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REDUCING CUMULATIVE TRAUMA DISORDERS AT CITRUS MUNICIPAL COURT

Institute for Court Management
Court Executive Development Program
Phase III Project
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ABSTRACT

The purpose of this study was to determine the most cost efficient and effective method for reducing workers' compensation claims relating to cumulative trauma disorders at Citrus Municipal Court. Over the past five years, there has been an increase of claims filed and days of work lost due to these types of disorders. This has had an impact on the budget. The Court is paying the injured employee's salary and benefits plus paying overtime to employees or hiring a temporary employee to replace the injured worker.

The goal of this paper was to suggest ways by which Citrus Municipal Court can establish a work environment free of hazards associated with cumulative trauma disorders. The Court wants the employees to be safe from any disorders that may be caused during the performance of their job duties.

The methodology for this paper included data collection of in-house records, a medical search, a legal search, a review of workers' compensation laws, and a review of ergonomic factors. The in-house records were the employee personnel files and worker compensation files. These files provided information as to the age of employee, date of injury, department the employee was assigned to at the time of injury, and the amount of time, if any, the employee was relieved of job duties. The medical search was performed to determine the cause of cumulative trauma disorders, symptoms, treatments, and to determine if there is a certain group of employees at a higher risk. A review of legal databases provided information relating to

workers' compensation laws and California Labor Codes. The ergonomic aspect of this paper was to determine if there are workstation specifications or guidelines that could assist the Citrus Municipal Court in achieving its goal for a work environment free of cumulative trauma disorders.

After a review of computer systems utilized by Citrus Municipal Court, workstations, case load statistics and employee records, it was concluded that the answer to reducing workers' compensation claims relating to cumulative trauma disorders lies in education and ergonomics. Employees need to be trained in the proper position of the equipment they use and the proper way to perform their job duties. When an employee can identify the early warning signs of a disorder, the injury can be treated before it becomes a problem. By purchasing equipment that is ergonomically correct, many of the issues associated with the development of cumulative trauma disorders can be resolved. Minor adjustments to existing workstations can be advantageous to all.

I. INTRODUCTION

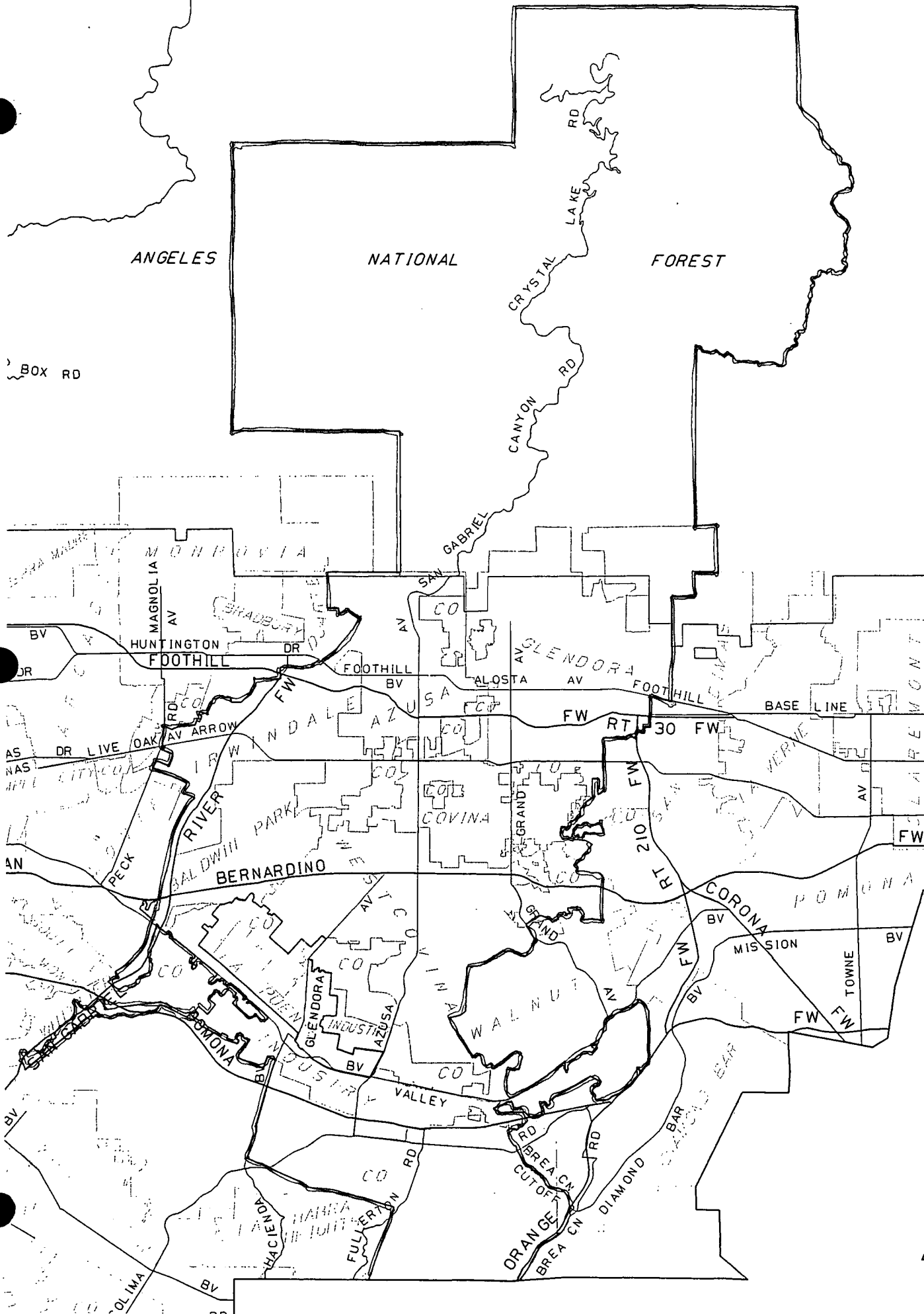
Citrus Municipal Court is one of twenty-four Municipal Courts in the County of Los Angeles, located in the city of West Covina, State of California, with a limited jurisdiction. The jurisdiction consists of the cities of Azusa, Baldwin Park, Covina, Glendora, Irwindale, West Covina, and two unincorporated county areas which are patrolled by the Los Angeles County Sheriff's Department (Figure 1). The total population served by this Court is approximately one million people.

The court has five departments: Administration, Civil, Criminal, Traffic and Small Claims. There are sixty-nine full time employees which consists of: one Court Administrator; one Assistant Court Administrator; four Division Chief; four Supervising Deputy Clerks IIs; one Administrative Secretary; one Judicial Secretary; eleven Courtroom Clerks; two Bookkeepers; eight Deputy Clerk IIIs; twenty Deputy Clerk IIs; and sixteen Deputy Clerk Is. There are eleven courtrooms: one Civil Court, one Traffic Court; one Small Claims Court; one Domestic Violence Court; one Felony Court; and six Criminal Courts. These employees are responsible for the processing of case information in the computer systems in each department.

For several years, Los Angeles County has been known for its customer service program. The County has worked diligently in reducing the amount of time a customer waits in line and has been generally concerned with the customers' view of the court. There have been customer survey forms placed on the counters of each department asking specific questions on how long the customer waited for service and how well we did in assisting the customer.

While this program is beneficial to the community we serve, it has been detrimental to our employees. They are required to perform their duties faster and maintain the accuracy of the work processed.

CITRUS JUDICIAL DISTRICT



DEPARTMENT

Figure 1

I see a need to take the customer concern a step further. We must focus on our internal customer, our employees. Employees are our most valuable resource. They are knowledgeable, dependable, they want to be productive and advance in their careers. How can we assist them in achieving these goals?

Over the last few years, we have been experiencing lost time of employees due to workers' compensations claims. A large portion of these claims have been related to cumulative trauma disorders. The first occurrence of a workers' compensation claim related to a cumulative trauma disorder was in 1991. Since that time, there has been an increase in the amount of worker's compensation claims related to cumulative trauma disorders.

The goal of this paper is to suggest ways by which Citrus Municipal Court can establish a work environment free of hazards associated with cumulative trauma disorders. We want the employees to be comfortable and safe from any disorders which may be caused by working with a video display terminal (VDT) while performing their assigned job duties. By eliminating hazards in the work environment, the workers' compensation claims will be reduced. This will save the County of Los Angeles, which is self-insured, a large amount of money that can be utilized in other areas.

This paper attempts to determine if there are workstation specification guidelines, employees who are at a higher risk, a department with a higher rate of workers' compensation claims related to cumulative trauma disorders and a specific job assignment with a higher rate of workers' compensation claims. It also identifies the ways in which the budget is impacted by these claims and precautionary measures that can be implemented.

A review of in-house records was conducted to determine the amount of workers'

compensation claims filed, employee personnel records, Occupational Safety and Health Administration reports, a comparison of computer systems utilized by each department and a review of the workstations. Since our first encounter with a cumulative trauma disorder occurred in 1991, the data collected began with 1991 and continued to 1995.

There is no way to determine if the improvements suggested in this paper are successful in the amount of time allowed. The success of any changes in the operation of Citrus Municipal Court employee workstations or implementation of new or additional methods/programs will have to be revisited after sufficient time has passed to observe if there is a decrease in workers' compensation claims related to cumulative trauma disorders.

II. COURT ORGANIZATION AND WORKLOAD

A. CIVIL DEPARTMENT

The Civil Department has nine full time employees (**Figure 2**). The Civil Department uses the Civil Automation System (CIVAS). CIVAS is an on-line data base system with the computer generation of notices, Register of Actions, case index, attorney listing, calendars and statistical reports. The CIVAS System also has a Forms Menu which allows the user to make additional copies of CIVAS generated notices and forms, or to make a corrected version of these documents.

There is an average of eight thousand three hundred and two civil cases filed per year (**Appendix A1**). Every case filed is entered on the Case Information and Filing Screen (**Appendix A2**). This screen consists of twenty-four fields requiring information. Once entered, this data is available for reports and other screens. After the initial filing screen, the Register of Action Screen (**Appendix A3**) is used to record information about all events, or actions, that occur during the life of a case, from the initial filing to the full satisfaction of a Judgment. It is on the Register of Action screen that these events are entered. The Register of Action screen allows the user to edit, add, insert, delete, remove, or view the actions that occur in a case. A time-saving feature on this screen is the mass entry function, which allows the user to enter the same action code to more than one case at a time. The user may enter up to fifty-one cases as mass entries. This screen requires five fields to be completed.

There are several different screens in the CIVAS System used to continue cases. To continue a case, the user must first access the Register of Action Screen, then the system

CITRUS MUNICIPAL COURT

CIVIL DEPARTMENT

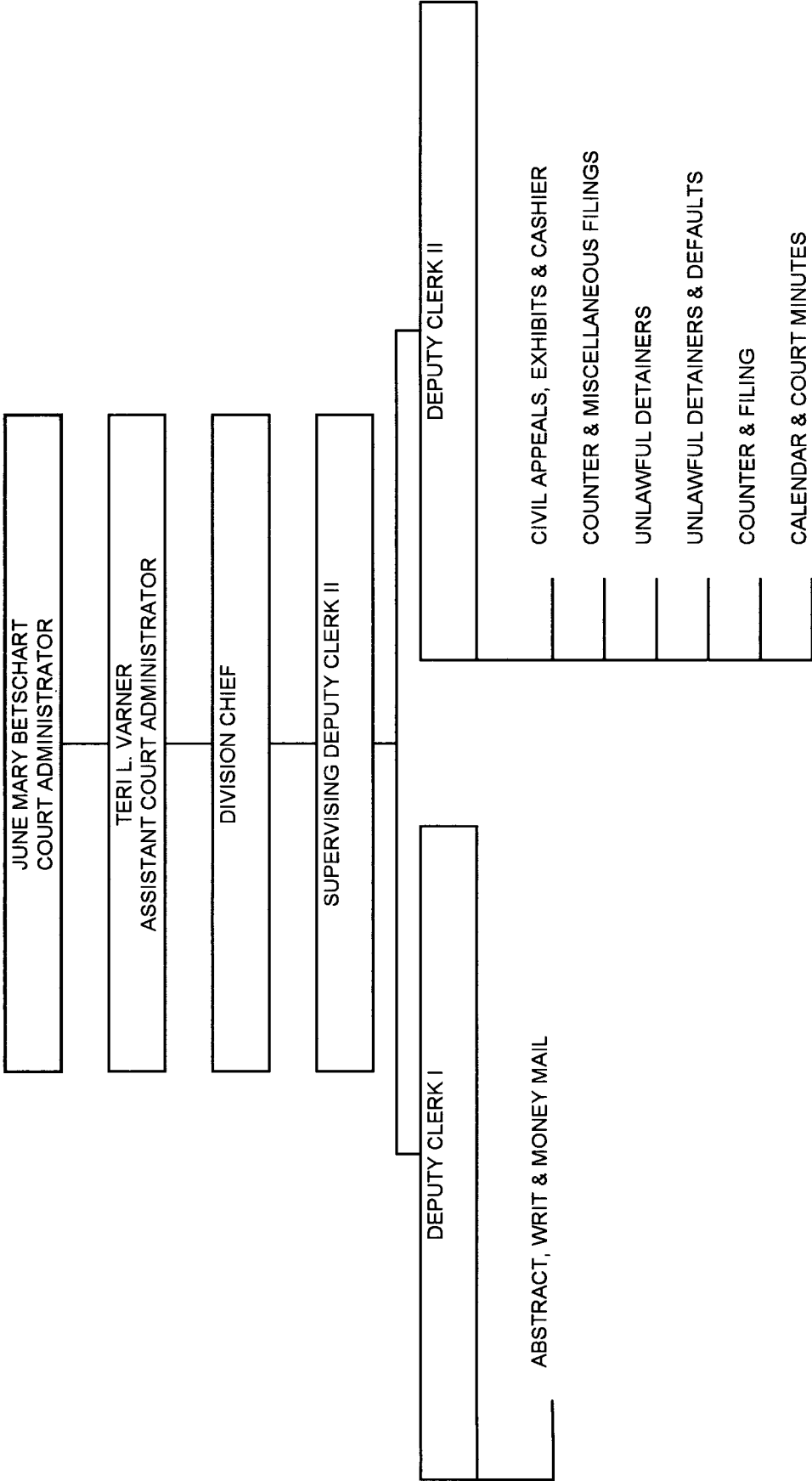


Figure 2

determines which Cause Called For Screen (**Appendix A4**) is used by the code input on the Register of Action Screen. The Cause Called for Screen contains six fields to be filled in. The amount of typing required varies, there are fields that may contain up to one hundred twenty characters of information. One of the codes will display the Cause Called For Court Trial Screen (**Appendix A5**) which contains four fields requiring information. The Clerk's Service Screen (**Appendix A6**) requires straight typing in blank fields. The Cause Called For Pre-Trial Screen (**Appendix A7**) is a two page screen requiring five fields of information.

The average of case dispositions for Civil cases is ten thousand three hundred sixty-three per year (**Appendix A8**). The Judgment Form Screen is used in conjunction with the Minutes Form Screen to provide a permanent printed record of civil case dispositions for the case file and for the involved parties. With the Clerk's Notice of Entry Of Judgment, this also acts as official notice of the disposition. The text requirement for judgments have led to the use of a three-part screen to capture all of the necessary information. The Judgment as a Final Disposition contains nine fields requiring information (**Appendix A9**).

The Default Judgment Screen (**Appendix A10**) requires four fields of information. The Unlawful Detainer Judgment Screen (**Appendix A11**) is a two page screen requiring nine fields of information. The Cause Called For Status Conference (**Appendix A12**) is a two page screen requiring eight fields of information.

With the exception of the Case Information and Filing Screen and the Register Of Action Screen, the CIVAS System has been developed to give the user on-line help by installing in the left margin an abbreviated description of what information is required in the field and the maximum amount of characters for each field.

B. CRIMINAL DEPARTMENT

The Criminal Department has seventeen full time employees (**Figure 3**). The computer system the Criminal Department uses is the Trial Court Information System (TCIS). A few of the functions that it is able to perform include: abstracts of conviction sent to the Department of Motor Vehicles through the computer system via magnetic tape, memos to the probation department, bail forfeiture notices, a bond book report produced every month regarding the status of bail bonds, management reports produced on demand, increased communication between law enforcement agencies through countywide database\on-line inquiries and, in 1996, an Arrest and Disposition form will be sent to the Department of Justice via magnetic tape. The Criminal Department became fully automated on August 3, 1992. All information entered becomes part of the official docket. With the Superior and Municipal Court Coordination Plan for Los Angeles County, this system is also utilized by Superior Court. This system was established in 1984.

The average number of Criminal cases filed per year is thirty-two thousand four hundred ninety (**Appendix B1**). This total includes all felony and misdemeanor cases. Every case filed is entered on the Initial Filing Screen (**Appendix B2**), which consists of at least thirty-one fields that require information to be filled in. The number of fields vary according to the amount of information given at the time of filing (i.e., social security number, vehicle license number, bail status, alias', number of counts filed, etc.).

After the first appearance in court, the Criminal Department or Courtroom Clerks will use the Arraignment/Plea Screen (**Appendix B3**). This is a two page screen which allows the user to enter the rights given in court, plea entered at arraignment, issue a bench warrant of

CITRUS MUNICIPAL COURT CRIMINAL DEPARTMENT

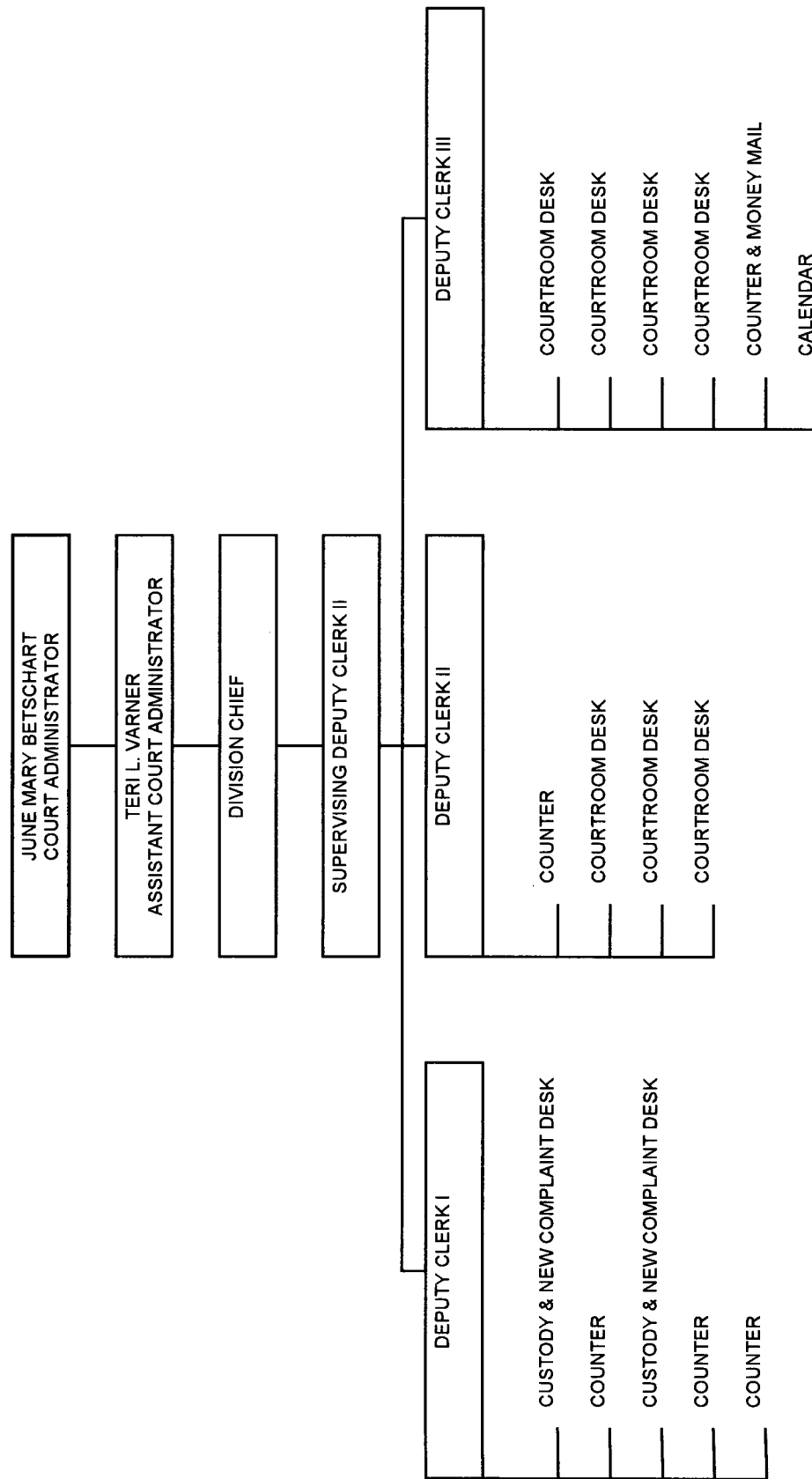


Figure 3

arrest or enter a next event date to continue a case. There are a minimum of thirty-five fields which require information. To issue a bench warrant there are fourteen fields required.

After the first appearance, all other continuances are performed on the Continuance/Motion Screen (**Appendix B4**). The Continuance/Motion Screen requires twenty-one fields of information to be entered. This amount varies, there are additional fields of information that can be input when appropriate, such as if there is an interpreter present or special court orders that need to be typed in the comments field.

The average of case dispositions per year in the Criminal Department is twenty-six thousand two hundred twenty-four cases (**Appendix B5**). When the case is adjudicated, the Sentencing/Probation Screen is used to enter the sentence (**Appendix B6**). This is a two page screen. Depending on the complexity of the sentence (if there is probation granted, terms of probation, jail and fine, partial payments, type of case, restitution, ignition interlock, etc.) there could be as many as sixty fields requiring information. This screen is where an abstract of conviction is generated to the Department of Motor Vehicles and eventually the Arrest and Disposition form will be generated to the Department of Justice.

C. SMALL CLAIMS DEPARTMENT

The Small Claims Department has seven full time employees (**Figure 4**). The Small Claims Department utilizes the Small Claims On-Line Tracking Systems (SCOT). This automated system is an on-line data base system with the computer generation of notices, Register of Action, calendars and statistical reports. SCOT and CIVAS use the same data base. The main difference in the systems is the code used to perform the individual tasks.

There is an average of eight thousand six hundred eighty-five Small Claims cases filed per year (**Appendix C1**). The initial filing of a case is performed on the Case Information and Filing Screen (**Appendix C2**). Once entered, this data is available for reports and other screens. This screen requires twenty-four fields of information per party listed on the claim.

The Register of Action Screen (**Appendix C3**) is organized into subsections corresponding to the action selected: a) Add an Action; b) Edit an Action; c) Insert an Action; d) Delete an Action; e) Remove an Action; and f) View an Action. This screen requires five fields of information. A Small Claims case can be updated beginning with the Register of Action Screen. The Action Code selected will automatically bring up the next screen needed by the user. To continue a case, the user enters an action code on the Register of Action Screen and the Continuance Screen will then be brought up on the screen. The Continuance Screen (**Appendix C4**) requires four fields of information. If the user wishes to continue a case for a Court Trial, in the action field on the Register of Action Screen the user enters the appropriate code and the Court Trial Screen (**Appendix C5**) would appear on the screen. The Cause Called for Court Trial Screen requires six fields of information.

There is an average of eight thousand three hundred sixty Small Claims cases that reach

● CITRUS MUNICIPAL COURT ●

SMALL CLAIMS DEPARTMENT

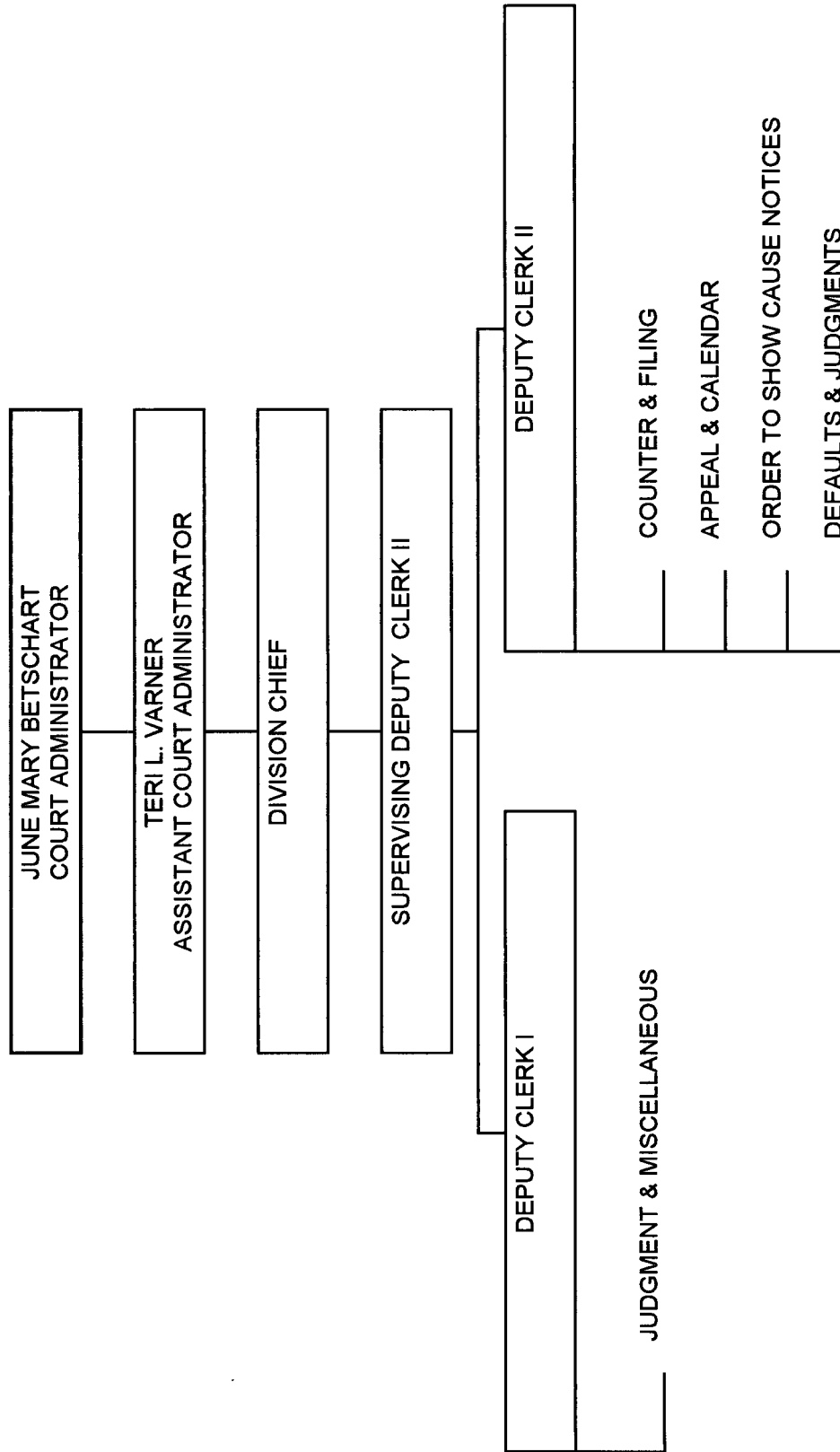


Figure 4

disposition per year (**Appendix C6**). To enter a judgment the user selects the appropriate action code and the Judgment Entered As A Final Disposition Screen (**Appendix C7**) would appear. The Judgment Screen is a two page screen requiring eight fields of information. As with CIVAS, the Judgment Screen is used in conjunction with the Minutes Form Screen to provide a permanent printed record of Small Claims dispositions for the case file and for the involved parties.

D. TRAFFIC DEPARTMENT

The Traffic Department has nineteen full time employees (**Figure 5**). The Traffic Department utilizes the Expanded Traffic Record System (ETRS). ETRS is an automated system for maintaining records of traffic violations for Los Angeles County. This system provides for entering and updating records on traffic violations by on-line terminals. These terminals can also initiate inquiries on records by name, operator's license number or citation/case number, as well as produce calendars. It allows for timely updates of court actions, continuances, bail forfeitures, warrant issuances/recalls and generates abstracts of conviction to the Department of Motor Vehicles via magnetic tape. This system was established in 1982.

The Traffic Department has an average of eighty-one thousand fifty cases filed per year (**Appendix D1**). The initial filing of cases, into the ETRS System, is contracted out to an independent company because of the massive volume of cases filed and the manpower it would entail. All other updating functions are performed in-house.

The Continuance Calendar Add/Change Screen (**Appendix D2**) is used to enter activities that take place between the initial entry of a citation and its final disposition. Any activity that negates the original appearance date is entered on this screen. There are ten fields which require information to continue a citation to another date. Examples of continuing a case would be to set it for a Court Trial, traffic school, or to post bail.

The Traffic Department has an average case disposition of seventy-nine thousand seven hundred thirty-two cases per year (**Appendix D3**). When a case is sentenced, the Court Disposition Add/Change Screen (**Appendix D4**) is used. This screen is also used to record payments on fines that are made after the date of disposition. This screen contains fifteen fields

CITRUS MUNICIPAL COURT

TRAFFIC DEPARTMENT

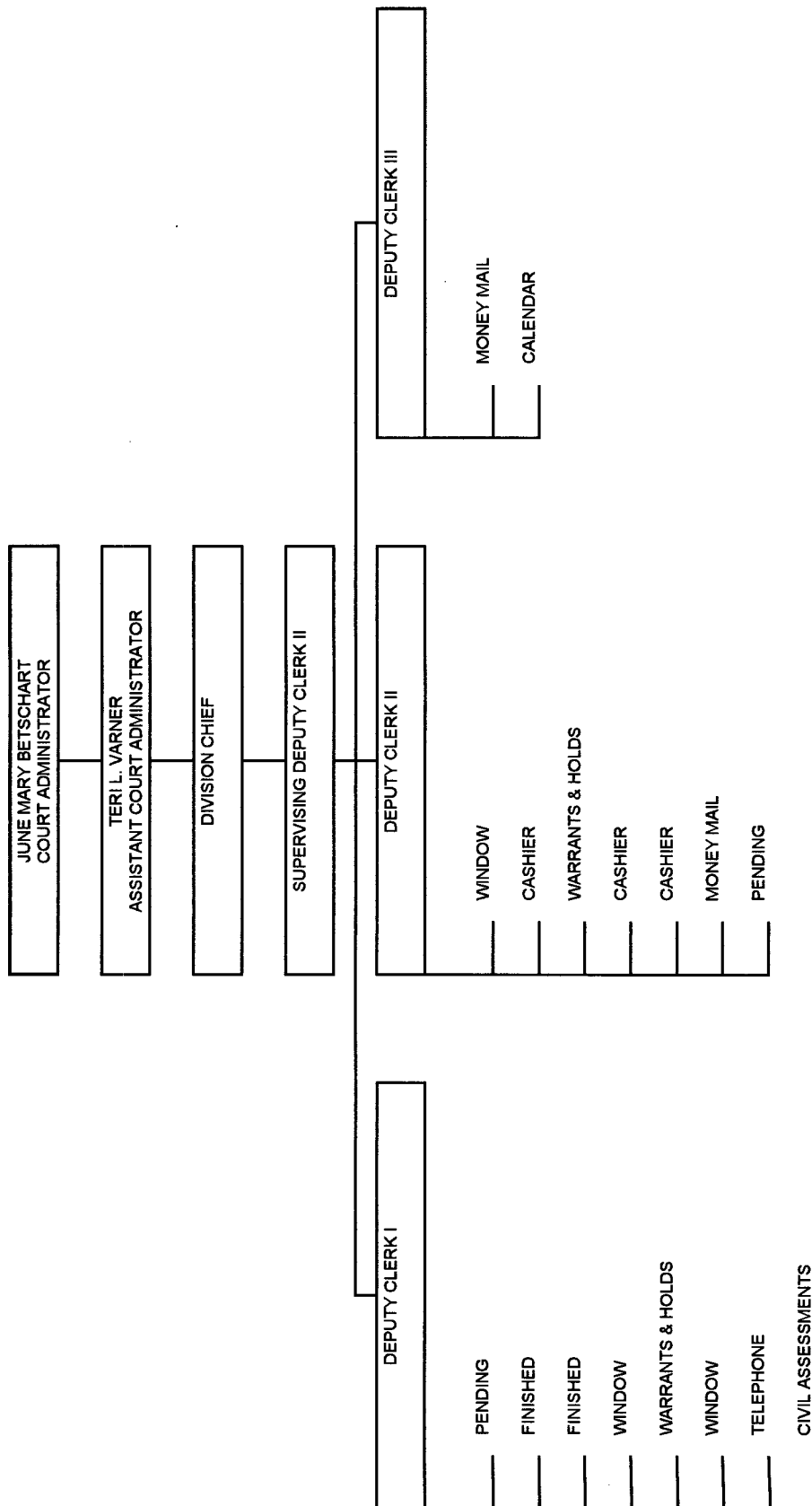


Figure 5

requiring

information. An abstract of conviction is generated to the Department of Motor Vehicles on this screen.

When there is a failure to pay a fine or a failure to appear, the Warrant Add/Change Screen (**Appendix D5**) is used. This enables the court to issue a bench warrant of arrest, place a hold on the registration of a vehicle (if the case is determined to be owner's responsibility), or a hold on the issuance of a new operator's license. This screen requires seventeen fields to be filled in.

The ETRS system also provides a Free Form Correspondence Screen (**Appendix D6**) that is used to create correspondence composed of user-defined paragraphs. The letter format is determined by what the user enters. The user must enter the appropriate opening and closing paragraphs in addition to the main body of text. This is straight typing so there is an undetermined amount of fields.

E. ADMINISTRATION

The Administration Department consists of one Court Administrator, one Assistant Court Administrator, one Division Chief, one Administrative Secretary, one Judicial Secretary, two Bookkeepers, and eleven Courtroom Clerks (**Figure 6**).

The Administrative and Judicial Secretary do not utilize a mainframe computer system. Their computer usage is predominately the WordPerfect Program where they perform straight typing of court correspondence.

The Bookkeepers use the County-Wide Accounting and Purchasing System (CAPS). This data base is used for processing all transactions on-line. The system allows the user to control the entire document processing cycle from data entry to the scheduling of the document payment date. The initial filing (**Appendix E1**) of a payment voucher in the CAPS System requires five fields of information. After this step, the user must enter the vendor code and address, amount of payment, scheduled payment date, invoice number, which account is being debited and the amount of the specific invoice (**Appendix E2**).

The Courtroom Clerks are responsible for maintaining the court records and updating the majority of cases on their daily calendars. The number of cases on calendar in a day varies depending on the specific function of the court (Civil, Criminal, Small Claims, Traffic, Domestic Violence, or Felony). The Courtroom Clerks have multiple sessions on their computers. This enables the clerks to access any system to retrieve information which will assist the court in processing cases in a timely and accurate manner. In addition to the mainframe systems utilized by the individual departments, the clerks have access to the Sheriff's Booking Screen, the Department of Motor Vehicles Computer System and have the ability to notify the

CITRUS MUNICIPAL COURT ADMINISTRATION

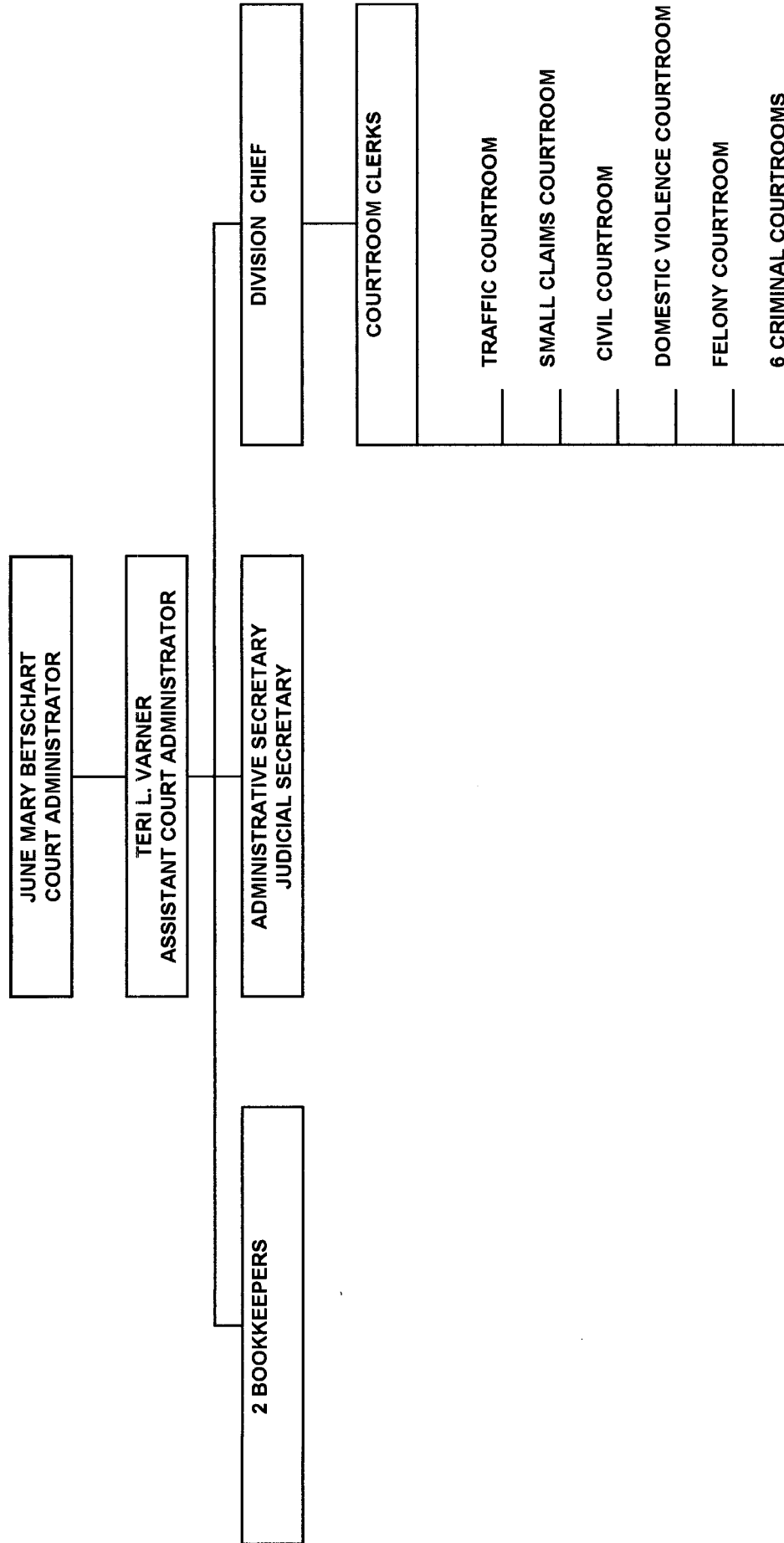


Figure 6

local agencies to call off witnesses that have been subpoenaed to appear in court.

III. REVIEW OF RELEVANT LITERATURE

On Thursday, March 28, 1991, The Employment and Housing Subcommittee of the Committee on Government Operations, House of Representatives, met in Redwood City, CA. The topic of this hearing was "Confronting Repetitive Motion Illnesses In The Workplace". Tom Lantos, Chairman of the Employment and Housing Subcommittee, in his opening statement, referred to repetitive motion illness as "the occupational disease of the 1990's."

A. CUMULATIVE TRAUMA DISORDERS

Cumulative Trauma Disorders (CTDs) is a term used to identify the group of musculoskeletal disorders involving injuries to the tendons, tendon sheaths, and the related bones, muscles and nerves of the hands, wrists, elbows and arms (**Appendix F1, F2, F3, and F4**). There are three basic types of injuries that relate to the working arm: tendon disorder, nerve disorder or neurovascular disorder. Such disorders as tendinitis, tenosynovitis and carpal tunnel syndrome, among others, have been increasingly recognized in recent years as widespread occupational injuries or diseases by both private employers and various federal, state, and county government agencies.

Injuries, or deficiencies in performance, resulting from repetitive movements and the cumulative work stress imposed by those movements, occur far more frequently than do injuries from a single, sudden, infrequent over-exertion. CTDs are also called repetitive motion injuries/disorders. Unlike cuts and bruises, they are not visible, but occur under the skin, affecting tendons, tendon sheaths and nerves. They are not noticeable until tendons become

inflamed, nerves are pinched or compressed, or blood flow is restricted.

An Italian physician, Bernadino Ramazinni, first diagnosed cumulative trauma disorders two hundred years ago. Ramazinni described a disorder resulting from "certain violent and irregular motions and unnatural posture of the body", which "serious diseases gradually developed therefrom". Early American medical reports diagnosed disorders resulting from irregular motions, postures and overuse as telegraphist's cramp, cotton-twister's hand, carpenter's elbow, stitcher's wrist and bricklayer's shoulder. These disorders are now referred to as tendinitis, carpal tunnel syndrome, tenosynovitis, thoracic outlet syndrome, ganglionic cysts and cervicobrachial disorders. ¹

Nerve Disorders

Nerve cumulative trauma disorders occur when repeated or sustained work activities expose the nerves to pressure from nearby bones, ligaments, tendons or hard surfaces.

Carpal Tunnel Syndrome (CTS) is the most common and well-known musculoskeletal disorder occurring in the VDT workplace. This nerve entrapment disorder involves a tunnel in the wrist where the median nerve and tendons pass into the hand. If any of the tendon sheaths become swollen in the cramped carpal tunnel, the median nerve may be pinched. Carpal tunnel syndrome is thought to be caused by repetitive trauma, extension, flexion and twisting of the wrist, which lead to compression of tissues. The symptoms include tingling, burning or numbness in the first three fingers and thumb of the effected hand, difficulty in moving the fingers, loss of sensation in fingers, and subjective feeling of swollen fingers with little or no swelling apparent. The symptoms often occur or become more intense during the night when

the body's circulatory system and body temperature are lower. As early as 1959, medical studies had identified occupational factors, though not office work, as either causing or aggravating the syndrome.

Tendon Disorders

Minor disorder of tendons and their sheaths are very common. Tendon disorders often occur at or near the joints where the tendons rub nearby ligaments and bones. The most frequently noted symptoms are a dull aching sensation over the tendon, discomfort with specific movements, and tenderness to touch. These conditions require rest to allow the tissues sufficient time to heal. Without rest, the tendons may be permanently weakened. ²

Tenosynovitis is the inflammation of the tendons and their synovial sheaths; it can occur at the wrist or fingers. With extreme repetition, the synovial sheath will be stimulated to produce excessive amounts of synovial fluid. The excessive fluid causes the sheath to become inflamed which sometimes cause swelling visible as a nodular thickening. It is often associated with extreme wrist deviation from side to side. Work tolerance is reduced because of pain during wrist and finger movement. The pain usually escalates to weakness so the primary complaint of a person affected with this disorder may be dropping articles or a weak grip.

Tendinitis is a form of tendon inflammation that occurs when a muscle/tendon unit is repeatedly tensed. When these muscles/tendons are further used, some of the fibers that make up the tendon can fray or tear apart, causing the tendon to become thickened or bumpy. In tendons without sheaths, the elbow or shoulder, the injured area may calcify. Tendinitis is one of the more common degenerating shoulder joint diseases.

De Quervain's disease, named after a French physician who first described it, is attributed to excessive friction between two thumb tendons and their common sheath. The repetitive friction accounts for the abnormal thickening of the fibrous sheath and constriction of the tendons. This disorder affects the tendons on the side of the wrist at the base of the thumb. These tendons are connected to muscles on the back of the forearm that contract to pull the thumb away from the hand.

Trigger finger occurs when the tendon sheath of a finger is sufficiently swollen so that the tendon becomes locked in the sheath, attempts to move that finger will cause a snapping or jerking movements. The palm side of the fingers is usually the site of trigger finger.

Unsheathed tendons are found in the elbow and shoulder joints. The elbow is particularly vulnerable to tendinitis because of the imbalance between the large forearm muscles and the small insertion area on the epicondyle of the humerus bone (elbow). The finger extensor muscles that are attached to the elbow control the movement of the wrist and hand. When strained or subjected to overuse, the tendons become irritated and radiate pain from the elbow down the forearm, a condition referred to as lateral epicondylitis. Symptoms are most common on the outer side of the elbow. ³

Ganglionic cysts are another form of tendon sheath disorder. The affected sheath swells up with synovial fluid and causes a bump under the skin, often on the wrist. These cysts are removed surgically.

Neurovascular Disorders

Some cumulative trauma disorders involve both the nerves and blood vessels. The most

common condition of these types is **thoracic outlet syndrome**. This condition is caused by the compressions of the nerves and blood vessels between the neck and shoulder. The symptoms are similar to those of carpal tunnel syndrome, namely numbness in the fingers. The arm may feel as if it is "going to sleep" and the pulse in the wrist may be weakened.

The neurovascular bundle consists of a network of large arteries and veins which provides blood circulation for the arm. If the circulation is restricted by activities or postures that put excessive pressure on these blood vessels, the adjacent tendons, ligaments and muscles are deprived of oxygen and nutrients. This condition slows muscle recovery and limits the duration of muscle activity. In a work situation, these blood vessels are compressed as a result of various activities or postures that include: pulling the shoulders back and down, as one does carrying a suitcase, or when work requires frequent reaching above the shoulder level.

Other Factors Associated With Cumulative Trauma Disorders

Job activities may be only partially responsible for the development of cumulative trauma disorders. There are several activities employees may perform, outside of the scope of employment, which may contribute to cumulative trauma disorders. Sports, such as racket sports, hobbies including knitting, sewing or playing a musical instrument, and accidents that result in bone fractures also contribute to the development of tendinitis, tenosynovitis, or degenerative joint diseases.

Various diseases or conditions may also make a person more susceptible to CTDs such as: rheumatoid arthritis, hypertension, diabetes, thyroid disorders, kidney disorders, obesity, alcoholism, pregnancy, use of oral contraceptives, vitamin B6 deficiency, fluid retention,

gynecological surgery, age, gender, wrist size and wrist structure variations.

Treatment

Treatment strategies usually attempt the simplest approaches first. **Conservative treatments** are treatments that are the least costly , the least painful, and they should have the fewest side effects. If this approach fails, the doctor may try more elaborate treatments such as surgery in extreme cases.

Conservative treatment of cumulative trauma disorders combines four types of therapies:

- (1) Restricting motion and splinting.
- (2) Applying heat or cold.
- (3) Medications and injections.
- (4) Special exercise.

Restricting Motion

The first type of therapy is to avoid the activities that caused the pain or stress to the injured body area. This may result in work restrictions. A splint or brace may be used to immobilize movement of the joint or muscles. The aim is to reduce pain of inflammation by supporting the body part in a position of low stress.

Heat and cold

The second type of therapy is the application of heat or cold to relieve pain and perhaps aid in the repair process. Evidence exists that supports the usefulness of heat or cold for temporary pain relief.

Heat may be recommended for pain relief of minor strains where there is no swelling. Where there are signs of significant inflammation, heat should be avoided for 48 hours. For the majority of CTDs there is no evidence that heat by itself can help reduce inflammation and swelling, or relieve pressure on a nerve.

Ice, if applied immediately after an injury or overuse strain, promotes recovery by reducing pain and swelling. For CTDs some movement may also be beneficial, but vigorous movements or exercising the hand or arm may further aggravate the condition.

Medication

The third type of therapy is the use of medication to reduce inflammation and pain. Three types of drugs are used for treating CTDs: aspirin, non-steroidal anti-inflammatory medications and injected corticosteroids.

Aspirin is probably the most commonly used drug for CTDs. It has two useful actions: relieving pain and reducing the inflammatory response.

Non-steroidal anti-inflammatory drugs are similar to aspirin. They differ in that most are more expensive and are longer-acting than aspirin and may be given once a day.

Injections of corticosteroids (such as cortisone) into the inflamed site, in the case of tendinitis, can often provide effective relief, but may impede the healing process.

Stretching and exercise

Stretching is an important link between sedentary activities and work. Stretching promotes circulation, increases the range of motion, and reduces muscle tension. Stretching

prescriptions have been devised for almost every type of activity and part of the body.

Various forms of exercise can be used to maintain or restore strength to an injured joint and its surrounding tendon-muscle units. Exercise is probably most important to shoulder disorders but for hand and wrist disorders exercise should be avoided since it will likely aggravate the existing condition.

Some Methods Of Diagnosis

X-rays may be helpful in ruling out a fracture or tumor. However, injury of cumulative trauma disorders usually involve only the soft tissues which would not be shown on an x-ray.

Electrodiagnostic tests are helpful to distinguish between carpal tunnel syndrome and other nerve problems at a higher level in the arm or neck. Tinels's test is performed by tapping the median nerve at the wrist that will elicit a tingling response in one or more of the fingers. In Phalen's test, the patient is asked to put the back of the hands together, acutely flexing the wrists for one minute. If the time of electrical conduction across the wrist is delayed for even a second, it's time enough to determine that the nerve response is abnormal.

Electromyography is a technique for studying electrical activity of muscle. Fine needles are inserted into the muscle or electrodes are attached to the skin to measure the electrical activity, which is displayed on an oscilloscope, a device similar to a television screen. Electromyography detects lower motor neuron disorders, neuromuscular disorders and nerve damage. This process measures nerve conduction time while muscles are at rest and during voluntary contraction.

B. THE FEDERAL LAW AND CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT

On December 29, 1970, President Nixon signed into law the Occupational Safety and Health Act of 1970 which became effective on April 28, 1971. This Act authorized the Federal Government to establish and enforce occupational safety and health standards applicable to businesses affecting commerce.

This Act has had a major impact because of its provisions, its establishment of national safety and health standards, the major expenditures which are necessary to comply with the Act, the inspections made by the Secretary of Labor representatives, the civil and criminal penalties which have been invoked, the maintenance of occupational injury and illness records, and the collection of statistics by Federal government agencies.

Its purpose is "to assure, so far as possible, every working man and woman in the nation safe and healthful working conditions, and to preserve our human resources."

The objective of the Act is fourfold.

1. To reduce the number of fatalities occurring annually in the American workplace.
2. To reduce the number, severity and cost of job-related injuries and health problems.
3. To help establish the security and well-being of those who do the job for us.
4. To reduce profit-loss and increase profit-potential for business and industry.

Each EMPLOYER under the Act has the general duty to furnish each of his employees employment and places of employment free from recognized hazards causing, or likely to cause death or serious physical harm; and the employer has the specific duty of complying with safety

and health standards promulgated under the Act.

Each EMPLOYEE has the duty to comply with these safety and health standards and all rules, regulations and orders issued pursuant to the Act which are applicable to his own actions and conduct.⁴

C. RESPONSIBILITIES AND DUTIES OF EMPLOYERS AND EMPLOYEES

The Act stated that each state would have the opportunity to pass similar enabling legislation which would provide them with the administration of their own safety and health regulatory procedures. Provided, of course, that the complete package was approved by the Federal Government and that it was equal to, or stronger than the Federal Act. On October 2, 1973 Governor Reagan signed into law the Fenton Bill (AB 150) which is California enabling legislation. This means that all California governmental agencies are now within the jurisdiction of the law.

In California, the Occupational Safety and Health Standards Board will be the only agency in California authorized to adopt standards. The Division of Industrial Safety will be the only agency that will enforce the standards in California and their safety inspectors may enter without delay, and at any reasonable times, any establishment covered by the act to inspect the premises and all pertinent conditions, structures, machines, apparatus, devices, equipment and materials therein, and to question privately any employer, owner, operator, agent, or employee. The Act permits the employer and a representative authorized by his employees to accompany the inspector during the physical inspection of any workplace for the purpose of aiding such

inspections.

As directed by the California Labor Code:

Every employer shall furnish employment and a place of employment which are safe and healthful for the employees therein.

Every employer shall furnish and use safety devices and safeguards, and shall adopt and use practices, means, methods, operations, and processes which are reasonably adequate to render such employment and place of employment safe and healthful. Every employer shall do every other thing reasonably necessary to protect the life, safety, and health of employees.

No employers shall require, or permit any employee to go or be in any employment or place of employment which is not safe and healthful.

No employer shall fail or neglect to do any of the following:

- (a) To provide and use safety devices and safeguards reasonably adequate to render the employment and place of employment safe.
- (b) To adopt and use methods and processes reasonably adequate to render the employment and place of employment safe.
- (c) To do every other thing reasonably necessary to protect the life, safety, and health of employees.

No employer shall occupy or maintain any place of employment that is not safe and healthful.

No employer, owner, or lessee of any real property shall construct or cause to be constructed any place of employment that is not safe and healthful.

No person shall do any of the following:

- (a) Remove, displace, damage, destroy or carry off any safety device, safeguard, notice of warning, furnished for use in any employment or place of employment.
- (b) Interfere in any way with the use thereof by any other person.
- (c) Interfere with the use of any method or process adopted for the protection of any employee, including himself, in such employment, or place of employment.
- (d) Fail or neglect to do every other thing reasonably necessary to protect the life, safety, and health of employees.

Every employer and every employee shall comply with occupational safety and health standards, with Section 25910 of the Health and Safety Code, and with all rules, regulations, and orders pursuant to this division which are applicable to his own actions and conduct.

All employers shall provide information to employees in the following way, as prescribed by authorized regulations:

- (a) Posting of information regarding protections and obligations of employees under occupational safety and health laws.
- (b) Posting prominently each citation issued under Section 6317, or a copy or copies thereof, at or near each place a violation referred to in the notice of violation occurred.
- (c) The opportunity for employees or their representatives to observe monitoring or measuring of employee exposure to hazards conducted pursuant to standards promulgated under Section 142.3.
- (d) Allow access by employees or their representatives to accurate records of employee exposures to potentially toxic materials or harmful physical agents.

- (e) Notification of any employee who has been or is being exposed to toxic materials or harmful physical agents in concentrations or at levels exceeding those prescribed by an applicable standard, order, or special order, and informing any employee so exposed of corrective action being taken.⁵

D. THE COMMON LAW AND WORKER'S COMPENSATION

Nature of the System

At common law, when an employee was injured in the course of his employment and sued his employer, the latter would escape liability in three situations: (a) Where the employee was guilty of contributory negligence; (b) where the employee had assumed the risk of the employment; and (c) where the injury was due to the negligence of another employee.

Workmen's compensation laws (now called worker's compensation laws in California) abolished these defenses of contributory negligence, assumption of risk, and fellow-servant rule, and established an absolute liability on the part of the employer, irrespective of the negligence of either party. The statute "rests on the underlying notion that the common-law remedy by action, with the requirements of proof incident to that remedy, involves intolerable delay and great economic waste, gives inadequate relief for loss and suffering, operates unequally as between different individuals in like circumstances, and that, whether viewed from the standpoint of the employer or that of the employee, it is inequitable and unsuited to the conditions of modern industry." (Western Indem. Co. v Pillsbury (1915) 170 C. 686, 693, 151 P. 398.)

E. CALIFORNIA WORKER'S COMPENSATION LAW

Enlargement of Legislative Power §3

In 1911, Art. XX, §21 was added to the California Constitution. In 1976, this provision was repealed and replaced by virtually identical Art XIV, §4, which provided that the Legislature is "vested with plenary power, unlimited by any provision of the Constitution, to create and enforce a complete system of workers' compensation, by appropriate legislation, and in that behalf to create and enforce liability on the part of any or all persons to compensate any or all of their workers for injury or disability, and their dependents for their death incurred or sustained by the said workers in the course of their employment, irrespective of the fault of any party". The section also states that the Legislature may provide for settlement of disputes arising under such legislation "by arbitration, or by an industrial accident commission, by the courts, or by either, any, or all of these agencies, either separately or in combination, and may fix and control the method and manner of trial of any such dispute, the rules of evidence and the manner of review of decisions rendered by the tribunal or tribunals designated by it; provided, that all decisions of any such tribunal shall be subject to review by the appellate courts of this state".

The Worker's Compensation Act was enacted pursuant to this authority.

Nature of Act §6

The Worker's Compensation Act has been generally described as (1) a compulsory statute, establishing (2) in all except certain designated employments (3) an exclusive system of compensation, (4) for injuries to employees arising out of and in the course of their employment (5) and not caused by their intoxication or intentionally self-inflicted, (6) resulting in disability or death. The liability so established is incident to the status of employment and is neither in

tort nor in contract.

Worker's Compensation Insurance §134

The Worker's Compensation Act requires all employers (except the state) to secure the payment of compensation by (1) obtaining insurance against liability, or (2) establishing a self-insurance plan. ⁶

Cumulative trauma disorders of the upper extremities (CTDUEs) have gained growing attention in the United States since the early 1980's. The Occupational Safety and Health Administration (OSHA), United States Bureau of Labor Statistics (BLS) and the National Institute for Occupational Safety and Health (NIOSH) have all indicated that CTDUEs are one of the fastest growing occupational-related disorders in industry.

Workers' compensation claims related to cumulative trauma disorders have grown at a disproportionate rate. Cumulative Trauma Disorder losses in California cost 137 million dollars in 1976 and since that time have increased substantially. Many of the claims involve the upper extremities with no evidence of bone injury.

The Liberty Mutual Group has been the largest writer of workers compensation insurance in the United States since 1936. During the 1993 calendar year, Liberty Mutual insured about 10% of the private carrier workers compensation insurance business in the United States. Data from Liberty Mutual workers compensation claims and the Bureau of Labor Statistics indicate that CTDUEs currently account for about 4% of all claims. The average cost of a CTDUE claim was \$6,760 in 1992, this was 80% higher than the average of all claims reported to Liberty Mutual in 1992 (\$3,723). Costs for CTDUEs currently account for about 5% of all

claim costs.⁷

Another claim has been that the increase of women in the workforce is responsible, in part, for an increase in reporting of CTDUEs. Since 1960, there has been a steady increase in the proportion of women in the workforce. From 1986 through 1993, the distribution of Liberty Mutual claims by gender has remained relatively constant, with females accounting for about 65% of CTDUEs, but only about 30% of all claims. This corresponds with BLS data that females account for 64% of all 1993 repetitive motion lost time cases, but only 33% of all 1993 lost time cases.

Since the use of oral contraceptives, menopause, pregnancy and hormonal disorders have been reported as factors associated with cumulative trauma disorders, women may be at a higher risk of CTDUEs than men. The counter-argument offered is that jobs held by women tend to have more risk factors of CTDUEs.

Studies by California Workers' Compensation Institute shows that claims resulting from cumulative injury or stress typically occur in older women who average 20 years of age more than the age of the average injured employee.

Silverstein determined that women who performed duties requiring a low force rate of repetitive movements had the highest complaints of cumulative trauma disorders to be an average of 39.7 years of age and the average length of years on the job to be 7.8 years. Silverstein described a high force rate to be employees performing strenuous duties while using heavy tools, machinery, or working on an assembly line. Silverstein's doctoral dissertation was published in 1985.

On January 30, 1996 the Metropolitan News-Enterprise, contained an article titled

"Assembly Passes Bill to Overturn State Plan to Minimize Repetitive-Motion Injuries".

Assembly Speaker Curt Pringle, R-Garden Grove, said workplace designs developed by the state Occupational Safety and Health Standards Board will be constantly changing as new research comes in, at great cost to businesses.

Opponents said the adoption of minimum standards to prevent repetitive motion injuries would save employers money from workers' compensation claims.

The measure advanced to the Senate on a 41-29 vote.

F. ERGONOMICS

The problems associated with video display terminal (VDT) use are not new, but the frequency with which they now occur has prompted an increased awareness of ergonomics. Ergonomics is derived from two Greek words, "ergos" and "nomos", which literally mean the law or management of work. In this paper, it means the study of how people work in an office environment and how their working conditions can be improved to make them more comfortable and productive.

Ergonomics is not a licensed profession, so anyone can be called an ergonomist. An increasing number of ergonomic consultants are going for certification by the independent Board of Certification in Professional Ergonomics. The Human Factors and Ergonomics Society (HFS), located in Santa Monica, CA., is an organization that publishes a directory of human-factors and ergonomic consultants that are indexed by locality and field of specialization.

The Occupational Safety and Health Administration is in the process of developing a standard for office ergonomics. The standard will focus on getting businesses to analyze and fix

whatever problems may arise with a job, but it will not require that businesses use-or provide-workers with specific equipment. This standard was originally scheduled for release in 1994, but it has been delayed and a new release date has not been given.

According to Thomas Traut, M. Ed., Director of Work Diagnostics, of California Physical Medicine, the hourly fee charged for workstation evaluations is approximately \$125 per hour. In one hour, an evaluation can be performed of two, possibly three, workstations.

The American National Standards Institute (ANSI) and the Computer and Business Equipment Manufacturers Association (CBEMA) developed a guide to help non-engineers understand the "American National Standard for Human Factors Engineering of Visual Display Terminal Workstations". The ANSI is the nationally recognized coordinator of voluntary national and international consensus standards relating to information processing. The standard is limited to three VDT applications: text processing, data entry and data inquiry. The standard covers only applications done from a seated position. The standard is based on empirical evidence available from scientific tests conducted on VDTs and workstations. These standards are voluntary, they are not laws.

In December 1990, San Francisco approved Municipal Health Code Part II, Chapter 5, Article 23, which regulates the use of VDTs for the private and public sectors. Employers with 15 or more VDT operators performing four or more hours of VDT work a day would be required to provide: adjustable seating; adjustable workstations; adjustable VDT design; proper lighting and glare control; 15 minute breaks every two hours; and employee training and education.

On February 13, 1992, a Superior Court judge ruled "only the state of California has the

power to regulate health and safety in the workplace," striking down the San Francisco VDT ordinance.

There is a yearly ergonomic conference. The third annual conference will be held in 1996, titled "Managing Ergonomics in the 1990's". The conference will address topics of: training and its effectiveness; worksite analysis; making ergonomic programs affordable; how to plan and implement a successful ergonomics program; repetitive motion injuries-prevention and diagnosis; and ADA-the human resource approach.

An office is essentially an information system, handling, processing, storing, retrieving and distributing information. Offices contain a variety of equipment: computers, copy machines, microfiche, printers, etc. Computers are the most widely used office equipment today.

Personnel spend most of their day operating a computer while performing specialized tasks. Although tasks may vary, personnel spend several hours at their workstations in a seated position, which imposes stress on the musculoskeletal system. Poorly designed workstations can create fatigue, discomfort and/or mental stress.

The primary payoffs of addressing office ergonomics are impressive: productivity improvements, lower workers' compensation costs, and heightened employee morale, resulting from greater physical comfort. Researchers have shown that ergonomic improvements in workstations produce substantial gains in productivity.

The definition of posture is "the position of a person's body while standing or sitting". Because of the constant give and take created by the gravity pull and countered by muscle action, posture is an ever-changing state. "Good" posture is efficient, allowing us to maintain

our balance with the least amount of muscle use, or while placing the least amount of stress on the body.

A good chair can help office workers in the constant struggle against the downward gravity pull. It can help maintain good posture by reducing back stress, facilitating appropriate placement of hands and arms while using the keyboard, improving circulation to the legs and helping to minimize fatigue. Many chairs offer adjustability features that make them both effective and accommodating. They are especially useful when a variety of people use the same workstation, since people have different body sizes and preferences for comfort.

Dimension guidelines for VDT chairs:

seat pan depth:	15 to 18 inches
seat pan width:	18 inches minimum
arm rest width:	2 inches minimum
distance between arm rests:	18.2 inches minimum
backrest width:	14 inches minimum
distance from front of seat pan to arm rest:	4 inches minimum

The posture of the hand and forearm has a direct impact on the amount of force the muscles must generate in order to perform a given task. By altering hand position, the amount of force required to perform a task may be reduced by 4 or 5 times. The wrists should be at typing position with the wrist and the back of the hand parallel. This position reduces the stress and pressure on the median nerve.

The monitor height should be such that the top of the screen should be placed at the operator's eye level. This allows the head to remain in its natural position and the eyes to naturally gravitate toward the center of the screen. The VDT viewing distance of 20 to 28 inches is satisfactory for most people.

The depth of the worksurface should be 30 inches. Worksurface height should be between 25.4 and 30 inches which accommodates 90 percent of seated adults. The worksurface height should be level with, or slightly below, the employees elbows. Worksurface height should provide sufficient clearance for the employee's thighs when sitting. The most frequently handled objects (pens, paper, telephone, etc.) should be placed close to the body, requiring minimum shoulder movement.

To achieve the proper relationship between operator and keyboard, the keyboard should be separate from the computer. The top surface of the keyboard should be lower than the writing surface in order to keep wrists straight during repetitive keying. A keyboard tray attached to the underside of the worksurface helps achieve the desired degree of adjustability (height, angle and lateral position).

The worksurface layout should follow a few principles: neatness and lack of clutter contribute to efficiency, surrounding activities should present a minimum of distractions and the most frequently used items should be placed within easy reach.

G. MEDICAL INTERVENTION

It is very important that the employees are encouraged by management to report early signs and symptoms of any medical disorders. The early reporting of symptoms will enable the treatment of the injury to begin at an early stage rather than waiting until significant damage has been done to the affected area. Early intervention has a better response to conservation treatment.

H. EDUCATION

Training programs will assist in increasing the safety awareness of both managers and employees. The purpose of training and education is to ensure that employees are sufficiently informed about the ergonomic hazards to which they may be exposed so they are better able to participate in their own protection. A good ergonomic training program will teach employees how to properly use their equipment as well as the correct way to perform a variety of job tasks.

All employees should be given formal instruction on the hazards associated with their jobs and with their equipment. This includes information of the varieties of CTDs, what risk factors cause or contribute to them, how to recognize and report symptoms, and how to prevent these disorders.

IV. METHODOLOGY

The general research design used in evaluating the data to determine the best approach for reducing cumulative trauma disorders at Citrus Municipal Court was an applied analysis. The information received from the in-house records had to be reviewed for information relating to the topic of my research.

The source for the data collection consisted of in-house records, a medical search, legal search, a review of workers' compensation laws, and ergonomic factors. The in-house records were the employee personnel files where information was gathered regarding the length of employment at Citrus Municipal Court and the age of employee. Separate employee files are kept regarding worker compensation claims. These files were accessed to determine the type of workers' compensation claim filed, when the injury occurred, in what department the employee was assigned when the injury occurred, the medical doctors diagnosis and how much time the employee lost, if any, from work. A comparison of the computer systems utilized by each department was performed. The size of the in-house sample was 100%. Every employee file was reviewed for information.

The Occupational Safety and Health Administration records were used to determine how many days of collective time were lost due to workers' compensation claims each year, beginning with the year of 1991 and continuing to, and including, the year of 1995.

The instrument used to collect data was an Interview Questionnaire (Appendix G1). This questionnaire was designed to be utilized during the interview of doctors in the local area of Citrus Municipal Court. There were seven doctor's offices contacted. Out of these seven, only one doctor would agree to an interview. The other six declined to be interviewed either in

person or over the telephone. The reason the interview technique was chosen was because of information received that most doctors would not respond to a survey sent directly to them but they might agree to an interview.

The medical data was collected at UCLA Louise M. Darling Biomedical Library. This library serves as the Regional Medical Library for the Pacific Southwest Region of the National Network of Libraries of Medicine (PSRML). The medical databases were utilized for research regarding cumulative trauma disorders and ergonomics. Copies were made of any materials that were relevant to the research topic.

A legal search was performed at the Marshall-Wythe Law Library. The Lexis and Law Desk databases were also utilized for any relevant material.

From the medical and legal research reviewed, letters were written to any organization which I believed could assist me further in my research. These letters were sent to Occupational Safety and Health Administration, National Institute Of Safety and Health, Liberty Mutual Research Center for Safety and Health, and the Center for Office Technology.

The Judicial Council reports were used to determine the number of cases filed and the number of case dispositions for each year beginning with 1991 and ending with 1995. This information was retrieved from the Planning and Research Information and Statistics Manager (PRISM) Computer System that is used to generate the reports that are produced monthly and forwarded to the Judicial Council. The collection of this data was performed in October 1995. Since information could only be retrieved that had been entered into the system, I could only gather the reports for January to September 1995. Therefore, the calculation of the average number of cases filed per year and cases reaching disposition per year were totaled and then

divided by 4.75 to achieve an accurate number.

A review of the ergonomic assessments of Bakersfield Municipal Court and the Santa Clara County Court Clerks was also performed. These assessments provided information regarding what ergonomists, physical therapists and doctors are looking for when they perform a worksite analysis.

The collection of data took approximately three months. The data collection began in August, 1995 and continued through October 1995. A review of the literature revealed additional possible resources and letters were then sent to those organizations. Since some of my data collection was performed via mail, some responses took longer to receive.

Once I was satisfied with the data collected, the information was divided into five categories: medical, legal, ergonomic, worker's compensation and Citrus Municipal Court. This provided me with the opportunity to review each topic separately and to stay focused on the research.

The main obstacle encountered was the refusal of the doctors to be interviewed. While this information would have been advantageous to my paper, the lack of it was not detrimental. The information obtained by the one doctor who granted an interview substantiated the information acquired during the medical research.

The other obstacle was the limited amount of quantifiable information relating to cumulative trauma disorders in office workers. Most of the research, in the ergonomics area, relates to assembly line workers and meatpackers. There have not been any laws enacted to ensure the ergonomic safety of office workers.

V. FINDINGS

A. WORKERS' COMPENSATION CLAIMS

In 1991, Citrus Municipal Court experienced its first workers' compensation claim related to a cumulative trauma disorder. To this date, that original case is still pending as an open worker's compensation claim. This employee was not taken off work, but she did attend several physical therapy sessions. The injury occurred in the hands. This employee was assigned to the Criminal Department and was working on a courtroom desk at the time on injury.

In 1992, there were two claims filed. The first employee missed 108 days of work (Figure 7). The injured area was the right wrist. This employee was relieved from job duties to give the tendons time to heal. When this failed, the employee had surgery for tendinitis. This employee was assigned to the Criminal Department, counter desk. Taking new filings requires the employee to staple the complaint in the case file. Since this incident, electric staplers have been purchased to eliminate the need for employees to use force to operate a stapler.

The second employee was assigned to a Criminal Courtroom. The injury occurred in the hands. This employee was provided with a hand brace and given anti-inflammatory medication. There were no days of work missed.

In 1993, there was one claim filed. This employee was assigned to the Criminal Department, courtroom desk. The injured area was the right wrist. The employee was provided with a splint to reduce the motion of the affected area. This employee also attended physical therapy sessions. There were no work days missed, during this year, relating to cumulative trauma disorders.

In 1994, there were 118 days of work missed due to a type of cumulative trauma

CITRUS MUNICIPAL COURT

DAYS LOST PER YEAR RELATED TO CUMULATIVE
TRAUMA DISORDERS

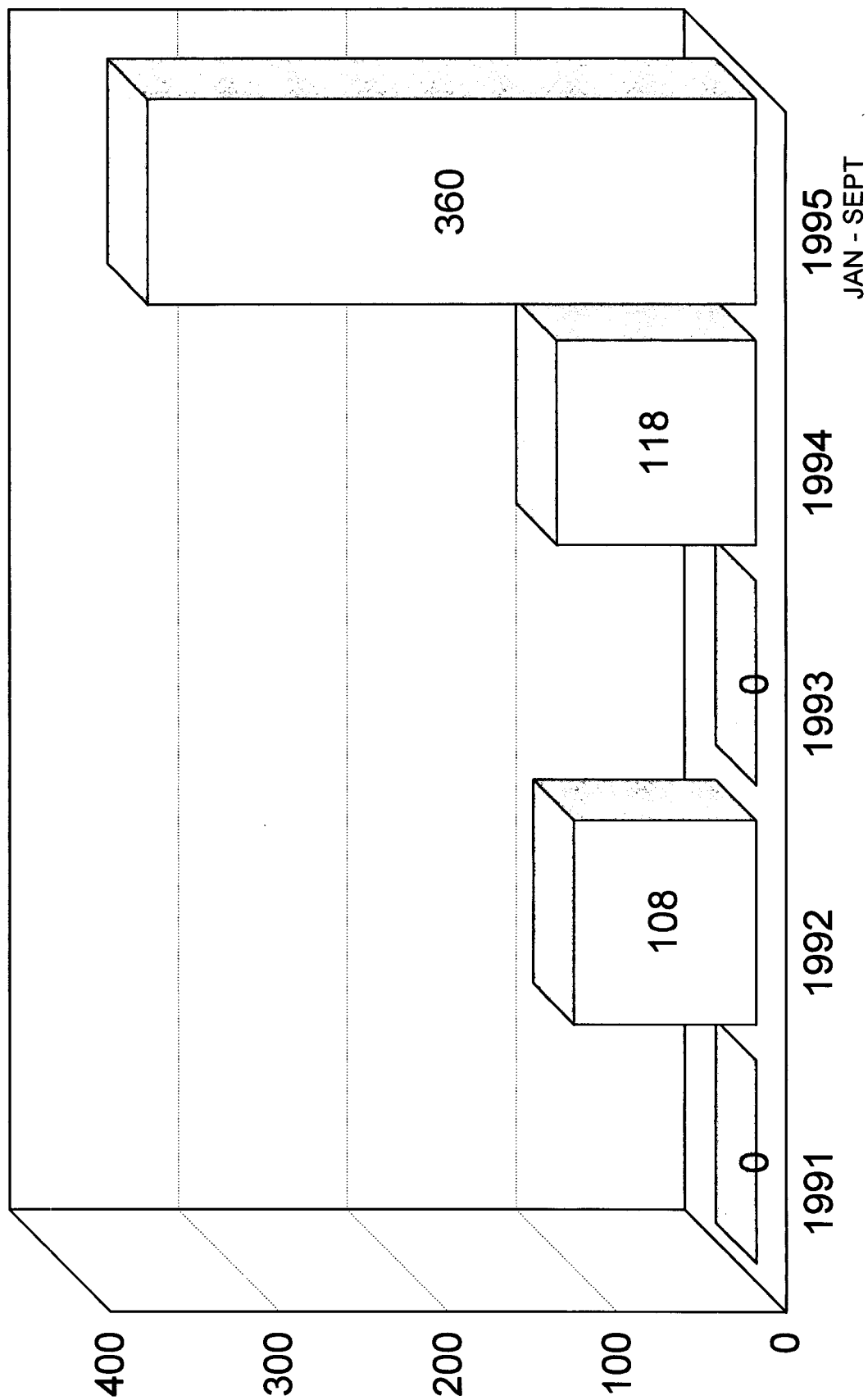


Figure 7

disorder. There were three claims filed. The employee who was injured in 1993, was relieved from job duties for 83 days. The treatment consisted of medication, an elbow brace and physical therapy.

The first employee, injured in 1994, was assigned to the Criminal Department, custody/new complaint desk. The injured areas included the hands, arms, finger, wrist and elbow. This employee was diagnosed with carpal tunnel syndrome. The absence from work was 35 days in 1994 and 197 days in 1995. The employee was pregnant at the time of injury. Because of her condition, treatment was limited. After the birth of her child, she had surgery on both of her hands.

The second employee was assigned to the Traffic Department, pending desk. There were no work days lost. The injured area was the right hand and wrist. She was treated with a hand brace and anti-inflammatory medication.

The third employee was assigned to the Criminal Department, courtroom desk. The injured area was the right thumb. The treatment consisted of a hand brace to reduce the movement in the injured area.

In 1995, there were a total of 360 days of work lost due to cumulative trauma disorders. The first employee was injured in February. She was assigned to a Criminal Courtroom at the time of injury. The injury occurred in the right hand and arm. She was relieved of work duties for 5 days. She was given a hand brace to support her wrist and anti-inflammatory medication.

The second employee was assigned to the Criminal Department, courtroom desk. She was relieved of work duties for 18 days. The injured area was the right middle finger. This was the second injury for this employee, so she is listed twice on the open worker's compensation

claims list. Treatment included 18 days off of work and anti-inflammatory medications.

The third employee was assigned to the Traffic Department, counter duty. The injured area was the shoulder and neck. She was relieved of work duties for 142 days in 1995 and is still off of work. She has been attending physical therapy sessions and receiving medication.

The fourth employee was assigned to the Criminal Department, courtroom desk. The injured area was the left shoulder and forearm. The treatment consisted of a hand brace and physical therapy. There were no days of work missed.

The fifth employee was assigned to the Criminal Department, courtroom desk. The injured area was the left shoulder. She was given medication to relieve pain.

These worker's compensation claims all involved female employees. The average age of these employees, with workers' compensation claims related to a cumulative trauma disorder, is 30.87 years, the median is 31 years and the mode was 30 years of age. The average length of service is 5.58 years, the median was 6 years and the mode 5 years. The age and the length of service are both lower than the research findings performed by Silverstein.

The generation of an "Open Workers Compensation Cases" list began in July 1993 (Appendix H1, H2 and H3). Using the list dated July 1995, a survey was performed of the costs of these worker compensation claims. The total cost of benefits paid to date was \$33,280.76 and the estimated cost of the claims, including both paid to date and expected future costs, was \$131,657.27 (Figure 8).

In reviewing these claims, it became apparent that the Criminal Department suffered the largest amount of worker's compensation claims. This prompted further investigation of any differences in the departments of the Citrus Municipal Court.

**COST OF OPEN WORKER'S COMPENSATION CLAIMS
RELATED TO CUMULATIVE TRAUMA DISORDERS
AS OF 7/31/95**

YEAR	DEPARTMENT	PAID TO DATE	ESTIMATED COST OF CLAIM
1991	CRIMINAL	\$1568.16	\$12,000.00
1992	ADMINISTRATION	\$0	\$0
1992	CRIMINAL	\$8971.70	\$16,500.00
1993	CRIMINAL	\$10,038.09	\$17,500.00
1994	TRAFFIC	\$1,128.99	\$10,004.70
1994	CRIMINAL	\$4,341.74	\$11,665.90
1994	CRIMINAL	\$2,587.14	\$11,027.58
1995	CRIMINAL	\$613.28	\$4,670.88
1995	CRIMINAL	\$897.76	\$12,954.40
1995	ADMINISTRATION	\$993.66	\$7,629.66
1995	TRAFFIC	\$2,140.24	\$12,665.60
1995	CRIMINAL	\$0	\$15,038.55
TOTAL		\$33,280.76	\$131,657.27

Figure 8

B. COMPUTER SYSTEMS

The computer system comparison reveals that the case filings and dispositions, in each department, has remained relatively stable over the last five years (Figures 9 and 10). In 1994, the Civil Department adjudications doubled because of Delay Reduction, cases were no longer placed "off calendar", there had to be an action taken on the court date. In the same year, the Traffic Department filings and adjudications both dropped by approximately nine thousand cases. This would be the effect of the parking tickets being removed from the Courts and given to the individual police agencies.

In reviewing the screens for each department, it is apparent that the Criminal Department has the busiest screens requiring the most amount of data entry. This, coupled with the amount of cases processed each year, could be a significant indicator that this may be the reason that the workers' compensation claims, related to CTDs, are mostly seen in the Criminal Department (Figure 11).

In the Criminal Department, the continuance and disposition of cases takes place on the courtroom desks. There are seven employees assigned to this job. The criminal, felony, and domestic violence courtroom clerks also update some of these cases. The TCIS System is utilized by all twenty-four Municipal Courts and Superior Court. The screens were developed to include all of the information required so there is no longer a need for a "paper docket". To change the screens would not be cost effective and all the fields are necessary for the "automated docket".

The Traffic Department has the highest amount of cases, both filed and adjudicated, of

CITRUS MUNICIPAL COURT

CASES FILED PER YEAR

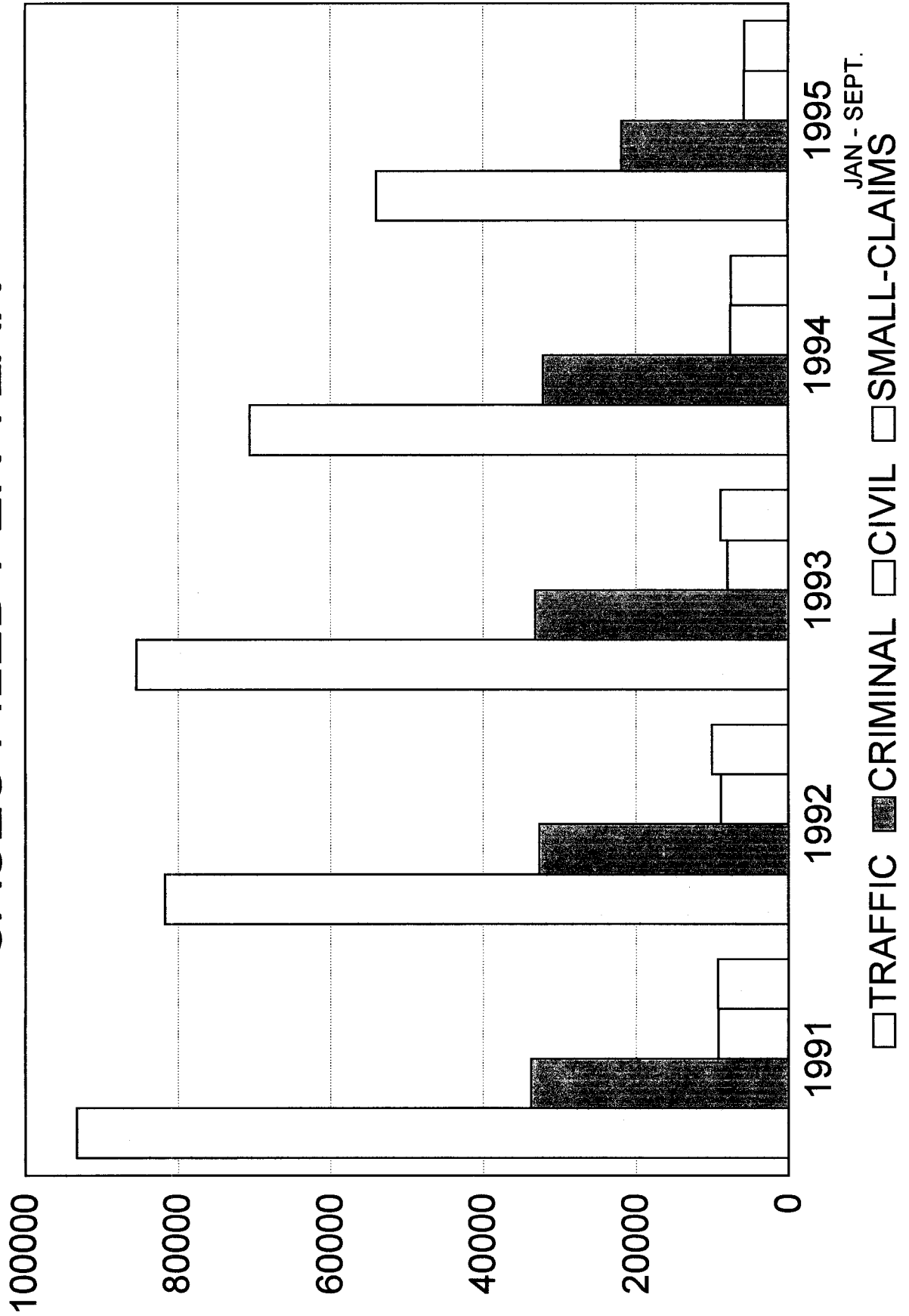


Figure 9

CITRUS MUNICIPAL COURT

CASES ADJUDICATED PER YEAR

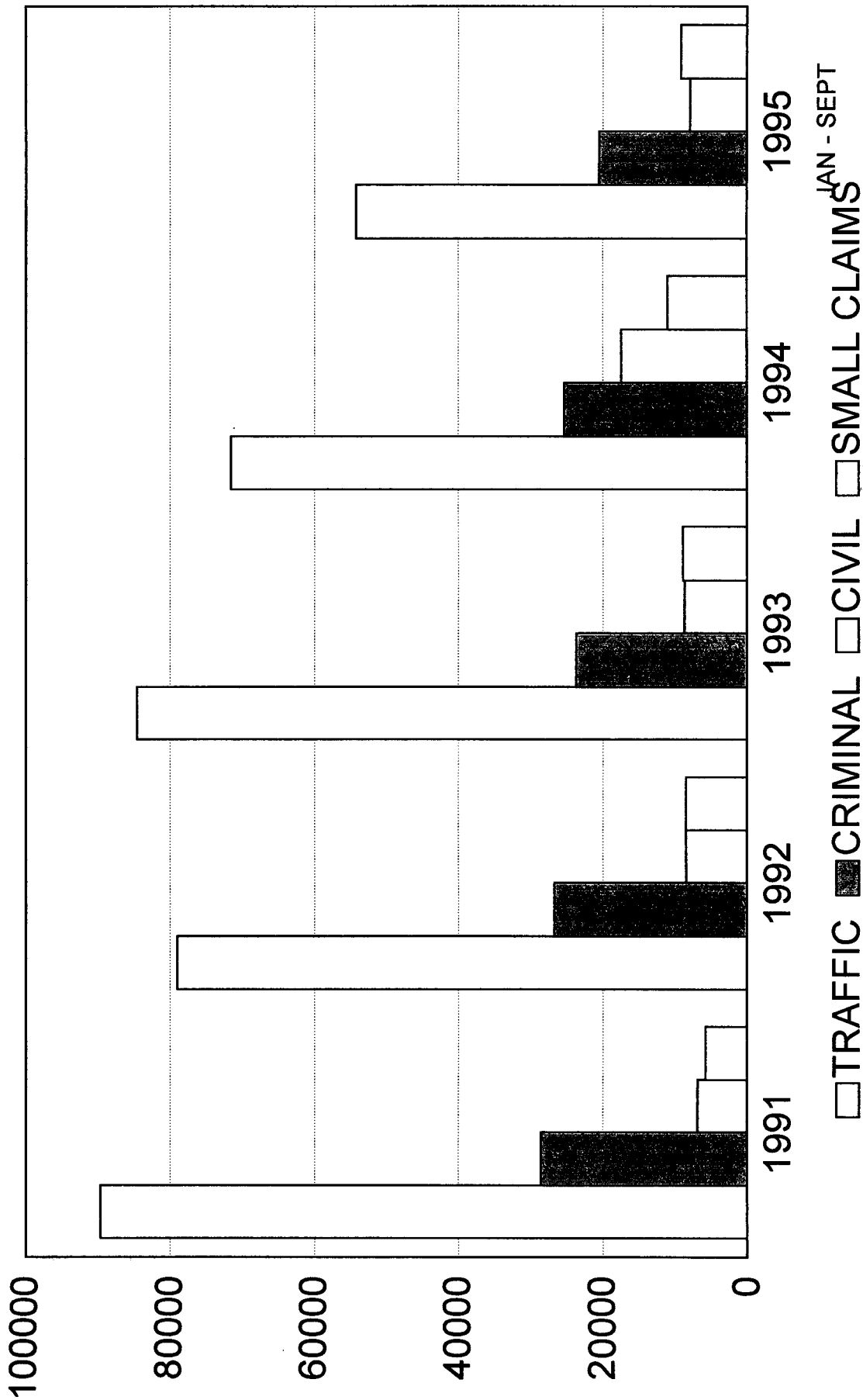
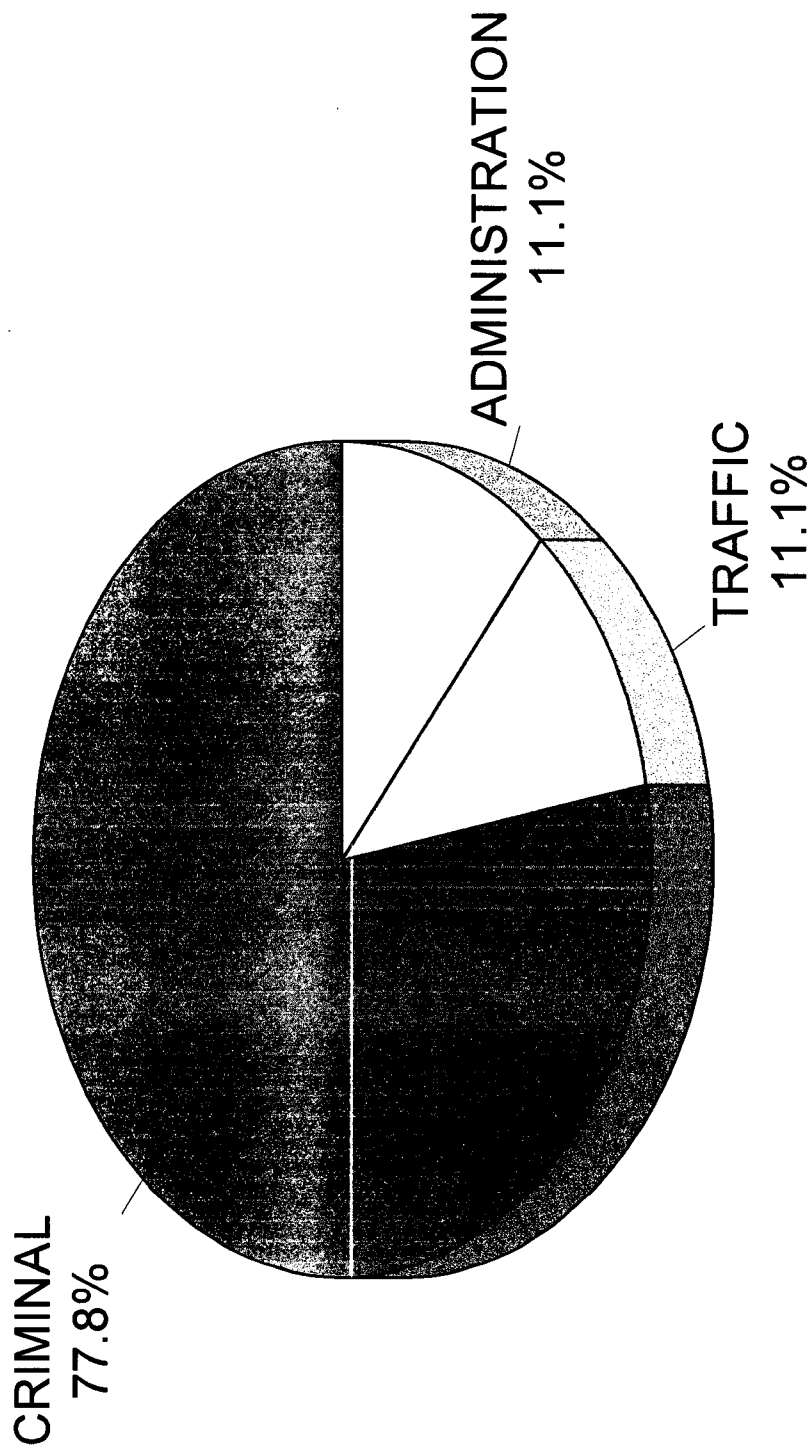


Figure 10

CITRUS MUNICIPAL COURT

OPEN WORKERS' COMPENSATION CLAIMS-RELATED TO
CUMULATIVE TRAUMA DISORDERS-AS OF 7/31/95-BY
DEPARTMENT



THE SMALL
CLAIMS AND
CIVIL
DEPARTMENTS
HAD ZERO
WORKERS'
COMPENSATION
CASES FILED
RELATED TO
CUMULATIVE
TRAUMA
DISORDERS

Figure 11

all the departments. The ETRS screens have the least amount of fields requiring information. The Traffic Department uses hand written minutes as the official document of court proceedings.

The Civil and Small Claims Department utilize the same database. Their systems are primarily the same, with the exception of the codes used to update a case. While the individual screens do not appear to be too complex, to update a case may require as many as five different screens. The advantage of this system is the ability to perform mass entries.

There was not a way to retrieve data as to amount of cases that are continued in each department. It would be sufficient to say that in each department 95 % of all cases are continued at least once. It is rare that a case is adjudicated on the first appearance, in any department.

C. EMPLOYEES AND WORKSTATIONS

As depicted in the organizational charts for each department, each employee is assigned to a specific desk. There is not a single job that requires an employee to perform data entry for eight hours a day. Each job assignment has a variety of duties. In the mornings, when the customers are in line to receive assistance in a department it is not uncommon for employees who are assigned to a desk other than the counter to assist the public. There is also a telephone located on each workstation and every employee is required to answer the telephones.

The research indicated that women are at a higher risk of being affected by cumulative trauma disorders. This prompted a gender based evaluation of the employees. There are fifty-nine female employees and ten male employees (85.5% female and 14.5% male). A survey of age of employees was also performed. The mean age of an employee at Citrus Municipal Court is 34.94 years of age, the median age is 32 and the mode is 40. This places the majority of employees in the area of the highest risk group for developing cumulative trauma disorders.

Silverstein's research, et al, showed that the average length on the job to be 7.8 years when afflicted with cumulative trauma disorders. This prompted a survey of the length of employment of all employees. The data could only respond to the length of service at Citrus Municipal Court. The average length of service is 8.28 years, the median is 7 years and the mode less than 1 year.

While keyboarding may be categorized as a repetitive movement job, it is certainly not strenuous. It could be classified as a sedentary job. Since keyboarding is sedentary, this requires a survey of the workstations at Citrus Municipal Court. All of the departments, with the exception of the courtrooms, have modular furniture. These are not cubicles. No employee

is isolated from other employees. There are two employees to each side of the modular furniture. The walls are low enough for the employees to be able to see over them and to enable them to have contact with any employee assigned within the same department.

Each workstation is equipped with a personal computer, a telephone, a shelf and some of the workstations have typewriters. There is a set of drawers with each workstation. The drawers are on wheels so they can be easily moved to be placed in an area that is the most convenient for the employee. Each workstation has a keyboard tray that is attached to the bottom of the worksurface. The keyboard tray is on sliders. The tray is approximately 15 inches deep. It can be placed under the desk when not in use. Some of the taller employees found the keyboard trays too low for their comfort, there wasn't enough room for their knees to fit comfortably under the workstation. So for these employees, the keyboard trays were removed and the keyboards were placed on top of the worksurface. This created a more comfortable position for the employee.

The workstations, in the clerk's office, are 28 1/2 inches high and 26 inches deep. Each workstation is organized at the discretion of the individual employee who is currently assigned to the desk. When keyboarding, the keyboard trays allow for the 20 inches recommended between the user and the video display terminal. Some of the employees prefer to have their central processing unit (CPU) located under their monitor, others prefer their monitor to be located directly on top of the worksurface.

The courtrooms are equipped with custom furniture. The workstations are 29 inches high and 31 inches deep. Each courtroom clerk has a computer, telephone, printer, and cubicles on top of their desks. The courtroom equipment is also organized by the individual preference of

the clerk. The cubicles allow for the most frequently used forms to be within easy reach of the clerk. Each courtroom has been equipped with a shoot from the judge's bench to the clerk's desk. This eliminates the need for the clerk to stand up to retrieve cases from the bench. In May, 1995, each workstation was furnished with a Microsoft Natural Keyboard. These keyboards have a curved form with a one inch vertical separation in the center of the keyboard. This design is aimed at assisting the operator to keep their hands turned inward, which is a more natural position for the hands.

The chairs for each employee meet the ANSI standards. The height of the chairs are adjustable from 18 1/2 to 23 1/2 inches. The seatpan of the chairs are 20 inches wide and 20 inches deep. The backs are ergonomically molded and are 18 inches high, 20 inches wide and 3 1/2 inches thick. The arms are vertically adjustable and the arm rests are 2 1/2 inches wide. There are five caster wheels supporting the chair.

Citrus Municipal Court provides employees with back rests, foot rests, screen filters to reduce glare, telephone headsets, document holders and floor mats so they can easily move around their workstation. The courtroom clerks have been provided with carts to carry their calendars to and from the courtrooms.

There is an employee suggestion box. A form has been developed, for employees, which requests suggestions for improvement or innovation (**Appendix I1**).

D. EDUCATION AND TRAINING

Los Angeles Municipal Court Training Department offers classes to the outlying jurisdictions. In 1996, they are offering a one hour session on "Video Display Terminal Safety Training". This course is aimed at training employees the safe use of VDTs to avoid stress and injury to the musculoskeletal system.

I am a member of the Education and Training Committee for the California Court Clerk's Association. The goal of the Education and Training Committee is to provide efficient and effective training to the members of the California Court Clerk's Association. It is the responsibility of this committee to select topics and speakers to present information to the members. There are three training days a year, in different locations throughout the state, and an annual convention. The Citrus Municipal Court pays the membership fee for every employee so they are able to take advantage of this training.

One of the classes offered this year is "How to Improve Your Workstation". This is a one and a half hour course designed to teach the employees the ergonomic factors associated with the organization of their workstation.

E. MEDICAL MANAGEMENT

The moment a Division Chief is informed of an injury to an employee the employee is approached and questioned about the injury. The purpose for inquiring about the injury is to determine if there is some immediate action that can be taken to prevent other employees from being injured. The employee is advised that he/she should see the Worker's Compensation doctor. The Division Chief then fills out the appropriate paperwork for the employee to take

to the doctor. The doctor is conveniently located within one mile of the Court.

The employee is provided with a County of Los Angeles Medical Service Order (Appendix J1) to take to the doctor's office. They are also provided with a pamphlet titled "Facts about Workers' Compensation". This pamphlet explains what worker's compensation is and the benefits injured employees are entitled to (Appendix J2). The Division Chief then completes the Employer's Report Of Occupational Injury Or Illness (Appendix J3). When the employee returns they are given the Employee Claim For Workers' Compensation Benefits form to fill out (Appendix J4). The Employee's Claim and Occupational Injury forms are given to the Assistant Court Administrator to forward to the claims unit.

F. IMPACT ON THE BUDGET

The budget is impacted by worker's compensation claims. When an employee is relieved of job duties, because of an injury incurred on the job, they are paid 70% of their salary plus benefits for the entire time they are off of work. To compensate for the loss of production of the injured employee, the court either has to pay other employees overtime or hire a temporary employee to replace the injured employee. Therefore, you are paying two people to perform the same job.

In the case of Citrus Municipal Court for the year of 1995, there was a loss of 360 days. This is the equivalent to 1.5 employees for the entire year. 70% of the salary for 1.5 employees cost the Court \$2,091 per month, benefits cost of \$710 per month and the temporary employee salary of \$1,760 per month. It cost the Court \$4,561 per month to maintain the same production of 1.5 employees who were off work due to cumulative trauma disorders.

VI. CONCLUSION AND RECOMMENDATIONS

Worker's Compensation Claims relating to cumulative trauma disorders are on an increase (Figure 12). If you haven't experienced it yet, the chances are you soon will. It is the conclusion of this study the answer to reducing CTDs in the workplace is *education* (employee and employer) and *ergonomics*.

Cumulative trauma disorders are not a fad. They have been around for numerous years and will continue to exist until proper action is taken to eliminate the problems associated with developing CTDs. Tom Lantos, Chairman of the Employment and Housing Subcommittee, was correct in saying this is the "occupational disease of the 1990's".

Employers need to show some empathy. This person was considered the best candidate for the position. These disorders are not only affecting the employees performance on the job, they are also affecting all aspects of the employees life.

The Occupational Safety and Health Administration requires that employers provide employees with: a safe workplace, safe equipment and information on workplace hazards. Managing ergonomics addresses the comfort, safety and health of employees.

Implementing an ergonomic practice in any office does not have to be expensive. The simplest plan is to use self-evaluation of workstations, using the basic principles of ergonomics. There are many books and pamphlets that are inexpensive, some are free, that provide information on evaluating workstations.

When the need to replace equipment arises, purchase equipment that is ergonomically correct for the employees who are performing the tasks. Adjustable furniture may be a little more expensive, but if you don't spend the money on the furniture now there's a good possibility

CITRUS MUNICIPAL COURT

WORKER'S COMPENSATION CLAIMS FILED RELATED TO CUMULATIVE TRAUMA DISORDERS

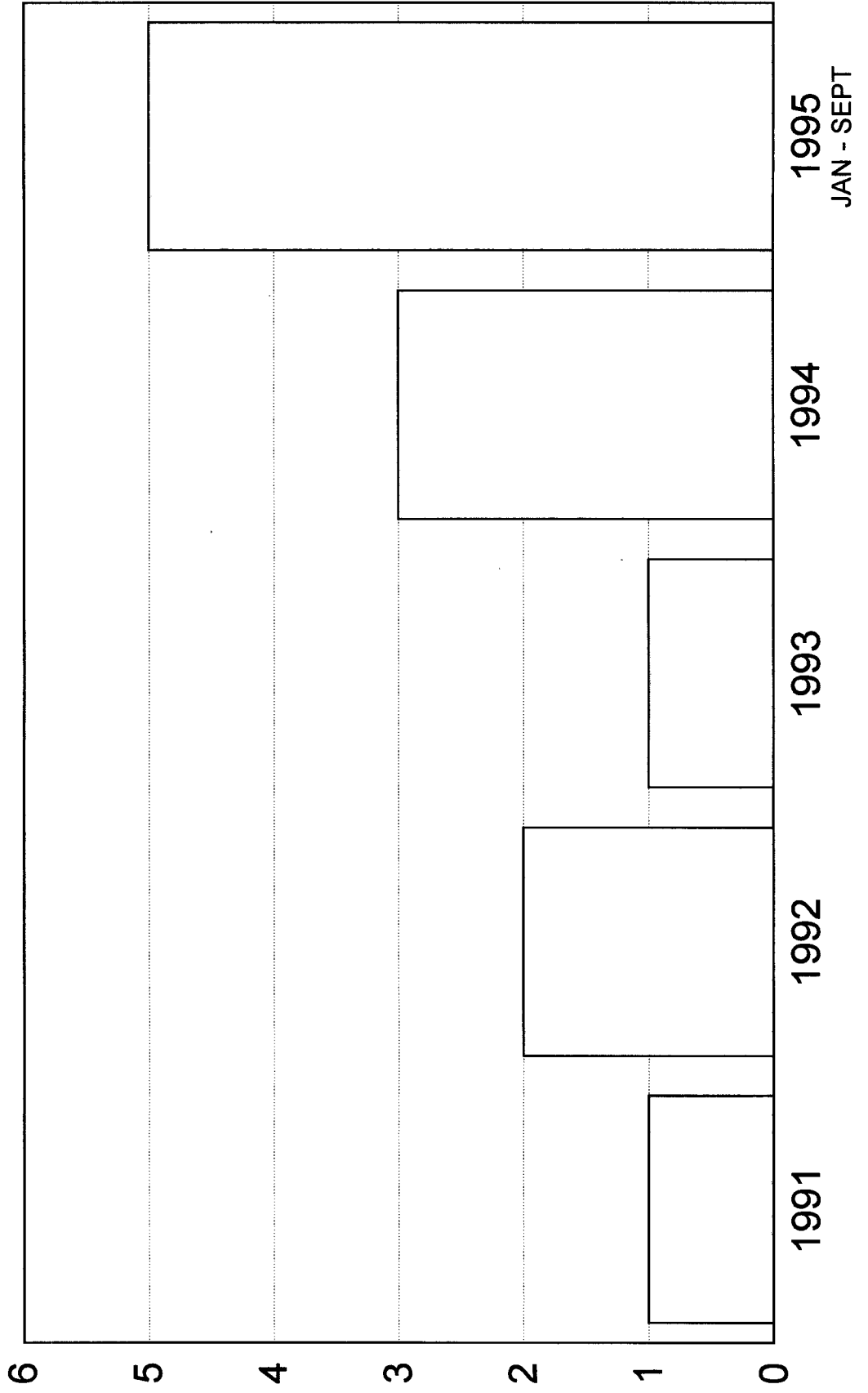


Figure 12

you will be spending more money on worker's compensation claims later.

Employees need to feel that they are important. What better way can this be done than by providing them with education on how to reduce the potential of injury they may encounter. If they are able to recognize the first signs of a disorder, the issue can be addressed before it becomes a problem (for everyone involved). Employees need to be informed that when they feel fatigued or tension in their muscles they should take a structured rest break to give their muscles or tendons sufficient recovery time. There are always other duties that can be performed. Early intervention will save the employee discomfort associated with the disorders as they further develop, the treatments will be less expensive and the time lost from work will be minimal.

If employers don't advise the employees about cumulative trauma disorders and the proper way to perform their job duties, they will hear it elsewhere. So why not provide them with accurate information and allow them to assist the employer in the achievement of a work environment free of cumulative trauma disorders. Employee participation is a primary contributor to job satisfaction and employee motivation.

Citrus Municipal Court is looking into purchasing a pamphlet titled "Preventing Repetitive Strain At The Keyboard" (Appendix K1) to hand out to all employees. This topic will also be addressed in the New Hire Orientation Program. We are enrolling employees in the Video Display Safety Training course offered by the Los Angeles County Municipal Court Training Department. We are also checking into the possibility of having this course taught at Citrus Municipal Court for the convenience of the employees.

After evaluating the workstations, it can be concluded that the equipment at Citrus Municipal Court is ergonomically correct. The worksurfaces are not adjustable, however the

chairs can be raised or lowered, depending on the employees height to meet the needs of all employees. We provide employees with any accessories that will assist them in performing their job duties in a comfortable and safe manner.

Has this project achieved its goal? The Court has definitely taken actions in the right direction and the first step in reaching a goal is to make a plan.

VII. ENDNOTES

1. Lyon, B.K., "Video Display Ergon," *Professional Safety*, June 1992: p.33.
2. Putz-Anderson, V., ed. *Cumulative Trauma Disorders: A Manual for Musculoskeletal Diseases of the Upper Limbs*. Philadelphia, PA: Taylor & Francis 1988, p. 16.
3. Putz-Anderson, V., ed. *Cumulative Trauma Disorders: A Manual for Musculoskeletal Diseases of the Upper Limbs*. Philadelphia, PA: Taylor & Francis 1988, p. 17.
4. *California Occupational Safety and Health Act Training and Recordkeeping Manual*, Department of Personnel Loss Prevention Section.
5. West's Annotated California Codes, Labor Code Sections 6400 to 6408. St. Paul, Minn: West Publishing Co., p. 314-323.
6. Witkin, B.E., *Summary of California Law*, Ninth edition, Volume 2, 1987, p. 560-565.
7. Brogmus, G.E., M.S., M.Erg.S., CPE, Sorock, G.S., Ph.D., Webster, B.S., BSPT, PA-C, Liberty Mutual Research Center for Safety and Health, "Recent Trends in Work-Related Cumulative Trauma Disorders of the Upper Extremities in the United States: An Evaluation of Possible Reasons", Unpublished Research, *Journal of Occupational and Environmental Medicine*.

VIII. BIBLIOGRAPHY

- Albin, T. and Gutman, S., "Minor Adjustments Unshackle Office Workers", *Occupational Health & Safety*, October 1994, p. 107-113.
- Barrer, S., "Gaining the Upper Hand on Carpal Tunnel Syndrome", *Occupational Health & Safety*, January 1991, p. 38-43.
- Braganza, B.J., "Ergonomics in the Office", *Professional Safety*, August 1994, p. 22-27.
- Brogmus, G.E., Sorock, G.S., Webster, B.S., , Liberty Mutual Research Center for Safety and Health, "Recent Trends in Work-Related Cumulative Trauma Disorders of the Upper Extremities in the United States: An Evaluation of Possible Reasons", Unpublished Research, *Journal of Occupational Environment Medicine*.
- California Occupational Safety and Health Act Training and Recordkeeping Manual*, Department of Personnel Loss Prevention Section.
- Center for Office Technology, (1994), *Latest Studies on VDTs*, Fourth Edition.
- Center for Office Technology, (1993), *Office Ergonomics Management Program*.
- Center for Office Technology, (1994), *A Summary of the Most Common VDT Standards and Guidelines*.
- "Confronting Repetitive Motion Illnesses in the Workplace", Hearing before the Employment and Housing Subcommittee of the Committee on Government Operations House of Representatives, One Hundred Second Congress, March 28, 1991. U.S. Government Printing Office, Washington: 1991.
- Joseph, B.S., PhD., "Ergonomic Considerations and Job Design in Upper Extremity Disorders", *Journal of Occupational Medicine*, Vol. 4, no. 3, July-September 1998, p. 547-555.
- Kasdan, M.L., "Occupational Hand Injuries", *Journal of Occupational Medicine*, Vol. 4, No. 3, p. 419-569.
- Keyserling, W.M., Stetson, D.S., Silverstein, B.A. and Brouwer, M.L., "A Checklist For Evaluating Ergonomic Risk Factors Associated With Upper Extremity Cumulative Trauma Disorders", *Ergonomics*, Vol. 36, No. 7, July, 1993, p. 807-831.
- Kuorinka, I., "Repetitive Work in Perspective", *Ergonomics*, Vol. 38, No. 8, 1995, p. 1686-1690.

- Lee, K., Swanson, N., Sauter, S., Wickstrom, R., Waikar, A. and Mangum, M., "A Review of Physical Exercises Recommended for VDT Operators", *Applied Ergonomics*, Vol. 23, No. 6, December 1992, p. 387-407.
- Lewin, D.L., "Preventive Medicine at Work", *Nation's Business*, March 1995, p. 33-35.
- Lyon, B.K., "Video Display Ergon", *Professional Safety*, June 1992, p. 32-39.
- Mc Knight, H.V., "Biomechanics of VDT Carpal Tunnel Cases", *Trial*, June 1991, p. 51-54.
- Moore, J.S. and Garg, A. "Ergonomics: Low-Back Pain, Carpal Tunnel Syndrome, and Upper Extremity Disorders in the Workplace." *Journal of Occupational Medicine*, Vol. 7, No. 4, p. 741-761.
- Putz-Anderson, V., Ed., *Cumulative Trauma Disorders: A Manual for Musculoskeletal Diseases of the Upper Limbs*, Philadelphia, PA: Taylor & Francis, 1988.
- National Institute for Occupational Safety and Health, "NIOSH Publications on Video Display Terminals" (Revised)
- Nobbe, G., "The End of the (Carpal) Tunnel, *Omni*, Vol. 17,, November 1994, p. 38.
- Pierson, J., "Stand Up and Listen: Your Chair May Harm Your Health", *Wall Street Journal*, September 12, 1995.
- Ranney, D., Wells, R. and Moore, A., "Upper limb musculoskeletal disorders in highly repetitive industries: precise anatomical physical findings." *Ergonomics*, 1995, Vol. 38, No. 7, p. 1408-1423.
- Schoenmarklin, R.W., Marras, W.S. and Leurgans, S.E., "Industrial wrist motions and incidence of hand/wrist cumulative trauma disorders." *Ergonomics*, 1994, Vol. 37, No. 9, p. 1449-1459.
- Snook, S., "Ergonomics and Video Display Terminals", *Industry*, March 1984.
- Steinberg, F., "The Law of Worker's Compensation As It Applies to Hand Injuries", *Journal of Occupational Medicine*, Vol. 4, No. 3, September 1989, p. 559-568.
- Tayyari, F. and Emanuel, J., "Carpal Tunnel Syndrome: An Ergonomic Approach To Its Prevention", *International Journal of Industrial Ergonomics*, Vol. 11, 1993, p. 173-179.
- Thorson, E.P., Szabo, R.M., "Tendonitis of the wrist and elbow", *Journal of Occupational Medicine*, July-September 1989. Vol. 4, No. 3, p. 419-430.
- U. S. Department of Health and Human Services, "Carpal Tunnel Syndrome: Selected References", March 1989.

Webster, B., Snook, S., "The Cost of Compensable Upper Extremity Cumulative Trauma Disorders", *Journal of Medicine*, Vol. 36, No. 7, July 1994, p. 713-717.

West's *Annotated California Codes*, Labor Code Sections 5300 to End, St. Paul, Minn: West Publishing Co., 1989, p. 314-323.

Witkin, B.E., *Summary of California Law*, Ninth Edition, Volume 2, 1987, p. 560-565.

IX. APPENDICES

A. Civil Department Computer Screens and Relevant Statistics

Civil Cases Filed Per Year.....	A1
Case Information and Filing Screen.....	A2
Register of Actions.....	A3
Cause Called for Screen.....	A4
Cause Called for Court Trial Screen.....	A5
Clerk's Service Screen.....	A6
Cause Called for Pre-Trial Screen.....	A7
Civil Cases Adjudicated Per Year.....	A8
Judgment as a Final Disposition Screen.....	A9
Default Judgment Screen.....	A10
Unlawful Detainer Judgment Screen.....	A11
Cause Called for Status Conference Screen.....	A12

B. Criminal Department Computer Screens and Relevant Statistics

Criminal Cases Filed Per Year.....	B1
Initial Filing Screen.....	B2
Arraignment/Plea Screen.....	B3
Continuance/Motion Screen.....	B4
Criminal Cases Adjudicated Per Year.....	B5
Sentencing/Probation Screen.....	B6

C. Small Claims Department Computer Screens and Relevant Statistics

Small Claims Cases Filed Per Year.....	C1
Case Information and Filing Screen.....	C2
Register of Action Screen.....	C3
Continuance Screen.....	C4
Court Trial Screen.....	C5
Small Claims Cases Adjudicated Per Year.....	C6
Judgment Entered As A Final Disposition.....	C7

D. Traffic Department Computer Screens and Relevant Statistics

Traffic Cases Filed Per Year.....	D1
Continuance Calendar Add/Change Screen.....	D2
Traffic Cases Adjudicated Per Year.....	D3
Court Disposition Add/Change Screen.....	D4
Warrant Add/Change Screen.....	D5
Free Form Correspondence Screen.....	D6

E. Administration Computer Screens and Relevant Statistics

Initial Filing Screen.....	E1
Payment Voucher Detail Screen.....	E2

F. Relevant Physiology

Hand.....	F1
Wrist.....	F2
Elbow.....	F3
Shoulder.....	F4

G. Interview Questionnaire

Interview Questionnaire.....	G1
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H. List of Open Workers' Compensation Cases

Open Workers' Compensation Cases as of July 31, 1993.....	H1
Open Workers' Compensation Cases as of July 31, 1994.....	H2
Open Workers' Compensation Cases as of July 31, 1995.....	H3

I. Employee Survey Form

Employee Survey Form.....	I1
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J. Relevant Medical Forms

County of Los Angeles Medical Order Form.....	J1
Facts about Workers' Compensation Pamphlet.....	J2
Employer's Report of Occupational Injury or Illness.....	J3
Employee's Claim for Workers' Compensation Benefits.....	J4

K. "Preventing Repetitive Strain at the Keyboard" Pamphlet

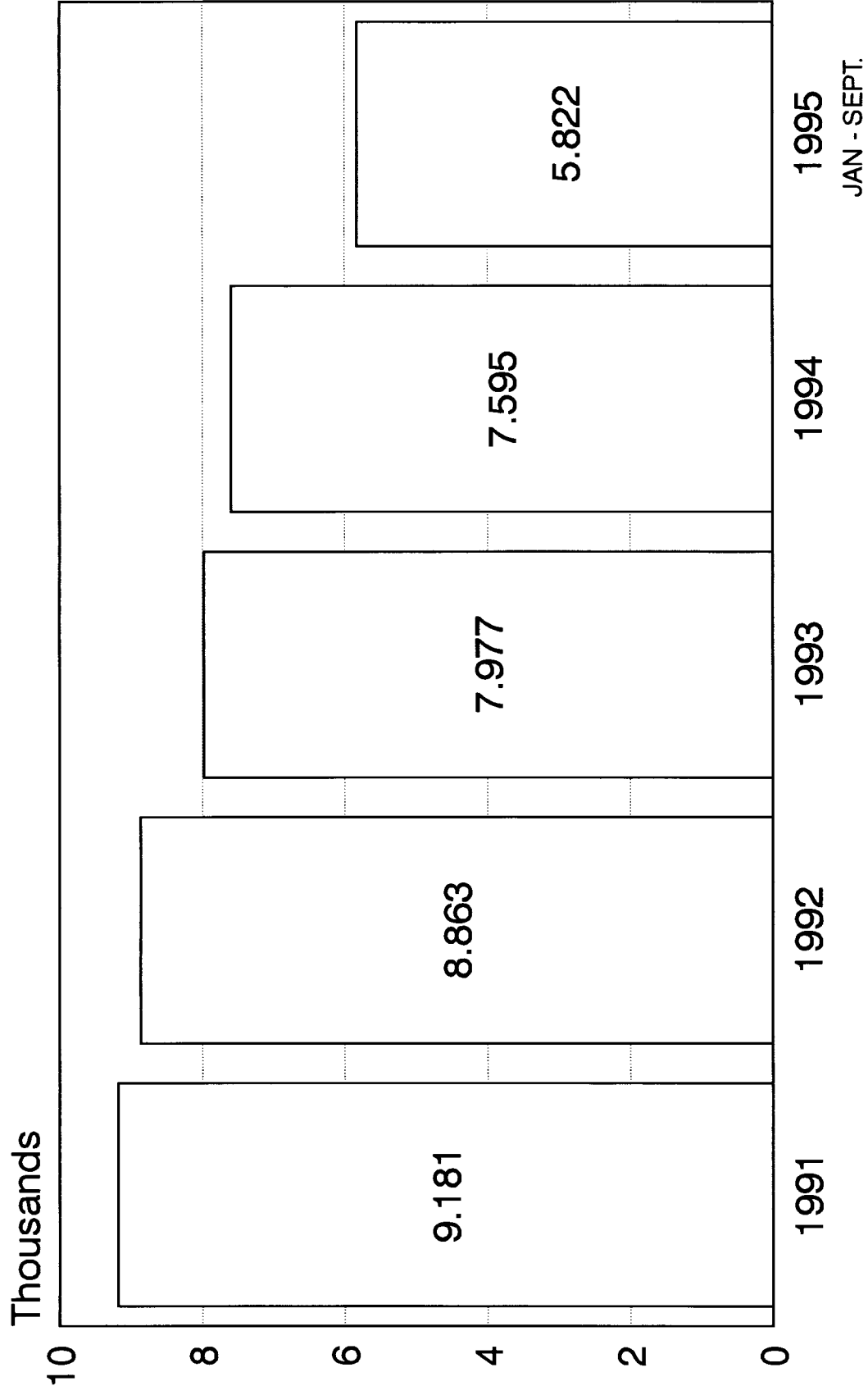
"Preventing Repetitive Strain at the Keyboard" Pamphlet.....	K1
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APPENDIX A

CIVIL DEPARTMENT COMPUTER SCREENS AND RELEVANT STATISTICS

CITRUS MUNICIPAL COURT

CIVIL CASES FILED PER YEAR



PROGRAM SWITCHED TO CIVAS - CASE INFORMATION AND FILING
CASE #: CIT ACTION(A,E,M,V): a
TYPE : NATURE : DATE: 11 / 06 / 95
RELIEF: ATTY FEES (Y/N): # OF PLTFS: # OF DEFTS:
EMISES ADDRESS :
CITY : ZIP :
TITLE : VS
P OR D #: NAME:

MAILING NAME:

PRO PER (Y/N): ATTY #:
ATTORNEY NAME (F,M,L,S):
ATTY FIRM:
ADDRESS:
ATTY/PRO PER CITY: STATE: ZIP:
PHONE: () -
F1=MENU F2=RESET F3=HELP F4=FILINGS F5=REGISTER F6=ARCHIVE
F7=BACKWARD F8=FORWARD F9=ATY-IND F10=ATY-INF F11=CROSS F12=NAM-IND

CIVAS REGISTER OF ACTIONS

CASE #: CIT

ACTION (A,C,E,I,D,U,V): A VIEW MONTH(MMY): _____

TITLE :

VS

DATE : / /

ACTION CODE:

STATUS: PE

MASS ENTRY : N

SEQUENCE:

DIVISION:

FEE : _____

STAT LINE : _____

NOTES : _____

F1=MENU

F2=RESET

F3=HELP

F4=SEQ-CDS

F7=BACKWARD

F8=FORWARD

CASE #: CIT ACTION (A,C,E,I,D,U,V): A VIEW MONTH(MMY): _____

TITLE : VS

DATE : / / ACTION CODE: 1120 STATUS: PE

: CAUSE CALLED AT

TIM05

: M, IN DIV.

NUM03

: , HON.

JUD60

: PRESIDING FOR PRE-TRIAL SETTLEMENT CONF. PLAINTIFF APPEARING

CHR60

STAT: 25 00

F1=MENU

F2=RESET

F3=HELP

PAGE 2

: . DEFENDANT APPEARING

CHR60

: . NO SETTLEMENT REACHED. TRIAL DATE TO REMAIN ON CALENDAR.

F1=MENU

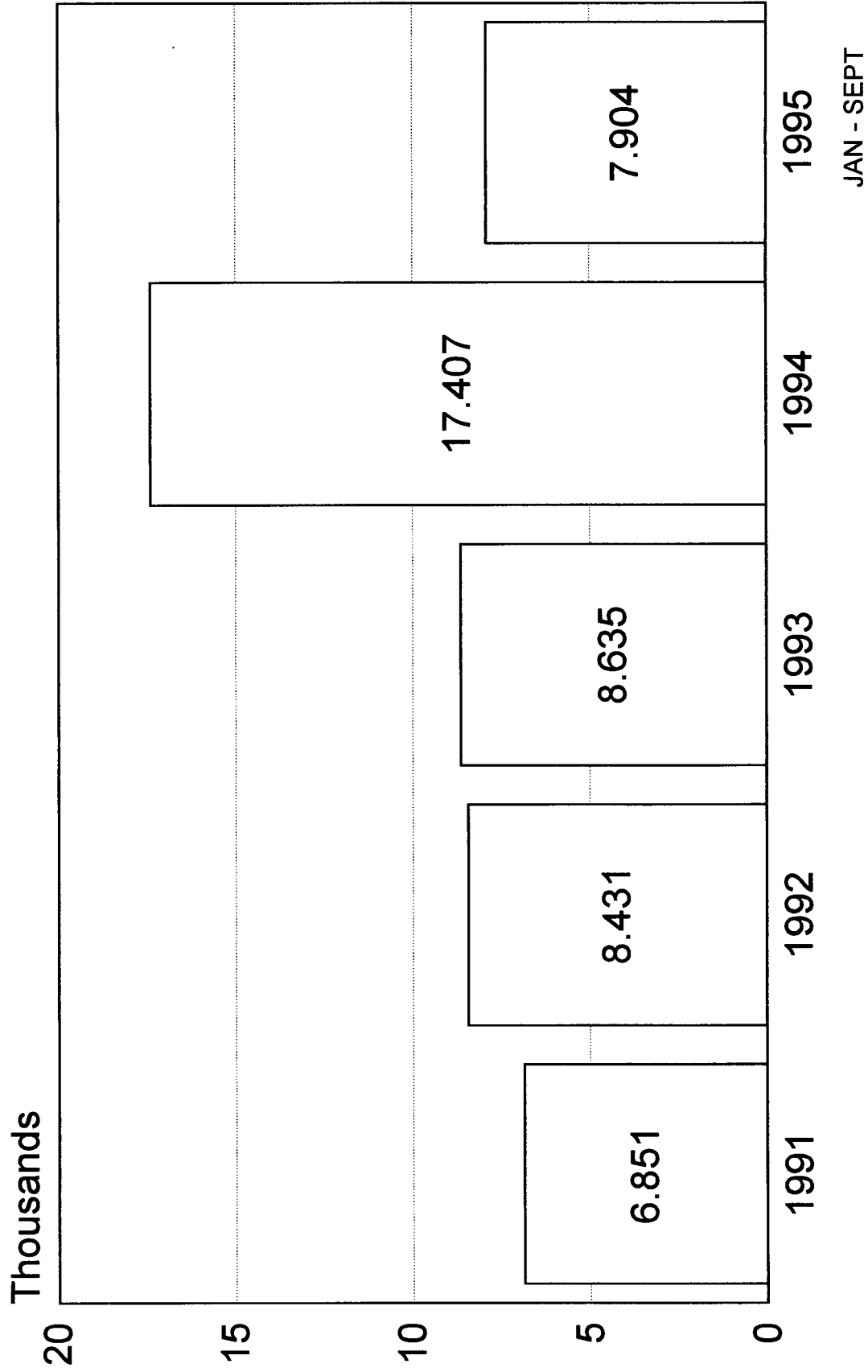
F2=RESET

F3=HELP

F7=BACKWARD

CITRUS MUNICIPAL COURT

CIVIL CASES ADJUDICATED PER YEAR



CASE #: CIT : ACTION (A,C,E,I,D,U,V) : A VIEW MONTH(MMY) : _____
TITLE : VS
DATE : / / ACTION CODE: 1131 STATUS: PE
: CAUSE CALLED AT
:
TIM05 :
:
: M, IN DIV.
:
NUM03 :
:
: , HON.
:
JUD60 :
:
: PRESIDING FOR HEARING RE: DEFAULT JUDGMENT BY COURT. PLTF.
: APPEARING BY DEC. CCP 585{D}. NO APPEARANCE BY OR FOR DEFT.
CHO120 :
:

F1=MENU F2=RESET F3=HELP

CASE #: CIT ACTION (A,C,E,I,D,U,V): A VIEW MONTH(MMY): _____

TITLE : VS

DATE : / / ACTION CODE: 2001 STATUS: PE

: JUDGMENT ENTERED AS A FINAL DISPOSITION ON

DAT06 :

: . FOR

LIT120 :

: . AGAINST

LIT120 :

: . PAST DUE RENT \$

NUM08 :

STAT: 04 05 06 08 09

F1=MENU

F2=RESET

F3=HELP

PAGE 2

: . DAILY DAMAGES \$

NUM08 :

: . ATTORNEY FEES \$

NUM08 :

: . COSTS \$

NUM08 :

: . AND FOR RESTITUTION OF PREMISES LOCATED AT

CHR120 :

CHO120 :

F1=MENU

F2=RESET

F3=HELP

F7=BACKWARD

CASE #: CIT ACTION (A,C,E,I,D,U,V): A VIEW MONTH(MMY): _____

TITLE : VS
DATE : / / ACTION CODE: 1376 STATUS: PE
: CAUSE CALLED AT

TIM05 :

: M, IN DIV.

NUM03 :

: , HON.

JUD60 :

: PRESIDING FOR

CHO120 :

NOTES: STATUS CONFERENCE HEARING

F1=MENU F2=RESET F3=HELP

WARNING...CALENDAR-NOT-WITHIN-0730-DAYS-OF-FILING-DATE-070993

PAGE 2

: MATTER CONTINUED TO

DA*06 :

: AT

TI*05 :

: M, IN DIV.

NU*03 :

CHO120 :

F1=MENU

F2=RESET

F3=HELP

F5=PREV-CAL

F6=NEXT-CAL

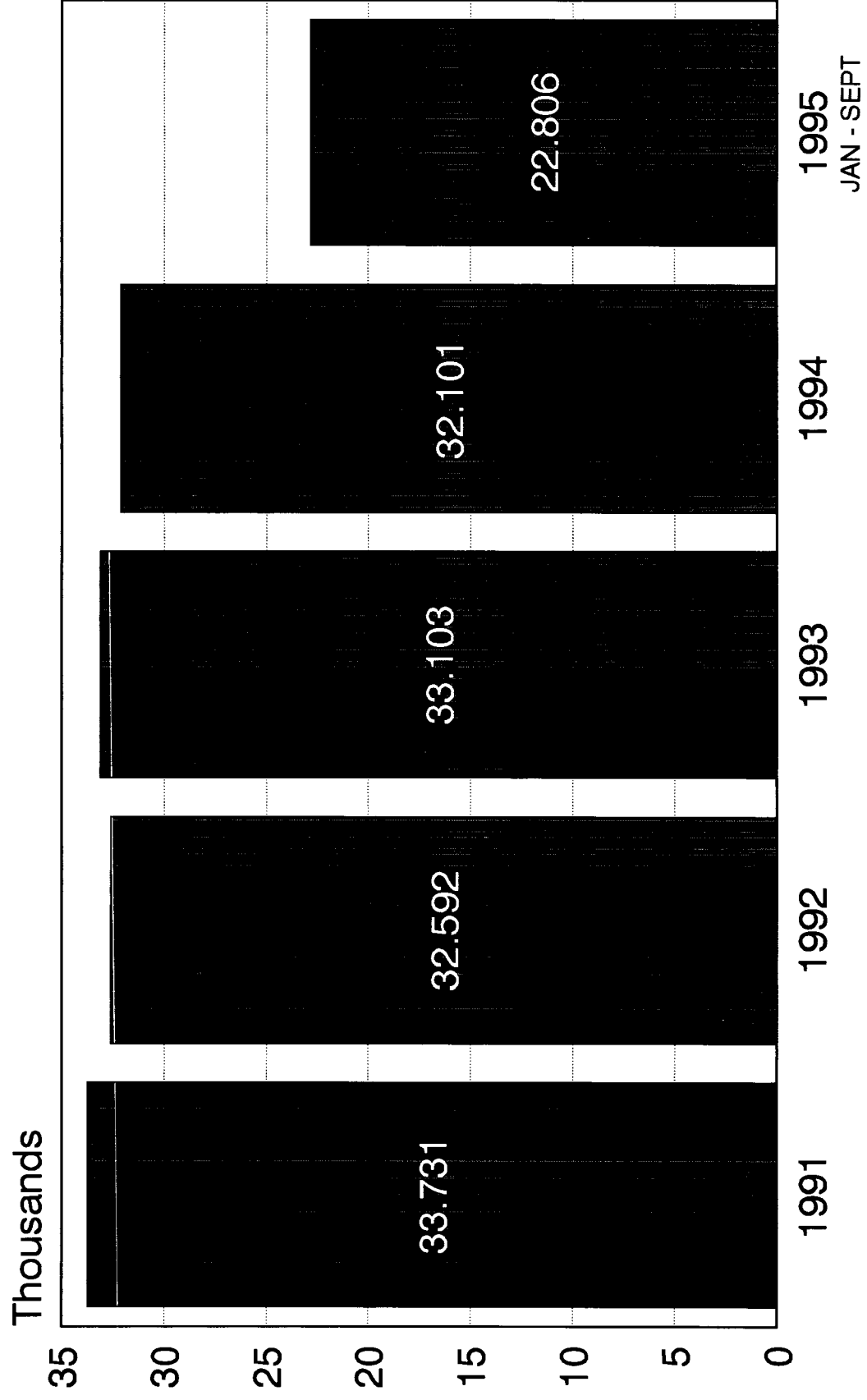
F7=BACKWARD

APPENDIX B

CRIMINAL DEPARTMENT COMPUTER SCREENS AND RELEVANT STATISTICS

CITRUS MUNICIPAL COURT

CRIMINAL CASES FILED PER YEAR



PSWD _____ TCIS INITIAL FILING _____ JUD DIST CIT FUNC A
 CASE# _____ DEF# 01 VIO DT _____ FILE DT _____ PROS AGCY _____ PL _____
 FIRST _____ MID _____ LAST _____ SUFX _____
 ADDR _____ CITY _____ ZIP _____ ST _____
 DOB _____ SEX _____ HAIR _____ EYES _____ HGT _____ WGT _____ RACE _____
 D#S OLN _____ ST _____ LPD _____ MAIN _____ SSN _____
 VLN _____ ST _____ CII _____ BKG _____ XXX _____
 AKA FIRST _____ MID _____ LAST _____ SUFX _____
 LEA _____ VIO CITY _____ RESP LEA _____ INV/UNIT _____ PH _____
 FILE CHG 01 _____ XX _____ XX _____
 ARST CHG A1 _____ A2 _____
 ADTE _____ ARST FRST _____ MID _____ LST _____ SFX _____
 CT _____ PR VIOL _____ ON _____ CASE _____ CRT CDE _____
 BAIL/WRT INFO _____ \$ _____ TYPE _____ JDG _____ NTCE _____
 BOND/RCPT# _____ RCPT DT _____ CO-AGT# _____
 AGT-DEP _____ AUT _____
 ADDR _____ CITY _____ ZIP _____ ST _____
 NXT EVT _____ DT _____ DIV _____ TM _____ DIST _____ AUTO NAME INQ _____
 COMMENTS: _____

COPY _____ NXT CASE# _____ DEF# _____ * MFIL *
 > ENTER FILING DATA > REQUIRED FLDS HIGHLIGHT >UPDATE NOT AUTHORIZED.

PSWD
CASE# _____ DEF# 01 TCIS - ARRAIGNMT & PLEA JUD DIST CIT FUNC A
FIRST _____ MID _____ TM _____ EVT _____
PROS ATTY _____ JDG _____ STIP JDG _____ CLERK _____ SUFX _____
DEF PRES _____ WITH ATTY DEF ATTY _____ NAME _____ CRT REP _____
NTPR _____ LANG _____ SWORN _____ WRT TYPE _____ \$ _____ NTCE _____
DEF DMD ATTY REF FSF PDA LWA NQ CNF/UNA DEF WVE ATTY 987.2
CRT ADV SELF REP CRT ACPT SELF REP WCR WFA CPR CPY T/N
ALL CT DIS PL CT CHARGE TY COP AMENDED CHARGE TY AMD W/D

DEF ADV-WVE GLTY PLEA RT, WTN WVR JURY-CRT TR CON WIT SUBP WIT
SELF INCR COUNSEL CRT ACPTS WVR
DEF ADV OF: NDE EGP EOP CTZ CRT ACPTS PL ADV-WVE SPDY TR
PRIORS: DENY INF-FL/AR
PSTD V R B/F/E>A>C BY BL RM/OR RL
NXT EVT DT DIV TM TM WVD DIST DD
ACTN EVT DT TM DV ACTN EVT DT TM DV
NXT PG ? COPY BOND/RCPT# * MRN1 *
VERIFY KEY & CALNDAR INFO > UPDATE NOT AUTHORIZED - PRESS PF24 FOR HELP.

PAGE 2
CASE# _____ DEF# 01 TCIS - ARRAIGNMT & MISC JUD DIST CIT FUNC A
FIRST _____ MID _____ LAST _____ SUFX _____
DEF ADV OF CONSTITUTIONAL AND STATUTORY RTS:
ORALLY _____ IN WRITING VIA CASSETTE: AUDIO _____ VIDEO _____ MASS _____
MISDEMEANOR RTS: LWR LWA RPS CNP PLS PLN SYT TOT DST
JUT WIT TSF CNS BAL PRC DSX CTZ
FELONY RTS: LWR LWA RPS CNP PLS SYT TOT
DST JUT WIT TSF CNS BAL CTZ
DEF ADVISED OF RTS: NDE EGP EOP EPC
DEF DMD PROBABLE CAUSE FOR ARREST CRT FIND PROBABLE CAUSE
COMMENTS _____
COURT ORDRS/FINDINGS: _____ ADDITIONAL TERMS/COMMENTS?
COMPL AMD: CT ALGPR VIO ON CASE# CRT CD A/D/S
ALL CT _____

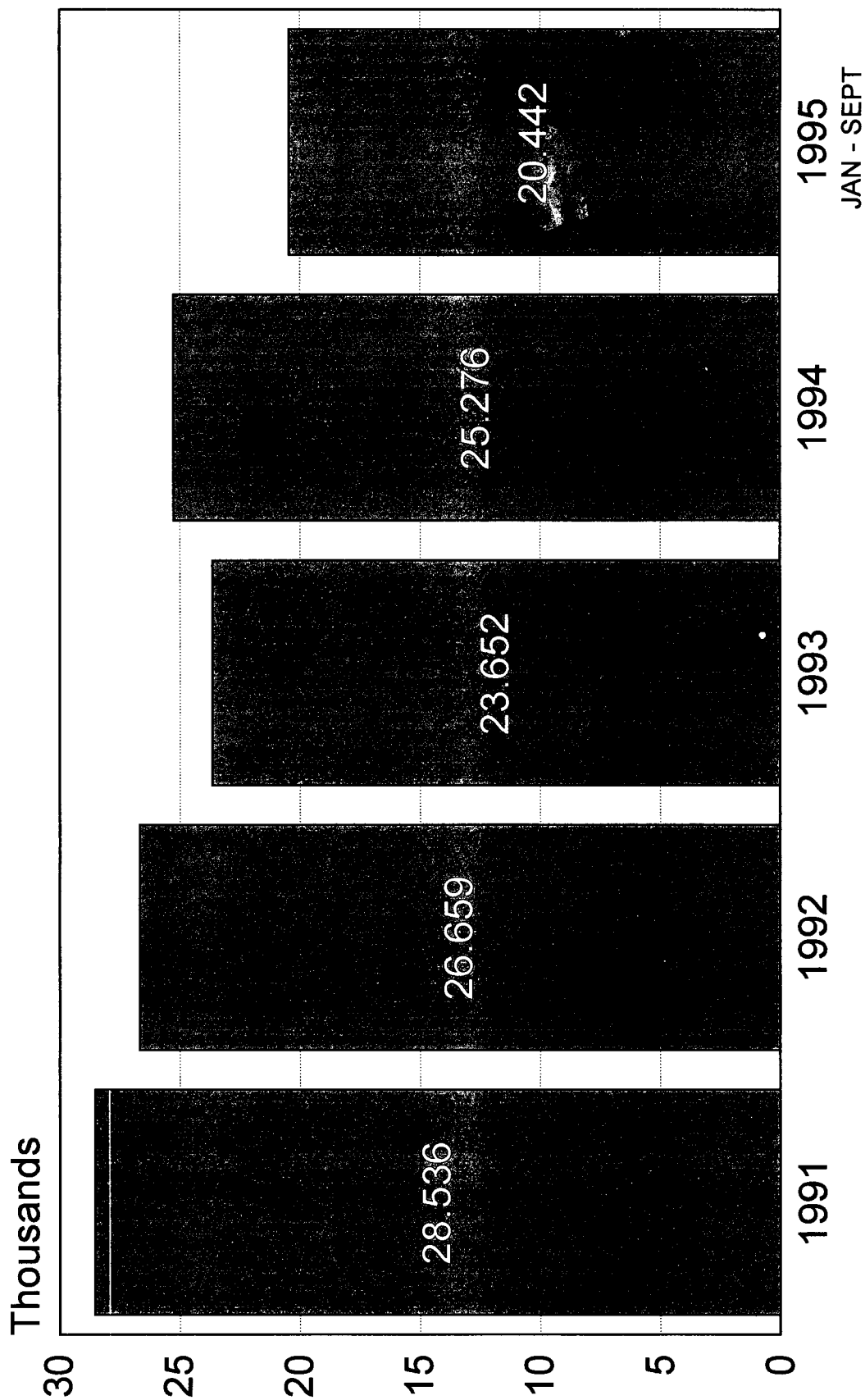
PRIORS: ADV/WAIVES: JURY-CRT TR SELF INCR CON WIT SUBP WIT COUNSEL
CRT ACPTS WVR
COPY * MRN1 *
VERIFY KEY & CALNDAR INFO > UPDATE NOT AUTHORIZED - PRESS PF24 FOR HELP.

PSWD _____ TCIS - CONT/MOTIONS _____ JUD DIST _____ FUNC A
 CASE# _____ DEF# 01 DIV _____ DT _____ TM _____ EVT _____
 FIRST _____ MID _____ LAST _____ SUFX _____
 PROS ATTY _____ JDG _____ STIP JDG _____ CLERK _____ CRT REP _____
 DEF PRES _____ WITH ATTY _____ DEF ATTY _____ NAME _____
 987.2 _____ EXP WIT _____
 INTPR _____ LANG _____ SWORN _____ WRT TYPE _____ \$ _____ NTCE _____
 BOND/RCPT# _____ SURETY/AGENT PRES _____
 PROB RPT FILED _____ PROB MEM FWD _____ MOTN GRNT/DENIED/OFF CAL _____
 COMMITMENT ISSUED _____ DUI PROVIDER _____
 COMMENTS: _____

COURT ORDRS/FINDINGS: _____ ADDITIONAL TERMS/COMMENTS? _____
 TOTAL DUE \$ _____
 CT _____ CRDT\$ _____ JAIL _____ LIEU _____ COM SVC/CAL(T)RANS _____ LIEU _____
 BAL DUE \$ _____ PAYMENT \$ _____ DATE _____ RCPT # _____
 PSTD _____ V _____ R _____ B/F/E>A>C _____ BY _____ BL _____ RM/OR _____ RL _____
 NXT EVT _____ DT _____ DIV _____ TM _____ TMD WVD _____ DIST _____ DD _____
 ACTN _____ EVT _____ DT _____ TM _____ DV _____ ACTN _____ EVT _____ DT _____ TM _____ DV _____
 COPY _____ NXT CASE# _____ DEF# _____ DIV _____ * MCDP *
 ENTER KEY DATA ONLY

CITRUS MUNICIPAL COURT

CRIMINAL CASES ADJUDICATED PER YEAR



PSWD TCIS SENTENCING/PROBATION JUD DIST FUNC A
 CASE# DEF# 01 DIV DT TM EVT CT ARR JDGMT
 FIRST MID LAST SUFX
 PROS ATTY JDG STIP JDG CLERK CRT REP
 DEF PRES WITH ATTY DEF ATTY NAME
 INTPR LANG SWORN WRT TYPE \$ NTCE
 CT PLEA DSPO ABS ADR DSPO RM CTS?
 CT ABS CT ABS CT ABS CT ABS
 PROB DEN LOC JAIL TRM CT CRDT JAIL SUR
 ACTUAL DAYS GOOD TM/WORK TM PLUS SEC
 STRAT FINE\$ (OR) JAIL LOC CRDT: JAIL FINE PA
 ISS/ESS/PROC SUSP: JAIL AND/OR \$
 SPRB/FPRB/DVRSN TRM JAIL LOC CRDT JAIL SUR
 AS FLWS CD BG DT FM TM DY TO TM DY BY DT
 PROB FINE\$ (OR) JAIL LOC CRDT: JAIL FINE PA
 COM SVC/CAL(T)RANS LIEU OF BY CRT COSTS \$ BY
 ADL SA:
 JAIL CNSEC TO: TRM CT CASE OBEY LAWS DIS RM CT
 CALC TOTL \$ BASE
 PSTD V R B/F/E>A>C BY BL RM/OR RL
 NXT EVT DT DIV TM TM WVD DIST
 ACTN EVT DT TM DV ACTN EVT DT TM DV
 NXT PG ? BOND/RCPT# * SENT *
 ENTER KEY DATA ONLY

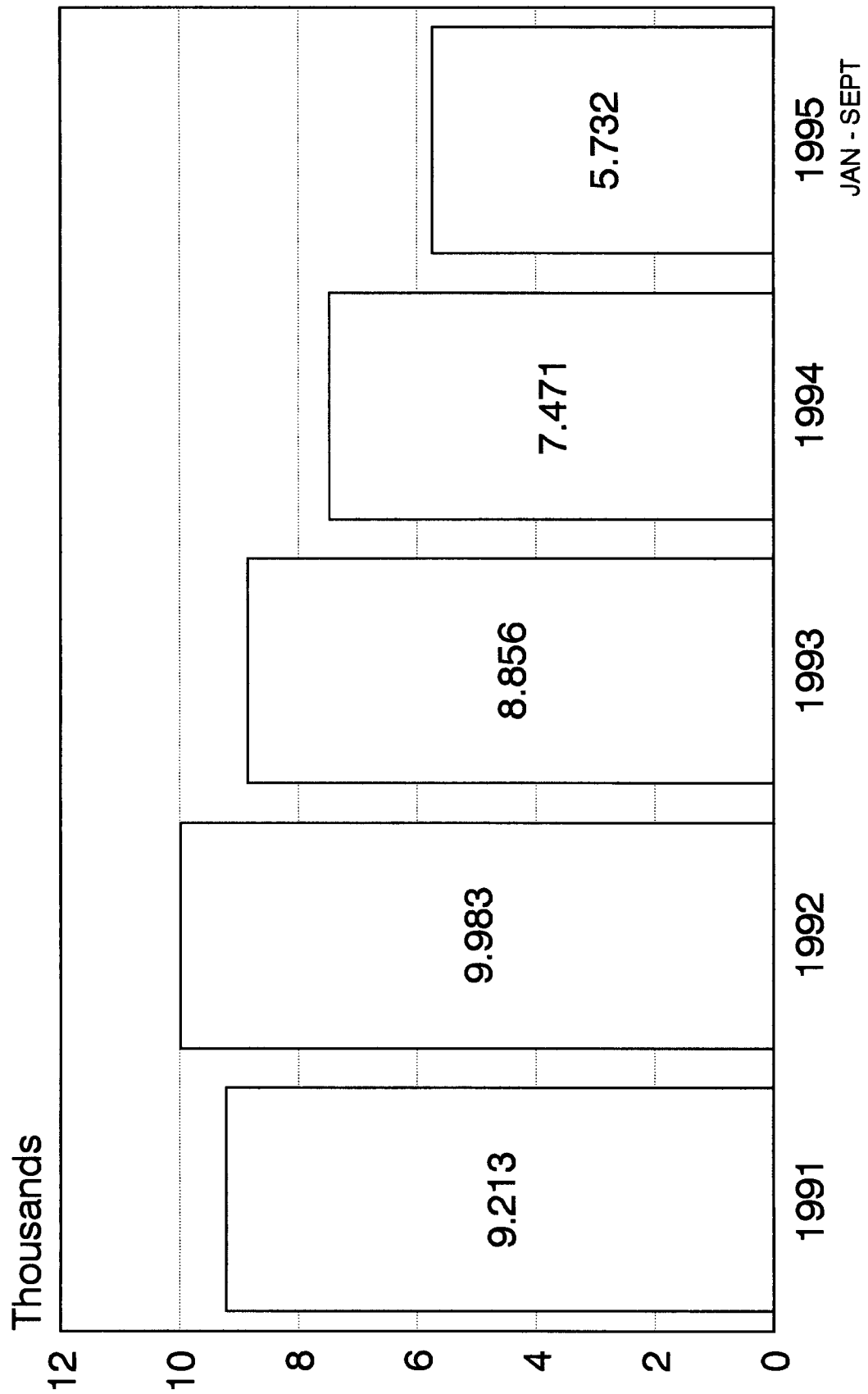
PAGE 02 TCIS - SENTENCING/PROB JUD DIST FUNC A
 CASE# DEF# 01 DIV DT TM EVT CT SUFX
 FIRST MIDDLE LAST
 PAYMENTS: TO/TH(R)U CRT/P.O.
 AS FLWS \$ CD PMT DY BEG DT
 INSTL PMTS:\$ DT \$ DT \$ DT
 SCHOOL: TS/DUI/D(R)UG 1ST/2ND/3RD OFNDR 90DY/1YR/1(8)MO/30MO
 ENROLL BY COMP BY
 LICENSE: RSTR/SUSP RSTR: TO/FW TO/FP D/W COM VEH/HAZ MAT
 CRT ORDER DMV: SUSP/R(V)K/DELAY ADDTL DMV RESTRICTIONS:
 RESTITUTION: \$ TO BY DT
 \$ TO BY DT
 ALCOHOL PERCENT CONSENT DT CORR DT
 COMMENTS:
 ADDL TERMS:
 COURT ORDRS/FINDINGS:
 ADDITIONAL TERMS/COMMENTS? DIS RM CT
 PSTD V R B/F/E>A>C BY BL RM/OR RL
 NXT EVT DT DIV TM TM WVD DIST
 ACTN EVT DT TM DV ACTN EVT DT TM DV
 ENTER KEY DATA ONLY

APPENDIX C

SMALL CLAIMS DEPARTMENT COMPUTER SCREENS AND RELEVANT STATISTICS

CITRUS MUNICIPAL COURT

SMALL CLAIMS CASES FILED PER YEAR



SCOT REGISTER OF ACTIONS

CASE #: CIT ACTION (A,C,E,I,D,U,V): A VIEW MONTH(MMY):
TITLE: VS
DATE: / / ACTION CODE: STATUS: DI
CLASS ENTRY: N SEQUENCE: DIVISION: 003

FEE : _____ STAT LINE : _____
NOTES : _____

F1=MENU F2=RESET F3=HELP F4=SEQ-CDS F7=BACKWARD F8=FORWARD

CASE #: CIT ACTION(A,C,E,I,D,U,V): A VIEW MONTH(MMY): _____
TITLE : VS
DATE : / / ACTION CODE: 4033 STATUS: DI
: MATTER CONTINUED FOR HEARING
:
CHR120 :
:
: TO
:
DA*06 :
:
: AT
:
TI*05 :
:
: , IN DIV
:
NU*03 :
:

NOTES: LAW AND MOTION

F1=MENU

F2=RESET

F3=HELP

F5=PREV-CAL F6=NEXT-CAL

CASE #: CIT ACTION(A,C,E,I,D,U,V): A VIEW MONTH(MMY):

TITLE : VS

DATE : / / ACTION CODE: 5005 STATUS: DI

: CAUSE CALLED AT

TIM05

: M, IN DIV.

NUM03

: , HON.

JUD60

: PRESIDING FOR SMALL CLAIMS HEARING. PLAINTIFF APPEARING

CHO120

F1=MENU

F2=RESET

F3=HELP

PAGE 2

: . DEFENDANT APPEARING

CHO120

CHO120

F1=MENU

F2=RESET

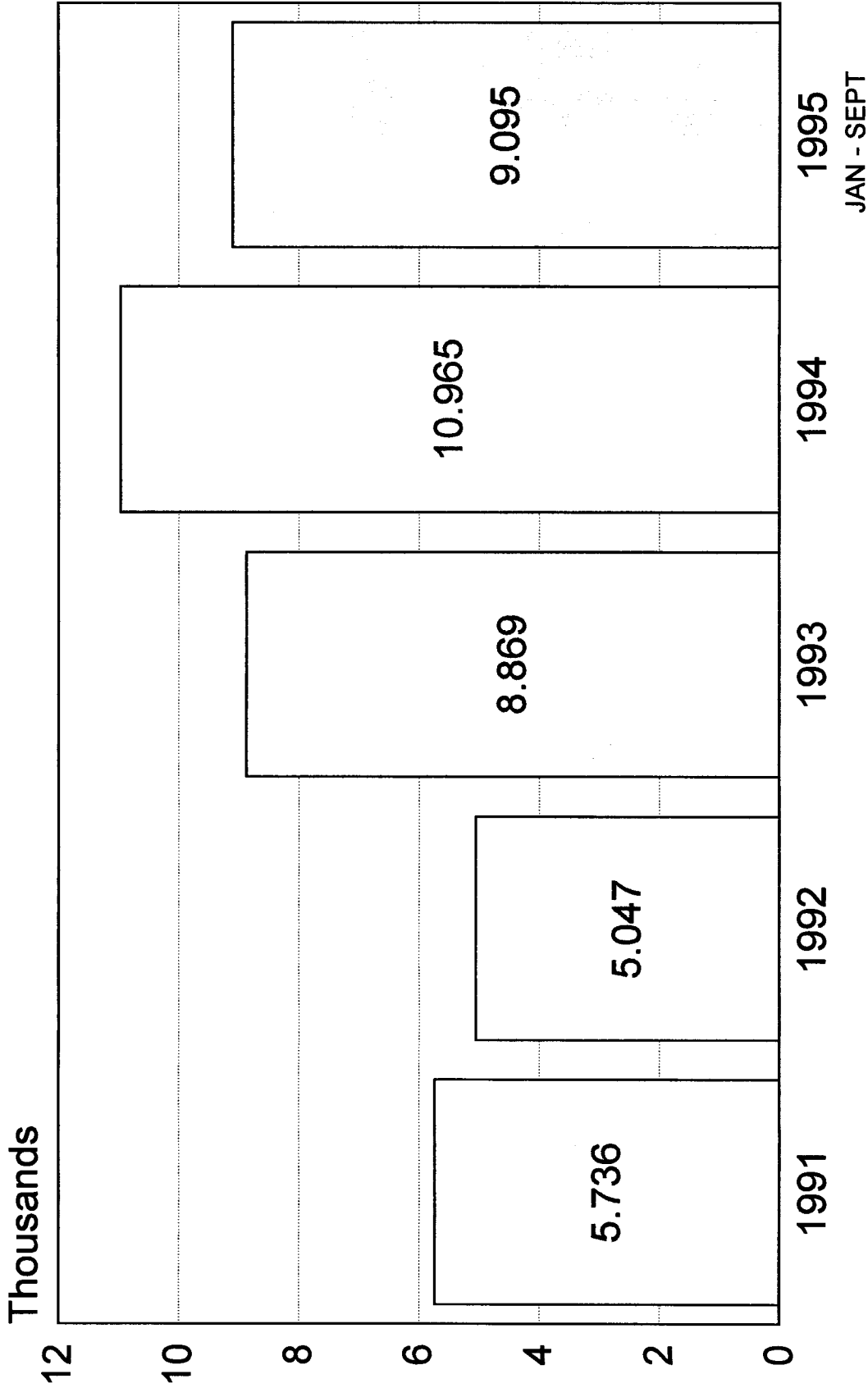
F3=HELP

F7=BACKWARD



CITRUS MUNICIPAL COURT

SMALL CLAIMS CASES ADJUDICATED PER YEAR



CASE #: CIT ACTION(A,C,E,I,D,U,V): A VIEW MONTH(MMY): _____

TITLE : VS

DATE : / / ACTION CODE: 6004 STATUS: DI

: JUDGMENT ENTERED AS A FINAL DISPOSITION ON

:

DAT06 :

:

: . FOR

:

LIT120 :

:

: . AGAINST

:

LIT120 :

:

: . DAMAGES \$

:

NUM08 :

:

F1=MENU

F2=RESET

F3=HELP

GE 2

: . INTEREST \$

:

NUM08 :

:

: . COSTS \$

:

NUM08 :

:

: . EXECUTION STAYED

:

NUM02 :

:

: DAYS.

:

CHO120 :

:

:

:

:

:

:

:

F1=MENU

F2=RESET

F3=HELP

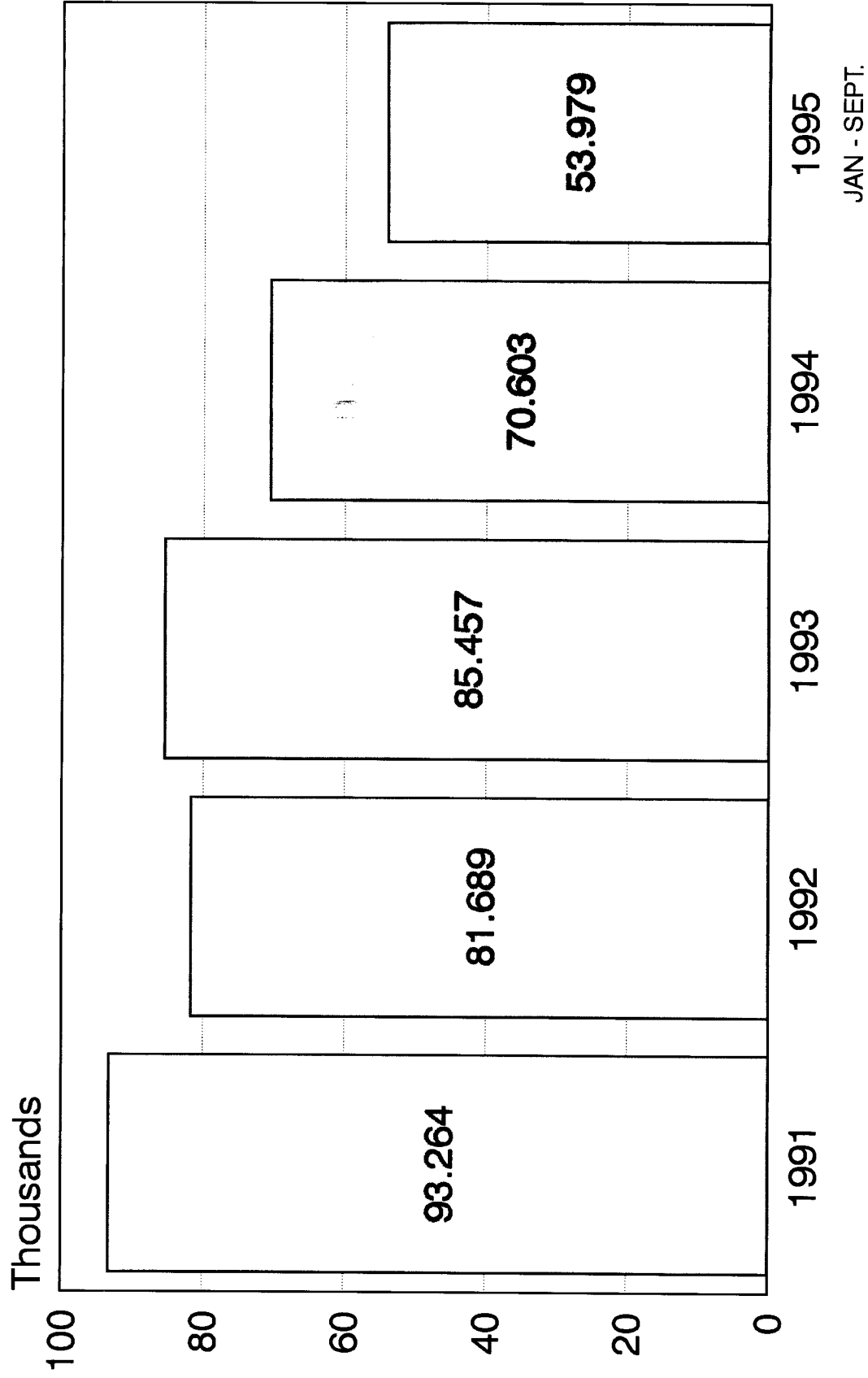
F7=BACKWARD

APPENDIX D

TRAFFIC DEPARTMENT COMPUTER SCREENS AND RELEVANT STATISTICS

CITRUS MUNICIPAL COURT

TRAFFIC CASES FILED PER YEAR



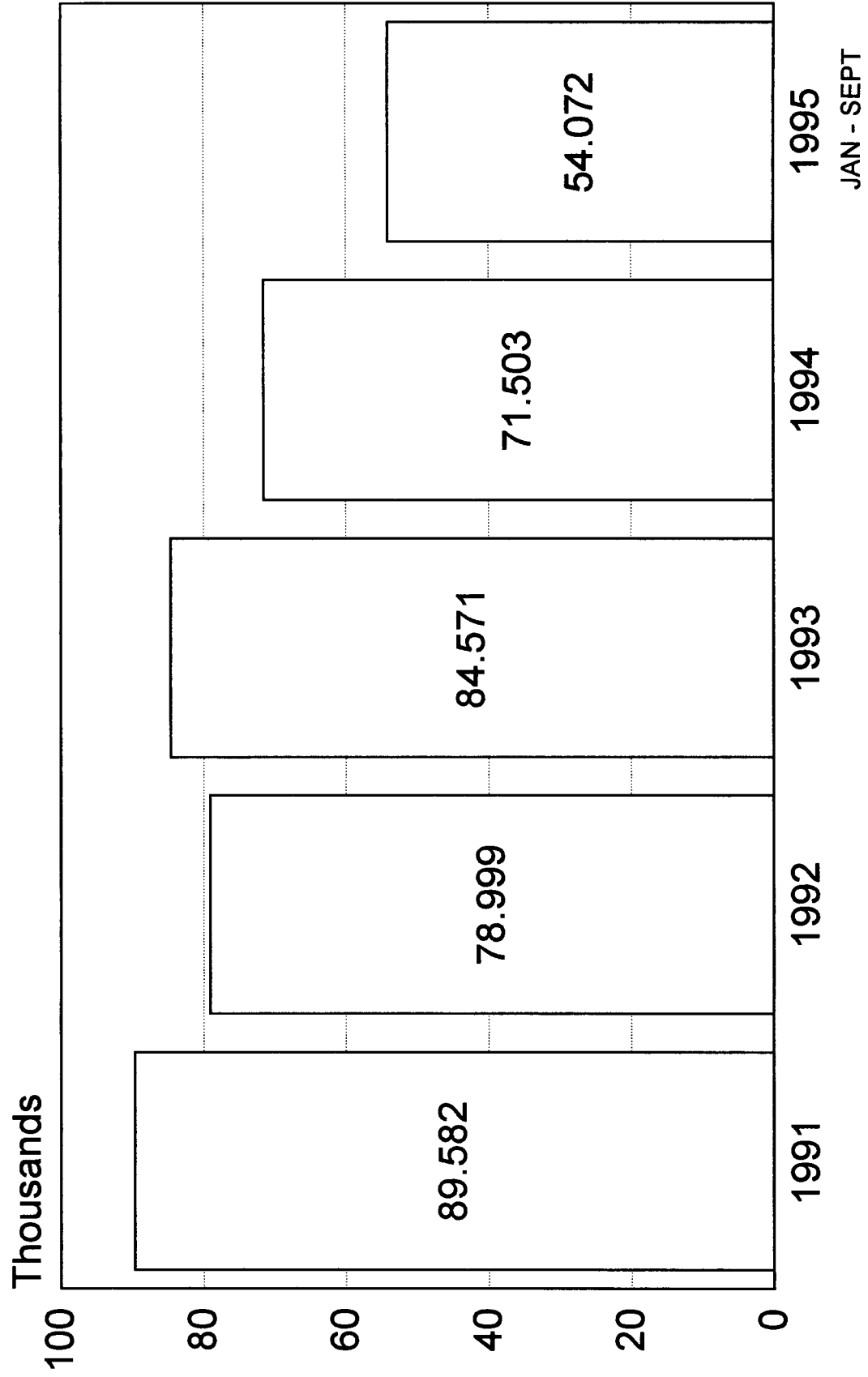
EXPANDED TRAFFIC RECORD SYSTEM
 OPERATOR CODE CONTINUANCE / CALENDAR ADD/CHANGE

PF/CASE	LEA/COURT	CHG/DLET/PART	T/S	T/S AMT	
NAME				DOB	
ADDR				OLN	ST
BAIL W/O PROOF		BALANCE DUE			
BAIL	BASE	PA	NC	WA	P/C/WA
ACTION CODE	ACTION DATE	CASE #			
VIOLATIONS					ABSTRACT
AMT PAID	RECEIPT NUMBER		PD DATE		PART PAY
DIVISION	TIME	TYPE OF BAIL	CALENDAR		
TD #	WITNESS INFO		BOND #		
IF DEFENDANT ARRESTED AS A RESULT OF A WARRANT ENTER 'X' HERE					

PF1-NAME	PF2-OLND	PF3-NMBR	PF4-CITN	PF5-DMVM	PF6-BFOR	
PF7-DSPO	PF8-WRNT	PF9-CONT	PF10-CCAL	PF11-TMEN	PF12-ACME	* CONT *

CITRUS MUNICIPAL COURT

TRAFFIC CASES ADJUDICATED PER YEAR



OPERATOR CODE

EXPANDED TRAFFIC RECORD SYSTEM

COURT DISPOSITION ADD/CHANGE

TT/CASE

LEA/COURT

CHANGE/DELETE

AMEND/CORR

T/S

NAME

DOB

ADDR

VIOLATIONS

ABSTRACT

DSPO DATE

JUD CNT

JDG

TERM

BAC

AMT PAID

RECEIPT NUMBER

ARRESTED

CONTINUANCE

FINE AMT

STAYED UNTIL

INSTALL FEE

BALANCE DUE

AMT OF PARTIAL PAYM

DATE

RECEIPT NO

LICENSE SUSP UNTIL

TERM OF REST

AMEND DATE

JUDGE ID

PF1-NAME

PF2-OLND

PF3-NMBR

PF4-CITN

PF5-DMVM

PF6-BFOR

PF7-DSPO

PF8-WRNT

PF9-CONT

PF10-CCAL

PF11-TMEN

PF12-ACME

* DSPO *

EXPANDED TRAFFIC RECORD SYSTEM
WARRANT ADD/DELETE

OPERATOR CODE
CIT/CASE
NAME
HOME ADDR
BUS ADDR

LEA/COURT

DELETE
DOB

SEX	HAIR	EYES	HEIGHT	FT	IN	WEIGHT	RACE
VEHICLE YEAR	MAKE	BODY					
WAR TYPE	JUDGES ID	DIV	WAR AMT				
FTA/FTP FLAG	RF FLAG	PREVIOUSLY ISSUED (Y/N)					

PF1-NAME	PF2-OLND	PF3-NMBR	PF4-CITN	PF5-DMVM	PF6-BFOR
PF7-DSPO	PF8-WRNT	PF9-CONT	PF10-CCAL	PF11-TMEN	PF12-ACME

* WRNT *

***** ETOFRFM *****

[illegible]

PRESS ENTER FOR ADDITIONAL LINES.

.....

APPENDIX E

ADMINISTRATION COMPUTER SCREENS AND RELEVANT STATISTICS

ACTION: MODE: D DOCID: PV KE USERID: STATUS

APRV: L# OVR: BATID: SECID:

B- PAYMENT VOUCHER HEADER SCREEN

BATCH DATE: NUM DOCS: NET AMOUNT:

H- PV DATE: ACCTG PRD: BUDGET FY:

DATE GOODS/INVOICE RCVD: DOCUMENT ACTION:

VENDOR CODE: INVOICE NO:

NAME: SORT ZIP:

ADDRESS:

VENDOR COMMENT:

TAX CODE: DISCOUNT TERMS: FA INDICATOR:

PV TYPE: DESCRIPTION:

SCHEDULED PAYMENT DATE: OFFSET LIAB ACCT:

SPEC HAND IND: DOCUMENT TOTAL:

ACTION: MODE: D DOCID: PV KE USERID: STATUS

APRV: L# OVR: BATID: SECID:

-REFERENCE ID DATA-

-PAYMENT VOUCHER DETAIL SCREEN-

LN	AUTH OR	DOC LN	APPR	MIN	SUB					
NO	CD	DP	NUMBER	NO	FUND	DEPT	ACCT	OBJ	EXP	UOM

KE

TI	DI	BS	VENDOR	SUB	SUB		
---	---	ACCT	INVOICE NUMBER	ORG	ORG	PROG	PGM

JOB/VO/ PROJECT	TASK	SUB TASK	REPT CATG	OPTION	LINE AMOUNT	I/D	P/F
-----	-----	-----	-----	-----	-----	---	---

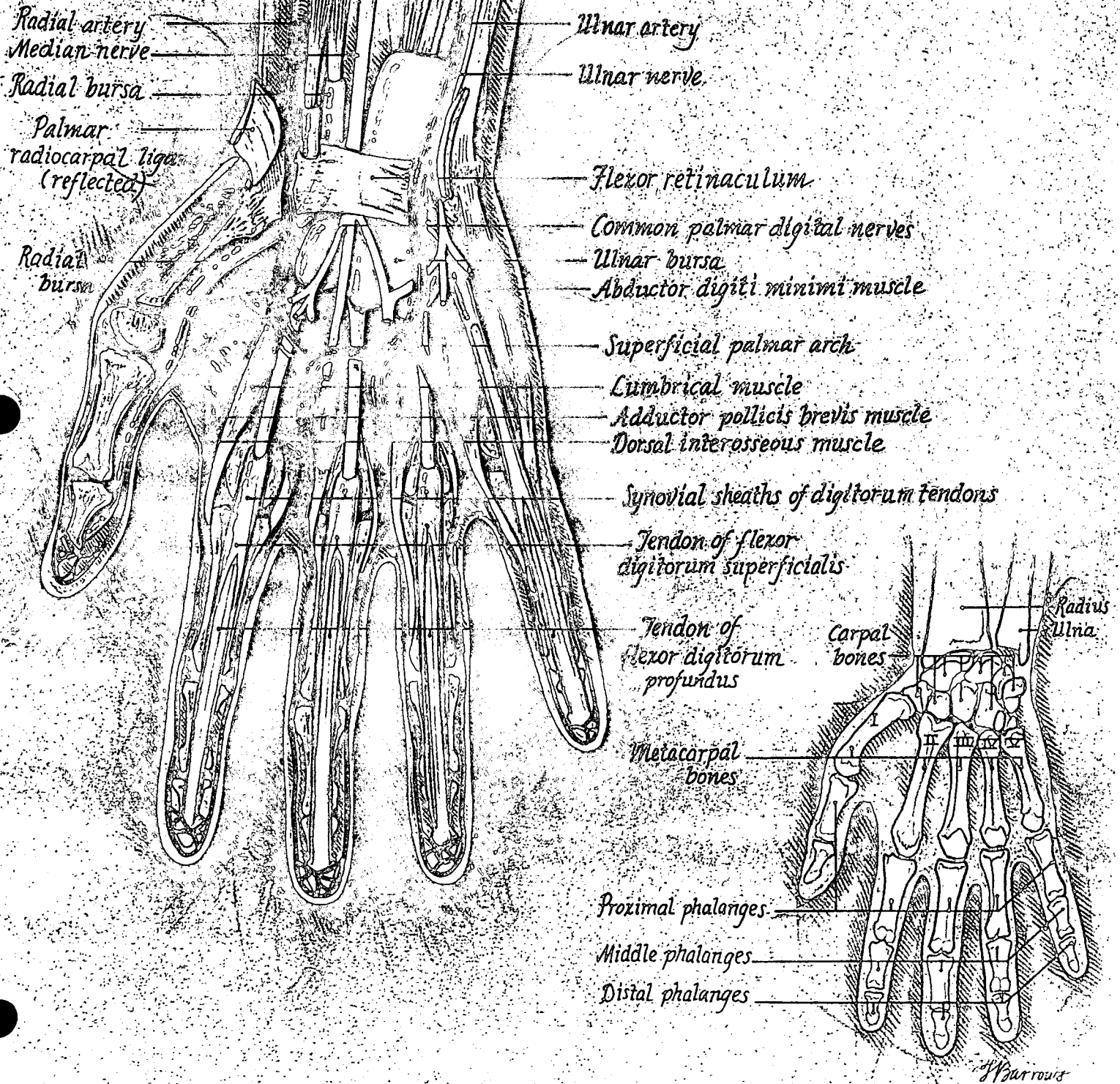
DESCRIPTION

A---*CU13-CONTINUING SAME DOCUMENT

APPENDIX F

RELEVANT PHYSIOLOGY

Hand



Wrist

Flexor carpi
radialis muscle

Flexor pollicis
longus muscle

Radial artery

Median nerve

Palmar radio-
carpal ligament
(reflected)

Flexor carpi ulnaris muscle

Palmaris longus tendon

Flexor digitorum superficialis muscle

Flexor digitorum profundus muscle

Ulnar artery

Ulnar nerve

Ulnar bursa

Flexor retinaculum

Ulnar bursa

Adductor pollicis brevis muscle (cut)

Adductor digiti minimi muscle

Flexor digitorum superficialis tendon

Flexor digitorum profundus tendon

Bones of Wrist

Ulna

Radius

Pisiform

Triquetrum

Lunate

Scaphoid

Trapezium

Trapezoid

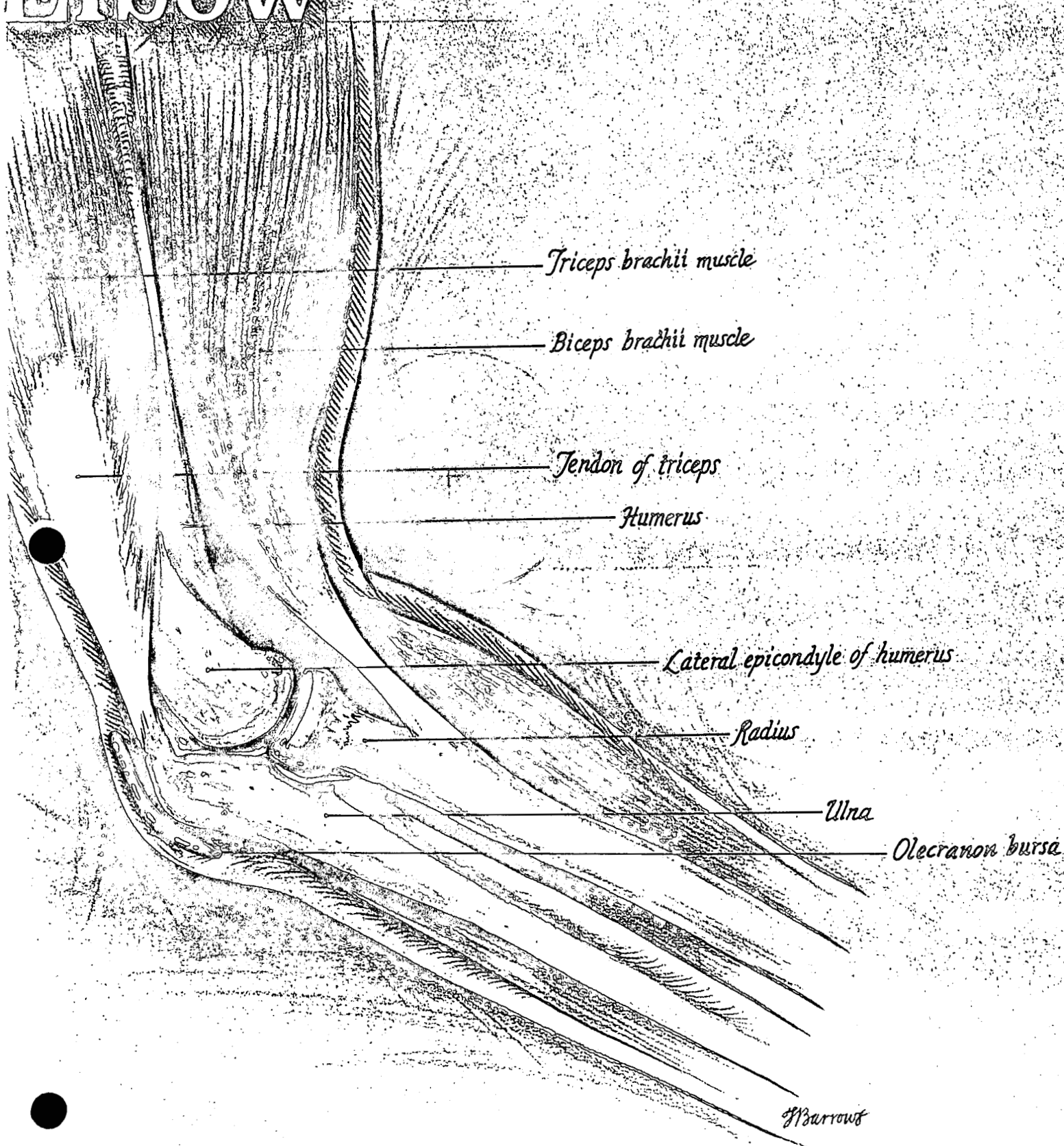
Capitate

Hamate

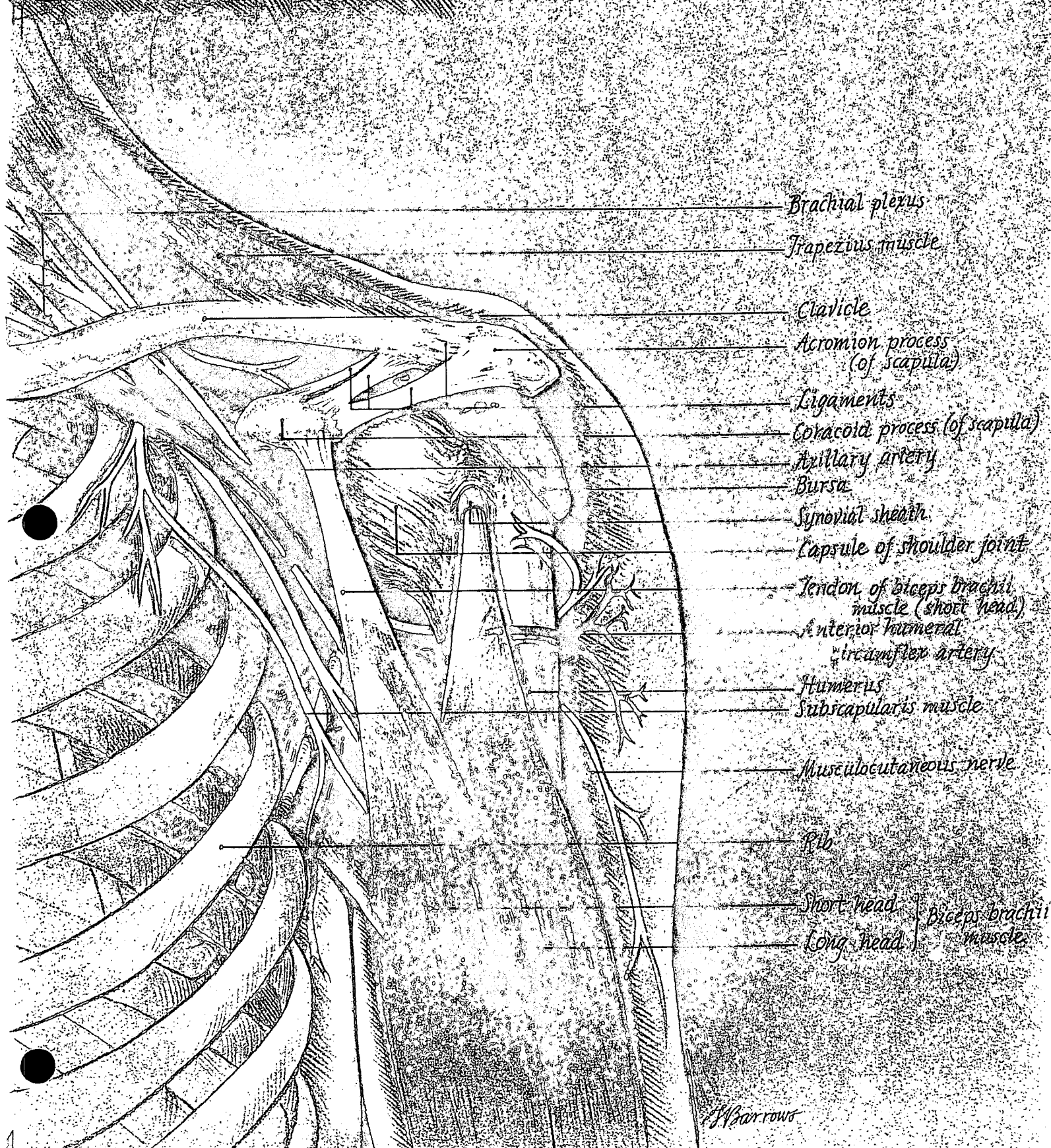
Metacarpals

Barrows

Elbow



Shoulder



APPENDIX G

INTERVIEW QUESTIONNAIRE

INTERVIEW QUESTIONNAIRE

1. What are the normal steps taken when a patient complains of aching hands, arms, wrists, or fingers?
2. How is the severity of the injury determined?
3. What is sufficient rest/recovery time for CTDs?
4. Will everyone who uses a keyboard develop a CTD?
5. What are the most common forms of treatment?
6. Is there a cure?
7. Will some patients be disabled forever?
8. What is sufficient recovery time before another form of treatment is approached?
9. What does physical therapy accomplish?
10. Are there tests that show nerve and muscle damage?
11. Why are these tests not the first action taken by a doctor?
12. What actions do you suggest employers to take to prevent the development of CTDs in employees?

APPENDIX H

LIST OF OPEN WORKERS' COMPENSATION CASES

LISTING OF ALL OPEN WORKERS COMPENSATION CASES AS OF 07-31-93

14.. CLAIMANT NAME.....	CLAIM#.....	DOI.....	INDEMNITY RESERVE		INJURY DESC.	PAID TO	TOT-INC.....	COUNT
			INDICATOR	EXAM#		DATE.....		
Employee #1	3000-69-01116	10-17-88 I	96		HAND/STRAIN	17632.26	55507.00	1
Employee #2	3000-79-35903	09-26-74 I	96		LUMBOSACRAL SPINE -	26594.05	27744.50	1
Employee #3	3000-92-01293	11-08-91 I	96		INJURY/BACK HANDS/PAINFU LL	4245.74	12000.00	1
Employee #4	3000-92-02159	02-20-92 I	96		RT. WRIST/TENOSY NOVITIS	8971.70	16500.00	1
						59443.75	111751.50	4

000505

LISTING OF ALL OPEN WORKERS COMPENSATION CASES AS OF 07-31-94

JC#..	CLAIMANT NAME.....	CLAIM#.....	DOI.....	INDICATOR	EXAM#	INJURY DESC.	PAID TO DATE.....	TOT-INC.....	COUNT
Employee #1	3000-79-35908	09-26-74	I	96	LUMBOSACRAL SPINE - INJURY/BACK	27399.19	27744.50	1	
Employee #2	3000-94-02542	06-20-94	I	96	RT.HAND/WRIS T,FOREARM/TE NDONITIS	10.00	10004.70	1	
Employee #3	3000-94-01605	11-01-93	I	96	RT WRIST/PAIN	3252.74	5172.00	1	
Employee #4	3000-94-02473	06-09-94	0	PS	BACK STRAIN	0.00	500.00	1	
Employee #5	3000-92-01293	11-03-91	I	96	HANDS/PAINFU LL	4245.74	12000.00	1	
Employee #6	3000-94-01614	02-07-94	0	PS	LFT KNEE, FACE	0.00	1000.00	1	
						34907.67	56421.20	6	

000505

LISTING OF ALL OPEN WORKERS COMPENSATION CASES AS OF 07-31-95

LOC#	CLAIMANT NAME	CLAIM#	DOI	INDEMNITY EXAM#	INJURY DESC.	PAID TO DATE	TOT-INC	COUNT
				RESERVE..				
				INDICATOR				
Employee #1	3000-96-00061	06-22-95	I	96	LFT SHOULDER/PAIN	0.00	15038.55	1
Employee #2	3000-95-00869	10-13-94	I	96	RT THUMB STRAIN	2567.14	11027.58	1
Employee #2A*	3000-95-01767	03-29-95	I	96	RT MID FINGER/SKOLLEN	613.28	4670.88	1
Employee #3	3000-95-01917	04-14-95	I	96	LFT HAND & FOREARM/TENDONITIS	597.76	12954.40	1
Employee #4	3000-95-01546	02-14-95	I	96	L KNEE/R ARM /BRUISED	995.66	7629.66	1
Employee #5	3000-94-01605	11-01-93	I	96	RT WRIST/PAIN	10038.09	17500.00	1
Employee #6	3000-95-01765	03-22-95	O	P8	FAINTED	554.07	1600.00	1
Employee #7	3000-95-01427	02-06-95	I	96	RT HAND & ARM/ACHING	893.42	3030.00	1
Employee #8	3000-92-01293	11-08-91	I	96	HANDS/PAINFUL	4568.16	12000.00	1
Employee #9	3000-95-01547	02-03-95	I	96	HEADACHES/STRESS	1771.73	13578.32	1
Employee #9A*	3000-95-01778	03-27-95	O	P8	BACK/THIGH/STRAIN	0.00		1
Employee #10	3000-95-01553	10-27-94	I	96	ANXIETY	1751.39	16107.52	1
Employee #10A*	3000-95-02244	05-22-95	I	96	LFT WRIST/SPRAINED-KNEES /HIP/BRUISED	1074.04	11354.40	1
Employee #11	3000-95-01889	04-07-95	I	96	SHOULDER/NECK/PAIN	2140.24	12665.60	1
Employee #11A*	3000-94-01614	02-07-94	O	P8	LFT KNEE/ FACE	50.00	1000.00	1
Employee #12	3000-95-00923	09-30-94	I	96	ARM/HAND/FINGERS, WRIST/ELBOW & SHOULDER/PAIN	4341.74	11665.90	1
***						32269.72	156823.31	16

* A indicates same employee different date of injury

APPENDIX I

EMPLOYEE SUGGESTION FORM

Ask yourself ...

What part of my job may be unnecessary?

Why do I do my job this way?

What would make me more efficient?

What are more efficient ways to serve our customers?

**WHAT ARE YOUR SUGGESTIONS
FOR IMPROVEMENT OR INNOVATION ?**

**PLEASE SUBMIT YOUR SUGGESTIONS ON
THE REVERSE SIDE OF THIS FORM AND
PLACE IT IN THE SUGGESTION BOX**

APPENDIX J

RELEVANT MEDICAL FORMS

76M119F/R3-84

COUNTY OF LOS ANGELES MEDICAL SERVICE ORDER

DR. _____ ADDRESS: _____

WE ARE SENDING _____
TO YOU FOR TREATMENT IN ACCORDANCE WITH THE TERMS OF THE WORKERS' COMPENSATION LAWS. PLEASE SEND YOUR "DOCTOR'S
FIRST REPORT" TO THE NOETICS GROUP, P.O. BOX 19775, IRVINE, CA 92713-9775.

SUPERVISOR'S SIGNATURE

RETURN TO EMPLOYEE AFTER EXAMINATION. THIS IS ESSENTIAL FOR COUNTY PAY RECORDS.

DATE OF THIS VISIT: _____ DATE EMPLOYEE STATES HE/SHE WAS INJURED: _____

IN YOUR OPINION IS THIS EMPLOYEE COMPELLED TO BE ABSENT FROM WORK BECAUSE OF THE INJURY? ☐ YES ☐ NO

IF YES, ESTIMATED PERIOD OF RECUPERATION: REGULAR WORKING DAYS: _____ LIMITED DUTY DAYS: _____

SPECIFY LIMITATIONS OR RESTRICTIONS: _____

PHYSICIAN'S SIGNATURE

EMPLOYEE: RETURN THIS CARD BY MAIL, OR IN PERSON.

More About Medical Care

Good medical care is important—to you, your family and your employer. Quality medical treatment is the quickest way to recovery.

- If first-aid is available at your workplace, get immediate treatment and report where, when and how the accident happened. If it's an emergency, get the best treatment available, then report the injury to your employer. If it's more than a simple first-aid injury, your employer will give you a claim form.
- To make sure you get all your benefits, complete the claim form and return it to your employer as soon as possible.
- If additional medical care is necessary, and you haven't selected a physician or health care organization prior to the injury, your claim administrator will arrange appropriate treatment. The doctor will be familiar with workers' compensation requirements and will report promptly so benefits can be paid.
- If you want to change doctors for any reason, ask your employer or claim administrator. They're as interested as you are in your prompt recovery and return to work and will give you a list of other qualified doctors to choose from.
- You're entitled to be treated by your own personal physician if you've notified your employer of the doctor's name and address in writing *before* the injury. For further information, ask your employer.
- If you haven't predesignated a physician before the injury, you can switch to your own doctor after the employer's medical control expires. This can range from 30 days up to a year after reporting the injury, so check with your claim administrator. If you switch, choose your doctor carefully—most people don't have a family surgeon, for example. If you want advice about specialists, talk to your claim administrator. In any event, report your choice as soon as you make it so the bills will be paid for you. Above all, don't treat yourself. Even minor injuries need expert care. Prompt, quality medical care is the best investment you and your employer can make.

This pamphlet is available in Spanish.

For a free copy, please write or call:

California Workers' Compensation Institute
120 Montgomery St., Suite 1300
San Francisco, CA 94104
Telephone 415-981-2107

Este folleto está traducido al español. Para conseguir una copia, favor de escribir o llamar a CWCi, 120 Montgomery St., Suite 1300 San Francisco, CA 94104. Teléfono 415-981-2107

In An Emergency . . .

1. Be sure first aid is given.
2. See that the injured employee is taken to a doctor or hospital, if necessary.
3. Report all injuries immediately to your supervisor or

Employer Representative _____ at _____ Telephone _____ and request a claim form if it's more than a simple first-aid injury. Any delay in reporting an injury may delay workers' compensation benefits.

4. Call your employer representative or claim administrator if you have questions. Free help and information also is available by contacting a Division of Workers' Compensation information and assistance officer at (1-800-736-7401) or at the local office listed below.

Street Address _____

City _____

Telephone _____

Claims Administered By:

Name _____ ☐ Check if Company Is Self-Insured

Address _____

City, State, ZIP _____

Telephone _____

The information in this pamphlet has been approved by the administrative director of the Division of Workers' Compensation.

Prepared and published as a community service by



California Workers' Compensation Institute

120 Montgomery Street, Suite 1300
San Francisco, California 94104

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Rev. 4/94

Facts about Workers' Compensation

The Way It Was

In the early 20th century, a worker injured on the job had to sue his employer to recover medical expenses and lost wages.

Lawsuits took months and sometimes years. Juries had to decide who was at fault and how much, if anything, would be paid. In most instances, the worker got nothing. It was costly, time consuming, and often unfair.

The Way It Is

Today, the California workers' compensation law provides a faster, fairer way to take care of injured workers . . . where fault doesn't have to be proved to recover medical expenses and lost wages.

This job-injury insurance is paid for by your employer and supervised by the state. If you can't work due to a job-related injury or illness, workers' compensation pays your medical bills and provides money to live on until you can return to work.

Who's Covered?

Almost every employee in California is protected by workers' compensation, but there are a few exceptions. People in business for themselves and unpaid volunteers may not be covered. Maritime workers and federal employees are covered by similar laws. If you have a question about coverage, ask your employer.

What's Covered?

Any injury or illness is covered if it's due to your job. Everything from first-aid type injuries to serious accidents are covered.

Coverage is automatic and immediate. There's no qualifying period, no need to earn a certain amount in wages before you're covered . . . protection begins the first minute you're on the job.

What You Have To Do

Immediately notify your supervisor or the employer representative listed on the back of this pamphlet so you can get medical help right away. If it's more than a simple first-aid injury, your employer will give you a claim form so you can describe the injury and how, when and where it happened. Complete the claim form and return it to your employer as soon as possible. Prompt reporting is the key to prompt benefits.

Benefits

The California workers' compensation law guarantees you three kinds of benefits:

- Medical treatment to cure the injury . . . and no deductibles.
- Tax-free payments to help replace lost wages while you're temporarily disabled. Additional payments are made if the injury results in a permanent disability or death.
- Rehabilitation services necessary to get you back to work. The amount of the payments, and when and how they're paid, are part of state law. Only the state Legislature can change the amounts.

Benefit Payments

All doctor bills and hospital expenses will be paid directly by the claim administrator whose name and address are posted at your workplace, so you should never see a bill.

If you're unable to work for more than three days, including weekends, you are entitled to compensation to help replace your lost wages. About two weeks after reporting the injury, you'll get a check . . . and every two weeks after that until the doctor says you can return to work. (Payment won't be made for the first three days, however, unless you're hospitalized as an inpatient or unable to work more than 14 days.)

The amount of these checks will be two-thirds of your average wage, up to a maximum set by the state Legislature. It won't be the full amount of your regular paycheck, but there are no deductions and the payments are tax free.

Other Benefits

Workers' compensation sometimes is confused with State Disability Insurance (SDI). They seem similar, but there are important differences. Workers' compensation insurance covers *on-the-job* injuries and illnesses and is paid for entirely by your employer. On the other hand, SDI covers *off-the-job* injuries or sickness, and is paid for by deductions from your paycheck.

If You Have Questions . . .

. . . ask your supervisor or employer representative. Or contact your employer's workers' compensation claim administrator (the name, address and phone number are posted at your workplace). You also can contact an information and assistance officer at the State Division of Workers' Compensation. Information and assistance officers are available at no charge to answer questions and review problems. The local office is listed on the back of this pamphlet, or you can call 1-800-736-7401 or check the local listing in the State Government section of the phone book under "Industrial Relations Department."

WORKERS' COMPENSATION FRAUD IS A FELONY

Anyone who knowingly files or assists in the filing of a false workers' compensation claim may be fined up to \$50,000 and sent to prison for up to five years (Insurance Code section 1871.4).

PLEASE TYPE ALL INFORMATION, IF POSSIBLE

COUNTY OF LOS ANGELES
LEGALLY UNINSUREDEMPLOYER'S REPORT OF OCCUPATIONAL
INJURY OR ILLNESS

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

SUPERVISOR.

- 1.) Use this form to report all injuries and illnesses to the Safety Office.
 2.) Report fatal or serious injuries and illnesses immediately to the Safety Office.
 3.) SEND: Original and one copy to: THE NOETICS GROUP, P.O. BOX 19775,
 IRVINE, CA 92713
 4.) Retain two copies, one for your files, second for establishments.

SAFETY OFFICE.

EMPLOYEE NO.

MEGA FLEX

☐ YES ☐ NO

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony.

NOTICE: California law requires employers to report within *five days* of knowledge every occupational injury or illness which results in lost time beyond the date of the incident *OR* requires medical treatment beyond first aid. If an employee subsequently dies as a result of a previously reported injury or illness, the employer must file within *five days* of knowledge an amended report indicating death. In addition, every serious injury/illness, or death must be reported *immediately* by telephone or telegraph to the nearest office of the California Division of Occupational Safety and Health.

EMPLOYER	1. FIRM NAME		1A. DEPT. CODE NO.	DO NOT USE THIS COLUMN
	2. MAILING ADDRESS (Number and Street, City, Zip)		2A. PHONE NUMBER	Case No.
	3. LOCATION, IF DIFFERENT FROM MAILING ADDRESS (Number and Street, City, Zip)		3A. ESTABLISHMENT CODE	Ownership
	4. NATURE OF BUSINESS, e.g. painting contractor, wholesale grocer, sawmill, hotel, etc.		5. STATE UNEMPLOYMENT INSURANCE ACCT. NO. 944-0503-02	Industry
EMPLOYEE	6. TYPE OF EMPLOYER <input type="checkbox"/> PRIVATE <input type="checkbox"/> STATE <input type="checkbox"/> CITY <input checked="" type="checkbox"/> COUNTY <input type="checkbox"/> SCHOOL DIST. <input type="checkbox"/> OTHER GOVERNMENT - SPECIFY _____			Occupation
	7. EMPLOYEE NAME		8. SOCIAL SECURITY NUMBER	9. DATE OF BIRTH (mm/dd/yy) Sex
	10. HOME ADDRESS (Number and Street, City, Zip)		10A. PHONE NUMBER	Age
	11. SEX <input type="checkbox"/> MALE <input type="checkbox"/> FEMALE		12. OCCUPATION (Regular job title - NO initials, abbreviations or numbers)	
INJURY	14. EMPLOYEE USUALLY WORKS hours _____ days _____ total _____ per day _____ per week _____ weekly hours		EMPLOYMENT STATUS (check applicable status at time of injury) regular _____ part time _____ part time _____ temporary _____ seasonal _____	
	15. GROSS WAGES/SALARY \$ _____ per _____		16. OTHER PAYMENTS NOT REPORTED AS WAGES/SALARY (e.g., tips, meals, lodging, overtime, bonuses, etc.)? <input type="checkbox"/> YES, \$ _____ per _____ <input type="checkbox"/> NO	
	17. DATE OF INJURY OR ONSET OF ILLNESS (mm/dd/yy)		19. TIME EMPLOYEE BEGAN WORK _____ AM _____ PM	
	21. UNABLE TO WORK FOR AT LEAST ONE FULL DAY AFTER DATE OF INJURY? <input type="checkbox"/> YES <input type="checkbox"/> NO		23. DATE RETURNED TO WORK (mm/dd/yy)	
ILLNESS	25. PAID FULL WAGES FOR DAY OF INJURY OR LAST DAY WORKED? <input type="checkbox"/> YES <input type="checkbox"/> NO		27. DATE OF EMPLOYER'S KNOWLEDGE/NOTICE OF INJURY/ILLNESS (mm/dd/yy)	
	26. SALARY BEING CONTINUED? <input type="checkbox"/> YES <input type="checkbox"/> NO		28. DATE EMPLOYEE WAS PROVIDED EMPLOYEE CLAIM FORM (mm/dd/yy)	
	29. SPECIFIC INJURY/ILLNESS AND PART OF BODY AFFECTED, MEDICAL DIAGNOSIS, if available, e.g., second degree burns on right arm, tendonitis of left elbow, lead poisoning.			Part of body
	30. LOCATION WHERE EVENT OR EXPOSURE OCCURRED (Number, Street, City)		30A. COUNTY	30B. ON EMPLOYER'S PREMISES <input type="checkbox"/> YES <input type="checkbox"/> NO
ILLNESS	31. DEPARTMENT WHERE EVENT OR EXPOSURE OCCURRED, e.g., shipping department, machine shop.		32. OTHER WORKER'S INJURED/ILL IN THIS EVENT? <input type="checkbox"/> YES <input type="checkbox"/> NO	
	33. EQUIPMENT, MATERIALS AND CHEMICALS THE EMPLOYEE WAS USING WHEN EVENT OR EXPOSURE OCCURRED, e.g., acetylene, welding torch, farm tractor, scaffold.			Sec. Source
	34. SPECIFIC ACTIVITY THE EMPLOYEE WAS PERFORMING WHEN EVENT OR EXPOSURE OCCURRED, e.g., welding seams of metal forms, loading boxes onto truck.			Extent of Injury
	35. HOW INJURY/ILLNESS OCCURRED. DESCRIBE SEQUENCE OF EVENTS. SPECIFY OBJECT OR EXPOSURE WHICH DIRECTLY PRODUCED THE INJURY/ILLNESS, e.g. worker stepped back to inspect work and slipped on scrap material. As he fell, he brushed against fresh weld, and burned right hand. USE SEPARATE SHEET IF NECESSARY.			
ILLNESS	36. NAME AND ADDRESS OF PHYSICIAN (Number and Street, City, Zip)			36A. PHONE NUMBER
	37. IF HOSPITALIZED AS AN INPATIENT, NAME AND ADDRESS OF HOSPITAL (Number and Street, City, Zip)			36B. PHONE NUMBER
Completed by (type or print) _____ Signature _____ Title _____ Date _____				

No. California

P.O. Box 9350 • Walnut Creek, CA 94598 • (510) 930-9883
 P.O. Box 9100 • Pleasanton, CA 94566 • (510) 426-8263

**So. California**

P.O. Box 9000 • Brea, CA 92622 • (714) 993-9484

State of California
 Department of Industrial Relations
 DIVISION OF WORKERS' COMPENSATION



Estado de California
 Departamento de Relaciones Industriales
 DIVISION DE COMPENSACIÓN AL TRABAJADOR

EMPLOYEE'S CLAIM FOR WORKERS' COMPENSATION BENEFITS

If you are injured or become ill because of your job, you are entitled to workers' compensation benefits.

Complete the "Employee" section and give the form to your employer. Keep the copy marked "Employee's Temporary Receipt" until you receive the dated copy from your employer. You may contact the State's Office of Benefit Assistance and Enforcement at 1-800-736-7401 if you need help in filling out this form or in obtaining your benefits. An explanation of workers' compensation benefits is included on the reverse of this form.

You should also have received a pamphlet from your employer describing workers' compensation benefits and the procedures to obtain them.

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of felony.

RECLAMO DEL EMPLEADO PARA BENEFICIOS DE COMPENSACION DEL TRABAJADOR

Si Ud. se ha lesionado o se ha enfermado en/o a causa de su trabajo, Ud. tiene derecho a recibir beneficios de compensación al trabajador.

Complete la sección "Empleado" y entregue la forma a su empleador. Quédese con la copia designada "Recibo Temporal del Empleado" hasta que Ud. reciba la copia fechada de su empleador. Si Ud. necesita ayuda para completar esta forma o para obtener sus beneficios, póngase en contacto con la Oficina Estatal de Asistencia para Beneficios y Ejecución de las Leyes Pertinentes llamando al 1-800-736-7401. Al dorso de esta forma se encuentra una explicación de los beneficios de compensación al trabajador.

Ud. también debería haber recibido de su empleador un folleto describiendo los beneficios de compensación al trabajador lesionado y los procedimientos para obtenerlos.

Toda aquella persona que con conocimiento haga o cause que se produzca cualquier declaración o representación material falsa o fraudulenta con el fin de obtener o negar beneficios o pagos de compensación a trabajadores lesionados es culpable de un crimen mayor "felonia."

Employee: Empleado:

1. Name. Nombre. _____ Today's Date. Fecha de Hoy. _____
2. Home address. Dirección Residencial. _____
3. City. Ciudad. _____ State. Estado. _____ Zip. Código Postal. _____
4. Date of injury. Fecha de la lesión (accidente). _____ Time of injury. Hora en que ocurrió _____ a.m. _____ p.m.
5. Address/place where injury happened. Dirección/lugar donde ocurrió el accidente. _____
6. Describe injury and part of body affected. Describa la lesión y la parte del cuerpo afectada. _____
7. Signature of employee. Firma del empleado. _____

Employer —complete this section and give the employee a copy immediately as a receipt.

Empleador —complete esta sección y déle inmediatamente una copia al empleado como recibo.

8. Name of employer. Nombre del empleador. _____
 Address. Dirección. _____
9. Date employer first knew of injury. Fecha en que el empleador supo por primera vez de la lesión o accidente. _____
10. Date claim form was provided to employee. Fecha en que se le entregó al empleado la petición. _____
11. Date employer received claim form. Fecha en que el empleado devolvió la petición completada al empleador. _____
12. Name and address of insurance carrier or adjusting agency. Nombre y dirección de la compañía de seguros o agencia administradora de seguros. _____
13. Signature of employer representative. Firma del representante del empleador. _____
14. Title. Título. _____ 15. Telephone. Teléfono. _____

Employer: You are required to date this form and provide copies to your insurer and to the employee, dependent or representative who filed the claim within one working day of receipt of completed form from employee.

SIGNING THIS FORM IS NOT AN ADMISSION OF LIABILITY

Empleador: Se requiere que Ud. feche esta forma y que provée copias a su compañía de seguros y empleado, dependiente o representante que haya presentado esta petición dentro del plazo de un día hábil desde el momento de haber sido recibida la forma completa del empleado.

EL FIRMAR ESTA FORMA NO SIGNIFICA ADMISION DE RESPONSABILIDAD

APPENDIX K

"PREVENTING REPETITIVE STRAIN AT THE KEYBOARD" PAMPHLET

PREVENTING REPETITIVE STRAIN

AT THE KEYBOARD



Comfortable Computing for Your Wrists and Hands

WALKING MILES AT THE KEYBOARD

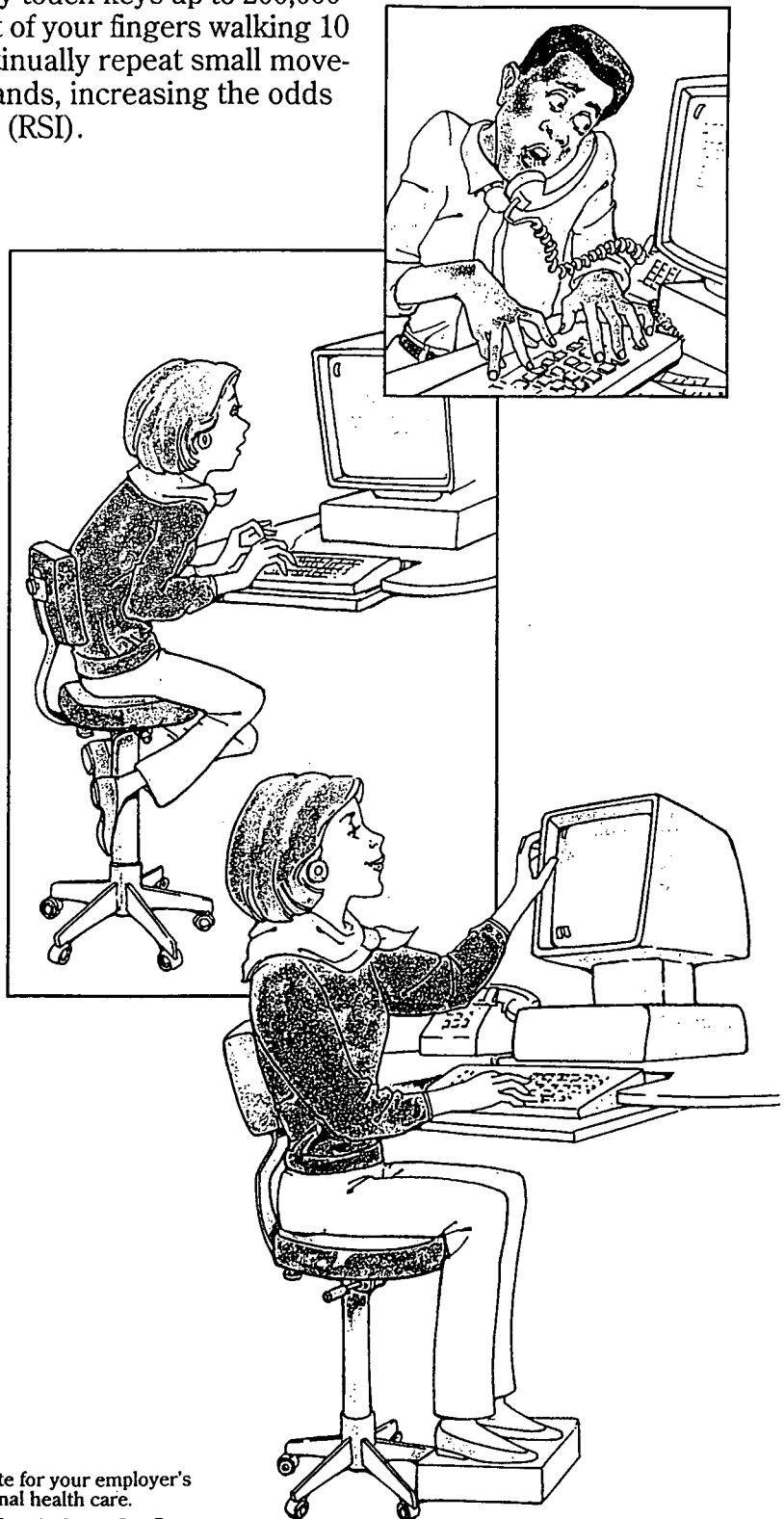
Does your job include typing rapidly on a computer keyboard? If it does, you may touch keys up to 200,000 times a day—the equivalent of your fingers walking 10 miles. This means you continually repeat small movements in your wrists and hands, increasing the odds of **repetitive strain injury (RSI)**.

Uncomfortable Computing

Awkward posture while keyboarding, poorly positioned equipment and furniture, and typing or sitting in the same position for hours can add to wear and tear on your wrists and hands. And, like favorite shoes that are worn from walking, overuse of your wrists and hands can lead to uncomfortable keyboarding. The result: tired wrists and hands—and possible strains and pains—unless you take steps to prevent them.

Creating Computer Comfort

Preventing tired wrists and hands is really a matter of taking charge of your posture and computer work environment. How? Learn the best way to hold your wrists and hands. Then practice adjusting the equipment and furniture in your work area so that you don't overwork your wrists and hands. When you have developed the right partnership between you and your workstation, your wrists and hands will usually feel fine, even at the end of a busy workday.



This booklet is not intended as a substitute for your employer's health and safety policies or for professional health care.

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KEYBOARD POSTURE

If your fingers do a lot of “keyboard walking,” straight wrists, hands, and back posture at the keyboard are the keys to your ongoing comfort. When you’ve found the right position, your muscles and back are “unstressed” and flexible, so your wrists and hands don’t have to overwork.

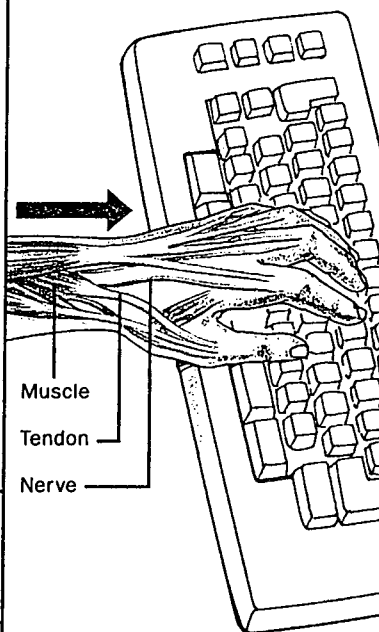
Keeping Your Wrists and Hands Straight

Each time you touch a key, **nerves** (“electrical messengers”) tell **muscles** and **tendons** in your wrists and hands they’re needed to help you move your fingers. When you work with straight wrists and fingers, these nerves, muscles, and tendons stay relaxed and comfortable. So, they’re less likely to develop the strains and pains that all may be associated with keyboarding.

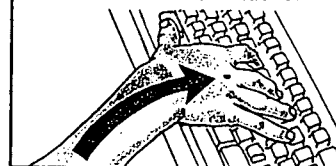
Ideal posture includes sitting straight in your chair, muscles relaxed, with your body tilted slightly back.



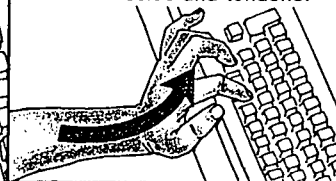
A **straight wrist** is a level, flat wrist. This position keeps extra pressure off muscles, tendons, and nerves in your wrist and hand.



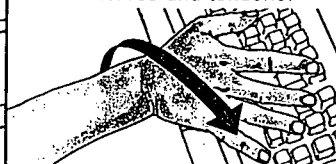
Flexing your wrist forward can strain muscles and tendons.



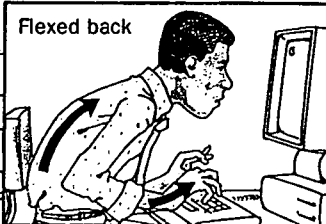
Extending your wrist backward strains muscles and tendons.



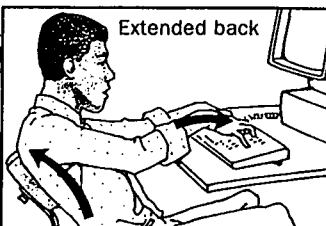
Twisting your wrist to the side strains nerves and tendons.



Flexed back



Extended back



Sitting Up Straight

Your posture at your workstation affects the position of your wrists and hands. Why? If you lean your body forward (**flexion**) or backward (**extension**), or if you slouch, your wrists and hands adapt by becoming flexed or extended, too. This means that the nerves, muscles, and tendons that support your wrists and hands become tense and strained.

COMFORTABLE COMPUTING

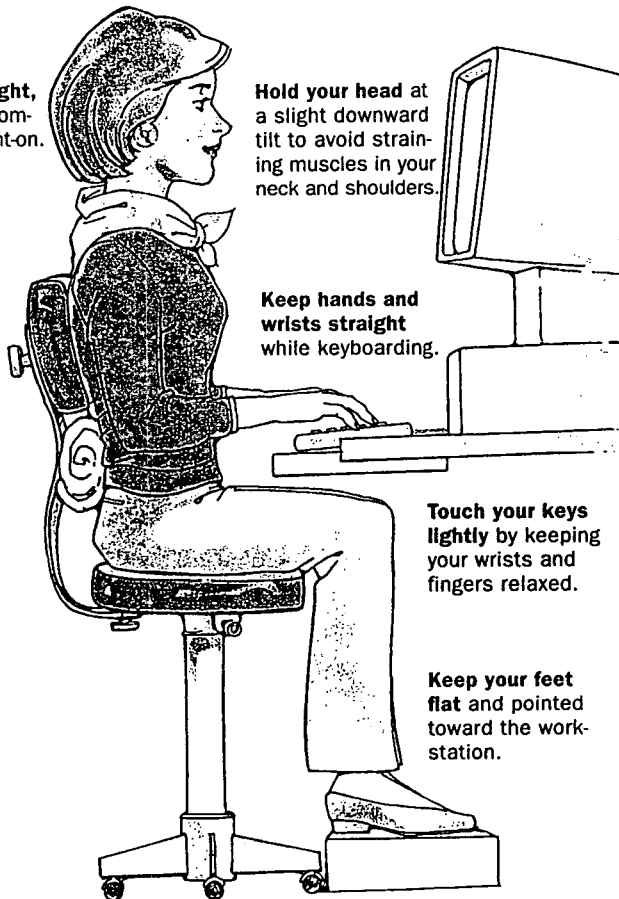
If you want to keep your wrists and hands comfortable and injury-free at the keyboard, there's no better time to start than now. To begin, check the position of your wrists, hands, and back. Then arrange your work space and use workstation props so that you can work without straining your wrists and hands.

1

Check Your Posture

At first, obtaining good posture may mean being continually aware of your posture at the keyboard. Your goal: keyboarding with straight wrists, relaxed fingers, and straight posture until it becomes second nature.

Sit up straight, facing the computer straight-on.



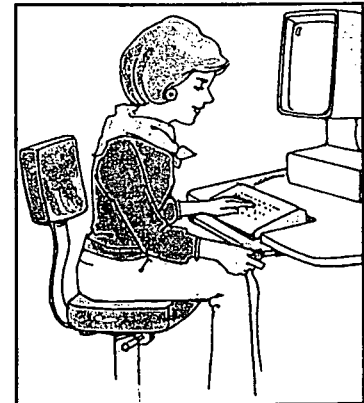
Hold your head at a slight downward tilt to avoid straining muscles in your neck and shoulders.

Keep hands and wrists straight while keyboarding.

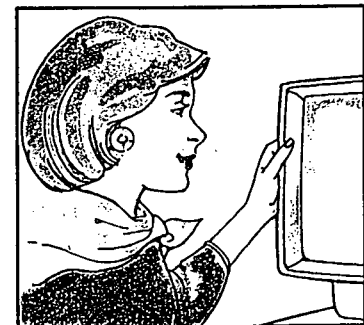
Touch your keys lightly by keeping your wrists and fingers relaxed.

Keep your feet flat and pointed toward the workstation.

2



Adjust keyboard tray or desk height so that your wrists and hands are straight while keyboarding.



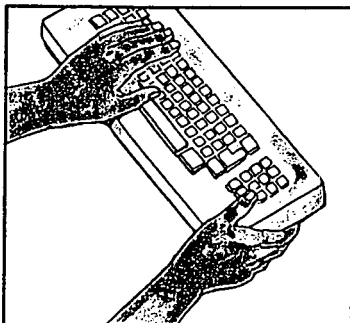
Adjust screen height so that the top of it is at about your eye level.

Adjust Your Workstation

How will you know if your office furniture is adjusted to meet your needs? First, you'll be able to easily maintain a straight wrist, hand, and back posture. What else? At the end of the work day, you won't feel aches and pains.



Adjust chair height and seat back so that you can keyboard with straight wrists and hands.



Position your keyboard so that your wrists and forearms are straight.

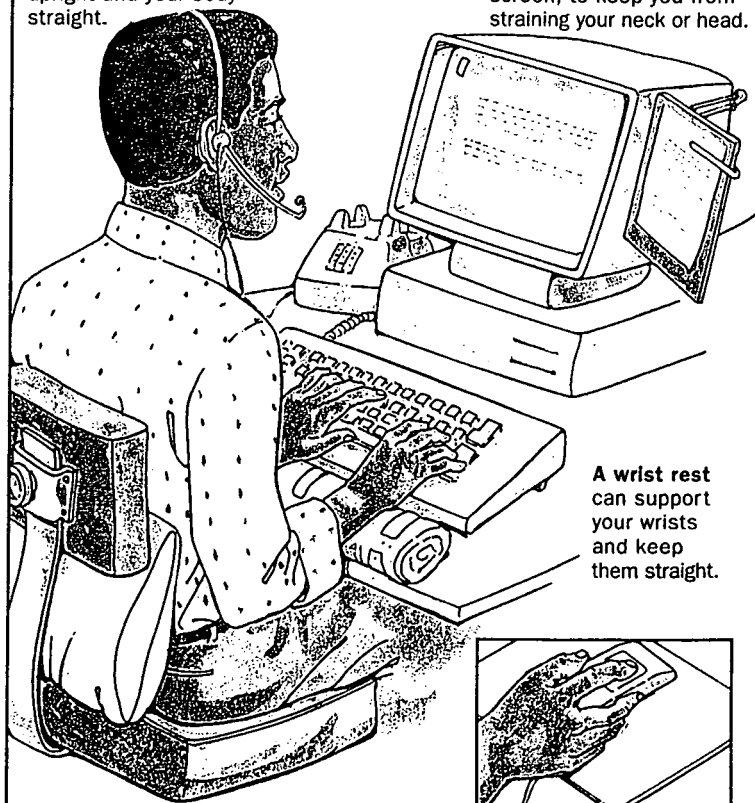
3

Use Workstation Props

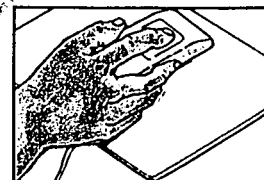
If you're unable to work comfortably with straight wrists after adjusting your furniture, try using props you've purchased or made. Props can help keep your wrists, hands, and back straight—and your muscles relaxed.

A telephone headset helps to keep your head upright and your body straight.

A copystand should be the same height as the screen, to keep you from straining your neck or head.



A wrist rest can support your wrists and keep them straight.



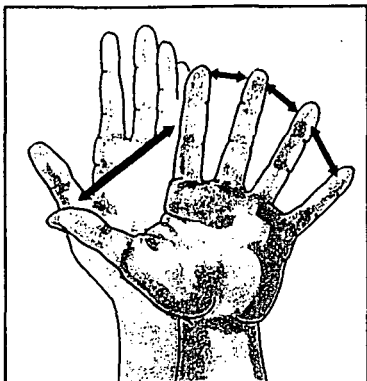
A lower back pad, such as a pillow or rolled-up towel, can help support your lower back.

A mouse pad should allow the mouse to float friction-free over it, requiring little effort.

RELEASING TENSION

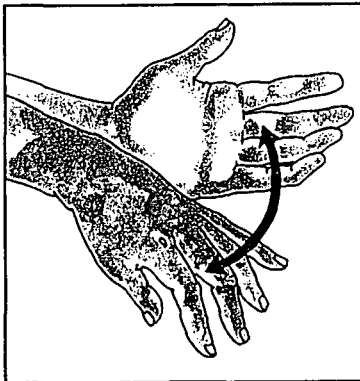
Your wrists and hands talk. When they're tense from repeated strain, they communicate stiffness and soreness. You can release tension build-up by exercising at least once every hour—even while you're at your desk. And when you're at home, avoid repeating wrist and hand motions you do at work.

In Your Wrists and Hands



Stretching

Place your hands out in front of you. Then spread your fingers as far apart as possible. Hold for five seconds. Relax. Repeat five times.



Rotating

Rotate your wrists, keeping your fingers relaxed and your elbows still. First turn your palms up, then rotate them down. Repeat five times.



Shaking

Let your hands dangle from your wrists. Then shake your hands, first up and down, then sideways. Repeat until tension in your hands is gone.

In Your Body



Reaching

Place your arms over your head. With your fingers stretched, reach toward the ceiling. Hold for five seconds, then relax. Repeat five times.



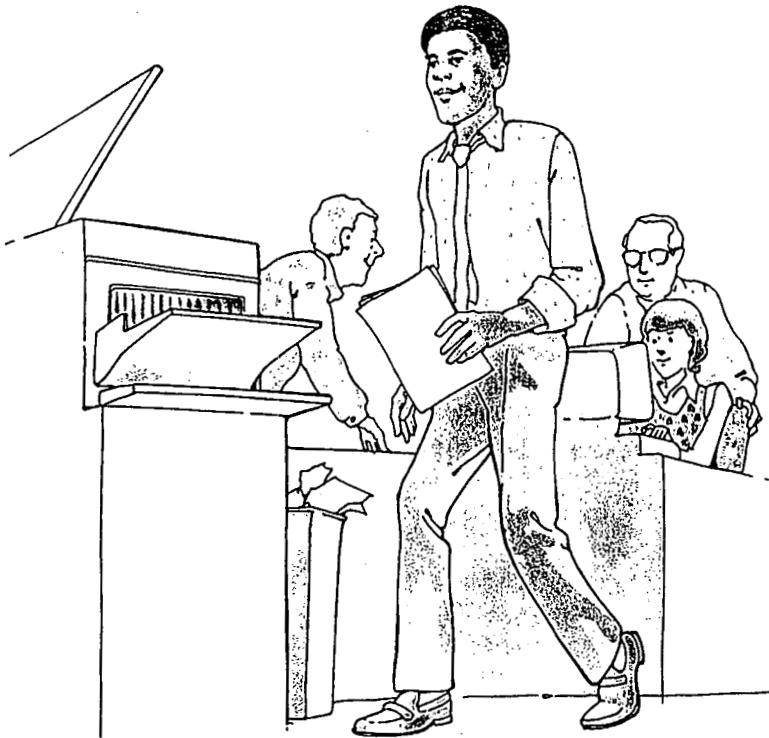
Rolling

Using a wide circular motion, roll your shoulders backward. Repeat five times.



Shifting

While sitting, move around in your chair. Slouch and slump, look away from the screen, dangle your arms. Repeat as often as necessary.



At Work

Moving around whenever possible can help ward off tension. Some guidelines:

- Walk to the printer to retrieve work you've printed out.
- Be sure to take any breaks that are recommended by your company's policy.
- Exercise your legs by rotating your ankles, whenever possible.
- Extend your legs while sitting to increase circulation.
- Force a yawn to relax facial muscles and to release tension in other parts of your body.



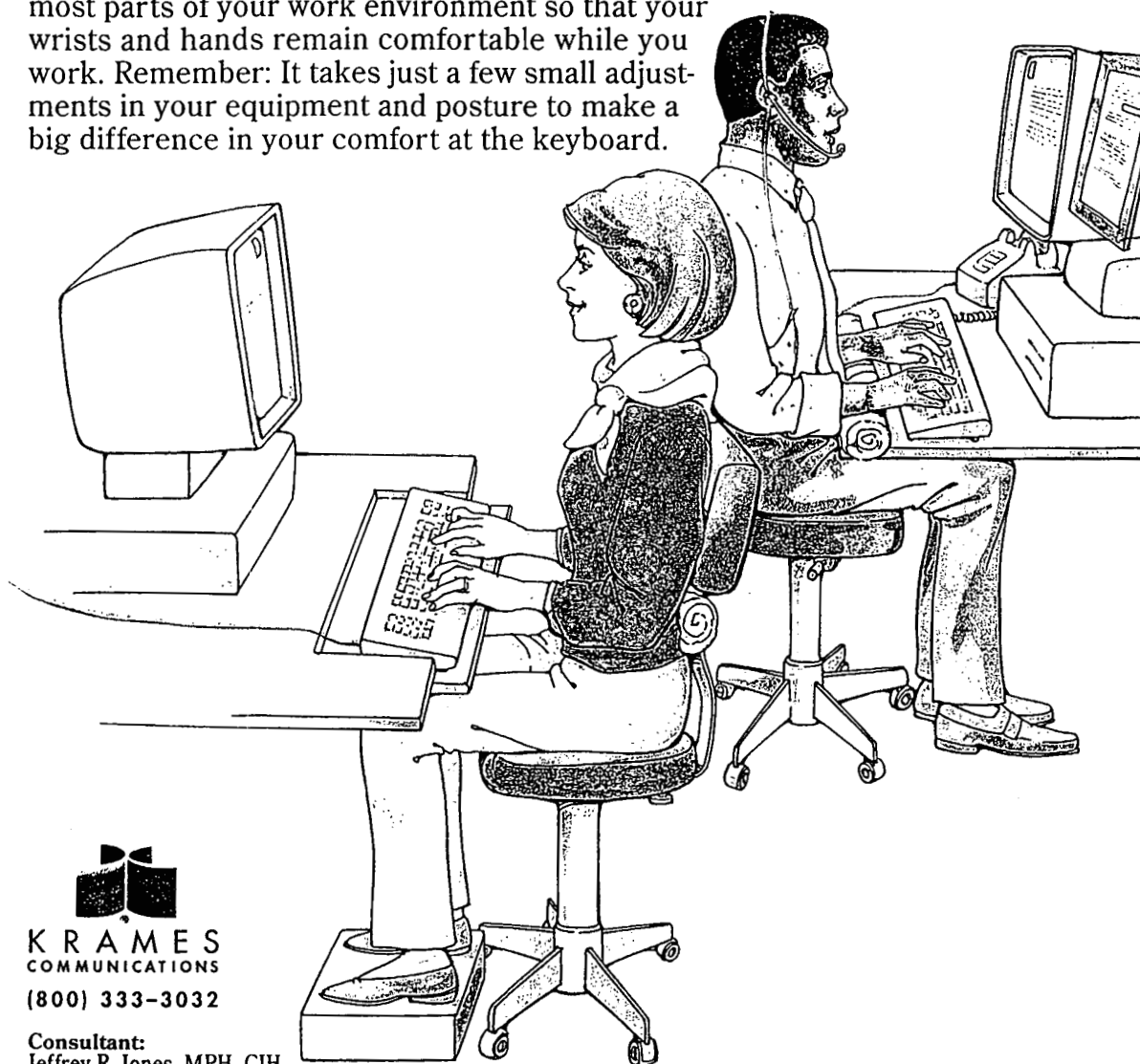
At Home

When you're at home, try to avoid repeating the same movements you use at work. Some tips:

- Be physical by getting involved with a favorite activity, such as playing ball.
- Stretch and relax your hands and body whenever you get a free moment.
- Exercise aerobically by walking or swimming.
- See your doctor if you have ongoing discomfort in your wrists and hands.

SHAPING YOUR ENVIRONMENT

From your chair to your keyboard, you can adjust most parts of your work environment so that your wrists and hands remain comfortable while you work. Remember: It takes just a few small adjustments in your equipment and posture to make a big difference in your comfort at the keyboard.




K RAMES
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**This Healthful Information
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Caring Staff at**

California Physical Medicine