

housing operating costs; plus the cost of demolishing the occupied public housing units (including the cost of any necessary environmental remediation); plus \$1,000 per unit (or a higher amount allowed by HUD) for relocation assistance costs, including counseling. However, if the sum of the estimated per unit cost of demolition, remediation, and relocation exceeds 10 percent of the average Total Development Cost (TDC) for the units, the lower of the PHA estimate or a figure based on 10 percent of TDC must be used.

B. For example, if the development has 200 occupied two-bedroom units, 150 occupied three-bedroom units, and 25 occupied four-bedroom units, and if the cost (gross rent) for voucher units occupied by recent movers is \$550 for two-bedroom units, \$650 for three-bedroom units, and \$750 for four-bedroom units, and if the administrative fee comes to \$46 per unit, then annual voucher and administrative costs are \$2,922,000—the unit weighted average of the costs of \$603.33 (the sum of 200 times \$550, plus 150 times \$650, plus 25 times \$750, divided by 375 units) plus \$46 in monthly per unit administrative fee, times 375 units times 12 months. To this the PHA adds the costs of demolition, remediation, and \$1,000 per unit for relocation, including counseling (unless a higher amount is approved by HUD). For example, assume that the cost of demolishing 375 occupied units is \$1,875,000 (\$5,000 per unit), remediation is \$375,000 (\$1,000 per unit), and relocation costs are \$375,000 (based on \$1,000 per unit) for a total of \$7,000 per unit. This figure is then compared to 10 percent of the average per unit TDC for the development. For example if the TDC limits are \$88,000 for a two-bedroom unit, \$123,000 for a three-bedroom unit, and \$140,000 for a four-bedroom unit, the average TDC is \$105,470 (200 times \$88,000, plus 150 times \$123,000, plus 25 times \$140,000, divided by 375) and 10 percent of TDC is \$10,547. In this example, the estimated cost of the items (per unit) is less than 10 percent of TDC for the development, and the PHA estimate of \$7,000 is used. If estimated expenses had exceeded 10 percent of TDC (\$10,547 in this example), expenses must be capped at the lower amount.

C. Voucher and administrative costs occur annually. Costs associated with demolition, remediation, and relocation are assumed to occur in year 1. The net present value of the stream of costs is obtained by applying the OMB-specified real discount rate to the sum of the costs in each year for the 20-year (or alternative) period. For example, if the costs in year 20 are \$2,922,000 and the discount factor is 2.85 percent per year, the discounted cost in year 20 would be \$1,713,163 (\$2,922,000 times the discount factor in the twentieth year). The discount factor for year 20 is derived by dividing 1 by $(1 + 0.0285)^{19}$. The discount factor for year 19 would be $1/(1 + 0.0285)^{18}$ and so on. (As noted above, HUD has developed a spreadsheet calculator—available for download from the HUD Homepage—that will perform these computations based on PHA-provided inputs.)

IV. Results

A. In voluntary conversion, this Section 8 cost would then be compared to the cost of the public housing development, both in terms of net present value and new budget authority. In the example of this section, the public housing cost (net present value) of \$609 monthly per occupied unit exceeds the Section 8 cost of \$533 monthly per occupied unit. In addition, the monthly per unit cost of public housing based on New Budget Authority (\$840) exceeds the cost of vouchers based on New Budget Authority (\$799). Therefore, the PHA would have the option of preparing a conversion plan for the development under subpart B of this part.

B. In required conversion, the Section 8 cost would be compared with the cost of the revitalized public housing development on a net present value basis. In the example in this section, the revitalized public housing cost on a net present value basis of \$609 per unit month would exceed the Section 8 cost of \$533 monthly per occupied unit. Therefore, the PHA would be required to convert the development under the requirements of subpart A of this part.

V. Detailing the Public Housing and Section 8 Cost Comparison: A Summary Table

This section summarizes the Section 8 cost comparison methods using the example provided. Sample pages from HUD's spreadsheet calculator are also reproduced, showing inputs and results for the example.

A. Key Data, Development

The revitalized development has 375 occupied units. All of the units are in walkup buildings. The 375 occupied units will consist of 200 two-bedroom units, 150 three-bedroom units, and 25 four-bedroom units. The total current operating costs attributable to the development are \$112,500 per month in non-utility costs, \$37,500 in utility costs paid by the PHA, and \$18,750 in utility allowance expenses for utilities paid directly by the tenants to the utility company. Also, the modernization cost for revitalization is \$21,000,000, or \$56,000 per occupied unit. This will provide standards for viability but not standards for new construction. The cost of demolition (including remediation) and relocation of the 375 occupied units is \$2,625,000, or \$7,000 per unit, based on recent experience.

B. Key Data, Other

The housing construction cost limit, a component of the TDC, is \$50,000 for two-bedroom walkups, \$70,000 for three-bedroom walkups, and \$80,000 for four-bedroom walkups. TDC units for the same sized units in this area are \$88,000, \$123,000, and \$140,000 respectively. The voucher cost for a two-bedroom unit (based on recent movers) is \$550, the cost of a three-bedroom unit is \$650, and the cost of a four-bedroom unit is \$750. The applicable monthly administrative fee amount, in the most recent **Federal Register Notice**, is \$46 per unit per month. The real discount rate is 2.85 percent.

C. Calculation of Public Housing Costs (Net Present Value)

1. Operating Cost—\$2,025,000: This is the annual cost of operating 375 units based on

the information above. Costs are assumed to begin in year 1 of the period and occur in each subsequent year.

2. Modernization Cost (Including Any Necessary Relocation)—\$21,000,000: This is the estimated cost of modernization for 375 units. Costs are assumed to occur in equal amounts in years 2, 3, and 4.

3. Estimated Accrual Cost—\$300,000: Accrual is estimated as the per-unit average housing construction cost minus half of the modernization cost per unit, times .025, times the number of units (in this example, \$32,000 times .025 times 375). Accrual begins in the first year after modernization. Accrual costs are incurred annually.

4. Net Present Value per Unit per Month of Public Housing Costs—\$609: This figure is obtained by summing the values described above in each year and discounting each year to the present using the OMB-specified real discount rate assuming a 20-year period. Net Present Values should be expressed on a per unit per month basis.

D. Current Costs of Section 8 (Net Present Value)

1. Annual Voucher and Administrative Costs—\$2,922,000—(based on the unit-weighted average of the costs for voucher units occupied by recent movers): In this example, 200 times \$550, plus 150 times \$650, plus 25 times \$750, divided by 375 plus the administrative fee of \$46 per unit per month times 375 units times 12 months. Costs are assumed to start in year 1 and occur in each year thereafter.

2. Demolition and Relocation Cost—\$2,625,000 (\$7,000 per unit times 375 units): All costs are assumed to occur in year 1.

3. Net Present Value Per Unit Per Month of Voucher Costs—\$533: This figure is obtained by summing the values described above in each year and discounting each year to the present using the OMB-specified real discount rate, assuming a 20-year period. Net Present Values should be expressed in dollars per unit per month.

E. Monthly Per Unit Costs of Public Housing and Vouchers Based on New Budget Authority

The New Budget Authority method produces a monthly per unit cost of \$840 for public housing and \$799 for vouchers. These figures are obtained using the same initial assumptions as for the net present value comparison. In this case, however, the comparison is based on the sum of the undiscounted (but inflated) costs for public housing and vouchers over a period of 20 years.

F. Result

In this example, public housing costs exceed voucher costs on a net present value basis and on the basis of new budget authority. Therefore, a conversion plan would be permissible under voluntary conversion, subpart B of this part. Under required conversion, because revitalized public housing costs on a net present value basis exceed section 8 costs, the PHA would be required to convert the public housing development under subpart A of this part.