

Case 16

Great White Hall

Flatland Views has advertised for proposals to build a new community center, but the city council cannot agree on how to evaluate the submitted proposals. The request for proposal (RFP) specified that respondents had to meet certain basic needs, although optional items could be included. The RFP also asked that each respondent calculate a benefit/cost (B/C) ratio using a discount rate of 12%. The RFP did specify the approximate size of each optional facility and the use that could be expected (and the value of such use in dollars per hour).

The RFP stipulated that the council would select a package of facilities based on estimated construction costs and B/C ratios. Since this package might not match any proposal, the council could issue a new RFP. However, if a new RFP is issued, only respondents to the first RFP may respond. The council's intent is to provide an incentive for participation in the first RFP. Instead of a second RFP, the council could choose to simply negotiate with one of the original bidders.

Three firms responded to the RFP, but they used different assumptions on how to calculate the ratio as well as including different options within their proposals. Their construction materials and associated lives are similar, but their designs differ substantially. The proposals can be summarized as follows.

Tightfisted Proposal

Averell Johnson, the conservative patriarch of the city's construction community, has proposed a bare-bones facility (see Table 16-1). Assuming 50 years of use and end-of-period

cash flows, his proposal has a B/C ratio of ____.¹ His proposal also assumes that construction expenditures are all made at the start of the construction period.

Table 16-1 Tightfisted Proposal

Construction:	1 year: \$2.5 million
Annual operation:	Gym: \$120,000 City offices: \$190,000
Annual benefit:	Gym: 60 hours/week at \$200/hour

Major Projects Proposal

The proposal that has been supported by the “town and gown” crowd includes a small auditorium/theater and a library as well as the gym (see Table 16-2). Major Projects Inc. has evaluated the proposal over 30 years of use for the benefits and for a 12-month term for the construction phase. Major Projects has assumed end-of-period cash flows, but they have analyzed the construction phase as 12 months—each with an equal share of the construction expenditures. Their calculated B/C ratio is ____.¹

Table 16-2 Major Projects Proposal

Construction:	12 months: \$4.8 million
Annual operation:	Gym: \$110,000 City offices: \$165,000 Library: \$450,000 (mostly salaries) Theater: \$65,000
Annual benefit:	Gym: 60 hours/week at \$200/hour Library: \$0.5 million in improved education Theater: 16 hours/week at \$450/hour

¹ The omitted B/C ratios for each facility are not necessary for the rest of the case. The “easiest” option is to calculate them.

Energy Breakthrough Proposal

The third proposal (Table 16-3) is from a new firm that specializes in the design and construction of energy-efficient structures. They based their B/C ratio, _____, on assumptions of 40 years of use and costs and benefits that flow continuously over that time (distributed rather than end-of-period cash flows).

Table 16-3 Energy Breakthrough Proposal

Construction:	1 year: \$3.9 million
Annual operation:	Gym: \$ 65,000 City offices: \$100,000 Theater: \$15,000
Annual benefit:	Gym: 60 hours/week at \$200/hour Theater: 16 hours/week at \$450/hour

The Council's Solution

Overwhelmed by the responses, the city council has decided to hire you as a consultant. Your contract requires you to calculate comparable ratios, to recommend a package of facilities, and to recommend a contractor.

Options

1. The problem can be simplified by specifying that all projects assume end-of-period cash flows except for construction costs, which could be specified to occur before construction begins. *This may or may not be the best assumption.*
2. The problem can be simplified by limiting it to the calculation of the omitted B/C ratios.
3. The problem can be simplified by reducing the scope of the consultant's contract to constructing valid comparisons of the three proposals.