTAL	903.0		74.0		644.0			
(16) Source of Funds								
Bonds - _____	259.0		74.0					
Grants - _____	483.0				483.0			
Operational State Grant _____	161.0				161.0			
TOTAL	903.0		74.0		644.0			
(17) Gross Floor Area (b) 168 (c) 2170 Sq. Ft.				(20) Architectural and Engineering Fees: \$19.0				
(18) Building Cost Per Sq. Ft. \$ (b) \$71.42 (c) \$36.87				(21) Percent of Building Cost 10 %				
(19) Project Status _____				(22) Estimated Start Date Engineering and Construction - 1977				
				(23) Estimated Completion Date Construction - 1977				
(24) Project Description and Justification (Continue on Additional Sheets. Same Size)								
(13) Buildings - (a) Install drainage channels in concrete floor of lower level of Incinerator Building for \$15,000, for removal of standing water which results from frequent and necessary washdown of area. Connect channels to existing buried piping.								
(b) Construct large, fireproof, well ventilated lubricant and flammable storage room on lower level of screenings room in Incinerator Building for \$12,000. Existing storage facility is not adequate in any way for such purpose.								
(c) Add intermediate floor to high ceilinged screenings room for \$80,000, to provide required office space for operations supervisor, washroom/locker room facilities for plant operators and chemicals storage and utilization space.								
(d) Extend existing chlorine storage area crane rail approximately 40 feet outside of chlorine/shop building, for \$55,000 to provide for faster, safer, all-weather loading and unloading of heavy chlorine containers from truck trailer. Present operation is slow, unsafe and dependent on availability of rented mobile crane.								

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Building Modifications

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements								
(15) Overhead @ 14%								
TOTAL								
(16) Source of Funds								
Bonds - _____								
Grants - _____								
Operational _____								
TOTAL								
(17) Gross Floor Area <u>(e) 1,305; (f) 73,464</u> <u>(g) 1,686</u> Sq. Ft.				(20) Architectural and Engineering Fees: <u>63.0</u>				
(18) Building Cost Per Sq. Ft. <u>(e) \$49.81 (f) \$7.08 (g) 26.69</u>				(21) Percent of Building Cost <u>10</u> %				
(19) Project Status _____				(22) Estimated Start Date <u>Engineering and Construction - 1978</u>				
				(23) Estimated Completion Date <u>Construction - 1981</u>				
(24) Project Description and Justification (Continue on Additional Sheets. Same Size)								
(13) Buildings - (e) Modify existing Chlorine/Shop Building, for \$65,000, by adding a second story over part of building roof, and utilizing for personnel lunch room and office space for maintenance supervisor. Present lunch room and office would then be converted to much needed space for electrical and instrumentation maintenance facilities, restoring also needed storage space for materials and spare parts.								
(f) Add dome-type covers to all clarifiers and thickeners, for \$520,000 for all-weather protection for equipment and treatment processes, and to make it possible to perform required operations and maintenance work in those areas in winter months.								
(g) Add covers and/or enclosures to other uncovered structures, for \$45,000, also for protection against inclement weather. Overall plant operations and personnel operating efficiencies will result from the required modifications.								

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section (2) Project Title: Treatment Plant - New Buildings

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	2,190.0					2,190.0		
(14) Other Improvements								
(15) Overhead @ 14%	307.0					307.0		
TOTAL	2,497.0					2,497.0		
(16) Source of Funds								
Bonds - <u>G.O. @ 75%</u>	1,873.0					1,873.0		
Grants - <u>State @ 25%</u>	624.0					624.0		
* Operational								
TOTAL	2,497.0					2,497.0		

(a) 9,600

- (17) Gross Floor Area (b) 29,520 Sq. Ft.
- (18) Building Cost Per Sq. Ft. \$ (a) \$43.75 (b) \$59.96
- (19) Project Status _____
- (20) Architectural and Engineering Fees: \$219.0
- (21) Percent of Building Cost 10 %
- (22) Estimated Start Date Engineering, 1980 - Construction, 1981
- (23) Estimated Completion Date Construction, 1982

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - (a) Add new shop building for mechanical maintenance of treatment plant and pump stations equipment with provision for welding shop, machine shop, paint shop, steam cleaning area, and heavy equipment and parts storage space. This facility is required even now, and will be an absolute necessity by time period indicated. Estimated cost of \$420,000.

(b) Add serpentine style chlorine contact chambers, for \$1,770,000, sized to accomodate ultimate sewage flow while maintaining adequate contact time. This facility will require a weather enclosure, and will provide capability for positive control over and increased efficiency in plant effluent disinfection process. A significant chlorine cost saving will result. Two contact chambers, one for each set of three clarifiers, would fit site and be most practical if primary treatment only is provided in future.

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Fuel Facility

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	21.0		21.0					
(14) Other Improvements								
(15) Overhead @ 14%	3.0		3.0					
TOTAL	24.0		24.0					
(16) Source of Funds								
Bonds - <u>G.O. @ 100%</u>	24.0		24.0					
Grants - _____								
• Operational _____								
TOTAL	24.0		24.0					

(17) Gross Floor Area 1,200 Sq. Ft.(18) Building Cost Per Sq. Ft. \$ 19.48

(19) Project Status _____

(20) Architectural and Engineering Fees: None

(21) Percent of Building Cost _____ %

(22) Estimated Start Date 1977(23) Estimated Completion Date 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13). Buildings - Install vehicle and equipment fueling facility on treatment plant site to eliminate substantial loss of labor hours and vehicle availability through present requirement to obtain fuel only at Bering Street and/or Tudor Road facilities. Remote location of treatment plant, number of vehicles used by the treatment section and the loss of productivity through refuel procedure, justifies requested facility.

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Operations Equipment

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	303.0		303.0					
(14) Other Improvements								
(15) Overhead @ 14%	42.0		42.0					
TOTAL	345.0		345.0					
(16) Source of Funds								
Bonds - <u>G.O. @ 100%</u>	345.0		345.0					
Grants - _____								
• Operational _____								
TOTAL	345.0		345.0					

(17) Gross Floor Area _____ Sq. Ft.

(20) Architectural and Engineering Fees: None

(18) Building Cost Per Sq. Ft. \$ _____

(21) Percent of Building Cost _____ %

(19) Project Status _____

(22) Estimated Start Date 1977(23) Estimated Completion Date 1977

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

- (13) Buildings -
- (a) Replace existing, worn out, stationary pump utilized for the draining of clarifiers and sludge thickener, for \$5,000.
 - (b) Replace existing, unsuitable, stationary pump utilized to pump chlorinated plant effluent from remote location back to plant site for analyses, for \$7,500.
 - (c) Install reverse osmosis or other appropriate treatment system, for \$290,000, in an existing building, to treat minimum 300,000 gallons per day of fresh water used in plant operations, for removal of extremely high and increasing levels of chlorides and calcium hardness. Present water supply obtained from on site wells and deteriorating water quality is adversely affecting equipment operation and costs of same and is suspected of having undesirable physiological effects on personnel.

CAPITAL PROJECT ESTIMATE

Page 268(1) Department and Division: Sewer Utility - Treatment Section (2) Project Title: Treatment Plant Operations Equipment

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	15.0			15.0				
(14) Other Improvements								
(15) Overhead @ 14%	2.0			2.0				
TOTAL	17.0			17.0				
(16) Source of Funds								
Bonds - <u>G.O. @ 100%</u>	17.0			17.0				
Grants - _____								
Operational _____								
TOTAL	17.0			17.0				

(17) Gross Floor Area _____ Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ _____
 (19) Project Status _____

(20) Architectural and Engineering Fees: None
 (21) Percent of Building Cost _____ %
 (22) Estimated Start Date 1978
 (23) Estimated Completion Date 1978

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

- (13) Buildings - (a) Add chemical feed equipment in existing building for precision feeding of sewage and sludge conditioning chemicals, required to maintain and improve treatment processes for \$8,500.
- (b) Replace existing method of steam heating of scum at clarifier and thickener collection points with electrical heating equipment for \$6,500. This change will materially reduce steam boiler operating and maintenance costs.

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section (2) Project Title: Treatment Plant Expansion Equipment

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)	15.0					15.0		
(12) Land								
(13) Buildings	535.0					535.0		
(14) Other Improvements								
(15) Overhead @ 14%	77.0					77.0		
TOTAL	627.0					627.0		
(16) Source of Funds								
Bonds - <u>G.O. @ 75%</u>	470.0					470.0		
Grants - <u>State @ 25%</u>	157.0					157.0		
- Operational								
TOTAL	627.0					627.0		

(17) Gross Floor Area _____ Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ _____
 (19) Project Status _____

(20) Architectural and Engineering Fees: \$48 - Items (a) and (b) only
 (21) Percent of Building Cost 10 %
 (22) Estimated Start Date Engineering and Construction - 1980
 (23) Estimated Completion Date Construction - 1982

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

- (11) Equipment (Moveable) - Add tractor with front end loader and rear scraper blade, for work on sludge drying beds and elsewhere as required, for \$15,000.
- (13) Buildings
- (a) Replace existing auxiliary power generator with unit with substantially greater generating capacity for \$320,000. New unit will be required to meet power demands of expanded treatment plant and to comply with EPA regulations.
 - (b) Add stationary, high pressure and volume steam cleaner and controls, with piping to all areas of plant for operations cleanup work and for maintenance equipment cleaning work as well for \$160,000.
 - (c) Add second high pressure and volume air compressor, to accomodate air requirements for air operated diaphragm type sludge pumps in expanded plant for \$15,000.
 - (d) Add ozone generator, and install as part of treatment plant building ventilation system for odor control for \$40,000.

CAPITAL PROJECT ESTIMATE

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(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Maintenance Equipment

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)	50.0		50.0					
(12) Land								
(13) Buildings	26.0					26.0		
(14) Other Improvements								
(15) Overhead @ 14%	11.0		7.0			4.0		
TOTAL	87.0		57.0			30.0		
(16) Source of Funds								
Bonds - <u>G. O. @ 100%</u>	87.0		57.0			30.0		
Grants - _____								
• Operational _____								
TOTAL	87.0		57.0			30.0		

(17) Gross Floor Area _____ Sq. Ft.

(18) Building Cost Per Sq. Ft. \$ _____

(19) Project Status _____

(20) Architectural and Engineering Fees: _____

(21) Percent of Building Cost _____ %

(22) Estimated Start Date (a) & (b), 1977 (c) (d) & (e) 1980(23) Estimated Completion Date 1980

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

- (11) Equipment (Moveable) - (a) Install 5-ton capacity hydraulic crane to frame of new 1 1/2 ton truck for use as equipment maintenance vehicle in treatment plant and pump stations, for \$15,000 for crane only.
- (b) Add high pressure and volume steam cleaner unit, trailer mounted, for cleaning and other maintenance in pump stations and at plant for \$35,000.
- (13) Install metal lathe, milling machine, and surface grinder in new shop building requested for 1980, for plant and pump station equipment repair and maintenance

CAPITAL IMPROVEMENTS PROGRAM SUMMARY

(1) Department Enterprise Activities

(2) Division Sewer Utility - Treatment Section, Lift Station

(3) PROJECT TITLE(S)	TOTAL PROJECT COST (4)	TO BE FUNDED (IN THOUSANDS) (5)						(6)	(7)	(8)	(9)	(10)	(11)
		G/O BONDS	REVENUE BONDS	FEDERAL	STATE	OTHER *		19_77	19_78	19_79	19_80	19_81	19_82
Pump Station #1 - R&R	7.0	7.0						7.0					
Pump Station #2 - R&R	15.0	15.0						15.0					
Pump Station #2 - Additions	440.0	330.0			*110.0				440.0				
Chester Creek Force Main	1,254.0	941.0			*313.0				1,254.0				
Pump Station #3 - R&R	7.0	7.0									7.0		
Pump Station #12 Additions	136.0	102.0			* 34.0							136.0	
Campbell Creek Force Main	479.0	359.0			*120.0							479.0	
Pump Station #15 - Buildings	8.0	8.0						8.0					
Pump Station #15 -R&R	6.0	6.0							6.0				
Pump Station #17 -R&R	9.0	9.0						9.0					
TOTAL (12)	2,361.0	1784.0			577.0			39.0	1700.0		7.0	615.0	
* OTHER SOURCE OF FUNDS (13)			FUNDING (14)										
* State Grant Funds if Available			General Obligation Bonds					39.0	1277.0		7.0	461.0	
			Revenue Bonds										
			Federal										
			State						423.0			154.0	
			Other										

			TOTAL					39.0	1700.0		7.0	615.0	

CAPITAL PROJECT ESTIMATE

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(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Satellites
Pumping Station #1, Vicinity of ARR Depot

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	6.0		6.0					
(14) Other Improvements								
(15) Overhead @ 14%	1.0		1.0					
TOTAL	7.0		7.0					
(16) Source of Funds								
Bonds - <u>G.O. @ 100%</u>	7.0		7.0					
Grants - _____								
Operational _____								
TOTAL	7.0		7.0					

(17) Gross Floor Area _____ Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ _____
 (19) Project Status _____

(20) Architectural and Engineering Fees: _____
 (21) Percent of Building Cost _____ %
 (22) Estimated Start Date _____
 (23) Estimated Completion Date _____

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - Two Flygt 6" CT dry pit submersible replacement sewage pumps with suction and discharge piping. Existing pumping equipment, installed in 1959, is worn and inefficient and has unsafe open line shafting. Planned replacement will reduce power cost through use of more efficient pumping equipment, eliminate costly repair and rebuilding as well as eliminate extensive safety guards required to meet OSHA requirements for open line shafting.

CAPITAL PROJECT ESTIMATE

Treatment Plant Satellites

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Chester Creek, Pumping Station #2

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	13.0		13.0					
(14) Other Improvements								
(15) Overhead @ 14%	2.0		2.0					
TOTAL	15.0		15.0					
(16) Source of Funds								
Bonds - <u>G. O. @ 100%</u>	15.0		15.0					
Grants - _____								
Operational _____								
TOTAL	15.0		15.0					

(17) Gross Floor Area _____ Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ _____
 (19) Project Status _____

(20) Architectural and Engineering Fees: _____
 (21) Percent of Building Cost _____ %
 (22) Estimated Start Date _____
 (23) Estimated Completion Date _____

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - Procure spare impeller and spare pump shaft for existing 400 Hp Fairbanks Morse sewage pumps, to be used in preventative maintenance program to avoid extended pump shutdown time while rebuilding worn pumps, \$7,500 - Impeller; \$5,500 -- Shaft.

CAPITAL PROJECT ESTIMATE

Treatment Plant Satellites

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(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Chester Creek, Pumping Station #2

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	386.0			386.0				
(14) Other Improvements								
(15) Overhead @ 14%	54.0			54.0				
TOTAL	440.0			440.0				
(16) Source of Funds								
Bonds - <u>G. O. @ 75%</u>	330.0			330.0				
Grants - <u>State @ 25%</u>	110.0			110.0				
- Operational								
TOTAL	440.0			440.0				

(17) Gross Floor Area _____ Sq. Ft.

(18) Building Cost Per Sq. Ft. \$ _____

(19) Project Status _____

(20) Architectural and Engineering Fees: \$35(21) Percent of Building Cost 10 %(22) Estimated Start Date Engineering-1978, Construction - 1978(23) Estimated Completion Date Construction - 1979

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - Install fourth sewage pump with electrical driving motor, controls, and piping at \$125,200.
Install second emergency power generator, at \$225,700.

Above projects consist of engineering and contracting for fourth sewage pump and a second emergency power generator sized and connected to automatically turn on and drive two sewage pumps when there is a failure in utility power system. This combined installation will provide additional pumping capability in keeping with the growth of the area served by this station, and is a part of planned for expansion.

CAPITAL PROJECT ESTIMATE

Treatment Plant Satellites

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Chester Creek Force Main

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 77 (5)	Estimated Requirements in Thousands				
				19 78 (6)	19 79 (7)	19 80 (8)	19 81 (9)	19 82 (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	1,100.0			1,100.0				
(15) Overhead @ 14%	154.0			154.0				
TOTAL	1,254.0			1,254.0				
(16) Source of Funds								
Bonds - <u>G.O. @ 75%</u>	941.0			941.0				
Grants - <u>State @ 25%</u>	313.0			313.0				
- Operational								
TOTAL	1,254.0			1,254.0				
(17) Gross Floor Area _____ Sq. Ft.				(20) Architectural and Engineering Fees: <u>\$92</u>				
(18) Building Cost Per Sq. Ft. \$ _____				(21) Percent of Building Cost <u>10</u> %				
(19) Project Status _____				(22) Estimated Start Date <u>Engineering - 1977</u>				
				(23) Estimated Completion Date <u>Construction - 1978</u>				
(24) Project Description and Justification (Continue on Additional Sheets. Same Size)								
(14) Other Improvements - Project consists of a second force main installation to carry increased flow to treatment plant from fourth pump installation at the Chester Creek pumping station. This is a part of planned for expansion projects under the proposed and adopted construction schedule concurrent with community growth.								

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Satellites
22nd & Fairbanks, Pumping Station #3

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	6.0					6.0		
(14) Other Improvements								
(15) Overhead @ 14%	1.0					1.0		
TOTAL	7.0					7.0		
(16) Source of Funds								
Bonds - <u>G.O. @ 100%</u>	7.0					7.0		
Grants - _____								
- Operational _____								
TOTAL								

(17) Gross Floor Area _____ Sq. Ft.

(20) Architectural and Engineering Fees: _____

(18) Building Cost Per Sq. Ft. \$ _____

(21) Percent of Building Cost _____ %

(19) Project Status _____

(22) Estimated Start Date _____

(23) Estimated Completion Date _____

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - Two replacement sewage pumps with controls and piping. Project required to meet area growth through installing larger pumps in a small package lift station.

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section (2) Project Title: Treatment Plant Satellites
Campbell Creek Pumping Station, #12

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	119.0						119.0	
(14) Other Improvements								
(15) Overhead @ 14%	17.0						17.0	
TOTAL	136.0						136.0	
(16) Source of Funds								
Bonds - G.O @ 75%	102.0						102.0	
Grants - State @ 25%	34.0						34.0	
Operational								
TOTAL	136.0						136.0	

(17) Gross Floor Area _____ Sq. Ft. (20) Architectural and Engineering Fees: \$11
 (18) Building Cost Per Sq. Ft. \$ _____ (21) Percent of Building Cost 10 %
 (19) Project Status _____ (22) Estimated Start Date Engineering - 1981
 (23) Estimated Completion Date Construction - 1982

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - Install fourth sewage pump with electrical driving motor, controls, and piping. Project consists of engineering and contracting for installation of additional pumping equipment, bringing this facility up to full planned for capacity to meet population growth in the area served and is part of planned for expansion.

CAPITAL PROJECT ESTIMATE

Treatment Plant Satellites

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(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Campbell Creek Force Main

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings								
(14) Other Improvements	420.0						420.0	
(15) Overhead @ 14%	59.0						59.0	
TOTAL	479.0						479.0	
(16) Source of Funds								
Bonds - G.O. @ 75%	359.0						359.0	
Grants - State @ 25%	120.0						120.0	
Operational								
TOTAL	479.0						479.0	

(17) Gross Floor Area _____ Sq. Ft.

(18) Building Cost Per Sq. Ft. \$ _____

(19) Project Status _____

(20) Architectural and Engineering Fees: \$38

(21) Percent of Building Cost 10 %(22) Estimated Start Date Engineering - 1981(23) Estimated Completion Date Construction - 1982

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(14) Other Improvements - Project consists of a second force main installation to carry increased flow to treatment plant from fourth pump installation at the Campbell Creek Pumping Station. This is a part of planned for expansion projects under the proposed and adopted construction schedule concurrent with community growth.

CAPITAL PROJECT ESTIMATE

Treatment Plant Satellites

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: International Airport - Pumping Station #15

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	7.0		7.0					
(14) Other Improvements								
(15) Overhead @ 14%	1.0		1.0					
TOTAL	8.0		8.0					
(16) Source of Funds								
Bonds - <u>G.O. @ 100%</u>	8.0		8.0					
Grants - _____								
- Operational _____								
TOTAL	8.0		8.0					

(17) Gross Floor Area _____ Sq. Ft.

(20) Architectural and Engineering Fees: \$ 1

(18) Building Cost Per Sq. Ft. \$ _____

(21) Percent of Building Cost 10 %

(19) Project Status _____

(22) Estimated Start Date _____

(23) Estimated Completion Date _____

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)

(13) Buildings - Construct underground vault over wet well of small built in place pumping station. This improvement will be made at a cost only slightly more than reconstructing another above ground wood building to replace present structure where concrete foundation has been undermined and broken, making extensive rebuilding necessary.

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section

(2) Project Title: Treatment Plant Satellites International Airport - Pumping Station #16

Estimated Cost	Estimated Total Cost (3)	Approp. Prior Years (4)	New Appropriation 19 <u>77</u> (5)	Estimated Requirements in Thousands				
				19 <u>78</u> (6)	19 <u>79</u> (7)	19 <u>80</u> (8)	19 <u>81</u> (9)	19 <u>82</u> (10)
(11) Equipment (Moveable)								
(12) Land								
(13) Buildings	5.0			5.0				
(14) Other Improvements								
(15) Overhead @ 14%	1.0			1.0				
TOTAL	6.0			6.0				
(16) Source of Funds								
Bonds - <u>G. O. @ 100%</u>	6.0			6.0				
Grants - _____								
Operational _____								
TOTAL	6.0			6.0				

(17) Gross Floor Area _____ Sq. Ft.
 (18) Building Cost Per Sq. Ft. \$ _____
 (19) Project Status _____
 (20) Architectural and Engineering Fees: _____
 (21) Percent of Building Cost _____ %
 (22) Estimated Start Date _____
 (23) Estimated Completion Date _____

(24) Project Description and Justification (Continue on Additional Sheets. Same Size)
 (13) Buildings - Two replacement submersible sewage pumps to install in small International Airport pumping station. Present pumps have been in service for approximately 8 years, making replacements due in 1978, based on 10 year life expectancy.

CAPITAL PROJECT ESTIMATE

(1) Department and Division: Sewer Utility - Treatment Section (2) Project Title: Treatment Plant Satellites International Airport - Pumping Station #17

Table with columns: Estimated Cost, Estimated Total Cost (3), Approp. Prior Years (4), New Appropriation 19-77 (5), and Estimated Requirements in Thousands (6-10). Rows include equipment, land, buildings, overhead, and source of funds (bonds, grants, operational).

(17) Gross Floor Area _____ Sq. Ft. (18) Building Cost Per Sq. Ft. \$ _____ (19) Project Status _____ (20) Architectural and Engineering Fees: _____ (21) Percent of Building Cost _____ % (22) Estimated Start Date _____ (23) Estimated Completion Date _____

(24) Project Description and Justification (Continue on Additional Sheets. Same Size) (13) Buildings - One complete new sewage pump with electric motor, controls, and check valves for use in preventative maintenance program for main International Airport system pumping station to provide continuous pumping during major pump overhaul.