

**RESUME OF ENGINEERING DEPARTMENT**  
**ACTIVITIES AND OBJECTIVES**  
**1969 Thru 1971**

Mr. Eldon Mills  
Assistant City Manager  
Hillsboro, Oregon

Dear Sir:

The Engineering Department is in the process of making permanent records of sanitary sewer, storm sewer and water line extensions and replacements that have been made in the past three years. In past years this work was done during the slack season of winter but in recent years with the increase in growth and development, we have been unable to keep up.

With the expansion of the City boundaries our base maps for the location of streets and utilities are beyond their limits and new base maps are being prepared for the use of all departments.

The obtaining of field data and the preparation of plans and specifications for the work outlined for this season is being accomplished as rapidly as possible.

We are faced with the greatest work load this season that we have ever experienced, and in order to maintain reasonable services to the public and to the various departments of the City, I recommend that budgetary consideration be given to this department for additional office space and an increase in personnel.

Respectfully Submitted,

W.H. HATHORN  
City Engineer

WHH: LV

## **DUTIES OF THE ENGINEERING DEPARTMENT**

The duties of the Engineering Department are many and varied and in most instances are quite time consuming due to the acquiring of preliminary field data required for the design of streets, water lines, sanitary and storm sewers; the research of deed records for the preparation of plans, making computations and the writing of property descriptions for project assessments; the survey and preparation of descriptions for the acquisition or sale of public land and for the dedication of or vacation of streets and alleys.

### **THE PRINCIPAL DUTIES ARE:**

Prepare and maintain current maps of the City relating to boundaries and zones.

Field and office check and approve all subdivision plats proposed to be made within the City.

Make surveys and prepare plats and descriptions for the establishment of streets and alleys.

Prepare descriptions for the annexation of properties to the City and revise and maintain the description of the City corporate limits.

Prepare and maintain grid maps for the purpose of numbering and naming streets and the assignment of house numbers.

Make and maintain permanent records showing the location, size, depths and grades of all sanitary sewers, storm sewers and water mains.

Survey, design and prepare quantity and cost estimates for all street and sewer construction projects.

Prepare plans and specifications for contract construction work.

Perform field engineering work for construction projects.

Provide field inspection for sidewalk and driveway construction and all contract construction.

Check location of and approve plans for proposed replacement or extension of private utility in or upon the public streets and alleys.

Provide plans and descriptions for easements of public utilities on private property or upon roads and highways not under the jurisdiction of the City.

Provide information to other departments of the City and to other governmental agencies as required.

Investigate the complaints of citizens relative to streets, drainage, sidewalks and sewers.

## **OBJECTIVES:**

To obtain and develop engineering control data for over all maps particularly of newly annexed areas and sufficient fringe areas likely to be annexed for the purpose of making a comprehensive layout system of water mains, sanitary and storm sewer projections and arterial streets to more effectively and economically serve the purpose of the City.

To develop and maintain accurate records of project unit costs to facilitate job cost estimating.

With the adoption of the Comprehensive Plan for the City establishing the approximate location of major and arterial highways requiring more than normal right-of-way widths, projections of such arterials should be made on sufficiently large scale maps to show how properties will be affected; where building might be restricted, and where land reservations should be made for right-of-way purposes in proposed subdivisions.

To continue the program of sealing and repairing existing sanitary sewers to reduce infiltration of ground water and to reduce the overloading of the sewage treatment plants.

To establish a plan for the maintenance of substandard City streets.

To strive for greater and more efficient service to the public..

1. Engineering Office Work:

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Preliminary drawings and Records	58	44	75	est. 85
Project design and plans completed	24	29	44	est. 52
Contract Plans and Specs. completed	10	5	8	est. 12

2. Private construction contract requiring approvals and inspection by the City.

Jan Park	1969-71	Buena Vista	1971
Hollman Park	1970-71	Riviera Park	1971

3. Subdivision Plats checked and approved by City

<u>1969</u>	<u>1970</u>	<u>1971</u>
Alderwood Park Plat No. 2	Padgett Park No. 2	Dawson Creek
Bentley Orchard No. 3	Parkland	Ide Park No. 2
Beaumead	Golden Acres	Roshak Park
Ide Park (Vacated 71)	Hillmeade No. 4	Chantree Lane
Jeaned Oaks	Parkwood	Hughes Park
Jonesfield No. 2	Dolaire	Hillaire No. 3
Buena Vista	Edward Meadows	
WACO West	Oakland	
Willow Oak Park		

4. Easements and Permits Obtained by City for Utilities

	<u>1969</u>	<u>1970</u>	<u>1971</u>
Water	8	12	6
Utility	5	6	8
Sanitary Sewer	22	28	10
Storm Sewer	4	7	6

5. Permits issued or approved for private Utilities.

	<u>1969</u>	<u>1970</u>	<u>1971</u>
Gas	31	26	36
Phone	6	8	9
Electric	3	6	9

6. Right-of-Way Dedication

	0	0	1
Street opening for dedication	0	0	2
Vacation of Right-of-way	1	1	2

7. Property Acquisition by the City

1969 - None                      1970 - None  
 1971 - Pump Station Site, 1S5-26, Levi A. Lovegren, B. 814, P 969  
           Parking Lot, Lot 8 Bk 10, City of Hillsboro, Ella Keenon,  
           B 829-P 756  
           For S.E. Maple Street Extension, 1S2-5, Charles F. Plapp,  
           B 831-P 189

8. Contract Dollar Value of Projects let by this Department

	<u>1969</u>	<u>1970</u>	<u>1971</u>
Street	\$41,993.18	\$ 38,448.03	\$ 185,982.76
Paving	20,750.26	44,476.04	9,452.50
Sanitary Sewer	47,158.44	42,273.70	8,826.80
Sanitary Sewer Sealing	0.00	0.00	64,760.56
Storm Sewer	0.00	38,350.25	0.00
	<hr/>	<hr/>	<hr/>
TOTAL	\$ 209,901.88	\$163,548.02	\$ 269,022.62

# 9. Summary of Survey Made by the City

	<u>1969</u>	<u>1970</u>	<u>1971</u>
<b>Streets: Traverse</b>	17	17	4
Prelim. Profile	17	16	5
X-Section	19	6	9
Topog.	8	8	6
Staking (const.)	18	6	8
<b><u>Sanitary Sewer:</u></b>			
Traverse	3	2	5
Profile	6	2	6
Staking (const.)	7	1	5
As-builts	6	0	6
<b><u>Storm Sewer:</u></b>			
Traverse	3	2	3
Profile	6	3	4
Staking (const.)	8	7	7
As-built	6	3	3
<b><u>Sidewalks:</u></b>	3	1	1
<b><u>Water</u></b>	0	6	5
<b>Misc. Surv.</b>	<u>0</u>	<u>5</u>	<u>5</u>
<b>TOTAL PER YEAR</b>	127	85	83

10. Street Status in the City

- A. 27.7 miles streets with gravel or oil surface; need full improvement to be brought up to City Minimum standards.
- B. 2.4 miles fully improved streets requiring widening to come up to City minimum standards.
- C. 8.3 miles of Right-of-Way dedicated, unimproved.
- D. Total 38.4 miles need improvement in the City of Hillsboro (includes County and State roads)

11. Total Street Mileage in City

City Streets	56.5 miles
Streets under County Jurisdiction	13.4 miles
State Highways	<u>6.8 miles</u>
Total Mileage in City	76.7 Miles

## **WORK PROGRAM FOR 1972 CONSTRUCTION SEASON**

The following are projects to be under construction during the 1972 construction season:

### **STREET PAVING:**

These are projects constructed, ready for paving during the 1971 season. The costs shown are approximate only.

Streets in Bentley Orchard Plat No. 3  
N.E. Sunrise Lane from N.E. 17th Ave. to N.E. 25th Ave.  
S.E. Maple St. from S.E. 13th Ave. to approximately 16th Ave.  
S.E. Pine St. in Ewing Subdiv. No. 2

Total Estimated Cost \$28,600.00

### **STREET CONSTRUCTION IN THE FOLLOWING SUBDIVISIONS:**

Chantree Lane, Ide Park No. 2, Birchaire No. 2, Parkwood,  
Hillmeade No. 4, Hughes Park, Hillaire No. 3 and Merrillee Park

Total Estimated Cost Including Paving \$353,700.00

### **DEDICATED CITY STREETS INDICATED TO BE IMPROVED THIS SEASON:**

N.E. Grant St. from end of existing improvement to 18th Ave.  
S.E. Walnut St. from 16th to 18th Ave.  
S.E. Maple St. from 16th to 18th Ave.  
S.W. Connell Ave. from Walnut to Cedar

Total Estimated Cost Including Paving \$68,040.00

### **SANITARY SEWER CONSTRUCTION:**

Parkwood Subdiv., Hillmeade No. 4 Subdiv., Hillaire No. 3 Subdiv.,  
Chantree Lane Subdiv., Ide Park Subdiv., Hughes Park Subdiv.,  
Merrillee Park Subdiv. and the following streets:

N.E. Brogden St. from 28th Ave. to 32nd Ave. (to serve Hillmeade #4)

S.E. Maple St. from 13th Ave. to 18th Ave.

S.E. Walnut St. from 16th Ave. to 18th Ave.

N.E. Hood St. from 9th Ave. to Jackson School Road.

Estimated Cost Including Engineer., Inspection  
and Contingencies

\$199,300.00

**STORM SEWER CONSTRUCTION:**

**N.E. Grant Street from the end of improvement to 18th Ave. Section:**

**36" and 42" pipe in place including Engineer, Inspection and  
Contingencies \$ 9,430.00**

**Sewer to serve Parkwood Subdiv., 32nd Ave. & Brogden  
Intersection and Hillmeade No. 4 Subdivision:**

**1320 Lin. Ft. 18" pipe, 530 Lin. Ft. 12" Pipe and  
642 Lin. Ft. of 8" pipe. in place, including  
Engineer, Inspection and Contingencies \$29,430.00**

**ESTIMATED TOTAL OF ALL SCHEDULED CONSTRUCTION \$688,500.00**

In addition to the foregoing projects, there are new subdivisions in the planning stages, approved by the Planning Commission, for which the developers have indicated a desire that construction and development be begun this season, namely:

Edwards Meadows Plat No. 2  
Singing Woods Subdivision

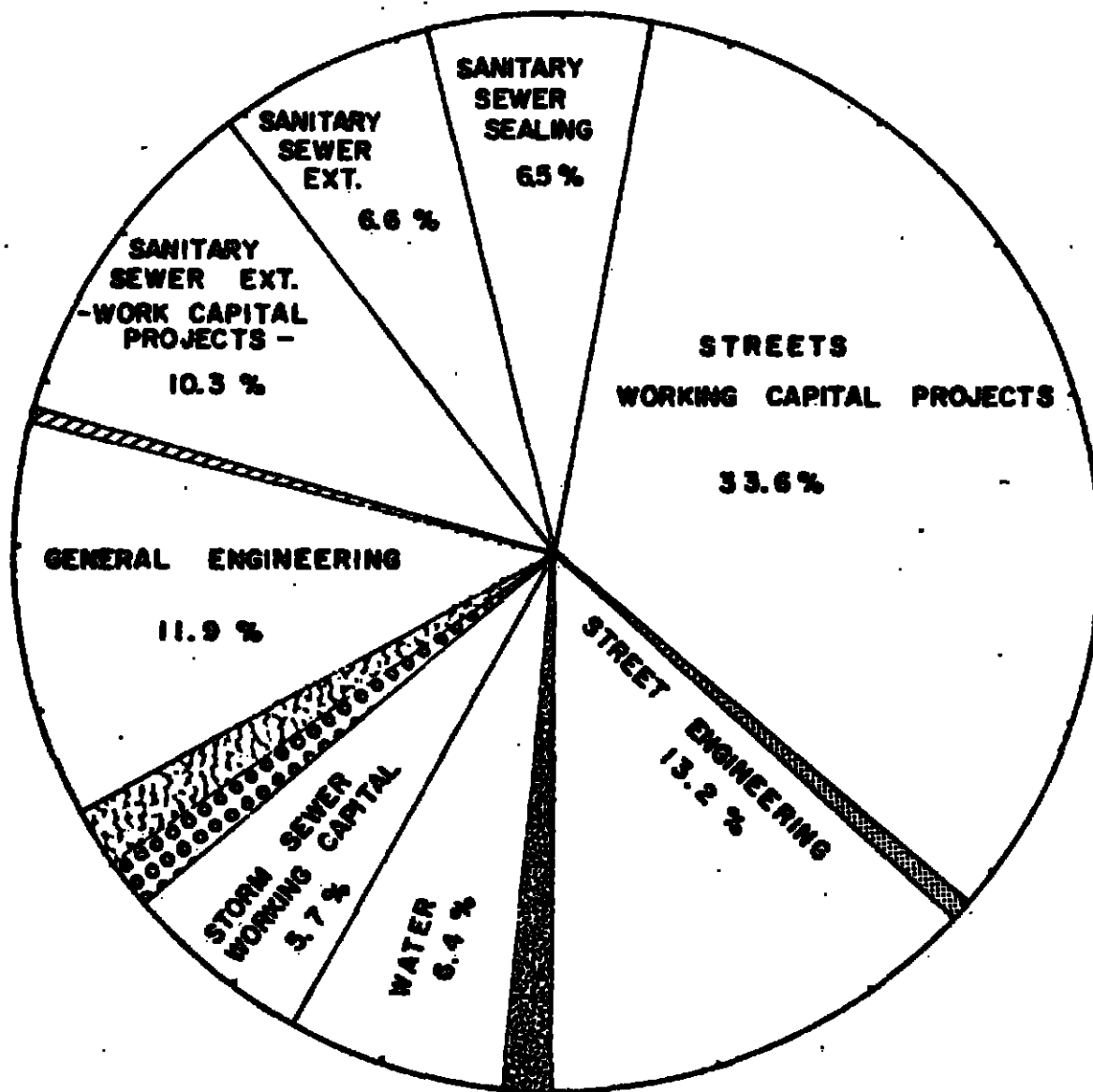
Other subdivisions, preliminary plats approved by the Planning Commission, are in the process of platting and for which a construction schedule has not been indicated are:






Brian Park Subdivision, Patti-Ron Subdivision, Val Park Subdivision and the Planned Unit Development at S.E. 24th Ave. and S.E. Maple Street.

All of these developments will require street, sanitary sewer and storm sewer design and construction, the extent of which is not known at this time.

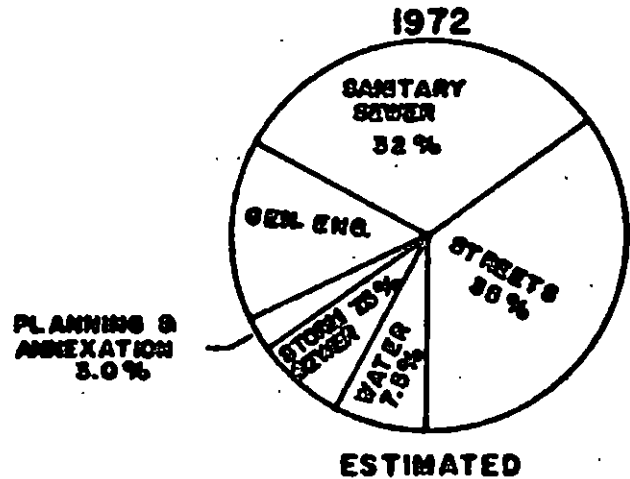
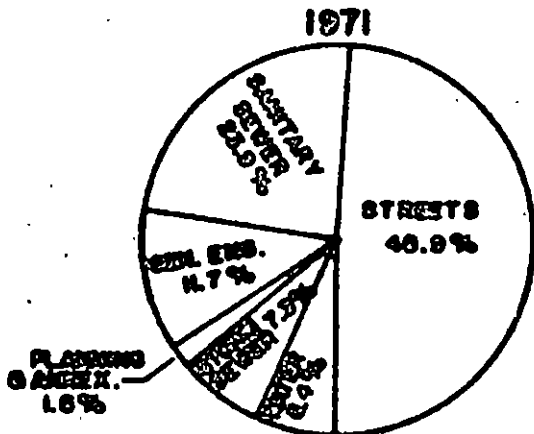
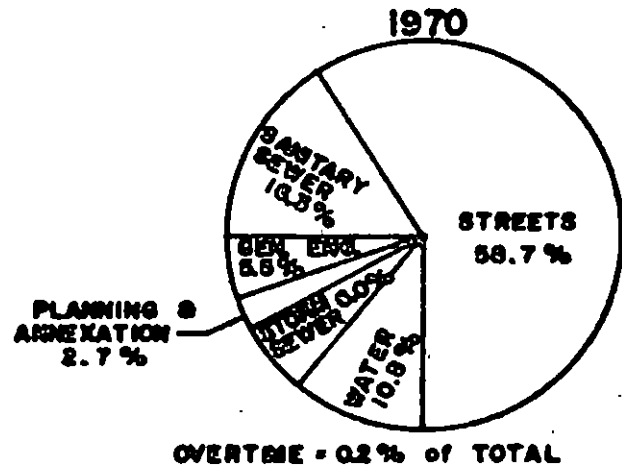
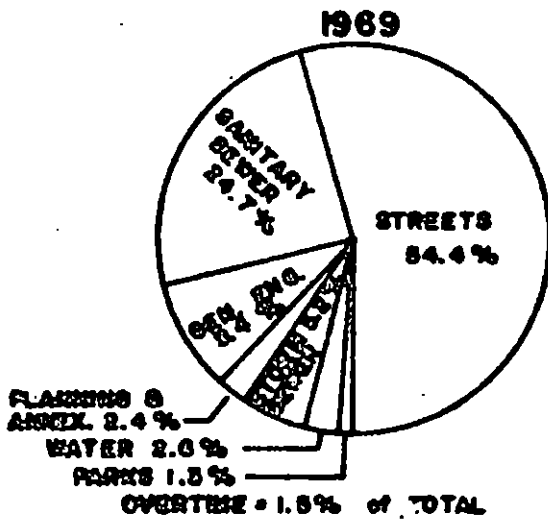
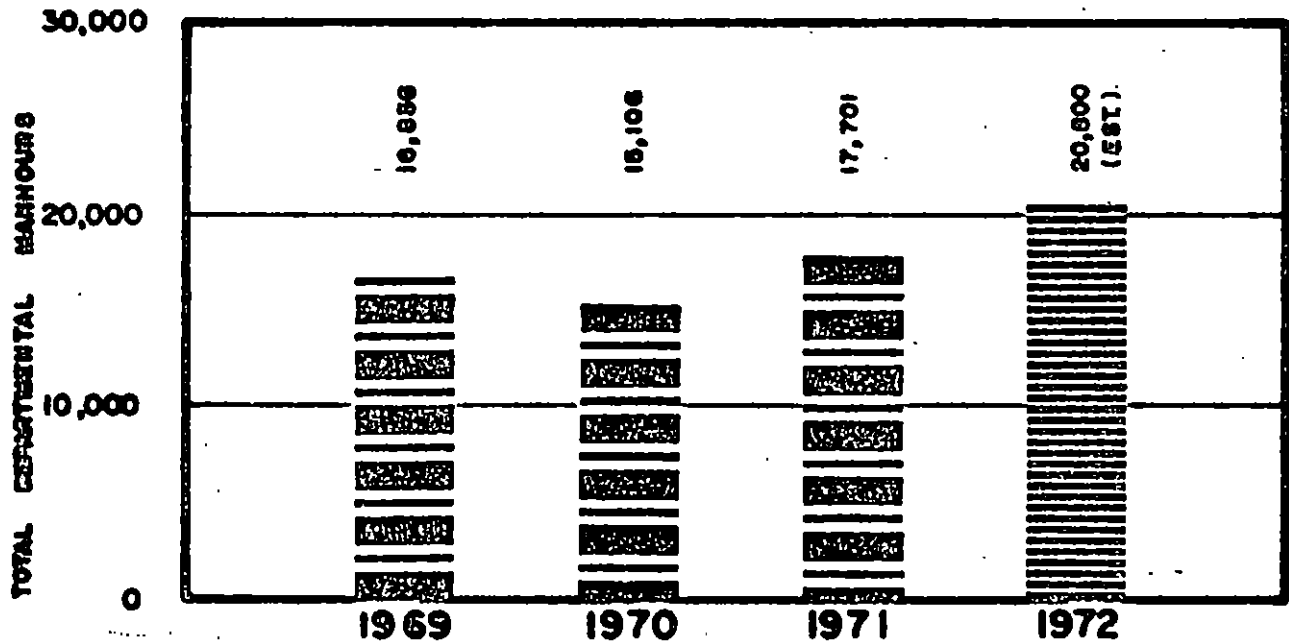
Sanitary sewer construction to serve Edwards Meadows Plat No. 2 and the Singing Woods Subdivision will be quite extensive and costly.

# 1971 MANHOURS DISTRIBUTION FROM PAYROLL



	STREETS , TOPIC PROGRAM - - - -	0.6 %
	SANITARY SEWER, BOND FUND - - -	0.5 %
	PLANNING - ZONING - ANNEXATION -	1.8 %
	STORM SEWER GENERAL - - - - -	1.5 %
	SIDEWALK - - - - -	1.4 %

# MANHOOUR DISTRIBUTION

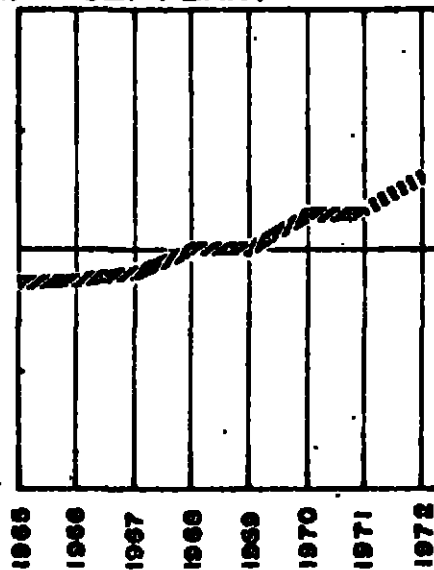


# MATERIAL AND LABOR COST

**8" CONCRETE SEWER PIPE PER.  
LIN. FT. FOB. PLANT**  
\$ 1.50

\$ 1.00

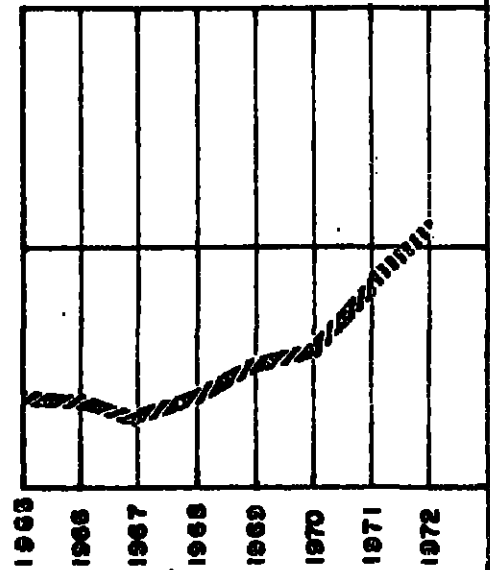
\$ 0.50



**A-C. PAVING PER TON**  
\$ 15.00

\$ 10.00

\$ 5.00



**3/4"-0" CRUSH ROCK FOB PLANT**

\$ 2.50

\$ 2.00

\$ 1.50



**CONSTRUCTION LABOR PER HOUR**

\$ 7.00

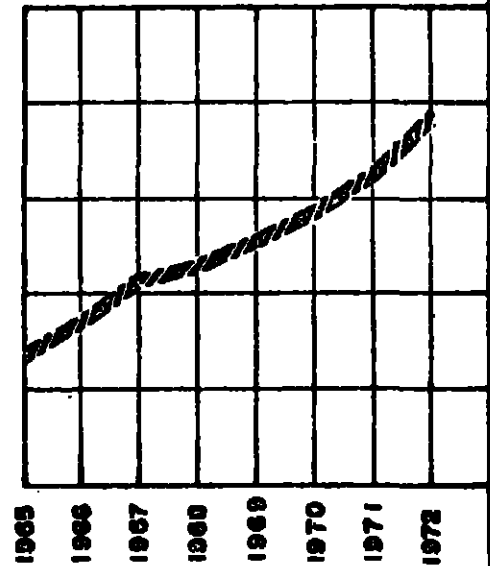
\$ 6.00

\$ 5.00

\$ 4.00

\$ 3.00

\$ 2.00

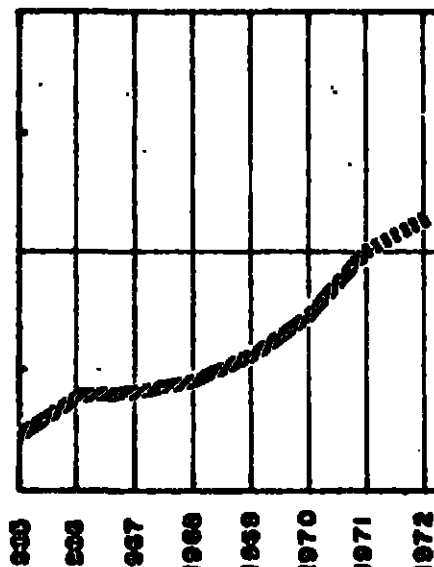


**CONCRETE CURBS PER LIN. FT.**

\$ 2.00

\$ 1.50

\$ 1.00



**TYPICAL CITY EMPLOY HOURLY WAGE**

\$ 7.00

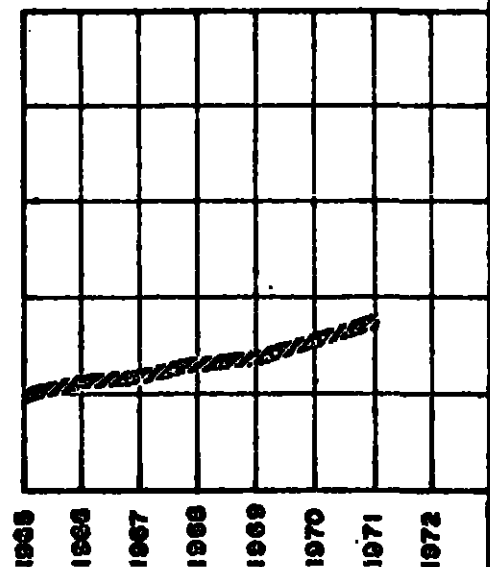
\$ 6.00

\$ 5.00

\$ 4.00

\$ 3.00

\$ 2.00



# HILLSBORO URBAN AREA MAP

## STREETS NEEDING IMPROVEMENT

- STREETS WITH GRAVAL OR OIL SURFACE
- FULLY IMPROVED STREETS REQUIRING WIDENING
- RIGHT-OF-WAY DEDICATED — UNIMPROVED

SCALE IN FEET  
0 800 1600 2400

DEC. 1971

STREETS