Project Labor Agreements and Financing Public School Construction in Massachusetts

David G. Tuerck, PhD
Paul Bachman, MSIE

Beacon Hill Institute at Suffolk University
8 Ashburton Place, Boston, MA 02108
Web: www.beaconhill.org phone: 617-573-8750 fax: 617-720-4279, email: bhi@beaconhill.org
December 2006
OVERVIEW

In 2003 The Beacon Hill Institute conducted a study of 126 schools in the Greater Boston area, in which it tested the theory that Project Labor Agreements (PLAs) raise construction costs. The study found that PLAs raise winning bids for school construction projects by 14%, and actual construction costs by 12%. This year, the City of Fall River provided a real-world confirmation of the BHI findings when the city canceled a PLA and re-opened the bidding process without requiring a PLA. The Fall River episode is instructive for all Massachusetts cities and towns. Beginning in 2007, significant changes to the state's school funding program will take effect that will, among other things, increase the share of construction costs borne by cities and towns. Here, BHI updates its 2003 study to show how PLAs will affect local construction costs under the new program. BHI finds that, on average, local governments will see the cost of adopting a PLA rise by about 35% under the new program.

EXECUTIVE SUMMARY

Project Labor Agreements (PLAs) are agreements with labor unions that establish the rules to be followed by firms that bid on construction projects. PLAs typically require that the contractor hire all workers through union halls, that nonunion workers pay dues for the length of the project and that the contractor follow union rules on pensions, work conditions and dispute resolution.

Economic theory predicts that Project Labor Agreements will, for two reasons, add to the cost of construction projects: First, by discouraging bids from nonunion contractors, PLAs reduce the number of contractors willing to bid on a project and thus reduce the number of bids. The fewer the bids, the greater the minimum bid is likely to be. Second, PLAs are likely to increase the minimum bid by forcing successful bidders to adopt union rules relating to work conditions.

In 2003, the Beacon Hill Institute tested the theory that PLAs raise construction costs. Because the actual cost of construction often exceeds the bid made by the successful bidder, we divided the test into two parts, asking, first, how PLAs affect the minimum bid and, second, how it affects construction costs.

---

For a sample of 126 school construction projects undertaken in the Greater Boston area over the period 1995-2003, the study found that PLAs cause bids to rise by $18.83 per square foot, or by 14%, and final construction cost to rise by $16.51 per square foot, or by 12%. Since the 2003 study, BHI has completed studies in Connecticut and New York using a similar methodology and found that bids and final construction costs were higher for PLA than for non-PLA projects in those two states as well.\(^2\)

This report updates and expands upon our 2003 study to incorporate two recent developments. In 2004, Massachusetts reformed the state’s School Building Assistance Program (SBAP) by creating the Massachusetts School Building Authority (MSBA), which falls under the purview of the Office of State Treasurer and Receiver General. The legislation directed the MSBA to plan and manage the Commonwealth’s investments in school buildings. As a result, school districts in Massachusetts will face tougher audits of their building programs, tighter control of expenses, lower reimbursement rates and more financial responsibility for cost overruns. Second, the recent experience of the city of Fall River with the construction bid process for four new schools closely reflects our estimate of the consequences of PLAs for construction costs.

**Implications of the New MSBA Rules**

As noted, we found in 2003 that PLAs add $16.51 per square foot to school construction costs. We could think of this amount as a kind of surcharge for PLAs – an extra charge to the project that results from putting it out to bid under a PLA. The cost of schools built under the SBAP was shared in part by the state and in part by local government. Under the MSBA, there will be a decrease in the share of this burden borne by the state and an increase in the share borne by local government. Thus there will be an increase in the PLA “surcharge” borne by local government. If the share borne by the state falls from 50% to 40%, the surcharge borne by local government will rise from $8.26 to $9.91 per square foot. If the share borne by the state falls from 90% to 80%, the surcharge borne by local government will rise from $1.65 to $3.30.

Table 1 compares the burden of this surcharge on local and state government under alternative assumptions about the degree to which state reimbursements will fall. Previously, for example, the

---

minimum share of construction cost for which the state would provide reimbursement was 50%. That minimum will now fall to 40%, as will the share of the PLA surcharge borne by the state. The surcharge borne by the local government will rise by 20%, from $8.26 to $9.91.

If the state was reimbursing local government by the maximum share, 90%, that share will now fall to 80%. The portion borne by the local government will double, rising from $1.65 to $3.30. Given that the average reimbursement rate will fall from 72% to 62%, the average surcharge borne by local government will rise 35%, from $4.62 to $6.27.

<table>
<thead>
<tr>
<th>Table ES-1: Local State Shares of the PLA Surcharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>Former SBAP Reimbursement Rates</td>
</tr>
<tr>
<td>50%</td>
</tr>
<tr>
<td>Local portion of the PLA surcharge (per square foot)</td>
</tr>
<tr>
<td>State portion of the PLA surcharge (per square foot)</td>
</tr>
<tr>
<td>New MSBA Plan Reimbursement Rates</td>
</tr>
<tr>
<td>40%</td>
</tr>
<tr>
<td>Local portion of the PLA surcharge (per square foot)</td>
</tr>
<tr>
<td>State portion of the PLA surcharge (per square foot)</td>
</tr>
</tbody>
</table>

*Based on BHI’s finding that a PLA increases construction costs by $16.51 per square foot.*

Fall River Mayor Learns Simple Economics

The experience of Edward Lambert, mayor of Fall River, with PLAs taught him a valuable economics lesson. As he recently stated, “With more bidders, you tend to get a better price.” His comments reflected his decision to rescind a PLA on several school projects. The results after he removed the PLA – the number of bidders soared and bids sans PLA resulted in savings of 8% to 12%.

This Fall River episode provides a “real-world” case study demonstrating the effect of a PLA on construction costs. The city bid three school construction projects under a PLA, but the projects attracted few bidders and the contractors who submitted bids exceeded the city’s budget. As a result, the city subsequently canceled the PLA and reopened the bidding process without such a condition. The City realized the following savings:

1. the Kuss Middle School project saved $1.9 million, or 10% on the sub-bids, and $1.8 million, or 4%, on the general contractor bids;
2. the Small Elementary School project saw savings of $1.2 million, or 12%, on the sub-contractor bids; and
3. the Slade Elementary School project saved $900,000, or 8%, on the sub-contractor bids.

Conclusion

In 2003, we found that PLAs impose a surcharge of $16.51 per square foot on school construction costs. Since our study of that year, there have been two developments that give new significance to this finding. First, local government cannot afford so easily henceforth to take the view that, because the state bears the burden of this surcharge, they need not worry about how a PLA will inflate construction costs. The portion of the surcharge that local government will bear is going up. Second, the city of Fall River has just undergone an object lesson on how a municipality can save on construction costs by not putting a project out to bid under a PLA. It is our conclusion that with property taxes occupying everyone’s attention, other cities and towns should take a close look at the Fall River experience as a way to control local spending.
I. INTRODUCTION

Project Labor Agreements (PLAs) discourage nonunion contractors from bidding on construction projects by requiring them to conform to union rules and hire through union halls. It is widely believed that construction projects are more expensive when a PLA is in effect. Until a 2003 study by the Beacon Hill Institute, however, the evidence for this had been largely anecdotal.4

The current report updates the earlier study by (1) applying the statistical results from our earlier study to the new, more restrictive reimbursement formula used by the Massachusetts School Construction Authority and (2) providing evidence from the recent experience of Fall River, in which school construction projects were bid with a PLA and subsequently reopened and bid without a PLA.

The Arguments for and against PLAs

Project Labor Agreements are a form of “pre-hire” collective bargaining agreements between construction clients (such as towns or school districts) and labor unions. A PLA, which is unique to the construction industry, applies to a specific project, contract or work location. The terms of a PLA generally recognize the participating unions as the sole bargaining representatives for the workers covered by the agreement, regardless of the current union membership status of the workers. A PLA requires all workers to be hired through the union hall referral system. Nonunion workers must join the signatory union of their respective craft and pay dues for the length of the project. The workers’ wages, pension contributions and working hours, along with the dispute resolution process and other work rules, are also prescribed in the agreement. PLAs supersede all other collective bargaining agreements and prohibit strikes, slowdowns and lockouts for the duration of the project.5

As PLAs have become more common in publicly financed construction projects, and as the number of nonunion construction firms has grown, PLAs have become controversial. Opponents of PLAs argue:

(i) that PLA agreements raise the cost of undertaking projects and
(ii) that nonunion or open shop contractors are discouraged from bidding on jobs that have PLAs.

4 Haughton, et al., “Project Labor Agreements.”
Opponents cite the PLA requirement that all employees be hired in union halls, pay union dues, contribute to union-sponsored retirement plans, and follow union work rules. They argue that the use of a union hiring hall can force contractors to hire union workers over their own work force. Contractors and their employees are required to pay union wages, dues and contributions into union benefit plans even if they are covered by their own plans. The union work rules restrict the contractors from using their own, more flexible operating rules and procedures. These restrictive conditions cause costs to rise for a project that requires a PLA. It is worth noting that whether or not a PLA is in effect, all contractors must adhere to any “prevailing wage” rules that may be in effect on public construction projects.

Furthermore, open-shop contractors contend that their competitive advantages are nullified by the PLA. The result is that in practice, if not in principle, they are unable to bid competitively on jobs that have a PLA requirement. In turn, the absence of open-shop bidders for PLA projects results in fewer bidders for the project, and with fewer bidders, the lowest bids come in higher than if open-shop contractors had participated. Therefore, the cost of the project will be higher, with fewer bidders attempting to under-bid each other for the contract. Some opponents also argue that requiring a PLA violates state competitive bidding laws that require a free and open bidding process. A number of critics even suggest that PLAs have evolved into a form of extortion, with an implicit threat that if a town does not agree to a PLA, then there is more likely to be disruption at the workplace.

Advocates for PLAs counter that:

- PLAs keep projects on time and on budget, and
- PLAs help assure the use of qualified skilled labor.

PLA advocates argue that the agreements provide for work conditions that are harmonious and predictable. For example, PLAs guarantee wage costs won’t rise for the life of the contract. They contend that the combination of work rules and provisions that prohibit strikes, slowdowns and lockouts keep the project on time and prevent cost overruns due to delays. They argue, furthermore, that the wage stipulations allow firms accurately to estimate labor costs for the life of the project and thus have more accurate bids that will keep the project on budget.

Advocates also insist that the union rules allow for a safer work environment, thereby reducing accidents and thus lowering the number of workers’ compensation claims. In addition, workers’ union certifications and employer apprenticeship programs ensure the quality of the work and help avoid costly
mistakes. These features, they argue, save money in the long run by keeping projects on budget by reducing cost overruns. In addition, proponents assert, that through union apprenticeship programs, PLAs help assure local workers are hired and trained.

Finally, PLA advocates laud the ability of such projects to meet specific hiring goals, such as assuring that a high percentage a project’s workforce consists of local labor. Public officials sometimes argue that a PLA will help public projects achieve goals for utilizing small and disadvantaged (minority or female owned) business enterprises.

II. HISTORICAL BACKGROUND TO PROJECT LABOR AGREEMENTS

Project Labor Agreements in the United States originated in the public works projects of the Great Depression, which included the Grand Coulee Dam in Washington State in 1938 and the Shasta Dam in California in 1940. PLAs have continued to be used for large construction projects since World War II, including the construction of Cape Canaveral in Florida, the Central Artery project (the “Big Dig”) in Boston, and even private projects, such as the Alaskan pipeline and Disney World in Florida.

Since the late 1980s, the use of PLAs in public construction projects has become more controversial. Open-shop construction firms and industry organizations have challenged PLAs in the courts. As discussed below, the executive and legislative branches at the federal, state and local levels of government have at times taken positions favoring the use of PLAs.

PLAs at the Federal Level

The executive branch of the federal government has been involved in the PLA debate for over a decade. The administration of George H. W. Bush issued an Executive Order in 1992 forbidding the use of PLAs on federally funded projects. The Clinton Administration rescinded that order in February 1993 and attempted to go further in 1997, when it planned to issue an Executive Order requiring all federal agencies to use PLAs on their construction projects. However, due to extensive lobbying, the President instead issued a memorandum encouraging the use of PLAs on contracts over $5 million for projects, including renovation and repair work, on federally owned facilities. President George W. Bush canceled the
Clinton order on February 17, 2001 by issuing an Executive Order prohibiting PLAs on federally funded and assisted construction projects.8

Some of largest unions in the country, including the AFL-CIO, insisted that the order illegally interfered with their collective bargaining rights under National Labor Relations Act. The unions filed suit in federal court (Building & Construction Trades v. Allbaugh), and on November 7, 2001 a United States District Court Judge issued an injunction blocking the President’s order. Upon appeal by the United States Justice Department, the United States Court of Appeals for the District of Columbia overturned the lower court decision and ordered the judge to lift the injunction on July 12, 2002. The appeals court contended that the National Labor Relations Act did not preempt the executive order.9 The unions disagreed and filed to have the case reviewed by the United States Supreme Court. In April 2003, the court declined to review the case and the Executive Order remains in place today.10

PLAs in the Northeast

Like Massachusetts, the nearby states of Connecticut, Rhode Island, New Jersey and New York regularly use PLAs on public projects. Given these states’ intertwined economies and the strength of organized labor, their collective history with PLAs is similar to that of Massachusetts.

Contention over PLAs in the Northeast rose to a crescendo in 1993 with the United States Supreme Court’s Boston Harbor decision. In 1988, a federal court directed the Massachusetts Water Resources Authority to clean up the pollution in the Boston Harbor. The Authority’s project management firm, IFC Kaiser, negotiated a PLA with local construction unions for the project. The precedent-setting aspect of this PLA was that its use was mandated in the project’s bid specifications.11 The Associated Builders and Contractors of Massachusetts filed a lawsuit contending that requiring the PLA as a part of the bid specification violated the National Labor Relations Act. However, the United States Supreme Court held, in a concise decision, that a state authority, acting as the owner of a construction project, was legally permitted to enforce a pre-hire collective bargaining agreement negotiated by private parties.12 Since the

---

12 Ibid., 60.
Boston Harbor decision, most litigation regarding PLAs has been based on the competitive bidding requirements of state and local law.

The 1994 New Jersey Supreme Court case George Harms Construction Co. v. New Jersey Turnpike Authority provides an example of a successful court challenge of PLAs based on competitive bidding laws. In the Harms decision, the Court held that the PLA requirement created a sole source of labor and a sole source of construction services in violation of the state's competition statutes, which were set in place to promote “unfettered competition.” The Court recognized that, while all parties were ostensibly permitted to bid, the specification of a PLA nevertheless limited “real competition.”

The New Jersey Supreme Court again weighed in on PLAs in the 1995 case Tormee Construction Inc. v. Mercer County Improvement Authority. Once again, the Court decided that the PLA requirement’s monopolistic characteristics choked off real competition, in opposition to the competitive bidding laws of the state. Furthermore, the Court found that PLAs increased labor costs because the number of employable nonunion workers was reduced.

New York’s state government, like that of Massachusetts, has taken steps to encourage the use of PLAs. In 1997 Governor George Pataki signed an executive order directing state agencies to establish protocols for the consideration of PLAs with respect to individual projects. While the order does caution that courts have struck down PLAs where the owner could not show a “proper business purpose” for entering into them, the order is widely understood to be responsible for the expansion of government-mandated PLAs, along with the expansion of litigation over their legitimacy.

The mayor of Providence, Rhode Island also followed the tradition of political encouragement for PLAs when he issued a 1998 executive order to require their use in certain city construction projects. In 1999, a PLA was specified for a school construction project in Providence, and only two contractors bid on the work. The Rhode Island Chapter of Associated Builders and Contractors moved for an injunction against the PLA stipulation and received it when the Court held that the PLA would irreparably harm open-shop builders. A subsequent 1999 decision against the Rhode Island Public Transit Authority resulted in another injunction against the stipulation of a PLA.

---

13 Ibid., 63.
14 Ibid., 67.
16 Ibid., 114.
The Rhode Island State Supreme Court continues to hold the issuance of PLAs by public entities to strict guidelines. In early 2002, the court rejected a PLA on a $73 million University of Rhode Island construction project. Citing the rulings in New York and Massachusetts, the court said, “It is our opinion that before adopting a PLA, an awarding authority must carry out an objective, reasoned evaluation that has incorporated reviewable criteria in order to fulfill the goals and purposes of the state purchases act, given a PLA’s anti-competitive effect. An objective, reasoned evaluation is necessary to dispel any suggestion of caprice or arbitrariness in imposing this type of contract.” The court ruled that since some of the bid packages for the project were issued without a PLA, withdrawn, and then issued with the PLA as an addendum, the process was “arbitrary and capricious,” and the court upheld a lower court ruling that struck down the PLA requirement.17

The Rhode Island Convention Center Authority has decided on a PLA for the $62 million renovation of the Dunkin’ Donuts Center, home of the Providence College basketball team and the Providence Bruins hockey team. The construction for this complex is expected to last 2 years with most of the work being completed in the summer. Analysis performed by the project management firm Gilbane estimated that the PLA would raise labor costs by $200,000 but nonetheless concluded that the project was suitable for a PLA.

**PLAs in Massachusetts**

In Massachusetts, PLAs appeared on the legislative agendas of state and local governments as efforts were made to require them on local construction projects. The City of Cambridge enacted a local ordinance that put in place many of the same requirements that are found in PLAs, for all public projects. The Massachusetts legislature attempted to require PLAs on a bond authorization for the rebuilding and repair of courthouses throughout the state. Under intense negotiation between the legislature and the Governor’s Office, a bill was produced in 1998 that mandated PLAs for funds allocated to courthouse construction projects in Boston, Worcester, and Fall River only. The legislation created a commission to recommend establishing circumstances in which PLAs should be used. The legislation instructed the commission to consider the “appropriateness and function and the size, complexity and duration of the public construction projects” when deciding whether or not to use PLAs.19

18 Ibid.
Yet PLAs have remained controversial. The city of Lynn, Massachusetts agreed to PLAs for a series of new school construction projects in 1997. According to the Lynn Building Department, the projects were bid and construction began that year. However, several nonunion construction firms challenged the PLA in court on the grounds that it violated Massachusetts’s competitive bidding laws. The Court ruled that the plaintiffs suffered “irreparable harm” because “they would be required to conform to a variety of union practices and would be limited in their autonomy to negotiate employment with nonunion workers.” The Court allowed that the city had the authority to enter into a PLA but that it “may not exercise its authority arbitrarily or capriciously” adding, “a PLA must be evaluated in the light of a project's size, complexity, and duration.” The Court then found that the Lynn schools failed to meet these criteria, and granted a preliminary injunction preventing the city from requiring bidders to sign a PLA in order to work on the project. The City of Lynn subsequently opened the bidding for the projects without requiring firms to sign a PLA.

The outcome was different in the case of the city of Malden, which in 1996 began a five-year $100-million series of projects to replace its schools serving kindergarten through eighth-grade, and to remodel Malden High School. The city planned to demolish nine existing schools, replace five and demolish three.

On the recommendation of its construction project management firm, O’Brien-Kreitzberg, Inc., the city negotiated a PLA with the Building and Construction Trades Council of the Metropolitan District, AFL-CIO and the New Council of Carpenters, AFL-CIO. The agreement included many of the PLA provisions discussed in Section II, including: the recognition of unions as the sole and exclusive bargaining representatives of all project employees; hiring through the union referral process; the requirement that contractors contribute to union employee benefit plans; uniform work rules and dispute resolution; and a prohibition on strikes, picketing, work stoppages, slowdowns and lockouts. The PLA was approved by a vote of the City of Malden municipal building committee in May of 1997; union approval followed.

In the initial phase of the project, the city bid the construction of the Beebe and Roosevelt schools as one project, with the stipulation that the project was subject to the PLA requirement. When the bids were

20 Ibid.
21 Ibid.
reviewed by the city, the lowest exceeded the project budget and all bids were subsequently rejected. The project was modified and the city offered each school for bid separately. On November 7, 1997, seven open-shop (nonunion) contractors with public sector building experience filed for a motion of preliminary injunction against the use of a PLA in the bidding process. The plaintiffs argued that the PLA violated the state's competitive bidding laws, and that they would have bid for both projects if the PLA were not included. The court denied the request for a preliminary injunction, and when the plaintiffs filed an appeal, the Massachusetts Supreme Judicial Court chose to hear the case.

The Supreme Judicial Court reaffirmed the lower court’s denial of the preliminary injunction. The court majority argued that the objectives of the state’s competitive bidding laws were to “obtain the lowest price for its work that the competition among responsible contractors [could] secure” and to create an “honest and open procedure for competition for public contracts.” The Court accepted the plaintiffs' assertion that “they were inhibited from bidding, and that this inhibition could have anti-competitive effects.” However, the Court concluded, “that PLAs on public projects are not absolutely prohibited.”

In echoing the decision of the Lynn case, and that of a New York case involving the restoration of the Tappan Zee Bridge, the Court stated that “the project is of such size, duration, timing, and complexity that the goals of the competitive bidding statute can not otherwise be achieved and the record demonstrates that the awarding authority undertook a careful, reasoned process to conclude that the adoption of a PLA furthered the statutory goals.” The Court went on to state, “It may be that in certain cases, sheer size of a project warrants the adoption of a PLA. In most circumstances, the building of a school will not, in and of itself, justify the use of a PLA.” This first phase of the construction project came in on budget and on time, with no labor interruptions, according to city officials.

Since 2003, PLAs have been at the center of controversy with building projects across Massachusetts drawing attention for the use or abandonment of a PLA. In Worcester, when the $563 million City Square project was to be built, city officials shied away from a PLA once it became apparent that the PLA would significantly reduce the amount of funding the state would provide. In addition, Worcester initially planned to use a PLA for the construction of the new Worcester Vocational School building. Officials

24 Ibid.
25 Ibid.
26 Ibid.
27 Ibid.
28 Ibid.
dropped the PLA after public outcry, including nonunion graduates from the existing school who would not have been able to work on the project.

The City of Brockton planned to use a PLA for the construction of two elementary schools on Colonel Bell Drive and Quincy Street. The projects were expected to cost $48 million and to be completed in time for the 2007 school year. City officials advertised the projects in July of 2005, but only two general contractors expressed interest and six subcontractor categories received no responses.31 However, after a lawsuit was filed by open-shop contractors, the judge barred the usage of a PLA on the project.32

III. THE EVIDENCE ON PLAs

Although there is substantial anecdotal evidence that PLAs raise construction costs, there has been little formal statistical evidence of such an effect until recently. Ideally, to compare PLA with non-PLA costs, we would compare construction projects of a similar nature – for instance road repairs – where some projects are done with a PLA in place, and others are not. Situations such as these are rare, and even when they occur, the relevant information is difficult to obtain.

However, in the 2003 report, we found one suitable “natural experiment” that allowed us formally to compare the bid costs of PLA and non-PLA projects. Driven by an increase in the student population, and encouraged by financial support from the state, many of the roughly one hundred towns and cities in the greater Boston area have financed school construction over the past several years. Some cities or towns had PLAs in effect during the construction bidding process while others did not. Using data on construction bid costs for 126 school construction projects, adjusted for inflation with an appropriate construction cost index, we estimated the difference in bid cost per square foot of construction between schools with a PLA in effect and schools with no such agreement.

A comparison of the key characteristics of the school construction projects in towns with a PLA (“PLA projects”) with those where there was no such agreement (“non-PLA projects”) revealed a notable pattern in the data that PLA projects, on average, cost $18.26 ($152.46 minus $134.20) more per square foot (in 2001 prices) than non-PLA projects. This test might seem inconclusive because it is possible that PLA

projects are systematically different – for instance larger, or concentrated on new buildings rather than renovations.

One way to determine whether or not the difference in PLA versus non-PLA project costs is robust is to perform a formal regression analysis that takes such factors into account. Our regression results showed that PLA projects add an estimated $18.83 per square foot (in 2001 prices) to the bids and an estimated $16.51 more per square foot to the actual cost of construction. We obtained these figure after adjusting the data for inflation (using an index that includes the trend in both construction wages and in materials costs) and after controlling both for the size of projects and for whether they involve new construction or renovations. Since the average cost per square foot of construction in our sample was $137.24, PLAs raise the cost of building schools by almost 12% and the bid costs by 14%. The data support this result at a 99% confidence level. The regression equation also showed that projects involving new construction, rather than renovations, experience significantly higher costs per square foot, as one would expect.33

IV. SCHOOL CONSTRUCTION FINANCING IN MASSACHUSETTS

The School Building Assistance Program in Massachusetts (SBAP) has helped fund public school construction for more than half a century. The program began in 1948 as a three-year effort to provide resources to local communities for the building of schools for the “Baby Boom” generation, with a 25% percent reimbursement rate for the local school districts.34

The program has since grown substantially and enjoys widespread political support.35 Today “the school building assistance program is the largest capital grant program operated by the Commonwealth…and the costs of the school building assistance program are increasing at an unsustainable rate.”36 In 1999, the program offered, on average, a 69% reimbursement rate for the construction and financing costs of school projects. Over the period 1991-1999, the Commonwealth of Massachusetts made total contributions to the program of more than $1.7 billion.37

---

33 For a complete description of the methodology see the 2003 BHI report. Available at http://www.beaconhill.org/BHIStudies/PLApolicystudy12903.pdf.
34 Massachusetts Executive Office of Administration and Finance, Reconstructing the School Building Assistance Program, Policy Report Series No. 3 (January, 2000).
36 Massachusetts Executive Office of Administration and Finance, “School Building Assistance.”
37 Ibid.
The financial commitment for the state rose consistently over the 1990s. In fiscal year (FY) 1999, the annual payment for school construction projects was $201 million, a 58% increase from the $127 million appropriated in 1991. By FY 2003 school construction appropriations had jumped to $362 million, a remarkable 80% increase over the FY 1999 level. According to the SBAP’s website, 283 construction projects appeared on the Priority List for FY 2003, with 19 new projects receiving authorization. The rapid growth of the program has prompted increased attention to the issue. A report entitled Reconstructing the School Building Assistance Program Policy Report, published in 2000, predicted that by FY 2002 “this program will achieve ‘budget buster’ status.” It is within this fiscal environment that school construction costs have become an important concern in the building of public schools in Massachusetts. The program was spinning out of control.

In 2004, the Commonwealth owed $5.1B for 728 school projects that had been receiving payments and $5.5B for 428 projects on a wait list which had been waiting for their first payment from the Commonwealth. In the absence of any reform, clearing the waitlist would have required the Legislature to more than double the annual appropriation of $400M to the school building assistance program without allowing approval for any new project proposed after 2003.

Massachusetts acted by passing legislation creating the Massachusetts School Building Authority (MSBA) to oversee state aid for the school construction in local communities. The MSBA’s mission is to provide “effective management and planning of the Commonwealth’s investments in school building assets” and to get control of the state school construction program. First, it is charged with reviewing current payment schedules and possibly suspending them for refinancing, audit findings, and other circumstances that may warrant such action. Second, the MSBA needed to clear the waitlist of past and current projects waiting for payment, and create a new funding mechanism for future construction projects. A moratorium was implemented, effectively deferring applications for grants until July 1, 2007; at which time the moratorium will be lifted and the acceptance of new applications will commence. The legislature also dedicated 20% of sales and use tax revenue to the newly created School Modernization and Reconstruction Trust Fund (SMART Fund). The MSBA can approve only projects that can be financed using the SMART Fund.

38 FY 1999 refers to the period July 1, 1998 through June 30, 1999.
39 See http://finance1.doe.mass.edu/doe_budget/1_doe.html.
40 Massachusetts Executive Office of Administration and Finance, “School Building Assistance.”
41 Massachusetts General Laws, Chapter 70B, Section 10.
For Fiscal Year 2008, the MSBA has a reimbursement ceiling of $500 million, with an additional 4.5% increase each year thereafter. Assuming the ceiling is reached each of the first ten years of operation, total state expenditures for school building reimbursement will reach $6.2 billion over the period. According to the MSBA, the total amount, today, on the waitlist yet to be funded is $5.5 billion. However, this represents only five years of reimbursements. In addition to squeezing the amount each applicant will be able to receive, the total pool available for reimbursement will decrease substantially. As designated by the MSBA, there will be no waitlist on reimbursements once the moratorium has been lifted. Instead, an applicant who does not receive a reimbursement due to lack of funds will be forced to apply in the next fiscal year, and therefore be evaluated and ranked in terms of priority with that year’s applicant pool. This presents another problem for municipalities that might not be able to receive funding for a number of years but have already begun planning construction projects.

The legislation also included a revision of the state funding formula for school building projects. Under the old policy governing the Building Assistance Plan, the state was obliged to reimburse municipalities for at least 50%, and at the most 90%, of their school building expenditure. However, effective August 1, 2005, the state was to become responsible for only 40% to 80% of building expenditures. The average reimbursement rate will now be 62% of construction costs, down from 72% under the previous formula.

The MSBA inherited 800 projects from DOE that had not been audited. To date, MSBA has completed 240 audits, including eight that have been appealed and have not yet been settled, said MSBA spokeswoman Carrie Sullivan. In performing those 240 audits, the MSBA refused reimbursement for $1.1 billion worth of spending on different projects; money that local municipalities will need to find, and ultimately local taxpayers will be required to pay.

The combination of the new funding formula, the audits of existing projects and the funding ceiling combine to make the new MSBA funding program far more stringent and less accommodating than the previous SBAP. Municipalities will be required to absorb a larger portion of their school building expenditure, especially for cost overruns. Since PLAs increase construction costs, they increase the

43 Ibid.
44 Ibid.
46 MGL Chapter 70B, Section 10.
likelihood of a municipality being denied reimbursement due to lack of funds. Municipalities denied state funding would have to locate funds sufficient enough to finance the portion of the project for which they were expecting reimbursement from the state.

The results from our 2003 study show that a PLA (holding everything else constant), on average, increases construction costs by $16.51 per square foot. By applying this “surcharge” for building a school with a PLA to the reimbursement rates under the old and new systems, we can estimate the increase in the construction cost per square foot that a school district would be obligated to finance for using a PLA. For example, if a local government receives a 50% reimbursement from the state then it will only pay 50%, or $8.26 per square foot, of the $16.51 per square foot increase in construction costs due to the PLA. However, if the state were ever to lower its reimbursement rate to 10% then the local government will be forced to pay $14.86 per square foot of the PLA cost increase. Table 1 contains a summary of the results.

Table 1: Local Obligation of the PLA Construction Cost Increases

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Former SBAP Reimbursement Rates</strong></td>
<td>50%</td>
<td>90%</td>
<td>72%</td>
</tr>
<tr>
<td>Local liability for PLA surcharge (per square foot)</td>
<td>$8.26</td>
<td>$1.65</td>
<td>$4.62</td>
</tr>
<tr>
<td>State liability for PLA surcharge (per square foot)</td>
<td>$8.26</td>
<td>$14.86</td>
<td>$11.89</td>
</tr>
<tr>
<td><strong>New MSBA Plan Reimbursement Rates</strong></td>
<td>40%</td>
<td>80%</td>
<td>62%</td>
</tr>
<tr>
<td>Local liability of PLA surcharge (per square foot)</td>
<td>$9.91</td>
<td>$3.30</td>
<td>$6.27</td>
</tr>
<tr>
<td>State liability for PLA surcharge (per square foot)</td>
<td>$6.60</td>
<td>$13.21</td>
<td>$10.24</td>
</tr>
</tbody>
</table>

Based on a finding that a PLA increases construction costs by $16.51 per square foot.

Those school districts that were reimbursed for 90% of their costs under the old plan would see their portion of a PLA surcharge double from $1.65 per square foot to $3.30 per square foot, while those at the 50% level increase their burden from a much higher base of $8.26 per square foot to almost $10 per square foot. On average, school districts that choose to use a PLA would see their surcharge rise from $4.62 per square foot to $6.27 per square foot.

To put these figures into perspective, building a new 125,000 square foot school with a PLA increases construction costs by $2.1 million (125,000 multiplied by $16.51). Under the old average reimbursement rate of 72%, the school district would pay $588,000 (28% of $2.1 million) of this cost increase and the

---

49 Beacon Hill Institute, *Project Labor Agreements and the Cost of School Building in Massachusetts.*
state would pay $1.5 million (72% of $2.1 million). Under the new system, the school district would have to pay $798,000 (38% of $2.1 million) and the state would pay $1.3 million (62% of $2.1 million). The new reimbursement formula, annual funding ceiling and stringent auditing under the new MSBA portend that local towns will need to be much more cost conscious in their school construction projects, or bear a higher burden for their failure to do so. The recent experience of Fall River provides a case study of how municipalities can be expected to become more cost conscious in the future.

V. THE FALL RIVER CASE STUDY

The City of Fall River is located on the southeastern Massachusetts coast and is most famous for the legend of how one of its residents took an axe to her parents. Says the legend: “Lizzie Borden took an axe, and gave her mother forty whacks. When she saw what she had done, she gave her father forty-one.” This year the city of Fall River took an axe, not to anyone’s parents, but to school building costs.

Fall River recently joined the other roughly one-hundred cities and towns in the greater Boston area engaged in significant school construction projects, when the city launched an ambitious ten-year School Building Plan to construct 11 new school buildings. Mayor Edward M. Lambert has led the effort in hopes that it will demonstrate Fall River’s commitment “to improve the school infrastructure so that we have the best schools as we move forward,” Lambert said. "We want to try to provide that to as many students as possible." 50

The new John J. Doran School, the first project completed under the School Building Plan, opened in January 2001, marking the first new school built in Fall River for nearly 50 years. In addition, the city opened the Spencer Borden and William S. Greene schools in January 2003, at a total cost of $36.4 million and a construction schedule of 2 years. The new Frank M. Silvia School also opened in 2004 after two years of construction.51

Under the old state School Building Assistance Program, described in the previous section, the state reimbursed Fall River 90% of the construction costs to build the three schools. All indications are that the three schools were built within budget and that the initial construction schedules were met. The schools were bid under a full competitive bidding process, without a PLA.

51 Ibid.
The next phase of the School Building Plan calls for building two middle schools (the Mathew J. Kuss and Morton Schools) and three elementary schools (the Letourneau, the Ralph M. Small and the Slade Elementary Schools).

Groundbreaking for the 160,000 square-foot, $36 million Kuss Middle School was held in May of 2005 followed by an October 2005 groundbreaking ceremony for the 92,000 square-foot, $20 million Letourneau School. City officials were planning the construction of the Small and Slade Elementary Schools as well. Once these schools are completed, plans call for the building of a new N.B. Borden Elementary School, as well as additional schools in the downtown area. Fall River city officials requested the City Council to approve a $136.5 million loan order to fund the construction of the five schools, with the understanding that the state would reimburse the city 90% of the construction costs. The School Building Plan appeared to be on course and set for a quick and uneventful completion to these construction projects.

City officials considered utilizing a PLA for the construction of these five schools. Mayor Lambert echoed the conventional argument of timeliness for using a PLA when he said, “Because students will be shifting around to different buildings during the construction process, it is imperative that all of the projects are completed without delay.” The Morton school was scheduled to begin shortly after the completion of the Kuss School, enabling students from the Morton school to use the old Kuss school building during the construction of their new building. The Mayor also claimed that a PLA would guarantee that a local work force would be used during construction. The mayor’s arguments of timeliness and a guarantee of local labor on the projects were not met with universal agreement by the community.52

Open-shop contractor groups warned city officials that the PLA would discourage nonunion contractors from bidding on the projects, and thus limit the number of bidders and drive up costs. They further argued that a PLA would provide no assurance that the projects would employ local labor. Nevertheless, the MSBA was prepared to reimburse 90% of the construction costs, alleviating costs concerns for local taxpayers, and thus city officials ignored the warnings and proceeded to negotiate a PLA with the local trade unions. In response to the decision, open-shop contractor groups filed for and received a temporary restraining order that blocked the use of a PLA on the project. However, the judge later dismissed the case, saying that the project was of “sufficient size, duration, timing and complexity;” under the standards

---

set by the Massachusetts Supreme Judicial Court set in the Malden case almost a decade earlier, to warrant a PLA.\textsuperscript{53}

In late 2005, the city solicited the first round of subcontractor bids for the Kuss Middle School, and a review of the bids revealed a dearth of bidders for several contacts and bid amounts that were well above the architect’s budget. The project received no bids for the electrical work; one bid each for plumbing, food service equipment, and painting and two bids each for supplying hydraulic elevators, aluminum windows, glass and glazing and roofing and flashing. Moreover, the low bids on the project totaled $17.4 million, or more than $5 million higher than the $11.8 million budget, even in the absence of a bid for the electrical work. City officials advertised the electrical contract again and their efforts produced one bid of $4.8 million, nearly double the $2.5 million budgeted for this work.

In response to the high bids, the city rejected several bids for the Kuss School and reopened the bidding process for the provision of masonry ($2.5 million over budget), metals ($900,000 over budget), aluminum windows ($200,000 over budget), painting and electrical services. As a result, the project schedule was delayed six weeks, thus nullifying one of the arguments city officials used for the PLA in the first place. Rather than blame the PLA, the Mayor blamed the high bids, 16% over-budget by his own accounting, on a requirement that contractors pre-qualify many months before bidding for the contracts.\textsuperscript{54}

The new round of bidding produced mixed results. Not only did it delay the project by an additional two weeks, but the new low bid for painting actually increased by $24,685. The new low bid for electrical services did drop by $1 million, and the new low bid for metals dropped by $20,000. Nonetheless, all bids remained well over budget.\textsuperscript{55}

In March, the city opened the general contractor bids for the Kuss School project and optimism that the bids would come close to the budget faded. The city received only two bids and both were over budget; the low bid, at $45 million, came in $9 million over the $36 million budget, while the other bid was nearly $17 million over budget.

And the beat went on. In April the city opened the sub-bids for the Small and Slade Elementary Schools. Similar to the Kuss project, both schools received few or no bids for many contracts, and those bids that


\textsuperscript{55} Ibid.
were submitted pushed project costs way over the original budget. The low sub-bids for the Small School totaled over $11.1 million, pushing the project $4.7 million over the original budget of $6.4 million, while the bids for the Slade School surged $3.4 million over its $8.4 million budget. In a rerun of the Kuss School sub-bids, both schools failed to obtain a single bid for electrical services and the Small School failed to solicit a bid for acoustical ceiling tiles. High bids for masonry and plumbing contributed to the budget overruns, but roofing proved the biggest budget-buster with the low bids coming in several times higher than the budgeted amount. Director of Municipal Services, James Smith concluded that “at first glance the bids are 30% over what was estimated.” While continuing to blame inflation and the pre-qualifying process, Smith admitted that the “PLA could be part of it.”\(^56\)

The ever-escalating cost of the project began to raise concerns, especially as the recently founded Massachusetts School Building Authority began to flex its fiscal austerity muscles. Initially, Fall River officials celebrated the $90 million reimbursement it was due to receive from the state for the five new schools. However, when construction costs began to soar, the MSBA held firm on its offer to reimburse Fall River only the original $90 million and local officials became concerned. The state was scheduled to reimburse Fall River $28 million for the Kuss Middle School, based on the original construction cost estimate of $31 million. In the absence of a funding increase from the MSBA, given that Fall River accepted the low bid, its citizens would need to pay $17.6 million of the project’s cost instead of the $8.2 the city originally planned.\(^57\) Fall River officials and the MSBA ultimately resolved the impasse by postponing the $34.7 Morton project and reallocating the $29 million due from the MSBA for that project to the other four schools.\(^58\)

In early May, Mayor Lambert, under pressure to reduce costs, canceled the PLA for the school building projects and in a press conference stated, “It is my belief that we have to do everything within our power to make these projects affordable and completed on time.”\(^59\) The mayor apparently began to believe the PLA was affecting the cost of the project. The bidding process for the Kuss, Small and Slade Schools would be reworked without the PLA.

The city solicited a new round of bidding for all three schools, but this time without the PLA requirement. BHI obtained copies of the bids for all three schools and compared those bids obtained by the city with the PLA requirement and those without the PLA. Our analysis shows that Fall River stands to save

\(^{56}\) Ibid.
almost $2 million over the latest round of bidding under the PLA, with the largest savings, $500,000, coming in the area of the previously problematic electrical services category. The lowest sub-bids under the PLA totaled $21,578,488 while the most recent sub-bids totaled just $19,617,249 meaning the sub-bids were 10% higher under the PLA. As expected, the lower bids were also accompanied by a substantial increase in the number of bidders in categories such as masonry, roofing, windows, glass and glazing, ceramic tile, flooring, painting, fire protection, plumbing and electrical services.

In September, the city opened the new general contractor bids for the Kuss project. The lowest bid, $43,870,700, still came in $15.3 million over the original $28.5 million budget. However, the city saved $1.8 million over the lowest bid under the PLA.

The City also reopened bidding for the Slade and Small Schools without the PLA. The sub-bids for the Slade project were reduced by $900,000. The largest savings were identified in the fields of plumbing, masonry and roofing, which provided savings of $485,230, $202,000, and $135,000 respectively. City officials also received bids for the electrical and acoustical ceiling work where the first round of bidding produced none.

Unlike the Kuss, Small and Slade Schools, bidding for the Letourneau Elementary School never took place under the PLA. Although the Small and the Letourneau projects are of comparable size and scope, the disparity between the results of their sub-bids is startling. The Letourneau project received 62 sub-bids, almost triple the 24 sub-bids the Small school received under the PLA. Mayor Lambert noted that the bids were only $1.5 million over the original budget of $10.5 million; this compares to the Small School’s sub-bids that came in $4.7 million over budget. Mayor Lambert identified the obvious key to the lower bids by stating, “with more bidders you tend to get a better price.”

Table 3 contains totals for the general and subcontractor bids that the three Fall River schools received with and without a PLA in place. As one can see, the city of Fall River saved $5.8 million on the total construction bids for all three projects when they were bid without a PLA. Factors such as the high level of publicity the projects received during the previous rounds of bidding and the slowdown in the residential housing construction market, could have helped to increased the number of bidders, and thus reduce the bid amounts in the subsequent round. Nevertheless, the elimination of the PLA requirement was the only observable change to the construction projects. Eliminating the PLA requirement clearly

\[\text{Will Richmond, “Bids better sans PLAs,” Herald News, July 21, 2006.}\]
allowed for greater competition among bidders and thus produced significant cost savings on the projects.\textsuperscript{61}

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|c|}
\hline
School Construction Project & PLA bids ($000) & Non-PLA Bids ($000) & PLA Surcharge ($000) & \% \\
\hline
Kuss Middle & & & & \\
\hline
Subcontractor & 21,500 & 19,600 & 1,900 & 10 \\
General Contractor & 45,700 & 43,900 & 1,800 & 4 \\
Small Elementary & & & & \\
Subcontractor & 11,100 & 9,900 & 1,200 & 12 \\
Slade Elementary & & & & \\
Subcontractor & 11,800 & 10,900 & 900 & 8 \\
\hline
\end{tabular}
\caption{Comparing Bids and Savings with and without a PLA}
\end{table}

\textsuperscript{61} According to conversations with city officials, only minor changes to the athletic fields were made between the bidding with the PLA and without.

\textit{As reported in The Herald News.}
VI. CONCLUSION

Economic theory predicts that Project Labor Agreements add to the cost of construction projects. By discouraging bids from nonunion contractors and by constraining successful bidders to adopt union rules relating to work conditions, PLAs are likely to increase the minimum bid and thus the cost of construction for projects for which they are adopted.

Recent experience in Fall River provides a “real-world” case study demonstrating the effect that a PLA has on construction costs. The city bid three school construction projects under a PLA. Then, after attracting few bidders, with those providing bids coming in well above the projected budget, the city canceled the PLA and reopened the bidding process. To date, the city of Fall River has saved $5.8 million on the total construction bids for all three projects.

The Massachusetts School Building Authority (MSBA) under the Department of State Treasurer in 2004 is charged with providing effective management and planning of the Commonwealth’s investments in school building assets. As a result, school districts in Massachusetts will face tougher audits of their building programs, tighter control of expenses, lower reimbursement rates and more financial responsibility for cost overruns. Taking into consideration the results of the original BHI study and the new state reimbursement rates, we estimate school districts that adopt a PLA will pay a significantly larger portion of the $16.51 per square foot that PLAs add to school construction costs. On average local governments will see their share of the school construction costs rise by 35% under the new MSBA reimbursement rates; therefore, the cost of adopting a PLA will also rise by 35%.

In light of the additional evidence regarding the cost of PLAs provided by the Fall River case, and the MSBA’s tighter rules for reimbursing school districts for school construction projects, local officials need to weigh the decision to use a PLA more carefully before adopting one for their school construction projects. Local government cannot afford so easily henceforth to take the view that, because the state bears most of the PLA surcharge, the cities and towns need not worry about how a PLA will inflate construction costs. The portion of the surcharge that they bear is going up. It is our conclusion that, with property taxes occupying everyone’s attention, other cities and towns might start acting more like Lizzie Borden and take an axe to construction costs.
About the Authors

**Paul Bachman, MSIE.** Mr. Bachman is Research Economist at the Beacon Hill Institute for Public Policy Research at Suffolk University. He holds a Master of Science in International Economics from Suffolk University.

**David G. Tuerck, PhD.** Dr. Tuerck is Director of the Beacon Hill Institute for Public Policy Research at Suffolk University and Chairman of the Economics Department at Suffolk University. He holds a Doctorate in Economics from the University of Virginia. His dissertation director was James M. Buchanan, Nobel Laureate in Economics.

The authors would like to thank Tim Knox and Colleen Sprague for their contributions to this study.