I. INTRODUCTION

An important principle of management is control. The object of control is to monitor the work performance and the effectiveness of resource utilization.

Control provides management with performance data that can be compared to the predetermined plans. If management sees unsatisfactory trends, through the control function, corrective action can be taken. Management Control Reports have been developed to resolve this situation.

Control of the Maintenance Operation is largely made possible through Maintenance Management Control Reports. These reports provide managers with a variety of information:

- Productivity Data
- Plan Performance
- Year-To-Date Accomplishments
- Year-To-Date Expenditures
- Budget Status
- Reporting Edits

There are four hard copy control reports currently available to the manager for utilization:
1. Daily Entry Listing
2. Field Production Analysis Report (Monthly)
3. Field Production Cost Report (Monthly)
4. Key Ranking Report (Monthly)

In addition to the hard copy reports listed above, the Field Production Cost Report information is also available at the organization level via the computer terminal through the CICS system currently being used. This report will be explained later in this chapter.

In order to have usable work control reports, it is a must that information be reported as accurately as possible. To ensure the accuracy of reported information, a means to review what has been reported and the ability to make corrections must be provided.

II. DAILY ENTRY LISTING REPORT

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The Daily Entry Listing Report lists data entered by an organization. The Daily Entry Listing Report will contain each day's reported data. For the most part, the information contained will be for one day, except for weekends and holidays. For example, if the Clerk enters three days worth of data on a Monday then the Daily Entry Listing will contain all three days entered in one report.

The Daily Entry Listing has eighteen columns of information. They are as follows:

1. Receiving Organization 10. Ending Milepost
2. Activity Number 11. Accomplishment
3. Home Organization 12. Measure Entered
5. Report Date 14. Record Type
6. Authorization Number 15. Account Number
7. N or P 16. Units
8. Route Number 17. Amount

The following is a sample of the left side of the report that shows the first nine columns.
Column 1 - **REC. ORG.**  
The Organization that is receiving the charges for the work activity.

Column 2 - **ACT.**  
The "Activity Number" of the work activity being performed.

Column 3 - **HOME ORG.**  
The Organization that performed the work activity.

Column 4 - **DOCUMENT NO.**  
The type and number of source document that the data was entered from, i.e. DOH-12, Daily Work Report.

Column 5 - **REPORT DATE**  
The date of the specific source document as numbered in Column 4.

Column 6 - **AUTHORIZATION**  
The "Authorization Number" used for the particular entry.

Column 7 - **N or P**  
Non-Participating or Participating

Column 8 - **ROUTE NO.**  
The "Route Number" used for the particular entry.

Column 9 - **BEGIN M.P.**  
The "Beginning Milepost" used for the particular entry.

Column 10 - **END M.P.**  
The "Ending Milepost" used for the particular entry.

Column 11 - **ACCOMP.**  
The number of activity "Work Accomplishments" performed for the particular entry.

Column 12 - **MEAS ENTERED**  
The activity "Unit of Measure" as entered from the document.

Column 13 - **ACT MEASURE**  
The activity "Unit of Measure" as per the Maintenance Management Performance Standards.

Column 14 - **RECORD TYPE**  
The "Type" of record entered. Number

The following is a sample of the right side of the report that shows the remaining columns.

<table>
<thead>
<tr>
<th>END M.P.</th>
<th>ACCOMP.</th>
<th>MEAS. ENTERED</th>
<th>ACT.</th>
<th>REC.</th>
<th>ACCCT</th>
<th>UNITS</th>
<th>AMOUNT</th>
<th>MEAS. ERR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00</td>
<td>TN</td>
<td>TN</td>
<td>04</td>
<td>4351</td>
<td>3.00</td>
<td>105.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.00</td>
<td>TN</td>
<td>TN</td>
<td>02</td>
<td>4351</td>
<td>4.00</td>
<td>50.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.00</td>
<td>TN</td>
<td>TN</td>
<td>03</td>
<td>4351</td>
<td>4.00</td>
<td>13.16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Column 10 - **END M.P.**  
The "Ending Milepost" used for the particular entry.

Column 11 - **ACCOMP.**  
The number of activity "Work Accomplishments" performed for the particular entry.

Column 12 - **MEAS ENTERED**  
The activity "Unit of Measure" as entered from the document.

Column 13 - **ACT MEASURE**  
The activity "Unit of Measure" as per the Maintenance Management Performance Standards.

Column 14 - **RECORD TYPE**  
The "Type" of record entered. Number
Detecting Errors

The Daily Entry Listing Report can be used by the Organizational Clerk to detect reporting errors. A general review in addition to verifying errors denoted in the MEAS ERR column (#18) should lead to the correction of reporting errors. The document of origin can be easily located in addition to the other pertinent information pertaining to the entry. Asterisks that appear by the Document number indicates that the transaction is a correction made by the Central Office. Such transactions may include Journal Vouchers, DOT-12A's, etc. The Daily Entry Listing Report is submitted to the District Maintenance Management Analyst each week for organizational distribution, review, and corrective action where warranted.

III. FIELD PRODUCTION ANALYSIS REPORT

Republished: 11/1/2000 Effective: 3/15/90

Another report used in detecting reporting errors is the Field Production Analysis Report. In this report three situations are flagged.

Man Hour Activity But Man Hours Do Not Equal Accomplishments

There are several activities in the Performance Standards that are reported in units of man-hours. This means the units of accomplishment for these activities should be identical to the number of man-hours used. If any man-hour activity is found by this program to have unlike accomplishments as compared to it's reported man-hours it will be flagged as No. 1. This type of error is nearly always valid and should be corrected.
Not A Man-Hour Activity But Man-Hours Equal Accomplishments

Activities that are not reported in man-hours and the accomplishments and man-hours are found to be identical will be flagged as No. 2. Generally this will be a valid error, that needs correction.

Performance Percentage Less Than .3% or Greater Than 400%

Activities showing an extremely low or extremely high productivity will be flagged as No. 3. It is likely that activities which show a percent performance below .3% or above 400% will contain a reporting error.

Below is an example of the Field Production Analysis Report:

<table>
<thead>
<tr>
<th>ACT CODE</th>
<th>ACTIVITY TITLE</th>
<th>UNIT MEAS</th>
<th>UNITS ACCMP</th>
<th>MAN HOURS</th>
<th>PERFORMANCE PERCENTAGE</th>
<th>FLG</th>
</tr>
</thead>
<tbody>
<tr>
<td>242</td>
<td>DITCHING AND BLASTING</td>
<td>HM</td>
<td>35.00</td>
<td>20.00</td>
<td>1999.00%</td>
<td>5</td>
</tr>
<tr>
<td>245</td>
<td>EXCAVATION OF DRAINAGE</td>
<td>TH</td>
<td>8.00</td>
<td>6.01</td>
<td>91.80%</td>
<td>2</td>
</tr>
<tr>
<td>541</td>
<td>EQUIPMENTowntime</td>
<td>D</td>
<td>1131.91</td>
<td>8.80</td>
<td>0.00%</td>
<td>3</td>
</tr>
</tbody>
</table>

This report is submitted to the District Maintenance Management Analyst each month for organizational distribution, review and corrective action where warranted.

Correcting Reporting Errors

It is important to dedicate time each week for the review of the Daily Entry Listing and each month for the Field Production Analysis Report. It is important to be aware that all corrections that are made during the course of the month will lessen the number of errors that appear on the monthly Field Production Analysis Report. Correction of reporting errors is absolutely essential to maintaining accurate and useable management information. It is much simpler to keep current with the correction of reporting errors rather than allow a great deal of time to elapse and then attempt to prepare corrections. Accurate, error free management reports are beneficial to all levels of DOH management.

When an error is found, the Central Office has made available a procedure, to the District Management Analyst District, through the CICS system, for correcting reporting errors. The correction of the reporting errors affects the Field Production Report accomplishments as soon as they are entered, thereby the ability to maintain accurate up-to-date information. All errors must be reported to the District Management Analyst in order to obtain the correction.

The District may already have an established procedure for their organizations concerning reporting errors. Contact the District Management Analyst or Assistant District Administrator - Maintenance for the existing procedures.
IV. FIELD PRODUCTION COST REPORT VIA COMPUTER SCREEN (CICS)

The next report to be discussed is the Field Production Year–To–Date Cost Report that is accessible through the CICS inquiry system (HWIQ). This report is available to all organizations and the information it contains is as current as the last reported work day.

Logon to the CICS system using the current method. Access HWIQ. The following menu listing will appear.

```
WEST VIRGINIA
DEPARTMENT OF HIGHWAYS
INQUIRY SYSTEM

1. PROJECT TRACKING
2. AUTHORIZATION
3. F.I.I.M.
4. ROAD FILE INVENTORY
5. EQUIPMENT
6. WEATHER
7. INVENTORY
8. PURCHASING
9. GAS & LUBE RATES
10. FIXED ASSETS INVENTORY
11. PHONE DIRECTORY
12. MAINTENANCE MANAGEMENT

X  EXIT

ENTER NUMBER OF SELECTION: _
```

Enter menu item #12 to select Maintenance Management. Below is an example of the first screen that appears after entering menu item #12.

```
WEST VIRGINIA
DIVISION OF HIGHWAYS
MAINTENANCE MANAGEMENT SYSTEM
INQUIRY

(1) TO INQUIRE BY ORGANIZATION:
ENTER ORG. ===> 
Enter ACT. ===> 

(2) TO INQUIRE BY ACTIVITY:
ENTER ACT. ===> 
Enter ORG. ===> 

TO EXIT THIS TRANSACTION:
ENTER 'X' ===> 
```

At this point, different selections can be made. To access all activities for an organization number, enter the Organization number "only" under "To Inquire By Organization". The
following screen appears listing all the activities for the organization and the following for each activity:

Year To Date Accomplishments
Year To Date Man Hours
Percent Performance
Planned Accomplishment
Percent Complete

EXAMPLE:

<table>
<thead>
<tr>
<th>ORG</th>
<th>ACT</th>
<th>DESCRIPTION</th>
<th>YTD ACCOMP</th>
<th>YTD MPH</th>
<th>%PERF</th>
<th>PLANNED</th>
<th>%COMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0103</td>
<td>201</td>
<td>PAVING BITUMINOUS</td>
<td>779.63</td>
<td>2,601.50</td>
<td>1.11</td>
<td>1,000.00</td>
<td>.75</td>
</tr>
<tr>
<td>0103</td>
<td>202</td>
<td>REPAIR OF BASE FALL</td>
<td>.00</td>
<td>14.00</td>
<td>.00</td>
<td>250.00</td>
<td>.00</td>
</tr>
<tr>
<td>0103</td>
<td>203</td>
<td>SKIP PATCHING</td>
<td>1,081.28</td>
<td>1,171.50</td>
<td>.62</td>
<td>800.00</td>
<td>1.35</td>
</tr>
<tr>
<td>0103</td>
<td>204</td>
<td>SEALING AND SURFACE</td>
<td>720.00</td>
<td>371.50</td>
<td>1.63</td>
<td>1,000.00</td>
<td>.73</td>
</tr>
<tr>
<td>0103</td>
<td>207</td>
<td>PAVING WITH ASPHALT</td>
<td>92.00</td>
<td>1,528.50</td>
<td>.73</td>
<td>1,000.00</td>
<td>.51</td>
</tr>
<tr>
<td>0103</td>
<td>241</td>
<td>PAVING PCC PAVEMENT</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>1,100.00</td>
<td>.09</td>
</tr>
<tr>
<td>0103</td>
<td>261</td>
<td>SPOT STABILIZATION</td>
<td>5,670.60</td>
<td>2,452.00</td>
<td>1.13</td>
<td>16,918.00</td>
<td>.33</td>
</tr>
<tr>
<td>0103</td>
<td>262</td>
<td>DITCHING AND BLADING</td>
<td>71.66</td>
<td>902.50</td>
<td>1.11</td>
<td>501.00</td>
<td>.14</td>
</tr>
<tr>
<td>0103</td>
<td>263</td>
<td>LIMITING DRAINAGE STRUCTURE</td>
<td>2,151.00</td>
<td>2,151.00</td>
<td>1.00</td>
<td>2,800.00</td>
<td>.77</td>
</tr>
<tr>
<td>0103</td>
<td>282</td>
<td>INSTALL PIPE DRAIN</td>
<td>780.00</td>
<td>791.00</td>
<td>.80</td>
<td>1,460.00</td>
<td>.55</td>
</tr>
<tr>
<td>0103</td>
<td>284</td>
<td>GUNNED DITCH DITCHES</td>
<td>54.90</td>
<td>40.00</td>
<td>1.32</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>0103</td>
<td>285</td>
<td>RIEPPING OF EMBANKMENT</td>
<td>2,214.25</td>
<td>1,187.00</td>
<td>1.70</td>
<td>1,200.00</td>
<td>1.65</td>
</tr>
<tr>
<td>0103</td>
<td>286</td>
<td>INSTALLATION &amp; MAIN</td>
<td>115.00</td>
<td>115.00</td>
<td>1.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>0103</td>
<td>287</td>
<td>REMOVING DITCHING</td>
<td>12,695.00</td>
<td>726.00</td>
<td>.92</td>
<td>27,000.00</td>
<td>.43</td>
</tr>
<tr>
<td>0103</td>
<td>301</td>
<td>GUARDRAIL MAINTENANCE</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>300.00</td>
<td>.00</td>
</tr>
<tr>
<td>0103</td>
<td>303</td>
<td>HOWING</td>
<td>517.00</td>
<td>327.00</td>
<td>.63</td>
<td>700.00</td>
<td>.74</td>
</tr>
<tr>
<td>0103</td>
<td>304</td>
<td>VEGETATION CONTROL</td>
<td>14.87</td>
<td>766.00</td>
<td>1.17</td>
<td>29.00</td>
<td>.74</td>
</tr>
<tr>
<td>0103</td>
<td>305</td>
<td>VEGETATION CONTROL</td>
<td>142.50</td>
<td>1,004.50</td>
<td>.76</td>
<td>135.00</td>
<td>1.06</td>
</tr>
<tr>
<td>0103</td>
<td>306</td>
<td>LITTER PICKUP AND DUMP</td>
<td>202.00</td>
<td>77.93</td>
<td>1.63</td>
<td>2,500.00</td>
<td>.08</td>
</tr>
<tr>
<td>0103</td>
<td>310</td>
<td>DEAD ANIMAL AND HAZARD</td>
<td>334.50</td>
<td>946.50</td>
<td>.99</td>
<td>1,000.00</td>
<td>.93</td>
</tr>
</tbody>
</table>

To access a detail file from this screen, move the cursor beside the desired activity number and enter. The following is a detail screen for Activity 281, Minor Drainage Structures. All the same information appears that did on the prior screen in addition to the Chargeable/Nonchargeable Costs by Labor, Equipment, Material and Total for the activity. The Basic Expense Standard costs is listed for the activity as well as the Average Actual Costs for comparison purposes.

<table>
<thead>
<tr>
<th>MONTH TO DATE</th>
<th>TO YEAR</th>
<th>YEAR TO DATE</th>
<th>YEAR TO DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0103</td>
<td>0103</td>
<td>202.00</td>
<td>202.00</td>
</tr>
<tr>
<td><strong>COSTS</strong></td>
<td><strong>NON-CHARGEABLE</strong></td>
<td><strong>CHARGEABLE</strong></td>
<td><strong>NON-CHARGEABLE</strong></td>
</tr>
<tr>
<td>MONTH-TO-DATE</td>
<td>LABOR</td>
<td>EQUIPMENT</td>
<td>MATERIALS</td>
</tr>
<tr>
<td>0103</td>
<td>0103</td>
<td>0103</td>
<td>0103</td>
</tr>
<tr>
<td><strong>NON-CHARGEABLE</strong></td>
<td>25,285.35</td>
<td>11.94</td>
<td>11.74</td>
</tr>
<tr>
<td><strong>CHARGEABLE</strong></td>
<td>25,285.35</td>
<td>11.94</td>
<td>11.74</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>50,570.70</td>
<td>23.84</td>
<td>23.48</td>
</tr>
</tbody>
</table>
To access a particular activity for an organization, enter the Organization Number and the Activity Number under "To Inquire By Organization" as in the example below.

Below is an example of how that screen appears.

<table>
<thead>
<tr>
<th>ORG ACT</th>
<th>DESCRIPTION</th>
<th>YTD ACCOMP</th>
<th>YTD WR</th>
<th>WSPF</th>
<th>PLANNED</th>
<th>%COMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0103.047</td>
<td>REMOVING DITCHLINE</td>
<td>12,195.00</td>
<td>706.00</td>
<td>.82</td>
<td>27,000.00</td>
<td>.43</td>
</tr>
</tbody>
</table>

Again, to see the detail screen file of the activity, place the cursor beside the activity and then enter.

The next two reports to be discussed are the "hard copy" reports that will be used to monitor and control an organization, assuming of course, that reporting errors are being corrected and kept to a minimum.

V. FIELD PRODUCTION COST REPORT

Republished: 11/1/2000 Effective: 3/15/90

This hard copy report is a summary of work that was performed by an organization through a given period of time. It provides information on work accomplishments, crew performance, plan status, expenditure status and Basic Expense Standard/Actual cost comparison. This report lists the work activities performed in numerical order. The following is a basic breakdown of the information contained in this report:

1. This period
   a. Units of Accomplishment
   b. Percent Performance

2. Year-To-Date Period
   a. Units of Accomplishment
   b. Percent Performance

3. Annual Plan Status
   a. Planned Accomplishments
   b. Percent Complete

4. Nonchargeable Cost-To-Date
   a. Labor
b. Equipment
c. Material
d. Total

5. Chargeable Cost-To-Date
   a. Labor
   b. Equipment
c. Material
d. Total

6. Current Organizational Basic Expense Standard
   a. Labor
   b. Equipment
c. Material
d. Total

7. Average Unit Chargeable Cost
   a. Labor
   b. Equipment
c. Material
d. Total

Below is an example of the left hand side of the hard copy report.

The first column lists the Activity Number immediately followed by the Activity Description
The first group of information is "This Period". "This Period" information contains data for the seven day period as listed under the title of the report. Beneath the heading "This Period" are two columns:

1. **UNITS ACCOMP** (Data reported for the weekly period)
2. **% PERF** (Calculated % performance using the weekly information)

Percent performance is the number of man-hours expended to perform the accomplishments as compared to the standard number of hours outlined in the Maintenance Performance Standards.

**FOR EXAMPLE:** Suppose an Organization reported the following:

Activity 201-Patch Bit Pavements 34 Tons 92 Man Hours

The calculation to find the percent performance is as follows:

Actual Accomp. X Standard Man-Hour/s Per Unit E Actual Man-Hour/s Used

"OR"

34 tons x 4 (Standard Man-Hours*) = 136

For Act. 201

136 Standard Man-Hours E 92 Actual Man-Hours = 1.47 %

Therefore the percent performance for this particular entry would be 147 %.

* Refer to the Maintenance Performance Standards for this particular data.

The second group of information is the "Year-To-Date". The "Year-To-Date" information contains data from the beginning of the first day of the Fiscal Year (July 1) through the current period shown under the title at the top of the report. Beneath the heading "Year-To-Date" are two columns:

1. **UNITS ACCOMP** (Data accumulated from the beginning of the Fiscal Year)
2. **% COMPLETE** (Calculated % performance as explained above)

The third group of information is the Annual Plan Status. There are two columns:

1. **PLANNED ACCOMP** (Planned units for the given period.)
2. **% COMPLETE** (Actual units reported E Units planned)
Using these columns, the manager at a glance can monitor his organization's plan compliance.

Below is an example of the right hand side of the hard copy report.

<table>
<thead>
<tr>
<th>LAB</th>
<th>CHARGEABLE COST TO DATE</th>
<th>FY BES</th>
<th>AVG UNIT CHG COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAB</td>
<td>11,790.11</td>
<td>172,624.73</td>
<td>57.76</td>
</tr>
<tr>
<td>EQP</td>
<td>3,501.81</td>
<td>48,726.23</td>
<td>16.10</td>
</tr>
<tr>
<td>MAT</td>
<td>3,291.35</td>
<td>48,726.23</td>
<td>28.36</td>
</tr>
<tr>
<td>TOT</td>
<td>25,669.62</td>
<td>369,462.96</td>
<td>40.18</td>
</tr>
</tbody>
</table>

The first column is "NONCHARGEABLE COST TO DATE". Directly beneath this column heading you will see LAB, EQP, MAT & TOT. This column lists the expenditures, by resource, incurred by an organization against a funding source 'other' than their Annual Plan. This may be Special Authorizations or various types of reimbursables.

The next column is "CHARGEABLE COST TO DATE". It contains the same format of resource costs as described for "NONCHARGEABLE COST TO DATE" except these expenditures were incurred against the organization's allocated Annual Plan Funds.

The column entitled "FY BES" is the particular organization's Basic Expense Standard for the current year. It, too, is listed by resource type, Labor, Equipment, Materials and Total. The Basic Expense Standard (BES) is described in detail in the chapter dealing with the Annual Plan. Briefly, the BES costs are those standardized average costs computed annually as the gauge for costing each maintenance activity.

The last column is the "AVG UNIT CHG COST". This column contains, by resource type, the ACTUAL cost of the activity per unit. This is derived by dividing the Year-To-Date accomplishments reported into the "Chargeable Cost To Date" figures. A manager can then easily review the differences that might occur between the Standard BES costs and Actual costs. This comparison, then, may result in the need for additional correction of reporting errors or it may point to inadequacies in the methods being utilized to perform the particular maintenance task.

This information is given for each activity found on the Field Production Report for each Organization. At the end of each report will be an Organizational Total for ALL activities, and finally a District Summary that is generally filed at the District Headquarters.

The Field Production Cost Report is submitted to the District Maintenance Management Analyst in hard copy format at the end of each month for further distribution.

VI. KEY ACTIVITY RANKING REPORT

Republished: 11/1/2000 Effective: 3/15/90
The second control report is entitled "Key Activity Ranking Report". The Key Activity Ranking Report was developed to more closely monitor the primary or "gut" maintenance activities. A report is generated for the following organizations and activities:

**COUNTY MAINTENANCE ORGANIZATIONS**

- Activity 201 - Patch Bituminous Pavements
- Activity 204 - Seal & Surface Treatment
- Activity 207 - Patch w/Asphalt & Aggregate
- Activity 261 - Spot Stabilization
- Activity 262 - Ditching & Blading
- Activity 282 - Install Pipe Culverts
- Activity 341 - Mechanical Application of SRIC Material

**EXPRESSWAY MAINTENANCE ORGANIZATIONS**

- Activity 204 - Seal & Surface Treatment
- Activity 241 - Patch PCC Pavements
- Activity 303 - Mowing
- Activity 308 - Litter Pickup & Disposal
- Activity 341 - Mechanical Application of SRIC Material

**ALL ORGANIZATIONS**

- Activity 345 - SRIC Support Operations
- Activity 801 - Organizational Overhead
- Activity 811 - Unproductive Equipment

**SIGN SHOPS**

- Activity 362 - Roadway Striping

Below is an example of the Key Activity Ranking Report. This particular sample is a County category and is for Activity 201–Patch Bituminous Pavements.

The first item listed is the activity and the activity description followed by the District number. All counties within a District will be included on the same page. Listed next is:

YTD Statewide Average Productivity: Actual productivity as calculated for all Organizations reporting this particular Activity within the State.

Immediately following the YTD Statewide Average Productivity, you will see a percentage amount. This percent is figured by dividing the YTD Statewide Average Productivity by the Standard Productivity. This figure tells us how the Statewide average performance of an activity compares to the Standard performance. It is important to remember that the figures are only as accurate as the reporting. Massive Reporting errors by one organization or the sum of reporting errors from a group of organizations can affect the accuracy of the percent.

With this information, one organization can be compared against either type of productivity (Statewide Average or Standard Productivity).

Below is a definition of each column heading found on the Key Activity Ranking Report:

- **Organization:** Organization number
- **Percent Performance To Date:** This is an organization's calculated percent performance through the given period. However, it is important to remember that the calculation for this particular report compares the reported organization's data to the "YTD STATEWIDE AVERAGE PRODUCTIVITY" and not the "STANDARD PRODUCTIVITY" as is calculated in the Field Production Cost Report described on Page 12. Again, remember the aforementioned possibility of reporting errors causing information to be inaccurate. All these factors must be considered before making any determinations concerning your organization's performance.

**For Example:**

In the report that follows, you will notice that the "YTD Statewide Average Productivity" when compared to the "Standard Productivity" is 138%. In other words, instead of the activity requiring 14 man-hours per road mile (as set forth in the Performance Standards) it is actually taking 10.153 man-hours per road mile, when averaged for all organizations in the state. It is helpful to remember that when the performance is over 100%, it is taking less time per unit and when performance is under 100% it is taking more time per unit than the Standard or the Statewide Average, depending on the type of comparison being made.
On this particular report, it appears that Organization 0838 is performing the work in far less time than the Statewide Average. As stated before, we already know that the Statewide Average is less than the Standard, therefore, this organization is even less than the Standard.

Because this organization is the only one that has an extreme percentage, in this particular case, it is likely that the Statewide Average Productivity is a good figure to use. Therefore, for Organization 0838 the various possibilities to consider are as follows:

1. Reporting error/s.
2. Using the wrong activity for the work being done.
3. Extraordinary conditions surrounding the work being done.
4. Inadequate work achievement.

This is an example of how the Key Activity Ranking Report can alert the Maintenance Supervisor to finding and resolving the problems that may exist in the organization.

**YTD UNITS ACCOMPLISHED:** This is the number of accomplishments reported for the organization from the beginning of the Fiscal Year.

**PLANNED UNITS:** The number of accomplishments planned in the Annual Plan (Period-To-Date) for the specific activity.

This same series of information will be given for all key activities listed on the County Maintenance Organizations, Expressway Maintenance Organizations and for the Sign Shop Roadway Striping Activity.

Below, is an example of the ranking report for Activity 80l - Organizational Overhead and Activity 811 - Unproductive Equipment:
Three columns of information appear on this report as follows:

**ORG**: Organization number

**TOTAL COST YEAR-TO-DATE**: The "Chargeable" costs from the beginning of the Fiscal Year for SRIC activities in total. "Chargeable" costs are those expenditures incurred against an Organization's Annual Plan allocation.

**% OF "TOTAL" COST YTD**: This is derived by dividing the "Total Overhead Activity Cost YTD" by the "Total Cost for ALL Activities reported Year-To-Date" for the particular organization. This gives the Supervisor the ability to monitor and control the amount of expenditures being consumed by the particular overhead activity.

The same series of information holds true for the ranking report on Activity 345 (SRIC Support Operations), except for the last column. The difference is as follows:

**PERCENT OF "TOTAL" SRIC EXPENDITURES**:

This is derived by dividing the "Total SRIC Support Operation" expenditures by the "Total of all SRIC Activity" expenditures, thus resulting in the percentage amount being consumed by SRIC Support Operations, again, enabling the Supervisor to monitor SRIC overhead costs.

As stated in the Introduction, control is the most important principle of management; one might say control is the very essence of management.

A manager's primary function is to make decisions that determine the future course of action for the organization over the short and long term. The manager's degree of success in making decisions most often hinges on the manager's level of knowledge, complexity of the decision to be made, and the availability of data for comparing alternatives.

The data for comparing alternatives is often clear, straightforward, and readily available. In
other situations, the manager may find the data vague and difficult to obtain. More often than not, the required data is available in some form, and with the large volume of data generated by today's computers the manager often finds himself deluged with data.

The Maintenance Management Control Reports discussed in this chapter have evolved over a period of years to enhance the highway maintenance manager's skills in controlling the maintenance organization. These management reports are often neglected until a near crisis results. The successful maintenance manager, however, will become familiar with the management control reports and learn to review, classify, and identify the data on each report. Through this process, managers soon develop the ability to identify significant deviations from the plan and the control principle of management naturally follows.