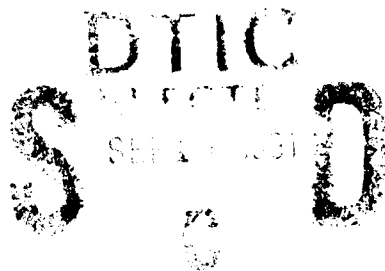




**US Army Corps
of Engineers**
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May 1991

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Maintenance Task Data Base for Buildings: Plumbing Systems

by
Edgar S. Neely
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This research project has provided improved maintenance resource data for use during facility planning, design, and maintenance activities. Data bases and computer systems have been developed to assist planners in preparing DD Form 1391 documentation, designers in life-cycle cost component selection, and maintainers in resource planning. The data bases and computer systems are being used by U.S. Army Corps of Engineers (USACE) designers at the District and installation levels and by resource programmers at USACE Headquarters, and Army Major Commands and installations. These research products may also be useful to other Government agencies and the private sector.

This report describes the building task maintenance and repair data base development and gives examples of its application. It is one of a series of special reports on the maintenance and repair data base. While this report describes plumbing systems, other reports in the series cover heating, ventilation, and air-conditioning systems, electrical systems, and architectural systems.

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FOREWORD

This research was conducted for the Directorate of Military Programs, Headquarters, U.S. Army Corps of Engineers (HQUSACE) and the Office of the Assistant Chief of Engineers under various research, development, testing, and evaluation (RDTE) and reimbursable funding documents. Work began under RDTE in 1980 and continued in reimbursable projects during 1984 through 1989. The technical monitor for the RDTE part was Dr. Larry Schindler (CEMP-EC) and for the reimbursable part was Ms. Val Corbridge (DAEN-ZCF-R).

The work was performed by the Facility Systems Division (FS), U.S. Army Construction Engineering Research Laboratory (USACERL). The Principal Investigators were Dr. Edgar Neely and Mr. Robert Neathammer (USACERL-FS). The primary contractor for much of the data development was the Department of Architectural Engineering, Pennsylvania State University. Dr. Michael O'Connor is Chief of USACERL-FS.

COL Everett R. Thomas is Commander and Director of USACERL, and Dr. L.R. Shaffer is Technical Director.

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MAINTENANCE TASK DATA BASE FOR BUILDINGS: PLUMBING SYSTEMS

1 INTRODUCTION

Background

Maintenance* and repair (M&R) cost estimates are needed during planning, design, and operations/maintenance of Army facilities. During planning, life-cycle costs are needed to evaluate alternative ways of meeting requirements (e.g., lease, new construction, renovate existing facilities). During design, M&R requirements for various types of components, such as built-up or shingle roofs, are needed so that the total life-cycle cost of different designs can be minimized. Finally, once the facility has been constructed, outyear predictions of maintenance and repair costs are needed so that enough funds can be programmed to ensure that Army facilities are maintained properly and do not deteriorate due to lack of maintenance.

The Directorate of Engineering and Construction (EC), Headquarters, U.S. Army Corps of Engineers (HQUSACE),** asked the U.S. Army Construction Engineering Research Laboratory (USACERL) to coordinate the assembly of a single centralized maintenance and repair data base for use by Corps designers. This research was required because designers were not able to obtain reliable maintenance and repair data to support their life-cycle cost (LCC) analysis from installations or from the technical literature. One of the first tasks in the research effort was to determine if reliable data bases, which could be adapted for Corps use, existed in government or private industry. Comprehensive data bases of maintenance costs for government and private sector facilities did not exist. The little data available always depended on widely varying standards of maintenance used to maintain the facilities for which the data was collected and thus was unreliable for prediction purposes. Recognizing this, HQUSACE asked USACERL to develop a maintenance and repair cost data base. This data is for use by U.S. Army Corps of Engineers (USACE) designers in performing life-cycle cost analyses during the design of new facilities. Initial results were presented in several USACERL reports.¹

Soon after this request, the Facilities Programming and Budgeting Branch of the Facilities Engineering Directorate asked USACERL to develop prediction models for outyear maintenance requirements of the Army facility inventory. The Programming Office of EC, responsible for Military Construction, Army (MCA) planning, also requested that USACERL provide methods and automated tools to help installations perform economic analyses. Part of the objective was to allow analysis to obtain future maintenance cost data.

*Maintenance in this report means all work required to keep a facility in good operating condition; it includes all maintenance, repair, and replacement of components required over the life of a facility.

**At the time of this request, EC was part of the Office of the Chief of Engineers, which has since reorganized. In addition, EC has now become the Directorate of Military Programs.

¹ R.D. Neathammer, *Life-Cycle Cost Database Design and Sample Cost Data Development*, Interim Report P-120/ADA0997222 (U.S. Army Construction Engineering Research Laboratory [USACERL], February 1981); R.D. Neathammer, *Life-Cycle Cost Database: Vol I, Design*, and *Vol II, Sample Data Development*, Technical Report P-139/ADA126644 and ADA126645 (USACERL, January 1983), Appendices E through G.

In response to these requests, USACERL began a multiyear effort to develop a comprehensive maintenance and repair cost research program for buildings. This coordinated program is the key to all detailed estimation of future maintenance costs for Army facilities.

Research Performed and Reports Published

This is one of several interrelated reports addressing maintenance resource prediction in the facility life-cycle process. The total research effort is described in a USACERL Technical Report.²

The first research product was a data base containing maintenance tasks related to every building construction component. This data base provides labor, material, and equipment resource information. The frequency of task occurrence is also included. This information is published in a series of four USACERL Special Reports by engineering systems: (1) architectural, (2) heating, ventilating, and air-conditioning (HVAC), (3) plumbing, and (4) electrical. The title for the series is *Maintenance Task Data Base for Buildings*.³ Table 1 shows an example from this data base. This data is also available in electronic form. The data base is used in a personal computer (PC) system under the Disk Operating System (DOS). This computer program allows a facility to be defined by entering the components and component quantities comprising the facility. The tasks are used to determine the resources required annually to keep the facility maintained.

The second research product was a component resource summary for the first 25 years of a facility. The tasks for the component were scheduled and combined into one set of annual resource requirements. This annual resource information is published in a series of four USACERL Special Reports titled *Building Component Maintenance and Repair Data Base*.⁴ An example from this data base is shown in Table 2. The data base is also available in electronic form. This data can be used to perform special economic analyses such as one for a 20-year life using a 10 percent discount rate.

The third research product was a set of 25-year present worth factor tables for use by designers in selecting components for discount rates of 7 and 10 percent. The annual component resource values were multiplied by the appropriate present worth factor and added for the 25 years to produce one set of resource values. This information is published in a series of four USACERL Special Reports titled

² E.S. Neely, R.D. Neathammer, J.R. Stirn, and R.P. Winkler, *Maintenance Resource Prediction in the Facility Life-Cycle Process*, Technical Report P-91/10 (USACERL, March 1991).

³ E.S. Neely, R.D. Neathammer, J.R. Stirn, and R.P. Winkler, *Maintenance Task Data Base for Buildings: Heating, Ventilation, and Air-Conditioning Systems*, Special Report P-91/21 (USACERL, May 1991); E.S. Neely, R.D. Neathammer, J.R. Stirn, and R.P. Winkler, *Maintenance Task Data Base for Buildings: Electrical Systems*, Special Report P-91/25 (USACERL, May 1991); and E.S. Neely, R.D. Neathammer, J.R. Stirn, and R.P. Winkler, *Maintenance Task Data Base for Buildings: Electrical Systems*, Special Report P-91/23 (USACERL, May 1991).

⁴ E.S. Neely, R.D. Neathammer, J.R. Stirn, and R.P. Winkler, *Building Component Maintenance and Repair Data Base for Buildings: Architectural Systems*, Special Report P-91/27 (USACERL, May 1991); E.S. Neely, R.D. Neathammer, J.R. Stirn, and R.P. Winkler, *Building Component Maintenance and Repair Data Base for Buildings: Heating, Ventilation, and Air-Conditioning Systems*, Special Report P-91/22 (USACERL, May 1991); E.S. Neely, R.D. Neathammer, J.R. Stirn, and R.P. Winkler, *Building Component Maintenance and Repair Data Base for Buildings: Plumbing Systems*, Special Report P-91/30 (USACERL, May 1991); E.S. Neely, R.D. Neathammer, J.R. Stirn, and R.P. Winkler, *Building Component Maintenance and Repair Data Base for Buildings: Electrical Systems*, Special Report P-91/19 (USACERL, May 1991).

Table 1

Typical Task Data Form

Task Code: 0811202

Component: FLUSH-TANK WATER CLOSET System: SANITARY Subsystem: FIXTURES

Task Description: M/R REPLACE WASHER IN BALL COCK

Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
Once every (H,A,L) years

Persons per Team: 1 Task Duration: 0.1872 hours

Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hours	Description	Quantity Unit Cost
1. TURN VALVE ON AND OFF	0.008000	WASHER	1 0.1700
2. REMOVE AND INSTALL COVER	0.017000		0.1700
3. REMOVE AND INSTALL 2 SCREWS	0.035000		
4. REMOVE/INSTALL VALVE ROD LIFTER	0.004000		
5. REMOVE AND INSTALL VALVE ROD	0.004000		
6. REMOVE WASHER	0.023000		
7. INSTALL WASHER	0.013000		
8. GRIND VALVE SEAT	0.016000		
9. CHECK OPERATION	0.024000		
SUMMARY			
Resources UOM	Direct	Indirect	Total
Labor Hours	0.144000	0.043200	0.187200
Material Cost \$	0.170000		0.170000
Equipment Hours			0.187200

Table 2
Typical Component Summary

25 Year Component Listing

CACES No.: 081110-Tank-Less Water Closet

081120 - Flush-Tank Water Closet

Labor Hours	Materials \$	Equipment Hours	YR	Labor Hours	Materials \$	Equipment Hours
0.0000	0.0000	0.0000	1	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	2	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	3	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	4	0.0000	0.0000	0.0000
1.5821	1.3992	1.5821	5	1.7693	1.5794	1.7693
0.0000	0.0000	0.0000	6	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	7	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	8	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	9	0.0000	0.0000	0.0000
1.6926	13.3772	1.6926	10	1.7693	1.5794	1.7693
0.0000	0.0000	0.0000	11	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	12	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	13	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	14	0.0000	0.0000	0.0000
1.5821	1.3992	1.5821	15	2.9796	18.0094	2.9796
0.0000	0.0000	0.0000	16	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	17	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	18	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	19	0.0000	0.0000	0.0000
1.6926	13.3772	1.6926	20	1.8832	1.7066	1.9032
0.0000	0.0000	0.0000	21	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	22	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	23	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	24	0.0000	0.0000	0.0000
1.5821	1.3992	1.5821	25	1.7693	1.5794	1.7693

*Building Maintenance and Repair Data for Life-Cycle Cost Analyses.*⁵ Table 3 shows an example from this data base. The data base is also available in electronic form. The first three resource columns provide data to allow designers to calculate the life-cycle costs at any location by multiplying by the correct labor rate, equipment rate, and material geographic factor. The multiplication and addition have been performed for the Military District of Washington, DC, and results are given in the fourth column of the table. The right section of the table is information that can be entered into computer systems that perform life-cycle cost analysis.

⁵ E.S. Neely, R.D. Neathammer, J.R. Stim, and R.P. Winkler, *Building Maintenance and Repair Data for Life-Cycle Cost Analyses: Architectural Systems*, Special Report P-91/17 (USACERL, May 1991); E.S. Neely, R.D. Neathammer, J.R. Stim, and R.P. Winkler, *Building Maintenance and Repair Data for Life-Cycle Cost Analyses: Heating, Ventilation, and Air-Conditioning Systems*, Special Report P-91/20 (USACERL, May 1991); E.S. Neely, R.D. Neathammer, J.R. Stim, and R.P. Winkler, *Building Maintenance and Repair Data for Life-Cycle Cost Analyses: Plumbing Systems*, Special Report P-91/24 (USACERL, May 1991); E.S. Neely, R.D. Neathammer, J.R. Stim, R.P. Winkler, *Building Maintenance and Repair Data for Life-Cycle Cost Analyses: Electrical Systems*, Special Report P 91/26 (USACERL, May 1991).

Table 3

Life-Cycle Cost Analysis

EPS BASED MAINTENANCE AND REPAIR COST DATA FOR USE IN LIFE CYCLE COST ANALYSIS (\$ PER UNIT MEASURE)												PAGE 15
COMPONENT DESCRIPTION	um	PRESENT WORTH OF ALL 25 YEAR MAINTENANCE AND REPAIR COSTS (d = 10%)			ANNUAL MAINTENANCE AND REPAIR PLUS HIGH COST REPAIR AND REPLACEMENT COSTS						Replacement and High Costs Tasks	
		By Resources			Annual Maintenance and Repair			Replacement and High Costs Tasks				
		labor	material	equipment	Washington DC Total	labor	material	equipment	labor	material		equipment
PLUMBING SANITARY FIXTURES	CT	189994	668070	189994	46.94	0.26563	0.93402	0.26563	35	202280	18809700	101140
	CT	231668	496386	231668	54.05	0.32389	0.60399	0.32389	35	411150	7906540	205595
	CT	289994	1098923	289694	72.38	0.40502	1.53640	0.40502	35	213330	16748000	106665
	CT	263399	1712850	263595	72.99	0.36854	2.39472	0.36854	40	195550	13844660	0.95775
	CT	263599	1712850	263654	72.99	0.36854	2.39472	0.36854	35	195680	14218640	0.95640
	CT	263554	1712850	263622	73.00	0.36861	2.39472	0.36861	35	195680	6179800	0.99840
	CT	406322	4296166	406822	129.17	0.56877	6.00644	0.56877	40	1300000	34129880	650000
	CT	547173	4430948	547173	160.26	0.76500	19488	0.76500	35	334100	17412620	157150
	CT	390504	2415328	390504	106.90	0.54596	337685	0.54596	30	9891700	24369400	4345650
	CT	390504	2415328	390504	106.90	0.54596	337685	0.54596	35	336700	25288000	168350
	CT	401348	3066697	382134	115.19	0.50670	255230	0.50670	20	336700	10596940	168250

See NOTES on the last page of this table for Explanation of Column Headings

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A fourth research product was a PC system that allows facilities to be modeled by entering the components that comprise the facility. Future years resource predictions are produced by applying the individual tasks and then forming resource summaries by subsystems, systems, facilities, installations, reporting installations, Major Commands (MACOMS) and Army. A summary level computer system was also developed for use by the Department of the Army (DA) and MACOMS. The summary level system applies the most basic data contained in the current facility real property inventory files: (1) current facility use, (2) floor area, and (3) construction date. User's and system's manuals will be published as USACERL ADP Reports.

Objective

The objective of this report is to describe the component summaries for plumbing systems and give examples for using these tables in performing life-cycle cost analyses during the design process.

Approach

The first activity in the research was to survey the literature for available maintenance data. No comprehensive task resource data base was located. The Navy has developed a series of manuals dealing with labor hours required to perform several basic maintenance tasks. This work has been adopted by the Department of Defense (DOD) for tri-service use. A series of Technical Bulletins (TBs) under the general title *Engineered Performance Standards* (EPS) has been published.

The next activity was to survey USACE District offices to solicit their input for a data base. A guiding committee composed of District personnel, installation representatives, and private sector consultants met and agreed upon a general data base design. More importantly, they recommended that the data base be developed using the EPS rather than historical data.

Once the data base was developed, component summaries were created by summing all tasks for a component. These summaries were then input into a program that computed present worth values for each component.

The calculation procedures described in this report were performed and summarized for standard Army life-cycle analysis of 25 years with a 7 or 10 percent worth factor. Final results are published in the USACERL Special report series *Building Maintenance and Repair Data Base for Life-Cycle Cost Analyses*.

Scope

The 25-year component resource summary tables are for DOD designers and can also be used by those in the private sector.

Mode of Technology Transfer

The tables pertinent to designer use will be issued as a supplement to Technical Manual (TM) 5-802-1, *Economic Studies for Military Construction Design—Applications*.

2 PROBLEM DEFINITION

In the facility life-cycle process, costs are incurred in construction, operation, maintenance, and disposal of a facility. Past emphasis during the planning, design, and construction phases has been on estimating initial construction costs. The impact of operating and maintaining facilities has always been a secondary consideration. In many cases, the operation and maintenance (O&M) costs are far greater than initial construction costs. Building owners are concerned with the total ownership costs of facilities rather than just the initial construction costs.

The Army has realized the importance of performing total life-cycle cost analyses for facilities at the design stage of accurately forecasting these costs for funds programming. HQUSACE asked USACERL in 1980 to develop a method of estimating future maintenance costs for buildings. In 1982, the programming branch of the former Facilities Engineering Directorate asked USACERL to develop effective models for forecasting facility maintenance resource requirements based on the actual facility.

Life cycle cost economic studies are an integral part of facility design in the MCA program. Requirements for performing these studies are given in:

- Statutes, Code of Federal Regulations, and Executive Orders for performing analyses when energy is a key cost and for wastewater treatment plants
- USACE *Architectural and Engineering Instructions: Design Criteria*
- Army Regulation (AR) 11-28, *Economic Analysis and Program Evaluation for Resource Management* for general economic analyses
- TM 5-802-1, *Economic Studies for Military Construction Design--Applications*

The main purpose of these studies is to minimize the life-cycle costs of Army facilities.

To perform life-cycle cost analyses on facility designs, three categories of costs are needed: initial, operating, and maintenance. Initial costs are usually easy to estimate through existing cost estimating systems such as the Corps of Engineers Computer Assisted Cost Estimating System (CACES) and standard publications such as Means or Dodge. Operating costs can be estimated by using energy consumption models such as the Corps of Engineers Building Loads Analysis and System Thermodynamics (BLAST) program or the Trane Company's Trace program. However, accurate estimates of maintenance costs are not available.

There are no comprehensive data bases of maintenance costs for building components either in the private sector or State/Federal Governments. Some historical data is available from the Building Owners' and Managers' Association reports. Within the Army, the Integrated Facilities System (IFS) contains some historical data; however, it does not have a feature for retaining several types of a building component (e.g., having brick and wood exteriors or three types of floor covering). Moreover, the data in IFS has not been kept current. For example, at one installation several family housing units were shown as having wood siding when, in fact, they had been covered with aluminum siding several years earlier.

3 DATA BASE DEVELOPMENT

The first step in data base development was to subdivide a building into systems, subsystems, and components, and define maintenance tasks. The second step was to schedule each task and to estimate resources for each task.

Building Subdivision

The UNIFORMAT method of dividing a building into systems, subsystems, and components was adopted since it is used by most Federal agencies and many private organizations. Systems requiring little maintenance such as foundations and superstructure were not subdivided.

The level of component detail was determined by maintenance and design personnel. This level varied, depending on the facility classification (e.g., historical) and the costs to collect and maintain data versus the benefit. Appendix A contains a complete list of the subdivisions. Major plumbing categories are:

08	Plumbing
081	Sanitary Fixtures
082	Rain Water
083	Special Plumbing Systems
084	Special Plumbing Fixtures.

Task Development

The primary objective was to develop a data base that is neither time- or cost-dependent. A data base independent of time would also be unaffected by inflation. This condition was achieved for labor and equipment resources through the use of hours. The number of labor hours and equipment hours for a task depends only on the current rates when an LCCA is performed. This process was not possible for material costs.

A typical task data form is shown in Table 1. The EPS adopted by all DOD agencies were used to determine labor resources. A USACERL Technical Report contains a full explanation of use of EPS in developing these resources.⁶

Standard references such as DA criteria documents, Corps of Engineers Unit Price Manuals, Means, and Dodge were used to determine the Washington, DC, area material costs. Material costs in the data base are given in July 1985 dollars for this area. Material costs can be adjusted for site location by applying a geographic location adjustment factor similar to the values shown in Appendix B. Material costs can be adjusted for inflation by applying a time adjustment factor from July 1985 to the new point in time.

⁶ E.S. Neely, et al., TR P-91/10, (USACERL, March 1991).

Task frequencies are the most subjective portion of the data base and were determined by applying professional experience, trade publication data, and data in manufacturers' literature. A range of values is given to provide more information than one average frequency.

The first activity was to list all maintenance tasks that occur during the life of each component. The next step was to develop resource data for each task. The five sets of elements shown in Figure 1 were needed for developing each task: (1) unit of measure, (2) frequency of occurrence, (3) labor hours, (4) equipment hours, and (5) material costs.

1. Unit of measure. A standard unit of measure for each component was selected based on commonly accepted measurement methods, the measurement units used within IFS, and the level of detail supported by the maintenance personnel. The standard unit of measure was one fixture.

2. Frequency of occurrence. The frequency of occurrence for tasks is the most subjective element in the data base. The data base developers used their experience and information from journals, reports, and manufacturers to estimate task frequencies.

3. Labor hours. The primary source of labor requirements was the EPS, which are approved for use by all DOD agencies. EPS are based on either methods-time-measurement studies or work sampling studies. Using these techniques, times for performing subtasks were estimated and combined to provide total task times.

The following EPS sources were used:

TB 420-20, *Plumbing and Pipefitting Handbook* (August 1983)
TB 420-34, *Preventive/Recurring Maintenance Handbook* (March 1984)
TB 420-30, *Emergency/Service Handbook* (August 1979)
TB 420-12, *Machine Shop, Machine Repairs Handbook* (April 1983).

When information was not available within EPS, the data was developed from existing trade journals, reports, and other publications.

4. Material resources. The amounts of materials needed were normally based on EPS and contractor experience. Material costs were taken from CACES, Means, Dodge, and other references.

5. Equipment resources. The equipment hours required for maintenance trucks were developed by dividing the total labor hours for the task by the normal crew size used on the task.

The data base has been reviewed by 13 different maintenance organizations and has been determined to accurately represent the resources required to perform the tasks.

Component Index

Appendix A lists all systems, subsystems, and components in the data base.

Appendix B gives geographical location adjustment factors.

Detailed Task Tables

Appendix C gives detailed resources by subtask for each task.

Summary Task Tables

Appendix D contains summary data from Appendix C. The half page per task given in Appendix C has been summarized into one line in Appendix D. This data includes the CACES number, task description, unit of measure, trade code, task classification (major or minor), the average, high, and low frequencies of task occurrence, labor hours, material costs, and equipment hours.

4 DATA BASE APPLICATION EXAMPLES

The task information can be used to calculate resources to perform the tasks for programming, planning, and staffing. These detailed task tables normally should not be used in performing life-cycle cost analyses. Tables given in the USACERL Special Report series *Building Maintenance and Repair Data for Life-Cycle Cost Analysis* are more appropriate for standard 25-year life-cycle cost analysis using either 7 or 10 percent discount rates. Tables in the USACERL Special Report series *Building Component Maintenance and Repair Data Base* can be used for other life-cycle cost analyses.

The example below calculates the cost of replacing a washer in the ball-cock of 100 water closets, given the following information:

Number of fixtures	100
Labor rate	\$18.50/hr
Geographic location factor	1.05
Equipment rate	\$3.60/hr
Washer Cost	\$0.17

Task data for this example is shown in Table 1. The calculation is: (Labor hr/fixture x Labor rate \$/hr + Material cost in Washington, DC dollars/fixture x Geographic location factor + Equipment rate \$/hr) x number fixtures. Substituting the above data:

$$\begin{aligned} & (.18720 \text{ hr/fixture} \times \$18.50/\text{hr} + \$0.17 \times 1.05 + .18720 \text{ hr/fixture} \times \$3.60 \\ & = \$5.92212/\text{fixture}) \times 100 \text{ fixtures} = \$59.23. \end{aligned}$$

5 PROCEDURES FOR DEVELOPING TASKS

Procedures for developing a task can be demonstrated by using the existing task number 0811202, REPLACE WASHER IN BALL COCK OF WATER CLOSET, shown in Table 1. The task includes turning valve off and on; removing and installing rod lifter, valve, and washer; grinding valve seat; and checking operation.

All labor hours were taken from the Pipefitting and Plumbing Handbook, TB-420-20, Table QT-314, page 183, shown in Table 4.

Labor hours for turning the water valve on and off are in subtask 1. The time used is .00846, hours/job or .008.

Labor hours for removing and installing the tank cover are in subtask 2. The time used is .01726 hours/job or .01700.

Labor hours for removing and installing two screws are in subtask 3. The time used is .03508 hours/job or .03500.

Labor hours for removing and installing valve rod lifter are in subtask 4. The time used is .00396 hours/job or .00400.

Labor hours for removing and installing valve rod are in subtask 5. The time used is .00396 hours/job or .00400.

Labor hours for removing the damaged washer are in subtask 6. The time used is .02252 hours/job or .02300.

Labor hours for installing the new washer are in subtask 7. The time used is .01265 hours/job or .01300.

Labor hours for grinding the valve seat are in subtask 8. The time used is .01627 hours/job or .01600.

Labor hours for checking operation of the reassembled water closet are in subtask 9. The time used is .02400 hours/job.

The total direct labor hours to perform the entire job would be the sum of all subtasks, or .144000 hr/job. The indirect time or the time to plan the work, load the truck at the beginning of the day, unload the truck at the end of the day, personal time, delay time, and material handling time must be included to obtain the total onsite labor time. In EPS, this value is expressed as a percentage of the direct labor. When all factors have been considered, the direct labor should be increased by 30 percent or .043200 hr/job.

The steering committee wanted to apply the same material costs for all planning, programming, design, construction, and operations activities. For this research project, all material costs were developed using prices in the Washington, DC area. Material prices for exact locations throughout the world can be obtained by multiplying the Washington, DC area costs by the appropriate location adjustment factor

published in a Programming, Administration, and Execution System (PAX) Newsletter under the title "Area Cost Factor Indexes." A copy of the 22 September 1988 indexes are given in Appendix D, Geographical Location Adjustment Factors. The *CACES Unit Price Book* for Region II, dated July 1, 1985 has been used for all costs and can be obtained from the Corps District Cost Estimating Section.

In reviewing material prices, there will usually be many grades listed for the component in question. Since only one entry for the component task will be made for the maintenance data base, it is important to use the middle grade for pricing. This will produce an average material cost.

When materials are not given in the CACES manuals, other material pricing manuals, such as Means, should be used to determine the cost.

The material cost for washers is obtained from local plumbing vendors and was quoted at \$.17/washer.

Table 4
Task QT-314*

No.	Reference	Work Unit Description	Hours	Units
1	PWQ-14-IV	Turn valve on and off	.00846	Job
2	PWMU-1-8012	Remove and install cover	.01726	Job
3	PWMU-1-8000	Remove and install two screws	.03508	Job
4	PWMU-1-8005	Remove and install valve rod lifter	.00396	Job
5	PWMU-1-8005	Remove and install valve rod	.00396	Job
6	PWMU-1-8013	Remove washer	.02252	Job
7	PWMU-1-8010	Install washer	.01265	Job
8	PWMU-1-8026	Grind valve seat	.01627	Job
9	4201	Check operation	.02400	Job

* QT-314 = .14416 hr/job.

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LIST OF ACRONYMS

ACE	Assistant Chief of Engineers
AMS	Army Management System
APC	Account Processing Code
AR	Army Regulation
ARR	Annual Requirements Report
ASTM	American Society for Testing and Materials
BLAST	Building Loads Analysis and System Thermodynamics
BMAR	Backlog of Maintenance and Repair
CA	Commercial Activities
CACES	Computer-Assisted Cost Estimating System
CONUS	Continental United States
DA	Department of the Army
DEH	Directorate of Engineering and Housing
DOD	Department of Defense
EA	Economic Analysis
EPS	Engineered Performance Standards
HQ-IFS	Headquarters - Integrated Facilities
HQDA	Headquarters, Department of the Army
HVAC	Heating, Ventilation, and Air-Conditioning
IFS	Integrated Facilities System
IJO	Individual Job Order
LCC	Life-Cycle Cost
LCCID	Life-Cycle Cost in Design
M&R	Maintenance and Repair
MACOM	Major Command

MCA	Military Construction, Army
MRPM	Maintenance Resource Prediction Model
OCE	Office of the Chief of Engineers
PAVER	Pavement Maintenance Management System
PC	Personal Computer
PM	Preventive Maintenance
R&D	Research and Development
RAM	Random Access Memory
RMF	Recurring Maintenance Factor
RPI	Real Property Inventory
RPLANS	Real Property Planning System
RPMS	Real Property Management System
SO	Service Order
STANFINS	Standard Army Financial System
TB	Technical Bulletin
URR	Unconstrained Requirements Report
USACE	U.S. Army Corps of Engineers
USACERL	U.S. Army Construction Engineering Research Laboratory
USAEHSC	U.S. Army Engineering and Housing Support Center

APPENDIX A:

TASK DATA BASE INDEX

Cases No : Unit of Measure : Description

0814500 1 VALVE, NON DRAIN 4"-6"
0814600 1 VALVE, DRAIN
0814700 1 EXPANSION CHAMBER
0814800 4 INSULATION, PIPE
0814900 1 CIRCULATOR PUMP, 1 1/2 HP
0814000 1 CIRCULATOR PUMP, 1/6 HP
0814800 1 CIRCULATOR PUMP, 1/2 HP
0814C00 1 STEAM CONVERTOR, DOMESTIC HOT WATER
0814000 1 HOT WATER HTR, GAS/OIL 50 GAL
0814E00 1 HOT WATER HTR, GAS/OIL 75 GAL
0814F00 1 HOT WATER HTR, GAS/OIL 1000 GPH RECOVERY
0814G00 1 HOT WATER HTR, GAS/OIL 1200 GPH RECOVERY
0814H00 1 HOT WATER HEATER ELEC. 120 GAL.
0814I00 1 HOT WATER HEATER ELEC. 300 GAL.
0814J00 1 HOT WATER HEATER ELEC. 1000 GAL.
0814K00 1 HOT WATER HEATER ELEC. 2000 GAL.
0814L00 1 HOT WATER HEATER ELEC. 52 GAL.
0814M00 1 HOT WATER STORAGE TANK, DHW
0814N00 4 HOT WATER PIPE/FITTINGS PVC.
0814000 1 CIRCULATION PUMP > 1 HP.
0820000 RAIN WATER
0821000 FIXTURES, RAIN WATER
0821100 1 DRAIN, ROOF SCUPPER, AREA
0822000 DRAINAGE, RAIN WATER
0822100 4 DISTRIBUTION, GUTTERS, PIPE
0823000 DRAINAGE, WATER SEEPAGE
0823100 1 SUMP PUMP
0830000 SPECIAL PLUMBING SYSTEM
0831000 COMPRESSED AIR
0831100 1 SIMPLE COMPRESSED AIR
0831110 1 1 H.P.
0831120 1 VACUUM PUMP
0831130 1 GAS COMPRESSOR > 1/2 HP
0831140 1 GAS COMPRESSOR > 15 HP
0831150 1 COMPRESSED AIR DRYER
0831200 1 HOSE, COMPRESSED AIR
0831210 1 RUBBER
0831300 4 PIPE AND FITTINGS FOR COMPRESSED AIR
0831310 4 METAL PIPE
0832000 INDUSTRIAL GASES
0832100 1 SIMPLE GAS COMPRESSOR
0832110 1 1 H.P.
0832200 1 HOSE, INDUSTRIAL GAS
0832210 1 RUBBER
0832300 4 PIPE AND FITTINGS FOR INDUST. GAS
0832310 4 METAL PIPE
0833000 SPECIAL GAS SYSTEMS
0833100 4 PIPING SPECIAL ANESTHESIA GAS SYS.
0833110 4 PIPE AND FITTING, ANESTHESIA
0833200 4 PIPING SPECIAL OXYGEN GAS SYSTEM
0833210 4 PIPE AND FITTING, OXYGEN
0840000 SPECIAL PLUMBING FIXTURE
0841000 KITCHEN PLUMBING FIXTURE
0841100 1 DISHWASHER

Cases No : Unit of Measure : Description

0800000 PLUMBING
0810000 SANITARY SYSTEM
0811000 FIXTURES
0811100 1 TANKLESS WATER CLOSET
0811200 1 FLUSH TANK WATER CLOSET
0811300 1 URINAL
0811400 1 LAVATORY, IRON, ENAMEL
0811500 1 LAVATORY, VITREOUS CHINA
0811600 1 LAVATORY, ENAMELED STEEL
0811700 1 BATH TUB, CAST IRON
0811800 1 BATH TUB, ENAMELED STEEL
0811900 1 SHOWER, FERRAZO
0811A00 1 SHOWER, ENAMELED STEEL
0811B00 1 SHOWER, PLASTIC
0811C00 1 SHOWER, ALUMINUM
0811D00 1 SINK, IRON ENAMEL
0811E00 1 SINK, ENAMELED STEEL
0811F00 1 SINK, STAINLESS STEEL
0811G00 1 SINK, PLASTIC
0811H00 1 DRINKING FOUNTAIN
0811I00 1 SPIGOT
0811J00 1 BATHTUB, PLASTIC
0811K00 1 LAVATORY, PLASTIC
0811L00 1 EMERGENCY SHOWER STATION
0811M00 1 EMERGENCY EYE WASH
0811N00 1 SHOWER, CMJ
0811P00 1 SHOWER GLAZED CMJ
0811R00 1 SHOWER, CERAMIC TILE
0812000 WASTE & VENT
0812100 4 PIPE & FITTINGS
0812200 1 FLOOR DRAIN, WITHOUT BUCKET
0812300 1 FLOOR DRAIN, WITH BUCKET
0812400 4 PIPE AND FITTINGS, PVC
0813000 COLD WATER
0813100 4 PIPE & FITTINGS, STEEL OR CAST IRON
0813200 4 PIPE & FITTINGS, COPPER
0813300 1 VALVE, NON-DRAIN 3/8" - 1 1/2"
0813400 1 VALVE, NON-DRAIN 2"-3"
0813500 1 VALVE, NON-DRAIN 4"-6"
0813600 1 VALVE, DRAIN
0813700 1 EXPANSION CHAMBER
0813800 1 WATER METER
0813900 4 INSULATION, PIPE
0813A00 1 CIRCULATOR PUMP 1 1/2 HP
0813B00 1 CIRCULATOR PUMP 1/6 HP
0813C00 1 CIRCULATOR PUMP 1/2 HP
0813D00 4 PIPE AND FITTINGS, PVC
0813E00 1 HOSE BIBB
0813F00 1 CIRCULATION PUMP GREATER THAN 1 HP
0814000 HOT WATER
0814100 4 PIPE & FITTINGS, STEEL OR CAST IRON
0814200 4 PIPE & FITTINGS, COPPER
0814300 1 VALVE, NON DRAIN 3/8"-1 1/2"
0814400 1 VALVE, NON DRAIN 2"-3"

Cases No : Unit of Measure : Description

0841200	1	WASTE DISPOSAL, RESIDENTIAL
0841300	1	WATER SOFTENER
0844000		SPECIAL SYSTEMS - FIRE SUPPRESSION
0844100	1	OPEN HEAD FIRE SUPPRESSION SYSTEM
0844110	1	OPEN HEAD SPRINKLER HEAD

APPENDIX B:

GEOGRAPHICAL LOCATION ADJUSTMENT FACTORS

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Alabama	State Average	.86
	Birmingham	.96
	Mobile	.86
	Montgomery	.76
	Anniston Army Depot	.81
	Huntsville	.38
	Fort McClellan	.80
	Redstone Arsenal	.88
	Fort Rucker	.80
Alaska	State Average	2.25
	Anchorage	1.92
	Delta Junction	2.70
	Fairbanks	2.13
	Adak	3.88
	Aleutian Islands	3.86
	Anchorage NSGA	1.92
	Barrow	4.18
	Burnt Mtn.	6.86
	Clear	3.10
	Eielson AFB	2.13
	Elmendorf AFB	1.92
	Galena	3.73
	Fort Greely	2.70
	Fort Richardson	1.92
	Fort Wainwright	2.13
Arizona	State Average	1.02
	Flagstaff	1.02
	Phoenix	.99
	Tucson	1.05
	Fort Huachuca	1.22
	Yuma Proving Ground	1.31
	Yuma	1.31
Arkansas	State Average	.89
	Pinebluff	.93
	Little Rock	.83
	Fort Smith	.92
	Fort Chaffee	.92
	Pine Bluff Arsenal	.93
California	State Average	1.21
	Los Angeles	1.20
	San Diego	1.18
	San Francisco	1.25
	Beale	1.28
	Bridgeport NWTC	1.27
	Castle	1.13
	Centerville Beach	1.32
	Desert Area	1.18
	Edwards AFB	1.30

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
California (Cont'd)	El Centro	1.27
	George AFB	1.31
	Fort Hunter Liggett	1.29
	Fort Irwin	1.20
	Le Moore NAS	1.20
	March AFB	1.18
	Mather AFB	1.17
	McClellan AFB	1.17
	Monterey Area	1.23
	Presidio of Monterey	1.23
	Norton AFB	1.16
	Oakland Army Base	1.33
	Fort Ord	1.24
	Port Huenema Area	1.20
	Riverside	1.18
	Sacramento	1.15
	Sacramento Army Depot	1.15
	Presidio of San Francisco	1.25
	San Nicholas Island	2.59
	Sharpe Army Depot	1.13
	Sierra Army Depot	1.33
	Stockton	1.15
	Travis AFB	1.27
	Vandenburg AFB	1.38
Colorado	State Average	.98
	Colorado Springs	.94
	Denver	1.04
	Pueblo	.96
	Fort Carson	1.01
	Fitzsimmons AMC	1.06
	Pueblo Army Depot	.96
	Peterson AFB	.94
	Rocky Mountain Arsenal	1.06
	State Average	1.13
Connecticut	Bridgeport	1.16
	Hartford	1.10
	New London	1.14
Delaware	State Average	.99
	Dover	1.04
	Lewes	.98
	Milford	.96
	Lewes NF	1.04
	Dover AFB	1.04
District of Columbia	Washington	1.03
	Fort McNair	1.03
	Walter Reed AMC	1.03
Florida	State Average	.89
	Miami	.95
	Panama City	.92
	Tampa	.79
	Cape Canaveral	.96
	Cape Kennedy	.96

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Florida (Cont'd)	Gulf Coast	.85
	Homestead AFB	.88
	Homestead	.88
	Jacksonville Area	.85
	Key West NAS	1.08
	Orlando	.80
	Pensacola Area	.85
	McDill AFB	.77
	Eglin AFB	.77
	Tyndall AFB	.92
	State Average	.80
	Albany	.82
	Atlanta	.87
	Macon	.70
Georgia	Athens	.90
	Atlanta-Marietta	.93
	Fort Benning	.71
	Columbus	.71
	Fort Gillem	.87
	Fort Gordon	.94
	Kings Bay	.93
	Fort McPherson	.87
	Fort Stewart	.84
	State Average	1.28
	Hawaii	1.29
	Honolulu	1.27
	Maui	1.29
Hawaii	Alimanu	1.27
	Barbars Point NAS	1.34
	Fort Debussy	1.27
	EWA Beach Area	1.34
	Helemano	1.34
	Hickam Army Air Field	1.27
	Kaneohe MCAS	1.34
	Moanalua	1.27
	Pearl City	1.27
	Pearl Harbor	1.27
	Pohakuloa	1.32
	Schofield Barracks	1.27
	Fort Shafter	1.27
	Tripler AMC	1.27
	Wheeler Army Air Field	1.34
	State Average	1.11
	Boise	1.05
	Idaho Falls	1.08
	Mountain Home	1.19
	Mountain Home AFB	1.20
Idaho	State Average	1.03
	Belleville	.96
	Chicago	1.09
	Rock Island	1.03
	Rock Island Arsenal	1.06
Illinois		

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Illinois (Cont'd)	St. Louis Support Ctr	.96
	Savannah Army Depot	1.05
	Scott AFB	1.03
	Fort Sheridan	1.10
Indiana	State Average	.99
	Indianapolis	1.03
	Logansport	.99
	Madison	.94
	Fort Benjamin Harrison	1.07
	Crane	1.10
	Crane AAP	1.10
	Grissom AFB	1.06
	Indiana AAP	1.02
	Jefferson Proving Ground	.94
Iowa	State Average	1.02
	Burlington	1.04
	Cedar Rapids	.98
	Des Moines	1.05
	Iowa AAP	1.06
	State Average	.94
Kansas	Manhattan	.97
	Topeka	.96
	Wichita	.88
	Kansas AAP	.94
	Fort Leavenworth	.94
	Fort Riley	.97
	Sunflower AAP	.97
	State Average	.96
	Bowling Green	.99
	Lexington	.96
Kentucky	Louisville	.93
	Fort Campbell	.93
	Fort Knox	.99
	Lexington/Bluegrass Army Depot	1.06
	Louisville NAS	.93
	State Average	.92
	Alexandria	.87
	New Orleans	.94
	Shreveport	.94
	Barksdale AFB	.94
Louisiana	England AFB	.87
	Gulf Outport New Orleans	.94
	Louisiana AAP	.94
	Fort Polk	.94
	State Average	.93
	Bangor	.85
	Caribou	.99
	Portland	.94
	Brunswick	.93
	Cutler	.98
Maine	Northern Area	1.17
	Winter Harbor	.98

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Maryland	State Average	.97
	Baltimore	.95
	Fredrick	.94
	Lexington Park	1.01
	Aberdeen Proving Ground	.94
	Annapolis	1.03
	Fort Detrick	.94
	Harry Diamond Lab	1.00
	Fort Meade	.95
	Patuxent River Area	1.08
	Fort Ritchie	.90
Massachusetts	State Average	1.10
	Boston	1.13
	Fitchburg	1.08
	Springfield	1.08
	Army Mtls & Mech Research Ctr	1.13
	Fort Devens	1.15
	Natick Research & Development Ctr	1.13
	South Weymouth	1.13
Michigan	State Average	1.06
	Bay City	1.02
	Detroit	1.14
	Marquette	1.03
	Detroit Arsenal	1.14
	Northern Area	1.25
	Republic (Elfcom)	1.10
	Selfridge AFB	1.14
Minnesota	State Average	1.08
	Duluth	1.05
	Minneapolis	1.09
	St. Cloud	1.10
	Twin Cities AAP	1.09
Mississippi	State Average	.84
	Biloxi	.87
	Columbus	.81
	Jackson	.84
	Columbus AFB	.81
	Gulfport Area	.87
	Meridian	.92
Missouri	State Average	.92
	Kansas City	.92
	St. Louis	.99
	Rolla	.85
	Lake City AAP	.93
	Fort Leonard Wood	.91
Montana	State Average	1.15
	Billings	1.15
	Butte	1.18
	Great Falls	1.12
	Malmstrom AFB	1.12
Nebraska	State Average	1.03
	Grand Island	1.00

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Nebraska (Cont'd)	Lincoln	1.05
	Omaha	1.05
	Offutt AFB	1.05
Nevada	State Average	1.18
	Hawthorne	1.26
	Las Vegas	1.13
	Reno	1.15
	Fallon	1.28
	Hawthorne AAP	1.26
	Nellis AFB	1.13
New Hampshire	State Average	1.09
	Concord	1.06
	Nashua	1.06
	Portsmouth	1.14
	Cold Regions Lab	1.17
New Jersey	State Average	1.08
	Newark	1.11
	Red Bank	1.08
	Trenton	1.06
	Bayonne	1.10
	Bayonne Mil Ocean Term	1.09
	Fort Dix	1.03
	Earle	1.10
	Lakehurst	1.05
	Fort Monmouth	1.09
	Picatinny Arsenal	1.20
New Mexico	State Average	1.03
	Alamogordo	.99
	Albuquerque	1.03
	Gallup	1.06
	Holloman AFB	1.05
	Kirtland AFB	1.03
	White Sands Missile Range	1.09
	Fort Wingate	1.06
New York	State Average	1.12
	Albany	1.07
	New York City	1.24
	Syracuse	1.05
	Brooklyn	1.24
	Fort Drum	1.18
	Fort Hamilton	1.24
	Seneca Army Depot	1.15
	U.S. Military Academy	1.17
	Watervliet Arsenal	1.07
North Carolina	State Average	.76
	Fayetteville	.76
	Greensboro	.75
	Wilmington	.78
	Fort Bragg	.76
	Camp Lejeune Area	.86
	Cherry Point	.86
	Goldsboro	.77

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
North Carolina (Cont'd)	Pope AFB	.82
	Seymour AFB	.77
	Sunny Point Mil Ocean Term	.78
North Dakota	State Average	1.03
	Bismarck	1.02
	Grand Forks	.98
	Minot	1.10
	Grand Forks AFB	.98
	Stanley R. Hicklesen CPX	1.03
	Minot AFB	1.12
	State Average	1.00
Ohio	Columbus	1.03
	Dayton	.98
	Youngstown	.99
	Cleveland	1.14
	Wright-Patterson AFB	.98
	State Average	.93
	Lawton	.90
	McAlester	.91
Oklahoma	Oklahoma City	.98
	Altus AFB	.94
	Enid	1.01
	McAlester AAP	.91
	Fort Sill	.90
	State Average	1.05
	Pendleton	1.08
	Portland	1.07
Oregon	Salem	.99
	Charleston	1.11
	Coos Head	1.08
	Umatilla Army Depot	1.18
	State Average	1.00
	Harrisburg	.91
	Philadelphia	1.05
	Pittsburgh	1.04
Pennsylvania	Carlisle Barracks	.93
	New Cumberland Army Depot	.91
	Fort Indiantown Gap	1.07
	Letterkenny Army Depot	1.07
	Mechanicsburg Area	.91
	Tobyhanna Army Depot	1.14
	Warminster Area	1.04
	State Average	1.11
Rhode Island	Bristol	1.13
	Newport	1.11
	Providence	1.10
	Davisville	1.17
	State Average	.82
South Carolina	Charleston	.81
	Columbia	.82
	Myrtle Beach	.84
	Beaufort Area	.89
	State Average	.82

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
South Carolina (Cont'd)	Charleston AFB	.81
	Fort Jackson	.82
	Sumter	.80
South Dakota	State Average	.95
	Aberdeen	.95
	Sioux Falls	.94
	Rapid City	.96
	Ellsworth AFB	.98
Tennessee	State Average	.84
	Chattanooga	.86
	Kingsport	.72
	Memphis	.95
	Arnold AFB	.90
	Milan AAP	.98
	Holston AAP	.71
Texas	State Average	.85
	San Angelo	.76
	San Antonio	.86
	Fort Worth	.93
	Fort Bliss	.96
	Carswell AFB	.93
	Chase Field - Beeville	.97
	Corpus Christi Army Depot	.92
	Corpus Christi	.92
	Dallas	.93
	Dyess AFB	.94
	Fort Hood	.89
	Kingsville	.99
	Red River Army Depot	.78
	Fort Sam Houston	.86
	William Beaumont AMC	.96
	Bergstrom AFB	.95
	Brooks AFB	.86
	Randolph AFB	.86
	Kelly AFB	.86
	Lackland AFB	.86
Utah	State Average	1.03
	Ogden	1.05
	Salt Lake City	1.00
	Tooele	1.06
	Dugway Proving Ground	1.03
	Hill AFB	1.07
	Tooele Army Depot	1.05
Vermont	State Average	.99
	Burlington	1.00
	Montpelier	1.00
	Rutland	.96
Virginia	State Average	.95
	Norfolk	.95
	Radford	.95
	Richmond	.94
	Arlington	1.04

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Virginia (Cont'd)	Arlington Hall Station	1.04
	Arlington National Cemetery	1.04
	Fort Belvoir	1.04
	Cameron Station	1.04
	Dahlgren	1.10
	Fort Eustis	.96
	Humphreys Engineer Center	1.03
	Fort A.P. Hill	.92
	Fort Lee	.93
	Fort Monroe	.94
	Fort Myer	1.03
	Norfolk-Newport News Area	.95
	Fort Pickett	.98
	Quantico	1.03
	Nadford AAP	1.02
	Port Story	.95
	Vint Hill Farms Station	1.08
Washington	State Average	1.09
	Spokane	1.08
	Tacoma	1.07
	Yakima	1.11
	Fairchild AFB	1.13
	Jim Creek	1.34
	Fort Lewis	1.07
	Pacific Beach	1.27
	Puget Sound Area	1.15
	Seattle Area	1.12
	Widbey Island	1.12
	Yakima Firing Center	1.18
West Virginia	State Average	.95
	Bluefield	.92
	Clarksburg	.95
	Charleston	.99
	Sugar Grove	1.15
Wisconsin	State Average	1.06
	LaCrosse	1.04
	Madison	1.02
	Milwaukee	1.13
	Badger AAP	1.06
	Clam Lake	1.20
	Fort McCoy	1.11
Wyoming	State Average	1.08
	Casper	1.07
	Cheyenne	1.10
	Laramie	1.08
	F.F. Warren AFB	1.10

APPENDIX C:

TASK DATA BASE DETAILED RESOURCE TABLES

TASK DATA FORM

Task Code: 0811101

Component: TANK-LESS WATER CLOSET System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPLACE FLUSH VALVE
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.1105 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF/ON	0.008000
2.REMOVE/REPLACE PACKING NUTS	0.042000
3.REMOVE/REPLACE FLUSH VALVE	0.025000
4.CHECK FOR LEAKS	0.010000

Material Resources

Description	Quantity	Unit Cost
FLUSH VALVE	1	11.3000
		11.3000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.085000	0.025500	0.110500
Material Cost \$	11.300000		11.300000
Equipment Hours			0.110500

Components In This Task: 0811100

TASK DATA FORM

Task Code: 0811102

Component: TANK-LESS WATER CLOSET System: SANITARY Subsystem: FIXTURES
 Task Description: H/R UNPLUG CLOGGED LINE
 Unit of Measure: COUNT Frequency of Occurrence: H: 5.00 A: 5.00 L: 7.00
 Persons per Team: 1 Task Duration: 1.5821 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.008000
2.REMOVE PACKING NUTS	0.109000
3.REMOVE/INSTALL NUTS FROM BOLTS	0.070000
4.REMOVE BOWL FROM FLANGE/INSTALL	0.194000
5.REMOVE GASKET	0.009000
6.UNPLUG LINE	0.150000
7.INSTALL GASKET	0.023000
8.APPLY PUTTY	0.132000
9.CLEAN PUTTY/BOWL FOUNDATION	0.136000
10.CONNECT PACKING NUTS	0.115000
11.CHECK OPERATION	0.167000
12.MOVE MATERIAL	0.104000

Material Resources

Description	Quantity	Unit Cost
PUTTY	8 oz	0.2200
		1.3200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.217000	0.365100	1.582100
Material Cost \$	1.320000		1.320000
Equipment Hours			1.582100

Components In This Task: 0811100

TASK DATA FORM

Task Code: 0811103

Component: TANK-LESS WATER CLOSET System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE WATER CLOSET
 Unit of Measure: COUNT Frequency of Occurrence: H: 26.00 A: 35.00 L: 44.00
 Persons per Team: 2 Task Duration: 1.0114 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF	0.004000
2.REMOVE PACKING NUTS	0.073000
3.REMOVE FLUSH VALVE	0.009000
4.REMOVE NUTS FROM BOLTS	0.018000
5.REMOVE BOWL FROM FLANGE	0.097000
6.REMOVE GASKET	0.013000
7.MOVE MATERIALS	0.104000
8.UNCRATE BOWL	0.235000
9.PLACE GASKET	0.023000
10.INSTALL BOWL	0.097000
11.PUT BOLTS IN RING	0.045000
12.INSTALL NUTS ON BOLTS	0.021000
13.INSTALL FLUSHOMETER	0.738000
14.TURN VALVE ON	0.004000
15.CHECK AND INSPECT	0.075000

Material Resources

Description	Quantity	Unit Cost
WATER CLOSET	1	177.4500
		177.4500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.556000	0.466800	2.022800
Material Cost \$	177.450000		177.450000
Equipment Hours			1.011400

Components In This Task: 0811100

TASK DATA FORM

Task Code: 0811201

Component: FLUSH-TANK WATER CLOSET System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNPLUG CLOGGED LINE
 Unit of Measure: COUNT Frequency of Occurrence: H: 5.00 A: 5.00 L: 7.00
 Persons per Team: 1 Task Duration: 1.5821 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.008000
2.REMOVE PACKING NUTS	0.109000
3.REMOVE/INSTALL NUTS FROM BOLTS	0.070000
4.REMOVE BOWL FROM FLANGE/INSTALL	0.194000
5.REMOVE GASKET	0.009000
6.UNPLUG LINE	0.150000
7.INSTALL GASKET	0.023000
8.APPLY PUTTY	0.132000
9.CLEAN PUTTY/BOWL FOUNDATION	0.136000
10.CONNECT PACKING NUTS	0.115000
11.CHECK OPERATION	0.167000
12.MOVE MATERIAL	0.104000

Material Resources

Description	Quantity	Unit Cost
PUTTY	6 oz	0.2200
		1.3200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.217000	0.365100	1.582100
Material Cost \$	1.320000		1.320000
Equipment Hours			1.582100

Components In This Task: 0811200

TASK DATA FORM

Task Code: 0811202

Component: FLUSH-TANK WATER CLOSET System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE WASHER IN BALL COCK
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.1872 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.TURN VALVE ON AND OFF	0.008000	WASHER	1	0.1700
2.REMOVE AND INSTALL COVER	0.017000			0.1700
3.REMOVE AND INSTALL 2 SCREWS	0.035000			
4.REMOVE/INSTALL VALVE ROD LIFTER	0.004000			
5.REMOVE AND INSTALL VALVE ROD	0.004000			
6.REMOVE WASHER	0.023000			
7.INSTALL WASHER	0.013000			
8.GRIND VALVE SEAT	0.016000			
9.CHECK OPERATION	0.024000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.144000	0.043200	0.187200
Material Cost \$	0.170000		0.170000
Equipment Hours			0.187200

Components In This Task: 0811200

TASK DATA FORM

Task Code: 0811203

Component: FLUSH-TANK WATER CLOSET System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE WORN PARTS IN WATER CLOSET
 Unit of Measure: COUNT Frequency of Occurrence: H: 17.00 A: 17.00 L: 17.00
 Persons per Team: 1 Task Duration: 1.2103 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.TURN VALVE OFF AND ON	0.008000	REPAIR KIT	1	15.5000
2.REMOVE AND INSTALL COVER	0.017000			15.5000
3.REMOVE/INSTALL FLOAT ON ROD	0.018000			
4.REMOVE/INSTALL FLOAT ROD	0.025000			
5.REMOVE AND INSTALL FLOAT VALVE	0.077000			
6.CLEAN VALVE SEAT	0.067000			
7.REMOVE/INSTALL LOCK NUT	0.021000			
8.REMOVE WASHER ON FLOAT VALVE	0.013000			
9.INSERT WASHER ON FLOAT VALVE	0.013000			
10.REMOVE/INSTALL ROD IN BALL	0.025000			
11.REMOVE AND INSTALL LIFT ROD	0.025000			
12.REMOVE/INSTALL RUBBER BALL	0.077000			
13.REMOVE/INSTALL FLUSH PIPE NUTS	0.043000			
14.REMOVE/INSTALL LOCK NUTS	0.043000			
15.INSTALL RUBBER GASKETS	0.048000			
16.ADJUST PARTS	0.188000			
17.CHECK OPERATION	0.167000			
18.REMOVE/INSTALL SUPPLY SLIP NUT	0.021000			
19.MOVE MATERIAL	0.035000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.931000	0.279300	1.210300
Material Cost \$	15.500000		15.500000
Equipment Hours			1.210300

Components In This Task: 0811200

TASK DATA FORM

Task Code: 0811204

Component: FLUSH-TANK WATER CLOSET System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSTALL GASKET IN SPUD CONNECTION
 Unit of Measure: COUNT Frequency of Occurrence: H: 17.00 A: 20.00 L: 23.00
 Persons per Team: 1 Task Duration: 0.1339 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.LOOSEN LOCKNUT	0.011000
3.REMOVE SPUD CONNECTION	0.013000
4.REMOVE GASKET OR WASHER	0.013000
5.CLEAN SPUD SEAT	0.016000
6.INSTALL NEW GASKET OR WASHER	0.002000
7.INSTALL SPUD CONNECTION	0.013000
8.TIGHTEN LOCKNUT	0.011000
9.INSPECT CONNECTION	0.007000

Material Resources

Description	Quantity	Unit Cost
GASKET	1	0.1200
		0.1200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.103000	0.030900	0.133900
Material Cost \$	0.120000		0.120000
Equipment Hours			0.133900

Components In This Task: 0811200

TASK DATA FORM

Task Code: 0811205

Component: FLUSH-TANK WATER CLOSET System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE WATER CLOSET
 Unit of Measure: COUNT Frequency of Occurrence: H: 26.00 A: 35.00 L: 44.00
 Persons per Team: 2 Task Duration: 2.0560 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SEAT NUTS	0.021000
3.REMOVE SEAT	0.024000
4.DISCONNECT FLUSH PIPE	0.073000
5.DISCONNECT FEED LINE	0.011000
6.REMOVE LAG SCREWS	0.021000
7.REMOVE TANK FROM WALL	0.024000
8.REMOVE STOOL NUTS FROM BOLTS	0.043000
9.REMOVE BOWL	0.097000
10.BOLTS FROM RING	0.043000
11.REMOVE GASKET	0.023000
12.INSTALL NEW BOWL AND TANK	2.568000
13.MOVE MATERIAL	0.207000

Material Resources

Description	Quantity	Unit Cost
WATER CLOSET	1	74.5900
		74.5900

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.163000	0.948900	4.111900
Material Cost \$	74.590000		74.590000
Equipment Hours			2.055950

Components In This Task: 0811200

TASK DATA FORM

Task Code: 0811301

Component: URINAL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FLUSH VALVE
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 0.1170 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVE OFF/ON	0.008000
2. REMOVE PACKING NUTS	0.021000
3. REMOVE FLUSH VALVE	0.013000
4. INSTALL NEW VALVE	0.043000
5. CHECK FOR LEAK	0.005000

Material Resources

Description	Quantity	Unit Cost
FLUSH VALVE	1	11.3000
		11.3000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.090000	0.027000	0.117000
Material Cost \$	11.300000		11.300000
Equipment Hours			0.117000

Components In This Task: 0811300

TASK DATA FORM

Task Code: 0811302

Component: URINAL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNPLUG LINE
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 2.4011 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVE OFF AND ON	0.008000
2. REMOVE PACKING NUTS	0.109000
3. REMOVE/INSTALL NUTS FROM BOLTS	0.700000
4. REMOVE BOWL FROM FLANGE/INST.	0.194000
5. REMOVE GASKET	0.099000
6. UNPLUG LINE	0.150000
7. INSTALL GASKET	0.023000
8. APPLY PUTTY	0.132000
9. CLEAN PUTTY/BOWL FOUNDATION	0.136000
10. CONNECT PACKING NUTS	0.115000
11. CHECK OPERATION	0.167000
12. MOVE MATERIAL	0.104000

Material Resources

Description	Quantity	Unit Cost
SEALANT	8 oz	0.2400
		1.9200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.847000	0.554100	2.401100
Material Cost \$	1.920000		1.920000
Equipment Hours			2.401100

Components In This Task: 0811300

TASK DATA FORM

Task Code: 0811303

Component: URINAL System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE URINAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 26.00 A: 35.00 L: 44.00
 Persons per Team: 2 Task Duration: 1.0667 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources	
Subtask Description	Labor Hrs
1.TURN VALVE OFF/ON	0.008000
2.REMOVE PACKING NUTS, FLUSH VALVE	0.091000
3.LOOSEN LOCKNUTS	0.073000
4.REMOVE TAILPIECES/LOCKNUTS	0.091000
5.REMOVE URINAL	0.097000
6.EXTRA WALKING BETWEEN FLOORS	0.042000
7.MOVE MATERIAL	0.104000
8.UNCRATE URINAL	0.235000
9.INSTALL GASKET	0.023000
10.MEASURE URINAL DIMENSION	0.047000
11.FIT UP URINAL TO WALL	0.098000
12.MEASURE AND DRILL 2 HOLES	0.058000
13.PUT IN BOLTS	0.045000
14.PUT NUTS ON BOLTS	0.021000
15.INSTALL FLUSHMETER PIPE	0.048000
16.INSTALL URINAL	0.097000
17.CLEAN URINAL	0.084000
18.CONNECT UNIONS	0.095000
19.ADJUST PARTS	0.013000
20.CHECK AND INSPECT	0.167000
21.MATERIAL HANDLING	0.104000

Material Resources		
Description	Quantity	Unit Cost
URINAL	1	158.0000
		158.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.641000	0.492300	2.133300
Material Cost \$	158.000000		158.000000
Equipment Hours			1.066650

Components In This Task: 0811300

TASK DATA FORM

Task Code: 0811401

Component: LAVATORY, IRON, ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: W/R REPLACE WASHER IN SPUD CONNECTION
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 0.1339 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources	
Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.LOOSEN LOCKNUT	0.011000
3.REMOVE SPUD CONNECTION	0.013000
4.REMOVE GASKET OR WASHER	0.013000
5.CLEAN SPUD SEAT	0.016000
6.INSTALL NEW GASKET OR WASHER	0.002000
7.INSTALL SPUD CONNECTION	0.013000
8.TIGHTEN LOCKNUT	0.011000
9.INSPECT CONNECTION	0.007000

Material Resources		
Description	Quantity	Unit Cost
WASHER	1	0.1200
		0.1200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.103000	0.030900	0.133900
Material Cost \$	0.120000		0.120000
Equipment Hours			0.133900

Components In This Task: 0811500 0811600 0811400

TASK DATA FORM

Task Code: 0811402

Component: LAVATORY, IRON, ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE WASHER IN FAUCET
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES ON AND OFF	0.017000
2. REMOVE PACKING NUT AND INSTALL	0.018000
3. REMOVE VALVE STEM AND CAP	0.013000
4. REMOVE SEAT WASHER AND INSTALL	0.018000
5. PRY OUT WASHER	0.013000
6. INSTALL WASHER	0.002000
7. INSTALL STEM	0.013000
8. TIGHTEN MAIN GLAND VALVES	0.009000
9. TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811500 0811600 0811400

TASK DATA FORM

Task Code: 0811403

Component: LAVATORY, IRON, ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE SUPPORT RODS
 Unit of Measure: COUNT Frequency of Occurrence: H: 9.00 A: 10.00 L: 11.00
 Persons per Team: 1 Task Duration: 0.1976 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. LOOSEN NUTS	0.013000
2. REMOVE RODS	0.017000
3. REMOVE WASHERS	0.004000
4. REMOVE NUTS	0.018000
5. INSTALL NEW NUTS	0.018000
6. INSTALL WASHERS	0.004000
7. PUT RODS INTO POSITION	0.017000
8. TIGHTEN NUTS	0.013000
9. ADJUST RODS/CHECK ALIGNMENT	0.048000

Material Resources

Description	Quantity	Unit Cost
NUT	2	0.0300
WASHER	2	0.0200
ROD	2	0.0700
		0.2400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.152000	0.045600	0.197600
Material Cost \$	0.240000		0.240000
Equipment Hours			0.197600

Components In This Task: 0811500 0811600 0811400

TASK DATA FORM

Task Code: 0811404

Component: LAVATORY, IRON, ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON/OFF	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCETS	1 SET	32.5000
		32.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	32.500000		32.500000
Equipment Hours			0.817700

Components In This Task: 0811500 0811600 0811400

TASK DATA FORM

Task Code: 0811405

Component: LAVATORY, IRON, ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R CLEAN OUT STRAINER AND P TRAP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.4823 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.DISCONNECT STRAINER	0.073000
2.REMOVE STRAINER LOCK NUT	0.036000
3.REMOVE STRAINER WASHER, TRAP, INS	0.076000
4.CONNECT TRAP TO WALL	0.115000
5.CLEAN OUT TRAP AND STRAINER	0.071000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.371000	0.111300	0.482300
Material Cost \$	0.540000		0.540000
Equipment Hours			0.482300

Components In This Task: 0811500 0811600 0811400

TASK DATA FORM

Task Code: 0811406

Component: LAVATORY, IRON, ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE LAVATORY
 Unit of Measure: COUNT Frequency of Occurrence: H: 30.00 A: 40.00 L: 50.00
 Persons per Team: 2 Task Duration: 0.9978 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.CUT OFF WATER (HOT AND COLD)	0.017000
2.REMOVE NUT ON TAILPIECE	0.021000
3.REMOVE WASHER	0.002000
4.REMOVE FAUCET	0.038000
5.UNSCREW TRAP PLUG TO DRAIN	0.038000
6.DISCONNECT TRAP UNION	0.038000
7.REMOVE WASH BASIN FROM SUPPORTS	0.024000
8.INSTALL NEW WALL WASH BASIN	0.920000
9.INSTALL COMBINATION FAUCETS	0.437000

Material Resources

Description	Quantity	Unit Cost
LAVATORY	1	130.6100
		130.6100

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.535000	0.460500	1.995500
Material Cost \$	130.610000		130.610000
Equipment Hours			0.997750

Components In This Task: 0811400

TASK DATA FORM

Task Code: 0811501

Component: LAVATORY, VITREOUS CHINA System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE WASHER IN SPUD CONNECTION
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 0.1339 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.LOSEN LOCKNUTS	0.011000
3.REMOVE SPUD CONNECTION	0.013000
4.REMOVE GASKET OR WASHER	0.013000
5.CLEAN SPUD SEAT	0.016000
6.INSTALL NEW GASKET OR WASHER	0.002000
7.INSTALL SPUD CONNECTION	0.013000
8.TIGHTEN LOCKNUT	0.011000
9.INSPECT CONNECTION	0.007000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1200
		0.1200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.103000	0.030900	0.133900
Material Cost \$	0.120000		0.120000
Equipment Hours			0.133900

Components In This Task: 0811400 0811600 0811500

TASK DATA FORM

Task Code: 0811502

Component: LAVATORY, VITREOUS CHINA System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE WASHER IN FAUCET
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES ON AND OFF	0.017000
2. REMOVE PACKING NUT AND INSTALL	0.018000
3. REMOVE VALVE STEM AND CAP	0.013000
4. REMOVE SEAT WASHER AND INSTALL	0.018000
5. PRY OUT WASHER	0.013000
6. INSTALL WASHER	0.002000
7. INSTALL STEM	0.013000
8. TIGHTEN MAIN GLAND VALVES	0.009000
9. TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811400 0811600 0811500

TASK DATA FORM

Task Code: 0811503

Component: LAVATORY, VITREOUS CHINA System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE SUPPORT RODS
 Unit of Measure: COUNT Frequency of Occurrence: H: 9.00 A: 10.00 L: 11.00
 Persons per Team: 1 Task Duration: 0.1976 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. LOOSEN NUTS	0.013000
2. REMOVE RODS	0.017000
3. REMOVE WASHERS	0.004000
4. REMOVE NUTS	0.018000
5. INSTALL NEW NUTS	0.018000
6. INSTALL WASHERS	0.004000
7. PUT RODS INTO POSITION	0.017000
8. TIGHTEN NUTS	0.013000
9. ADJUST RODS/CHECK ALIGNMENT	0.048000

Material Resources

Description	Quantity	Unit Cost
NUTS	2	0.0300
WASHER	2	0.0200
RODS	2	0.0700
		0.2400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.152000	0.045600	0.197600
Material Cost \$	0.240000		0.240000
Equipment Hours			0.197600

Components In This Task: 0811400 0811600 0811500

TASK DATA FORM

Task Code: 0811504

Component: LAVATORY, VITREOUS CHINA System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: M: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCETS	1 SET	32.5000
		32.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	32.500000		32.500000
Equipment Hours			0.817700

Components In This Task: 0811400 0811600 0811500

TASK DATA FORM

Task Code: 0811505

Component: LAVATORY, VITREOUS CHINA System: SANITARY Subsystem: FIXTURES
 Task Description: M/R CLEAN OUT STRAINER AND P TRAP
 Unit of Measure: COUNT Frequency of Occurrence: M: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.4823 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.DISCONNECT STRAINER	0.073000
2.REMOVE STRAINER LOCK NUT	0.036000
3.REMOVE STRAINER WASHER/TRAP/INS	0.076000
4.REMOVE AND INSTALL STRAINER NUT	0.115000
5.CLEAN OUT TRAP AND STRAINER	0.071000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.371000	0.111300	0.482300
Material Cost \$	0.540000		0.540000
Equipment Hours			0.482300

Components In This Task: 0811400 0811600 0811500

TASK DATA FORM

Task Code: 0811506

Component: LAVATORY, VITREOUS CHINA System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE LAVATORY
 Unit of Measure: COUNT Frequency of Occurrence: H: 26.00 A: 35.00 L: 44.00
 Persons per Team: 2 Task Duration: 0.9984 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.CUT OFF WATER (HOT AND COLD)	0.017000
2.REMOVE NUT ON TAILPIECE	0.021000
3.REMOVE WASHER	0.002000
4.REMOVE FAUCET	0.038000
5.UNSCREW TRAP PLUG TO DRAIN	0.038000
6.DISCONNECT TRAP UNION	0.038000
7.REMOVE WASH BASIN FROM SUPPORTS	0.024000
8.INSTALL NEW WALL WASH BASIN	0.920000
9.INSTALL COMBINATION FAUCETS	0.438000

Material Resources

Description	Quantity	Unit Cost
LAVATORY	1	134.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.536000	0.460800	1.996800
Material Cost \$	134.140000		134.140000
Equipment Hours			0.998400

Components In This Task: 0811500

TASK DATA FORM

Task Code: 0811601

Component: LAVATORY, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: W/R REPLACE WASHER IN SPUD CONNECTION
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 0.1339 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.LOOSEN LOCKNUT	0.011000
3.REMOVE SPUD CONNECTION	0.013000
4.REMOVE GASKET OR WASHER	0.013000
5.CLEAN SPUD SEAT	0.016000
6.INSTALL NEW GASKET OR WASHER	0.002000
7.INSTALL SPUD CONNECTION	0.013000
8.TIGHTEN LOCKNUT	0.011000
9.INSPECT CONNECTION	0.007000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.103000	0.030900	0.133900
Material Cost \$	0.120000		0.120000
Equipment Hours			0.133900

Components In This Task: 0811400 0811500 0811600

TASK DATA FORM

Task Code: 0811602

Component: LAVATORY, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE WASHER IN FAUCET
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.TURN VALVES ON AND OFF	0.017000	WASHER	1	0.1400
2.REMOVE PACKING NUT AND INSTALL	0.018000			0.1400
3.REMOVE VALVE STEM AND CAP	0.013000			
4.REMOVE/INSTALL SEAT WASHER	0.018000			
5.PRY OUT WASHER	0.013000			
6.INSTALL WASHER	0.002000			
7.INSTALL STEM	0.013000			
8.TIGHTEN MAIN GLAND VALVES	0.009000			
9.TEST FAUCET	0.008000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811400 0811500 0811600

TASK DATA FORM

Task Code: 0811603

Component: LAVATORY, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE SUPPORT RODS
 Unit of Measure: COUNT Frequency of Occurrence: H: 9.00 A: 10.00 L: 11.00
 Persons per Team: 1 Task Duration: 0.1989 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.LOOSEN NUTS	0.013000	WASHER	2	0.0300
2.REMOVE RODS	0.017000	NUT	2	0.0200
3.REMOVE WASHERS	0.004000	ROD	2	0.0700
4.REMOVE NUTS	0.018000			0.2400
5.INSTALL NEW NUTS	0.018000			
6.INSTALL WASHERS	0.004000			
7.PUT RODS INTO POSITION	0.018000			
8.TIGHTEN NUTS	0.013000			
9.ADJUST RODS AND CHECK ALIGNMENT	0.048000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.153000	0.045900	0.198900
Material Cost \$	0.240000		0.240000
Equipment Hours			0.198900

Components In This Task: 0811400 0811500 0811600

TASK DATA FORM

Task Code: 0811604

Component: LAVATORY, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCETS	1 SET	32.5000
		32.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	32.500000		32.500000
Equipment Hours			0.817700

Components In This Task: 0811400 0811500 0811600

TASK DATA FORM

Task Code: 0811605

Component: LAVATORY, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: H/R CLEAN OUT STRAINER AND P TRAP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.4823 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.DISCONNECT STRAINER	0.073000
2.REMOVE STRAINER LOCK NUT	0.036000
3.REMOVE/INSTALL STRAINER WASHER	0.076000
4.REMOVE AND INSTALL STRAINER NUT	0.115000
5.CLEAN OUT TRAP AND STRAINER	0.071000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.371000	0.111300	0.482300
Material Cost \$	0.540000		0.540000
Equipment Hours			0.482300

Components In This Task: 0811400 0811500 0811600

TASK DATA FORM

Task Code: 0811606

Component: LAVATORY, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE LAVATORY
 Unit of Measure: COUNT Frequency of Occurrence: H: 26.00 A: 35.00 L: 44.00
 Persons per Team: 2 Task Duration: 0.9984 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.CUT OFF WATER (HOT AND COLD)	0.017000
2.REMOVE NUT ON TAILPIECE	0.021000
3.REMOVE WASHER	0.002000
4.REMOVE FAUCET	0.038000
5.UNSCREW TRAP PLUG TO DRAIN	0.038000
6.DISCONNECT TRAP UNION	0.038000
7.REMOVE WASH BASIN FROM SUPPORTS	0.024000
8.INSTALL NEW WALL WASH BASIN	0.920000
9.INSTALL COMBINATION FAUCETS	0.438000

Material Resources

Description	Quantity	Unit Cost
LAVATORY	1	58.3000
		58.3000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.538000	0.460800	1.998800
Material Cost \$	58.300000		58.300000
Equipment Hours			0.998400

Components In This Task: 0811600

TASK DATA FORM

Task Code: 0811701

Component: BATHTUB, CAST IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER HEAD	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	.5 oz	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811800 0811700

TASK DATA FORM

Task Code: 0811702

Component: BATHTUB, CAST IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811500 0811700

TASK DATA FORM

Task Code: 0811703

Component: BATHTUB, CAST IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811800 0811700

TASK DATA FORM

Task Code: 0811704

Component: BATHTUB, CAST IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R RESEAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.7670 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor ResourcesMaterial Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.REMOVE OLD CAULK AND APPLY NEW	0.590000	CAULK	8 oz	0.0900
				0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811800 0811700

TASK DATA FORM

Task Code: 0811705

Component: BATHTUB, CAST IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPAIR DIVERter VALVE
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 1 Task Duration: 1.0270 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor ResourcesMaterial Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.REPAIR DIVERter VALVE	0.790000	REPAIR KIT	1	12.5000
				12.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.790000	0.237000	1.027000
Material Cost \$	12.500000		12.500000
Equipment Hours			1.027000

Components In This Task: 0811800 0811700

TASK DATA FORM

Task Code: 0811706

Component: BATHTUB, CAST IRON ENAMEL
 Task Description: M/R UNSTOP
 Unit of Measure: COUNT
 Persons per Team: 1
 Trade: PLUMBING

System: SANITARYSubsystem: FIXTURES

Frequency of Occurrence: H: 5.00 A: 6.00 L: 7.00
 Task Duration: 0.5720 hours Once every (H,A,L) years
 Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.UNSTOP PLUGGED DRAIN	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811800 0811700

TASK DATA FORM

Task Code: 0811707

Component: BATHTUB, CAST IRON ENAMEL
 Task Description: REPLACE REPLACE TUB
 Unit of Measure: COUNT
 Persons per Team: 2
 Trade: PLUMBING

System: SANITARYSubsystem: FIXTURES

Frequency of Occurrence: H: 30.00 A: 40.00 L: 50.00
 Task Duration: 6.5000 hours Once every (H,A,L) years
 Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE/INSTALL TUB, FITTINGS	10.000000

Material Resources

Description	Quantity	Unit Cost
BATH TUB	1	321.9800
		321.9800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	10.000000	3.000000	13.000000
Material Cost \$	321.980000		321.980000
Equipment Hours			6.500000

Components In This Task: 0811700

TASK DATA FORM

Task Code: 0811801

Component: BATHTUB, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN WATER OFF AND ON	0.008000
2. REMOVE SHOWER HEAD	0.036000
3. CHECK SHOWER HEAD	0.007000
4. INSTALL SHOWER HEAD	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	.5 oz	0.2200
		0.1100

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.110000		0.110000
Equipment Hours			0.115700

Components In This Task: 0811700 0811800

TASK DATA FORM

Task Code: 0811802

Component: BATHTUB, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES ON AND OFF	0.017000
2. REMOVE PACKING NUT AND INSTALL	0.018000
3. REMOVE VALVE STEM AND CAP	0.013000
4. REMOVE/INSTALL SEAT WASHER	0.018000
5. PRY OUT WASHER	0.013000
6. INSTALL WASHER	0.002000
7. INSTALL STEM	0.013000
8. TIGHTEN MAIN GLAND VALVE	0.009000
9. TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811700 0811800

TASK DATA FORM

Task Code: 0811803

Component: BATHTUB, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UO.	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811700 0811800

TASK DATA FORM

Task Code: 0811804

Component: BATHTUB, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R RESEAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.7670 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD CAULK AND APPLY NEW	0.590000

Material Resources

Description	Quantity	Unit Cost
CAULK	8 oz	0.0900
		0.7200

SUMMARY

Resources UO.	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811700 0811800

TASK DATA FORM

Task Code: 0811805

Component: BATHTUB, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPAIR DIVERTER VALVE
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 1 Task Duration: 1.0270 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REPAIR DIVERTER VALVE	0.790000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	12.5000
		12.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.790000	0.237000	1.027000
Material Cost \$	12.500000		12.500000
Equipment Hours			1.027000

Components In This Task: 0811700 0811800

TASK DATA FORM

Task Code: 0811806

Component: BATHTUB, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.UNSTOP PLUGGED DRAIN.	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811700 0811800

TASK DATA FORM

Task Code: 0811807

Component: BATHTUB, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE TUB
 Unit of Measure: COUNT Frequency of Occurrence: M: 26.00 A: 35.00 L: 44.00
 Persons per Team: 2 Task Duration: 1.6705 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL TUB AND FITTINGS	2.570000

Material Resources

Description	Quantity	Unit Cost
BATH TUB	1	164.2700
		164.2700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.570000	0.771000	3.341000
Material Cost \$	164.270000		164.270000
Equipment Hours			1.670500

Components In This Task: 0811800

TASK DATA FORM

Task Code: 0811901

Component: SHOWER, TERRAZO System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: M: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLOW TAPE	.5 oz	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811A00 0811800 0811C00 0811900

TASK DATA FORM

Task Code: 0811902

Component: SHOWER, TERRAZO System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811A00 0811B00 0811C00 0811900

TASK DATA FORM

Task Code: 0811903

Component: SHOWER, TERRAZO System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811A00 0811B00 0811C00 0811900

TASK DATA FORM

Task Code: 0811904Component: SHOWER, TERRAZOSystem: SANITARYSubsystem: FIXTURESTask Description: M/R RESEALUnit of Measure: COUNTFrequency of Occurrence: H: 4.00 A: 5.00 L: 6.00Persons per Team: 1Task Duration: 0.7670 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs
T.REMOVE OLD CAULK AND APPLY NEW	0.590000

Description	Quantity	Unit Cost
CAULK	8 oz	0.0900
		0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811A00 0811B00 0811C00 0811900

TASK DATA FORM

Task Code: 0811905Component: SHOWER, TERRAZOSystem: S TARYSubsystem: FIXTURESTask Description: M/R UNSTOPUnit of Measure: COUNTFrequency of Occurrence: H: 1.67 A: 2.00 L: 2.33Persons per Team: 1Task Duration: 0.5720 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs
T.UNSTOP PLUGGED DRAIN.	0.440000

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811A00 0811B00 0811C00 0811900

TASK DATA FORM

Task Code: 0811906

Component: SHOWER, TERRAZO System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SHOWER
 Unit of Measure: COUNY Frequency of Occurrence: H: 20.00 A: 30.00 L: 40.00
 Persons per Team: 2 Task Duration: 49,458 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL SHOWERS	76.090000

Material Resources

Description	Quantity	Unit Cost
SHOWER	1	229.9000
		229.9000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	76.090000	22.827000	98.917000
Material Cost \$	229.900000		229.900000
Equipment Hours			49.458500

Components In This Task: 0811900

TASK DATA FORM

Task Code: 0811A01

Component: SHOWER, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: N/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNY Frequency of Occurrence: H: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	.5 62	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811900 0811800 0811C00 0811A00

TASK DATA FORM

Task Code: 0811A02

Component: SHOWER, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811900 0811800 0811C00 0811A00

TASK DATA FORM

Task Code: 0811A03

Component: SHOWER, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811900 0811800 0811C00 0811A00

TASK DATA FORM

Task Code: 0811A04

Component: SHOWER, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R RESEAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.7670 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE OLD CAULK AND APPLY NEW	0.590000

Material Resources

Description	Quantity	Unit Cost
CAULK	8 oz	0.0900
		0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811900 0811800 0811C00 0811A00

TASK DATA FORM

Task Code: 0811A05

Component: SHOWER, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.UNSTOP PLUGGED DRAIN.	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811900 0811800 0811C00 0811A00

TASK DATA FORM

Task Code: 0811A06

Component: SHOWER, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SHOWER
 Unit of Measure: COUNT Frequency of Occurrence: H: 26.00 A: 35.00 L: 44.00
 Persons per Team: 2 Task Duration: 1.6835 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL SHOWER	2.590000

Material Resources

Description	Quantity	Unit Cost
SHOWER	1	248.0000
		248.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.590000	0.777000	3.367000
Material Cost \$	248.000000		248.000000
Equipment Hours			1.683500

Components In This Task: 0811A00

TASK DATA FORM

Task Code: 0811B01

Component: SHOWER, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER HEAD	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	.5 oz	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811900 0811A00 0811C00 0811B00

TASK DATA FORM

Task Code: 0811802

Component: SHOWER, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811900 0811A00 0811C00 0811800

TASK DATA FORM

Task Code: 0811803

Component: SHOWER, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811900 0811A00 0811C00 0811800

TASK DATA FORM

Task Code: 0811804

Component: SHOWER, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: H/R RESEAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.7670 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD CAULK AND APPLY NEW	0.590000

Material Resources

Description	Quantity	Unit Cost
CAULK	8 oz	0.0900
		0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811900 0811A00 0811C00 0811B00

TASK DATA FORM

Task Code: 0811805

Component: SHOWER, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: H/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.UNSTOP PLUGGED DRAIN.	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811900 0811A00 0811C00 0811B00

TASK DATA FORM

Task Code: 0811B06

Component: SHOWER, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SHOWER AND FITTINGS
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 1.6835 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE/INSTALL SHOWER	2.590000	SHOWER	1	99.9900
				99.9900

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.590000	0.777000	3.367000
Material Cost \$	99.990000		99.990000
Equipment Hours			1.683500

Components In This Task: 0811B00

TASK DATA FORM

Task Code: 0811C01

Component: SHOWER, ALUMINUM System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.TURN WATER OFF AND ON	0.008000	TEFLOW TAPE	.5 oz	0.2700
2.REMOVE SHOWER HEAD	0.036000			0.1350
3.CHECK SHOWER HEAD	0.007000			
4.INSTALL SHOWER HEAD	0.038000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811900 0811A00 0811B00 0811C00

TASK DATA FORM

Task Code: 0811C02

Component: SHOWER, ALUMINUM System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1456 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.009000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.112000	0.033600	0.145600
Material Cost \$	0.140000		0.140000
Equipment Hours			0.145600

Components In This Task: 0811900 0811A00 0811800 0811C00

TASK DATA FORM

Task Code: 0811C03

Component: SHOWER, ALUMINUM System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811900 0811A00 0811800 0811C00

TASK DATA FORM

Task Code: 0811C04Component: SHOWER, ALUMINUMSystem: SANITARYSubsystem: FIXTURESTask Description: M/R RESEALUnit of Measure: COUNTFrequency of Occurrence: H: 4.00 A: 5.00 L: 6.00Persons per Team: 1Task Duration: 0.7670 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0Labor Resources

Subtask Description	Labor Hrs
T.REMOVE OLD CAULK AND APPLY NEW	0.590000

Material Resources

Description	Quantity	Unit Cost
CAULK	8 oz	0.0900
		0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811900 0811A00 0811B00 0811C00

TASK DATA FORM

Task Code: 0811C05Component: SHOWER, ALUMINUMSystem: SANITARYSubsystem: FIXTURESTask Description: M/R UNSTOPUnit of Measure: COUNTFrequency of Occurrence: H: 1.67 A: 2.00 L: 2.33Persons per Team: 1Task Duration: 0.5720 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0Labor Resources

Subtask Description	Labor Hrs
T.UNSTOP PLUGGED DRAIN.	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811900 0811A00 0811B00 0811C00

TASK DATA FORM

Task Code: 0811C06

Component: SHOWER, ALUMINUM System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SHOWER AND FITTINGS
 Unit of Measure: COUNT Frequency of Occurrence: H: 19.00 A: 25.00 L: 31.00
 Persons per Team: 2 Task Duration: 1.6835 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL SHOWER	2.590000

Material Resources

Description	Quantity	Unit Cost
SHOWER	1	169.5000
		169.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.590000	0.777000	3.367000
Material Cost \$	169.500000		169.500000
Equipment Hours			1.683500

Components In This Task: 0811C00

TASK DATA FORM

Task Code: 0811D01

Component: SINK, IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811D00

TASK DATA FORM

Task Code: 0811D02

Component: SINK, IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: H/R CLEAN TRAP
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.50 A: 3.00 L: 3.50
 Persons per Team: 1 Task Duration: 0.1664 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. UNSCREW TRAP PLUG TO DRAIN, INST	0.021000
2. DISCONNECT UNIONS AND INSTALL	0.043000
3. REMOVE TRAP	0.024000
4. INSPECT TRAP	0.024000
5. CLEAN TRAP	0.016000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	1 oz	0.2700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.128000	0.038400	0.166400
Material Cost \$	0.270000		0.270000
Equipment Hours			0.166400

Components In This Task: 0811E00 0811F00 0811G00 0811D00

TASK DATA FORM

Task Code: 0811D03

Component: SINK, IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES OFF/ON	0.017000
2. REMOVE HANDLE SCREW	0.018000
3. REMOVE HANDLE	0.025000
4. REMOVE ESCUTCHEON NUT	0.018000
5. REMOVE ESCUTCHEON	0.004000
6. REMOVE LOCK NUT ON FAUCET	0.018000
7. REMOVE LOCK NUT ON SPOUT	0.011000
8. REMOVE SLIP NUT ON SPOUT	0.011000
9. REMOVE COMBINATION	0.009000
10. REMOVE SLIP NUT FROM TUBING	0.018000
11. REMOVE COUPLING NUT	0.018000
12. REMOVE TUBING	0.025000
13. INSTALL FAUCETS	0.281000
14. ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15. CONNECT FAUCETS AND TUBING	0.039000
16. CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	36.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.829000	0.188700	0.817700
Material Cost \$	36.000000		36.000000
Equipment Hours			0.817700

Components In This Task: 0811E00 0811F00 0811G00 0811D00

TASK DATA FORM

Task Code: 0811D04Component: SINK, IRON ENAMELSystem: SANITARYSubsystem: FIXTURESTask Description: M/R UNSTOPUnit of Measure: COUNTPersons per Team: 1Trade: PLUMBINGFrequency of Occurrence: H: 1.67 A: 2.00 L: 3.50Task Duration: 0.5720 hoursTask Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.UNSTOP PLUGGED DRAIN	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811E00 0811F00 0811G00 0811D00

TASK DATA FORM

Task Code: 0811D05Component: SINK, IRON ENAMELSystem: SANITARYSubsystem: FIXTURESTask Description: M/R REPAIR STRAINERUnit of Measure: COUNTPersons per Team: 1Trade: PLUMBINGFrequency of Occurrence: H: 7.00 A: 8.00 L: 9.00Task Duration: 1.1700 hoursTask Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE STRAINER,REPAIR,INSTALL	0.900000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	1.1000
		1.1000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.900000	0.270000	1.170000
Material Cost \$	1.100000		1.100000
Equipment Hours			1.170000

Components In This Task: 0811E00 0811F00 0811G00 0811D00

TASK DATA FORM

Task Code: 0811D06

Component: SINK, IRON ENAMEL System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SINK
 Unit of Measure: COUNT Frequency of Occurrence: H: 26.00 A: 35.00 L: 44.00
 Persons per Team: 2 Task Duration: 1.5340 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
1.REMOVE/INSTALL SINK AND FITTING	2.360000	SINK	1
			Unit Cost
			138.7600
			138.7600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.360000	0.708000	3.068000
Material Cost \$	138.760000		138.760000
Equipment Hours			0.534000

Components In This Task: 0811D00

TASK DATA FORM

Task Code: 0811E01

Component: SINK, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
1.TURN VALVES ON AND OFF	0.017000	WASHER	1
2.REMOVE PACKING NUT AND INSTALL	0.018000		Unit Cost
3.REMOVE VALVE STEM AND CAP	0.013000		0.1400
4.REMOVE/INSTALL SEAT WASHER	0.018000		0.1400
5.PRY OUT WASHER	0.013000		
6.INSTALL WASHER	0.002000		
7.INSTALL STEM	0.013000		
8.TIGHTEN MAIN GLAND VALVES	0.009000		
9.TEST FAUCET	0.008000		

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811D00 0811F00 0811G00 0811E00

TASK DATA FORM

Task Code: 0811E02Component: SINK, ENAMELED STEELSystem: SANITARYSubsystem: FIXTURESTask Description: M/R CLEAN TRAPUnit of Measure: COUNTFrequency of Occurrence: H: 2.50 A: 3.00 L: 3.50Persons per Team: 1Task Duration: 0.1677 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0Labor Resources

Subtask Description	Labor Hrs
1. UNSCREW TRAP PLUG, INSTALL NEW	0.021000
2. DISCONNECT UNIONS AND INSTALL	0.043000
3. REMOVE TRAP	0.025000
4. INSPECT TRAP	0.024000
5. CLEAN TRAP	0.016000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	1 oz	0.2700
		0.2700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.129000	0.038700	0.167700
Material Cost \$	0.270000		0.270000
Equipment Hours			0.167700

Components In This Task: 0811D00 0811F00 0811G00 0811E00

TASK DATA FORM

Task Code: 0811E03Component: SINK, ENAMELED STEELSystem: SANITARYSubsystem: FIXTURESTask Description: M/R REPLACE FAUCETSUnit of Measure: COUNTFrequency of Occurrence: H: 8.00 A: 10.00 L: 12.00Persons per Team: 1Task Duration: 0.8177 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES OFF/ON	0.017000
2. REMOVE HANDLE SCREW	0.018000
3. REMOVE HANDLE	0.025000
4. REMOVE ESCUTCHEON NUT	0.018000
5. REMOVE ESCUTCHEON	0.004000
6. REMOVE LOCK NUT ON FAUCET	0.018000
7. REMOVE LOCK NUT ON SPOUT	0.011000
8. REMOVE SLIP NUT ON SPOUT	0.011000
9. REMOVE COMBINATION	0.009000
10. REMOVE SLIP NUT FROM TUBING	0.018000
11. REMOVE COUPLING NUT	0.018000
12. REMOVE TUBING	0.025000
13. INSTALL FAUCETS	0.281000
14. ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15. CONNECT FAUCETS AND TUBING	0.039000
16. CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	36.0000
		36.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	36.000000		36.000000
Equipment Hours			0.817700

Components In This Task: 0811D00 0811F00 0811G00 0811E00

TASK DATA FORM

Task Code: 0811E04

Component: SINK, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 3.50
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
T.UNSTOP PLUGGED DRAIN	0.440000	TEFLON TAPE	2 oz
			Unit Cost
			0.2700
			0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811D00 0811F00 0811G00 0811E00

TASK DATA FORM

Task Code: 0811E05

Component: SINK, ENAMELED STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPAIR STRAINER
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.00 A: 8.00 L: 9.00
 Persons per Team: 1 Task Duration: 1.1700 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
T.REMOVE STRAINER,REPAIR,INSTALL	0.900000	REPAIR KIT	1
			Unit Cost
			1.1000
			1.1000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.900000	0.270000	1.170000
Material Cost \$	1.100000		1.100000
Equipment Hours			1.170000

Components In This Task: 0811D00 0811F00 0811G00 0811E00

TASK DATA FORM

Task Code: 0811E06Component: SINK, ENAMELED STEELSystem: SANITARYSubsystem: FIXTURESTask Description: REPLACE REPLACE SINKUnit of Measure: COUNTPersons per Team: 2Trade: PLUMBINGFrequency of Occurrence: H: 26.00 A: 35.00 L: 44.00Task Duration: 1.5340 hours

Once every (H,A,L) years

Task Classification: 1Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL SINK AND FITTING	2.360000

Material Resources

Description	Quantity	Unit Cost
SINK	1	67.0000
		67.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.360000	0.708000	3.068000
Material Cost \$	67.000000		67.000000
Equipment Hours			1.534000

Components In This Task: 0811E00

TASK DATA FORM

Task Code: 0811F01Component: SINK, STAINLESS STEELSystem: SANITARYSubsystem: FIXTURESTask Description: H/R REPLACE FAUCET WASHERUnit of Measure: COUNTPersons per Team: 1Trade: PLUMBINGFrequency of Occurrence: H: 1.00 A: 2.00 L: 3.00Task Duration: 0.1456 hours

Once every (H,A,L) years

Task Classification: 0Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.009000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.112000	0.033600	0.145600
Material Cost \$	0.140000		0.140000
Equipment Hours			0.145600

Components In This Task: 0811D00 0811E00 0811G00 0811F00

TASK DATA FORM

Task Code: 0811F02

Component: SINK, STAINLESS STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R CLEAN TRAP
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.50 A: 3.00 L: 3.50
 Persons per Team: 1 Task Duration: 0.1677 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. UNSCREW TRAP PLUG AND INSTALL	0.021000
2. DISCONNECT UNIONS AND INSTALL	0.043000
3. REMOVE TRAP	0.025000
4. INSPECT TRAP	0.024000
5. CLEAN TRAP	0.016000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	1 oz	0.2700
		0.2700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.129000	0.038700	0.167700
Material Cost \$	0.270000		0.270000
Equipment Hours			0.167700

Components In This Task: 0811D00 0811E00 0811G00 0811F00

TASK DATA FORM

Task Code: 0811F03

Component: SINK, STAINLESS STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES OFF/ON	0.017000
2. REMOVE HANDLE SCREW	0.018000
3. REMOVE HANDLE	0.025000
4. REMOVE ESCUTCHEON NUT	0.018000
5. REMOVE ESCUTCHEON	0.004000
6. REMOVE LOCK NUT ON FAUCET	0.018000
7. REMOVE LOCK NUT ON SPOUT	0.011000
8. REMOVE SLIP NUT ON SPOUT	0.011000
9. REMOVE COMBINATION	0.009000
10. REMOVE SLIP NUT FROM TUBING	0.018000
11. REMOVE COUPLING NUT	0.018000
12. REMOVE TUBING	0.025000
13. INSTALL FAUCETS	0.281000
14. ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15. CONNECT FAUCETS AND TUBING	0.039000
16. CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	42.0000
		42.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	42.000000		42.000000
Equipment Hours			0.817700

Components In This Task: 0811D00 0811E00 0811G00 0811F00

TASK DATA FORM

Task Code: 0811F04

Component: SINK, STAINLESS STEEL

System: SANITARY

Subsystem: FIXTURES

Task Description: M/R UNSTOP

Unit of Measure: COUNT

Frequency of Occurrence: H: 1.67 A: 2.00 L: 3.50

Persons per Team: 1

Task Duration: 0.5720 hours

Once every (H,A,L) years

Trade: PLUMBING

Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.UNSTOP PLUGGED DRAIN.	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811D00 0811E00 0811G00 0811F00

TASK DATA FORM

Task Code: 0811F05

Component: SINK, STAINLESS STEEL

System: SANITARY

Subsystem: FIXTURES

Task Description: M/R REPAIR STRAINER

Unit of Measure: COUNT

Frequency of Occurrence: H: 7.00 A: 8.00 L: 9.00

Persons per Team: 1

Task Duration: 1.1700 hours

Once every (H,A,L) years

Trade: PLUMBING

Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE STRAINER,REPAIR,INSTALL	0.900000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	1.1000
		1.1000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.900000	0.270000	1.170000
Material Cost \$	1.100000		1.100000
Equipment Hours			1.170000

Components In This Task: 0811D00 0811E00 0811G00 0811F00

TASK DATA FORM

Task Code: 0811F06

Component: SINK, STAINLESS STEEL System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SINK
 Unit of Measure: COUNT Frequency of Occurrence: H: 30.00 A: 40.00 L: 50.00
 Persons per Team: 2 Task Duration: 1.5340 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
1.REMOVE/INSTALL SINK AND	2.360000	SINK	1
			Unit Cost
			198.6900
			198.6900

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.360000	0.708000	3.068000
Material Cost \$	198.690000		198.690000
Equipment Hours			1.534000

Components In This Task: 0811F00

TASK DATA FORM

Task Code: 0811G01

Component: SINK, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
1.TURN VALVES ON AND OFF	0.017000	WASHER	1
2.REMOVE PACKING NUT AND INSTALL	0.018000		Unit Cost
3.REMOVE VALVE STEM AND CAP	0.013000		0.1400
4.REMOVE/INSTALL SEAT WASHER	0.018000		0.1400
5.PRY OUT WASHER	0.013000		
6.INSTALL WASHER	0.002000		
7.INSTALL STEM	0.013000		
8.TIGHTEN MAIN GLAND VALVES	0.009000		
9.TEST FAUCET	0.008000		

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811D00 0811E00 0811F00 0811G00

TASK DATA FORM

Task Code: 0811G02

Component: SINK, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: H/R CLEAN TRAP
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.50 A: 3.00 L: 3.50
 Persons per Team: 1 Task Duration: 0.1677 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.UNSCREW TRAP PLUG AND INSTALL	0.021000
2.DISCONNECT UNIONS AND INSTALL	0.043000
3.REMOVE TRAP	0.025000
4.INSPECT TRAP	0.024000
5.CLEAN TRAP	0.016000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	1 oz	0.2700
		0.2700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.129000	0.038700	0.167700
Material Cost \$	0.270000		0.270000
Equipment Hours			0.167700

Components In This Task: 0811D00 0811E00 0811F00 0811G00

TASK DATA FORM

Task Code: 0811G03

Component: SINK, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	36.0000
		36.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	36.000000		36.000000
Equipment Hours			0.817700

Components In This Task: 0811D00 0811E00 0811F00 0811G00

TASK DATA FORM

Task Code: 0811G04

Component: SINK, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 3.50
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.UNSTOP PLUGGED DRAIN.	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 oz	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811D00 0811E00 0811F00 0811G00

TASK DATA FORM

Task Code: 0811G05

Component: SINK, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPAIR STRAINER
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.00 A: 8.00 L: 9.00
 Persons per Team: 1 Task Duration: 1.1700 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE STRAINER,REPAIR,INSTALL	0.900000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	1.1000
		1.1000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.900000	0.270000	1.170000
Material Cost \$	1.100000		1.100000
Equipment Hours			1.170000

Components In This Task: 0811D00 0811E00 0811F00 0811G00

TASK DATA FORM

Task Code: 0811G06

Component: SINK, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE SINK AND FITTINGS
 Unit of Measure: COUNT Frequency of Occurrence: H: 11.00 A: 15.00 L: 19.00
 Persons per Team: 2 Task Duration: 1.4170 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE/INSTALL SINK	2.180000

Material Resources

Description	Quantity	Unit Cost
SINK	1	59.5100
		59.5100

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.180000	0.654000	2.834000
Material Cost \$	59.510000		59.510000
Equipment Hours			1.417000

Components In This Task: 0811G00

TASK DATA FORM

Task Code: 0811H01

Component: DRINKING FOUNTAIN System: SANITARY Subsystem: FIXTURES
 Task Description: H/R CHECK/MINOR REPAIRS
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.50 A: 1.00 L: 1.50
 Persons per Team: 1 Task Duration: 0.6760 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.CHECK UNIT, MAKE MINOR ADJ.	0.520000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	0.8000
		0.8000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.520000	0.156000	0.676000
Material Cost \$	0.800000		0.800000
Equipment Hours			0.676000

Components In This Task: 0811H00

TASK DATA FORM

Task Code: 0811H02

Component: DRINKING FOUNTAIN System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPAIR INTERNAL LEAKS
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 1 Task Duration: 0.6240 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.OPEN UNIT, REPAIR LEAKS,CLOSE	0.480000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	0.7300
		0.7300

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.480000	0.144000	0.624000
Material Cost \$	0.730000		0.730000
Equipment Hours			0.624000

Components In This Task: 0811H00

TASK DATA FORM

Task Code: 0811H03

Component: DRINKING FOUNTAIN System: SANITARY Subsystem: FIXTURES
 Task Description: M/R CORRECT WATER PRESSURE
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.ADJUST WATER PRESSURE, CLOSE	0.440000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.000000		0.000000
Equipment Hours			0.572000

Components In This Task: 0811H00

TASK DATA FORM

Task Code: 0811H04

Component: DRINKING FOUNTAIN System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FREON
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 1.1180 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.ADD FREON TO UNIT	0.860000	FREON	.3 lb	4.3600
				1.3080

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.860000	0.258000	1.118000
Material Cost \$	1.308000		1.308000
Equipment Hours			1.118000

Components In This Task: 0811H00

TASK DATA FORM

Task Code: 0811H05

Component: DRINKING FOUNTAIN System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPAIR DRAIN LEAK
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REPAIR LEAK IN DRAIN LINE	0.440000	PIPE	1 ft	0.2600
		FITTINGS	1	0.2900
		CEMENT	1 oz	0.1200
				0.6700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.670000		0.670000
Equipment Hours			0.572000

Components In This Task: 0811H00

TASK DATA FORM

Task Code: 0811H06

Component: DRINKING FOUNTAIN System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNSTOP DRAIN
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.UNPLUG CLOGGED DRAIN LINE	0.440000

Material Resources

Description	Quantity	Unit Cost
SEALANT	2 oz	0.3400
		0.6800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.680000		0.680000
Equipment Hours			0.572000

Components In This Task: 0811H00

TASK DATA FORM

Task Code: 0811H07

Component: DRINKING FOUNTAIN System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE FOUNTAIN
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 2 Task Duration: 0.6890 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE OLD,INSTALL NEW UNIT	1.080000

Material Resources

Description	Quantity	Unit Cost
FOUNTAIN	1	468.3000
		468.3000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.080000	0.318000	1.378000
Material Cost \$	468.300000		468.300000
Equipment Hours			0.689000

Components In This Task: 0811H00

TASK DATA FORM

Task Code: 0811101

Component: SPIGOT System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.3367 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.REMOVE PACKING NUT	0.011000
3.REMOVE HANDWHEEL SCREW	0.009000
4.REMOVE PACKING GLAND	0.023000
5.MEASURE AND CUT NEW PACKING	0.025000
6.REMOVE OLD PACKING	0.051000
7.INSTALL NEW PACKING	0.025000
8.INSTALL PACKING GLAND	0.013000
9.INSTALL HANDWHEEL	0.013000
10.INSTALL HANDWHEEL SCREW	0.009000
11.INSTALL PACKING NUT	0.011000
12.TEST ACTION OF VALVE	0.017000
13.MATERIAL HANDLING	0.035000

Material Resources

Description	Quantity	Unit Cost
PACKING	2 OZ	0.2100
		0.4200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.259000	0.077700	0.336700
Material Cost \$	0.420000		0.420000
Equipment Hours			0.336700

Components In This Task: 0811100

TASK DATA FORM

Task Code: 0811102

Component: SPIGOT System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE OLD VALVE WITH NEW, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 1 Task Duration: 0.2600 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL PARTS FROM VALVE	0.200000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	5.2000
		5.2000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.200000	0.060000	0.260000
Material Cost \$	5.200000		5.200000
Equipment Hours			0.260000

Components In This Task: 0811100

TASK DATA FORM

Task Code: 0811J01

Component: BATHTUB, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.67 A: 3.00 L: 5.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER HEAD	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	.5 OZ	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811800 0811700 0811J00

TASK DATA FORM

Task Code: 0811J02

Component: BATHTUB, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811800 0811700 0811J00

TASK DATA FORM

Task Code: 0811J03

Component: BATHTUB, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811800 0811700 0811J00

TASK DATA FORM

Task Code: 0811J04

Component: BATHTUB, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R RESEAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.7670 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD CAULK AND APPLY NEW	0.590000

Material Resources

Description	Quantity	Unit Cost
CAULK	8 OZ	0.0900
		0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811800 0811700 0811J00

TASK DATA FORM

Task Code: 0811J05

Component: BATHTUB, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPAIR DIVERTER VALVE
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 1 Task Duration: 1.0270 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.REPAIR DIVERTER VALVE	0.790000	REPAIR KIT	1	12.5000
				12.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.790000	0.237000	1.027000
Material Cost \$	12.500000		12.500000
Equipment Hours			1.027000

Components In This Task: 0811800 0811700 0811J00

TASK DATA FORM

Task Code: 0811J06

Component: BATHTUB, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 5.00 A: 6.00 L: 7.00
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.UNSTOP PLUGGED DRAIN	0.440000	TEFLOW TAPE	2 OZ	0.2700
				0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811800 0811700 0811J00

TASK DATA FORM

Task Code: 0811J07Component: BATHTUB, PLASTICSystem: SANITARYSubsystem: FIXTURESTask Description: REPLACE REPLACE TUBUnit of Measure: COUNTPersons per Team: 2Trade: PLUMBINGFrequency of Occurrence: H: 15.00 A: 20.00 L: 25.00Task Duration: 6.5000 hours

Once every (H,A,L) years

Task Classification: 1Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL TUB, FITTINGS	10.000000

Material Resources

Description	Quantity	Unit Cost
BATH TUB	1	418.5000
		418.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	10.000000	3.000000	13.000000
Material Cost \$	418.500000		418.500000
Equipment Hours			6.500000

Components In This Task: 0811J00

TASK DATA FORM

Task Code: 0811K01Component: LAVATORY, PLASTICSystem: SANITARYSubsystem: FIXTURESTask Description: H/R REPLACE WASHER IN SPUD CONNECTIONUnit of Measure: COUNTPersons per Team: 1Trade: PLUMBINGFrequency of Occurrence: H: 6.00 A: 7.00 L: 8.00Task Duration: 0.1339 hours

Once every (H,A,L) years

Task Classification: 0Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.LOOSEN LOCKNUT	0.011000
3.REMOVE SPUD CONNECTION	0.013000
4.REMOVE GASKET OR WASHER	0.013000
5.CLEAN SPUD SEAT	0.016000
6.INSTALL NEW GASKET OR WASHER	0.002000
7.INSTALL SPUD CONNECTION	0.013000
8.TIGHTEN LOCKNUT	0.011000
9.INSPCT CONNECTION	0.007000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1200
		0.1200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.103000	0.030900	0.133900
Material Cost \$	0.120000		0.120000
Equipment Hours			0.133900

Components In This Task: 0811400 0811500 0811600 0811K00

TASK DATA FORM

Task Code: 0811K02

Component: LAVATORY, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE WASHER IN FAUCET
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811400 0811500 0811600 0811K00

TASK DATA FORM

Task Code: 0811K03

Component: LAVATORY, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE SUPPORT RODS
 Unit of Measure: COUNT Frequency of Occurrence: H: 9.00 A: 10.00 L: 11.00
 Persons per Team: 1 Task Duration: 0.1989 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.LOSEN NUTS	0.013000
2.REMOVE RODS	0.017000
3.REMOVE WASHERS	0.004000
4.REMOVE NUTS	0.018000
5.INSTALL NEW NUTS	0.018000
6.INSTALL WASHERS	0.004000
7.PUT RODS INTO POSITION	0.018000
8.TIGHTEN NUTS	0.013000
9.ADJUST RODS AND CHECK ALIGNMENT	0.048000

Material Resources

Description	Quantity	Unit Cost
WASHER	2	0.0300
NUT	2	0.0200
ROD	2	0.0700
		0.2400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.153000	0.045900	0.198900
Material Cost \$	0.240000		0.240000
Equipment Hours			0.198900

Components In This Task: 0811400 0811500 0811600 0811K00

TASK DATA FORM

Task Code: 0811K04

Component: LAVATORY, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 11.00
 Persons per Team: 1 Task Duration: 0.8112 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.020000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Description	Quantity	Unit Cost
FAUCETS	1 SET	32.5000
		32.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.624000	0.187200	0.811200
Material Cost \$	32.500000		32.500000
Equipment Hours			0.811200

Components In This Task: 0811400 0811500 0811600 0811K00

TASK DATA FORM

Task Code: 0811K05

Component: LAVATORY, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: M/R CLEAN OUT STRAINER AND P TRAP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.4823 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs
1.DISCONNECT STRAINER	0.073000
2.REMOVE STRAINER LOCK NUT	0.036000
3.REMOVE/INSTALL STRAINER WASHER	0.076000
4.REMOVE AND INSTALL STRAINER NUT	0.115000
5.CLEAN OUT TRAP AND STRAINER	0.071000

Description	Quantity	Unit Cost
TEFLON TAPE	2 02	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.371000	0.111300	0.482300
Material Cost \$	0.540000		0.540000
Equipment Hours			0.482300

Components In This Task: 0811400 0811500 0811600 0811K00

TASK DATA FORM

Task Code: 0811K06

Component: LAVATORY, PLASTIC System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE LAVATORY
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 0.9984 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.CUT OFF WATER (HOT AND COLD)	0.017000
2.REMOVE NUT ON TAILPIECE	0.021000
3.REMOVE WASHER	0.002000
4.REMOVE FAUCET	0.038000
5.UNSCREW TRAP PLUG TO DRAIN	0.038000
6.DISCONNECT TRAP UNION	0.038000
7.REMOVE WASH BASIN FROM SUPPORTS	0.024000
8.INSTALL NEW WALL WASH BASIN	0.920000
9.INSTALL COMBINATION FAUCETS	0.438000

Material Resources

Description	Quantity	Unit Cost
LAVATORY	1	73.0000
		73.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.536000	0.460800	1.996800
Material Cost \$	73.000000		73.000000
Equipment Hours			0.998400

Components In This Task: 0811K00

TASK DATA FORM

Task Code: 0811L01

Component: EMERGENCY SHOWER STATION System: SANITARY Subsystem: FIXTURES
 Task Description: H/R REPACK VALVE GLANDS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.3536 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.REMOVE PACKING NUT	0.011000
3.REMOVE HANDWHEEL SCREW	0.009000
4.REMOVE HANDWHEEL	0.013000
5.REMOVE PACKING GLAND	0.023000
6.MEASURE AND CUT NEW PACKING	0.025000
7.REMOVE OLD PACKING	0.051000
8.INSTALL NEW PACKING	0.025000
9.INSTALL PACKING GLAND	0.013000
10.INSTALL HANDWHEEL	0.013000
11.INSTALL HANDWHEEL SCREW	0.009000
12.INSTALL PACKING NUT	0.011000
13.TEST ACTION OF VALVE	0.017000
14.MATERIAL HANDLING	0.035000

Material Resources

Description	Quantity	Unit Cost
PACKING	2 OZ	0.2100
		0.4200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.272000	0.081600	0.353600
Material Cost \$	0.420000		0.420000
Equipment Hours			0.353600

Components In This Task: 0811L00

TASK DATA FORM

Task Code: 0811L02

Component: EMERGENCY SHOWER STATION System: SANITARY Subsystem: FIXTURES
 Task Description: PH INSPECT AND CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 3.00 L: 5.00
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLOW TAPE	.5 OZ	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811L02

TASK DATA FORM

Task Code: 0811L03

Component: EMERGENCY SHOWER STATION System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SHOWER
 Unit of Measure: COUNT Frequency of Occurrence: H: 20.00 A: 25.00 L: 30.00
 Persons per Team: 2 Task Duration: 1.3000 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD UNIT, INSTALL NEW	2.000000

Material Resources

Description	Quantity	Unit Cost
SHOWER	1	135.0000
		135.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.000000	0.600000	2.600000
Material Cost \$	135.000000		135.000000
Equipment Hours			1.300000

Components In This Task: 0811L00

TASK DATA FORM

Task Code: 0811M01Component: EMERGENCY EYE WASHSystem: SANITARYSubsystem: FIXTURESTask Description: M/R REPACK VALVE GLANDSUnit of Measure: COUNTFrequency of Occurrence: H: 8.00 A: 10.00 L: 12.00Persons per Team: 1Task Duration: 0.3536 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.REMOVE PACKING NUT	0.011000
3.REMOVE HANDWHEEL SCREW	0.009000
4.REMOVE HANDWHEEL	0.013000
5.REMOVE PACKING GLAND	0.023000
6.MEASURE AND CUT NEW PACKING	0.025000
7.REMOVE OLD PACKING	0.051000
8.INSTALL NEW PACKING	0.025000
9.INSTALL PACKING GLAND	0.013000
10.INSTALL HANDWHEEL	0.013000
11.INSTALL HANDWHEEL SCREW	0.009000
12.INSTALL PACKING NUT	0.011000
13.TEST ACTION OF VALVE	0.017000
14.MATERIAL HANDLING	0.035000

Material Resources

Description	Quantity	Unit Cost
PACKING	2 OZ	0.2100
		0.4200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.272000	0.081600	0.353600
Material Cost \$	0.420000		0.420000
Equipment Hours			0.353600

Components In This Task: 0811M00

TASK DATA FORM

Task Code: 0811M02Component: EMERGENCY EYE WASHSystem: SANITARYSubsystem: FIXTURESTask Description: PM INSPECT AND CLEAN SPRAY HEADSUnit of Measure: COUNTFrequency of Occurrence: H: 2.00 A: 5.00 L: 5.00Persons per Team: 1Task Duration: 0.1157 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SPRAY HEAD	0.036000
3.CHECK SPRAY HEAD	0.007000
4.INSTALL SPRAY	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLOW TAPE	.5 OZ	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811M00

TASK DATA FORM

Task Code: 0811M03

Component: EMERGENCY EYE WASH System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE EYE WASH STATION
 Unit of Measure: COUNT Frequency of Occurrence: H: 20.00 A: 25.00 L: 30.00
 Persons per Team: 2 Task Duration: 1.3000 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD UNIT, INSTALL NEW	2.000000

Material Resources

Description	Quantity	Unit Cost
STATION	1	104.0000
		104.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.000000	0.600000	2.600000
Material Cost \$	104.000000		104.000000
Equipment Hours			1.300000

Components In This Task: 0811M00

TASK DATA FORM

Task Code: 0811N01

Component: SHOWER, CMU System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	.5 OZ	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811N02

Component: SHOWER, CMU System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES ON AND OFF	0.017000
2. REMOVE PACKING NUT AND INSTALL	0.018000
3. REMOVE VALVE STEM AND CAP	0.013000
4. REMOVE/INSTALL SEAT WASHER	0.018000
5. PRY OUT WASHER	0.013000
6. INSTALL WASHER	0.002000
7. INSTALL STEM	0.013000
8. TIGHTEN MAIN GLAND VALVES	0.009000
9. TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811N03

Component: SHOWER, CMU System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES OFF/ON	0.017000
2. REMOVE HANDLE SCREW	0.018000
3. REMOVE HANDLE	0.025000
4. REMOVE ESCUTCHEON NUT	0.018000
5. REMOVE ESCUTCHEON NUT	0.004000
6. REMOVE LOCK NUT ON FAUCET	0.018000
7. REMOVE LOCK NUT ON SPOUT	0.011000
8. REMOVE SLIP NUT ON SPOUT	0.011000
9. REMOVE COMBINATION	0.009000
10. REMOVE SLIP NUT FROM TUBING	0.018000
11. REMOVE COUPLING NUT	0.018000
12. REMOVE TUBING	0.025000
13. INSTALL FAUCETS	0.281000
14. ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15. CONNECT FAUCETS AND TUBING	0.039000
16. CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811N04

Component: SHOWER, CMU System: SANITARY Subsystem: FIXTURES
 Task Description: H/R RESEAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.7670 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.REMOVE OLD CAULK AND APPLY NEW	0.590000	CAULK	8 OZ	0.9900
				0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811N05

Component: SHOWER, CMU System: SANITARY Subsystem: FIXTURES
 Task Description: H/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.UNSTOP PLUGGED DRAIN	0.440000	TEFLOW TAPE	2 OZ	0.2700
				0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811N06

Component: SHOWER, CMU System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SHOWER
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 49.4585 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL SHOWERS	76.090000

Material Resources

Description	Quantity	Unit Cost
SHOWER	1	200.0000
		200.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	76.090000	22.827000	98.917000
Material Cost \$	200.000000		200.000000
Equipment Hours			49.458500

Components In This Task: 0811N00

TASK DATA FORM

Task Code: 0811P01

Component: SHOWER GLAZED CMU System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	.5 OZ	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811P02

Component: SHOWER GLAZED CMU System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811A00 0811B00 0811C00 0811P00 0811I00

TASK DATA FORM

Task Code: 0811P03

Component: SHOWER GLAZED CMU System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811A00 0811B00 0811C00 0811P00 0811I00

TASK DATA FORM

Task Code: 0811P04

Component: SHOWER GLAZED CMU System: SANITARY Subsystem: FIXTURES
 Task Description: M/R RESEAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.7670 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE OLD CAULK AND APPLY NEW	0.590000

Material Resources

Description	Quantity	Unit Cost
CAULK	8 OZ	0.0900
		0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811A00 0811B0G 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811P05

Component: SHOWER GLAZED CMU System: SANITARY Subsystem: FIXTURES
 Task Description: M/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.UNSTOP PLUGGED DRAIN	0.440000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	2 OZ	0.2700
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811P06

Component: SHOWER GLAZED CMU System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SHOWER
 Unit of Measure: COUNY Frequency of Occurrence: H: 20.00 A: 25.00 L: 30.00
 Persons per Team: 2 Task Duration: 49.4585 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL SHOWERS	76.090000

Material Resources

Description	Quantity	Unit Cost
SHOWER	1	225.0000
		225.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	76.090000	22.827000	98.917000
Material Cost \$	225.000000		225.000000
Equipment Hours			49.458500

Components In This Task: 0811P00

TASK DATA FORM

Task Code: 0811R01

Component: SHOWER, CERAMIC TILE System: SANITARY Subsystem: FIXTURES
 Task Description: M/R INSPECT/CLEAN SHOWER HEAD
 Unit of Measure: COUNY Frequency of Occurrence: H: 2.67 A: 3.00 L: 3.33
 Persons per Team: 1 Task Duration: 0.1157 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN WATER OFF AND ON	0.008000
2.REMOVE SHOWER HEAD	0.036000
3.CHECK SHOWER HEAD	0.007000
4.INSTALL SHOWER	0.038000

Material Resources

Description	Quantity	Unit Cost
TEFLON TAPE	.5 OZ	0.2700
		0.1350

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.089000	0.026700	0.115700
Material Cost \$	0.135000		0.135000
Equipment Hours			0.115700

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811R02

Component: SHOWER, CERAMIC TILE System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCET WASHER
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 1 Task Duration: 0.1443 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES ON AND OFF	0.017000
2.REMOVE PACKING NUT AND INSTALL	0.018000
3.REMOVE VALVE STEM AND CAP	0.013000
4.REMOVE/INSTALL SEAT WASHER	0.018000
5.PRY OUT WASHER	0.013000
6.INSTALL WASHER	0.002000
7.INSTALL STEM	0.013000
8.TIGHTEN MAIN GLAND VALVES	0.009000
9.TEST FAUCET	0.008000

Material Resources

Description	Quantity	Unit Cost
WASHER	1	0.1400
		0.1400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.111000	0.033300	0.144300
Material Cost \$	0.140000		0.140000
Equipment Hours			0.144300

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811R03

Component: SHOWER, CERAMIC TILE System: SANITARY Subsystem: FIXTURES
 Task Description: M/R REPLACE FAUCETS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.8177 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF/ON	0.017000
2.REMOVE HANDLE SCREW	0.018000
3.REMOVE HANDLE	0.025000
4.REMOVE ESCUTCHEON NUT	0.018000
5.REMOVE ESCUTCHEON	0.004000
6.REMOVE LOCK NUT ON FAUCET	0.018000
7.REMOVE LOCK NUT ON SPOUT	0.011000
8.REMOVE SLIP NUT ON SPOUT	0.011000
9.REMOVE COMBINATION	0.009000
10.REMOVE SLIP NUT FROM TUBING	0.018000
11.REMOVE COUPLING NUT	0.018000
12.REMOVE TUBING	0.025000
13.INSTALL FAUCETS	0.281000
14.ASSEMBLE 2 FLARE NUTS TO TUBING	0.082000
15.CONNECT FAUCETS AND TUBING	0.039000
16.CONNECT TUBING	0.035000

Material Resources

Description	Quantity	Unit Cost
FAUCET	1 SET	46.0000
		46.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.629000	0.188700	0.817700
Material Cost \$	46.000000		46.000000
Equipment Hours			0.817700

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811R04

Component: SHOWER, CERAMIC TILE

System: SANITARY

Subsystem: FIXTURES

Task Description: R/R RESEAL

Unit of Measure: COUNT

Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00

Persons per Team: 1

Task Duration:

0.7670 hours

Once every (H,A,L) years

Trade: PLUMBING

Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.REMOVE OLD CAULK AND APPLY NEW	0.590000	CAULK	8 OZ	0.0900
				0.7200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.590000	0.177000	0.767000
Material Cost \$	0.720000		0.720000
Equipment Hours			0.767000

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811R05

Component: SHOWER, CERAMIC TILE

System: SANITARY

Subsystem: FIXTURES

Task Description: R/R UNSTOP

Unit of Measure: COUNT

Frequency of Occurrence: H: 1.67 A: 2.00 L: 2.33

Persons per Team: 1

Task Duration:

0.5720 hours

Once every (H,A,L) years

Trade: PLUMBING

Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.UNSTOP PLUGGED DRAIN	0.440000	TEFLON TAPE	2 OZ	0.2700
				0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0811A00 0811B00 0811C00 0811900 0811100

TASK DATA FORM

Task Code: 0811R06

Component: SHOWER, CERAMIC TILE System: SANITARY Subsystem: FIXTURES
 Task Description: REPLACE REPLACE SHOWER
 Unit of Measure: COUNT Frequency of Occurrence: H: 20.00 A: 30.00 L: 40.00
 Persons per Team: 2 Task Duration: 49.4585 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE/INSTALL SHOWERS	76.090000

Material Resources

Description	Quantity	Unit Cost
SHOWER	1	180.0000
		180.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	76.090000	22.827000	98.917000
Material Cost \$	180.000000		180.000000
Equipment Hours			49.458500

Components In This Task: 0811R00

TASK DATA FORM

Task Code: 0812101

Component: PIPE & FITTINGS, C.I. System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: M/R UNCLOG FLOOR DRAIN
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 1 Task Duration: 5.2000 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.UNCLOG PLUGGED FLOOR DRAIN	4.000000

Material Resources

Description	Quantity	Unit Cost
SOLVENT	100 OZ	0.2400
		24.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.000000	1.200000	5.200000
Material Cost \$	24.000000		24.000000
Equipment Hours			5.200000

Components In This Task: 0812100

TASK DATA FORM

Task Code: 0812102

Component: PIPE & FITTINGS, C.I. System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: M/R UNCLOG MAIN DRAIN
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 1 Task Duration: 0.8190 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description Labor Hrs
 1. UNCLOG MAIN DRAIN USING AUGER 0.630000

Material Resources

Description Quantity Unit Cost
 AUGER KIT 1 3.8400
 3.8400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.630000	0.189000	0.819000
Material Cost \$	3.840000		3.840000
Equipment Hours			0.819000

Components In This Task: 0812100

TASK DATA FORM

Task Code: 0812103

Component: PIPE & FITTINGS, C.I. System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: REPLACE REPLACE PIPE & FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 20.00 A: 40.00 L: 60.00
 Persons per Team: 2 Task Duration: 161.7395 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description Labor Hrs
 1. REMOVE OLD PIPE, INSTALL NEW 248.830000

Material Resources

Description Quantity Unit Cost
 PIPE 1000 ft 2040.0000
 2040.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	248.830000	74.649000	323.479000
Material Cost \$	2040.000000		2040.000000
Equipment Hours			161.739500

Components In This Task: 0812100

TASK DATA FORM

Task Code: 0812201

Component: FLOOR DRAIN, W/O BUCKET System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: M/R CLEAN DRAIN
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.00 A: 4.00 L: 5.00
 Persons per Team: 1 Task Duration: 2.0670 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE DEBRIS FROM DRAIN	1.590000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.590000	0.477000	2.067000
Material Cost \$	0.000000		0.000000
Equipment Hours			2.067000

Components In This Task: 0812200

TASK DATA FORM

Task Code: 0812202

Component: FLOOR DRAIN, W/O BUCKET System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: M/R REPLACE STRAINER
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE FLOOR STRAINER INST NEW	0.440000

Material Resources

Description	Quantity	Unit Cost
STRAINER	1	0.5400
		0.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.540000		0.540000
Equipment Hours			0.572000

Components In This Task: 0812200

TASK DATA FORM

Task Code: 0812203

Component: FLOOR DRAIN, W/O BUCKET System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: REPLACE REPLACE FLOOR DRAIN
 Unit of Measure: CCNY Frequency of Occurrence: H: 20.00 A: 40.00 L: 60.00
 Persons per Team: 1 Task Duration: 1.5340 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE FLOOR DRAIN,INSTALL NEW	1.180000

Material Resources

Description	Quantity	Unit Cost
FLOOR DRAIN	1	87.6800
		87.6800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.180000	0.354000	1.534000
Material Cost \$	87.680000		87.680000
Equipment Hours			1.534000

Components In This Task: 0812200

TASK DATA FORM

Task Code: 0812301

Component: FLOOR DRAIN WITH BUCKET System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: W/R CLEAN OUT BUCKET
 Unit of Measure: CCNY Frequency of Occurrence: H: 2.00 A: 5.00 L: 8.00
 Persons per Team: 1 Task Duration: 3.8740 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE DEBRIS FROM BUCKET	2.980000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.980000	0.894000	3.874000
Material Cost \$	0.000000		0.000000
Equipment Hours			3.874000

Components In This Task: 0812300

TASK DATA FORM

Task Code: 0812302

Component: FLOOR DRAIN WITH BUCKET System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: M/R REPLACE STRAINER
 Unit of Measure: COUNTRY Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1.REMOVE STRAINER,INSTALL NEW	0.440000	STRAINER	0.2700
			0.2700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	0.270000		0.270000
Equipment Hours			0.572000

Components In This Task: 0812200 0812300

TASK DATA FORM

Task Code: 0812303

Component: FLOOR DRAIN WITH BUCKET System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: REPLACE REPLACE FLOOR DRAIN
 Unit of Measure: COURT Frequency of Occurrence: H: 20.00 A: 40.00 L: 60.00
 Persons per Team: 1 Task Duration: 3.0680 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1.REMOVE FLOOR DRAIN,INSTALL NEW	2.360000	FLOOR DRAIN	173.0000
			173.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.360000	0.708000	3.068000
Material Cost \$	173.000000		173.000000
Equipment Hours			3.068000

Components In This Task: 0812300

TASK DATA FORM

Task Code: 0812401

Component: PIPE AND FITTINGS, PVC System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: M/R UNCLOG FLOOR DRAIN
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 1 Task Duration: 5.2000 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.UNCLOG PLUGGED FLOOR DRAIN	4.000000	SOLVENT	100 OZ	0.2400
				24.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.000000	1.200000	5.200000
Material Cost \$	24.000000		24.000000
Equipment Hours			5.200000

Components In This Task: 0812400

TASK DATA FORM

Task Code: 0812402

Component: PIPE AND FITTINGS, PVC System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: M/R UNCLOG MAIN DRAIN
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 1 Task Duration: 0.8190 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.UNCLOG MAIN DRAIN USING AUGER	0.830000	AUGER KIT	1	3.8400
				3.8400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.830000	0.189000	0.819000
Material Cost \$	3.840000		3.840000
Equipment Hours			0.819000

Components In This Task: 0812400

TASK DATA FORM

Task Code: 0812403

Component: PIPE AND FITTINGS, PVC System: SANITARY Subsystem: WASTE AND VENT SYSTEMS
 Task Description: REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 15.00 A: 25.00 L: 50.00
 Persons per Team: 2 Task Duration: 120.9000 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD PIPE, INSTALL NEW	186.000000

Material Resources

Description	Quantity	Unit Cost
PIPE	1000 FT.	7.5800
		7580.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	186.000000	55.800000	241.800000
Material Cost \$	7580.000000		7580.000000
Equipment Hours			120.900000

Components In This Task: 0812400

TASK DATA FORM

Task Code: 0813101

Component: PIPE/FITTINGS, STEEL/IRON System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R INSTALL NEW GASKET
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 37.00 A: 50.00 L: 65.00
 Persons per Team: 1 Task Duration: 0.3250 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.DISCONNECT FLANGE JOINT	0.084000
2.REMOVE FLANGE GASKET	0.013000
3.MAKE NEW GASKET	0.035000
4.INSTALL NEW GASKET	0.013000
5.CONNECT FLANGE JOINTS	0.072000
6.CLEAN FLANGE FACES	0.033000

Material Resources

Description	Quantity	Unit Cost
GASKET	1	0.1600
		0.1600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.250000	0.075000	0.325000
Material Cost \$	0.160000		0.160000
Equipment Hours			0.325000

Components In This Task: 0813100

TASK DATA FORM

Task Code: 0813102

Component: PIPE/FITTINGS, STEEL/IRON System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REPLACE 10' SECTION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 10.00 A: 12.00 L: 15.00
 Persons per Team: 2 Task Duration: 5.3723 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK BREAK OR LEAK (1X)	0.012000
2.CUT WATER VALVE ON AND OFF	0.008000
3.REMOVE FIRST BROKEN SECTION	1.401000
4.REMOVE ADDITIONAL SECTIONS	0.605000
5.MATERIAL HANDLING	0.207000
6.CLEAN JOINTS	0.033000
7.INSTALL SECTION OF PIPE	1.579000
8.INSTALL LAST SECTION	4.413000
9.CHECK FOR LEAKS ADDITIONAL SECT	0.007000

Material Resources

Description	Quantity	Unit Cost
PIPE	10 ft	1.8200
		18.2000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	8.265000	2.479500	10.744500
Material Cost \$	18.200000		18.200000
Equipment Hours			5.372250

Components In This Task: 0813100

TASK DATA FORM

Task Code: 0813103

Component: PIPE/FITTINGS, STEEL/IRON System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 50.00 A: 75.00 L: 90.00
 Persons per Team: 2 Task Duration: 537.2250 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.CHECK BREAK OR LEAK	1.200000
2.CUT WATER VALVE ON AND OFF	0.800000
3.REMOVE FIRST BROKEN SECTION	140.100000
4.REMOVE ADDITIONAL SECTIONS	60.500000
5.MATERIAL HANDLING	20.700000
6.CLEAN JOINTS	3.300000
7.INSTALL SECTION OF PIPE	157.900000
8.INSTALL LAST SECTION	441.300000
9.CHECK FOR LEAKS ADDITIONAL SECT	0.700000

Material Resources

Description	Quantity	Unit Cost
PIPE	1000 FT	1.8200
		1820.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	826.500000	247.950000	1074.450000
Material Cost \$	1820.000000		1820.000000
Equipment Hours			537.225000

Components In This Task: 0813100

TASK DATA FORM

Task Code: 0813201

Component: PIPE/FITTINGS, COPPER System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R RESOLDER JOINT
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.1846 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. MEASURE, CUT & REAM BOTH ENDS	0.041000
2. SOLDER FITTING	0.101000

Material Resources

Description	Quantity	Unit Cost
SOLDER	.5 oz	0.1600
		0.0800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.142000	0.042600	0.184600
Material Cost \$	0.080000		0.080000
Equipment Hours			0.184600

Components In This Task: 0814200

TASK DATA FORM

Task Code: 0813202

Component: PIPE/FITTINGS, COPPER System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE INSTALL 10' SECTION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 10.00 A: 20.00 L: 30.00
 Persons per Team: 2 Task Duration: 2.7755 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. REMOVE 10' SECTION INSTALL NEW	4.270000

Material Resources

Description	Quantity	Unit Cost
PIPE	10 ft	1.0500
		10.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.270000	1.281000	5.551000
Material Cost \$	10.500000		10.500000
Equipment Hours			2.775500

Components In This Task: 0813200

TASK DATA FORM

Task Code: 0813203

Component: PIPE/FITTINGS, COPPER System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 15.00 A: 25.00 L: 50.00
 Persons per Team: 2 Task Duration: 27.7550 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.REMOVE OLD,INSTALL NEW	42.700000	PIPE	1000 FT	1.0500
				1050.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	42.700000	12.810000	55.510000
Material Cost \$	1050.000000		1050.000000
Equipment Hours			27.755000

Components In This Task: 0813200

TASK DATA FORM

Task Code: 0813301

Component: VALVE, NON-DRAIN, <1 1/2" System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.50 A: 10.00 L: 11.50
 Persons per Team: 1 Task Duration: 0.3536 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.TURN VALVE OFF AND ON	0.017000	PACKING	2 oz	0.2100
2.REMOVE PACKING NUT	0.011000			0.4200
3.REMOVE HANDWHEEL SCREW	0.009000			
4.REMOVE HANDWHEEL	0.013000			
5.REMOVE PACKING GLAND	0.023000			
6.MEASURE AND CUT NEW PACKING	0.025000			
7.REMOVE OLD PACKING	0.051000			
8.INSTALL NEW PACKING	0.025000			
9.INSTALL PACKING GLAND	0.013000			
10.INSTALL HANDWHEEL	0.013000			
11.INSTALL HANDWHEEL SCREW	0.009000			
12.INSTALL PACKING NUT	0.011000			
13.TEST ACTION OF VALVE	0.017000			
14.MATERIAL HANDLING	0.035000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.272000	0.081600	0.353600
Material Cost \$	0.420000		0.420000
Equipment Hours			0.353600

Component In This Task: 0813300

TASK DATA FORM

Task Code: 0813302

Component: VALVE, NON-DRAIN, <1 1/2" System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE OLD VALVE WITH NEW, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 1 Task Duration: 0.2600 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE WORN PARTS INSTALL NEW	0.200000	REPAIR KIT	1	10.4000
				10.4000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.200000	0.060000	0.260000
Material Cost \$	10.400000		10.400000
Equipment Hours			0.260000

Components In This Task: 0813300

TASK DATA FORM

Task Code: 0813401

Component: VALVE, NON-DRAIN, 2"- 3" System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: R/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.50 A: 10.00 L: 11.50
 Persons per Team: 1 Task Duration: 0.3549 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.TURN VALVE OFF AND ON	0.017000	PACKING	4 oz	0.2100
2.REMOVE PACKING NUT	0.011000			0.8400
3.REMOVE HANDWHEEL SCREW	0.009000			
4.REMOVE HANDWHEEL	0.013000			
5.REMOVE PACKING GLAND	0.023000			
6.MEASURE AND CUT NEW PACKING	0.026000			
7.REMOVE OLD PACKING	0.051000			
8.INSTALL NEW PACKING	0.025000			
9.INSTALL PACKING GLAND	0.013000			
10.INSTALL HANDWHEEL	0.013000			
11.INSTALL HANDWHEEL SCREW	0.009000			
12.INSTALL PACKING NUT	0.011000			
13.TEST ACTION OF VALVE	0.017000			
14.MATERIAL HANDLING	0.035000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.273000	0.081900	0.354900
Material Cost \$	0.840000		0.840000
Equipment Hours			0.354900

Components In This Task: 0813400

TASK DATA FORM

Task Code: 0813402

Component: VALVE, NON-DRAIN, 2"- 3" System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REPLACE OLD VALVE WITH NEW, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Material Resources

Subtask Description Labor Hrs
 1.REPLACE VALVE PARTS 0.440000

Description Quantity Unit Cost
 REPAIR KIT 1 71.6700
 71.6700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	71.670000		71.670000
Equipment Hours			0.572000

Components In This Task: 0813400

TASK DATA FORM

Task Code: 0813501

Component: VALVE, NON-DRAIN, 4"- 6" System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.50 A: 1.00 L: 1.50
 Persons per Team: 1 Task Duration: 0.6331 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description Labor Hrs
 1.REMOVE HANDWHEEL NUT /INSTALL 0.018000
 2.REMOVE HANDWHEEL AND INSTALL 0.045000
 3.REMOVE PACKING GLAND NUTS 0.035000
 4.REMOVE PACKING GLAND AND INSTAL 0.045000
 5.REMOVE OLD PACKING 0.101000
 6.MEASURE AND CUT NEW PACKING 0.013000
 7.PACK VALVE 0.101000
 8.REMOVE GLAND NUTS AND INSTALL 0.035000
 9.INSTALL PACKING GLAND NUTS 0.035000
 10.FINAL CHECK 0.024000
 11.MATERIAL HANDLING 0.035000

Description Quantity Unit Cost
 PACKING 3 oz 0.2100
 0.6300

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.487000	0.146100	0.633100
Material Cost \$	0.630000		0.630000
Equipment Hours			0.633100

Components In This Task: 0813500

TASK DATA FORM

Task Code: 0813502

Component: VALVE, NON-DRAIN, 4"- 6" System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REMOVE OLD VALVE INSTALL NEW, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 1.9500 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE WORN PARTS INSTALL NEW	3.000000	REPAIR KIT	1	118.3300
				118.3300

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.000000	0.900000	3.900000
Material Cost \$	118.330000		118.330000
Equipment Hours			1.950000

Components In This Task: 0813500

TASK DATA FORM

Task Code: 0813601

Component: VALVE, DRAIN System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 2.50 L: 3.00
 Persons per Team: 1 Task Duration: 0.3549 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.TURN VALVE OFF AND ON	0.017000	PACKING	1.5 oz	0.2100
2.REMOVE PACKING NUT	0.011000			0.3150
3.REMOVE HANDWHEEL SCREW	0.009000			
4.REMOVE HANDWHEEL	0.013000			
5.REMOVE PACKING GLAND	0.023000			
6.MEASURE AND CUT NEW PACKING	0.026000			
7.REMOVE OLD PACKING	0.051000			
8.INSTALL NEW PACKING	0.025000			
9.INSTALL PACKING GLAND	0.013000			
10.INSTALL HANDWHEEL	0.013000			
11.INSTALL HANDWHEEL SCREW	0.009000			
12.INSTALL PACKING NUT	0.011000			
13.TEST ACTION OF VALVE	0.017000			
14.MATERIAL HANDLING	0.035000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.273000	0.081900	0.354900
Material Cost \$	0.315000		0.315000
Equipment Hours			0.354900

Components In This Task: 0813600

TASK DATA FORM

Task Code: 0813602

Component: VALVE, DRAIN System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R REPLACE VALVE STEM ASSEMBLY
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.50 A: 7.50 L: 8.50
 Persons per Team: 1 Task Duration: 0.0559 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF AND ON	0.017000
2.UNSCREW BONNET RING	0.011000
3.REMOVE AND INSTALL ASSEMBLY	0.004000
4.INSTALL BONNET RING	0.011000

Material Resources

Description	Quantity	Unit Cost
STEM ASSY.	1	5.5000
		5.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.043000	0.012900	0.055900
Material Cost \$	5.500000		5.500000
Equipment Hours			0.055900

Components In This Task: 0813600

TASK DATA FORM

Task Code: 0813603

Component: VALVE, DRAIN System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REMOVE OLD VALVE, INSTALL NEW
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 1 Task Duration: 0.5070 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD VALVE /INSTALL NEW	0.390000

Material Resources

Description	Quantity	Unit Cost
VALVE	1	19.0800
		19.0800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.390000	0.117000	0.507000
Material Cost \$	19.080000		19.080000
Equipment Hours			0.507000

Components In This Task: 0813600

TASK DATA FORM

Task Code: 0813701

Component: EXPANSION CHAMBER System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R REFILL
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.00 A: 5.00 L: 7.00
 Persons per Team: 1 Task Duration: 0.0390 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.REFILL AIR CHAMBER	0.030000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.030000	0.009000	0.039000
Material Cost \$	0.000000		0.000000
Equipment Hours			0.039000

Components In This Task: 0813700

TASK DATA FORM

Task Code: 0813702

Component: EXPANSION CHAMBER System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REMOVE OLD CHAMBER, INSTALL NEW
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.00 A: 10.00 L: 13.00
 Persons per Team: 1 Task Duration: 1.2740 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE/INSTALL EXPANSION DEVICE	0.980000

Material Resources

Description	Quantity	Unit Cost
CHAMBER	1	196.6900
		196.6900

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.980000	0.294000	1.274000
Material Cost \$	196.690000		196.690000
Equipment Hours			1.274000

Components In This Task: 0813700

TASK DATA FORM

Task Code: 0813801

Component: WATER METER System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R OVERHAUL
 Unit of Measure: COUNT Frequency of Occurrence: H: 11.00 A: 13.00 L: 15.00
 Persons per Team: 1 Task Duration: 1.3000 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.OPEN METER, REPLACE WORN PARTS	1.000000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	3.0500
		3.0500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.000000	0.300000	1.300000
Material Cost \$	3.050000		3.050000
Equipment Hours			1.300000

Components In This Task: 0813800

TASK DATA FORM

Task Code: 0813802

Component: WATER METER System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REMOVE OLD METER, INSTALL NEW
 Unit of Measure: COUNT Frequency of Occurrence: H: 19.00 A: 25.00 L: 31.00
 Persons per Team: 1 Task Duration: 0.7930 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE/INSTALL WATER METER	0.610000

Material Resources

Description	Quantity	Unit Cost
METER	1	81.5800
		81.5800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.610000	0.183000	0.793000
Material Cost \$	81.580000		81.580000
Equipment Hours			0.793000

Components In This Task: 0813800

TASK DATA FORM

Task Code: 0813901

Component: INSULATION, PIPE System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R REPAIR BROKEN INSULATION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.3380 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE INSULATION (1X)	0.098000
2.MATERIAL HANDLING	0.012000
3.INSTALL INSULATION	0.138000
4.MATERIAL HANDLING	0.012000

Material Resources

Description	Quantity	Unit Cost
TAPE	10 ft	0.0400
		0.4000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.260000	0.078000	0.338000
Material Cost \$	0.400000		0.400000
Equipment Hours			0.338000

Components In This Task: 0813900

TASK DATA FORM

Task Code: 0813902

Component: INSULATION, PIPE System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REMOVE OLD INSULATION & REPLACE WITH NEW
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 7.50 A: 15.00 L: 22.50
 Persons per Team: 1 Task Duration: 31.4990 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL INSULATION	24.230000

Material Resources

Description	Quantity	Unit Cost
INSULATION	1000 ft	0.6400
		640.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	24.230000	7.269000	31.499000
Material Cost \$	640.000000		640.000000
Equipment Hours			31.499000

Components In This Task: 0813900

TASK DATA FORM

Task Code: 0813A01

Component: CIRC. PUMP - 1/8 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R OVERHAUL PUMP, REPLACE SEALS
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.50 A: 10.00 L: 11.50
 Persons per Team: 1 Task Duration: 0.6032 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. LOOSEN COUPLING FROM PUMP SHAFT	0.009000
2. REMOVE 4 STUD BOLTS IN MOTOR	0.035000
3. REMOVE MOTOR	0.052000
4. REMOVE IMPELLER NUT FROM SHAFT	0.033000
5. REMOVE SEAL ASSEMBLY	0.019000
6. INSPECT BEARING BRACKETS FACE	0.005000
7. CLEAN BEARING	0.016000
8. INSPECT SHAFT	0.005000
9. CLEAN SHAFT	0.017000
10. INSTALL NEW SEAL AND RUBBER	0.013000
11. INSTALL SEAL SPRING AND WASHERS	0.006000
12. INSTALL IMPELLER NUT ON SHAFT	0.031000
13. CLEAN PUMP BODY GASKET AREA	0.037000
14. INSTLL NEW GASKET (READY MADE)	0.013000
15. INSTALL IMPELLER	0.009000
16. INSTALL 4 STUD BOLTS	0.035000
17. ASSEMBLE MOTOR TO BEARING	0.024000
18. INSTALL 4 STUD BOLTS	0.027000
19. TIGHTEN COUPLING	0.009000
20. FINAL TIGHTEN OF BOLTS	0.027000
21. TEST RUN	0.042000

Material Resources

Description	Quantity	Unit Cost
SEAL	2	0.7000
		1.4000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.464000	0.139200	0.603200
Material Cost \$	1.400000		1.400000
Equipment Hours			0.703200

Components In This Task: 0813A00

TASK DATA FORM

Task Code: 0813A02

Component: CIRC. PUMP - 1/8 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: PM INSPECT/CHECK PUMP/MOTOR OPERATION, LUBRICATE
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.50 A: 1.00 L: 1.50
 Persons per Team: 1 Task Duration: 0.1092 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. CHECK FOR LEAKS	0.008000
2. CHECK PUMP OPERATION	0.009000
3. LUBRICATE PUMP AND MOTOR	0.036000
4. CHECK SUCTION OR DISCHARGE PRES	0.003000
5. CHECK PACKING GLANDS TIGHTEN	0.011000
6. FILL OUT INSPECTION REPORT	0.017000

Material Resources

Description	Quantity	Unit Cost
LUBRICATE	2 oz	0.1300
		0.2600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.084000	0.025200	0.109200
Material Cost \$	0.260000		0.260000
Equipment Hours			0.109200

Components In This Task: 0813A00

TASK DATA FORM

Task Code: 0813A03

Component: CIRC. PUMP - 1/8 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 0.5395 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE PUMP /MOTOR,INSTALL NEW	0.830000

Material Resources

Description	Quantity	Unit Cost
PUMP	1	200.0000
		200.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.830000	0.249000	1.079000
Material Cost \$	200.000000		200.000000
Equipment hours			0.539500

Components In This Task: 0813A00

TASK DATA FORM

Task Code: 0813B01

Component: CIRC. PUMP - 1/6 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R OVERHAUL PUMP, REPLACE SEALS
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 1 Task Duration: 0.6019 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.LOOSEN COUPLING FROM PUMP SHAFT	0.009000
2.REMOVE 4 STUD BOLTS ON MOTOR	0.035000
3.REMOVE MOTOR	0.052000
4.REMOVE IMPELLER NUT FROM SHAFT	0.033000
5.REMOVE SEAL ASSEMBLY	0.019000
6.INSPECT BEARING BRACKETS FACE	0.005000
7.CLEAN SEALING FACE OF BRACKET	0.016000
8.INSPECT SHAFT	0.005000
9.CLEAN SHAFT	0.016000
10.INSTALL NEW SEAL AND RUBBER	0.013000
11.INSTALL SEAL SPRING AND WASHER	0.006000
12.INSTALL IMPELLER NUT ON SHAFT	0.031000
13.CLEAN PUMP BODY GASKET AREA	0.037000
14.INSTALL NEW GASKET (READY MADE)	0.013000
15.INSTALL IMPELLER	0.009000
16.INSTALL 4 STUD BOLTS	0.035000
17.ASSEMBLE MOTOR TO BEARING	0.024000
18.INSTALL 4 STUD BOLTS	0.027000
19.TIGHTEN COUPL'NG	0.009000
20.FINAL TIGHTEN OF BOLTS	0.027000
21.TEST RUN	0.042000

Material Resources

Description	Quantity	Unit Cost
SEAL	2	0.8400
		1.6800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.463000	0.138900	0.601900
Material Cost \$	1.680000		1.680000
Equipment hours			0.601900

Components In This Task: 0813B00

TASK DATA FORM

Task Code: 0813802

Component: CIRC. PUMP - 1/6 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: PM INSPECT/CHECK PUMP/MOTOR OPERATION, LUBRICATE
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.50 A: 1.00 L: 1.50
 Persons per Team: 1 Task Duration: 0.1092 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.CHECK FOR LEAKS	0.008000	LUBRICANT	2	0.1300
2.CHECK PUMP OPERATION	0.009000			0.2600
3.LUBRICATE PUMP AND MOTOR	0.036000			
4.CHECK SUCTION OR DISCHARGE PRES	0.003000			
5.CHECK PACKING GLANDS, TIGHTEN	0.011000			
6.FILL OUT INSPECTION REPORT	0.017000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.084000	0.025200	0.109200
Material Cost \$	0.260000		0.260000
Equipment Hours			0.109200

Components In This Task: 0813800

TASK DATA FORM

Task Code: 0813803

Component: CIRC. PUMP - 1/6 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 0.9230 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE PUMP /MOTOR INSTALL NEW	1.420000	PUMP	1	350.0000
				350.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.420000	0.426000	1.846000
Material Cost \$	350.000000		350.000000
Equipment Hours			0.923000

Components In This Task: 0813800

TASK DATA FORM

Task Code: 0813C01

Component: CIRC. PUMP - 1/2 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R OVERHAUL PUMP, REPLACE SEAL OR BEARING
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.8866 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.LOOSEN SCREW ON PUMP COUPLING	0.009000
2.REMOVE PUMP HALF COUPLING	0.023000
3.REMOVE SHAFT KEY COUPLING	0.023000
4.LOOSEN 4 SET SCREWS	0.035000
5.REMOVE OUTER THRUST COLLAR	0.013000
6.REMOVE BEARING SCREWS	0.035000
7.REMOVE BEARING HOUSING	0.097000
8.CLEAN GASKET AREA	0.033000
9.REMOVE SHAFT SEAL ASSEMBLY	0.045000
10.CLEAN MECHANICAL SEAL	0.075000
11.INSTALL SEAL ASSEMBLY	0.047000
12.POSITION BEARING BRACKET	0.013000
13.INSTALL INNER THRUST COLLAR	0.013000
14.ASSEMBLE BEARING	0.013000
15.INSTALL 4 STUD BOLTS	0.035000
16.INSTALL BALL BEARING	0.023000
17.INSTALL BEARING COVER	0.048000
18.INSTALL OUTER THRUST COLLAR	0.013000
19.TIGHTEN SCREWS ON THRUST COLLAR	0.035000
20.INSTALL COUPLING	0.054000

Material Resources

Description	Quantity	Unit Cost
SEAL	2	1.3000
		2.6000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.682000	0.204600	0.886600
Material Cost \$	2.600000		2.600000
Equipment Hours			0.886600

Components In This Task: 0813C00

TASK DATA FORM

Task Code: 0813C02

Component: CIRC. PUMP - 1/2 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: PM INSP./CHECK PUMP/MOTOR OPER. LUBR. CHECK ALIGN.
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 0.1625 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK FOR LEAKS	0.008000
2.CHECK PUMP OPERATION	0.009000
3.CHECK ALIGNMENT	0.041000
4.LUBRICATE PUMP AND MOTOR	0.036000
5.CHECK SUCTION DISCHARGE PRESS.	0.003000
6.CHECK PACKING GLANDS, TIGHTEN	0.011000
7.FILL OUT INSPECTION REPORT	0.017000

Material Resources

Description	Quantity	Unit Cost
LUBRICANT	2 oz	0.1300
		0.2600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.125000	0.037500	0.162500
Material Cost \$	0.260000		0.260000
Equipment Hours			0.162500

Components In This Task: 0813C00

TASK DATA FORM

Task Code: 0813C03

Component: CIRC. PUMP - 1/2 HP. System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 1.4365 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE PUMP /MOTOR, INSTALL NEW	2.210000

Material Resources

Description	Quantity	Unit Cost
PUMP	1	110.0000
		110.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.210000	0.663000	2.873000
Material Cost \$	110.000000		110.000000
Equipment Hours			1.436500

Components In This Task: 0813C00

TASK DATA FORM

Task Code: 0813D01

Component: PIPE/FITTINGS, PVC System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R REGLOE JOINT
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 0.2870 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CUT EXIST PIPE, INSYL TEE, 1 JNT	0.029640
2.CONNECT REMAIN 2 JOINTS OF TEE	0.030800
3.MOVE TOOLS AND MATERIALS	0.034530
4.INSPECT JOINTS	0.126000

Material Resources

Description	Quantity	Unit Cost
GLUE	.5 OZ	0.0500
		0.0250

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.220770	0.066231	0.287001
Material Cost \$	0.025000		0.025000
Equipment Hours			0.287001

Components In This Task: 0813D00

TASK DATA FORM

Task Code: 0813002

Component: PIPE/FITTINGS, PVC System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R INSTALL 10' SECTION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: M: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 0.2085 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMV BROKEN PIPE, INSTALL NEW	0.202280
2.MOVE TOOLS AND MATERIALS	0.034530
3.INSPECT JOINTS	0.084000

Material Resources

Description	Quantity	Unit Cost
PIPE	10 FT	0.6300
GLUE	1 OZ	0.0500
		6.3500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.320810	0.096243	0.417053
Material Cost \$	6.350000		6.350000
Equipment Hours			0.208527

Components In This Task: 0813000

TASK DATA FORM

Task Code: 0813003

Component: PIPE/FITTINGS, PVC System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REPLACE PIPE
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: M: 25.00 A: 30.00 L: 35.00
 Persons per Team: 2 Task Duration: 20.8527 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMV BROKEN PIPE, INSTALL NEW	20.228000
2.MOVE TOOLS AND MATERIALS	3.453000
3.INSPECT JOINTS	8.400000

Material Resources

Description	Quantity	Unit Cost
PIPE	1000 FT	0.6300
GLUE	25 OZ	0.0500
		631.2500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	32.081000	9.624300	41.705300
Material Cost \$	631.250000		631.250000
Equipment Hours			20.852650

Components In This Task: 0813000

TASK DATA FORM

Task Code: 0813E01

Component: HOSE BIBB System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 3.00 L: 4.00
 Persons per Team: 1 Task Duration: 0.3536 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.REMOVE PACKING NUT	0.011000
3.REMOVE HANDWHEEL SCREW	0.009000
4.REMOVE HANDWHEEL	0.013000
5.REMOVE PACKING GLAND	0.023000
6.MEASURE AND CUT NEW PACKING	0.025000
7.REMOVE OLD PACKING	0.051000
8.INSTALL NEW PACKING	0.025000
9.INSTALL PACKING GLAND	0.013000
10.INSTALL HANDWHEEL	0.013000
11.INSTALL HANDWHEEL SCREW	0.009000
12.INSTALL PACKING NUT	0.011000
13.TEST ACTION OF VALVE	0.017000
14.MATERIAL HANDLING	0.035000

Material Resources

Description	Quantity	Unit Cost
PACKING	2.02	0.2100
		0.4200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.272000	0.081600	0.353600
Material Cost \$	0.420000		0.420000
Equipment Hours			0.353600

Components In This Task: 0813E00

TASK DATA FORM

Task Code: 0813E02

Component: HOSE BIBB System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REPLACE OLD VALVE WITH NEW PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 1 Task Duration: 0.2600 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL PARTS FROM VALVE	0.200000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	5.2000
		5.2000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.200000	0.060000	0.260000
Material Cost \$	5.200000		5.200000
Equipment Hours			0.260000

Components In This Task: 0813E00

TASK DATA FORM

Task Code: 0813F01

Component: CIRC. PUMP > 1 HP System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: M/R OVERHAUL PUMP, REPLACE SEAL OR BEARING
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.8866 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1. LOOSEN SCREW ON PUMP COUPLING	0.009000	SEAL	2	1.3000
2. REMOVE PUMP HALF COUPLING	0.023000			2.6000
3. REMOVE SHAFT KEY COUPLING	0.023000			
4. LOOSEN 4 SET SCREWS	0.035000			
5. REMOVE OUTER THRUST COLLAR	0.013000			
6. REMOVE BEARING SCREWS	0.035000			
7. REMOVE BEARING HOUSING	0.097000			
8. CLEAN GASKET AREA	0.033000			
9. REMOVE SHAFT SEAL ASSEMBLY	0.045000			
10. CLEAN MECHANICAL SEAL	0.075000			
11. INSTALL SEAL ASSEMBLY	0.047000			
12. POSITION BEARING BRACKET	0.013000			
13. INSTALL INNER THRUST COLLAR	0.013000			
14. ASSEMBLE BEARING	0.013000			
15. INSTALL 4 STUD BOLTS	0.035000			
16. INSTALL BALL BEARING	0.023000			
17. INSTALL BEARING COVER	0.048000			
18. INSTALL OUTER THRUST COLLAR	0.013000			
19. TIGHTEN SCREWS ON THRUST COLLAR	0.035000			
20. INSTALL COUPLING	0.054000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.682000	0.204600	0.886600
Material Cost \$	2.600000		2.600000
Equipment Hours			0.886600

Components In This Task: 0813F00

TASK DATA FORM

Task Code: 0813F02

Component: CIRC. PUMP > 1 HP System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: PH INSP./CHECK PUMP/MOTOR OPER., LUBR., CHECK ALIGN.
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 0.1625 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1. CHECK FOR LEAKS	0.008000	LUBRICANT	4 OZ	0.1300
2. CHECK PUMP OPERATION	0.009000			0.5200
3. CHECK ALIGNMENT	0.041000			
4. LUBRICATE PUMP AND MOTOR	0.036000			
5. CHECK SUCTION DISCHARGE PRESS	0.003000			
6. CHECK PACKING GLANDS, TIGHTEN	0.011000			
7. FILL OUT INSPECTION REPORT	0.017000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.125000	0.037500	0.162500
Material Cost \$	0.520000		0.520000
Equipment Hours			0.162500

Components In This Task: 0813F00

TASK DATA FORM

Task Code: 0813F03

Component: CIRC. PUMP > 1 HP System: SANITARY Subsystem: COLD WATER SYSTEMS
 Task Description: REPLACE REPLACE MOTOR PUMP ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 1.4365 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE PUMP/MOTOR, INSTALL NEW	2.210000

Material Resources

Description	Quantity	Unit Cost
PUMP	1	110.0000
		110.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.210000	0.663000	2.873000
Material Cost \$	110.000000		110.000000
Equipment Hours			1.436500

Components In This Task: 0813F00

TASK DATA FORM

Task Code: 0814101

Component: PIPE/FITTINGS, STEEL/IRON System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: H/R INSTALL NEW GASKET
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 19.00 A: 25.00 L: 31.00
 Persons per Team: 1 Task Duration: 0.3250 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.DISCONNECT FLANGE JOINT	0.084000
2.REMOVE FLANGE GASKET	0.013000
3.MAKE NEW GASKET	0.035000
4.INSTALL NEW GASKET	0.013000
5.CONNECT FLANGE JOINTS	0.072000
6.CLEAN FLANGE FACES	0.033000

Material Resources

Description	Quantity	Unit Cost
GASKET	1	0.1600
		0.1600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.250000	0.075000	0.325000
Material Cost \$	0.160000		0.160000
Equipment Hours			0.325000

Components In This Task: 0814100

TASK DATA FORM

Task Code: 0814102

Component: PIPE/FITTINGS, STEEL/IRON System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE INSTALL 10' SECTION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 10.00 A: 12.00 L: 15.00
 Persons per Team: 2 Task Duration: 5.3723 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK BREAK OR LEAK (1X)	0.012000
2.CUT WATER VALVE ON AND OFF	0.008000
3.REMOVE FIRST BROKEN SECTION	1.401000
4.REMOVE ADDITIONAL SECTIONS	0.605000
5.MATERIAL HANDLING	0.207000
6.CLEAN JOINTS	0.033000
7.INSTALL SECTION OF PIPE	1.579000
8.INSTALL LAST SECTION	4.413000
9.CHECK FOR LEAKS ADDITIONAL SECT	0.007000

Material Resources

Description	Quantity	Unit Cost
PIPE	10 ft	1.8200
		18.2000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	8.265000	2.479500	10.744500
Material Cost \$	18.200000		18.200000
Equipment Hours			5.372250

Components In This Task: 0814100

TASK DATA FORM

Task Code: 0814103

Component: PIPE/FITTINGS, STEEL/IRON System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 50.00 A: 75.00 L: 90.00
 Persons per Team: 2 Task Duration: 537.2250 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.CHECK BREAK OR LEAK	1.200000
2.CUT WATER VALVE ON AND OFF	0.800000
3.REMOVE FIRST BROKEN SECTION	140.100000
4.REMOVE ADDITIONAL SECTIONS	60.500000
5.MATERIAL HANDLING	20.700000
6.CLEAN JOINTS	3.300000
7.INSTALL SECTION OF PIPE	157.900000
8.INSTALL LAST SECTION	441.300000
9.CHECK FOR LEAKS ADDITIONAL SECT	0.700000

Material Resources

Description	Quantity	Unit Cost
PIPE	1000 FT	1.8200
		1820.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	826.500000	247.950000	1074.450000
Material Cost \$	1820.000000		1820.000000
Equipment Hours			537.225000

Components In This Task: 0814100

TASK DATA FORM

Task Code: 0814201

Component: PIPE/FITTINGS, COPPER System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R RESOLDER JOINT
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 9.50 A: 12.50 L: 15.50
 Persons per Team: 1 Task Duration: 0.1846 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. MEASURE, CUT & REAM BOTH ENDS	0.041000
2. ATTACH FITTING	0.101000

Material Resources

Description	Quantity	Unit Cost
SOLDER	.5 oz	0.1600
		0.0800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.142000	0.042600	0.184600
Material Cost \$	0.080000		0.080000
Equipment Hours			0.184600

Components In This Task: 0814200

TASK DATA FORM

Task Code: 0814202

Component: PIPE/FITTINGS, COPPER System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE INSTALL 10' SECTION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 10.00 A: 12.00 L: 15.00
 Persons per Team: 2 Task Duration: 2.7755 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. REMOVE 10' SECTION INSTALL NEW	4.270000

Material Resources

Description	Quantity	Unit Cost
PIPE	10 ft	1.0500
		10.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.270000	1.281000	5.551000
Material Cost \$	10.500000		10.500000
Equipment Hours			2.775500

Components In This Task: 0814200

TASK DATA FORM

Task Code: 0814203

Component: PIPE/FITTINGS, COPPER System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 15.00 A: 25.00 L: 50.00
 Persons per Team: 2 Task Duration: 27.7550 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE OLD,INSTALL NEW	42.700000	PIPE	1000 FT	1.0500
				1050.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	42.700000	12.810000	55.510000
Material Cost \$	1050.000000		1050.000000
Equipment Hours			27.755000

Components In This Task: 0814200

TASK DATA FORM

Task Code: 0814301

Component: VALVE, NON-DRAIN, <1-1/2" System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: H/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.3536 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.TURN VALVE OFF AND ON	0.017000	PACKING	2 oz	0.2100
2.REMOVE PACKING NUT	0.011000			0.4200
3.REMOVE HANDWHEEL SCREW	0.009000			
4.REMOVE HANDWHEEL	0.013000			
5.REMOVE PACKING GLAND	0.023000			
6.MEASURE AND CUT NEW PACKING	0.025000			
7.REMOVE OLD PACKING	0.051000			
8.INSTALL NEW PACKING	0.025000			
9.INSTALL PACKING GLAND	0.013000			
10.INSTALL HANDWHEEL	0.013000			
11.INSTALL HANDWHEEL SCREW	0.009000			
12.INSTALL PACKING NUT	0.011000			
13.TEST ACTION OF VALVE	0.017000			
14.MATERIAL HANDLING	0.035000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.272000	0.081600	0.353600
Material Cost \$	0.420000		0.420000
Equipment Hours			0.353600

Components In This Task: 0814300

TASK DATA FORM

Task Code: 0814302

Component: VALVE, NON-DRAIN, <1-1/2" System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE OLD VALVE WITH NEW, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 1 Task Duration: 0.2600 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL PARTS FROM VALVE	0.200000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	10.4000
		10.4000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.200000	0.060000	0.260000
Material Cost \$	10.400000		10.400000
Equipment Hours			0.260000

Components In This Task: 0814300

TASK DATA FORM

Task Code: 0814401

Component: VALVE, NON-DRAIN, 2"- 3" System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: H/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.3536 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.REMOVE PACKING NUT	0.011000
3.REMOVE HANDWHEEL SCREW	0.009000
4.REMOVE HANDWHEEL	0.013000
5.REMOVE PACKING GLAND	0.023000
6.MEASURE AND CUT NEW PACKING	0.025000
7.REMOVE OLD PACKING	0.051000
8.INSTALL NEW PACKING	0.025000
9.INSTALL PACKING GLAND	0.013000
10.INSTALL HANDWHEEL	0.013000
11.INSTALL HANDWHEEL SCREW	0.009000
12.INSTALL PACKING NUT	0.011000
13.TEST ACTION OF VALVE	0.017000
14.MATERIAL HANDLING	0.035000

Material Resources

Description	Quantity	Unit Cost
PACKING	4 oz	0.2100
		0.8400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.272000	0.081600	0.353600
Material Cost \$	0.840000		0.840000
Equipment Hours			0.353600

Components In This Task: 0814400

TASK DATA FORM

Task Code: 0814402

Component: VALVE, NON-DRAIN, 2"- 3" System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE OLD VALVE WITH NEW, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 1 Task Duration: 0.5720 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REPLACE VALVE PARTS WITH NEW	0.440000	REPAIR KIT	1	71.6700
				71.6700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.440000	0.132000	0.572000
Material Cost \$	71.670000		71.670000
Equipment Hours			0.572000

Components In This Task: 0814400

TASK DATA FORM

Task Code: 0814501

Component: VALVE, NON-DRAIN, 4"- 6" System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: H/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.50 A: 1.00 L: 2.00
 Persons per Team: 1 Task Duration: 0.6331 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE HANDWHEEL NUT /INSTALL	0.018000	PACKING	3 oz	0.2100
2.REMOVE HANDWHEEL AND INSTALL	0.045000			0.6300
3.REMOVE PACKING GLAND NUTS	0.035000			
4.REMOVE PACKING GLAND AND INSTAL	0.045000			
5.REMOVE OLD PACKING	0.101000			
6.MEASURE AND CUT NEW PACKING	0.013000			
7.PACK VALVE	0.101000			
8.REMOVE GLAND NUTS AND INSTALL	0.035000			
9.INSTALL PACKING GLAND NUTS	0.035000			
10.FINAL CHECK	0.024000			
11.MATERIAL HANDLING	0.035000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.487000	0.146100	0.633100
Material Cost \$	0.630000		0.630000
Equipment Hours			0.633100

Components In This Task: 0814500

TASK DATA FORM

Task Code: 0814502

Component: VALVE, NON-DRAIN, 4"- 6" System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REMOVE OLD VALVE INSTALL NEW, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 2 Task Duration: 1.9500 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE/INSTALL PARTS FROM VALVE	3.000000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	118.3300
		118.3300

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.000000	0.900000	3.900000
Material Cost \$	118.330000		118.330000
Equipment Hours			1.950000

Components in This Task: 0814500

TASK DATA FORM

Task Code: 0814601

Component: VALVE, DRAIN System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: H/R REPACK GLAND
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 2.50 L: 3.00
 Persons per Team: 1 Task Duration: 0.3536 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVE OFF AND ON	0.017000
2.REMOVE PACKING NUT	0.011000
3.REMOVE HANDWHEEL SCREW	0.009000
4.REMOVE HANDWHEEL	0.013000
5.REMOVE PACKING GLAND	0.023000
6.MEASURE AND CUT NEW PACKING	0.025000
7.REMOVE OLD PACKING	0.051000
8.INSTALL NEW PACKING	0.025000
9.INSTALL PACKING GLAND	0.013000
10.INSTALL HANDWHEEL	0.013000
11.INSTALL HANDWHEEL SCREW	0.009000
12.INSTALL PACKING NUT	0.011000
13.TEST ACTION OF VALVE	0.017000
14.MATERIAL HANDLING	0.035000

Material Resources

Description	Quantity	Unit Cost
PACKING	1.5 oz	0.2100
		0.3150

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.272000	0.081600	0.353600
Material Cost \$	0.315000		0.315000
Equipment Hours			0.353600

Components in This Task: 0814600

TASK DATA FORM

Task Code: 0814602

Component: VALVE, DRAIN System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: W/PL EPLACE VALVE STEM ASSEMBLY
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.00 A: 3.75 L: 4.33
 Persons per Team: 1 Task Duration: 0.0559 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES OFF AND ON	0.017000
2. UNSCREW BONNET RING	0.011000
3. REMOVE AND INSTALL ASSEMBLY	0.004000
4. INSTALL BONNET RING	0.011000

Material Resources

Description	Quantity	Unit Cost
STEM ASSY.	1	5.5000
		5.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.043000	0.012900	0.055900
Material Cost \$	5.500000		5.500000
Equipment Hours			0.055900

Components in This Task: 0814600

TASK DATA FORM

Task Code: 0814603

Component: VALVE, DRAIN System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REMOVE OLD VALVE, INSTALL NEW
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 1 Task Duration: 0.5070 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1. REMOVE VALVE INSTALL NEW ONE	0.390000

Material Resources

Description	Quantity	Unit Cost
VALVE	1	19.0800
		19.0800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.390000	0.117000	0.507000
Material Cost \$	19.080000		19.080000
Equipment Hours			0.507000

Components in This Task: 0814600

TASK DATA FORM

Task Code: 0814701

Component: EXPANSION CHAMBER

System: SANITARY

Subsystem: HOT WATER SYSTEMS

Task Description: H/R REFILL

Unit of Measure: COUNT

Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00

Persons per Team: 1

Task Duration: 0.0390 hours

Once every (H,A,L) years

Trade: PLUMBING

Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.REFILL ATR CHAMBER	0.030000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.030000	0.009000	0.039000
Material Cost \$	0.000000		0.000000
Equipment Hours			0.039000

Components In This Task: 0814700

TASK DATA FORM

Task Code: 0814702

Component: EXPANSION CHAMBER

System: SANITARY

Subsystem: HOT WATER SYSTEMS

Task Description: REPLACE REMOVE OLD CHAMBER, INSTALL NEW

Unit of Measure: COUNT

Frequency of Occurrence: H: 13.00 A: 17.00 L: 21.00

Persons per Team: 1

Task Duration: 1.2740 hours

Once every (H,A,L) years

Trade: PLUMBING

Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE/INSTALL EXPANSTON DEVICE	0.980000

Material Resources

Description	Quantity	Unit Cost
CHAMBER	1	196.6900
		196.6900

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.980000	0.294000	1.274000
Material Cost \$	196.690000		196.690000
Equipment Hours			1.274000

Components In This Task: 0814700

TASK DATA FORM

Task Code: 0814801

Component: INSULATION, PIPE System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R REPAIR BROKEN INSULATION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 2.00 A: 2.50 L: 3.00
 Persons per Team: 1 Task Duration: 0.3380 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE INSULATION (1X)	0.098000	TAPE	10 ft	0.0400
2.MATERIAL HANDLING	0.012000			0.4000
3.INSTALL INSULATION	0.138000			
4.MATERIAL HANDLING	0.012000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.260000	0.078000	0.338000
Material Cost \$	0.400000		0.400000
Equipment Hours			0.338000

Components In This Task: 0814800

TASK DATA FORM

Task Code: 0814802

Component: INSULATION, PIPE System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REMOVE OLD INSULATION & REPLACE WITH NEW
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 7.50 A: 15.00 L: 22.50
 Persons per Team: 1 Task Duration: 31.4990 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE/INSTALL INSULATION	24.230000	INSULATION	1000 ft	0.6400
				640.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	24.230000	7.269000	31.499000
Material Cost \$	640.000000		640.000000
Equipment Hours			31.499000

Components In This Task: 0814800

TASK DATA FORM

Task Code: 0814901

Component: CIRC. PUMP - 1/12 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R OVERHAUL PUMP, REPLACE SEALS
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.5850 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1. LOOSEN COUPLING FROM PUMP SHAFT	0.009000	SEAL	2	0.7000
2. REMOVE 4 STUD BOLTS	0.035000			1.4000
3. REMOVE MOTOR	0.052000			
4. REMOVE IMPELLER NUT FROM SHAFT	0.033000			
5. REMOVE SEAL ASSEMBLY	0.019000			
6. INSPECT BEARING BRACKET	0.005000			
7. CLEAN SEALING FACE OF BRACKET	0.016000			
8. INSPECT SHAFT	0.005000			
9. CLEAN SHAFT	0.016000			
10. INSTALL NEW SEAL AND RUBBER	0.013000			
11. INSTALL SEAL SPRING AND WASHERS	0.006000			
12. INSTALL IMPELLER NUT ON SHAFT	0.031000			
13. CLEAN PUMP BODY GASKET AREA	0.037000			
14. INSTALL IMPELLER	0.009000			
15. INSTALL 4 STUD BOLTS	0.035000			
16. ASSEMBLE MOTOR TO BEARING	0.024000			
17. INSTALL 4 STUD BOLTS	0.027000			
18. TIGHTEN COUPLING	0.009000			
19. FINAL TIGHTEN OF BOLTS	0.027000			
20. TEST RUN	0.042000			

SUMMARY

Resources	UOM	Direct	Indirect	Total
Labor	Hours	0.450000	0.135000	0.585000
Material	Cost \$	1.400000		1.400000
Equipment	Hours			0.585000

Components In This Task: 0814900

TASK DATA FORM

Task Code: 0814902

Component: CIRC. PUMP - 1/12 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PM INSPECT/CHECK PUMP/MOTOR OPERATION, LUBRICATE
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.50 A: 0.50 L: 0.50
 Persons per Team: 1 Task Duration: 0.1092 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1. CHECK FOR LEAKS	0.008000	LUBRICANT	2 oz	0.1300
2. CHECK PUMP OPERATION	0.009000			0.2600
3. LUBRICATE PUMP AND MOTOR	0.036000			
4. CHECK SUCTION OR DISCHARGE PRES	0.003000			
5. CHECK PACKING GLANDS, TIGHTEN	0.011000			
6. FILL OUT INSPECTION REPORT	0.017000			

SUMMARY

Resources	UOM	Direct	Indirect	Total
Labor	Hours	0.084000	0.025200	0.109200
Material	Cost \$	0.260000		0.260000
Equipment	Hours			0.109200

Components In This Task: 0814900

TASK DATA FORM

Task Code: 0814903

Component: CIRC. PUMP - 1/12 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 2 Task Duration: 0.5395 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE PUMP INSTALL NEW	0.830000	PUMP	1	200.0000
				200.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.830000	0.249000	1.079000
Material Cost \$	200.000000		200.000000
Equipment Hours			0.539500

Components In This Task: 0814900

TASK DATA FORM

Task Code: 0814A01

Component: CIRC. PUMP - 1/6 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R OVERHAUL PUMP, REPLACE SEALS
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.6019 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.LOOSEN COUPLING FROM PUMP SHAFT	0.009000	SEAL	2	0.8400
2.REMOVE 4 STUD BOLTS	0.035000			1.6800
3.REMOVE MOTOR	0.052000			
4.REMOVE IMPELLER NUT FORM SHAFT	0.033000			
5.REMOVE SEAL ASSEMBLY	0.019000			
6.INSPECT BEARING BRACKETS FACE	0.005000			
7.CLEAN SEALING FACE	0.016000			
8.INSPECT SHAFT	0.005000			
9.CLEAN SHAFT	0.016000			
10.INSTALL NEW SEAL AND RUBBER	0.013000			
11.INSTALL SEAL SPRING AND WASHERS	0.006000			
12.INSTALL IMPELLER NUT ON SHAFT	0.031000			
13.CLEAN PUMP BODY GASKET AREA	0.037000			
14.INSTALL NEW GASKET	0.013000			
15.INSTALL IMPELLER	0.009000			
16.INSTALL 4 STUD BOLTS	0.035000			
17.ASSEMBLE MOTOR TO BEARING	0.024000			
18.INSTALL 4 STUD BOLTS	0.027000			
19.TIGHTEN COUPLING	0.009000			
20.FINAL TIGHTEN OF BOLTS	0.027000			
21.TEST RUN	0.042000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.463000	0.138900	0.601900
Material Cost \$	1.680000		1.680000
Equipment Hours			0.601900

Components In This Task: 0814A00

TASK DATA FORM

Task Code: 0814A02

Component: CIRC. PUMP - 1/6 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PM INSPECT/CHECK PUMP/MOTOR OPERATION, LUBRICATE
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.50 A: 0.50 L: 0.50
 Persons per Team: 1 Task Duration: 0.1092 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK FOR LEAKS	0.008000
2.CHECK PUMP OPERATION	0.009000
3.LUBRICATE PUMP AND MOTOR	0.036000
4.CHECK SUCTION OR DISCHARGE PRES	0.003000
5.CHECK PACKING GLANDS,TIGHTEN	0.011000
6.FILL OUT INSPECTION REPORT	0.017000

Material Resources

Description	Quantity	Unit Cost
LUBRICANT	2	0.1300
		0.2600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.084000	0.025200	0.109200
Material Cost \$	0.260000		0.260000
Equipment Hours			0.109200

Components In This Task: 0814A00

TASK DATA FORM

Task Code: 0814A03

Component: CIRC. PUMP - 1/6 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 2 Task Duration: 0.9230 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE PUMP INSTALL NEW	1.420000

Material Resources

Description	Quantity	Unit Cost
PUMP	1	350.0000
		350.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.420000	0.426000	1.846000
Material Cost \$	350.000000		350.000000
Equipment Hours			0.923000

Components In This Task: 0814A00

TASK DATA FORM

Task Code: 0814801

Component: CIRC. PUMP - 1/2 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R OVERHAUL PUMP, REPLACE SEAL OR BEARING
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.8879 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. LOOSEN SET SCREW ON PUMP	0.009000
2. REMOVE PUMP HALF COUPLING	0.023000
3. REMOVE SHAFT KEY COUPLING	0.023000
4. LOOSEN 4 SET SCREWS ON COLLARS	0.035000
5. REMOVE OUTER THRUST COLLAR	0.013000
6. REMOVE 4 SCREWS ON HOUSING	0.035000
7. REMOVE BEARING HOUSING	0.097000
8. CLEAN GASKET AREA	0.033000
9. REMOVE SHAFT SEAL ASSEMBLY	0.045000
10. CLEAN SEALING SURFACES	0.075000
11. INSTALL SEAL ASSEMBLY	0.047000
12. POSITION BEARING BRACKET	0.013000
13. INSTALL INNER THRUST COLLAR	0.013000
14. ASSEMBLE BEARING BRACKET	0.013000
15. INSTALL 4 STUD BOLTS	0.035000
16. INSTALL BALL BEARING	0.023000
17. INSTALL BEARING COVER PLATE	0.048000
18. INSTALL OUTER THRUST COLLAR	0.013000
19. TIGHTEN 4 SET SCREWS	0.035000
20. INSTALL COUPLING HALF SHAFT KEY	0.023000
21. INSTALL COUPLING HALF	0.023000
22. TIGHTEN COUPLING HALF SET SCREW	0.009000

Material Resources

Description	Quantity	Unit Cost
BEARING	1	2.5900
		2.5900

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.683000	0.204900	0.887900
Material Cost \$	2.590000		2.590000
Equipment Hours			0.887900

Components In This Task: 0814800

TASK DATA FORM

Task Code: 0814802

Component: CIRC. PUMP - 1/2 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PM INSPCT./CHECK PUMP/MOTOR OPER., LUBR., CHECK ALIGN.
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.50 A: 0.50 L: 0.50
 Persons per Team: 1 Task Duration: 0.1625 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. CHECK FOR LEAKS	0.008000
2. CHECK PUMP OPERATION	0.009000
3. CHECK ALIGNMENT	0.041000
4. LUBRICATE PUMP AND MOTOR	0.036000
5. CHECK SUCTION / DISCHARGE PRESS	0.003000
6. CHECK PACKING GLANDS, TIGHTEN	0.011000
7. FILL OUT INSPECTION REPORT	0.017000

Material Resources

Description	Quantity	Unit Cost
LUBRICANT	3 oz	0.1300
		0.3900

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.125000	0.037500	0.162500
Material Cost \$	0.390000		0.390000
Equipment Hours			0.162500

Components In This Task: 0814800

TASK DATA FORM

Task Code: 0814803

Component: CIRC. PUMP - 1/2 HP. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 2 Task Duration: 1.4365 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Mins	Description	Unit Cost
T.REMOVE PUMP, INSTALL NEW	2.210000	PUMP	512.0000
			512.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.210000	0.663000	2.873000
Material Cost \$	512.000000		512.000000
Equipment Hours			1.436500

Components In This Task: 0814800

TASK DATA FORM

Task Code: 0814C01

Component: STEAM CONVERTER, DOM. H.W. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R REPAIR STEAM LEAK
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 2 Task Duration: 2.9705 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Mins	Description	Unit Cost
T.REPAIR HEAT EXCHANGER	4.570000	WELD ROD	1.3900
			5.5600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.570000	1.371000	5.941000
Material Cost \$	5.560000		5.560000
Equipment Hours			2.970500

Components In This Task: 0814C00

TASK DATA FORM

Task Code: 0814C02

Component: STEAM CONVERTER, DOM. H.W. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PH INSECT FOR LEAKS
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 0.0923 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1.CHECK RELIEF VALVE OPERATION	0.029000		0.0000
2.CHECK FOR PROPER WATER TEMP.	0.042000		

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.071000	0.021300	0.092300
Material Cost \$	0.000000		0.000000
Equipment Hours			0.092300

Components In This Task: 0814C00

TASK DATA FORM

Task Code: 0814C03

Component: STEAM CONVERTER, DOM. H.W. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE STEAM CONVERTER
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 3.6790 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1.REMOVE EXCHANGER INSTALL NEW	5.660000	EXCHANGER	740.0000
			740.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	5.660000	1.698000	7.358000
Material Cost \$	740.000000		740.000000
Equipment Hours			3.679000

Components In This Task: 0814C00

TASK DATA FORM

Task Code: 0814D01

Component: H.W. HTR., GAS/OIL, 30 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R CLEAN & SERVICE
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 1.5717 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. TURN VALVES OFF AND ON	0.017000
2. REMOVE THERMOSTAT, CHECK, AND INS	0.141000
3. REMOVE BURNER, CLEAN AND INSTALL	0.175000
4. CLEAN PILOT AND THERMOCOUPLE	0.228000
5. REMOVE BURNER DOOR AND INSTALL	0.025000
6. CHECK AFTER MAINTENANCE	0.167000
7. DRAIN AND FILL TANK	0.456000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.209000	0.362700	1.571700
Material Cost \$	0.000000		0.000000
Equipment Hours			1.571700

Components In This Task: 0814D00

TASK DATA FORM

Task Code: 0814D02

Component: H.W. HTR., GAS/OIL, 30 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PH CLEAN AND SERVICE
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 3.0030 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. CHECK/ADJUST FUEL BURNER	2.310000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.310000	0.693000	3.003000
Material Cost \$	0.000000		0.000000
Equipment Hours			3.003000

Components In This Task: 0814D00

TASK DATA FORM

Task Code: 0814D03

Component: H.W. HTR, GAS/OIL, 30 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE HOT WATER HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 2 Task Duration: 0.5356 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.CHECK OPERATION OF OLD TANK	0.042000
2.REMOVE OLD HEATER, INSTALL NEW	0.511000
3.MATERIAL HANDLING	0.104000
4.CHECK AFTER INSTALLATION	0.167000

Material Resources

Description	Quantity	Unit Cost
WATER HTR	1	137.0000
		137.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.824000	0.247200	1.071200
Material Cost \$	137.000000		137.000000
Equipment Hours			0.535600

Components In This Task: 0814D00

TASK DATA FORM

Task Code: 0814E01

Component: H.W. HTR, GAS/OIL, 80 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: HTR OVERHAUL HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 2.3946 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE HOT WATER HEATER AND INS	0.511000
2.REMOVE THMST,CHECK AND INSTALL	0.141000
3.REMOVE BURNER, CLEAN AND INSTAL	0.175000
4.CLEAN PILOT AND THERMOCOUPLE	0.228000
5.REMOVE BURNER DOOR AND INSTALL	0.025000
6.REPLACE BURNER DOOR ASBESTOS	0.144000
7.DRAIN AND REFILL TANK	0.456000
8.TURN VALVE OFF AND ON	0.162000

Material Resources

Description	Quantity	Unit Cost
ASBESTOS	4 ft	1.4000
		5.6000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.842000	0.552600	2.394600
Material Cost \$	5.600000		5.600000
Equipment Hours			2.394600

Components In This Task: 0814E00

TASK DATA FORM

Task Code: 0814E02

Component: H.W. HTR., GAS/OIL, 80 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PH CLEAN & SERVICE
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 3.0030 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.CHECK/ADJUST FUEL BURNER	2.310000			0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.310000	0.693000	3.003000
Material Cost \$	0.000000		0.000000
Equipment Hours			3.003000

Components In This Task: 0814E00

TASK DATA FORM

Task Code: 0814E03

Component: H.W. HTR., GAS/OIL, 80 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE HOT WATER HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 10.00 A: 12.00 L: 15.00
 Persons per Team: 2 Task Duration: 2.8145 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.REMOVE HEATER, INSTALL NEW ONE	4.330000	WATER HTR.	1	676.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.330000	1.299000	5.629000
Material Cost \$	676.000000		676.000000
Equipment Hours			2.814500

Components In This Task: 0814E00

TASK DATA FORM

Task Code: 0814F01

Component: H.W. HTR. GAS/OIL, 1000 GPH System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R MINOR REPAIRS, ADJUSTMENTS
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 3.00
 Persons per Team: 2 Task Duration: 0.6890 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
T.RESET, ADJUST CONTROLS	1.060000		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.060000	0.318000	1.378000
Material Cost \$	0.000000		0.000000
Equipment Hours			0.689000

Components In This Task: 0814F00

TASK DATA FORM

Task Code: 0814F02

Component: H.W. HTR. GAS/OIL, 1000 GPH System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PH CLEAN & SERVICE
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 2.00 L: 2.00
 Persons per Team: 2 Task Duration: 16.2240 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
T.DRAIN TANK, CLEAN, AND SERVICE	24.960000		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	24.960000	7.488000	32.448000
Material Cost \$	0.000000		0.000000
Equipment Hours			16.224000

Components In This Task: 0814F00

TASK DATA FORM

Task Code: 0814F03

Component: H.W. HTR., GAS/OIL, 1000 GPH System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE HOT WATER HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 22.9970 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE HEATER , INSTALL NEW	35.380000	WATER HTR.	1	6010.4200
				6010.4200

SUMMARY

Resources	UOM	Direct	Indirect	Total
Labor	Hours	35.380000	10.614000	45.994000
Material	Cost \$	6010.420000		6010.420000
Equipment	Hours			22.997000

Components In This Task: 0814F00

TASK DATA FORM

Task Code: 0814G01

Component: H.W. HTR., GAS/OIL 8-120 G System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: H/R OVERHAUL HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 2.3946 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE HOT WATER HEATER AND INS	0.511000	ASBESTOS	4 FT	1.4000
2.REMOVE THMST,CHECK & INSTALL	0.141000			5.6000
3.REMOVE BURNER,CLEAN & INSTALL	0.175000			
4.CLEAN PILOT & THERMOCOUPLE	0.228000			
5.REMOVE BURNER DOOR & INSTALL	0.025000			
6.REPLACE BURNER DOOR ASBESTOS	0.144000			
7.DRAIN AND REFILL TANK	0.456000			
8.TURN VALVE OFF AND ON	0.162000			

SUMMARY

Resources	UOM	Direct	Indirect	Total
Labor	Hours	1.842000	0.552600	2.394600
Material	Cost \$	5.600000		5.600000
Equipment	Hours			2.394600

Components In This Task: 0814L00 0814G00

TASK DATA FORM

Task Code: 0814G02

Component: M.W. HTR., GAS/OIL 8-120 G System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PH CLEAN
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 3.0030 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.CHECK/ADJUST FUEL BURNER	2.310000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.310000	0.693000	3.003000
Material Cost \$	0.000000		0.000000
Equipment Hours			3.003000

Components In This Task: 0814L00 0814G00

TASK DATA FORM

Task Code: 0814G03

Component: M.W. HTR., GAS/OIL 8-120 G System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE
 Unit of Measure: COUNT Frequency of Occurrence: H: 10.00 A: 12.00 L: 15.00
 Persons per Team: 2 Task Duration: 2.8145 hours Once every (H,A,L) years
 Trade: PLUMB G Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE HEATER, INSTALL NEW ONE	4.530000

Material Resources

Description	Quantity	Unit Cost
WATER HEATER	1	931.0000
		931.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.530000	1.299000	5.829000
Material Cost \$	931.000000		931.000000
Equipment Hours			2.814500

Components In This Task: 0814L00 0814G00

TASK DATA FORM

Task Code: 0814H01

Component: H.W. HTR. ELEC. 120 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: DRAIN AND FLUSH
 Unit of Measure: COUNTY Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 4.6540 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.DRAIN ,CLEAN AND READJUST	3.580000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.580000	1.074000	4.654000
Material Cost \$	0.000000		0.000000
Equipment Hours			4.654000

Components In This Task:

TASK DATA FORM

Task Code: 0814H02

Component: H.W. HTR. ELEC. 120 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: CHECK OPERATION
 Unit of Measure: COUNTY Frequency of Occurrence: H: 2.00 A: 3.00 L: 4.00
 Persons per Team: 1 Task Duration: 0.0572 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK FOR RELIEF VALVE	0.008000
2.CHECK FOR PROPER WATER TEMP	0.002000
3.FILL OUT MAINTENANCE REPORT	0.017000
4.FILL OUT RECORDS	0.017000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.044000	0.013200	0.057200
Material Cost \$	0.000000		0.000000
Equipment Hours			0.057200

Components In This Task:

TASK DATA FORM

Task Code: 0814H03

Component: H.W. HTR. ELEC. 120 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE WATER HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 10.00 A: 15.00 L: 20.00
 Persons per Team: 2 Task Duration: 2.3530 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.REMOVE HEATER AND INSTALL NEW	3.620000	WATER HEATER	1 UNIT	2875.0000
				2875.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.620000	1.086000	4.706000
Material Cost \$	2875.000000		2875.000000
Equipment Hours			2.353000

Components In This Task: _____

TASK DATA FORM

Task Code: 0814I01

Component: H.W. HEATER ELEC. 300 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: DRAIN AND FLUSH
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 4.6540 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Material Resources

Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
T.DRAIN ,CLEAN AND ADJUST	3.580000			0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.580000	1.074000	4.654000
Material Cost \$	0.000000		0.000000
Equipment Hours			4.654000

Components In This Task: _____

TASK DATA FORM

Task Code: 0814102

Component: H.W. HEATER ELEC. 300 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: CHECK OPERATION
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 3.00 L: 4.00
 Persons per Team: 1 Task Duration: 0.0572 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK RELIEF VALVE	0.008000
2.CHECK FOR PROPER WATER TEMP.	0.002000
3.FILL OUT MAINTENANCE REPORT	0.017000
4.FILL OUT RECORDS	0.017000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.044000	0.013200	0.057200
Material Cost \$	0.000000		0.000000
Equipment Hours			0.057200

Components In This Task: _____

TASK DATA FORM

Task Code: 0814103

Component: H.W. HEATER ELEC. 300 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE WATER HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 10.00 A: 15.00 L: 20.00
 Persons per Team: 2 Task Duration: 2.3530 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE HEATER AND INSTALL NEW	3.620000

Material Resources

Description	Quantity	Unit Cost
WATER HEATER	1 UNIT	5325.0000
		5325.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.620000	1.086000	4.706000
Material Cost \$	5325.000000		5325.000000
Equipment Hours			2.353000

Components In This Task: _____

TASK DATA FORM

Task Code: 0814J01

Component: H.W. HEATER ELEC. 1000 GAL System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: DRAIN AND FLUSH
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 4.6540 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1.DRAIN ,CLEAN AND ADJUST	3.580000		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.580000	1.074000	4.654000
Material Cost \$	0.000000		0.000000
Equipment Hours			4.654000

Components In This Task:

TASK DATA FORM

Task Code: 0814J02

Component: H.W. HEATER ELEC. 1000 GAL System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: CHECK OPERATION
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 3.00 L: 4.00
 Persons per Team: 1 Task Duration: 0.0572 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1.CHECK RELIEF VALVE	0.008000		0.0000
2.CHECK FOR PROPER WATER TEMP.	0.002000		
3.FILL OUT MAINTANANCE REPORT	0.017000		
4.FILL OUT RECORDS	0.017000		

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.044000	0.013200	0.057200
Material Cost \$	0.000000		0.000000
Equipment Hours			0.057200

Components In This Task:

TASK DATA FORM

Task Code: 0814J03

Component: H.W. HEATER ELEC. 1000 GAL System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE WATER HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 10.00 A: 15.00 L: 20.00
 Persons per Team: 2 Task Duration: 2.3530 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE HEATER AND INSTALL NEW	3.620000

Material Resources

Description	Quantity	Unit Cost
WATER HEATER	1 UNIT	13825.0000
		13825.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.620000	1.086000	4.706000
Material Cost \$	13825.000000		13825.000000
Equipment Hours			2.353000

Components In This Task: _____

TASK DATA FORM

Task Code: 0814K01

Component: H.W. HEATER ELEC. 2000 GAL System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: DRAIN AND FLUSH
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 4.6540 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.DRAIN ,CLEAN AND ADJUST	3.580000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.580000	1.074000	4.654000
Material Cost \$	0.000000		0.000000
Equipment Hours			4.654000

Components In This Task: _____

TASK DATA FORM

Task Code: 0814K02

Component: H.W. HEATER ELEC. 2000 GAL System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: CHECK OPERATION
 Unit of Measure: COUNT Frequency of Occurrence: M: 2.00 A: 3.00 L: 4.00
 Persons per Team: 1 Task Duration: 0.0572 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK RELIEF VALVE	0.008000
2.CHECK FOR PROPER WATER TEMP.	0.002000
3.FILL OUT MAINTENANCE REPORT	0.017000
4.FILL OUT RECORDS	0.017000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.044000	0.013200	0.057200
Material Cost \$	0.000000		0.000000
Equipment Hours			0.057200

Components In This Task: _____

TASK DATA FORM

Task Code: 0814K03

Component: H.W. HEATER ELEC. 2000 GAL System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE WATER HEATER
 Unit of Measure: COUNT Frequency of Occurrence: M: 10.00 A: 15.00 L: 20.00
 Persons per Team: 2 Task Duration: 2.3530 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE HEATER AND INSTALL NEW	3.620000

Material Resources

Description	Quantity	Unit Cost
WATER HEATER	1 UNIT	17825.0000
		17825.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.620000	1.086000	4.706000
Material Cost \$	17825.000000		17825.000000
Equipment Hours			2.353000

Components In This Task: _____

TASK DATA FORM

Task Code: 0814L01

Component: H.W. HTR. ELEC., 52 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R DRAIN & FLUSH
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 7.00 L: 8.00
 Persons per Team: 1 Task Duration: 4.6540 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.DRAIN, CLEAN AND ADJUST	3.580000			0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.580000	1.074000	4.654000
Material Cost \$	0.000000		0.000000
Equipment Hours			4.654000

Components In This Task: 0814G00 0814L00

TASK DATA FORM

Task Code: 0814L02

Component: H.W. HTR. ELEC., 52 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PM CHECK OPERATION
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 3.00 L: 4.00
 Persons per Team: 1 Task Duration: 0.0572 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.CHECK RELIEF VALVE	0.008000			0.0000
2.CHECK FOR PROPER WATER TEMP.	0.002000			
3.FILL OUT MAINTENANCE REPORT	0.017000			
4.FILL OUT RECORDS	0.017000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.044000	0.013200	0.057200
Material Cost \$	0.000000		0.000000
Equipment Hours			0.057200

Components In This Task: 0814G00 0814L00

TASK DATA FORM

Task Code: 0814L03

Component: H.W. HTR., ELEC. 52 GAL. System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE HEATER
 Unit of Measure: COUNT Frequency of Occurrence: H: 10.00 A: 12.00 L: 15.00
 Persons per Team: 2 Task Duration: 2.3530 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE HEATER AND INSTALL NEW	3.620000

Material Resources

Description	Quantity	Unit Cost
WATER HTR.	1	176.0000
		176.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.620000	1.086000	4.706000
Material Cost \$	176.000000		176.000000
Equipment Hours			2.353000

Components In This Task: 0814G00 0814L00

TASK DATA FORM

Task Code: 0814M01

Component: STORAGE TANK, DHW System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: H/R CLEAN AND SCRAPE TANK
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 2.00 L: 4.00
 Persons per Team: 1 Task Duration: 3.7330 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.OPEN AND CLOSE VALVES	0.016920
2.REMOVE NUTS ON COIL	0.106400
3.REMOVE COIL BOLTS	0.126500
4.REMOVE COIL	0.036180
5.REMOVE GASKETS	0.025300
6.DISCONNECT UNIONS	0.109440
7.FILL AND DRAIN TANK	1.140000
8.CLEAN COIL FACES	0.071380
9.CLEAN COIL	0.035690
10.CLEAN INSIDE OF TANK--SCRAPE 2	0.586800
11.CONNECT HOSE	0.038430
12.DISCONNECT HOSE	0.036480
13.HOSE TO FLUSH TANK--25 GALLONS	0.190000
14.MAKE TWO GASKETS	0.070360
15.INSTALL GASKET	0.003960
16.INSTALL COIL	0.036180
17.INSTALL BOLTS IN COIL	0.019800
18.CONNECT UNIONS	0.115290
19.INSTALL NUTS ON BOLTS	0.106400

Material Resources

Description	Quantity	Unit Cost
GASKET	1	5.0000
		5.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.871510	0.861453	3.732963
Material Cost \$	5.000000		5.000000
Equipment Hours			3.732963

Components In This Task: 0814M00

TASK DATA FORM

Task Code: 0814N02

Component: STORAGE TANK, DHW

System: SANITARY

Subsystem: HOT WATER SYSTEMS

Task Description: REPLACE REPLACE STORAGE TANK

Unit of Measure: COUNT

Frequency of Occurrence: H: 20.00 A: 50.00 L: 70.00

Persons per Team: 2

Task Duration: 1.7970 hours

Once every (H,A,L) years

Trade: PLUMBING

Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.TURN VALVES OFF AND ON	0.016920
2.CONNECT DRAIN HOSE	0.038430
3.DISCONNECT DRAIN HOSE	0.036480
4.DRAIN OLD TANK, FILL NEW TANK	0.608000
5.DISCONNECT UNIONS	0.072960
6.CONNECT UNIONS	0.076860
7.REMOVE RELIEF VALVE	0.049090
8.REMOVE OLD HEATER & POSITN NEW	0.194380
9.INSTALL RELIEF VALVE	0.047580
10.INSTL 4 ADAPTERS TO NEW HEATER	0.153720
11.INSTALL DRAIN COCK ON HEATER	0.038430
12.MATERIAL HANDLING	0.310770
13.INSULATE PIPING FITNGS @ HEATER	0.174040
14.UNCRAT HTR-12 PC LUMBER, 8NLS/PC	0.946920

Material Resources

Description	Quantity	Unit Cost
TANK	1	327.0000
		327.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.764580	0.829374	3.593954
Material Cost \$	327.000000		327.000000
Equipment Hours			1.796977

Components In This Task: 0814N00

TASK DATA FORM

Task Code: 0814N01

Component: PIPE/FITTINGS, PVC

System: SANITARY

Subsystem: HOT WATER SYSTEMS

Task Description: R/R REGLOE JOINT

Unit of Measure: 1000 LINEAR FEET

Frequency of Occurrence: H: 6.00 A: 8.00 L: 10.00

Persons per Team: 1

Task Duration: 0.2870 hours

Once every (H,A,L) years

Trade: PLUMBING

Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CUT EXIST PIPE, INSTL TEE, 1 JOINT	0.029440
2.CONN REMAINING 2 JOINTS OF TEE	0.030800
3.MOVE TOOLS AND MATERIALS	0.034530
4.INSPECT JOINTS	0.126000

Material Resources

Description	Quantity	Unit Cost
GLUE	.5 OZ	0.0500
		0.0250

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.220770	0.066231	0.287001
Material Cost \$	0.025000		0.025000
Equipment Hours			0.287001

Components In This Task: 0814N00

TASK DATA FORM

Task Code: 0814N02

Component: PIPE/FITTINGS, PVC System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R INSTALL 10' SECTION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 15.00 A: 18.00 L: 20.00
 Persons per Team: 2 Task Duration: 0.2085 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMV BROKEN PIPE, INSTALL NEW	0.202280
2.MOVE TOOLS AND MATERIALS	0.034530
3.INSPECT JOINTS	0.084000

Material Resources

Description	Quantity	Unit Cost
PIPE	10 FT	0.6300
GLUE	1 OZ	0.0500
		6.3500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.320810	0.096243	0.417053
Material Cost \$	6.350000		6.350000
Equipment Hours			0.208527

Components In This Task: 0814N00

TASK DATA FORM

Task Code: 0814N03

Component: PIPE/FITTINGS, PVC System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE REPLACE PIPE
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 20.00 A: 25.00 L: 30.00
 Persons per Team: 2 Task Duration: 20.8527 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMV BROKEN PIPE, INSTALL NEW	20.228000
2.MOVE TOOLS AND MATERIALS	3.453000
3.INSPECT JOINTS	8.400000

Material Resources

Description	Quantity	Unit Cost
PIPE	1000 FT	0.6300
FLUE	25 OZ	0.0500
		631.2500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	32.081000	9.624300	41.705300
Material Cost \$	631.250000		631.250000
Equipment Hours			20.852650

Components In This Task: 0814N00

TASK DATA FORM

Task Code: 0814001

Component: CIRC. PUMP > 1 HP System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: M/R OVERHAUL PUMP, REPLACE SEAL OR BEARING
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.8866 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. LOOSEN SCREW ON PUMP COUPLING	0.009000
2. REMOVE PUMP HALF COUPLING	0.023000
3. REMOVE SHAFT KEY COUPLING	0.023000
4. LOOSEN 4 SET SCREWS	0.035000
5. REMOVE OUTER THRUST COLLAR	0.013000
6. REMOVE BEARING SCREWS	0.035000
7. REMOVE BEARING HOUSINGS	0.097000
8. CLEAN GASKET AREA	0.033000
9. REMOVE SHAFT SEAL ASSEMBLY	0.045000
10. CLEAN MECHANICAL SEAL	0.075000
11. INSTALL SEAL ASSEMBLY	0.047000
12. POSITION BEARING BRACKET	0.013000
13. INSTALL INNER THRUST COLLAR	0.013000
14. ASSEMBLE BEARING	0.013000
15. INSTALL 4 STUD BOLTS	0.035000
16. INSTALL BALL BEARING	0.023000
17. INSTALL BEARING COVER	0.048000
18. INSTALL OUTER THRUST COLLAR	0.013000
19. TIGHTEN SCREWS ON THRUST COLLAR	0.035000
20. INSTALL COUPLING	0.054000

Material Resources

Description	Quantity	Unit Cost
SEAL	2	1.3000
		2.6000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.682000	0.204600	0.886600
Material Cost \$	2.600000		2.600000
Equipment Hours			0.886600

Components In This Task: 0814000

TASK DATA FORM

Task Code: 0814002

Component: CIRC. PUMP > 1 HP System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: PM INSP./CHECK PUMP/MOTOR OPER., LUBR., CHECK ALIGN.
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 0.1625 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1. CHECK FOR LEAKS	0.008000
2. CHECK PUMP OPERATION	0.009000
3. CHECK ALIGNMENT	0.041000
4. LUBRICATE PUMP AND MOTOR	0.036000
5. CHECK SUCTION DISCHARGE PRESS.	0.003000
6. CHECK PACKING GLANDS, TIGHTEN	0.011000
7. FILL OUT INSPECTION REPORT	0.017000

Material Resources

Description	Quantity	Unit Cost
LUBRICANT	4 OZ	0.1300
		0.5200

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.125000	0.037500	0.162500
Material Cost \$	0.520000		0.520000
Equipment Hours			0.162500

Components In This Task: 0814000

TASK DATA FORM

Task Code: 0814003

Component: CIRC. PUMP > 1 HP System: SANITARY Subsystem: HOT WATER SYSTEMS
 Task Description: REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 1.4365 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE PUMP/MOTOR, INSTALL NEW	2.210000

Material Resources

Description	Quantity	Unit Cost
PUMP	1	1100.0000
		1100.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.210000	0.663000	2.873000
Material Cost \$	1100.000000		1100.000000
Equipment Hours			1.436500

Components In This Task: 0814000

TASK DATA FORM

Task Code: 0821101

Component: DRAIN: ROOF, SCUPPER, AREA System: RAINWATER DRAINAGE Subsystem: FIXTURES
 Task Description: M/R GENERAL MAINTENANCE & REPAIR
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.75 A: 1.00 L: 1.25
 Persons per Team: 1 Task Duration: 0.5070 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.INSPECT DRAIN	0.080000
2.REPAIR DRAIN	0.310000

Material Resources

Description	Quantity	Unit Cost
SEALANT	1.5 oz	0.2400
		0.3600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.390000	0.117000	0.507000
Material Cost \$	0.360000		0.360000
Equipment Hours			0.507000

Components In This Task: 0821100

TASK DATA FORM

Task Code: 0821103

Component: DRAIN; ROOF, SCUPPER, AREA System: RAINWATER DRAINAGE Subsystem: FIXTURES
 Task Description: REPLACE REPLACE DRAIN
 Unit of Measure: COUNT Frequency of Occurrence: M: 20.00 A: 40.00 L: 60.00
 Persons per Team: 1 Task Duration: 1.3130 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE DRAIN, INSTALL NEW	1.010000	DRAIN	1	165.5100
				165.5100

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.010000	0.303000	1.313000
Material Cost \$	165.510000		165.510000
Equipment Hours			1.313000

Components In This Task: 0821100

TASK DATA FORM

Task Code: 0822101

Component: DISTRIBUTION;GUTTERS,PIPE System: RAINWATER DRAINAGE Subsystem: DRAINAGE SYSTEMS
 Task Description: H/R GENERAL MAINTENANCE & REPAIR
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: M: 0.75 A: 1.00 L: 1.25
 Persons per Team: 1 Task Duration: 5.3040 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REPAIR PIPE, GUTTERS (1X)	0.080000	SEALANT	.4 LB	3.8400
2.CLEAN OUT GUTTERS	4.000000			1.5360

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.080000	1.224000	5.304000
Material Cost \$	1.536000		1.536000
Equipment Hours			5.304000

Components In This Task: 0821100

TASK DATA FORM

Task Code: 0822102

Component: DISTRIBUTION:GUTTERS,PIPE System: RAINWATER DRAINAGE Subsystem: DRAINAGE SYSTEMS
 Task Description: REPLACE REPLACE PIPE OR GUTTER
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 10.00 A: 20.00 L: 30.00
 Persons per Team: 1 Task Duration: 206.9990 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE DIST. SYSTEM, INSTALL	159.230000

Material Resources

Description	Quantity	Unit Cost
GUTTER	1000 ft	1.0900
		1090.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	159.230000	47.769000	206.999000
Material Cost \$	1090.000000		1090.000000
Equipment Hours			206.999000

Components In This Task: 0822100

TASK DATA FORM

Task Code: 0823101

Component: SUMP PUMP System: RAINWATER DRAINAGE Subsystem: PUMPS
 Task Description: M/K OVERHAUL PUMP, REPLACE SEAL OR BEARING
 Unit of Measure: COUNT Frequency of Occurrence: H: 4.00 A: 5.00 L: 6.00
 Persons per Team: 1 Task Duration: 0.8866 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.LOOSEN SCREW ON PUMP COUPLING	0.009000
2.REMOVE PUMP HALF COUPLING	0.023000
3.REMOVE SHAFT KEY COUPLING	0.023000
4.LOOSEN 4 SET SCREWS	0.035000
5.REMOVE OUTER THRUST COLLAR	0.013000
6.REMOVE BEARING SCREWS	0.035000
7.REMOVE BEARING HOUSING	0.097000
8.CLEAN GASKET AREA	0.033000
9.REMOVE SHAFT SEAL ASSEMBLY	0.045000
10.CLEAN MECHANICAL SEAL	0.075000
11.INSTALL SEAL ASSEMBLY	0.047000
12.POSITION BEARING BRACKET	0.013000
13.INSTALL INNER THRUST COLLAR	0.013000
14.ASSEMBLE BEARING	0.013000
15.INSTALL 4 STUD BOLTS	0.035000
16.INSTALL BALL BEARING	0.023000
17.INSTALL BEARING COVER	0.048000
18.INSTALL OUTER THRUST COLLAR	0.013000
19.TIGHTEN SCREWS ON THRUST COLLAR	0.035000
20.INSTALL COUPLING	0.054000

Material Resources

Description	Quantity	Unit Cost
SEAL	2	1.5000
		2.6000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.882000	0.204600	0.886600
Material Cost \$	2.600000		2.600000
Equipment Hours			0.886600

Components In This Task: 0823100

TASK DATA FORM

Task Code: 0823102

Component: SUMP PUMP System: RAINWATER DRAINAGE Subsystem: PUMPS
 Task Description: PH INSP./CHECK PUMP/MOTOR OPER. LUBR. CHECK ALIGN.
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 0.1625 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.CHECK FOR LEAKS	0.008000	LUBRICANT	2 02	0.1300
2.CHECK PUMP OPERATION	0.009000			0.2600
3.CHECK ALIGNMENT	0.041000			
4.LUBRICATE PUMP AND MOTOR	0.036000			
5.CHECK SUCTION DISCHARGE PRESS	0.003000			
6.CHECK PACKING GLANDS, TIGHTEN	0.011000			
7.FILL OUT INSPECTION REPORT	0.017000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.125000	0.037500	0.162500
Material Cost \$	0.260000		0.260000
Equipment Hours			0.162500

Components In This Task: 0823100

TASK DATA FORM

Task Code: 0823103

Component: SUMP PUMP System: RAINWATER DRAINAGE Subsystem: PUMPS
 Task Description: REPLACE REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL
 Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00
 Persons per Team: 2 Task Duration: 1.4365 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE PUMP/MOTOR, INSTALL NEW	2.210000	PUMP	1	385.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.210000	0.663000	2.873000
Material Cost \$	385.000000		385.000000
Equipment Hours			1.436500

Components In This Task: 0823100

TASK DATA FORM

Task Code: 0831113

Component: SIMPLEX AIR COMPR., 1 HP. System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: REPLACE COMPRESSOR
 Unit of Measure: COUNT Frequency of Occurrence: H: 19.00 A: 25.00 L: 31.00
 Persons per Team: 2 Task Duration: 1.8395 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1.REMOVE COMPRESSOR, INSTALL NEW	2.830000	COMPRESSOR	5758.3300
			5758.3300

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.830000	0.849000	3.679000
Material Cost \$	5758.330000		5758.330000
Equipment Hours			1.839500

Components In This Task: 0832110 0831110

TASK DATA FORM

Task Code: 0831121

Component: VACUUM PUMP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: M/R OVERHAUL VACUUM PUMP
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.00 A: 5.00 L: 8.00
 Persons per Team: 1 Task Duration: 3.9000 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1.TEAR DOWN PUMP	1.000000	GASKETS	2.5000
2.REPLACE BEARINGS	0.500000	OIL	8.7500
3.REASSEMBLE AND CHECKOUT	1.500000	BEARINGS	25.0000
			90.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.000000	0.900000	3.900000
Material Cost \$	90.000000		90.000000
Equipment Hours			3.900000

Components In This Task: 0831120

TASK DATA FORM

Task Code: 0831122

Component: VACUUM PUMP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: PH CHECK OPERATION
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 0.3250 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.CHECK VACUUM AND OIL LEVEL	0.250000

Material Resources

Description	Quantity	Unit Cost
OIL	1 QT	8.7500
		8.7500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.250000	0.075000	0.325000
Material Cost \$	8.750000		8.750000
Equipment Hours			0.325000

Components In This Task: 0831120

TASK DATA FORM

Task Code: 0831123

Component: VACUUM PUMP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: REPLACE REPLACE VACUUM PUMP
 Unit of Measure: COUNT Frequency of Occurrence: H: 5.00 A: 10.00 L: 15.00
 Persons per Team: 2 Task Duration: 2.9250 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE OLD UNIT, INSTALL NEW	4.500000

Material Resources

Description	Quantity	Unit Cost
PUMP	1	2502.0000
		2502.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.500000	1.350000	5.850000
Material Cost \$	2502.000000		2502.000000
Equipment Hours			2.925000

Components In This Task: 0831120

TASK DATA FORM

Task Code: 0831131

Component: GAS COMPRESSOR 7 1/2 HP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: PM CHECK AND ADJUST
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 1.4690 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK COMPRESSOR OIL LEVEL	0.017000
2.CHECK TENSION ON V-BELT	0.029000
3.REPLACE V-BELT	0.245000
4.DRAIN MOISTURE FROM AIR TANK	0.025000
5.CLEAN AIR INTAKE FILTER ON COMP	0.136000
6.CLEAN RESUABLE OIL FILTER	0.139000
7.CHECK OPERATION OF PRESS. VALVE	0.083000
8.CLEAN COOLING FINS	0.081000
9.CHECK MOTOR	0.046000
10.CHECK COMPRESSOR CIRCUITS	0.139000
11.PERFORM OPERATION	0.173000
12.FILL OUT MAINTENANCE REPORT	0.017000

Material Resources

Description	Quantity	Unit Cost
V-BELT	2	1.3800
		2.7600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.130000	0.339000	1.469000
Material Cost \$	2.760000		2.760000
Equipment Hours			1.469000

Components In This Task: 0831130

TASK DATA FORM

Task Code: 0831132

Component: GAS COMPRESSOR 7 1/2 HP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: M/R REPAIR COMPRESSOR
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 2 Task Duration: 6.6365 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REPAIR COMPRESSOR	10.210000

Material Resources

Description	Quantity	Unit Cost
REPAIR KIT	1	25.0000
		25.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	10.210000	3.063000	13.273000
Material Cost \$	25.000000		25.000000
Equipment Hours			6.636500

Components In This Task: 0831130

TASK DATA FORM

Task Code: 0831133

Component: GAS COMPRESSOR 7 1/2 HP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: REPLACE COMPRESSOR
 Unit of Measure: COUNT Frequency of Occurrence: H: 19.00 A: 25.00 L: 31.00
 Persons per Team: 2 Task Duration: 1.9500 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REMOVE COMPRESSOR, INSTALL NEW	3.000000	COMPRESSOR	1	3150.1100
				3150.1100

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.000000	0.900000	3.900000
Material Cost \$	3150.110000		3150.110000
Equipment Hours			1.950000

Components In This Task: 0831130

TASK DATA FORM

Task Code: 0831141

Component: GAS COMPRESSOR > 15 HP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: PM CHECK AND ADJUST
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 1.4690 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.CHECK COMPRESSOR OIL LEVEL	0.017000	V-BELT	3	1.3800
2.CHECK TENSION ON V-BELT	0.029000			4.1400
3.REPLACE V-BELT	0.245000			
4.DRAIN MOISTURE FROM AIR TANK	0.025000			
5.CLEAN AIR INTAKE FILTER ON COMP	0.136000			
6.CLEAN RESUABLE OIL FILTER	0.139000			
7.CHECK OPERATION OF PRESS. VALVE	0.083000			
8.CLEAN COOLING FINS	0.081000			
9.CHECK MOTOR	0.046000			
10.CHECK COMPRESSOR CIRCUITS	0.139000			
11.PERFORM OPERATION	0.173000			
12.FILL OUT MAINTENANCE REPORT	0.017000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.130000	0.339000	1.469000
Material Cost \$	4.140000		4.140000
Equipment Hours			1.469000

Components In This Task: 0831140

TASK DATA FORM

Task Code: 0831142

Component: GAS COMPRESSOR > 15 HP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: M/R REPAIR COMPRESSOR
 Unit of Measure: COUNT Frequency of Occurrence: M: 3.50 A: 4.00 L: 4.50
 Persons per Team: 2 Task Duration: 6.6365 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1. REPAIR COMPRESSOR	10.210000	REPAIR KIT	50.0000
			50.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	10.210000	3.063000	13.273000
Material Cost \$	50.000000		50.000000
Equipment Hours			6.636500

Components In This Task: 0831140

TASK DATA FORM

Task Code: 0831143

Component: GAS COMPRESSOR > 15 HP System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: REPLACE REPLACE COMPRESSOR
 Unit of Measure: COUNT Frequency of Occurrence: M: 19.00 A: 25.00 L: 31.00
 Persons per Team: 2 Task Duration: 2.2750 hours Once every (M,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1. REMOVE COMPRESSOR, INSTALL NEW	3.500000	COMPRESSOR	5050.5600
			5050.5600

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.500000	1.050000	4.550000
Material Cost \$	5050.560000		5050.560000
Equipment Hours			2.275000

Components In This Task: 0831140

TASK DATA FORM

Task Code: 0831151

Component: COMPRESSED AIR DRYER System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: M/R RECHARGE SYSTEM
 Unit of Measure: COOY Frequency of Occurrence: H: 2.00 A: 5.00 L: 8.00
 Persons per Team: 1 Task Duration: 0.6500 hours Once every (H,A,L) years
 Trade: REFRIG./AIR COND. Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
1.ADD FREON	0.500000	FREON	5 LBS
			Unit Cost
			2.5000
			12.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.500000	0.150000	0.650000
Material Cost \$	12.500000		12.500000
Equipment Hours			0.650000

Components In This Task: 0831150

TASK DATA FORM

Task Code: 0831152

Component: COMPRESSED AIR DRYER System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: M/R REPLACE COMPRESSOR
 Unit of Measure: COOY Frequency of Occurrence: H: 8.00 A: 10.00 L: 12.00
 Persons per Team: 1 Task Duration: 2.2750 hours Once every (H,A,L) years
 Trade: REFRIG./AIR COND. Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
1.REMOVE COMPRESSOR	0.500000	COMPRESSOR	1
2.INSTALL NEW UNIT	0.750000	DRYER	1
3.RECHARGE SYSTEM	0.500000	FREON	10 LBS.
			Unit Cost
			350.0000
			15.0000
			1.6700
			381.7000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.750000	0.525000	2.275000
Material Cost \$	381.700000		381.700000
Equipment Hours			2.275000

Components In This Task: 0831150

TASK DATA FORM

Task Code: 0831153

Component: COMPRESSED AIR DRYER System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: PH CHECK OPERATION
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 0.3250 hours Once every (H,A,L) years
 Trade: REFRIG./AIR COND. Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK OPERATION OF UNIT	0.250000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.250000	0.075000	0.325000
Material Cost \$	0.000000		0.000000
Equipment Hours			0.325000

Components In This Task: 0831150

TASK DATA FORM

Task Code: 0831154

Component: COMPRESSED AIR DRYER System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: REPLACE COMPRESSED AIR DRYER
 Unit of Measure: COUNT Frequency of Occurrence: H: 10.00 A: 15.00 L: 20.00
 Persons per Team: 1 Task Duration: 1.9500 hours Once every (H,A,L) years
 Trade: REFRIG./AIR COND. Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD UNIT, INSTALL NEW	1.500000

Material Resources

Description	Quantity	Unit Cost
UNIT	1	1680.0000
		1680.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.500000	0.450000	1.950000
Material Cost \$	1680.000000		1680.000000
Equipment Hours			1.950000

Components In This Task: 0831150

TASK DATA FORM

Task Code: 0831211

Component: HOSE, COMPRESSED AIR System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: REPLACE REPLACE HOSE
 Unit of Measure: COONT Frequency of Occurrence: H: 2.50 A: 5.00 L: 7.50
 Persons per Team: 1 Task Duration: 0.4680 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE AIR HOSE, INSTALL NEW	0.360000

Material Resources

Description	Quantity	Unit Cost
HOSE	10 ft	2.2100
		22.1000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.360000	0.108000	0.468000
Material Cost \$	22.100000		22.100000
Equipment Hours			0.468000

Components In This Task: 0832210 0831210

TASK DATA FORM

Task Code: 0831311

Component: PIPE/FITTINGS COMPR. AIR System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: M/R GENERAL MAINTENANCE
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 1.50 A: 2.00 L: 2.50
 Persons per Team: 1 Task Duration: 0.0195 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.GENERAL MAINTENANCE	0.015000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.015000	0.004500	0.019500
Material Cost \$	0.000000		0.000000
Equipment Hours			0.019500

Components In This Task: 0832310 0831310

TASK DATA FORM

Task Code: 0831312

Component: PIPE/FITTINGS COMPR. AIR System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: 2EPLACE REPLACE PIPE AND FITTINGS, 10 FT.
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 2.00 A: 3.00 L: 4.00
 Persons per Team: 2 Task Duration: 5.3723 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK BREAK OR LEAK (1X)	0.012000
2.CUT WATER VALVE ON AND OFF	0.008000
3.REMOVE FIRST BROKEN SECTION	1.401000
4.REMOVE ADDITIONAL SECTIONS	0.605000
5.MATERIAL HANDLING	0.207000
6.CLEAN JOINTS	0.033000
7.INSTALL SECTION OF PIPE	1.579000
8.INSTALL LAST SECTION	4.413000
9.CHECK FOR LEAKS ADDITIONAL SECT	0.007000

Material Resources

Description	Quantity	Unit Cost
PIPE	10 ft	2.0800
		20.8000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	8.265000	2.479500	10.744500
Material Cost \$	20.800000		20.800000
Equipment Hours			5.372250

Components In This Task: 0832310 0831310

TASK DATA FORM

Task Code: 0831313

Component: PIPE/FITTINGS COMPR. AIR System: SPECIAL PLUMBING Subsystem: COMPRESSED AIR SYSTEMS
 Task Description: REPLACE REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 50.00 A: 75.00 L: 90.00
 Persons per Team: 2 Task Duration: 537.2250 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.CHECK BREAK OR LEAK	1.200000
2.CUT WATER VALVE ON AND OFF	0.800000
3.REMOVE FIRST BROKEN SECTION	140.100000
4.REMOVE ADDITIONAL SECTIONS	60.500000
5.MATERIAL HANDLING	20.700000
6.CLEAN JOINTS	3.300000
7.INSTALL SECTION OF PIPE	157.900000
8.INSTALL LAST SECTION	441.300000
9.CHECK FOR LEAKS ADDITIONAL SECT	0.700000

Material Resources

Description	Quantity	Unit Cost
PIPE	1000 FT	2.0800
		2080.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	826.500000	247.950000	1074.450000
Material Cost \$	2080.000000		2080.000000
Equipment Hours			537.225000

Components In This Task: 0831310 0832310

TASK DATA FORM

Task Code: 0832111

Component: SIMPLEX GAS COMPR., 1 HP. System: SPECIAL PLUMBING Subsystem: INDUSTRIAL GASEOUS SYS.
 Task Description: PM CHECK AND ADJUST
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 1.4690 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.CHECK COMPRESSOR OIL LEVEL	0.017000	V-BELT	1	1.3800
2.CHECK TENSION ON V-BELT	0.029000			1.3800
3.REPLACE V-BELT	0.245000			
4.DRAIN MOISTURE FROM AIR TANK	0.025000			
5.CLEAN AIR INTAKE FILTER ON COMP	0.136000			
6.CLEAN RESUABLE OIL FILTER	0.139000			
7.CHECK OPERATION OF PRESS. VALVE	0.083000			
8.CLEAN COOLING FINS	0.081000			
9.CHECK MOTOR	0.046000			
10.CHECK COMPRESSOR CIRCUITS	0.139000			
11.PERFORM OPERATION	0.173000			
12.FILL OUT MAINTENANCE REPORT	0.017000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	1.130000	0.339000	1.469000
Material Cost \$	1.380000		1.380000
Equipment Hours			1.469000

Components In This Task: 0831110 0832110

TASK DATA FORM

Task Code: 0832112

Component: SIMPLEX GAS COMPR., 1 HP. System: SPECIAL PLUMBING Subsystem: INDUSTRIAL GASEOUS SYS.
 Task Description: M/R REPAIR COMPRESSOR
 Unit of Measure: COUNT Frequency of Occurrence: H: 3.50 A: 4.00 L: 4.50
 Persons per Team: 2 Task Duration: 6.6365 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.REPAIR COMPRESSOR	10.210000	REPAIR KIT	1	12.4500
				12.4500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	10.210000	3.063000	13.273000
Material Cost \$	12.450000		12.450000
Equipment Hours			6.636500

Components In This Task: 0831110 0832110

TASK DATA FORM

Task Code: 0832113

Component: SIMPLEX GAS COMPR., 1 HP. System: SPECIAL PLUMBING Subsystem: INDUSTRIAL GASEOUS SYS.
 Task Description: REPLACE COMPRESSOR
 Unit of Measure: COUNT Frequency of Occurrence: H: 19.00 A: 25.00 L: 31.00
 Persons per Team: 2 Task Duration: 1.8395 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
T.REMOVE COMPRESSOR, INSTALL NEW	2.830000	COMPRESSOR	1288.5100
			1288.5100

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	2.830000	0.849000	3.679000
Material Cost \$	1288.510000		1288.510000
Equipment Hours			1.839500

Components In This Task: 0831110 0832110

TASK DATA FORM

Task Code: 0832211

Component: HOSE, INDUSTRIAL GAS System: SPECIAL PLUMBING Subsystem: INDUSTRIAL GASEOUS SYS.
 Task Description: REPLACE HOSE
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.50 A: 5.00 L: 7.50
 Persons per Team: 1 Task Duration: 0.4680 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
T.REMOVE AIR HOSE, INSTALL NEW	0.360000	HOSE	2.2100
			22.1000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.360000	0.108000	0.468000
Material Cost \$	22.100000		22.100000
Equipment Hours			0.468000

Components In This Task: 0831210 0832210

TASK DATA FORM

Task Code: 0832311

Component: PIPE/FITTINGS, INDUST. GAS System: SPECIAL PLUMBING Subsystem: INDUSTRIAL GASEOUS SYS.
 Task Description: M/R GENERAL MAINTENANCE
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 1.50 A: 2.00 L: 2.50
 Persons per Team: 1 Task Duration: 0.0195 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1. GENERAL MAINTENANCE	0.015000		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.015000	0.004500	0.019500
Material Cost \$	0.000000		0.000000
Equipment Hours			0.019500

Components In This Task: 0831310 0832310

TASK DATA FORM

Task Code: 0832312

Component: PIPE/FITTINGS, INDUST. GAS System: SPECIAL PLUMBING Subsystem: INDUSTRIAL GASEOUS SYS.
 Task Description: REPLACE PIPE AND FITTINGS, 10 FT.
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 3.00 A: 2.00 L: 5.00
 Persons per Team: 2 Task Duration: 5.3723 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Unit Cost
1. CHECK BREAK OR LEAK (1X)	0.012000		
2. CUT WATER VALVE ON AND OFF	0.008000		
3. REMOVE FIRST BROKEN SECTION	1.401000		
4. REMOVE ADDITIONAL SECTIONS	0.605000		
5. MATERIAL HANDLING	0.207000		
6. CLEAN JOINTS	0.033000		
7. INSTALL SECTION OF PIPE	1.579000		
8. INSTALL LAST SECTION	4.413000		
9. CHECK FOR LEAKS ADDITIONAL SECT	0.007000		
		PIPE 10 FT.	20.8000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	8.265000	2.479500	10.744500
Material Cost \$	20.800000		20.800000
Equipment Hours			5.372250

Components In This Task: 0831310 0832310

TASK DATA FORM

Task Code: 0832313

Component: PIPE/FITTINGS, INDUST. GAS System: SPECIAL PLUMBING Subsystem: INDUSTRIAL GASEOUS SYS.
 Task Description: REPLACE REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 50.00 A: 75.00 L: 90.00
 Persons per Team: 2 Task Duration: 537.2250 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.CHECK BREAK OR LEAK (1X)	1.200000	PIPE	1000 FT	2.0800
2.CUT WATER VALVE ON AND OFF	0.800000			2080.0000
3.REMOVE FIRST BROKEN SECTION	140.100000			
4.REMOVE ADDITIONAL SECTIONS	60.500000			
5.MATERIAL HANDLING	20.700000			
6.CLEAN JOINTS	3.300000			
7.INSTALL SECTION OF PIPE	157.900000			
8.INSTALL LAST SECTION	441.300000			
9.CHECK FOR LEAKS ADDITIONAL SECT	0.700000			

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	826.500000	247.950000	1074.450000
Material Cost \$	2080.000000		2080.000000
Equipment Hours			537.225000

Components In This Task: 0832310 0831310

TASK DATA FORM

Task Code: 0833111

Component: PIPE/FITTINGS, ANETHESIA System: SPECIAL PLUMBING Subsystem: SPECIAL GAS SYSTEM
 Task Description: M/R RESOLDER JOINT
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 9.50 A: 12.50 L: 15.50
 Persons per Team: 1 Task Duration: 0.1846 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources		
Subtask Description	Labor Hrs	Description	Quantity	Unit Cost
1.MEASURE, CUT & REAM BOTH ENDS	0.041000	SOLDER	.5 OZ	0.1600
2.ATTACH FITTING	0.101000			0.0800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.142000	0.042600	0.184600
Material Cost \$	0.080000		0.080000
Equipment Hours			0.184600

Components In This Task: 0814200 0833110

TASK DATA FORM

Task Code: 0833112

Component: PIPE/FITTINGS, ANETHESIA System: SPECIAL PLUMBING Subsystem: SPECIAL GAS SYSTEM
 Task Description: REPLACE INSTALL 10' SECTION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 10.00 A: 12.00 L: 15.00
 Persons per Team: 2 Task Duration: 2.7755 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
T.REMOVE 10' SECTION INSTALL NEW	4.270000	PIPE	10 FT
			Unit Cost
			1.0500
			10.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.270000	1.281000	5.551000
Material Cost \$	10.500000		10.500000
Equipment Hours			2.775500

Components In This Task: 0814200 0833110

TASK DATA FORM

Task Code: 0833113

Component: PIPE/FITTINGS, ANETHESIA System: SPECIAL PLUMBING Subsystem: SPECIAL GAS SYSTEM
 Task Description: REPLACE REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 15.00 A: 25.00 L: 50.00
 Persons per Team: 2 Task Duration: 277.5500 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
T.REMOVE OLD, INSTALL NEW	427.000000	PIPE	1000 FT
			Unit Cost
			1.0500
			1050.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	427.000000	128.100000	555.100000
Material Cost \$	1050.000000		1050.000000
Equipment Hours			277.550000

Components In This Task: 0814200 0833110

TASK DATA FORM

Task Code: 0833211

Component: PIPE/FITTINGS, OXYGEN System: SPECIAL PLUMBING Subsystem: SPECIAL GAS SYSTEM
 Task Description: M/R RESOLDER JOINT
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 9.50 A: 12.50 L: 15.50
 Persons per Team: 1 Task Duration: 0.1846 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.MEASURE, CUT & DRESS BOTH ENDS	0.041000
2.ATTACH FITTING	0.101000

Material Resources

Description	Quantity	Unit Cost
SOLDER	.5 OZ	0.1600
		0.0800

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.142000	0.042600	0.184600
Material Cost \$	0.080000		0.080000
Equipment Hours			0.184600

Components In This Task: 0814200 0833210

TASK DATA FORM

Task Code: 0833212

Component: PIPE/FITTINGS, OXYGEN System: SPECIAL PLUMBING Subsystem: SPECIAL GAS SYSTEM
 Task Description: REPLACE INSTALL 10' SECTION
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 10.00 A: 12.00 L: 15.00
 Persons per Team: 2 Task Duration: 2.7755 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE 10' SECTION INSTALL NEW	4.270000

Material Resources

Description	Quantity	Unit Cost
PIPE	10 FT	1.0500
		10.5000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.270000	1.281000	5.551000
Material Cost \$	10.500000		10.500000
Equipment Hours			2.775500

Components In This Task: 0814200 0833210

TASK DATA FORM

Task Code: 0833213

Component: PIPE/FITTINGS, OXYGEN System: SPECIAL PLUMBING Subsystem: SPECIAL GAS SYSTEM
 Task Description: REPLACE REPLACE PIPE AND FITTINGS
 Unit of Measure: 1000 LINEAR FEET Frequency of Occurrence: H: 15.00 A: 25.00 L: 50.00
 Persons per Team: 2 Task Duration: 277.5500 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
1.REMOVE OLD, INSTALL NEW	427.000000	PIPE	1000 FT
			Unit Cost
			1.0500
			1050.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	427.000000	128.100000	555.100000
Material Cost \$	1050.000000		1050.000000
Equipment Hours			277.550000

Components In This Task: 0814200 0833210

TASK DATA FORM

Task Code: 0841101

Component: DISHWASHER System: SPECIAL PLUMBING FIXT. Subsystem: KITCHEN SYSTEMS
 Task Description: M/R GENERAL MAINTENANCE AND REPAIR
 Unit of Measure: COUNT Frequency of Occurrence: H: 2.00 A: 3.00 L: 4.00
 Persons per Team: 1 Task Duration: 3.9000 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
1.REPAIR	3.000000	REPAIR KIT	1
			Unit Cost
			14.5400
			14.5400

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	3.000000	0.900000	3.900000
Material Cost \$	14.540000		14.540000
Equipment Hours			3.900000

Components In This Task: 0841100

TASK DATA FORM

Task Code: 0841102

Component: DISHWASHER System: SPECIAL PLUMBING FIXT. Subsystem: KITCHEN SYSTEMS
 Task Description: REPLACE REPLACE UNIT
 Unit of Measure: COUNT Frequency of Occurrence: H: 7.50 A: 10.00 L: 12.50
 Persons per Team: 2 Task Duration: 3.0030 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE UNIT AND INSTALL NEW	4.620000

Material Resources

Description	Quantity	Unit Cost
DISHWASHER	1	433.3300
		433.3300

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.620000	1.386000	6.006000
Material Cost \$	433.330000		433.330000
Equipment Hours			3.003000

Components In This Task: 0841100

TASK DATA FORM

Task Code: 0841201

Component: WASTE DISPOSAL, RESIDENT. System: SPECIAL PLUMBING FIXT. Subsystem: KITCHEN SYSTEMS
 Task Description: H/R UNSTOP
 Unit of Measure: COUNT Frequency of Occurrence: H: 0.67 A: 1.00 L: 1.33
 Persons per Team: 1 Task Duration: 0.8710 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.UNSTOP CLOGGED UNIT.	0.670000

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.670000	0.201000	0.871000
Material Cost \$	0.000000		0.000000
Equipment Hours			0.871000

Components In This Task: 0841200

TASK DATA FORM

Task Code: 0841202

Component: WASTE DISPOSAL, RESIDENT. System: SPECIAL PLUMBING FIXT. Subsystem: KITCHEN SYSTEMS
 Task Description: REPLACE REPLACE UNIT
 Unit of Measure: COUNT Frequency of Occurrence: H: 6.00 A: 8.00 L: 10.00
 Persons per Team: 1 Task Duration: 1.2740 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 1

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
T.REMOVE UNIT, INSTALL NEW	0.980000	DISPOSAL	1
			Unit Cost
			104.1700
			104.1700

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.980000	0.294000	1.274000
Material Cost \$	104.170000		104.170000
Equipment Hours			1.274000

Components In This Task: 0841200

TASK DATA FORM

Task Code: 0841301

Component: WATER SOFTENER System: SPECIAL PLUMBING FIXT. Subsystem: KITCHEN SYSTEMS
 Task Description: M/R GENERAL MAINTENANCE AND REPAIR
 Unit of Measure: COUNT Frequency of Occurrence: H: 5.00 A: 8.00 L: 10.00
 Persons per Team: 1 Task Duration: 0.6500 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources		Material Resources	
Subtask Description	Labor Hrs	Description	Quantity
T.REPAIR SEQUENCE TIMER	0.500000	MOTOR	1
			Unit Cost
			5.0000
			5.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.500000	0.150000	0.650000
Material Cost \$	5.000000		5.000000
Equipment Hours			0.650000

Components In This Task: 0841300

TASK DATA FORM

Task Code: 0841302Component: WATER SOFTENERSystem: SPECIAL PLUMBING FIXT.Subsystem: KITCHEN SYSTEMSTask Description: PH CHECK OPERATION AND ADD SALTUnit of Measure: COUNT Frequency of Occurrence: H: 0.08 A: 0.08 L: 0.08Persons per Team: 1 Task Duration: 0.5850 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.CHECK OPERATION	0.200000
2.ADD SALT	0.250000

Material Resources

Description	Quantity	Unit Cost
SALT	320 LBS	0.1000
		32.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.450000	0.135000	0.585000
Material Cost \$	32.000000		32.000000
Equipment Hours			0.585000

Components In This Task: 0841300

TASK DATA FORM

Task Code: 0841303Component: WATER SOFTENERSystem: SPECIAL PLUMBING FIXT.Subsystem: KITCHEN SYSTEMSTask Description: REPLACE REPLACE SOFTENERUnit of Measure: COUNT Frequency of Occurrence: H: 10.00 A: 15.00 L: 20.00Persons per Team: 2 Task Duration: 2.6000 hours

Once every (H,A,L) years

Trade: PLUMBINGTask Classification: 1

Labor Resources

Subtask Description	Labor Hrs
1.REMOVE OLD UNIT, INSTALL NEW	4.000000

Material Resources

Description	Quantity	Unit Cost
SOFTENER	1	690.0000
		690.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	4.000000	1.200000	5.200000
Material Cost \$	690.000000		690.000000
Equipment Hours			2.600000

Components In This Task: 0841300

TASK DATA FORM

Task Code: 0844111

Component: SPRINKLER HEAD System: SPECIAL PLUMBING FIXT. Subsystem: SPRINKLER SYSTEM
 Task Description: M/R REPAIR OPEN HEAD
 Unit of Measure: COUNT Frequency of Occurrence: H: 5.00 A: 10.00 L: 15.00
 Persons per Team: 1 Task Duration: 0.6500 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
T.REPLACE THERMOSTATIC ELEMENT	0.500000

Material Resources

Description	Quantity	Unit Cost
ELEMENT	1	2.0000
		2.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.500000	0.150000	0.650000
Material Cost \$	2.000000		2.000000
Equipment Hours			0.650000

Components In This Task: 0844110

TASK DATA FORM

Task Code: 0844112

Component: SPRINKLER HEAD System: SPECIAL PLUMBING FIXT. Subsystem: SPRINKLER SYSTEM
 Task Description: PM INSPECT SPRINKLER SYSTEM
 Unit of Measure: COUNT Frequency of Occurrence: H: 1.00 A: 1.00 L: 1.00
 Persons per Team: 1 Task Duration: 0.0134 hours Once every (H,A,L) years
 Trade: PLUMBING Task Classification: 0

Labor Resources

Subtask Description	Labor Hrs
1.INSPECT WATER PRESSURE GAUGES	0.003400
2.TEST FIRE ALARM (WET OR DRY)	0.002300
3.MOTOR, EXPOSED, INSPECT	0.000010
4.INSPECT,VISUAL,MEDIUM PART	0.004600

Material Resources

Description	Quantity	Unit Cost
		0.0000

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.010310	0.003093	0.013403
Material Cost \$	0.000000		0.000000
Equipment Hours			0.013403

Components In This Task: 0844110

TASK DATA FORM

Task Code: 0844113

Component: SPRINKLER HEAD System: SPECIAL PLUMBING FIXT. Subsystem: SPRINKLER SYSTEM

Task Description: REPLACE REPLACE SPRINKLER HEAD

Unit of Measure: COUNT Frequency of Occurrence: H: 15.00 A: 20.00 L: 25.00

Persons per Team: 1 Task Duration: 0.3250 hours Once every (H,A,L) years

Trade: PLUMBING Task Classification: 1

Labor Resources

Subtask Description	Labor Hrs
T.REMOVE OLD, INSTALL NEW	0.250000

Material Resources

Description	Quantity	Unit Cost
HEAD	1	3.9500
		3.9500

SUMMARY

Resources UOM	Direct	Indirect	Total
Labor Hours	0.250000	0.075000	0.325000
Material Cost \$	3.950000		3.950000
Equipment Hours			0.325000

Components In This Task: 0844110

APPENDIX D:

TASK DATA BASE RESOURCE SUMMARY TABLES

UM=Unit of Measure		TRD=Trade Index	Class=Task Classification			TPMTH=Task	Work Performance	Method		
CACES	DESCRIPTION	UM	TRD	CLASS	FREQ	AVE FREQ	LABOR HOURS	MATERIAL COSTS	EQUIPMENT HOURS	TPMTH
4	0811100 TANKLESS WATER CLOSET	1	3	0	8.00	10.00	12.00	11.300000	.110500	IC1111
0811101	REPLACE FLUSH VALVE	1	3	0	3.00	5.00	7.00	1.582100	1.582100	IC1111
0811102	UNPLUG CLOGGED LINE	1	3	0	26.00	35.00	44.00	177.450000	2.022800	IC1111
4	0811200 FLUSH TANK WATER CLOSET	1	3	0	3.00	5.00	7.00	1.320000	1.582100	IC1111
0811201	UNPLUG CLOGGED LINE	1	3	0	4.00	5.00	6.00	.170000	.187200	IC1111
0811202	REPLACE WASHER IN BALL COCK	1	3	0	13.00	15.00	17.00	15.210300	1.210300	IC1111
0811203	REPLACE WORN PARTS IN WATER CLOSET	1	3	0	17.00	20.00	23.00	.133900	.139000	IC1111
0811204	INSTALL GASKET IN SPUD CONNECTION	1	3	0	26.00	35.00	44.00	74.590000	4.111900	IC1111
0811205	REPLACE WATER CLOSET	1	3	0	6.00	7.00	8.00	11.300000	.117000	IC1111
4	0811300 URINAL	1	3	0	4.00	5.00	6.00	1.920000	2.401100	IC1111
0811301	REPLACE FLUSH VALVE	1	3	0	26.00	35.00	44.00	158.000000	2.133300	IC1111
0811302	UNPLUG LINE	1	3	0	6.00	7.00	8.00	.120000	.133900	IC1111
0811303	REPLACE URINAL	1	3	0	1.00	2.00	3.00	.140000	.144300	IC1111
4	0811400 LAVATORY, IRON, ENAMEL	1	3	0	9.00	10.00	11.00	.197600	.197600	IC1111
0811401	REPLACE WASHER IN SPUD CONNECTION	1	3	0	8.00	10.00	12.00	32.500000	.817700	IC1111
0811402	REPLACE WASHER IN FAUCET	1	3	0	1.67	2.00	2.33	.540000	.82300	IC1111
0811403	REPLACE SUPPORT RODS	1	3	0	30.00	40.00	50.00	130.610000	1.995500	IC1111
0811404	REPLACE FAUCETS	1	3	0	6.00	7.00	8.00	.120000	.133900	IC1111
0811405	CLEAN OUT STRAINER AND P TRAP	1	3	0	1.00	2.00	3.00	.140000	.144300	IC1111
0811406	REPLACE LAVATORY	1	3	0	9.00	10.00	11.00	.197600	.197600	IC1111
4	0811500 LAVATORY, VITREOUS CHINA	1	3	0	8.00	10.00	12.00	32.500000	.817700	IC1111
0811501	REPLACE WASHER IN SPUD CONNECTION	1	3	0	1.67	2.00	2.33	.540000	.82300	IC1111
0811502	REPLACE WASHER IN FAUCET	1	3	0	26.00	35.00	44.00	134.140000	1.996800	IC1111
0811503	REPLACE SUPPORT RODS	1	3	0	6.00	7.00	8.00	.120000	.133900	IC1111
0811504	REPLACE FAUCETS	1	3	0	1.00	2.00	3.00	.140000	.144300	IC1111
0811505	CLEAN OUT STRAINER AND P TRAP	1	3	0	9.00	10.00	11.00	.197600	.197600	IC1111
0811506	REPLACE LAVATORY	1	3	0	8.00	10.00	12.00	32.500000	.817700	IC1111
4	0811600 LAVATORY, ENAMELED STEEL	1	3	0	1.67	2.00	2.33	.540000	.82300	IC1111
0811601	REPLACE WASHER IN SPUD CONNECTION	1	3	0	26.00	35.00	44.00	134.140000	1.996800	IC1111
0811602	REPLACE WASHER IN FAUCET	1	3	0	6.00	7.00	8.00	.120000	.133900	IC1111
0811603	REPLACE SUPPORT RODS	1	3	0	1.00	2.00	3.00	.140000	.144300	IC1111
0811604	REPLACE FAUCETS	1	3	0	9.00	10.00	11.00	.197600	.197600	IC1111
0811605	CLEAN OUT STRAINER AND P TRAP	1	3	0	8.00	10.00	12.00	32.500000	.817700	IC1111
0811606	REPLACE LAVATORY	1	3	0	1.67	2.00	2.33	.540000	.82300	IC1111
4	0811700 BATH TUB, CAST IRON	1	3	0	26.00	35.00	44.00	58.300000	1.996800	IC1111
0811701	INSPECT/CLEAN SHOWER HEAD	1	3	0	2.67	3.00	3.33	.135000	.115700	IC1111
0811702	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.140000	.144300	IC1111
0811703	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	32.500000	.817700	IC1111
0811704	RESEAL	1	3	0	4.00	5.00	6.00	.720000	.767000	IC1111
0811705	REPAIR DIVERTER VALVE	1	3	0	3.50	4.00	4.50	12.500000	1.027000	IC1111
0811706	UNSTOP	1	3	0	5.00	6.00	7.00	.572000	.572000	IC1111
0811707	REPLACE TUB	1	3	0	30.00	40.00	50.00	321.980000	13.000000	IC1111
4	0811800 BATH TUB, ENAMELED STEEL	1	3	0	2.67	3.00	3.33	.135000	.115700	IC1111
0811801	INSPECT/CLEAN SHOWER HEAD	1	3	0	1.00	2.00	3.00	.140000	.144300	IC1111
0811802	REPLACE FAUCET WASHER	1	3	0	8.00	10.00	12.00	32.500000	.817700	IC1111
0811803	REPLACE FAUCETS	1	3	0	4.00	5.00	6.00	.720000	.767000	IC1111
0811804	RESEAL	1	3	0	3.50	4.00	4.50	12.500000	1.027000	IC1111
0811805	REPAIR DIVERTER VALVE	1	3	0	1.67	2.00	2.33	.540000	.572000	IC1111
0811806	UNSTOP	1	3	0	26.00	35.00	44.00	164.270000	3.341000	IC1111
0811807	REPLACE TUB	1	3	0	3.50	4.00	4.50	12.500000	1.027000	IC1111
4	0811900 SHOWER, TERRAZO	1	3	0	3.00	3.00	3.33	.135000	.115700	IC1111
0811901	INSPECT/CLEAN SHOWER HEAD	1	3	0	3.00	3.00	3.33	.135000	.115700	IC1111

UM=Unit of Measure		TRD=Trade Index	Class=Task Classification			TWPMTN=Task Work Performance		Method			
CACES	DESCRIPTION	UM	TRD	CLASS	HIGH FREQ	AVE FREQ	LOW FREQ	LABOR HOURS	MATERIAL COSTS	EQUIPMENT HOURS	TWPMTH
0811902	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.144300	.140000	.144300	IC1111
0811903	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	.817700	46.000000	.817700	IC1111
0811904	RESEAL	1	3	0	4.00	5.00	6.00	.767000	.720000	.767000	IC1111
0811905	UNSTOP	1	3	0	1.67	2.00	2.33	.572000	.540000	.572000	IC1111
0811906	REPLACE SHOWER	1	3	0	20.00	30.00	40.00	98.917000	229.900000	98.917000	IC1111
4 10	0811A00 SHOWER, ENAMELED STEEL										
0811A01	INSPECT/CLEAN SHOWER HEAD	1	3	0	2.67	3.00	3.33	.115700	.135000	.115700	IC1111
0811A02	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.144300	.140000	.144300	IC1111
0811A03	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	.817700	46.000000	.817700	IC1111
0811A04	RESEAL	1	3	0	4.00	5.00	6.00	.767000	.720000	.767000	IC1111
0811A05	UNSTOP	1	3	0	1.67	2.00	2.33	.572000	.540000	.572000	IC1111
0811A06	REPLACE SHOWER	1	3	0	26.00	35.00	44.00	3.367000	248.000000	3.367000	IC1111
4 11	0811B00 SHOWER, PLASTIC										
0811B01	INSPECT/CLEAN SHOWER HEAD	1	3	0	2.67	3.00	3.33	.115700	.135000	.115700	IC1111
0811B02	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.144300	.140000	.144300	IC1111
0811B03	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	.817700	46.000000	.817700	IC1111
0811B04	RESEAL	1	3	0	4.00	5.00	6.00	.767000	.720000	.767000	IC1111
0811B05	UNSTOP	1	3	0	1.67	2.00	2.33	.572000	.540000	.572000	IC1111
0811B06	REPLACE SHOWER AND FITTINGS	1	3	0	15.00	20.00	25.00	3.367000	99.990000	3.367000	IC1111
4 12	0811C00 SHOWER, ALUMINUM										
0811C01	INSPECT/CLEAN SHOWER HEAD	1	3	0	2.67	3.00	3.33	.115700	.135000	.115700	IC1111
0811C02	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.145600	.140000	.145600	IC1111
0811C03	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	.817700	46.000000	.817700	IC1111
0811C04	RESEAL	1	3	0	4.00	5.00	6.00	.767000	.720000	.767000	IC1111
0811C05	UNSTOP	1	3	0	1.67	2.00	2.33	.572000	.540000	.572000	IC1111
0811C06	REPLACE SHOWER AND FITTINGS	1	3	0	19.00	25.00	31.00	3.367000	169.500000	3.367000	IC1111
4 13	0811D00 SINK, IRON ENAMEL										
0811D01	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.144300	.140000	.144300	IC1111
0811D02	CLEAN TRAP	1	3	0	2.50	3.00	3.50	.166400	.270000	.166400	IC1111
0811D03	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	.817700	36.000000	.817700	IC1111
0811D04	UNSTOP	1	3	0	1.67	2.00	3.50	.572000	.540000	.572000	IC1111
0811D05	REPAIR STRAINER	1	3	0	7.00	8.00	9.00	1.170000	1.100000	1.170000	IC1111
0811D06	REPLACE SINK	1	3	0	26.00	35.00	44.00	3.068000	138.760000	3.068000	IC1111
4 14	0811E00 SINK, ENAMELED STEEL										
0811E01	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.144300	.140000	.144300	IC1111
0811E02	CLEAN TRAP	1	3	0	2.50	3.00	3.50	.167700	.270000	.167700	IC1111
0811E03	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	.817700	36.000000	.817700	IC1111
0811E04	UNSTOP	1	3	0	1.67	2.00	3.50	.572000	.540000	.572000	IC1111
0811E05	REPAIR STRAINER	1	3	0	7.00	8.00	9.00	1.170000	1.100000	1.170000	IC1111
0811E06	REPLACE SINK	1	3	0	26.00	35.00	44.00	3.068000	67.000000	3.068000	IC1111
4 15	0811F00 SINK, STAINLESS STEEL										
0811F01	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.145600	.140000	.145600	IC1111
0811F02	CLEAN TRAP	1	3	0	2.50	3.00	3.50	.167700	.270000	.167700	IC1111
0811F03	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	.817700	42.000000	.817700	IC1111
0811F04	UNSTOP	1	3	0	1.67	2.00	3.50	.572000	.540000	.572000	IC1111
0811F05	REPAIR STRAINER	1	3	0	7.00	8.00	9.00	1.170000	1.100000	1.170000	IC1111
0811F06	REPLACE SINK	1	3	0	30.00	40.00	50.00	3.068000	198.690000	3.068000	IC1111
4 16	0811G00 SINK, PLASTIC										
0811G01	REPLACE FAUCET WASHER	1	3	0	1.00	2.00	3.00	.144300	.140000	.144300	IC1111
0811G02	CLEAN TRAP	1	3	0	2.50	3.00	3.50	.167700	.270000	.167700	IC1111
0811G03	REPLACE FAUCETS	1	3	0	8.00	10.00	12.00	.817700	36.000000	.817700	IC1111
0811G04	UNSTOP	1	3	0	1.67	2.00	3.50	.572000	.540000	.572000	IC1111
0811G05	REPAIR STRAINER	1	3	0	7.00	8.00	9.00	1.170000	1.100000	1.170000	IC1111

UM=Unit of Measure		TRD=Trade Index	Class=Task Classification			TUPMTH=Task Work Performance			Method		
CACES	DESCRIPTION	UM	TRD	CLASS	FREQ	HIGH AVE FREQ	LOW FREQ	LABOR HOURS	MATERIAL COSTS	EQUIPMENT HOURS	TUPMTH
0811G06	REPLACE SINK AND FITTINGS	1	3	0	11.00	15.00	19.00	2.834000	59.510000	2.834000	IC1111
4 17	0811H00 DRINKING FOUNTAIN										
0811H01	CHECK/MINOR REPAIRS	1	3	0	.50	1.00	1.50	.676000	.800000	.676000	IC1111
0811H02	REPAIR INTERNAL LEAKS	1	3	0	3.50	7.00	4.50	.624000	.730000	.624000	IC1111
0811H03	CORRECT WATER PRESSURE	1	3	0	1.67	2.00	2.33	.572000	.000000	.572000	IC1111
0811H04	REPLACE FREON	1	3	0	1.67	2.00	2.33	1.118000	1.308000	1.118000	IC1111
0811H05	REPAIR DRAIN LEAK	1	3	0	3.50	4.00	4.50	.572000	.670000	.572000	IC1111
0811H06	UNSTOP DRAIN	1	3	0	3.50	4.00	4.50	.572000	.680000	.572000	IC1111
0811H07	REPLACE FOUNTAIN	1	3	0	8.00	10.00	12.00	1.378000	4.68.300000	1.378000	IC1111
4 18	0811I00 SPIGOT										
3 2	0812000 WASTE & VENT										
4 1	0812100 PIPE & FITTINGS										
0812101	UNCLOG FLOOR DRAIN	4	3	0	15.00	20.00	25.00	5.200000	24.600000	5.200000	IC1111
0812102	UNCLOG MAIN DRAIN	4	3	0	7.50	10.00	12.50	.819000	3.840000	.819000	IC1111
0812103	REPLACE PIPE & FITTINGS	4	3	0	20.00	40.00	60.00	323.479000	2040.000000	323.479000	IC1111
4 2	0812200 FLOOR DRAIN, WITHOUT BUCKET										
0812201	CLEAN DRAIN	1	3	0	3.00	4.00	5.00	2.067000	.000000	2.067000	IC1111
0812202	REPLACE STRAINER	1	3	0	15.00	20.00	25.00	.572000	.540000	.572000	IC1111
0812203	REPLACE FLOOR DRAIN	1	3	0	20.00	40.00	60.00	1.534000	87.680000	1.534000	IC1111
4 3	0812300 FLOOR DRAIN, WITH BUCKET										
0812301	CLEAN OUT BUCKET	1	3	0	2.00	5.00	8.00	3.874000	.000000	3.874000	IC1111
0812302	REPLACE STRAINER	1	3	0	15.00	20.00	25.00	.572000	.270000	.572000	IC1111
0812303	REPLACE FLOOR DRAIN	1	3	0	20.00	40.00	60.00	3.068000	173.000000	3.068000	IC1111
3 3	0813000 COLD WATER										
4 1	0813100 PIPE & FITTINGS, STEEL OR CAST IRON										
0813101	INSTALL NEW GASKET	4	3	0	37.00	50.00	63.00	.325000	.160000	.325000	IC1111
0813102	REPLACE 10' SECTION	4	3	0	10.00	12.00	15.00	10.744500	18.200000	10.744500	IC1111
0813103	REPLACE PIPE AND FITTINGS	4	3	0	50.00	75.00	90.00	1074.450000	1820.000000	1074.450000	IC1111
4 2	0813200 PIPE & FITTINGS, COPPER										
0813201	RESOLDER JOINT	4	3	0	8.00	10.00	12.00	.184600	.080000	.184600	IC1111
0813202	INSTALL 10' SECTION	4	3	0	10.00	20.00	30.00	5.551000	10.500000	5.551000	IC1111
0813203	REPLACE PIPE AND FITTINGS	4	3	0	15.00	25.00	50.00	55.510000	1050.000000	55.510000	IC1111
4 3	0813300 VALVE, NON-DRAIN 3/8" - 1 1/2"										
0813301	REPACK GLAND	1	3	0	8.50	10.00	11.50	.353600	.420000	.353600	IC1111
0813302	REPLACE OLD VALVE WITH NEW, PARTIAL	1	3	0	15.00	20.00	25.00	.260000	10.400000	.260000	IC1111
4 4	0813400 VALVE, NON-DRAIN 2"-3"										
0813401	REPACK GLAND	1	3	0	8.50	10.00	11.50	.354900	.840000	.354900	IC1111
0813402	REPLACE OLD VALVE WITH NEW, PARTIAL	1	3	0	15.00	20.00	25.00	.572000	71.670000	.572000	IC1111
4 5	0813500 VALVE, NON-DRAIN 4"-6"										
0813501	REPACK GLAND	1	3	0	.50	1.00	1.50	.633100	.530000	.633100	IC1111
0813502	REMOVE OLD VALVE INSTALL NEW, PARTIAL	1	3	0	15.00	20.00	25.00	3.900000	118.330000	3.900000	IC1111
4 6	0813600 VALVE, DRAIN										
0813601	REPACK GLAND	1	3	0	2.00	2.50	3.00	.354900	.315000	.354900	IC1111
0813602	REPLACE VALVE STEM ASSEMBLY	1	3	0	6.50	7.50	8.50	.055900	5.500000	.055900	IC1111
0813603	REMOVE OLD VALVE, INSTALL NEW	1	3	0	15.00	20.00	25.00	.507000	19.080000	.507000	IC1111
4 7	0813700 EXPANSION CHAMBER										
0813701	REFILL	1	3	0	3.00	5.00	7.00	.039000	.000000	.039000	IC1111
0813702	REMOVE OLD CHAMBER, INSTALL NEW	1	3	0	7.00	10.00	13.00	1.274000	196.690000	1.274000	IC1111
4 8	0813800 WATER METER										
0813801	OVERHAUL	1	3	0	11.00	13.00	15.00	1.300000	3.050000	1.300000	IC1111
0813802	REMOVE OLD METER, INSTALL NEW	1	3	0	19.00	25.00	31.00	.793000	81.580000	.793000	IC1111
4 9	0813900 INSULATION, PIPE										
0813901	REPAIR BROKEN INSULATION	4	3	0	4.00	5.00	6.00	.338000	.400000	.338000	IC1111

CAGES	DESCRIPTION	UM	TRD	CLASS	Task Classification		TUPMTH=Task	Work	Performance	Method	EQUIPMENT
					HIGH	AVE					
					FREQ	FREQ	LOW	HOURS		MATERIAL	HOURS
							FREQ			COSTS	TUPMTH
0813902	REMOVE OLD INSULATION & REPLACE WITH NEW	4	3	0	7.50	15.00	22.50	31.499000		640.000000	31.499000
4 10	0813A00 CIRCULATOR PUMP 1 1/2 HP										
0813A01	OVERHAUL PUMP, REPLACE SEALS	1	3	0	8.50	10.00	11.50	.603200		1.400000	.603200
0813A02	INSPECT/CHECK PUMP/MOTOR OPERATION, LUBR	1	3	0	1.50	1.00	1.50	.109200		.260000	.109200
0813A03	REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL	1	3	0	15.00	20.00	25.00	1.079000		200.000000	1.079000
4 11	0813B00 CIRCULATOR PUMP 1/6 HP										
0813B01	OVERHAUL PUMP, REPLACE SEALS	1	3	0	3.50	4.00	4.50	.601900		1.680000	.601900
0813B02	INSPECT/CHECK PUMP/MOTOR OPERATION, LUBR	1	3	0	.50	1.00	1.50	.109200		.260000	.109200
0813B03	REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL	1	3	0	15.00	20.00	25.00	1.846000		350.000000	1.846000
4 12	0813C00 CIRCULATOR PUMP 1/2 HP										
0813C01	OVERHAUL PUMP, REPLACE SEAL OR BEARING	1	3	0	4.00	5.00	6.00	.886600		2.600000	.886600
0813C02	INSP./CHECK PUMP/MOTOR OPER., LUBR., CHECK	1	3	0	1.00	1.00	1.00	.162500		.260000	.162500
0813C03	REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL	1	3	0	15.00	20.00	25.00	2.873000		110.000000	2.873000
3 4	0814000 NOT WATER										
4 1	0814100 PIPE & FITTINGS, STEEL OR CAST IRON										
0814101	INSTALL NEW GASKET	4	3	0	19.00	25.00	31.00	.325000		160000	.325000
0814102	INSTALL 10' SECTION	4	3	0	10.00	12.00	15.00	10.744500		18.200000	10.744500
0814103	REPLACE PIPE AND FITTINGS	4	3	0	50.00	75.00	90.00	1074.450000		1820.000000	1074.450000
4 2	0814200 PIPE & FITTINGS, COPPER										
0814201	RESOLDER JOINT	4	3	0	9.50	12.50	15.50	.184600		.080000	.184600
0814202	INSTALL 10' SECTION	4	3	0	10.00	12.00	15.00	5.551000		10.500000	5.551000
0814203	REPLACE PIPE AND FITTINGS	4	3	0	15.00	25.00	50.00	55.510000		1050.000000	55.510000
4 3	0814300 VALVE, MON DRAIN 3/8"-1 1/2"										
0814301	REPACK GLAND	1	3	0	4.00	5.00	6.00	.353600		.420000	.353600
0814302	REPLACE OLD VALVE WITH NEW, PARTIAL	1	3	0	7.50	10.00	12.50	.260000		10.400000	.260000
4 4	0814400 VALVE, MON DRAIN 2"-3"										
0814401	REPACK GLAND	1	3	0	4.00	5.00	6.00	.353600		.840000	.353600
0814402	REPLACE OLD VALVE WITH NEW, PARTIAL	1	3	0	7.50	10.00	12.50	.572000		71.670000	.572000
4 5	0814500 VALVE, MON DRAIN 4"-6"										
0814501	REPACK GLAND	1	3	0	.50	1.00	2.00	.633100		.630000	.633100
0814502	REMOVE OLD VALVE INSTALL NEW, PARTIAL	1	3	0	7.50	10.00	12.50	3.900000		118.330000	3.900000
4 6	0814600 VALVE, DRAIN										
0814601	REPACK GLAND	1	3	0	2.00	2.50	3.00	.353600		.315000	.353600
0814602	REPLACE VALVE STEM ASSEMBLY	1	3	0	3.00	3.75	4.33	.055900		5.500000	.055900
0814603	REMOVE OLD VALVE, INSTALL NEW	1	3	0	7.50	10.00	12.50	.507000		19.080000	.507000
4 7	0814700 EXPANSION CHAMBER										
0814701	REFILL	1	3	0	4.00	5.00	3.00	.039000		.000000	.039000
0814702	REMOVE OLD CHAMBER, INSTALL NEW	1	3	0	13.00	17.00	21.00	1.274000		196.690000	1.274000
4 8	0814800 INSULATION, PIPE										
0814801	REPAIR BROKEN INSULATION	4	3	0	2.00	2.50	3.00	.338000		.400000	.338000
0814802	REMOVE OLD INSULATION & REPLACE WITH NEW	4	3	0	7.50	15.00	22.50	31.499000		640.000000	31.499000
4 9	0814900 CIRCULATOR PUMP, 1 1/2 HP										
0814901	OVERHAUL PUMP, REPLACE SEALS	1	3	0	4.00	5.00	6.00	.585000		1.400000	.585000
0814902	INSPECT/CHECK PUMP/MOTOR OPERATION, LUBR	1	3	0	.50	.50	.50	.109200		.260000	.109200
0814903	REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL	1	3	0	7.50	10.00	12.50	1.079000		200.000000	1.079000
4 10	0814A00 CIRCULATOR PUMP, 1/6 HP										
0814A01	OVERHAUL PUMP, REPLACE SEALS	1	3	0	4.00	5.00	6.00	.601900		1.680000	.601900
0814A02	INSPECT/CHECK PUMP/MOTOR OPERATION, LUBR	1	3	0	.50	.50	.50	.109200		.260000	.109200
0814A03	REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL	1	3	0	7.50	10.00	12.50	1.846000		350.000000	1.846000
4 11	0814B00 CIRCULATOR PUMP, 1/2 HP										
0814B01	OVERHAUL PUMP, REPLACE SEAL OR BEARING	1	3	0	4.00	5.00	6.00	.887900		2.590000	.887900
0814B02	INSP./CHECK PUMP/MOTOR OPER., LUBR., CHEC	1	3	0	.50	.50	.50	.162500		.390000	.162500
0814B03	REPLACE PUMP/MOTOR ASSEMBLY, PARTIAL	1	3	0	7.50	10.00	12.50	2.873000		512.000000	2.873000

UM=Unit of Measure TRD=Trade Index Class=Task Classification TUPMTH=Task Work Performance Method														
CACES	DESCRIPTION	UM	TRD	CLASS	FREQ	HIGH	AVE	LOW	FREQ	HOURS	MATERIAL COSTS	LABOR HOURS	EQUIPMENT HOURS	TUPMTH
4 12	0814C00 STEAM CONVERTOR, DOMESTIC HOT WATER	1	3	0	3.50	4.00	4.50	5.941000	5.941000	5.941000	5.560000	5.941000	5.941000	IC1111
0814C01	REPAIR STEAM LEAK	1	3	0	1.00	1.00	1.00	.092300	.092300	.092300	.000000	.092300	.092300	IC1111
0814C02	INSECT FOR LEAKS	1	3	0	15.00	20.00	25.00	7.358000	7.358000	7.358000	740.000000	7.358000	7.358000	IC1111
4 13	0814D00 NOT WATER HTR, GAS/OIL 30 GAL	1	3	0	1.00	1.00	1.00	1.571700	1.571700	1.571700	.000000	1.571700	1.571700	IC1111
0814D01	CLEAN & SERVICE	1	3	0	8.00	10.00	12.00	1.071200	1.071200	1.071200	137.000000	1.071200	1.071200	IC1111
0814D03	REPLACE NOT WATER HEATER	1	3	0	4.00	5.00	6.00	2.394600	2.394600	2.394600	5.600000	2.394600	2.394600	IC1111
4 14	0814E00 NOT WATER HTR, GAS/OIL 75 GAL	1	3	0	1.00	1.00	1.00	3.003000	3.003000	3.003000	.000000	3.003000	3.003000	IC1111
0814E01	OVERHAUL HEATER	1	3	0	10.00	12.00	15.00	5.629000	5.629000	5.629000	676.000000	5.629000	5.629000	IC1111
0814E02	CLEAN & SERVICE	1	3	0	2.00	2.00	2.00	.000000	.000000	.000000	.000000	.000000	.000000	IC1111
0814E03	REPLACE NOT WATER HEATER	1	3	0	15.00	20.00	25.00	45.994000	45.994000	45.994000	6010.420000	45.994000	45.994000	IC1111
4 15	0814F00 NOT WATER HTR, GAS/OIL 1000 GPH RECOVERY	1	3	0	1.00	2.00	3.00	1.378000	1.378000	1.378000	.000000	1.378000	1.378000	IC1111
0814F01	MINOR REPAIRS, ADJUSTMENTS	1	3	0	2.00	2.00	2.00	32.448000	32.448000	32.448000	.000000	32.448000	32.448000	IC1111
0814F02	CLEAN & SERVICE	1	3	0	15.00	20.00	25.00	45.994000	45.994000	45.994000	6010.420000	45.994000	45.994000	IC1111
0814F03	REPLACE NOT WATER HEATER	1	3	0	6.00	7.00	8.00	4.654000	4.654000	4.654000	.000000	4.654000	4.654000	IC1111
4 16	0814G00 NOT WATER HTR, GAS/OIL 8-120GPH RECOVERY	1	3	0	2.00	3.00	4.00	.057200	.057200	.057200	.000000	.057200	.057200	IC1111
0814G01	DRAIN & FLUSH	1	3	0	10.00	12.00	15.00	4.706000	4.706000	4.706000	176.000000	4.706000	4.706000	IC1111
0814G02	CHECK OPERATION	1	3	0	6.00	7.00	8.00	4.654000	4.654000	4.654000	.000000	4.654000	4.654000	IC1111
0814G03	REPLACE HEATER	1	3	0	2.00	3.00	4.00	.057200	.057200	.057200	.000000	.057200	.057200	IC1111
4 17	0814H00 NOT WATER HEATER ELEC. 120 GAL	1	3	0	6.00	7.00	8.00	4.654000	4.654000	4.654000	.000000	4.654000	4.654000	IC1111
0814H01	DRAIN AND FLUSH NOT WATER HTR.	1	3	0	2.00	3.00	4.00	.057200	.057200	.057200	.000000	.057200	.057200	IC1111
0814H02	CHECK OPERATION-NOT WATER HTR.	1	3	0	10.00	15.00	20.00	4.706000	4.706000	4.706000	2875.000000	4.706000	4.706000	IC1111
0814H03	REPLACE NOT WATER HEATER	1	3	0	6.00	7.00	8.00	4.654000	4.654000	4.654000	.000000	4.654000	4.654000	IC1111
4 18	0814I00 NOT WATER HEATER ELEC. 300 GAL	1	3	0	2.00	3.00	4.00	.057200	.057200	.057200	.000000	.057200	.057200	IC1111
0814I01	DRAIN AND FLUSH NOT WATER HTR.	1	3	0	10.00	15.00	20.00	4.706000	4.706000	4.706000	5325.000000	4.706000	4.706000	IC1111
0814I02	CHECK OPERATION-NOT WATER HTR.	1	3	0	6.00	7.00	8.00	4.654000	4.654000	4.654000	.000000	4.654000	4.654000	IC1111
0814I03	REPLACE NOT WATER HEATER	1	3	0	2.00	3.00	4.00	.057200	.057200	.057200	.000000	.057200	.057200	IC1111
4 19	0814J00 NOT WATER HEATER ELEC. 1000 GAL	1	3	0	6.00	7.00	8.00	4.654000	4.654000	4.654000	.000000	4.654000	4.654000	IC1111
0814J01	DRAIN AND FLUSH NOT WATER HTR.	1	3	0	2.00	3.00	4.00	.057200	.057200	.057200	.000000	.057200	.057200	IC1111
0814J02	CHECK OPERATION-NOT WATER HTR.	1	3	0	10.00	15.00	20.00	4.706000	4.706000	4.706000	13325.000000	4.706000	4.706000	IC1111
0814J03	REPLACE NOT WATER HEATER	1	3	0	6.00	7.00	8.00	4.654000	4.654000	4.654000	.000000	4.654000	4.654000	IC1111
4 20	0814K00 NOT WATER HEATER ELEC. 2000 GAL	1	3	0	2.00	3.00	4.00	.057200	.057200	.057200	.000000	.057200	.057200	IC1111
0814K01	DRAIN AND FLUSH NOT WATER HTR.	1	3	0	10.00	15.00	20.00	4.706000	4.706000	4.706000	17825.000000	4.706000	4.706000	IC1111
0814K02	CHECK OPERATION-NOT WATER HTR.	1	3	0	6.00	7.00	8.00	4.654000	4.654000	4.654000	.000000	4.654000	4.654000	IC1111
0814K03	REPLACE NOT WATER HEATER	1	3	0	2.00	3.00	4.00	.057200	.057200	.057200	.000000	.057200	.057200	IC1111
2 2	0820000 RAIN WATER	1	3	0	1.00	1.00	1.00	1.507100	1.507100	1.507100	1.507100	1.507100	1.507100	IC1111
3 1	0821000 FIXTURES, RAIN WATER	1	3	0	.75	1.00	1.25	.507100	.507100	.507100	.360000	.507100	.507100	IC1111
4 1	0821100 DRAIN, ROOF SCUPPER, AREA	1	3	0	20.00	40.00	60.00	1.313000	1.313000	1.313000	165.510000	1.313000	1.313000	IC1111
0821101	GENERAL MAINTENANCE & REPAIR	1	3	0	1.00	1.00	1.00	.360000	.360000	.360000	.360000	.360000	.360000	IC1111
0821103	REPLACE DRAIN	1	3	0	20.00	40.00	60.00	1.313000	1.313000	1.313000	165.510000	1.313000	1.313000	IC1111
3 2	0822000 DRAINAGE, RAIN WATER	1	3	0	1.00	1.00	1.00	1.507100	1.507100	1.507100	1.507100	1.507100	1.507100	IC1111
4 1	0822100 DISTRIBUTION, GUTTERS, PIPE	4	3	0	.75	1.00	1.25	.507100	.507100	.507100	1.536000	.507100	.507100	IC1111
0822101	GENERAL MAINTENANCE & REPAIR	4	3	0	10.00	20.00	30.00	5.304000	5.304000	5.304000	1090.000000	5.304000	5.304000	IC1111
0822102	REPLACE PIPE OR GUTTER	4	3	0	10.00	20.00	30.00	206.999000	206.999000	206.999000	1090.000000	206.999000	206.999000	IC1111
2 3	0830000 SPECIAL PLUMBING SYSTEM	1	3	0	1.00	1.00	1.00	1.469000	1.469000	1.469000	1.380000	1.469000	1.469000	IC1111
3 1	0831000 COMPRESSED AIR	1	3	0	3.50	4.00	4.50	13.273000	13.273000	13.273000	12.450000	13.273000	13.273000	IC1111
4 1	0831100 SIMPLE COMPRESSED AIR	1	3	0	19.00	25.00	31.00	3.679000	3.679000	3.679000	5758.330000	3.679000	3.679000	IC1111
5 1	0831110 1 H.P.	1	3	0	1.00	1.00	1.00	1.469000	1.469000	1.469000	1.380000	1.469000	1.469000	IC1111
0831111	CHECK AND ADJUST	1	3	0	3.50	4.00	4.50	13.273000	13.273000	13.273000	12.450000	13.273000	13.273000	IC1111
0831112	REPAIR COMPRESSOR	1	3	0	19.00	25.00	31.00	3.679000	3.679000	3.679000	5758.330000	3.679000	3.679000	IC1111
0831113	REPLACE COMPRESSOR	1	3	0	1.00	1.00	1.00	1.469000	1.469000	1.469000	1.380000	1.469000	1.469000	IC1111
4 2	0831200 HOSE, COMPRESSED AIR	1	3	0	3.50	4.00	4.50	13.273000	13.273000	13.273000	12.450000	13.273000	13.273000	IC1111
5 1	0831210 RUBBER	1	3	0	1.00	1.00	1.00	1.469000	1.469000	1.469000	1.380000	1.469000	1.469000	IC1111

Army Wide Task/Basic Task Structure List

Tree id: BF Group id: B5

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UM=Unit of Measure TRD=Trade Index Class=Task Classification TWPMT=Task Work Performance Method									
CAGES	DESCRIPTION	UM	TRD	CLASS	HIGH FREQ	AVE FREQ	LOW FREQ	LABOR HOURS	MATERIAL COSTS
0831211	REPLACE ROSE	1	3	0	2.50	5.00	7.50	.468000	22.100000
4	0831300 PIPE AND FITTINGS FOR COMPRESSED AIR								
5	0831310 METAL PIPE								
0831311	GENERAL MAINTENANCE	4	3	0	1.50	2.00	2.50	.019500	.000000
0831312	REPLACE PIPE AND FITTINGS, 10 FT.	4	3	0	2.00	3.00	4.00	10.744500	20.800000
0831313	REPLACE PIPE AND FITTINGS	4	3	0	50.00	75.00	90.00	1074.450000	2080.000000
3	0832000 INDUSTRIAL GASES								
4	0832100 SIMPLE GAS COMPRESSOR								
5	0832110 1 N.P.								
0832111	CHECK AND ADJUST	1	3	0	1.00	1.00	1.00	1.469000	1.380000
0832112	REPAIR COMPRESSOR	1	3	0	3.50	4.00	4.50	13.273000	12.450000
0832113	REPLACE COMPRESSOR	1	3	0	19.00	25.00	31.00	3.679000	5758.330000
4	0832200 MOSE, INDUSTRIAL GAS								
5	0832210 RUBBER								
0832211	REPLACE ROSE	1	3	0	2.50	5.00	7.50	.468000	22.100000
4	0832300 PIPE AND FITTINGS FOR INDUST. GAS								
5	0832310 METAL PIPE								
0832311	GENERAL MAINTENANCE	4	3	0	1.50	2.00	2.50	.019500	.000000
0832312	REPLACE PIPE AND FITTINGS, 10 FT.	4	3	0	3.00	4.00	5.00	10.744500	20.800000
0832313	REPLACE PIPE AND FITTINGS	4	3	0	50.00	75.00	90.00	1074.450000	2080.000000
2	0840000 SPECIAL PLUMBING FIXTURE								
3	0841000 KITCHEN PLUMBING FIXTURE								
4	0841100 DISHWASHER								
0841101	GENERAL MAINTENANCE AND REPAIR	1	3	0	2.00	3.00	4.00	3.900000	14.540000
0841102	REPLACE UNIT	1	3	0	7.50	10.00	12.50	6.006000	433.330000
4	0841200 WASTE DISPOSAL, RESIDENTIAL								
0841201	UNSTOP	1	3	0	.67	1.00	1.33	.871000	.000000
0841202	REPLACE UNIT	1	3	0	6.00	8.00	10.00	1.274000	104.170000
1	0900000 HEATING, VENTILATION AND AIRCONDITIONING								
2	0910000 NATURAL GAS SYSTEMS								
3	0911000 EQUIPMENT/METERS/REGULATORS, NAT. GAS								
4	0911100 GAS METER								
0911101	REPLACE METER	1	9	0	10.00	16.00	20.00	.390000	93.000000
3	0912000 PIPING SYSTEMS, NATURAL GAS SYS.								
2	0920000 FUEL OIL SYSTEMS								
3	0921000 STORAGE SYSTEMS, FUEL OIL SYS.								
3	0922000 TRANSFER SYSTEMS, FUEL OIL SYS.								
3	0923000 DISTRIBUTION SYSTEMS, FUEL OIL SYS.								
2	0930000 LPG SYSTEMS								
3	0931000 STORAGE SYSTEMS, LPG SYS.								
3	0932000 TRANSFER SYSTEMS, LPG SYS.								
3	0933000 DISTRIBUTION SYSTEMS, LPG SYS.								
2	0940000 STEAM (SUPPLIED FROM CENTRAL)								
3	0941000 PRESSURE REDUCING REG. SYS., STEAM SYS.								
4	0941300 STEAM REGULATION VALVE - 2"								
0941301	REPLACE STEAM REGUL. VALVE-2"	1	9	0	1.88	5.64	9.40	7.800000	236.350000
4	0941500 COND.METER, <300#/HR								
0941501	REPAIR METER	1	9	0	5.40	16.20	21.60	1.950000	591.500000
0941502	PREVENTIVE MAINTENANCE CLEANIN	1	9	0	2.00	2.00	2.00	1.300000	.000000
0941503	REPLACE METER	1	9	0	21.60	32.40	43.20	.650000	950.000000
3	0942000 DISTRIBUTION SYSTEMS, STEAM SYS.								
4	0942100 RADIATOR VALVE 1"								