THE FIRST of three papers was presented by P. J. F. Wingate of the Road Research Laboratory of Great Britain. He described the measures of productivity used in Great Britain and emphasized the use of performance standards in this process. Some of the measures of productivity described by him were actual hours divided into standard hours, actual hours divided into wages, standard hours divided into wages, budget standard hours divided into standard hours work, and budget unit cost divided into actual unit cost. He concluded that the direct assessment of productivity is cumbersome to make and not very effective for controlling labor forces used in highway maintenance. However, the modified approach through performance standards to determine effective performance was considered indispensable for a proper control of labor utilization.

Setting up the control system involves a considerable effort, but once installed it is easy to run and has a number of side benefits including a valuable means of preparing annual programs by providing accurate information on which estimates of labor and financial resources needed could be based. The system could be incorporated with an incentive bonus scheme where desired; but it is preferable for the bonus scheme to be a side benefit. Otherwise the real object, that of monitoring labor productivity in the organization, becomes obscured.

The second presentation was made by Joel F. Katz of the Minnesota Department of Highways. He spoke on Performance Standards as a Tool in Preparing the Maintenance Program Budget. Katz stated that performance budgeting in maintenance can be made into a practical management process if performance standards are used. Standards for controlling quantity and productivity are essential features of a program budget in maintenance. Quality standards control how well the maintenance is done; quality standards, when combined with the road and equipment inventory, define the work load required to meet the quality standards; productivity standards define how much manpower, equipment, and materials are required to meet the work load. He warned that maintenance managers must be aware that maintenance program budgeting requires a commitment of personnel and that there are several pitfalls that must be avoided. In general, program budgeting using performance standards can give maintenance managers a method of cost control not otherwise available to them.

The last presentation, made in two parts, was presented by Roy E. Jorgensen and Stanley P. Smalley. Jorgensen spoke on a case study of performance budgeting and described the performance budgeting system that his firm is evolving under an NCHRP contract. This system involves the complete format for program budgeting and controlling of highway maintenance. He handed out copies of an interim report on the research project. The report included a chart that was, in essence, a flow chart of the entire performance budgeting system. Smalley described the system that he is installing in two counties in Michigan. The highlight of his presentation was his description of a work order form used to control maintenance expenditures. His process also included controlling the allocation of resources through a unique card system.