

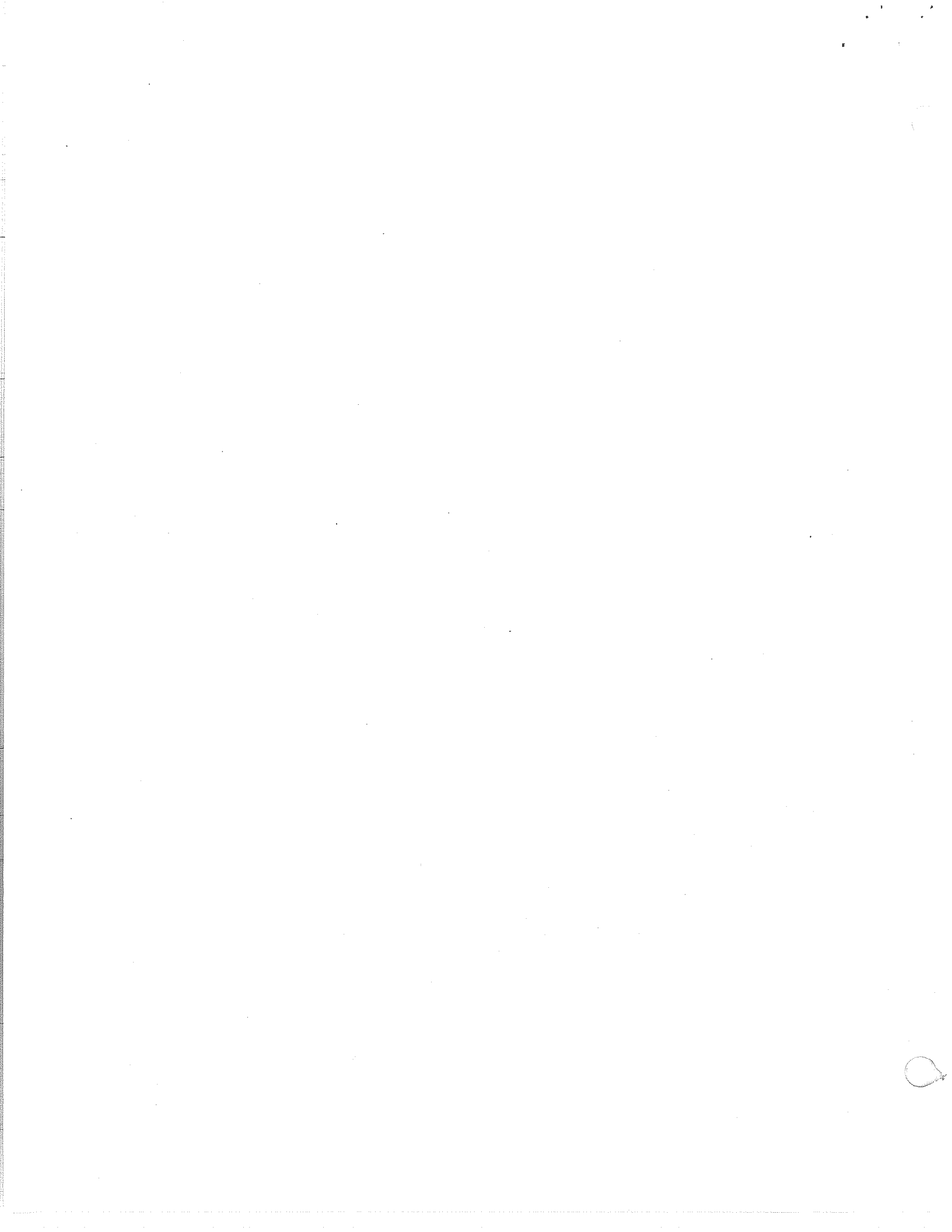
STATE PRINTING AND PUBLICATIONS

A Report by
the Governor's Task Force
on Waste and Mismanagement

June 22, 1978

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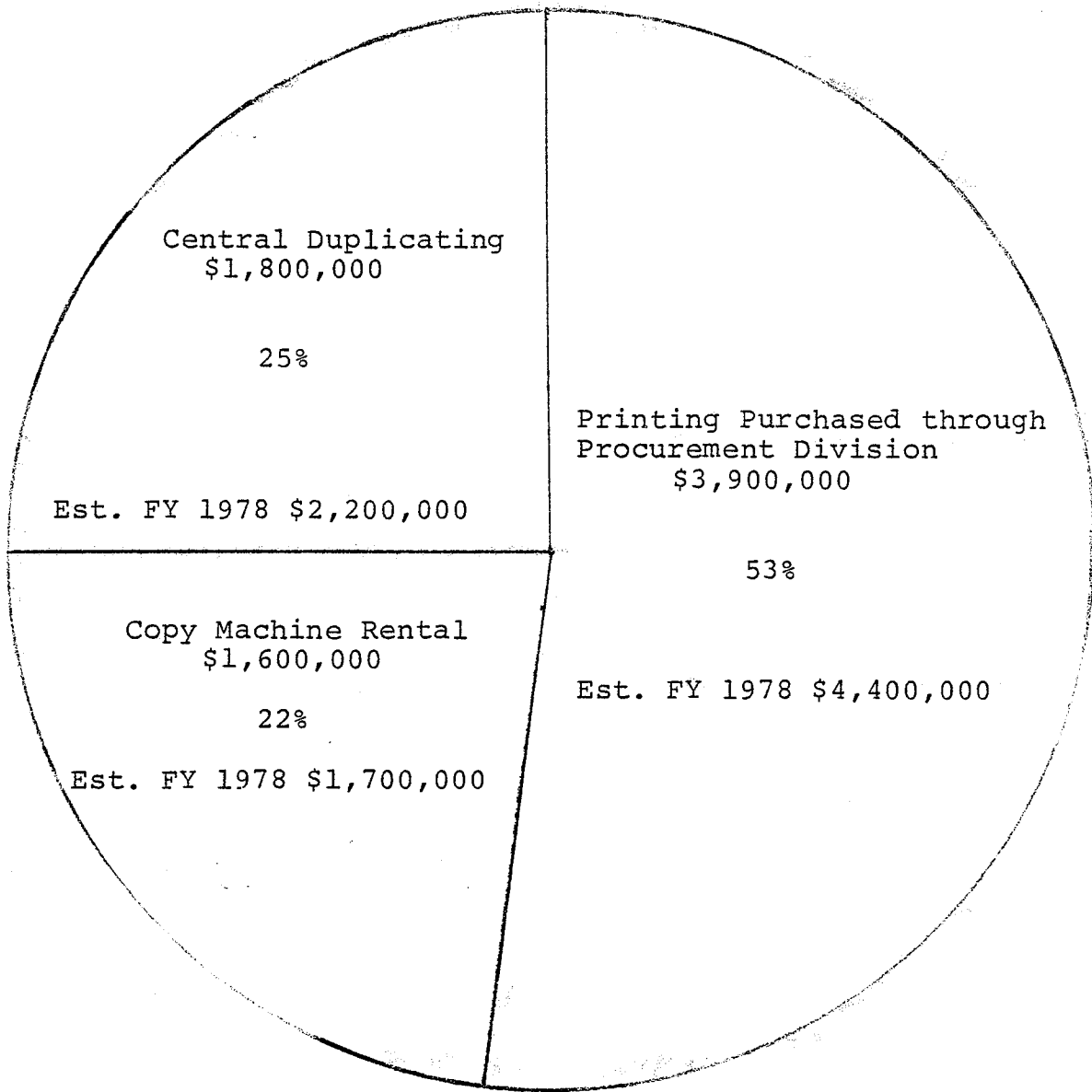
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PRINTING EXPENDITURES

FISCAL YEAR 1977

\$7,300,000



ESTIMATED FISCAL YEAR 1978

\$8,200,000



STATE PRINTING AND PUBLICATIONS

Introduction

Over 24,300 printing requisitions were processed in Fiscal Year 1977. Twenty-one thousand were processed in-house through the copy centers and overloads. Another 2,800 were sent to Procurement for bidding. Of these 24,000 requisitions, approximately ten percent were reprints, approximately 80 percent were relatively simple jobs with uncomplicated specifications (camera-ready, black ink, standard-size). The remaining ten percent of the jobs called for an endless variety of combinations of specifications.

The success or failure of a vendor in interpreting and complying with the specifications is often a subjective judgment. Quality control is not a matter of durability, function, or effectiveness, but of craftsmanship and training. Perhaps the major difference between the procurement of printing and other items is in its intangibility. Printing does not produce a book, a pamphlet, a report, or a form. It produces information or information gathering devices. The information needs of the state are diverse and often unpredictable. An agency may be able to schedule its purchase of desks, automobiles, and pens with an admirable regularity, but the dissemination of information occurs usually as a result of change and innovation. And while agency personnel may not mind waiting a month or two for a typewriter or office chair, printing always seems to be needed "as soon as possible."

Because of this situation -- the great variety of specifications and the urgency with which new information is needed --

the process involved in the requisition of printing is the subject of criticism from everyone involved in the process -- the agencies, the printing and procurement personnel, and the vendors. Some of the complaints are the result of a certain degree of ignorance about the process. For example, many of the people requisitioning printing are unaware of the time involved in processing a requisition through their own procurement divisions or the legal requirements for letting bids to outside vendors. Some are caused by bureaucratic hostilities, such as Procurement's refusal to accept responsibility for the accuracy of specifications, and Publication Division's general unhappiness that printing buying was taken from that division and placed in Procurement in 1972.

Printers and buyers comment on lack of planning by agencies, who always seem to need printing "right away." Vendors and users despair of the cumbersome requisition process and its general inflexibility. Vendors question the expertise of those writing the specifications, or those interpreting them. Some of these problems will always be with us. Agency deadlines will not always coincide with print shop production schedules, the nature of the bureaucracy will always demand a requisition process, and vendors and users will continue to disagree about the quality of the finished product. The rest of the problems we can do something about.

RECENT CHANGES IN THE STATE'S PRINTING SYSTEMS

In order to understand some of the present problems with the printing system, it is necessary to understand some of the decisions that have been made about it in the past.

Until the early 1970's the Division of Publications and Central Services and Central Duplicating were two separate entities. The State Printer in the Division of Publications purchased outside printing, and Central Duplicating printed in-house. State agencies decided whether their jobs would be printed internally or externally. In 1972, the Loaned Executive Action Program (LEAP) recommended that the State Printer and Central Duplicating be combined in a Printing Section managed by the State Printer, and that the buying function of the State Printer transfer to the Procurement Division. LEAP reasoned that combining the two would:

. . . establish a central focus point to process all printing requisitions. State agencies would send their requisitions through the Printing Section and be assured knowledgeable personnel would channel the job properly. Central Duplicating resources would be more efficiently utilized, expenses should be reduced, and service to user should be improved.

Buying was transferred to Procurement for the reason that:

This duplication of function causes unnecessary clerical expenses in handling the sending out of bids, the awarding of bids, and the typing of purchase orders. This duplication is in direct contradiction with the overall organization structure which shows all of the other buyers are in the Procurement Division.

It is interesting to note that at the time LEAP commented on "poor service," indicating that buying printing took 46 days from the date of requisition to delivery. Internal printing took 12 days. It still takes that long to buy printing -- two to eight days for requisition process and mailing to Publications, two to eight days in Publications, an average of 14 days in Procurement,

and four to six weeks at the printer. Internal printing has speeded up considerably. Printing ordered on the 619 forms takes an average of four days. Internal printing ordered on the 523 forms takes a median of 11 days.

In 1975 the Printing Liaison Officer (PLO) position was established. This concept, borrowed from the State of Wisconsin, is basically a sound one. The PLO in a state department or division would be trained to write printing specifications and act as a liaison between the State Printer or the vendor. Unlike Minnesota, however, Wisconsin's PLOs are in the upper management levels. Their relative job stability has permitted an accumulation of expertise. Also, unlike Minnesota, Wisconsin's external printing is purchased on a series of contracts and not bid out on an individual job basis. Because of contract arrangement, agency PLOs approach the vendors directly, thus avoiding a lengthy requisition process. Wisconsin PLOs are also classified according to expertise and training. The highest class PLOs, for example, have the authority to write specifications and purchase the most sophisticated kinds of printing at prices set by contract. In Minnesota, then, we have the baby but not the bath water. Most PLOs are in clerical positions, have little incentive to acquire the necessary expertise, write minimal specifications, and serve basically as a liaison and as a vendor contact within an agency.

Last biennium another important decision was made which changed the direction of the state's printing: The Legislature removed the restrictions on the size of the presses the state was permitted to own. For years the state could own only 11" x 17" duplicators. The change in the law meant the state could buy

larger presses, increase the volume printed in-house, eliminate the expensive and time-consuming procurement process for many long run jobs, and save money by printing this expanded volume at lower than market rate.

As a result the Publications Division is buying larger roll-fed presses and other new equipment and moving it into remodeled facilities at 117 University Avenue. Some presses and bindery equipment will remain in the present Central Duplicating shop in the Transportation Building, and that shop will, in effect, become a copy center like those in Centennial Building and Capitol Square, and print only short-runs. This set-up is typical of the states which have centralized printing facilities. It's also a promising state printing strategy, but it is questionable whether it will be efficient or cost-effective under present management policies in the Publications Division.

In summary, past decisions of the Governor (LEAP), the Legislature, and the Department of Administration have broadly defined the present printing system. It's basically a workable one, but we believe it needs some fine tuning in some areas, procedural and policy changes in others. The state relies heavily on printed forms, envelopes, brochures, letters, reports, rules and regulations to conduct its business and to keep the public informed. The systems supplying these must be responsive, flexible, efficient, and cost-effective.

THE REQUISITION PROCESS

Printing Liaison Officers

Findings

The Printing Liaison Officer is the liaison between the state department or division requesting printing and Central Duplicating, the State Printer, the Procurement Division, and the outside vendor. The PLO, or the alternate PLO if the PLO is unavailable, writes the specifications and initiates and follows the requisition through its various stages. The PLO system was established in Minnesota in 1975 after a study of the Wisconsin printing system, where the PLO program has existed for ten years.

The Task Force feels that the PLO function is a sensible and important one. Presently, however, PLOs are haphazardly placed in many state agencies, their responsibilities are poorly defined (are they requisition writers or contact people?), there is little incentive to learn the highly technical job of specifications writing if it is not included as an important part of a worker's job description, and the turnover of PLOs in clerical positions prevents an accumulation of expertise.

PLOs have varying levels of expertise and are found in different levels of agency staffing patterns. Approximately 20 percent are middle-management procurement and accounting staff (Public Safety, Department of Transportation), 20 percent are public information and communication staff (Department of Natural Resources, Economic Development), the remainder are clerical,

secretarial, and supervisory staff. Usually they are in the administrative support sections of each agency. Rarely is the PLO function part of the person's job description. The Publications Division holds training seminars for the PLOs and provides technical assistance to them, however attendance is disappointing and the turnover is rapid. According to the Wisconsin State Printer, although the PLO function originally was given to accounting and procurement personnel, today approximately 75 percent of the PLOs are personnel in the communications and publications sections of their agencies. Since accurately written specifications do more to expedite the printing process than any other factor an agency has control over, and since information and communications staff have a greater awareness of an agencies publications needs and are better able to determine the most economical means of printing and distribution, the Task Force feels that a similar transfer of the PLO function should take place here.

The Task Force believes further that, where feasible, agencies should centralize their printing and publication efforts, including the requisitioning of forms, through their information and communications section. That staff possesses sufficient expertise to advise on the necessity and advisability of printing and the most efficient and least expensive way of doing so.

The Task Force also recommends that agency PLOs be required to attend PLO training seminars.

Publications Review and Standardization Committee

Findings

The recommendation regarding this committee is of the "fine-tuning" variety, and will speed the printing process for new publications.

To order printing, the PLO fills out either Reproduction Requisition Form 619 or Requisition for Printing 523. The 619 form is used for smaller, relatively simple duplicating or copying jobs and is sent directly to Central Duplicating. The 523 form is sent to the State Printer where specifications are verified and a "make or buy" decision is made. If the requisition specifies the printing of a new publication or periodical, the requisition and accompanying copy are set aside for review by the Publications Review and Standardization Committee which meets Wednesday morning at 8:00 a.m. The committee consists of PLOs from various agencies, the State Printer, and the Director of Publications. Its purpose is to see that new publications abide by the Department of Administration's printing policies, standards and guidelines. The committee scans the copy and requisitions and points out problems and violations. The committee then makes a recommendation to approve, table, or return the requisition and copy. The Task Force recommends that the responsibility for reviewing new publications for compliance with printing standards be transferred to the staff of the Publications Division and that the present committee become an appeal and advisory body, convened at the request of agency personnel or the State Printer, with the authority to appeal decisions to the Commissioner of Administration.

This recommendation is made for the following reasons: The printing requisition may be delayed as much as a week (or longer if it is tabled) until the next weekly committee meeting; new publications on Form 619, which are printed in Central Duplicating, rarely undergo this scrutiny, and, in the case of periodicals, subsequent issues are exempted from this procedure.

Agency personnel should be aware of printing standards (a copy is available from the Publications Division), for if a violation is found, the printing requisition may be delayed until the violation is corrected.

Recommendations

The Task Force recommends that the Governor direct commissioners and state agency heads to take the following actions:

1. Commissioners and agency heads shall transfer the PLO function to a staff person most closely associated with an agency's printing needs, preferably to personnel in the agency's information and communications sections.
2. In smaller agencies where no such information or communications sections exist, the PLO function shall become part of the job description of management or supervisory staff -- a person who will stay on the job long enough to want to accumulate expertise.
3. Commissioners and agency heads shall centralize, where feasible, agency printing and publications efforts, including the requisitioning of forms, through information and communication sections.

4. Commissioners and agency heads shall require attendance of PLOs at PLO training seminars.
5. The Commissioner of Administration shall transfer the responsibility of screening new publications to determine if they are in compliance with printing standards from the Publications Review and Standardization Committee to the staff of the Publications Division. The committee would continue to monitor compliance, and advise Publications staff on particular problems.

PROCUREMENT

Findings

If the State Printer decides a printing job is too complex or large to be run in-house, he sends the requisition to the Procurement Division. If a printing job is estimated to be over \$5,000 it is advertised for seven days; from \$2,000 to \$5,000 it is posted on the Procurement bulletin board for three days; under \$2,000 at least three vendors are invited to submit bids. Invitations to bid for these jobs are made by mail and by phone. The Procurement Division estimates that 50 percent of its purchases are less than \$300. Ten percent of printing jobs are estimated at under \$100. Two percent of printing jobs are under \$50, but over \$35.

In February, Governor Perpich ordered that changes be made in procurement procedures that would greatly affect printing buying. One change raised the Authority for Local Purchase from \$35 to \$50. This would affect only two percent of requisitions currently processed by the printing buyer. The Governor also stated that

When the amount involved is more than \$35 but less than \$200, (agencies) may make purchases locally; however, agencies must obtain three bids...there is apparently a widespread misunderstanding of this regulation, as many agencies interpret it to mean that no local purchases may be made where the amount involved is more than \$35."

The Governor ordered that the \$200 limit be raised to \$300, though this purchase authority should be used only in emergencies and reported to Procurement immediately. An awareness of the increased

limits of local purchase authority will result in improved service, less use of convenience copiers for emergency duplicating, and will ease the workload of the printing buyer, allowing him to concentrate on some purchasing problems described below.

The length of time needed to requisition printing from outside vendors is just as lengthy as it was in 1972 under the State Printer when the LEAP Report commented on the "poor service."

To alleviate this situation, the Task Force is recommending that the Printing Buyer, in consultation with the State Printer, determine and accept responsibility for the accuracy of specifications; that he devise, in consultation with the State Printer a production time schedule, to be followed by the vendor and the agency to ensure prompt delivery; and that the printing buyer act as an advocate for the state concerning vendor compliance with delivery dates.

A problem mentioned repeatedly by both agency personnel and outside vendors is the splitting of the oversight function between the Printing Buyer and the State Printer and the resulting duplication of effort and poor communication. While the Task Force concurs with the 1974 LEAP recommendation which placed printing buying in the Procurement Division, we strongly recommend that the Procurement and Publications divisions begin a cooperative effort to provide better service to agencies and vendors alike. For example, when the decision to buy is made, the State Printer keeps one copy of Form 523 and forwards the remainder of the requisition, along with the copy, keylines, art, or photos, to the Procurement Division, where it is assigned

to the Printing Buyer or the Buyer's Assistant. Bids are secured and an award is made. Recently the Printing Buyer has placed a notice on the requisition sent to vendors that "all specifications are the responsibility of the State Printer," and any questions the vendor has about printing specifications are referred to the Publications Division. Unfortunately, accurate information is not readily available in Publications. Alterations in specifications may have been made by the Printing Buyer of which the State Printer is unaware; the requisition copy has been filed and is not at hand; and the copy, keylines, art, and spec sheets are in the Printing Buyer's Office. The vendor is often then referred to the agency staff person who initiated the printing requisition. This wastes a great deal of time and energy, and such a process contradicts the reason for the establishment of a Procurement Division in the first place: the buyers deal with the vendors.

As mentioned before, a potential printing job involves a number of different combinations of specifications. The 2,800 printing requisitions processed by Procurement in Fiscal Year 1977 were the ones with complex specifications usually with sophisticated processing and press requirements. It is these kinds of jobs which raise the most questions with vendors, and it is important that information about them be readily available. The Task Force recommends that the Printing Buyer and the State Printer review the specifications on requisitions for accuracy and clarity, and that they meet and confer on a daily basis in the Office of the Printing Buyer.

> Another problem area mentioned often is the failure of the Printing Buyer to respond to complaints about poor vendor contract compliance and to act as an advocate for the state when a poorly printed job clearly calls for a discounting or rerun. Presently, agency information, finance, accounting, or procurement personnel attempt to resolve billing disputes. This is a Procurement Division responsibility.

Many agency personnel are unaware that there is a Procurement Complaint Form available from Central Stores. This form, or a written memo specifying vendor non-compliance should be sent to Procurement and a more adequate complaint file than now exists should be maintained in the Procurement Division. In February, the Governor also ordered the ". . . the Procurement Division establish a system of logging in all complaints and place responsibility for seeing to it that they are answered promptly and adequately with someone other than the buyer who was responsible for making the purchase."

Almost \$750,000 of the \$4 million of printing purchased by Procurement is printed forms. We recommend that Procurement investigate the economy and efficiency of placing carbon and carbon-interleaved forms on a contract basis. The state presently orders over 12,000 different carbon-interleaved forms and over 850 carbonless. The state will probably pay comparable prices to those arrived at through individual bidding, but the elimination of individual bidding will greatly decrease the requisition time and allow agencies to carry smaller inventories.

Recommendations

The Task Force recommends that the Governor direct commissioners and agency heads to take the following actions:

1. The Commissioner of Administration shall direct the Director of Procurement to set up a schedule within which printing purchases can reasonably be made in order to reduce the length of time a requisition spends in Procurement.
2. The Commissioner of Administration shall direct the Printing Buyer, in consultation with the State Printer in the Publications Division, to determine the accuracy of and accept the responsibility for printing specifications.
3. The Commissioner of Administration will direct the Printing Buyer to devise, in consultation with the State Printer, a production time schedule, to be followed by both the agency and the vendor, to ensure prompt delivery.
4. The Commissioner of Administration shall direct the Printing Buyer to discount or rerun printing orders that are not in compliance with specifications and delivery dates.
5. The Commissioner of Administration shall provide a complaint system for vendor non-compliance that provides prompt investigation and response.
6. The Commissioner of Administration shall investigate the economy and efficiency of placing carbon-interleaved and carbonless forms on a contract basis in order to decrease the time presently required to requisition these forms.

DIVISION OF PUBLICATIONS

Findings

A state print shop should provide fast reliable service of acceptable quality at or below market rates. It should provide users with rate schedules that are realistic and allow agencies to more accurately budget their printing needs. Turnaround time should be predictable and based on the size and complexity of the job. Four hour service in the copy centers for total quantities under 500, one day for quantities under 2,000, and three to ten days for 2,000 to 20,000 copies is not unreasonable. The print shop prices should cover its costs and provide a small cushion for machine downtime and equipment replacement.

Such is not the case in the Division of Publications which operates Central Duplicating and copy centers in the Centennial Building and Capitol Square. A random sample of 529 invoices indicates that the Division of Publications is operating at an average of 40 percent above market rate (depending on the nature of the job). On relatively simple short-run quantities using black ink and white paper, the state is priced at, and sometimes over, the corner fast print outlet, at its "walk-in" price list, prices which give no discount for volume and includes the cost of spending time with customers unfamiliar with printing specifications. In arriving at price comparisons, the Task Force used a random sample of invoices, with a variety of paper and bindery specifications. Most "walk-ins" are small shops with limited paper inventories and bindery equipment. They are geared to print with black ink on white 20#

PRICE COMPARISON
 PUBLICATIONS VS. FAST PRINT OUTLETS
 (8½" x 11" white, 20#, Black Ink)

No. of Copies	<u>Publications</u>		<u>Insty</u>	<u>Rapit</u>	<u>One-Side</u>	<u>Quick</u>
	X-7	303	<u>Print</u>	<u>Print</u>	<u>Mr.</u> <u>Print</u>	<u>Print</u>
50	\$1.15	\$ 2.30	\$ 2.90	\$ 2.85	\$ 2.45	\$ 2.75
75	1.59	2.73			2.70	3.25
100	2.30	3.16	3.95	3.85	2.90	3.75
150	2.88	4.03			3.35	4.30
200	3.77	4.88	5.10	4.90	3.80	4.85
300	5.46	6.61	6.30	5.95	4.70	5.95
400	7.19	8.33	7.45	7.00	5.60	7.05
500	8.91	10.06	8.65	8.05	6.50	8.15
600		9.98	9.85	9.10	7.40	
700		10.50	11.00	10.15	8.30	10.35
800		11.02	12.10	11.20	9.20	
900		13.25	13.35	12.25	10.10	
1,000		13.77	14.55	13.30	11.00	13.65

X-7 = Automatic Press

Plate = .25

Print and Paper = .015 per imp.

303 = Manual

Plate = .25

Print and paper =

Under 500 .015 per imp.

Over 500 paper plus \$1.50 per unit

PRICE COMPARISON
PUBLICATIONS VS. FAST PRINT OUTLETS

TWO SIDES

No. of Copies	Publications			<u>Rapit Print</u>	<u>Mr. Print</u>	<u>Quick Print</u>
	X-7	303	303			
	at .015		at .015			
50	\$ 2.30	\$ 4.65	\$ 4.85	\$ 5.50	\$ 4.75	\$ 5.50
75	3.16	5.46	4.98		5.15	6.50
100	4.03	6.84	5.12	6.50	5.50	7.50
150	5.75	8.05	7.11		6.25	8.30
200	7.48	9.77	9.07	8.15	7.00	9.10
300	10.93	13.22	9.59	9.80	8.50	10.70
400	14.38	16.68	10.33	11.45	10.00	12.30
500	17.83	20.70	12.93	13.10	11.50	13.90
600			13.43	14.75	13.00	
700			13.95	16.40	14.50	17.10
800			14.47	18.05	16.00	
900			16.70	19.70	17.50	
1,000			17.22	21.35	19.00	21.90

standard size paper. The customer pays a premium for other inks, paper colors or weights, or any bindery operation. For example, colored stock may cost an additional \$2.50; collating, stapling, and punching may have a \$1.50 or \$2 minimum charge. In these cases, the state's print shop with its extensive paper inventories and better equipped shops has a distinct competitive edge, yet the walk-ins are cheaper than the state in 45 percent of the invoices with "nonstandard" specifications i.e., bindery requirements, colored stock.

This is surprising. Publications price schedule (see Appendix 1) appears to be competitive and management has continually asserted that Central Duplicating and the copy centers operate at below market rate. On January 12, 1978, the Director of Publications stated that the typesetting operation is 30 to 35 percent below market rate, the pressroom 20 percent below, the camera room 35 percent below, and the bindery 30 percent below. He added that the pressmen run from 5,000 to 6,000 impressions per hour. Publications staff base these conclusions on a survey of costs published by the Printing Industry of the Twin Cities, Inc., which shows high, low, and average costs of 26 printing firms for the areas mentioned above.

According to the survey, (see Appendix 2) the average all-inclusive hour cost rate for a single-color 12" x 18" press is \$19.91. Average production is 4,833 impressions per hour at an average of \$3.89 per thousand. Publications price schedule lists a \$15 per hour charge for press time and \$1 set-up charge for each original, or \$16 per hour. Using these figures, Publications does indeed appear to be 20 percent below market rate. However, it costs

Publications \$7.36 in press time only to print the thousand impressions, far above the survey's average cost of \$3.89. Publications staff does not use these per impression costs to arrive at their market rate comparisons.

State Duplicating Costs

The Task Force tried to determine the reason for the high printing costs in the face of such apparent low hourly rates.

> Publications has no internal cost-accounting system with which to determine the accuracy of the hourly rates, nor were there any
> production standards or records to back up the 5,000 impressions per hour figure. The absence of any financial and productivity data caused us finally to examine the copies of billing invoices which show what work was done, how long it took, and what the agencies were charged. From information gathered from the invoices we found that:

1. The 15 percent overhead charge added to every invoice obscures actual composition, printing, and binding costs. It raises \$15 per hour press time and mechanical bindery rates to \$17.25, optical scanning from \$24 to \$27.60, etc. It is actually a 15 percent across the board price increase, which adds \$270,000 annually to the Publications revolving fund.
2. The number of time units needed to complete a printing or bindery job is routinely altered by the bookkeeper at the direction of the Director of Publications.
3. Agencies do not pay for paper at the cost plus a ten percent handling charge mentioned on the Publications

price schedule. Paper is marked up as much as 60 percent over Publication's cost.

4. It basically takes Publications personnel longer to perform press and bindery functions than other comparable duplicating shops.
5. Publications is making a 77 percent profit on their Xerox 9200 copiers.

Perhaps the clearest way of discussing the various prices charged to agencies by Publications is in terms of the cost centers identified on the printing requisition itself.

Plate Charge: Included under this heading are the kind, number, and cost of plates and the set-up charges. The plates most commonly used are electrostatic -- or paper -- plates. The published price to agencies for an 8½" x 11" plate is 25 cents and for an 11" x 17" plate is 50 cents. The manufacturer guarantees 500 impressions from a paper plate, although 1,000 impressions is not unreasonable. When more than 500 copies are run, Publications charges for two plates, although the worksheet shows that only one plate was used. For example, 700 copies of a six-page book would require that six plates be made at a charge of \$1.50 or \$3 depending on the size. Publications charges for 12 plates, although only six are actually used.

There is a \$1 set-up charge for every plate put on the press. This charge covers the cost of "taking off the plate, and putting a new one on the cylinder." There is no set-up charge for the automatic presses for quantities under 500 per original. A set-up charge is added for runs over 500 copies per original, even though the plate is placed on the cylinder automatically.

Paper: The "Price Schedule for Central Duplicating Billing" (see Appendix 3) states that paper stock and bindery supplies are charged to agencies at "cost plus ten percent for handling and spoilage." The Director of Publications states that the ten percent handling charge includes "waste, spoilage during make-ready, storage, and handling."

The mark up on paper is much greater than ten percent, however. The most commonly used paper, for example, is No. 4 20# white 8½" x 11" suphite. Publications buys this paper from three different vendors under three different contracts at \$3.20, \$3.28, and \$3.44 per thousand. It is sold to agencies at \$4.30 per thousand, a mark up of 34, 31, and 24 percent respectively. Colored 8½" x 11" 20# is purchased for \$3.81 per thousand and sold to agencies at \$5.72, a 50 percent mark up. Additional paper prices are found in Appendix 3.

In addition to the mark ups mentioned above, the billing clerk adds another 1.5 to 5 percent to the invoiced paper costs to cover spoilage during the initial press run, although, according to the Director of Publications, "spoilage during make-ready" is included in the ten percent paper handling charge. Then the 15 percent overhead charge is added at the bottom line. Because of these three mark ups, paper on our previous examples purchased by Publications at \$3.20, \$3.28, and \$3.44 ultimately costs the agency \$5.14 per thousand. This is not a mark up of ten percent, but of 61, 56, and 49 percent, depending on the source of supply, above Publications cost. It should be noted that agencies receive no paper price discount for two-sided duplicating in quantities less than 500.

Operations: Another reason for the high cost of printing and binding is that it takes longer to perform press room and bindery

functions. For example, the state's duplicating overload contractor, using comparable duplicating equipment, charges \$2.50 for the press time needed to print 1,000 copies on 20# paper. (Contract prices are charged on a per impression basis, not according to an hourly rate.) Invoices from Publications indicate that it takes four units of pres time to print 1,000 copies. Four units at \$1.50 per unit is \$6. Add the 15 percent overhead charge, and the cost of printing 1,000 sheets comes to \$6.90. (On page 20, the cost per thousand is \$7.36. This cost includes the set-up charge, which is included in the Printing Industry Survey average hourly rate.) Two certified public accountants, John Bennett of Peat, Marwick, and Mitchell, and Vernon Kowalsky of Ernst and Ernst, loaned to the Task Force by the Minnesota Society of Certified Public Accountants, analyzed direct labor and equipment utilization for the month of February. They found the utilization "reasonably acceptable." One possible explanation, then, for the high press charges could be that too much time is spent in the set-up and make-ready portions of the press room.

Cost comparisons in the bindery are more difficult to make primarily because of invoicing procedures and because machine operations are usually accompanied by a number of units of "hand gathering" at \$1 per unit. The absence of per sheet costs make direct price comparisons difficult. Pricing finished jobs on the "walk-in" price schedule, however, revealed that over 40 percent of the jobs with bindery specifications could have been purchased from walk-ins at less expense. Publications is generally less expensive where a machine collator and stitcher are used, and there is no hand labor.

In order to obtain an overall view of a comparison of Publication's prices with the overload contractor, we randomly took 100 completed jobs with varying paper, size, ink, and bindery specifications and priced them at overload contract rates. (See appendices 4 and 5.) The 15 percent overhead charge was added to the overload contract price to cover invoicing and processing costs and to ensure an accurate comparison. We found the greatest price disparities occurring in the smaller jobs of under \$25. There Publications charges were approximately 40 percent higher than the overload contracts. On \$50 to \$100 jobs, Publication's charges were 30 percent higher; \$100 to \$200, 15 percent higher, and over \$200, six percent higher.

The charge discrepancy is less in the more expensive jobs for the following reasons: These tend to be either long-run jobs or jobs requiring a lot of bindery work. On long-runs, the initial charges for set-up and make-ready are offset by low per impression costs. Publications is competitive in mechanical bindery operations with the overload contractor and generally complex bindery work can be performed more cheaply. Last, neither Publications nor the overload contractor is competitive after a point. Long-runs and complex binding operations can always be performed cheaper by printers with larger and faster presses and bindery equipment. However, the bulk of Publications requisitions fall in the under \$100 category.

As mentioned previously, Publication's bookkeeper routinely alters the number of units recorded on the job sheet by the press or bindery workers in the copy centers. The bookkeeper explained that the number of units were decreased because bindery workers from the Division of Vocational Rehabilitation work more slowly. However, alterations

also are made in press operations. A random sample of 353 invoices or 8.5 percent of the 7,000 523 forms showed that 23 percent of the forms were obviously altered, that is, the bookkeeper using a red or black pen to add up the billing, moved over to the Operations column and changed the number of units in press and bindery operations. (Alterations in blue ink were harder to determine and were not included as changes.) Fifty-two changes involved bindery operations where the Division of Vocational Rehabilitation personnel work. However, 21 changes increased the number of units; 31 changes decreased the number of units. There were 23 alterations in the press operations where no Division of Vocational Rehabilitation personnel were employed. In 13 cases, the number of time units was increased; in 10 cases, decreased. In other words, in 23 percent of the sample, the work billed had no relation to the work actually performed, and agencies were billed what Publications thought the job should cost, not what it actually did cost. In 11 percent of the sample, the agencies were billed for more than it cost to produce the job.

Basically, these changes can be viewed in one of two ways. They are either a means of gaining additional revenue to cover costs or they are haphazard attempts to impose consistency in the absence of any kind of production standards. The Task Force believes that the latter is the case.

Lack of production schedules and work standards in press and bindery operations also cause price inconsistencies. Our random sample shows that 500 copies of one original took two press units to print (three jobs), three units (twelve jobs), and five units (one job). However, if the work sheet showed two or five units,

it was almost always changed to three. Printing 1,000 copies of one original took three units (one job), four units (six jobs), or seven units (one job). When more than one original are involved the number of units is even more unpredictable. Five hundred aggregate copies, for example, can take two, three, or four units. The absence of production standards account for the price discrepancies among identical jobs. Two issues of the Legislative Library's Checklist, published in September, 1977, with identical specifications cost \$124.62 and \$139.49.

The alteration of time units and the variations in the amount of press time used to print identical jobs is one more indication the \$15 hourly press and bindery rates are more mythical than real.

The 15 percent overhead charges: It is not clear why this 15 percent overhead is added to every printing invoice. John Bennett, one of the CPA's, was told it covered the overhead costs of the Department of Administration which are charged to the Publication's budget. These costs were \$121,000 in Fiscal Year 1977 and included portions of the salaries of the Commissioner, Deputy Commissioner, and Assistant Commissioner who are responsible for the Publications Division and the cost of services rendered to Publications by Administration's personnel and fiscal services division. However, earlier the Director of Publications stated that the \$15 press and bindery rates included "equipment amortization; labor; fringe benefits; division and departmental overhead; and make-ready, such as set-up, paper guides, inking, and other nonchargeable supplies." The Task Force feels that the 15 percent overhead charge is simply a mechanism to bring in revenue to cover increased

costs and obscure true printing costs. While a 15 percent charge amounts to very little on individual jobs, it quickly adds up. If Publications matches its Fiscal Year 1977 revenues of \$1.8 million, which it certainly will, the 15 percent charge will comprise \$270,000 of that total. Without a cost-accounting system that delineates cost centers, it is impossible to accurately allocate these funds.

Xerox 9200: The actual costs of the Xerox 9200's were easily arrived at since there is a per copy cost rather than hourly rate. To determine the cost and price differential, the Task Force gathered a one-month volume of invoices that are representative of the average monthly volume of the Xerox 9200 in Central Duplicating. Using the Xerox rental plan and information from other sources concerning labor, supplies, and overhead costs, we found that it cost Publications \$5,375.35 to run 293,400 copies or .0183 per copy. (See Appendix 6.)

According to the Price Schedule for Central Duplicating Billing, Publications charges users 25 cents per original, two cents a sheet uncollated and an additional .005 per sheet collated. These prices include paper. The charge to the agencies for the same 293,400 copies mentioned above was \$9,528.90 or .0325 per copy. (See Appendix 6.) In other words, Publications made a 77 percent profit on one month's volume on one Xerox 9200. Again, the revenue returns to the revolving fund to cover costs elsewhere. Publications could shave .0142 from their .0325 per copy costs and still cover their costs. Extrapolated for both machines over a full year \$91,000 could be saved. This spring, however, Publications will receive two Xerox 9400's to replace the 9200's. These

machines will cost about \$400 more per month, but have a duplexing feature which will make two-sided copying easier and more efficient. The total per copy costs using the 9400 are .0184 at Central Duplicating and .0197 at Capitol Square. (See Appendix 7.) The Xerox 9400 total cost per copy assumes the machine will be staffed half-time. Using Xerox productivity figures the January, 1978, volume of 242,912 at the Transportation Building could have been produced in 55.22 hours rather than an entire months. (See Appendix 8.) This 55 hours includes the time needed to process originals and copies, and the time tangential to the actual copying -- deciding how to process the job, set-up, operators fatigue, coffee breaks, etc. The highest monthly volume, in October, 1977, of 354,533 copies should have been processed according to Xerox studies, in 77.25 hours.

Miscellaneous: There are smaller problems with little cost impact which, however, should be addressed. The bookkeeper adds 20 cents to the paper charges for a 12" x 19" Kraft envelope. He has no idea whether the job required an envelope or not. The Task Force also found small billing errors such as set-up charges for paper furnished by the agency, collating charges for a one-page piece, hand work charged at \$1.50 per unit instead of \$1, and a few mathematical errors.

Basically, then, the Task Force found that Publications is operating far above market rate because management has not dealt with productivity and cost problems. Billings are often the result of guesswork, agencies are receiving mediocre service at high prices, and paying a 15 percent premium because Publications has no cost or production systems to use as decision making tools.

Expansion of Publications

Over the last six years, the Division of Publications has requested expanded facilities and new high-volume presses and related equipment. Two floors of the building at 117 University are presently being remodeled for their use. Last year the Department of Administration approved their request for a small Apollo web press capable of producing 25,000 impressions per hour on two sides simultaneously. The Apollo prints simple jobs in quantities over 500 quickly and economically, and its two-sided capability results in significant paper savings. An added benefit is that it runs recycled roll paper without the problems of curling and static electricity that hamper two-sided duplicating on offset presses. In terms of the state shop, it would fit nicely between the 11" x 17" offsets and the more sophisticated kinds of printing bid out through Procurement, and eliminate the necessarily time-consuming bid process for many long-run jobs.

The Task Force asked the Department of Administration to hold the shipment of the press until the CPA's determined the operating costs of the machine. Publications staff estimate that the press will run 25,000 impressions per hour at an hourly rate of approximately \$21. Though 25-30,000 impressions per hour is the machines rated continuous speed, three private in-plant supervisors state that 10-12,000 impressions per hour is a more realistic estimate. The CPAs estimate that initially and tentatively an hourly rate of \$27.53 should be charged to recapture machine, labor, and overhead costs. (See Appendix 9.) One can assume that the same

price schedules operating in other division operations will be repeated here: An apparent lower than market rate hourly rate will be inflated by low productivity, various plate and paper mark ups, and the addition of an overhead charge, resulting in costs far above market rate. Because of these factors, the Task Force does not doubt that the jobs that will be printed on the Apollo press could be purchased elsewhere at less cost to the state.

However, according to the Publications staff, the press has been built according to specifications written by the state, and a 20 percent penalty will be charged if the state refuses delivery -- or \$6,000 for the \$30,000 machine. For this reason only, the Task Force recommends delivery of the press provided that its operation is charged at the rate recommended by the CPAs and that this rate decrease according to the recommendations listed in the next part of the report. The Apollo definitely has a place in a well-managed print shop with the constituency, volume, and particular printing needs of the state. The Task Force recommends, however, that no additional equipment, except replacement equipment, be approved or ordered until Publications becomes competitively priced.

Recommended Action

The main arguments supporting the establishment of a state print shop are convenience, confidentiality, centralization, and low cost. The Task Force believes that the copy centers offer

agencies a convenient and valuable service in short-run quantities (40-500 copies per original). Longer runs tie up presses and bindery equipment and hamper short-run production.

The confidentiality argument is a weak one. Private printers are capable of discretion too.

Centralization is an important factor. Presently, agencies are not allowed to have their own presses (with certain exceptions) and all printing requisitions are processed by the Publications Division. Ideally this ensures that the specifications that go to Procurement, the correctional print shop, or the overload contractor are accurate and understandable; that publications are in compliance with Department of Administration printing standards; that agency PLOs have written specifications in the most economical way; that such Department of Administration guidelines concerning duplexing, annual report specifications, paper conservation, or the use of recycled paper are easily put into operation and realized. Centralization should also allow Publications management to estimate volume and adjust rate and time schedules accordingly. Allowing agencies to buy their own printing, either through Procurement or area purchase orders (with bids over \$50) would probably lower the cost of printing to the state, but Procurement process would delay the acquisition of printing and the Department Purchase Orders process would herald the coming of printing sales people in every department and division of state government. There are more orderly and efficient ways of contracting for printing than the two alternatives mentioned above, however, they do point out the necessity for a degree of centralization.

The question is, then, that convenience and centralization are important, but at what costs? The Task Force believes that the Publications Division, with a captive constituency and a predictable volume, should be operating far below "walk-in" press shop rates.

A More Realistic Price Structure

If Publications is to operate more efficiently and economically in the future, it needs a system of financial reporting and cost-accounting that will reflect true operating costs, point out trouble spots, and provide data with which to make pricing, cost-cutting, and production decisions. The CPAs on loan to the Task Force have made recommendations for such a system (see Appendix 10) and have developed a system of more realistic hourly rates based on Publications records of its present productivity. (See Appendix 11.) Current prices for chargeable supplies will be used, except for paper, which will be charged at cost plus ten percent handling. In addition we are recommending that Publications translate these hourly press and bindery rates into per impression and per sheet costs and to charge agencies on a per impression cost basis, and that these costs be decreased to a level at or near those of the private duplicating overload contract by December 31, 1978.

We believe that the overload price schedule is a reasonable goal, since the state is currently buying printing at those prices. In addition, the firms that lost the overload contract bid were only \$72 and \$1,454 higher than the firm awarded the contract. Obviously, there is more than one firm who feels they can print at nearly competitive contract prices.

We also recommend that the Printing Advisory Committee monitor the rate reduction progress of the Publications Division and advise the Commissioner of Administration of the division's progress.

If the Publications Division is not competitive by December 31, 1978, it should be abolished. Two alternatives will be investigated if the need arises. A private printing firm could be contracted to operate the state's presses and provide assistance with specifications at a set price schedule. Or, the copy centers could be placed under new management and runs outside the limits of the 619 form will be placed on contract with appropriate vendors, and agencies will approach the vendors directly. The State of Wisconsin presently has such a contract system.

Recommendations

The Task Force recommends that the Governor direct the Commissioner of Administration to take the following actions:

1. The Division of Publications shall immediately publish a new price schedule that reflects the true costs of printing a job. The schedule will list the prices on a per impression basis and not according to hourly rate.
2. The Division of Publications shall immediately publish a schedule illustrating the average length of time required to print jobs of varying complexity to allow users to better plan their printing needs.
3. The Division of Publications shall immediately cease altering information on billing invoices.

4. The Printing Advisory Committee shall monitor the cost and productivity level of the Publications Division and report the division's progress to the Commissioner of Administration.
5. The Publications Division shall gradually decrease its costs and increase its productivity and reach competitive market rates by December 31, 1978 or the division will be abolished and other alternatives will be investigated.

Savings

The state agencies are currently paying approximately .0219 cents per impression for printing and bindery work. Each tenth of a cent shaved from per impression costs at the present volume will save the state \$39,000. If the Fiscal Year 1979 in-house volume of 39,000,000 impressions were run at a .011 per impression rate the state would save \$425,000 per year. This rate is one at which the state could buy printing from outside vendors and covers printing, bindery, and invoicing costs. By reducing Xerox 9200 or 9400 costs to the levels suggested in appendices 6 and 7, the state will saving \$91,000 annually.

SPECIFICATIONS

Findings

The Task Force inspected each of the 4,000 523 requisitions processed in Fiscal Year 1977, noting its title, number of pages, use of color and photographs, net cost, and unit cost. We found a few instances where unit costs were extremely high (environmental impact studies, court briefs) and moderately high (usually annual reports and long range plans of various kinds), but in general we found that agencies are doing a good job in keeping their printing costs down. Since the bulk of the state's printing (\$4.5 million of \$6 million expended in Fiscal Year 1977) is ordered on the 523 form, we feel we have a very accurate picture of present printing patterns.

Necessity and Distribution

Although we have found a few instances of clearly inappropriate printing, the Task Force has not really attempted to make any value judgments about the necessity for individual publications. We feel it is each agency's responsibility to determine whether publications are necessary to various programs, etc. We do, however, feel that the sheer volume of printed, duplicated, and copied materials needs looking into and we recommend that agencies reevaluate the need for each publication before it is written or reprinted. Twenty-four thousand printing requisitions a year and 62 million copier-produced sheets (approximately seven copies per state employee per working day) leads one to wonder whether all this information is necessary, appreciated, read, or could have

been communicated in another form - mimeo, telephone, etc. The Director of Publications estimates that only 25 percent of the requisitions are for such items as forms, letterheads, envelopes, etc. The Forms Unit of Records Management will consolidate and reduce the number of forms printed (and also a significant number of copier-produced forms), but it is imperative that each agency begin to rethink its own publications program.

Tradition, habit, lack of planning, or inadequate justification review may cause the reproduction of materials which are of questionable use or value. The Government and Community Relations Division of the Department of Transportation has recently developed a communications policy that stresses prior review:

Prior to preparation of a draft manuscript or audio-visual products, the following steps should be taken:

1. A study of the extent to which the proposed material implements Office of Communications or divisional communication plans and Departmental objectives or priorities.
2. An assessment of project need, weighed against overall public information obligations regardless of whether funds have been budgeted for it by the originator.
3. An appraisal of the project's probability of achieving its stated goals.
4. A consideration of alternative methods of communication.
5. A measurement of the project's cost-benefit, including an estimated audience cost per unit.
6. A description of proposed distribution strategy intended to insure the desired readership.
7. Such other standards as may be established by the Department of Transportation Office of Communications and the Management Committee.

Initial planning, in addition to questioning the necessity of a publication, should also determine its distribution. Agencies tend to overprint, often on the basis of a lower per unit cost, but more often on an overoptimistic expectation of a document's popularity and a poorly planned distribution strategy. Publications are delivered and there is limited demand, or they are shipped to out-state offices without clear distribution directions.

The cost involved in storing extra publications, however, far outweighs the money "saved" from printing an extra hundred or thousand publications. The existence of 44 depositories for publications throughout the state ensures their availability to the public if a document is out-of-print, and the desired information would be too expensive to copy from an extant document. Formerly, state publications policy required that distribution of a new publication be indicated on the back of the 307 form. Generally, varying numbers of publications were listed as "General Distribution." The 307 form has been abolished, however.

Agencies should also, where possible, coordinate publishing ventures. For example, the Fire Marshal, Pollution Control Agency, Traffic Safety, and Civil Defense all publish information on hazardous materials. Perhaps one booklet would do. The Department of Natural Resources and the Pollution Control Agency publish separate rules and regulations that apply to the same subject, i.e. Water Resources. Consolidation of such information would save the public the necessity of ordering two publications from Documents or making two trips to the

agency's offices. Presently, State Planning has a list of reports currently being researched and published by state agencies. Various public information personnel from different agencies are discussing ways of sharing such information in a formal way. We encourage the thought; such a group could do much to avoid duplication of research writing, editorial, and production time.

Specifications

In our survey of state publications we found that agencies with professional communications and publications staff tended to produce the most attractive publications for the least cost. As mentioned before, most PLOs do not have a printing or publications background and have difficulty writing specifications to produce a publication in the most economical way. Likewise, most PLOs understandably use the same specifications for reprints, perhaps unaware of new printing or reproduction technology that may lower the cost. The Printing Coordinators in the Publications Division are of assistance in some instances, but are unable to review every requisition. Upgrading the PLO, as mentioned before, will help a great deal. Money can be saved if PLOs are able to make knowledgeable decisions about the many variables affecting the printing process.

For example, using one-and-one half spacing rather than double spacing on typed camera-ready copy, where feasible, will save paper in both the typing and printing processes. Writing specifications for standard paper sheets saves money in ordering

the paper, warehousing it, and filing or mailing the finished product. It saves time, too, in terms of its availability, and it will fit into a standard envelope. Standard papers and inks should be used unless there is a compelling reason not to. Paper grades should correspond to the particular needs of a job. Watermarked or rag content paper should not be used where a lower cost sulphite will do. Most forms can be printed on #16 paper. Printing self-mailers eliminates stuffing and envelope costs and, in many cases, postage as well. (The Department of Economic Security Employment Services recently sent out a "return self-mailer." Information was filled in, the sheet refolded, and mailed.) Considerable postage savings will result if items to be mailed are typeset and printed on lighter weight paper. Printing on both sides of the sheet, where appropriate, saves paper, binding, collating, and mailing costs, and greatly reduces the space needed for filing and storing printed materials. Plastic bindings are popular, but expensive and hard to file. They should be used only when flat sheets are absolutely necessary. Printed ring binders cost from \$2.50 to \$3.50 a piece and should be reused whenever possible.

The use of color and paper is a particular problem area, especially in inter-office and intra-office publications. The Task Force feels it is inappropriate to print an office newsletter, which is usually discarded moments after it is read, on anything but inexpensive standard recyclable paper stock in one standard color ink. It is expected that strictly informational items which are written by and for state employees (studies, reports, newsletters) will be printed in one color. Exempted are items printed to promote

awareness of state service, to reach a particular audience, for resale, or where the use of color is an illustrative necessity, i.e. driver's manual, some maps and graphs. Also exempted are preprinted mastheads ordered in large quantities.

Business cards are another area where paper and money can be saved. Several state employees suggested that the cards be printed for divisions or sections rather than individuals. Personalized business cards (which must be ordered in minimum quantities of 500) are frequently outdated by personnel and telephone changes. Employees also commented that they received business cards without requesting them or particularly needing them.

Publication Codes

Once a document is printed and distributed, it is often for all intents, lost. State documents are extremely difficult to catalog and, as a result, very hard to find. As an aid to the public, legislators, program managers, and researchers, then, we are recommending that every document intended for public distribution through the depository system have a publication code which identifies the number printed, the originating agency, and year of publication. For example, a Department of Commerce publication code (quantity 750) would read 750-COM741755-76 such codes would be located on the last printed page, within normal margins. Reprints will carry the initial code, and will be followed by reprint information preceded by an "R." For example: 750-COM741755-76; R400-COM741755-78. The PLO has the responsibility of providing publication code data to the typesetter, whether a private vendor or Publications. If camera-ready the code will be typed wherever practicable, but preferably on the last printed

To ensure that all public documents are retained for archival purposes, the Division of Publications will forward the copy of the document used to ascertain billing costs to the Legislative Reference Library, where the documents will be retained. Forms are not included. Publications staff will add the publication code to the copy of the document.

Recommendations

The Task Force recommends that the Governor direct state agency heads to take the following actions:

1. The commissioners and agency heads shall review the necessity for each new publication prior to the preparation of a draft and review reprints before reordering. Those with only marginal necessity should not be printed, or should be communicated in a less costly manner. Forms not reprinted within two years shall be abolished. Agency personnel should plan a distribution strategy for each proposed publication.
2. Whenever any state agency maintains a mailing list of public officials or other persons to whom publications or other printed matter is sent without charge, the state agency shall correct its mailing list and verify its accuracy at least once each year. This will be done by including a notice within a publication, or including a postcard in a regular mailing to each person on the mailing list. The name of any person who does not respond or who indicates that he/she does not desire to receive such publications or printed matter will be removed from the mailing lists.

The responses of those desiring to be on the mailing lists will be retained by those agencies for one year. Verification of the results should be submitted to the commissioner or agency head in a report listing:

- a) the number of copies regularly published;
 - b) number of addresses;
 - c) number of persons responding "yes";
 - d) number of persons responding "no" or not responding at all.
3. The Legislature should place a sunset provision on every publication mandated by statute.
 4. The Commissioner of Administration shall direct the State Printer to print a pamphlet describing areas of possible cost and time savings, and distribute them to commissioners and agency heads.
 5. The Commissioner of Administration shall require that all inter- and intra-office publications are printed in the most economical manner, on inexpensive standard papers in one color ink.
 6. The Commissioner of Administration shall require that all letterhead stationery, envelopes, and business cards be printed in one color standard inks where there is no additional wash-up charge to the state.
 7. All strictly information items shall be printed in one color ink. Exempted are items printed to promote awareness of state service, to reach a particular audience, for resale, or where color is an illustrative necessity, i.e. driver's manual, some maps and graphs.

8. The Commissioner of Administration shall require that all public documents intended for public distribution through the depository system bear a production code number indicating the quantity, originating agency, and year of publication.
9. The Commissioner of Administration shall require that one copy of all documents printed in Central Duplicating will be forwarded from the Publications Division to the Legislative Reference Library. The publication code shall be written on the copy by Publications staff.

SAVINGS

Agencies will realize significant savings in their internal printing budgets as Publications reduces its price schedule.

Additional savings can also be realized through the writing of more economical specifications, the biennial pruning of mailing lists, and the continual reviewing of the necessity for particular publications. For example, if agencies shaved five percent from their external printing budgets through the means mentioned above, the state would save \$225,000.

COPYING COSTS

Findings

The State of Minnesota spends almost \$1.6 million for rental and another \$270,000 for supplies for convenience copiers located in state agencies. (The state owned or leased, on July 1, 1977, 162 Xeroxes, 268 Saxons, 3 IBMs, 2 Savins, and 1 Kodak machine. The Xerox 9200's in Publications are not included in these costs or volume figures.) Over 62 million copies were made in Fiscal Year 1977, or seven copies per state employee per day.

The costs and volume have climbed rapidly in the last few years, although exact increases are difficult to determine because of the different object codes on purchase orders used to pay for machine rental and supplies. Using information supplied by copier vendors, the Task Force determined that the current per copy cost, including supplies, for the 62 million copy volume is .026 cents -- a relatively low copy cost which indicates that most agencies are using machines appropriate to their copying needs.

The convenience of on-site copying is evident to anyone who has easy access to a copy machine, and the price of such convenience is reflected in the \$1.6 million cost. The volume figures tell the story: Agencies must reduce the number of copies run on their machines. The use of an auditron reduces copying costs to some extent, and an operator-controlled machine almost eliminates the problem of personal copying and ensures that the machine is used for appropriate run lengths. Unfortunately, the same psychology contributing to agency over-printing costs also operates in this area, and that is that agencies are making more copies than they need.

While .026 cents per copy seems insignificant to a state employee who decides to run "a few extra copies," the costs quickly add up. Returning to the "seven copy per employee per working day" example mentioned previously, if each employee ran one copy less per day, the state would save \$226,549 each year. Such a volume cut is possible only with the cooperation of individual employees who make the determination of exactly how many copies they need. The Task Force recommends that state agencies decrease their volume by 14 percent. We also recommend that the Department of Administration begin to educate agencies about their per copy costs and inform them of the savings realized in their division or department through a reduction in volume. The State of Washington posts yearly agency copy costs above machines to make users aware of the cumulative "cost of doing business."

The Rule of 40

The .026 cents per copy cost is an average for all machines. Low-volume machines generally have higher per copy costs; high-volume machines have lower per copy costs. The rental and supply costs for a run of 40 copies of one original are approximately \$1.60 on a low-volume machine, \$1.20 on a medium-volume machine, \$0.92 on a high-volume copier, and \$0.46 on a production copier. Again the question of convenience vs. cost arises. Longer runs on small agency copiers often save time, but cost more. Production copying at a copy center takes more time, but costs less.

The rule of 40 is admittedly an arbitrary one designed to discourage long or multiple original runs on convenience copiers. The 40 copy limit is too high for agencies presently using low-volume copiers and too low for high-volume machines with collators. Allowing a flexible rate depending on the size and capabilities of on-set copiers would be faster, but certainly confusing.

A revised price schedule for Publication's two Xerox 9200 (and the Xerox 9400s that are soon to replace them) will lower production copier costs considerably, and faster turnaround time will provide better service. The Task Force recommends that we retain the 40-copy limit on agency-operated machines.

Centralization of Copy Machine Purchase and Rental

The Task Force's incursion into the world of copy machine purchase, rental, and supply costs was bewildering at first. Each vendor has different rental schedules, supply costs, and purchase options. We believe that agency personnel, faced with renting or buying a new machine or upgrading or downgrading a present one, are equally confused and amazed at the variety of machines, prices, capabilities, and costs per copy. To add to all this, there is little data available within the state to help agencies make these kinds of decisions. There is no one place where one can find complete data on the number of machines owned and rented or the cumulative or individual machine and supply costs. Agencies must rely heavily on information supplied by vendors, who can be and are very helpful, but, of course, who want to place their machines in state agencies.

Presently, when an agency decides to rent or purchase a new copier, Procurement forwards the requisition to the Office Machine Repair Section, where staff determine which size machine and which accessories will economically handle the agency's copy volume. This recommendation is returned to Procurement and bids are let.

The decision to upgrade or downgrade a machine is made by the agencies themselves. An agency's volume may increase, and the copier is not upgraded. A division may move from one floor or building, causing the volume to decrease. Both these circumstances result in higher per copy costs. If vendors are not supplying adequate cost information, or if personnel are neglecting, overlooking, or wondering what to do about the vendor information they do receive, the cost per copy will continue to climb. For example, the average per copy cost of the state's 23 Xerox 7000's is .018, ranging from a low of .014 to a high of .045.

The Task Force believes that there should be an increased central authority to deal with copier-related decisions. The changing technology, the lack of current information, the variety of available equipment all call for a centralization of expertise and responsibility. We believe the Office Machine Repair Section should be given the authority to approve or disapprove not only new machines, but also authorize the upgrading or downgrading of present copiers, and monitor run lengths. An advisory committee should also be created including agency personnel and headed by the Commissioner of Administration. If a department disagrees with a decision, it should appeal to the advisory

committee and abide by its final decision. We recommend that the Office Machine Repair Section also advise agencies about cutting copy volume and costs, i.e. retaining unacceptable copies, training key operators, using auditrons, etc.

Purchase or Lease of Copiers

Many vendors have recently begun to sell, in addition to lease, their copy machines. Considerable cost savings are realized through the purchase of appropriate machines. Again, the decision to buy or lease is a complex one, requiring a knowledge of an agency's future needs and present ones. Last fiscal year, ten agencies purchased copiers for an estimated three-year savings of \$104,175 and an estimated five-year savings of \$335,640. The Task Force recommends that the Office Machine Repair Section continue to advise agencies about lease or purchase arrangements and identify machines whose purchase would result in cost savings.

Recommendations

The Task Force recommends that the Governor direct commissioners and state agency heads to take the following actions:

1. Commissioners and agency heads should reduce copy volume by 14 percent in Fiscal Year 1979. This reduction is equivalent to one less copy per employee per day.
2. The Commissioner of Administration should authorize the Office Machine Repair Section to review all renewals as well as new requests for the rental and purchase of machines (including the Division of Publications) to

authorize the upgrading, downgrading, or moving of present machines with higher per copy costs, to monitor the run length of selected machines periodically, to advise agencies on purchase or rental options where appropriate, to serve as a clearing house of information about technological changes and available equipment, to collect information on the number and kind of state-owned or -leased copy equipment and their cumulative and individual costs, and to educate agency personnel about the per copy costs of their machines is a way individual state employees can reduce copy cost and volume.

3. The Commissioner of Administration should set up an advisory committee, chaired by the Commissioner of Administration, to resolve any disagreements between agencies and the Office of Machine Repair Section.
4. All commissioners and agency heads shall submit to the Office Machine Repair Section a list of all agency copiers indicating the make, model, date of purchase, and whether they are leased or rented.
5. The Commissioner of Administration shall investigate the feasibility of installing coin-operated copiers in the Capitol Complex for employee and public use.

Savings

A 14 percent reduction in copy volume in Fiscal Year 1979 will save \$226,500.

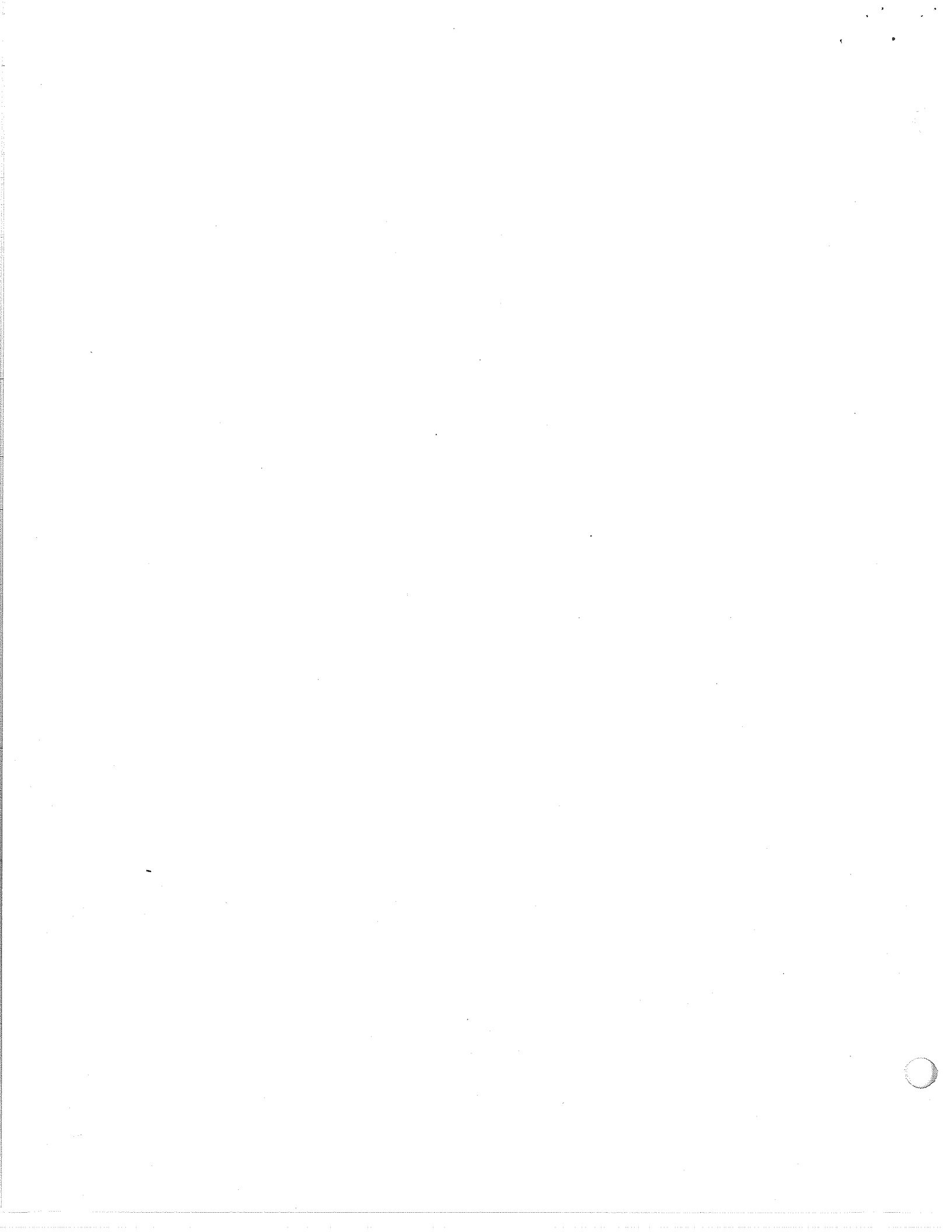
Centralized authority over copy machine use should provide accurate and current cost information which will allow more efficient machine upgrading or downgrading and decrease per copy costs.

Every tenth of a cent (.001) shaved from the average per copy cost at the present volume of 54,000,000 (excluding the volume produced by coated-paper copiers which have a fixed per sheet costs) saves the state \$54,000. Conservatively, better management can shave .002 from the state's per copy costs for a savings of \$108,000 in Fiscal Year 1979.

The increased purchase of appropriate copy machines in Fiscal Year 1979 will save \$280,000 in three years and \$850,000 in five years.

SAVINGS SUMMARY

	<u>F.Y. 1979</u>	<u>F.Y. 1980-1981</u>
Reduction of price schedule of Publications Division	\$ 425,000	
Reduction of Xerox 9200 price schedule	91,000	
Review of specifications, pruning of mailing list, etc.	225,000	
Fourteen percent copying reduction	226,000	
Centralized authority over copy machine use	108,000	
Purchase of copy machines	<u>93,000</u>	<u>\$ 186,000</u>
	<u>\$1,168,000</u>	<u>\$ 186,000</u>
Total Fiscal Years 1979, 1980, 1981		<u>\$1,354,000</u>



APPENDIX 1
 NEW PRICE SCHEDULE
 CENTRAL DUPLICATING - BILLING

EFFECTIVE
~~3-16-77~~
 4-1-77

I. MATERIAL

Paper stock and bindery supplies: Cost plus 15% handling

Negatives:

Line stripped

8 x 10 = \$2.75
 10 x 12 = 3.00
 11 x 14 = 4.00
 12 x 18 = 6.00

Halftone stripped

8 x 10 = \$4.70
 10 x 12 = 5.20
 11 x 14 = 5.70
 12 x 16 = 7.50

COMPUTER
 #357#

II. COPY PREPARATION

Composition, ruling, keylining, paste-up

KEYLINE
 \$15.00 per hour.

30 - T - 2411R

III. PLATE ROOM

Plates: XL 1.50

Paper short run = 8 1/2 x 11 = \$.25 11 x 17 = \$.50
 Metal plate = 10 x 16 = 3.00
 11 x 18 = 4.00

Extra burns and extra stripping or opaquing at \$10 per hour.

IV. PRESS ROOM

NO SET UP CHARGE ON X-7 AUTOMATIC PRESS
 Set up charge per plate \$1.00 NOT ADS or mimeo

Short runs up to 500 on ADS, press, or mimeo: \$.015 per impression,
 including paper stock, 16 & 20# sulphite or 50 & 60 offset, white.

OVER 500 \$15/HOUR
 PRESS TIME

V. XEROX

3600 = \$1.05 per impression includes stock and labor.
 9200 = \$.25 per original; .02 per impression and an additional .005 if collated

VI. BINDERY

Machine time at \$15 per hour.
 Hand time at \$10 per hour.

Perfect bind - 1/2" = \$.35 per book
 over 1/2" = .50 per bk.

VII. OVERHEAD

Add 15% to all costs.

VIII. DELIVERY CHARGES

First package = \$1.00)
 Each additional .25) Per order.

APPENDIX 2

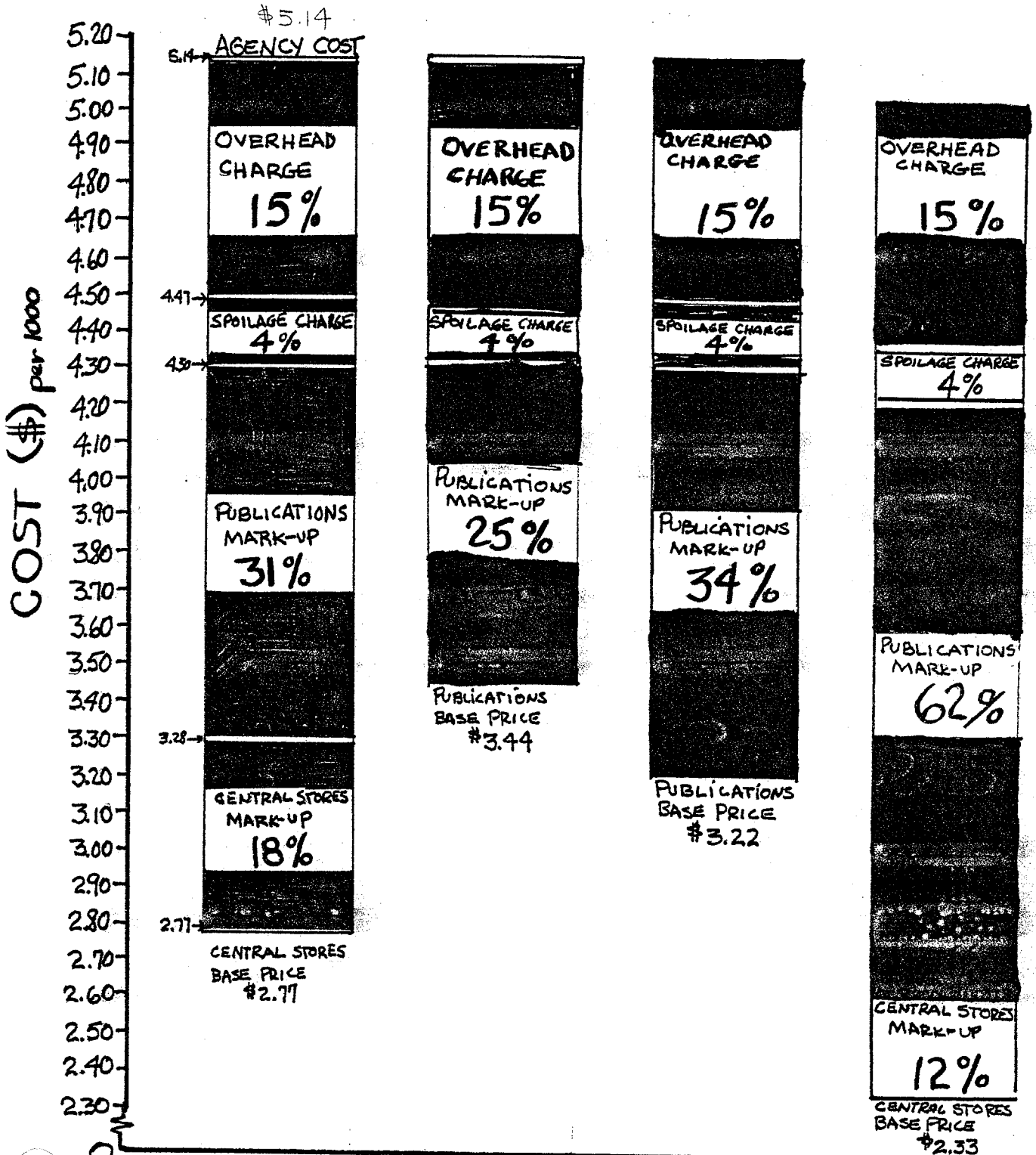
PRINTING INDUSTRY OF TWIN CITIES, INC.
AVERAGE ALL-INCLUSIVE HOUR COST RATES - Cont'd.

June 17, 1977

PART A
 Page 2 of 2

	<u>Firms</u> <u>Reporting</u>	<u>High</u>	<u>Low</u>	<u>Average</u>
III. <u>OFFSET</u>				
A. <u>Preparatory</u>				
Artist	11	42.00	18.00	28.77
Camera (B & W)	15	51.30	18.00	31.71
Camera (Color)	9	62.50	18.00	35.14
Photo-Composing	10	43.10	27.00	32.73
Printing Frame	12	42.00	18.00	28.93
Stripping	21	51.30	16.00	27.79
B. <u>Single Color Presses</u>				
10 x 15	11	28.90	11.15	20.74
12 x 18	6	27.83	15.75	19.91
14 x 20	2	25.30	21.00	23.15
17 x 22	6	35.09	20.00	28.85
23 x 29	11	36.30	24.00	30.03
23 x 36	3	37.00	18.45	27.15
32 x 44 - 38 x 52	3	71.39	41.00	55.13
C. <u>Two Color Presses</u>				
19 x 25	3	34.00	22.75	29.92
25 x 38	6	67.00	48.00	56.75
32 x 44 - 38 x 52	4	95.59	48.00	67.40
43 x 60	2	101.64	80.00	90.82
D. <u>Four Color Presses</u>				
25 x 38	2	88.00	83.00	85.50
28 x 40	3	82.00	65.00	74.00

PAPER MARK-UPS



CENTRAL STORES
CONTRACT
(No. 4 20# 8 1/2" x 11")
WHITE

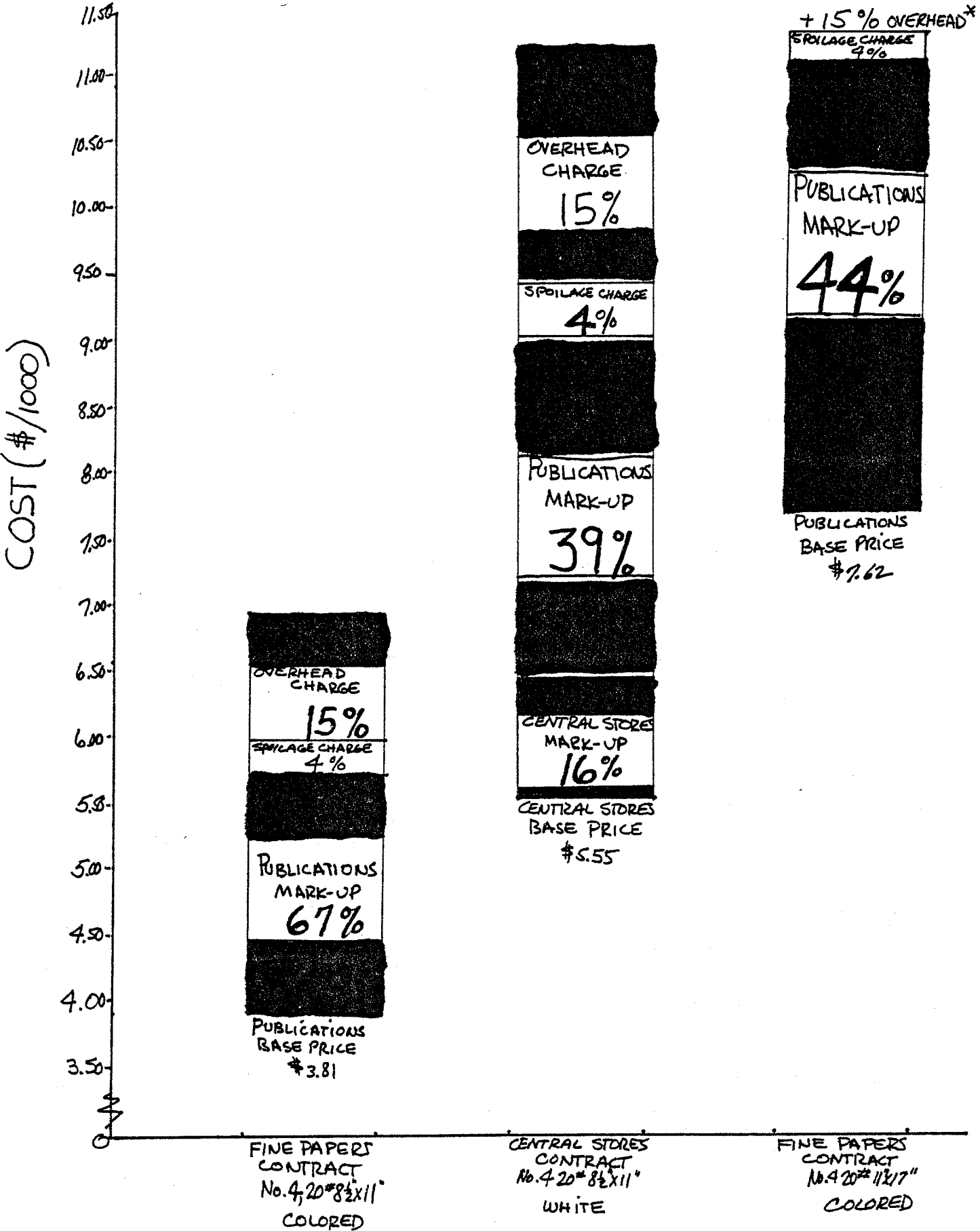
FINE PAPERS
CONTRACT
(No. 4 20# 8 1/2" x 11")
WHITE

I-TECK
CONTRACT
(No. 4 20# 8 1/2" x 11")
WHITE

CENTRAL STORES
CONTRACT
(No. 4 16# 9 1/2" x 11")
WHITE

VENDOR / PAPER GRADES

PAPER MARK-UPS



VENDOR / PAPER GRADES

BID SPECIFICATIONS & PRICE SCHEDULE

Effective 4/1/77

Price agreement for overload work from Central Duplicating for a one (1) year period with option to renew for additional 1 year. Central Duplicating will furnish all paper and plates (paper or metal); Vendor will supply all press operation, ink, labor and all other necessary material not mentioned in this request. Free pick up and delivery at B-23 Hwy. Bldg., B-13 Cent. Bldg., or B-15 Capitol Square Bldg.

The quantities on the computation sheet are approximates only - Unit prices bid shall prevail for the duration of the contract.

Please total the sub totals and grand totals on your bid prices.

I. OFFSET PRINTING PER PLATE:

A.	Per plate change -----	\$ <u>1.00</u> X 1500	= \$ <u>1500</u>
B.	Per color wash up (other than black) -----	\$ <u>2.50</u> X 50	= \$ <u>125</u>
C.	Stock 16 lb. & heavier (Per M impressions) ----	\$ <u>2.50</u> X 3500M	= \$ <u>8750</u>
D.	Stock lighter than 16 lb. (Per M impressions) -	\$ <u>2.50</u> X 20M	= \$ <u>50</u>
E.	Index or tag - 90 lb. up thru 150 lb. tag) Per M	\$ <u>2.50</u> X 30M	= \$ <u>75</u>
F.	Envelopes #6 $\frac{3}{4}$ to #10 Per M -----	\$ <u>2.50</u> X 50M	= \$ <u>125</u>
G.	Envelopes 8 X 10 to 9 X 12 (with clasp) Per M -	\$ <u>2.50</u> X 50M	= \$ <u>125</u>
H.	Envelopes 8 X 10 to 9 X 12 (without clasp) Per M	\$ <u>2.50</u> X 50M	= \$ <u>125</u>
		I. SUB TOTAL	\$ <u>10,875</u>

II. BINDERY OPERATIONS: ALL PRICES TO BE PER M SHEET BASIS - (EXCEPT WHERE OTHERWISE NOTED)

A.	Punching 1, 2 or 3 hole standard (round) -----	\$ <u>1.50</u> X 50M	= \$ <u>75</u>
B.	Punching 4 holes or more (round) -----	\$ <u>1.50</u> X 5M	= \$ <u>7.5</u>
C.	Collating -----	\$ <u>5.00</u> X 75M	= \$ <u>375</u>
D.	Folding (1, 2 or 3 folds) -----	\$ <u>5.00</u> X 75M	= \$ <u>375</u>
E.	Stitching (Side or saddle 1, 2 or 3 stitches Per 100 Booklets -----	\$ <u>1.00</u> X 45M Books	= \$ <u>450</u>
F.	Trimming (Sheets per cut - Per M -----	\$ <u>1.00</u> X 40M	= \$ <u>40</u>
G.	Trimming (Booklets - 3 sides Per 100 Booklets)-	\$ <u>1.00</u> X 40M Books	= \$ <u>400</u>
H.	Padding (Chipboard will be supplied if Needed Per Pad -----	\$ <u>.05</u> X 5M Pads	= \$ <u>250</u>
I.	Banding (Per Unit Banded) -----	\$ <u>.25</u> X 100	= \$ <u>25</u>
J.	Binding (Tape cloth strip) Per Book 9" or 11" Binding Side -----	\$ <u>.05</u> X 1500 Books	= \$ <u>75</u>
K.	Perforating and/or scoring -----	\$ <u>2.50</u> X 30M	= \$ <u>75</u>
L.	Numbering (By press or hand) -----	\$ <u>2.50</u> X 150M	= \$ <u>375</u>
M.	Die Cutting -----	\$ <u>2.50</u> X 35M	= \$ <u>87.5</u>
N.	G.B.C. Punching -----	\$ <u>4.00</u> X 100M	= \$ <u>400</u>
		II. SUB TOTAL	\$ <u>3010</u>

*GRAND TOTAL \$ 13,885.

EXTRA FEATURE PRICES

1.	Making of plates-paper up to & including 11 X 17 5/8	---	each	\$	<u>3.00</u>
2.	Making of plates-metal up to & including 11 X 17 5/8	---	each	\$	<u>3.00</u>
3.	Negatives - 8 1/2 X 11	-----	each	\$	<u>2.00</u>
4.	Negatives - 11 X 17	-----	each	\$	<u>3.50</u>
5.	Stripping - Per Negative - 8 1/2 X 11	-----	each	\$	<u>2.00</u>
6.	Stripping - Per Negative - 11 X 17	-----	each	\$	<u>2.50</u>
7.	Halftones - Per Halftone	-----	each	\$	<u>4.00</u>
8.	Shrink Wrapping per order (1 to 10)	-----	Per Pkg.	\$	<u>.10</u>
9.	Shrink Wrapping per order (11 or more)	-----	Per Pkg.	\$	<u>.10</u>
10.	Fan apart NCR Padding	-----	Per M Sets	\$	<u>1.00</u>
11.	Applying GBC Binders (Cent. Duplicating will Furnish Binders)				
	^{1/4 to 9/16} A. 1/4" to 9/16"	-----	Per Book	\$	<u>.05</u>
	B. 5/8" to 1"	-----	Per Book	\$	<u>.10</u>
	C. 1" and larger	-----	Per Book	\$	<u>.15</u>

Work will be ordered as required with 3 day delivery service. At the present need is approximately 30M impressions per order but is in no way a guarantee of future orders.

All deliveries hereunder shall comply in every respect with all applicable laws of the Federal Government and/or the State of Minnesota including the State Act Against Discrimination M.S. 363 as amended.

All preparatory materials including negatives and plates to be returned with completed job.

Award will be made to lowest Grand Total providing Extra Features prices are in line with trade pricing in the sole opinion of the Printing Section and that successful bidder has equipment compatible to accepting our plates.

APPENDIX 6

XEROX 9200

One Month Sample: 293,400 (Does not include "copying" costs for 1-5 copies, which usually amount to \$30 to \$90 per month).

<u>Xerox Price Schedule</u>	=	<u>Rental</u>
4033 originals x .16	=	645.28
to 100,000 x .0048	=	480.00
over 100,000 x .0039	=	754.35
Total Rental		<u>1,879.35</u>
per copy cost		.0064

Labor, Supplies, Overhead

Operator, full-time, \$1,023 per month	\$1,023.00	or	.0035
Space, \$6/sq. ft. x 200 sq. ft.	1,200.00		.0041
Supplies (205,380 sheets paper) toner, etc.	1,273.00		.0043
	<u>3,496.00</u>		.0119
	+1,879.35		+.0064
	<u><u>5,375.35</u></u>		<u><u>.0183</u></u>

Publications Charges to Agencies

4033 originals x .25	=	\$1,008.25	
281,983 copies x .025	=	7,049.57	
11,417 copies x .02	=	228.34	
		<u>8,286.16</u>	
x 15% overhead		1,242.74	
Charged to agencies		<u><u>\$9,528.90</u></u>	
\$9,528.90 ÷ 293,400			<u><u>.0325</u></u> per copy

\$9,528,90 charges	.0325
<u>-5,375.35</u> costs	<u>-.0183</u>
\$4,153.55 profits	.0142

Savings

DOT 293,400 x .0142 = \$ 4,166.28
x 12 months
\$49,995.36 per year

Capitol Square 244,720 x .0142 = \$ 3,475.02
x 12 months
\$41,700.29 per year

TOTAL \$91,695 per year

APPENDIX 7

XEROX 9400 COSTSDOT, Volume, 296,317

Rental	.0084	\$2,480.34
Operator, 1/2 time	.0017	512.00
Space	.0040	1,200.00
Supplies, 66% duplexed	<u>.0043</u>	<u>1,280.00</u>
<u>TOTAL PER COPY</u>	<u>.0184</u>	<u>\$5,472.34</u>

CAPITOL SQUARE, Volume, 268,567

Rental	.0090	\$2,415.67
Operator, 1/2 time	.0019	512.00
Space	.0045	1,200.00
Supplies (60 % duplexed)	<u>.0043</u>	<u>1,160.00</u>
<u>TOTAL PER COPY</u>	<u>.0197</u>	<u>\$5,287.67</u>

APPENDIX 8

XEROX PRODUCTIVITY SCHEDULE
CENTRAL DUPLICATING

January, 1978, Volume: 242,912

3322 originals ÷ 100 x .0344 (time to process 100 originals) =
1:14 hrs. to process originals

240,946 ÷ 100 x .017 (time per copy/C and sort) = 40.96 hrs. to
process copies

3322 ÷ 100 x 1.582 (time tangential to process 100 jobs - fatigue,
coffee breaks, processing, etc.) = 13.12 hrs.

1.14 hrs. to process originals
40.96 hrs. to process copies
13.12 hrs. of factors tangential to producing 100 jobs
55.22 hrs. to produce January volume

Publications employs one full-time staff person to operate 9200 for
160 hours per month.

9200 operating at 34.5 percent efficiency.

October, DOT, Volume: 354,533

4000 originals (est.) ÷ 100 x .0344 =	1.376 hrs.
353,319 copies ÷ 100 x .017 =	60.06 hrs.
4000 ÷ 4 ÷ 100 x 1.582 =	<u>15.82</u> hrs.
	77.256 hrs. to process October volume.

APPENDIX 8

JANUARY CAPITOL SQUARE, Volume: 229,724

4165 originals ÷ 100 x .0344 = 1.43 hrs. for originals
 229,724 copies ÷ 100 x .017 = 39.05 hrs. for copies
 4168 ÷ 4 ÷ 100 x 1.582 = 16.472 hrs. for processing
 56.95 to process January volume

DECEMBER, CAPITOL SQUARE, Volume 268,567

6400 originals (est.) ÷ 100 x .0344 = 2.20 hrs. for originals
 268,567 ÷ 100 x .017 = 45.65 hrs. for copies
 6400 ÷ 4 ÷ 100 x 1.582 = 25.31 hrs. for processing
 73.16 hrs.

ESTIMATED PROCESSING TIME FOR 500,000 VOLUME

7,246 originals ÷ 100 x .0344 = 2.49 hrs.
 500,000 copies ÷ 100 x .017 = 85.00 hrs.
 7,246 originals ÷ 4 ÷ 100 x 1.582 = 28.66
 116.15 hrs. to process volume.

10,000 originals ÷ 100 x .0344 = 3.44 hrs.
 500,000 copies ÷ 100 x .017 = 85.00 hrs.
 10,000 originals ÷ 4 ÷ 100 x 1.582 = 39.55 hrs.
 127.99 hrs.

APPENDIX 9

Tentative Cost Center Rate - Apollo Roll Fed Press
 Publication Division
 State of Minnesota

A tentative Cost Center rate for the Apollo Roll Fed Press, currently on order by the Publication Division, was developed on the following basis: estimated press cost (\$30,000); planned financial operations for the year ending June 30, 1978; estimated area requirements; a \$6.00 an hour press operator and a production utilization of 62.5%. The following Cost Center rate for the Apollo Roll Fed Press should be considered as a Preliminary Rate until actual cost data is accumulated to provide a cost center rate based on actual experience and planned operations. The tentative cost center rate for the Apollo Roll Fed Press was determined:

Annual production hours (1 shift)	1,300
Annual cost center expenses	<u>\$14,986</u>
Hourly burden rate	\$11.53
Hourly direct labor rate	6.00
Hourly administrative rate	2.30
Hourly profit rate	<u>7.70</u>
Total Hourly Cost Center Rate (Tentative)	<u>\$27.53</u>

APPENDIX 10

Recommendations

Based on our findings and analyses we recommend that the Publication Division:--

- . Maintain timely financial reporting practices to assist Division management.
- . Develop and maintain a realistic approach to determining and providing a sound economic basis for Publication Division operations.
- . Develop and maintain a management-oriented cost accounting system.
- . Develop and maintain (update annually) hourly cost center rates for all significant parts of the Publication Division operations.
- . Develop, maintain and use consistent pricing policies and practices.
- . Establish prices for the Publication Divisions services and products on the basis of the Divisions economic factors.
- . Update prices annually to reflect the current level of operating costs and return on capital requirements.
- . Establish and maintain acceptable levels of production performance for the various operations of the Publication Division.
- . Develop and maintain reporting practices that will inform management of the effectiveness of the various Publication Division operations.
- . Develop and maintain management practices and techniques that will provide acceptable quality products produced at competitive prices.

APPENDIX II
Cost Center Rates
Publication Division
State of Minnesota

The accompanying Cost Center rates for the year ending June 30, 1978 were developed on the basis of planned operations for the year. The following data was also used in determining the Cost Center rates:

- . Actual direct labor rates in effect at the time of our study.
- . Depreciation expense based on actual equipment costs and rates determined on eight years.
- . Direct labor and equipment utilization based on February 1978 data.
- . Administration expense based on the planned amount assigned to Publications for the year ending June 30, 1978.
- . A planned profit amount of \$125,600 which is a 23.1% return on beginning of the year investment or an 8% return on sales.
- . Actual occupancy costs in effect at the time of our study.

The preparation of the Cost Center rates included the following activities:

- . Identifying appropriate cost centers for the Publication Division (Preparation, Press and Bindery).
- . Developing appropriate bases for assigning the expenses to the cost centers.
- . Assigning expenses to the cost centers.
- . Determining depreciation expense applicable to the equipment assigned to the cost centers.
- . Determining rental costs applicable to the various cost centers.
- . Determining production volumes for the various cost centers.
- . Determining hourly overhead rates for the cost centers.
- . Determining hourly direct labor rates for the cost centers
- . Determining an hourly administrative expense rate.
- . Determining hourly profit rates for the cost centers.
- . Determining total hourly costs center rates for the preparation, press and bindery cost centers.