

**ECONOMIC IMPACTS OF A PREVAILING WAGE LAW  
FOR IOWA STATE CONSTRUCTION PROJECTS**

Prepared for:

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### **THE ECONOMIC IMPACTS OF AN IOWA PREVAILING WAGE LAW: SUMMARY**

An Iowa law establishing a prevailing wage standard modeled after the Federal Davis-Bacon Act would produce only a small increase in the total cost of state highway and building projects and would have a positive effect on state general fund revenues. Our study indicates that overall state highway project costs would increase by less than 1%. Based on an examination of regents building projects in Iowa City, the cost of such projects would have been only about 3.5% greater. For highway projects, the net gain in general fund revenues was estimated at \$73,000 to \$172,000 per year; for regents institution building projects totaling about \$59 million over a three year period, the net gain for the general fund would have been more than \$400,000. These revenue gains are well in excess of the cost of administering

a prevailing wage law, estimated by the Legislative Fiscal Bureau in March, 1983 to be only about \$14,000 per year if Federal prevailing wage rates are used, or about \$90,000 per year if the state sets its own rates.

The study of state building projects clearly indicates that construction firms currently paying non-union wage rates are not passing the labor cost savings fully on to the state. Instead, it appears that they are attempting to bid slightly under the union contractors; when they win a contract, they pay wages about half of the prevailing scale, and earn rates of profit well in excess of the union firms. A prevailing wage law would produce substantially higher incomes for Construction workers, but probably less than half of this would be passed on to the state in higher contract costs; the rest would come out of excess contractor profits.

It should be emphasized that this study did not examine all of the relevant costs associated with construction projects, particularly the costs associated with shoddy workmanship and construction delays. The superior quality and productivity of union labor has been documented elsewhere, and this factor may more than offset the higher project costs. (See Freeman and Medoff, *What Do Unions Do?* and Steven Allen, "Unionization and Productivity in Office Building and School Construction", National Bureau of Economic Research, 1983).

### **STATE HIGHWAY PROJECTS**

In order to estimate the effects of a prevailing wage law on state highway projects we must know: (1) the dollar volume of state construction projects not already subject to the Federal prevailing wage law, (2) the labor cost component of those projects, (3) the percentage increase in wages under a state prevailing wage law, and (4) the extent to which higher wage costs would be reflected in higher total contract costs. Some of this information was obtained from the Iowa Dept. of Transportation (conversation with Bob Pratt, Feb. 15, 1985), which looked into this issue in connection with an earlier version of the prevailing wage bill now under consideration. For fiscal 1983, the total dollar value of state highway and bridge contracts was \$201,780,000. Of that amount, \$161,540,000 consisted of Federal aid highway projects, where the Federal prevailing wage already applied. The remaining \$40,240,000 consisted of \$27,540,000 for non-Federal-aid highway projects and \$12,700,000 for maintenance work. A state prevailing wage law would have applied to this \$40.2 million in contracts during FY 1983.

The Iowa DOT estimated that labor costs represent about 10% of total project costs for highly mechanized projects such as paving. For other work, such as road repair and bridge maintenance, labor costs were estimated at about 30% of total costs. They used 20% as an average figure for the labor component of costs. The IDOT study also

estimated that Federal prevailing wages (under the Davis-Bacon Act) were about 25% higher than typical non-union wage rates in Iowa. They then estimated the impact of such a law as follows:

Labor component of costs: 20% of \$40,240,000 = \$8,048,000

Additional labor costs required to meet state prevailing wage standard:

25% of \$8,048,000 = \$2,012,000

It was then assumed that the entire increase in labor costs would be passed on through higher contract bids. The result would be an additional cost to the state of about \$2 million, which represents a 5% increase in the total cost of non-Federal-aid projects (\$2,012,000/\$40,240,000) but only a 1% increase in the total state highway project budget for fiscal 1983.

The \$2 million cost estimated by IDOT should be taken as an upper limit. It is likely that the actual cost increase would be less than that. First, the 25% wage premium assumed is probably too high; 20% may be more reasonable, particularly given recent wage reductions accepted by the construction trade unions. Second, it is not necessarily the case that current winning bids of highway contractors are 5% below what they would be if the contractors had to pay the prevailing wage. These contractors may be able to underbid the firms paying union scale by less than 5% and thereby earn a higher profit. In that case, part of the \$2 million in higher wages would come out of the profits of non-union contractors, and the additional costs to the state would be less than the full \$2 million.

This is at least plausible, given that a non-union firm knows the union pay scale, and faces the same costs of materials. To take an example, suppose a non-union firm estimates its labor costs at \$200,000 and its other costs at \$700,000 and sets a minimum profit target of \$100,000. It knows that a union contractor will face labor costs of about \$240,000 (using our estimate of a 20% wage premium) and the same non-labor costs. Thus if the union firm's bid is predicted to be \$1,040,000, the non-union firm can undercut that by just \$10,000, say, and win the bid. It will then get the contract for only \$10,000 less (about a 1% cost saving to the state) but pay \$40,000 less in wages; the difference of \$30,000 is contractor profit. The effect of a prevailing wage law in such an instance is to increase state costs by only 1%. Unfortunately, we do not have the contract information on state highway projects that would enable us to estimate the extent to which this phenomenon occurs.

Officials at IDOT stated that the total highway project cost estimates for fiscal 1983 were typical, and that the \$2 million figure would be a good estimate of the cost impact in future years. We take this as a maximum annual cost of prevailing wage legislation as it affects highway projects. A more reasonable estimate would be calculated as follows:

Labor component of costs: 20% of \$40,240,000 = \$8,048,000

Additional labor costs to meet prevailing wage standards:

20% of \$8,048,000 = \$1,610,000

In order to estimate the effects of a state prevailing wage law on Iowa taxpayers and the state general fund, we must make one of two assumptions: (1) that the total state expenditure on highways would remain unchanged, so that the impact of prevailing wage standards is to reduce slightly the volume of road work that can be accomplished in a given year with that fixed budget, or (2) that state road use taxes would be raised to cover the increase in project costs. We will consider each of these assumptions in turn, using both the Iowa DOT figure of a \$2 million annual cost increase and our own estimate of \$1.6 million.

### **Fixed Budget Assumption**

If a prevailing wage law left unchanged the total dollar volume of state highway contracts, then the effect could be viewed as a \$1.6 to \$2 million increase in construction worker incomes offset by the elimination of the equivalent of a \$1.6 to \$2 million highway project. The increase in incomes would have two effects on state revenues, estimated as follows:

Assumptions: 95% of highway construction workers are Iowans

Effective sales tax rate is 1.03% (based on tables 3.12 and 3.53 in *A Study of State and Local Taxes in Iowa*, Appendix, Coopers and Lybrand, Dec. 1984, and assuming an average household income of \$20,000 to \$30,000)

Applicable state income tax rate is 9%, the marginal rate for households-in the above income range.

Calculations: 95% of \$1.6 to \$2.0 million = \$1.52 to \$1.90 million

1.03% of above amounts = \$15,650 to \$19,570

9% of \$1.52 to \$1.90 million = \$136,800 to \$171,000

Total Increase in State General Fund Revenues:

\$152,450 to \$190,570

The next step is to calculate the revenue losses due to the offsetting cancellation of \$1.6 to \$2 million in road projects. From the census publication cited above, we learn that on average for highway construction firms in Iowa in 1982, 29% of net construction receipts went to payroll, 5.4% to purchases of capital, and about 15.8% was gross profit. The state would lose individual income and sales taxes on the lost payroll, sales taxes on some of the capital (construction machinery), and corporate income taxes on profits. These calculations were made as follows:

Lost income and sales taxes:

29% of \$1.6 to \$2.0 million = \$464,000 to \$580,000

Combined income and sales tax rate = 9% + 1.03% = 10.03%

10.03% of lost income = \$46,539 to \$58,174

Lost Sales Taxes on machinery:

Assumed 4% of receipts goes to purchase taxable machinery



4% of \$1.6 to \$2.0 million = \$64,000 to \$80,000

4% tax on \$64,000 to \$80,000 = \$2,560 to \$3,200

Lost Corporate Income Tax:

Assumed 87% of gross profit is Iowa Taxable income (based on 1983 state corporate income tax returns for the construction industry)

87% of 15.8% times \$1.6 to \$2.0 million = \$219,936 to \$274,920

Assumed highway contractors on average face 11% marginal Iowa corporate income tax rate (given average size of such firms)

11% of \$219,936 to \$274,920 = \$24,193 to \$30,241

Total Lost Tax Revenues:

Low Estimate:	\$46,539	High Estimate:	\$58,174
	2,560		3,280
	<u>24,193</u>		<u>30,241</u>
	\$73,292		\$91,695

Net Gain in Revenues:

Low Estimate:	\$152,450	High Estimate:	\$190,570
	<u>-73,292</u>		<u>-91,695</u>
	79,158		98,875

In other words, we estimate that the state general fund would show a net gain of \$79,000 to \$99,000 as a result of the prevailing wage law under the assumptions made above.

### **Increased Motor Fuel Tax Assumption**

An alternative assumption would be that the additional \$1.6 to \$2 million cost would eventually be translated into higher road use taxes. Some portion of road use taxes is paid by out-of-state residents and trucking firms using Iowa roads. Trucking alone accounts for probably 25% to 30% of the fuel taxes paid in Iowa, based on studies of highway mileage by vehicle size class. If we consider also out-of-state travelers and residents of Minnesota and Wisconsin crossing into Iowa to avoid high gas taxes in those states, it would be conservative to assume that 15% of fuel taxes are paid by non-residents.

An increase in fuel taxes would have no effect on the taxable income of Iowans for purposes of the state individual income tax. It would reduce the disposable income of Iowans, however, and this, in turn, would reduce purchases of items subject to the Iowa sales tax. The reduction in state sales tax revenues is estimated as follows:

Reduction in disposable incomes of Iowans due to fuel tax increase:

85% of \$1.6 to \$2.0 million = \$1,360,000 to \$1,700,000

Reduction in sales tax revenues: \$14,400 to \$18,000

(This is based on the distribution of fuel tax and sales tax burden by income class, derived from tables 4.21, 3.12, and 3.53 in the Coopers and Lybrand report cited earlier.)

This reduction in sales tax revenues, however, is offset by the fact that the increase in road use taxes is paid out in higher incomes of construction workers. These workers have more disposable income and thus purchase more taxable goods and services. It will also be the case that state income tax revenues will increase. This is because the road use tax increase has no effect on income tax liability, while the higher wages of construction workers translate into higher taxable incomes and greater income tax revenues. The increase in sales and income tax revenues would be the same as that estimated under the first assumption: \$152,450 to \$190,570. The net effect on the state general fund is therefore:

Low Estimate:	\$152,350	High Estimate:	\$190,570
	<u>-14,400</u>		<u>-18,000</u>
	\$137,950		\$172,570

Thus under the assumption that road use taxes increase as a result-of the prevailing wage law, the state general fund would experience a net gain of \$138,00 to \$172,600.

### **BOARD OF REGENTS CONSTRUCTION PROJECTS**

The other major category of projects that would be affected by a state prevailing wage law consists of building projects undertaken by the state Board of Regents. Such projects are generally financed by the issuance of revenue bonds, retired from future tuition receipts, hospital fees, and other revenues of the state university system. Any increase in costs of such projects would be felt in future years by university students and users of University of Iowa hospitals (and perhaps to a limited extent by state taxpayers generally), while the increased wages of construction workers would generate immediate income and hence additional sales and income tax revenues. In order to estimate the magnitude of these effects, we examined all of the major construction projects undertaken by the Board of Regents in Iowa City for the years 1982 through January, 1985 (bid dates), plus an addition to the Iowa Security Medical Facility at Oakdale. The results are shown in the tables on the following pages.

For each construction project, the lowest bid submitted by a union firm and the lowest bid submitted by a non-union firm were recorded. Where a union firm was the lowest bidder, it was assumed that the contract went to a firm paying the prevailing wage so that there would be no cost impact to be attributed to a prevailing wage law. Where a non-union firm won the bid, the cost impact was taken as the difference between the winning bid and the lowest

union firm bid. Column E in Table 2 is this difference divided by the amount of the winning bid, or the percentage increase in costs under a prevailing wage law.

The labor component of contract costs was estimated using data from *the 1982 Census of Construction Industries: General Contractors--Nonresidential Buildings, Other than Industrial Buildings and Warehouses*. The census data for Iowa showed that there were in 1982 on average about .02 hours of construction worker labor for every \$1.00 of construction firm receipts. This ratio was used to estimate the labor hours for each project. The total hours were then multiplied by an-estimate of the current average union hourly labor cost (\$14.00) or the average non-union hourly labor cost (\$7.00) to arrive at the total labor cost of the union and non-union contractors. (These average wage figures were supplied by the construction trade unions, and include fringe benefits.)

It is our contention that a state prevailing wage law would have three kinds of direct effects: (1) an increase in construction worker incomes, (2) a reduction in profits of contractors formerly paying below the prevailing wage, and (3) an increase in contract costs. The tables that follow show clearly the potential significance of the second factor. Where a non-union firm was the lowest bidder, we calculated the non-labor costs of that firm and then subtracted the non-labor costs of the union firm with the lowest bid. Since both firms face the same materials costs, and since the union firm's bid undoubtedly included some profit, the non-union firm's excess non-labor costs can be construed as excess profit. This is shown in column H of the second table. Item 1, the increase in contract costs, is shown in column

D, and item 3, the increase in wages, in column I. The crucial point is that the contract costs will rise by much less than the increase in wages, because much of the wage increase will be offset by a reduction in contractor profits.

These results are summarized in the last table. For all the Regents projects in Iowa City over the past three years, if a prevailing wage law had been in effect we estimate that construction workers would have earned an additional \$4.9 million, contractors would have made \$2.8 million less in profits, and project costs would have been \$2.1 million higher (about a 3.5% increase in the total cost of all projects).

The effects on state tax revenues can be estimated much as before:

Increased incomes of Iowa construction workers:

$$95\% \text{ of } \$4.9 \text{ million} = \$4,675,000$$

Increased sales and income tax revenues paid from this income:

$$10.03\% \text{ of } \$4,675,000 = \$468,800$$

Reduction in Iowa taxable income of construction firms:

$$87\% \text{ of } 14.7\% \text{ times } \$2,849,000 = \$364,359$$

(Census data cited earlier shows a 14.7% gross profit rate for Iowa non-residential general contractors, and 87% was the average taxable income as a percent of gross income.)

Loss in corporate income taxes on this amount:

$$9\% \text{ of } \$364,359 = \$32,792$$

(The average gross income of non-residential general contractors in Iowa placed them on the border between the 8% and 10% tax brackets.)

Net Gain in General Fund Revenues:

$$\$468,800 - \$32,792 = \$436,008$$

The above estimates show a very sizeable gain in general fund revenues for the state. This is a reasonable estimate of the immediate effects. Of course in the long run, some of this revenue gain will be offset by a reduction in sales tax revenues since the increased tuition or other fees necessitated by the higher Construction project costs will reduce spendable incomes of some Iowans. However, the net gain to the state will remain substantial. This is because the higher fees will not reduce income tax liabilities, and because the increase in project costs is only 42% of the increase in construction worker wages. There will be no offsetting loss of income tax revenues, and the future loss in sales tax revenues will be less than half of the immediate gain in sales tax receipts.

**Table 1**  
**Lowest Bids of Union and Non-Union Firms, State Construction Projects in Iowa City, 1982-1985**

Project	Bid Date	Lowest Bid: Union Firm	Name and Location of Union Firm	Lowest Bid: Non-Union	Name and Location of Non-Union Firm
U of I Theater Bldg.					
General Cont.	3-83	\$3,664,748	J.P. Cullen, Janesville, WI	\$3,378,000 *	
Story Const., Ames					
Mechanical	3-83	643,800	R.M. Boggs, Iowa City	643,300 *	
Fulton & Sons, Des Moines					
Electrical	3-83	994,540	Shay Electric, Iowa City	910,553 *	
Meissner, Newton					
Fieldhouse	5-5-83	4,252,700	M.A. Mortenson, Minneapolis	3,987,000 *	
Mid-America Const., Minneapolis					
Communications Bldg.					
General Cont.	7-7-82	2,888,000	Vawter & Walter, Des Moines	2,816,900 *	
Story Const., Ames					
Electrical	7-7-82	516,502	Shay Electric, Iowa City	352,310 *	
Sweeney-Manning, Ames					
Mechanical	7-7-82	901,106	AAA Mechanical Cont., Iowa City	802,400 *	
L.A. Fulton & Sons, Des Moines					
Oakdale Addition	10-5-82	6,486,000	Knutson Const., Coralville	5,888,250 *	
Vulcan Const., Des Moines					
Carver Pavilion—					
Phase C Completion	7-14-82	3,983,800 *	Knutson Const., Coralville	4,078,950	
Vulcan Const., Des Moines					
Colloton Pavilion					
Phase B Ext. Shell	3-22-83	6,316,500 *	M.A. Mortenson, Minneapolis	6,345,000	
Vulcan Const., Des Moines					
Phase C Completion	11-22-83	13,015,500	M.A. Mortenson, Minneapolis	12,582,300 *	
Mid-America Const. Minneapolis					
Alumni Center Add'n	8-31-82	753,300	Kleiman Constr., Cedar Rapids	699,500 *	
Merit Constr., Cedar Rapids					



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Law School	6-14-83	15,334,742 *	PCL Constr. Ltd., Minneapolis	15,777,500
Mid-America Constr., Minneapolis				
Indoor Practice Fac.	1-23-85	1,287,700	Kleiman Constr., Cedar Rapids	1,271,712 *
Mid-America Constr., Minneapolis				

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\* Winning Bid

Table 2

**Impact of a Prevailing Wage Law on State Construction Projects in Iowa City, 1982-1985**

Project A	Lowest Bid: Union Firm B	Lowest Bid: Non-Union C	Cost of Wage Law		Labor Component of Costs		Excess Profit (C-G)(B-F) H	Increased Wages (F-G) I
			Amount D	% Incr. E	Union F	Non-Union G		
U of I Theater Bldg.								
General Cont.	\$3,664,748	\$3,378,000	\$286,748	8.5%	\$1,008,300	\$504,150	\$217,402	\$504,150
Mechanical	643,800	543,300	500	0.1	184,272	92,136	91,636	92,136
Electrical	994,540	910,553	83,987	9.2	272,749	136,375	52,388	136,375
Fieldhouse	4,252,700	3,987,000	265,700	6.7	1,179,665	589,833	324,133	589,833
Communications Bldg.								
General Cont.	2,888,000	2,816,900	71,100	2.5	816,762	408,381	337,281	408,381
Electrical	516,502	352,310	164,192	46.6	124,386	62,193	(101,999)	62,193
Mechanical	901,106	802,400	98,706	12.3	243,888	121,944	23,238	121,944
Oakdale Addition	6,486,000	5,888,250	597,750	10.2	1,771,603	885,801	288,051	885,801
Carver Pavilion— Phase C Completion	3,983,800	4,078,950	0	0.0	1,154,332	577,166	0	0
Colloton Pavilion								
Phase B Ext. Shell	6,316,500	6,345,000	0	0.0	1,812,728	906,364	0	0
Phase B Completion	13,015,500	12,582,300	433,200	3.4	3,664,798	1,832,399	1,399,199	1,832,399
Alumni Center Add'n	753,300	699,500	53,800	7.7	207,995	103,998	50,198	103,998
Law School	15,334,742	15,777,500	0	0.0	4,454,292	2,227,146	0	0
Indoor Practice Fac.	1,287,700	1,271,712	15,988	1.3	366,427	183,214	167,226	183,214
<b>TOTAL</b>	<b>\$61,038,938</b>	<b>\$59,533,675</b>	<b>\$2,071,671</b>	<b>3.5%</b>	<b>\$17,262,198</b>	<b>\$8,631,099</b>	<b>\$2,848,752</b>	<b>\$4,920,423</b>

Table 3

**Summary of Estimated Impacts:  
State Construction Projects in Iowa City, 1982-1985**

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**All Projects**

(1)	Total of winning union bids	\$25,635,042
(2)	Total of winning non-union bids	<u>33,332,225</u>
(3)	Total cost of contracts (1+2)	\$58,967,267

**Projects Won By Non-Union Firms:**

(4)	Total of lowest bids of union firms	\$35,403,896
(5)	Total of winning non-union firm bids	<u>33,332,225</u>
(6)	Increased costs under prevailing wage (4-5)	\$2,071,671
(7)	Percent increase in costs (6/5)	6.2%

**Effects of Prevailing Wage Law:**

(8)	Increased wages of construction workers	\$4,920,423
(9)	Reduced excess profits of non-union firms	<u>2,848,752</u>
(10)	Net increase in project costs (8-9=6)	\$2,071,671
(11)	Overall percent increase in costs (10/3)	3.5%

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