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SUMMARY REPORT

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South Carolina
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955 Park Street
P.O. Box 191
Columbia, SC 29202

Cost Indexing and Unit Price Adjustments for Construction Materials

This report describes the research conducted to evaluate the financial and procedural benefits and risks associated with unit price adjustment clauses (PACs), also known as cost escalation clauses, for construction materials. The goals were to provide the South Carolina Department of Transportation (SCDOT) with an assessment of its current PACs, which are accepted for asphalt and fuel, and to complete a feasibility study on the potential development of new clauses for other materials.

Given that the construction and maintenance of transportation infrastructure consumes significant quantities of materials, it is prudent for state Departments of Transportation (DOTs) to adopt mechanisms, like PACs, that mitigate the financial risks associated with the fluctuation of material costs during the period of a construction contract. Based on a comprehensive review of current practices at state DOTs, it is evident that PACs are the most common approach for risk mitigation. More than 90% (49 of 52) state DOTs provide PACs for at least one material, and more than 80% (41 of 49) of those state DOTs provide PACs for fuel or asphalt, or both. Far fewer state DOTs offer similar clauses for steel products (15) or portland cement concrete products (4). There appears to be some regional influences on the materials for which PACs are provided at each state DOT. PACs for steel, for example, tend to be concentrated in three distinct groups of states located within the northwestern, midwestern, and northeastern parts of the U.S.

Although PACs are common, the specifications contained within the clauses are variable and depend on the material. For a specific material, PACs can be invoked on the basis of minimum material quantities, minimum contract time periods, minimum contract amounts, or some combination of those requirements. There are two formulations to calculate price adjustment. An inclusive clause adjusts for the entire difference between the current price index and base price index, while an exclusive clause allows for a partial adjustment of the difference. While both are used, exclusive formulas are more common. All exclusive and most inclusive clauses require a trigger, as a percentage of the base price index, to initiate a price adjustment. The most common trigger is 5%, although there are triggers as high as 25%. The selection of a trigger has a significant influence on the amounts and frequencies of adjustments made on existing contracts.

However, there are some inclusive clauses that do not require a trigger. There is anecdotal evidence that the absence of a trigger can lower bid prices and increase bid competition. When there is a trigger required to initiate a price adjustment, contractors must account for that risk in the bid formulation, causing bid prices associated with those materials to be higher. Price adjustment caps can also be specified in PACs to protect against unlimited coverage from extreme shifts in material cost. While caps can be an effective risk sharing component of PACs, most state DOTs do not provide specifications for them. Those clauses that have caps range from 50% to 100% of the base price index.

Contractors and state DOTs both consider PACs to be favorable, according to responses gathered from a series of interviews and surveys. NCHRP Report 274 also indicates that such clauses are “moderately positive” and recommends PACs as an appropriate mechanism for certain construction materials, like asphalt and fuel. Other construction materials are not considered to be good candidates for price adjustment because there is a lack of reliable price indexes and/or materials are consumed in limited quantities. Steel meets both of these two criteria, but there is a mixed response on using PACs for steel. Most of the state DOTs with steel PACs are satisfied with their performance. However, some indicated that steel PACs have been underutilized or even removed from specifications. There are some complexities with making price adjustments for steel, given the large number of steel products that are manufactured, although that can be managed with the use of multiple price indexes. Some state DOTs have reported difficulties in monitoring transaction dates, such as mill shipping dates, for making proper price adjustments. NCHRP Report 274 does not recommend PACs for steel, although that assessment assumes that provisions for stockpiling steel are available. Recommendations are made in this report for SCDOT consideration of a PAC for reinforcing steel, but not structural steel.

This research project was conducted at the University of South Carolina by Charles E. Pierce, Ph.D., Nathan N. Huynh, Ph.D., and Paulo Guimarães, Ph.D.
For further information, contact Terry Swygert at SCDOT: (803) 737-6652; SwygertTL@dot.state.sc.us