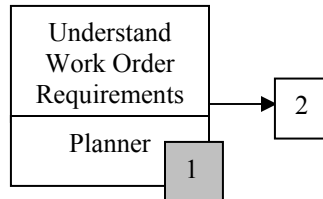


Maintenance Planning Work Flow Description

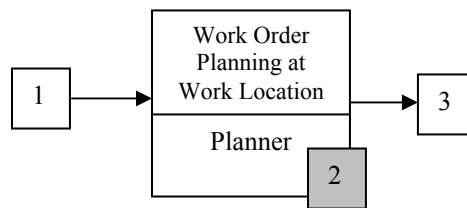


1.0 Task Description: Maintenance Planner needs to have a thorough understanding of the work order's requirements such as the following:

- Correct equipment number
- Work description request or equipment symptoms
- Urgency of work
- Initial safety considerations

1.2 Maintenance Planner reviews CMMS to determine if the job has been performed previously and history is available. Planner also searches for a master plan of the requested work.

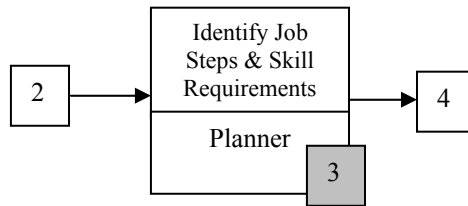
Master plans and history search typically can expedite the planning process.



2.0 Task Description: Maintenance Planner visits the equipment location area to field plan the work order.

2.1 Work order planning at equipment location encompasses the following:

- Observing physical restraints
 - Access to work area
 - Equipment removal requirements
 - Space for lifting devices or mobile equipment
 - Proximity of other jobs going on at potentially the same time
- Identify environmental condition
 - Wet
 - Hot
 - Cold
 - Heights
 - Depths
 - Escaping Steam
 - Product
 - Chemicals
- Identify safety issues
 - Permits – Hot Work, Confined Space Entry
 - PPE requirements
 - Blowers
 - Fall protection harnesses
 - Monitoring devices
 - Extra safety watch people
- Prepare field drawings or sketches
- Take digital pictures with supporting notes
- Prepare any type of notations that will help plan the job
- Specify special tools and/or equipment
 - Cranes
 - Fire protection
 - Welding/cutting tools
 - Scaffolding



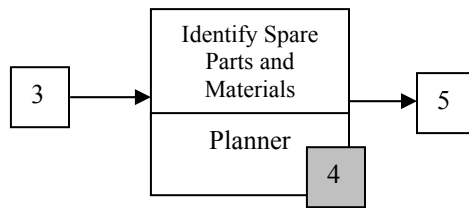
3.0 Task Description: Upon returning to the office, the Maintenance Planner begins to plan the work order using information obtained during visit to equipment work area

3.1 The Planner, using his knowledge of craft skills, identifies skills needed to perform the required work. Usual skills include:

- Millwrights
- Pipe Fitters
- Machinists
- Electricians
- Instrumentation Technicians
- Welders
- Other

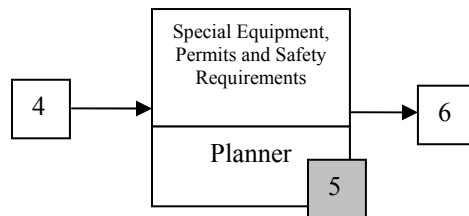
3.2 Each work order job step requiring above skills is identified with duration of the work such as:

- Two Millwrights for four hours
- One electrician for one hour



4.0 Task Description: Using information gained from equipment location visit, CMMS equipment files and manufacturer, the Maintenance Planner determines spare parts and material requirements needed to complete the work order.

- 4.1 Stock spare parts and materials are allocated from stores; non-stock materials and spare parts are purchase requisitioned.
- 4.2 When all spare parts and materials are available, the work order status is changed to “R”, ready, by the Planner.



5.0 Task Description: Maintenance Planner identifies special equipment such as

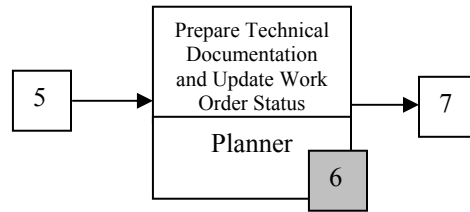
- Fork trucks
- Trailer
- Cranes
- Welding machines
- Cutting rigs

5.1 Permits are also identified at this phase to include:

- Confined space permit
- Hot work permit
- Scaffold/elevated permit
- Hole watch permit

5.2 Special safety equipment such as:

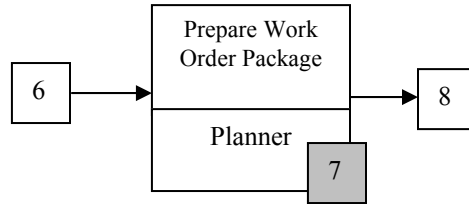
- SCBA packs
- Sniffers



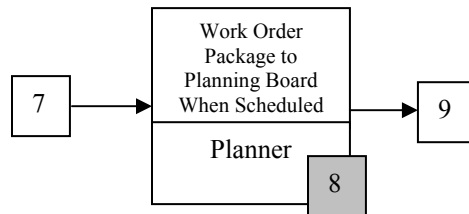
6.0 Task Description: Planner determines technical documentation that will support the craftsperson. Technical documentation includes:

- Drawings
- Specifications
- Spare parts list
- Operations and Maintenance critical equipment manufacturer (OEM) manual page copies
- Equipment history

6.1 When all spare parts and materials are available, the Planner updates the work order status in CMMS to ready, “R”.

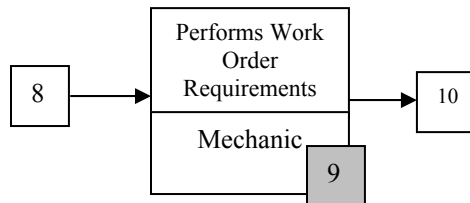


7.0 Task Description: As all parts, materials, special tools and equipment are available, the Planner assembles all documentation including work order and feedback form into a planning envelope and files the package into the “Ready to Schedule” file by equipment number.



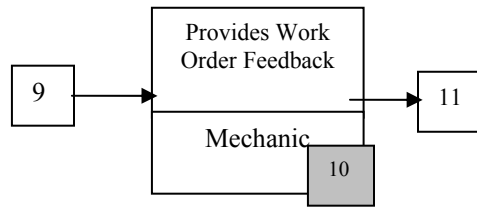
8.0 Task Description: On Friday, Planner places all scheduled work order packages into the scheduled day slot on the planning board in the maintenance work area.

8.1 Planner also posts the weekly schedule on the area maintenance planning board.



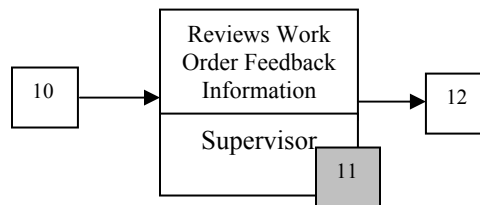
9.0 Task Description: Maintenance mechanics receive verbal instructions from the Supervisor regarding expectations and the planned maintenance work order.

9.1 All spare parts, specialty tools and materials are available for the maintenance mechanic to perform the work order.



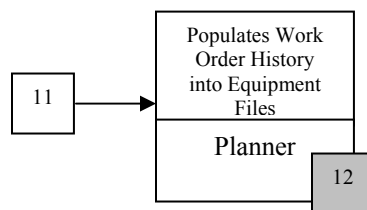
10.0 Task Description: Upon completion of the maintenance work order, maintenance mechanics are expected to provide a brief written description of work performed on the work order form. Refer to “work Order Feedback Forms” in the Appendix of this manual.

10.1 The Work Order Feedback Form, which is enclosed in the planned work order package, should be completed and returned to the Maintenance Supervisor for population of CMMS equipment history files



11.0 Task Description: Supervisors review work order feedback information to ensure data is correct and thorough.

11.1 Completed work order packages are given to the area planner to populate CMMS databases.



12.0 Task Description: Using the completed work order feedback information provided by craftspeople, the Maintenance Planner populates the equipment history database.

12.1 The Planner also indicates in CMMS that the maintenance work order is complete and informs the coordinator of completions.