ERGONOMICS IN THE COURTROOM

Institute for Court Management
Court Executive Development Program
Phase III Project
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Gail Padgett
Office of the Chief Immigration Judge
Executive Office for Immigration Review

Library
National Center for State Courts
300 Newport Ave.
Williamsburg, VA 23187-8798
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# Table of Contents

Acknowledgments ............................................................................................................. 2
Figures Listing ................................................................................................................... 5
Tables Listing .................................................................................................................... 7
Appendix Material ............................................................................................................. 8
Abstract .............................................................................................................................. 9
Introduction ....................................................................................................................... 10
Problem Identification ...................................................................................................... 10
Background Information .................................................................................................. 21
Methodology: Research Design and Implementation ...................................................... 27
Findings: Survey Results and Analysis ............................................................................. 29
Review of Literature ......................................................................................................... 32
Ergonomics Defined ......................................................................................................... 32
Applicability of Industry Standards .................................................................................. 33
Costs and Benefits ............................................................................................................ 37
Factors of Good Ergonomics ............................................................................................ 45
Recommendations ............................................................................................................. 47
Conclusions ....................................................................................................................... 72
References ......................................................................................................................... 73
Figures

Figure A: Prototype Immigration Court Design.........................................................11
Figure B: Bench and Interpreter/clerk Workstation.....................................................12
Figure C: Interpreter Reaching to Pass Files to Judge.................................................14
Figure D: Placement of Interpreter Microphone.........................................................15
Figure E: Interpreter Craning to see Witness while Speaking into Microphone.............16
Figure F: Interpreter's Chair near Wires and Attorneys' Table....................................17
Figure G: Interpreter Leans to Return Files to Crate....................................................18
Figure H: Attorneys' Tables and Chairs......................................................................19
Figure I: Judge's Chair and Bench Storage Area.........................................................20
Figure J: Bench Work Surface......................................................................................22
Figure K: Ad Hoc Storage Area....................................................................................23
Figure L: Lack of Space Between Bench and Wall.......................................................24
Figure M: Map of Florida Immigration Court Hearing Sites.......................................26
Figure N: Bench Plan....................................................................................................49
Figure O: Bench Elevation............................................................................................50
Figure P: Judge/Clerk Relationship.............................................................................52
Figure Q: Arial View of Judge/Clerk Relationship..........................................................53
Figure R: Clerk Plan.................................................................53

Figure S: Path to Witness Chair.................................................68

Figure T: Wires Drape the Bench................................................69
Tables

Table 1: 1999 Annual Caseload of Miami Immigration Court.......................25
Table 2: Medical Names for RSI..........................................................38
Table 3: Identifying the Health Problems..............................................41
Table 4: Cost of Workers' Compensation.............................................44
Table 5: Dimension Guidelines for Chair.............................................62
APPENDICES

Appendix A: OSHA Report on the San Francisco Immigration Court......Tab A
Appendix B: Survey Instrument ..............................................Tab B
Appendix C: Survey Results..................................................Tab C
Appendix D: Trial Court Performance Standards..........................Tab D
Appendix E: OSHA Draft Regulations......................................Tab E
Appendix F: EOIR Standard Furniture List....................................Tab F
Appendix G: Ergonomics Check List..........................................Tab G
Appendix H: Posture Diagram................................................Tab H
Appendix I: Relevant Physiology.............................................Tab I
Appendix J: Pamphlet: Preventing Repetitive Strain at the Keyboard......Tab J
ABSTRACT

The research reported in this paper was aimed at evaluating user satisfaction of ergonomic factors of the courtrooms in the Miami Immigration Court. This topic is significant because of the inter-relationship of ergonomics with comfort and safety in the court rooms.

One of the goals of the Miami Immigration Court is to provide a safe and comfortable environment for the employees, parties, attorneys, and spectators who use the court rooms. The objective of this paper is to gather and provide information that will enhance the ability of the Miami Immigration /Court to meet this goal.

Users of the Miami Immigration Court were surveyed to measure their satisfaction level for a variety of ergonomic factors in the courtrooms of that court. A survey instrument was developed, tested and distributed to 6 types of court users and results were analyzed. An examination of the literature was conducted to ascertain the factors of good ergonomics and recommended ergonomically sound furniture, equipment, tools, and environment for courtrooms. Analysis of the survey results identified those elements of the courtroom that generated responses indicating the highest levels of dissatisfaction. Specific recommendations were drawn from the literature search to suggest corrections for those areas of highest dissatisfaction.

The results of this survey show that at the time this survey was conducted there was widespread dissatisfaction across all user groups for certain aspects of the ergonomics of the court.

The conclusion drawn is that there are many ergonomic factors in need of improvement. Those factors have been grouped under eight subject areas and specific recommendations have been provided for each of these.
INTRODUCTION

Problem Identification

It is a typical Tuesday morning in the U.S. Immigration Court in Miami, the temperature outside is over 90 degrees. As is the routine four days every week, there will be over 200 master calendar cases and 40 individual merit cases scheduled for the morning session of court. More than 240 aliens, their families, witnesses, and attorneys are crowding into the court’s waiting areas, hallways, lobbies, elevators, bathrooms, and courtrooms.

A small force of uniformed and armed guards stationed at the waiting area entrance on each of the court’s 5 floors begin to identify and funnel a crowd of 30 aliens, their family members, witnesses, and attorneys into courtroom 710 and 5 other courtrooms where Master Calendar hearings will be held. The aliens, family members, witnesses, and attorneys are directed to be seated in the 6 rows of wooden pews when they arrive at Courtroom 710. The other 18 court rooms will be used today for the 45-50 individual merit cases scheduled for this morning. Figure A shows the design for one floor of the Miami Immigration Courthouse.

In courtroom 710 the total number of people hoping to crowd into the 700 Square foot courtroom is over 75. The 6 pews, only 6 feet in length, will hold only 24 comfortably.

In the front of the courtroom beyond the railing are two tables, a bench, witness chair, and a combination interpreter/clerk work station. Immigration Judge Baker enters the court through a door near the bench, steps up on the raised dias and sits in the large executive chair at the bench. As the Judge enters, Interpreter Adams announces the Judge’s entry and everyone in the court rises and stands until the Judge is seated.

Inside the rail, facing the bench, are the counsels’ tables with 3 chairs each. The government’s attorneys sit on the left facing the judge, and the alien and his or her attorney are on the right. The witness chair is to the judge’s left. In front of the bench is the small work station where the interpreter and/or clerk is seated.

Microphones are placed on both counsels’ tables, at the witness chair, on the bench, and at the interpreter’s work station. Exposed cables and wires for the microphones, the speaker phone on the bench, and the courtroom computers and recorders are run along the floor and furniture. See Figure B.

The only light source in the courtroom is from fluorescent ceiling fixtures. The floor is covered in grey industrial carpet.
Figure A: Prototype Immigration Court Design
Figure B: Bench and Interpreter/clerk Workstation
Interpreter Adams and Judge Baker will spend the next 4 hours working through the 30 cases on that morning's master calendar.

As each case is called, the interpreter reaches across her work station to hand the judge one of the 30 thick case files that she has carried into the courtroom prior to the hearing. To hand this file to the judge she stretches over the bench or often must stand, reach over the computer, and the bench to hand off the file. See Figure C. The interpreter then sits at her microphone, placed on a work surface already crowded with a monitor, keyboard, hole punch, stapler, and files. See Figure D. Then she proceeds to provide consecutive interpretation of all that is said on the record. often having to lean way over to see the witness. See Figure E.

During the course of the case, Interpreter Adams leaves her chair to retrieve from or deliver documents to the counsel's tables. Each trip requires her to step over a jumble of cables or wires and dodge the sharp corners of the attorneys' table which is inches from her chair. See Figure F.

The interpreter uses the keyboard and monitor to review the Judge's calendars and set the case for its next hearing. The notices to appear for that date are printed on a printer situated in the hallway outside the courtroom. The interpreter must go there to retrieve the notices unless she, or someone else, has pre-printed notices before the hearing. If notices are pre-printed, the interpreter must fill in dates and other information on a work surface that is overcrowded.

Finally the interpreter must reach over to the bench, take back the case file from the judge and refile it in a file crate on the floor. See Figure G. The file crates have been carried in by the interpreter prior to the hearing. She must also step over the creates every time she moves to the attorneys' tables.

This entire process is repeated 30 times during the morning's master calendar. Also during the morning, Interpreter Adams will leave her station and walk outside the courtroom 4 times to go to the waiting areas looking for parties or attorneys. She also makes 2 trips to the judge's chambers to retrieve legal material.

The attorney and alien for the first case swing open the gate at the rail and take their seats at the attorneys' table. The table has no knee room. The chairs are wooden with no wheels. Arm rests hit the table bottom when the chairs are moved up to the table. See Figure H.

As they are being seated, Judge Baker reaches across the bench to retrieve the file from the interpreter. Then the Judge leans under the bench to a storage shelf for a cassette tape, stretches to the tape player to insert the tape and turns the recorder. Judge Baker weighs 110 lbs. and is 5'2" tall. The judge's chair weighs over 40 lbs. and the seat is almost 18 inches from the floor. The chair is not adjustable in height. There are no foot rests. There is no arm pad under the chair. The judge has added her own cushions to sit taller and further forward. See Figure I.
Figure C: Interpreter Reaching to Pass Files to Judge
Figure D: Placement of Interpreter Microphone
Figure E: Interpreter Craning to See Witness while Using Microphone
Figure F: Interpreter’s Chair Near Wires and Attorneys’ Table
Figure G: Interpreter leans to Return Files to Crate
Figure H: Attorneys’ Table and Chairs
Figure I: Judge’s Chair and Bench Storage Area
The work surface of the bench is 30 inches high and non-adjustable.

The Judge leans forward on the edge of the chair to make handwritten notes as she hears testimony and to fill out the judge’s portion of the Record of Proceeding (ROP) worksheet, and to sign notices and orders. Later, during testimony the Judge leans back in her chair and tries to ease the discomfort created by the chair and the chair hits the wall. See Figure L.

After a hearing date is set for the next hearing, the Judge removes the tape from the machine, places it in the file, completes a worksheet, signs an order, and reaches over the bench to return the file to the interpreter.

This process is also repeated 30 times during the morning’s calendar.

At the end of such a day, Judges and Interpreters report back pain, carpel tunnel syndrome, vision problems, headaches, and lack of energy.

BACKGROUND INFORMATION

The Executive Office for Immigration Review (EOIR) was created through a Department of Justice (DOJ) reorganization in January, 1983. This internal reorganization combined the Immigration Judge function with the Board of Immigration Appeals (BIA). Prior to this change, the Immigration Judge function had been the responsibility of the United States Immigration and Naturalization Service (INS). EOIR is a completely separate agency from the INS, which is the agency responsible for the enforcement of the immigration laws. Until March of 1987, EOIR consisted of the Office of the Director, the BIA, which heard appeals of immigration decisions, and the Office of the Chief Immigration Judge (OCIJ), which supervised the operation of the Immigration Courts located throughout the United States. The Office of the Chief Administrative Hearing Officer (OCAHO) was established within EOIR in March of 1987. OCAHO is responsible for the administration of issues arising from the hearing process under employee sanctions, document fraud, and anti-discrimination provisions of the Immigration Reform and Control Act of 1986 (IRCA) and the Immigration Act of 1990 (IMMUCT).

The Attorney General, who is responsible for the administration and enforcement of the Immigration and Nationality Act of 1952 (INA) as well as all other laws relating to the immigration and naturalization of aliens, has delegated to EOIR the responsibilities of immigration hearings, review of immigration hearings, and employment discrimination, document fraud, and employer
Figure J: Bench Work Surface
Figure K: Ad Hoc Storage Area
Figure L: Lack of Space Between Bench and Wall
sanctions hearings. The mission of EOIR is to ensure fairness, competence, effectiveness, and efficiency in decisions relating to the status of individual aliens in the United States. The Office of the Chief Immigration Judge (OCIJ) oversees the 220 U.S. Immigration Judges located in 50 cities across the country. These Judges conduct formal judicial proceedings to consider if aliens in this country should be allowed to stay or if there are any forms of relief from being removed from this country available to the individuals in proceedings. Asylum, cancellation of removal, adjustment of status, and voluntary departure are the major forms of relief available for the Immigration Judge to consider. Immigration Courts conduct more than 250,000 immigration hearings annually.

The Miami Immigration Court consists of 23 Immigration Judges, a Court Administrator, Deputy Court Administrator, 12 interpreters and 37 clerks. This Court is responsible for conducting non-detained hearings in South Florida and Institutional Hearing Program hearings in 5 sites covering 23 state and local corrections facilities throughout the state of Florida.

Below in Table 1 are the FY99 total receipts and completions respectively for each hearing location assigned to the Miami Immigration Court. The FY99 average overall pending caseload for the Miami Court was about 14,000.

<table>
<thead>
<tr>
<th>Table 1: FY99 Total Receipts and Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipts</td>
</tr>
<tr>
<td>Miami Non-Detained</td>
</tr>
<tr>
<td>Miami IHP Reg 1</td>
</tr>
<tr>
<td>Miami IHP Reg 2</td>
</tr>
<tr>
<td>Miami IHP Reg 3</td>
</tr>
<tr>
<td>Miami IHP Reg 4</td>
</tr>
<tr>
<td>Miami IHP Reg 5</td>
</tr>
<tr>
<td>Miami IHP TGK</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
</tr>
</tbody>
</table>

Figure M shows the locations of the Miami court hearing sites and the Correction Institutions served by these sites. Detained aliens who are in INS custody, rather than state or local government custody, have their hearings in the INS detention centers at Krome and Bradenton, Florida.
Figure M: Map of Florida With Hearing Sites and Correctional Institutions
The Miami Immigration Court is responsible for conducting hearings for non-detained aliens in Florida and for criminal aliens held in state and local corrections facilities. In addition to the 12 court employed interpreters, there are contract interpreters that provide day to day support for the court in over 40 languages. In 1996 an additional court for non-detained alien hearings was opened in Orlando to serve the northern third of Florida.

In 1998, interpreters from the San Francisco Immigration Court filed a complaint with the Occupational Safety and Health Administration (OSHA) describing what they thought were less than satisfactory ergonomic conditions in the courtrooms. See Appendix A. The current courtrooms in Miami are almost identical to those in San Francisco. The building of a new court facility, due to be occupied in 2002, would allow the Miami Court to consider enhanced ergonomic measures for its courtrooms based on user input.

**METHODOLOGY: RESEARCH DESIGN AND IMPLEMENTATION**

The users of the courtrooms are identified as Judges, judicial law clerks, interpreters, clerks, attorneys, aliens, witnesses and spectators. A draft survey instrument was designed and tested on a small group of Judges and the Miami Court Administrator. After incorporating their suggested charges, the survey instrument (See Appendix B) was distributed to all 23 Judges, 4 Judicial Law Clerks, 12 interpreters, 37 clerks, the Court Administrator, and the Deputy Court Administrator employed at the Court. A small group of government attorneys also received surveys. Out of a total of 78 surveys sent out, 37 were returned: (11 from Judges, 4 from interpreters, 12 from administrators and clerks, 3 from government attorneys, 2 from Judicial Law Clerks, and 5 from users who did not identify their position.) This was a return rate of approximately 49%.

**Survey Instrument**

This research was conducted through the use of a survey, See Appendix B, to determine the satisfaction levels of the Miami Immigration Court users with various ergonomic factors of the courtrooms. A survey instrument was chosen as the method because: 1) it allowed input from a wide variety and large number of court users, 2) it was less expensive and less time consuming than interviewing such a large group, 3) it required no interviewing skills on the part of the researcher, and 4) it allowed anonymity for survey participants.
The decision to use a survey also took into account the following disadvantages of a survey and efforts were made to overcome them: 1) difficulty in motivating respondents, 2) low response rates, and 3) lack of opportunity to follow-up on incomplete answers. A variety of methods were used to overcome the difficulty in motivating respondents and overcoming a low response rate. These included describing to prospective respondents how the results of the survey will be used to design new courtrooms they will be moving to in 2002, and offering to share the results with anyone who provides an address on the survey form.

The survey used a scaled response method for the majority of the questions. Very Unsatisfied being 1 and Very Satisfied being 4. Respondents were also asked to answer one fixed alternative question, and several open-ended questions. Respondents were also given the opportunity to add comments to all the questions.

A pretest of the survey instrument was conducted with 4 test subjects. Their suggestions were adopted and included in the final survey.

The following sections will describe the results and offer an analysis. The scaled response and open-ended questions solicit opinions only and therefore are relying on internal validity, permitting the inferences being drawn. The fixed alternative question (dealing with injuries as a result of work) does not eliminate other potential causes for these injuries and is therefore not as reliable.

The survey consisted of 21 different sections with a total of 134 questions. (See Appendix B). Each section dealt with a different aspect of courtroom furniture, equipment, or environment.

Relevant Population

The relevant population chosen for this survey was drawn from day to day users of the Miami Immigration Court. The distribution was a combination of a census method (for court employees) and a sample method (for government attorneys). Surveys were distributed to the following:

| 23 | Immigration Judges |
| 4  | Judicial Law Clerks |
| 35 | Legal Technicians/Clerks |
| 12 | Interpreters |
| 2  | Administrators |
| 3  | Government Attorneys |
| 78 | Total Surveys Distributed |
FINDINGS: SURVEY RESULTS AND ANALYSIS

Responses were due back on December 28, 1999. A total of 37 surveys were returned for a return rate of 49%. The breakdown of responses by category of court users follows:

<table>
<thead>
<tr>
<th>Number</th>
<th>Percentage</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>52%</td>
<td>Immigration Judges</td>
</tr>
<tr>
<td>2</td>
<td>50%</td>
<td>Judicial Law Clerks</td>
</tr>
<tr>
<td>11</td>
<td>31%</td>
<td>Legal Technicians/Clerks</td>
</tr>
<tr>
<td>4</td>
<td>36%</td>
<td>Interpreters</td>
</tr>
<tr>
<td>1</td>
<td>50%</td>
<td>Administrator</td>
</tr>
<tr>
<td>3</td>
<td>100%</td>
<td>Government Attorneys</td>
</tr>
<tr>
<td>5</td>
<td>0%</td>
<td>Unknown</td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>Total Surveys Returned</td>
</tr>
</tbody>
</table>

Results of the scaled type questions were manually tabulated, using a color coded mark system. A different color mark was used for each of the 7 groups listed as respondents above (including “unknown”). Each question on each survey was marked on a master survey. Marks were counted, totaled, and combined into 2 overall answers for each item. This resulted in each item having an answer representing the total number of respondents who circled either Very Unsatisfied and Unsatisfied and a second number representing the total who circled Satisfied and Very Satisfied. See Appendix C.

The level of satisfaction or dissatisfaction could be more closely determined by totaling the responses under each of the 4 levels of the scale used on the survey. See Appendix C. However, since the primary use of this research will be to determine which factors of court ergonomics should be reviewed for change, the 2 combination totals will suffice.

Much more analysis than that covered by this paper can be done with the raw data in the survey responses. The data may be used in the future to set priorities as to which changes should be made first based on the Very Unsatisfied scores. Data can also be analyzed by breaking responses into user groups and giving different weights to answers to determine if one group is more dissatisfied than another with certain aspects of the court. For example, more weight can be given to responses from Interpreters over Judges on the Interpreters’ work stations. The reverse would apply to the bench. The comments solicited by this survey are also not addressed in this paper but will be used in the future as specific ideas for improvements in the courtrooms.

Correlations could also be drawn between sets of responses. For example, those groups who
report the most trips from their work station to other points in the court seem to be the most unsatisfied with the floor and cabling factors in the courtroom. Answers from certain groups may generate the need for follow-up interviews or some other means of collecting more information and can help target the group(s) that should be the subject of the follow-up research. For example, interpreters and clerks report the most trips during court sessions and responded more often to the questions relating to heavy lifting. This group may benefit from targeted training and may serve as a focus group or test subjects for identifying and trying out different equipment aimed at making frequent trips and lifting heavy objects easier.

The survey results, when shared with others, can also be the basis for improved communication and a better understanding between user groups. For example, the number of trips made by interpreters and clerks during master hearings is phenomenal. The Immigration Courts do not have bailiffs or marshals so the interpreter/clerks serve all the notices, orders, forms, and transfer all exhibits during sessions that may cover up to 50 cases in a 3 hour period. Making Judges more aware of this might eliminate Judge irritation over an interpreter’s request for frequent rest breaks.

The following factors are those where the majority of respondents indicate they are unsatisfied or very unsatisfied: (Those indicated by an * had higher than 75% unsatisfied response):

**Bench Area:**

- ability to adjust work surface height
- footrest
- space behind the bench

**Interpreters/clerks work Station:**

* work surface area - size, height, width
* ability to adjust height of work surface
* ease of movement around work station
* storage space
* drawers
* knee room
* footrest
* file holders

**Spectator Area:**
comfort of pews

Attorney Tables:

* drawers
* storage
* file holders
* access to PC port modems
* modesty screen

Speaker Phones:

* placement for attorneys' tables
* placement for interpreter
* ability to reconfigure placement

Visual Display Terminals:

* ability to adjust height

Keyboard/mouse:

* placement
* ability to adjust placement
* ability to adjust height
* room for proper use

Lamps:

* ability to adjust

Chairs:

* footrest
* support for appropriate posture
* back support
The results of the movement pattern questions indicate that the number of trips made by the interpreters and clerks during a master session range from 2 to 60 with a median range of 25 - 40. Government attorneys made from 2 - 10 trips with a median of 6. Judges made an average of 2 trips.

The number of respondents reporting the lifting of more than 2 pounds during court sessions was 18. The highest percentage of responses in this area, per groups, were from Interpreters, Legal Technicians and Government Attorneys.

Comments accompanying these responses indicate that some individual Records of Proceedings (ROP) may weigh more than 2 pounds each and that for a master hearing, full crates carried by attorneys, clerks, and interpreters may hold 30 or more ROPs.

The following list gives the numbers of respondents who say they experienced pain or discomfort after a day in court:

- eye strain: 16 (43%)
- discomfort in back, neck, shoulder: 21 (56%)
- lack of energy: 14 (38%)
- headache: 13 (35%)
- wrist or arm pain: 8 (21%)
- other (includes voice strain, mental fatigue, and stress): 8 (21%)

REVIEW OF LITERATURE

Ergonomics Defined

A search of the literature available indicates a common agreement among ergonomics experts and users of courtroom facilities that there are several factors involved in developing and maintaining a safe and comfortable courtroom that is also efficient and productive.

Ergonomics is derived from two Greek words, “ergos” and “nomos” which literally means the law or management of work. (Ford, 1996) Ergonomics, as defined today, is the relationship of furniture and tools to one’s own body (Inkeles and Schenike, 1994). The quality of this relationship determines whether one is exhausted at the end of the day or still full of energy. If the relationship
is good, the surroundings work with people, eliminating the eyestrain, backaches, headaches and other pains that they suffer as a result of their work habitat. (Inkeles and Schenike, 1994).

Although "ergonomics" as a buzz word has only recently entered our work place vernacular, the concept of matching body to tools and furniture has existed for centuries. Ramazinni, an 18th century physician, writes:

"Various and manifold is the harvest of diseases reaped by certain workers from crafts and trades they pursue. All of the profit they get is fatal injury to their health. . . . certain violent and irregular motions and unnatural postures of the body, by reason of which, the natural structure of the vital machine is so impaired that serious disease gradually develops therefrom."

--------Ramazinni, 1793

The ultimate goal of ergonomics is to optimize the work practices and environment to allow employees to work at high levels of performance and efficiency while still maintaining physical and mental health. (Stanford University Environmental Health and Safety, 1999).

In courtroom design much thought goes into ensuring that the furniture and tools match themselves and the paneled walls or frescoed ceilings. Until recently, very little thought was given at the design stage to having courtroom furniture and tools match the employees who must use them. Tradition and judicial values dictated that courtrooms appear to be the architectural embodiment of the importance of the formal functions conducted in the courtroom. The good value of ergonomics requires the furniture and tools in the courtroom to be comfortable, efficient to use, and healthy to work with. This paper challenges the belief these two values are in conflict and that one comes only at a loss to the other.

APPLICABILITY OF INDUSTRY STANDARDS

Trial Court Performance Standards

In August 1987, the National Center for State Courts (NCSC) and the Bureau of Justice Assistance (BJA) of the U.S. Department of Justice initiated the Trial Court Performance Standards Project to develop a system, now known as the Trial Court Performance Standards and Measurement System, to measure the performance of the nation's general jurisdiction state trial courts. (See Appendix D)
Four sections of these standards, outlined below, apply to this topic.

**Performance Area 1: Access to Justice**

**Standard 1.2 Safety, Accessibility, and Convenience.**

Court facilities are safe, accessible, and convenient to use.

The first group of standards is in the area of Access to Justice. These standards are to ensure that trial courts are open and accessible. Location, physical structure, procedures, and the responsiveness of personnel affect accessibility. Accordingly, the five standards grouped under Access to Justice require a trial court to eliminate unnecessary barriers to its services. Standard 1.2 requires the trial court to make its facilities safe, accessible, and convenient to use. For the optimum safety, accessibility and convenience for all users of the court, including employees, ergonomics must be considered.

**Performance Area 4: Independence and Accountability**

**Standard 4.2: Accountability for Public Resources**

The trial court responsibly seeks, uses, and accounts for its public resources.

Effective court management requires sufficient resources to do justice and to keep costs affordable. Standard 4.2 requires that a trial court responsibly seek the resources needed to meet its judicial responsibilities, use those resources prudently, and account for their use. Trial courts must use available resources wisely to address multiple and conflicting demands. (Trial Court Performance Standards, 1999) The wise and prudent use of available resources includes the need to ensure that employees are safe, healthy, and able to produce at optimal efficiency levels. Ergonomics greatly enhances a court’s ability to do this. A Judge suffering from headaches, backaches, or other pains caused by bad furniture or tools in the courtroom cannot give his or her full attention to the matters before the court. Pain is very distracting. This not only may lead to judicial error but is also not a efficient or effective use of Judge bench time.

**Standard 4.3 Personnel Practices and Decisions:**

The trial court uses fair employment practices.

The trial court stands as an important and visible symbol of government. Equal treatment of all persons before the law is essential to the concept of justice. Extended to the court’s own employees, this concept requires every trial court to operate free of bias - on the basis of race, religion, ethnicity, gender, sexual orientation, color, age handicap, or political affiliation - in its personal practices and decisions.

Fairness in the recruitment, compensation, supervision, and development of court personnel helps ensure judicial independence, accountability, and organizational competence. Court personnel
practices and decisions should establish the highest standards of personal integrity and competence among its employees. (Trial Court Performance Standards, 1999)

Court personnel practices should be fair to all employees, including those who suffer from work-related illness or injuries. Fairness to all employees requires that work hazards are eliminated to the extent possible. Proper employee development should include training in and opportunity to practice good posture, safe lifting and carrying techniques, and other ergonomically related practices.

**Standard 4.5 Response to Change:**
The trial court anticipates new conditions and emergent events and adjusts its operation as necessary.

Effective trial courts are responsive to emergent public issues such as drug abuse, child and spousal abuse, AIDS, drunken driving, child support enforcement, crime and public safety, consumer rights, gender bias, and the more efficient use of fewer resources. Standard 4.5 requires trial courts to recognize and respond appropriately to such public issues. A trial court that moves deliberately in response to emergent issues is a stabilizing force in society and acts consistently with its role of maintaining the rule of law.

Courts can support, tolerate, or resist societal pressures for change. In matters for which the trial court may have no direct responsibility but nonetheless may help identify problems and shape solutions, the trial court may take appropriate actions to inform responsible individuals, groups, or entities about the effects of these matters on the judiciary and about possible solutions. (Trial Court Performance Standards, 1999)

Responsiveness to emergent public issues also includes employee and courtroom user ergonomic needs. To be most efficient with fewer resources, courts use enhanced ergonomics to retain valued employees to whom expensive training in court procedures has been provided.

Without proper ergonomics, the repetitive nature of some courtroom functions and the requirements to sit for hours on end, would cause a great loss of resources from employees having to use sick leave to recover from work-related pain or to have to function at less than optimal levels due to work-related discomfort.
Applicability of OSHA Standards

Courts should also consider standards promulgated by the Occupational Safety and Health Administration (OSHA) when enhancing courtroom ergonomics. See Appendix E. On November 22, 1999, OSHA unveiled proposed ergonomic standards after eight years of intense opposition from the business community. These standards would require employees to provide work space and equipment to support the physical make-up of each individual doing a job. (Skrzycki, 1999)

The proposed standards have two parts. The first deals with manual lifting - requiring employers to have a program to identify ergonomic issues and teach employees proper methods of lifting. In Immigration Courts the interpreters, clerks, and Judges often lift heavy stacks of case files, books, or equipment. The second part sets out standards for employers' responses to workers who report ergonomic injuries. Once reported, a condition has to be changed. Employers will be required to do such things as adjust work situations, buy equipment to mitigate strain, slow the pace of work, or rotate jobs. OSHA expects to issue a final version of the regulation setting out these standards sometime in 2000.

Other Standards and Guidance

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 Standards 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. (Ford, 1996).

Guidelines for ergonomics have been developed by the Human Factors and Ergonomics Society (HFS) located in Santa Monica, California. HFS also publishes a list of ergonomic consultants indexed by locality and specialization. Although ergonomics is not a licensed profession, there is certification available from the Board of Certification in Professional Ergonomics. (Ford, 1996).

More specific guidance related to Immigration Courts was developed through an ergonomics study of the San Francisco Immigration Court. (OSHA Report, 1998) See Appendix A. This report resulted from the filing of a complaint by an interpreter reporting alleged work related hazards in a San Francisco Immigration Court courtroom.

Suggested Standards also result from annual ergonomic conferences. These conferences address such topics as: training and its effectiveness, works site 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.

COSTS AND BENEFITS

Costs

The primary costs to courts that fail to correct situations leading to bad ergonomics are that of person hours lost and efficiency hampered due to pain, injury, or illness of employees caused by conditions in the workplace. About 4 out of 5 people will fall victim at least once in their life to back pain. It is the leading cause of lost work days among people younger than 45 and the reason $50 billion a year is spent on treatment (Fischer, 1999). Sedentary work and poor computer posture are major causes of this epidemic of back pain and build up painful waste products, and can lock muscles in a constricted spasm. Many people can remain unaware of their body position or pains for hours as they concentrate during the workday. This appears to be a particularly costly problem for Immigration Court interpreters. They must interpret every word spoken by all parties, attorneys, witnesses, and the Judge for hearings that sometimes last 4 hours without a break.

Sitting too still for too long can tax your back muscles as they hold your body up right. Sitting too much, and stress, two major characteristics of court room work, are leading causes of back pain. (Karp, 1998). People in a state of stress hold their muscles in a tightened position, which reduces blood flow. Standing and walking every half hour is the advice most often given. This is not usually an option for Judges, clerks, and interpreters.

Types of Injuries

The Many Forms of RSI (Repetitive Stress Injury)

RSI is not a single condition. Instead it should be regarded as an umbrella term with many quite different conditions under it. All the conditions listed below are forms of RSI:

Common Names

- writers’ cramp
- washer woman’s wrist
- fisher woman’s finger
- scrivener’s palsy
- tennis/golfer’s elbow
- trigger finger
- telegrapher’s wrist

See Table 2 for medical names for these injuries.
Table 2: Medical Names (From New Zealand ACC publications)

<table>
<thead>
<tr>
<th>Localized inflammations</th>
<th>Compression syndromes</th>
<th>Pain Syndromes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger Finger</td>
<td>Carpel Tunnel Syndrome</td>
<td>Chronic Pain Syndrome</td>
</tr>
<tr>
<td>de Quevian’s Tenosynovitis</td>
<td>Thoracic Outlet Syndrome</td>
<td>Myofascial Syndrome</td>
</tr>
<tr>
<td>Tenosynotitis</td>
<td>Radial/Ulnar Nerve Compression</td>
<td>Fybromyalgia</td>
</tr>
<tr>
<td>Epicondylitis</td>
<td></td>
<td>Regional Pain Syndrome</td>
</tr>
<tr>
<td>Rotator Cuff Syndrome</td>
<td></td>
<td>Complex Regional Pain Syndrome</td>
</tr>
<tr>
<td>Bursitis</td>
<td></td>
<td>Reflex Sympathetic Dystrophy</td>
</tr>
<tr>
<td>Cerviothoracic Dysfunction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postural Syndromes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscle Strain</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Muscles and tendons get blood through capillaries passing between the muscle fibers. A tense muscle squeezes on these vessels and they collapse, slowing the flow of blood. Blood flow restriction begins when the muscle exerts 5% of full power, and is stopped completely at 50% of full power. When blood flow stops, the muscle has enough stored energy to cope with brief periods of tension. When this is used up, the muscle switches to an inefficient form of energy supply. However this is quickly exhausted and leads to a buildup of acid wastes in the muscle (lactic acid). These acid products cause pain and fatigue in the muscle. This pain and fatigue is similar to that felt when lifting weights at the gym. See Appendix 1: Relevant Physiology.

The muscle pain can cause neighboring muscles to tense up in sympathy by a reflex reaction (called the splinting reaction). This is a normal reaction to injury, and is good where bracing is needed for acute injuries like a broken bone, or an infection. In overuse syndrome, however, a self-sustaining pain cycle can develop. This pain fluctuates in intensity, from being mild to intolerable. The pain can also migrate from one part of the affected limb to another. Over time the muscles can become hyper-sensitive, with pain being caused by relatively low levels of activity, and the muscles developing specific tender points (myofascial trigger points). An inadequate blood supply to nerves
may also cause numbness and tingling. If larger nerves passing between muscles are squeezed, more definite tingling and numbness may result. (New Zealand ACC, 1999).

In the worst cases diffuse RSI can develop into a chronic condition. A number of physiological and neurological dysfunctions combined with a loss of muscle tone and physical fitness can result in a seemingly permanent disability, one with some similarities to fibromyalgia. The mechanisms behind this are not well understood but it does appear that recovery and rehabilitation is still possible. These types of injuries also sometimes known as Cumulative Trauma Disorders (CTD) are generally grouped into 3 categories for 1) Nerve Disorders 2) Tendon Disorders, and 3) Neurovascular Disorders.

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 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. Carpel tunnel syndrome is thought to be caused by repetitive trauma, extension, flexing and twisting of the wrist, which lead to compression of tissues. The symptom 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. (Ford, 1996).

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.

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 causes 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. (Ford, 1996).

**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.

**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. (Ford, 1996).

**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 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.

Table 3 identifies the specific sources in the workplace that lead to these injuries. (Inlels and Schencke, 1994)

Table 3: **Identifying the Health Problems**

<table>
<thead>
<tr>
<th>Wrong choice here</th>
<th>Leads to</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Furnishings</strong></td>
<td></td>
</tr>
<tr>
<td>Chairs</td>
<td>Chronic back, shoulder and neck pain, numb legs, cold feet</td>
</tr>
<tr>
<td>Desk</td>
<td>Eyestrain, stress, repetitive motion syndrome characterized by severe pain, often in the back</td>
</tr>
<tr>
<td>Storage</td>
<td>Stress, allergies, accidents</td>
</tr>
<tr>
<td><strong>Ambience</strong></td>
<td></td>
</tr>
<tr>
<td>Sound</td>
<td>High anxiety, aggressive behavior, inability to concentrate, hearing loss</td>
</tr>
<tr>
<td>Light</td>
<td>Fatigue, depression, eyestrain, headache</td>
</tr>
<tr>
<td>Air</td>
<td>Allergies, headaches, drowsiness</td>
</tr>
<tr>
<td><strong>Computer</strong></td>
<td></td>
</tr>
<tr>
<td>Keyboard</td>
<td>Carpal tunnel syndrome characterized by severe pain in the neck, shoulders, arms, wrists and hands</td>
</tr>
<tr>
<td>Screens</td>
<td>Severe eyestrain, allergies, possible radiation poisoning</td>
</tr>
</tbody>
</table>
Printer: Stress, inability to concentrate
Workstation: Poor circulation and muscle tone, back pain
Communications:
Electronic mail, fax: Aggressive behavior, emotional problems
Telephone: Neck and shoulder pain, stress

Specific Costs to the Miami Immigration Court

The American workforce is suffering from an epidemic of RSIs. As many as 1 million people are afflicted yearly. Reported cases from private industry alone jumped 800% in the 10 years from 1984 to 1994 rising from 34,700 to 332,000 new cases. In one year, RSIs jumped 10%, to become 5% of all the non-fatal workplace injuries private companies reported to the Bureau of Labor Statistics in 1994. (Skrzycki, 1999).

A recent estimate by the Miami Immigration Court Administrator, based on sick leave usage in 1999, is that over 200 work hours were lost due to pain and injury related to RSI or CTD. At an average cost to the government of $50.00 an hour for wages and benefits paid to employees while on sick leave, the Miami Immigration Court lost an estimated $10,000.00 to sick leave use that may have been avoided with improved courtroom ergonomics.

For an estimate of the costs of Workers’ Compensation Claims and sick leave use, the Miami Immigration Court is compared to a court of similar size and function that has documented its costs for Workers’ Compensation over the years due to ergonomic related loss of time. This is the Citrus Municipal Court of Los Angeles County, California. That court has 11 Judges, 1 court administrator and 68 support staff, for a total of 80 employees. The Miami Immigration Court has 23 Judges, 4 Judicial Law Clerks, 1 court administrator and 49 support staff for a total of 77 employees.

When employees are 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 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 costs $710 per month and the temporary employee salary cost
$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. During the year 1999, the Miami Immigration Court had a comparatively small loss of 25 days (200 hours). However, the costs to the Immigration Court are comparable to the costs to the Citrus Municipal Court and to the efficient flow of work and the lowered morale of employees. The Miami Court can avoid the additional costs incurred by the Citrus Municipal Court by identifying and solving problems early. See Table 4.

The Miami Immigration Court has not been the subject of a complaint to OSHA or any other outside agency to date. Having surveyed the level of employee satisfaction with ergonomics in the courtroom and researching possible solutions, this court may also be able to avoid the experience of the San Francisco Court.

Based on the disruption to the Court and the time spent dealing with the results of a complaint filed with OSHA in the San Francisco Immigration Court, there is a great deal of cost associated with responding to such complaints. Being aware of and correcting ergonomic problems before complaints are filed eliminates the expense of having to hire consultants, responding to OSHA requirements filing follow-up reports, and dealing with disruptions.
Table 4:
COST OF OPEN WORKERS' COMPENSATION CLAIMS RELATED TO CUMULATIVE TRAUMA DISORDERS IN THE CITRUS MUNICIPAL COURT AS OF 7/31/95

<table>
<thead>
<tr>
<th>YEAR</th>
<th>DEPARTMENT</th>
<th>PAID TO DATE</th>
<th>ESTIMATED COST OF CLAIM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>CRIMINAL</td>
<td>$1,568.16</td>
<td>$12,000.00</td>
</tr>
<tr>
<td>1992</td>
<td>ADMINISTRATION</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>1992</td>
<td>CRIMINAL</td>
<td>$8,971.70</td>
<td>$16,500.00</td>
</tr>
<tr>
<td>1993</td>
<td>CRIMINAL</td>
<td>$10,038.09</td>
<td>$17,500.00</td>
</tr>
<tr>
<td>1994</td>
<td>TRAFFIC</td>
<td>$1,128.99</td>
<td>$10,004.70</td>
</tr>
<tr>
<td>1994</td>
<td>CRIMINAL</td>
<td>$4,341.74</td>
<td>$11,665.90</td>
</tr>
<tr>
<td>1994</td>
<td>CRIMINAL</td>
<td>$2,587.14</td>
<td>$11,027.58</td>
</tr>
<tr>
<td>1995</td>
<td>CRIMINAL</td>
<td>$613.28</td>
<td>$4,670.88</td>
</tr>
<tr>
<td>1995</td>
<td>CRIMINAL</td>
<td>$897.76</td>
<td>$12,954.40</td>
</tr>
<tr>
<td>1995</td>
<td>ADMINISTRATION</td>
<td>$993.66</td>
<td>$7,629.66</td>
</tr>
<tr>
<td>1995</td>
<td>TRAFFIC</td>
<td>$2,140.24</td>
<td>$12,665.60</td>
</tr>
<tr>
<td>1995</td>
<td>CRIMINAL</td>
<td>$0</td>
<td>$(Krohe, 1993),038.55</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>$33,280.76</td>
<td>$131,656.27</td>
</tr>
</tbody>
</table>
Costs of Making Improvements

According to Thomas Traut, M.Ed., Director of Work Diagnostics of California Physical Medicine, the hourly fee charged by consultants for workstation evaluation is approximately $125 per hour. In one hour, evaluations can be done for 2-3 work station. According to OSHA estimates, most workstations can be completely ergonomically enhanced at an average annual cost of $150.00 (Skrzycki, 1999)

There are currently 46 workstations for employees’ use in the Miami Immigration Court rooms (includes benches and interpreter/clerk workstations.) At an average cost of $150 the total required to make those workstations ergonomically sound would be approximately $7000.00.

The cost to improve the attorneys’ tables and witness stand is estimated to be approximately $500 per courtroom for a total of $11,500 for the 23 courtrooms now in use.

Benefits

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. (Ford, 1996) Proactively paying attention to ergonomics and involving employees in making changes avoids the disruption and expense of reacting to complaints to outside agencies such as OSHA.

Sound ergonomics practices can make the difference between a tired, dull, aching workforce and an alert, rested, energetic workforce. With the right tools and furniture, employees can live with in their work environment on their own terms. A healthful, comfortable, amicable workplace better serves their needs and allows them to better respond to the needs of the court (Inlels and Schencke, 1994).

FACTORS OF GOOD ERGONOMICS

Ergonomically sound courtrooms are not organized according to the work people do, but rather according to the people who do the work. Poor performance OF a courtroom is easy to mistake for poor performance IN the courtroom (Krohe, 1993). Courts pay penalties for what are called “forced fits” between staff and facilities in the courtroom. These “forced fits” often become so
commonplace that they seem natural to the people involved. That is not, however, a good reason to keep these “forced fits” in operation. (Krohe, 1993) To quote General Bill Sutter, Chief Clerk of the U.S. Supreme Court, “The most unproductive words in the English language are ‘we’ve always done it that way’.” (Speech at Immigration Court Administrators’ Conference, December 14, 1999, Alexandria, Virginia)

Since immigration courtroom workstations (with the exception of the Judge’s bench) are often used by different people every day, the best choice ergonomically is to have a “negotiable environment”, one that can be changed to fit each person who uses it. Even zoos have adopted means of tailoring habitats to each animal that uses them. (Krohe, 1993) Courtrooms should not be too far behind that example.

In the alternative to the negotiable work space, the court could provide each interpreter or clerk with their own portable workstation, similar to the court reporters work station developed for courtroom 21 in Williamsburg, VA. (Brust, 1999). Another model for this type of work station being pioneered by IBM, is the “hot-desk” concept. Workers take any space available and plug in their own personal links to voice mail, fax, and computers (Krohe, 1993). This would require a complete retooling of the interpreter/clerk workstation in the Miami courtrooms and may not be feasible as an improvement in current Miami courtrooms, but may be a viable option when new courtrooms are built for that court.

Eight Factors

A review of available literature shows that there are 8 factors important to courtroom ergonomics:

• Furniture equipment and tools that adjust to fit the individual bodies that use them (Inlels and Schencke, 1994) allowing proper posture and frequent movements (Biomedical Computer Group, 1999);

• Lighting, and furniture arrangements that allow for glare-free, clear, unencumbered lines of sight. (Biomedical Computer Group, 1999)

• Ability to perform proper lifting and carrying. (OSHA Report, 1998)

• Work schedules that allow for frequent movements or changes in position. (Inlels and Schencke, 1994)
Floor, furniture, and wiring arrangements that allow for unencumbered movement to all parts of the courtroom. (OSHA Report, 1998)

Work surfaces that are adequate size and adjustable. (Washington State Department of Labor, 1999)

Full range of motion and adequate leg room. (Washington State Department of Labor, 1999)

Adequate storage space for appropriate access to all necessary tools, equipment, and supplies. (Washington State Department of Labor, 1999)

RECOMMENDATIONS

Factor 1: Furniture, equipment and tools that adjust to fit the individual bodies that use them, allowing proper posture and frequent movements.

Currently furniture in the immigration court includes the bench and chair for the Judge, the work station and chair for the interpreter/clerk, the witness chair, tables and chairs for attorneys and pews for spectators. All furniture for Immigration courtrooms is currently selected from a uniform list (See Appendix F).

At the current time, equipment and tools include a computer with keyboard, mouse and VDT (visual display terminal) for the interpreter/clerk, tape recorder, and microphones for the recorder on the bench, at the interpreters station, on attorneys tables and at the witness stand. There are also a telephone on the bench and a conference phone on the bench. There are file holders at the interpreter/clerk work station, along with a 2 hole punch and a stapler. There is a 2 hole punch on each of the attorneys’ tables.

There are a variety of checklists to determine if your furniture fits your body and needs. (See Appendix G, Biomedical Computer Group, 1999: Stanford University Environmental Health and Safety Department, 1999)

In this section, recommendations will be made for the furniture, tools, and equipment for the major components of the Immigration courtroom. Recommendations follow for the Judges’ bench, witness stand, attorneys’ tables, and interpreters/clerk work station. General recommendations on chairs apply across all these components.
The Judge's Bench

Symbolism and functionality are important in courtroom design. The formal arrangement of the participants and furniture reflects society's view of the appropriate relationships between the judicial authority and the parties. In evaluating any courtroom layout, the communications of social and judicial values should be given equal weight to the design's functionality.

This is of primary importance in designing the Judge's bench. It is possible to combine symbolism and ergonomics in a bench that projects the proper courtroom values and is also comfortable, safe, and efficient to use.

The Judge is the symbol the administration of justice. The Judge's bench should, therefore, impart an appropriate sense of importance and dignity. The Judge must be able to view and hear all courtroom participants, exercise a protective influence over witnesses, address all persons in the courtroom or speak softly during side-bar conferences with the attorneys or with the clerk, and pass documents and exhibits to attorneys, and the court clerk. The Judge is an impartial arbiter and needs to be positioned so that he or she does not appear to favor either party.

The bench is the focal point of the courtroom and should be placed in a prominent location, commanding a view of all areas of the courtroom. The bench should face the spectators; it may be placed on the front wall, either centered or off-center, or in the corner of the courtroom. The Judge should have a clear view of all entrances, witnesses, attorneys, and spectators.

The size of the Judge's bench should be proportionate to the size of the courtroom. In medium-sized courtrooms, the Judge's desk top should be 6 to 8 feet in length by 2 to 2 ½ feet in depth. A work surface that is much wider than 2 feet will cause the Judge to sit too far back from the front of the bench and, coupled with the height of the bench, give the appearance to spectators that the Judge is simply a "talking head." See Figure N.

The space between the Judge's desk and the opposing wall should be approximately 5 feet so that the Judge can move for side-bar conferences, reach for reference books, and move in a dignified fashion to and from the bench. The total space requirement for a Judge's bench should range from 45 to 70 square feet. (Hardenbergh, 1999).

The eye level of the Judge should be higher than that of the average standing attorney. Generally, the minimum elevation of the Judge's bench should be 21 inches. Anything lower will place the Judge at or below the eye level of the average-height participant. The bench should be elevated at least three risers (18 to 21 inches) in a small-or medium-sized courtroom. See Figure O.

The front of the standard trial bench should be 52 to 56 inches in height. This includes 21 to 22 inches for riser height, 29 to 30 inches for the work surface, and 3 to 4 inches for the privacy rail.
Figure N: Bench Plan
Figure O: Bench Elevation
Judge’s Bench

COURTESY OF HOK
All benches should accommodate future installation of ramps or lifts. This will require space to accommodate a wheelchair and unobstructed turning space within the bench, an accessible path to the bench, and an accessible desk. The route to the bench within the courtroom should be at the same level as the bench; any transition to this raised level (steps, ramp, or lift) should occur outside the courtroom and out of view of the public and court participants.

The Judge’s bench should facilitate the transfer of documents and verbal communication with the court clerk and interpreter, as well as provide clear lines of sight to the witness. The bench and the court clerk’s station should be adjacent. The witness stand is often immediately adjacent to the Judge but can be separated as long as the Judge can see and hear clearly. See Figures P and Q.

The Stand Up and Modular Desk

A modular bench system can easily include both a stand-up and a sit-down work surface for the Judge. Softly rounded edges on all surfaces that users come in contact with are required. Channels for power and telephone cords will eliminate power cord tangles. (Inlels and Schencke, 1994) Equipment should plug into the bench itself, using built-in outlets.

The Judge should have private access to the bench from a secure corridor. Entry to the bench should be from directly behind or close to the bench. The Judge should not have to cross public areas to enter the courtroom.

The front panel of the Judge’s desk should be made of bullet-resistant materials. Care should be taken not to use steel-plated, bullet-resistant materials, as this may cause bullets to ricochet through the courtroom.

The Judge’s bench should have a concealed, silent, positive-action duress alarm that will directly alert the courthouse security station or an employee trained in emergency notification procedures. While care should be taken to avoid placement of the alarm where it could be accidentally activated, the alarm should be within easy reach of the Judge, and its activation should be as inconspicuous as possible. The button should also activate an audio or, preferably, video system within the courtroom, which transmits to the security station. This will enable security personnel to determine what is occurring in the courtroom and plan an appropriate response.

Several drawers should be provided for forms, supplies, and personal items, as well as adequate shelving for reference books.
Figure P: Judge/Clerk Relationship
Figure Q: Aerial View of Judge /Clerk Relationship

Figure R: Clerk Plan
The front of the bench may be surrounded by a chest-high shelf approximately ten to twelve inches deep. This would allow attorneys to refer to files and documents during a bench conference, prevent the attorneys from approaching too close to the bench and seeing documents on the Judge’s desk, and prevent attorneys from resting their arms and elbows on the top of the bench. Another solution is to erect a decorative rail in from of the bench to block attorneys from approaching too close, while allowing attorneys to sidestep the rail for side-bar conferences. (Hardenbergh, 1999).

Electrical receptacles and cable conduits for built-in video display and computer terminals for electronic access to legal databases, taped dispositions, case management information, or instant case transcript display should be installed. All receptacles should be flush-mounted in the floor. Judges may also wish to take notes on their computer, so the bench may be designed with a keyboard tray. Telephones and recorders should be flush to the work surface.

The Witness Stand

The witness, along with the Judge, should be a focal point of all courtroom proceedings. It is critical that all courtroom participants clearly hear and see all verbal and nonverbal communication from the witness. Because many witnesses testify at a personal sacrifice of time and money, and at the risk of being harmed, they deserve the court’s courtesy and protection. Witnesses must be allowed to present their testimony in an impartial manner, free from intimidation.(Hardenbergh, 1999).

The design and image of the witness stand should be compatible with the style and finishes of the Judge’s bench and other courtroom furniture. The witness stand may be elevated on one or two risers from the floor, but should remain lower than the Judge. The witness should be in clear view of the Judge, interpreter, and attorneys’ tables. If the witness stand is not constructed as part of the bench, it may be preferable that the witness stand be a movable, modular unit, thus allowing it to be rotated to an appropriate angle.

The front width of the witness stand should be at least 5 feet wide and approximately 5 feet deep to allow for ease of entry and exit. Because witnesses must frequently receive, examine, and return exhibits, a desk area approximately 15 to 18 inches deep should be provided to the front or side of the stand on which to rest files or evidence. This shelf area also ensures an adequate non-encroachment distance between the witness and attorneys. The bottom of the desk should be approximately 30 inches from the floor of the witness stand to permit ease of entry and exit. Additional adjacent space should be allowed for an interpreter to stand or sit without blocking the view of the witness.

The area around the witness should be well lit so that the Judge, interpreter, and attorneys can clearly see the expressions of the witness, but the light source should not be so direct as to cast shadows or glare.
The witness stand in all courtrooms should be accessible to persons with a disability. It should accommodate an accessible wheelchair space, located within the defined area of the witness. The accessible path must coincide with the normal circulation path to the witness stand, a permanent ramp or lift is required if the position is raised above floor level, and a 30-inch x 48-inch wheelchair space is required with unobstructed turning space.

The witness stand may be located in a number of different positions. The most common arrangement is to place the witness stand to the left of the Judge. This provides the proximity necessary for the witness to be seen and heard clearly. The location of the witness stand should not allow the witness to seize objects from the bench and there should be a physical barrier between the witness and the Judge.

The witness chair should be stationary to prevent witnesses from backing away from the microphone. Chairs with swivel seats should be comfortable and quiet. A modesty panel should be provided. The chair should be comfortable for the average size adult; it should be affixed but swivel; and it should have armrests.

A movable microphone should be mounted un-obtrusively in the witness stand and be able to receive clearly the testimony of children and soft-spoken witnesses. The microphone may be connected to an amplifier controlled by the Judge or interpreter.

**Interpreter/Clerk Station**

The court clerk or interpreter helps all court proceedings run efficiently through a variety of tasks, including checking case files, recording appropriate case information, and providing simultaneous or consecutive interpretations of all that is said in court. In this capacity, the clerk/interpreter frequently passes the files to and from the Judge and, therefore, requires immediate proximity to the Judge. The clerk or interpreter may be responsible for marking trial evidence and is responsible for the custody of all exhibits.

The design and image of the court clerk/interpreter’s station should be compatible with the style and finishes of the Judge’s bench and other courtroom furniture. It may be at floor level or elevated on one riser. A floor-level location is more accessible to the handicapped and further accentuates the prominence of the Judge’s bench, while an elevated location eases the transfer of documents to the Judge and presents a better view of the courtroom; these factors should be carefully weighed in the placement decision. The court clerk/interpreter should have a clear view of all courtroom participants, because the interpreter takes notes and provides interpretations during the proceedings and must be able to see and hear all participants clearly. The court clerk/interpreter should not obstruct the Judge’s view of the witness.
A single court clerk’s work surface should be approximately 30 to 36 inches in depth by 5 feet in length. The desk and appropriate storage area must accommodate a large volume of case files in addition to other documents, exhibits, supplies, and sound-recording and computer equipment. The court clerk’s station should be positioned a minimum of 4 feet from the opposing wall to allow for easy access. Approximately 30 to 40 square feet is required for a single clerk’s station. One of the most frequent complaints issued by clerks is lack of work and storage space. See Figure R.

The court clerk’s station should have the same amount of task lighting as the Judge’s bench. This spot illumination will augment the lighting used in the courtroom. Work surfaces should be non-glare.

As with the Judge’s bench, the courtroom clerk’s area need not be accessible immediately but should be adaptable to provide accessibility for persons with disabilities. This requires space to accommodate a wheelchair and unobstructed turning space within the work space; an accessible path to the work area, which coincides with the normal circulation path to the area; space to locate a permanent ramp or lift; and an accessible desk. Raised floor levels at the clerk’s position may be served with a movable ramp. Because clerks are employees of the court, advance planning should allow temporary installation of a ramp for court personnel assigned to that courtroom who require access to the workstation.

The court clerk’s station should be adjacent to the bench, facilitating communication with the Judge and the transfer of files and documents. In most courtrooms, the clerk is on the opposite side of the Judge from the witness to provide balance to the room and to avoid blocking the Judge’s view of the witness. In some courtroom arrangements, however, the clerk is stationed immediately in front of the bench. Either way the clerk/interpreter must be able to easily see every other person in the courtroom without craning or leaning to reach the microphone.

The court clerk’s station may have the same duress alarm/intercom system as the Judge, providing direct linkage with central security through a foot - or - knee-activated button under the work surface.

The court clerk’s station typically includes a shelf for both signing documents and preventing attorneys from seeing documents on the work surface. There should be storage areas, either desk drawers or pigeonholes, for forms and paperwork. The clerk’s chair should be movable, able to swivel, and comfortable for long periods of sitting.

The court clerk’s station should have flush, floor-mounted electrical receptacles, a telephone jack, and cable conduits for computer terminals and a built-in video display. The computer terminal should be equipped with a silent keyboard and laser printer. The control console for the sound amplification system may be located at the work station, along with a microphone for the clerk/interpreter. Currently, the court record is taken by electronic audio recording using a recorder on the bench. Other methods may be used in the future. For that reason, the clerk’s station should
have recorder space to support the method used and have the ability to change as record making methods change.

The relationship of the interpreters/clerk’s station to other parties in the litigation area is important. The station should be placed so that the interpreter can clearly view the witness’s facial expressions and hear voice testimony. The court interpreter also must have an unobstructed view of the entire well area. This field of vision should include the Judge, witness box, and attorney’s tables, all within a 180-degree arc, allowing for the rapid head-and-eye movement necessary for identifying exchanges between speakers and accurately interpreting verbal and nonverbal (e.g., head nods, facial expressions, hand gestures) communication. (Inlels and Schencke, 1994)

The interpreter/clerk desk must easily accommodate a large computer system as well as a built in monitor or a monitor stand. The monitor stand must-glide to any position above the desktop with a flick of the hand. The interpreter/clerk should be able to add or subtract shelves, drawers, equipment stands and adjoining pieces. Work surfaces should be uniformly matte, particularly if the courtroom is brightly lit. The most ergonomic workstations manage all electrical connections. Power cords, concealed in a generous hidden channel, are held in place with thick rubber grommets. The desk itself plugs into the wall and supplies electricity through surface-mounted outlets. The entire work surface should adjust from twenty-five to thirty inches with levelers on all four legs to compensate for uneven floors. The keyboard should go on an adjustable platform or tray that is lower than the desktop.

The monitor should move up and down and be capable of tilting and swiveling until the perfect personal viewing angle is found. Since many interpreters share equipment, it must make these adjustments easily. All adjustments should be possible by hand alone, no tools should be required.

The printer should be located so that it can easily be reached from the desk. There should be a soft sound-absorbent pad under the printer. The desk should be wide enough for a pointing device, like a mouse, as well as a copy stand, reference books, papers, and Records of Proceeding (ROP).

**Keyboard**

Each employee should have an option to have keyboards with a curved form with a one inch vertical separation in the center of the keyboard. This design is aimed at assisting the operators to keep their hands turned inward, which is a more natural positions.

The ergonomic solution - a comfortably sloped keyboard with a soft, low front lip - permits one to rest the wrists on the desktop while supporting the upper arms. While typing, the employee can see the keys without bending forward. The most ergonomic keyboards are supported by a low rubber bumper that also provides a cushioned support for the wrists.
Think of the keyboard, the workstation (tabletop) and the chair as an interconnected system for supporting the arms, wrists and back. If one must lean forward to type, there is much more likelihood of a backache. The same thing will happen if armrests are too long. Without a place to rest the arms, upper back and shoulders might become tired from bearing the weight of the arms all day. The edge of the desk and that of the keyboard need to be softly rounded, preventing damage to the wrists as they move across these surfaces. Hard and narrow armrests can add to the problems by putting pressure on the ulnar nerve in the elbow. Most typists prefer an auditory cue in addition to the purely tactile each time a letter is typed. Avoid keyboards with overly mushy keys that fail to provide the crucial tactile and auditory feedback necessary for fast typing.

Flat key caps, which make it impossible to stop the fingers from slipping and sliding, will reduce the fastest touch typist to a hunt-and-peck crawl. Sculpted keys that are fitted to the pads of your fingers provide a simple ergonomic solution. Raised dots on the D and K or, occasionally, the F and J keys help a touch typist work without studying the keyboard. (Inlels and Schencke, 1994)

Devices that can be attached to the sides of a keyboard, rather than the computer itself, are much more flexible. Left-handed employees can choose a system that permits input devices to be attached on the left side of the keyboard. Like the standard keyboard, a mouse should have Every bit of glare protection helps.

Plan the routing of cables so they don’t turn into spaghetti. (Inlels and Schencke, 1994) Just one loose cable can trip someone, yank equipment onto the floor, and injure someone. Workstations that provide a hidden cable channel in the table-top are a great blessing. Cable clamps, while less aesthetically pleasing, fasten bundles of cable directly to the edges of a desk, where they will be safe and out of the way.

**Video Display Terminals**

Video display terminals (VDT), may cause more aches and pains per square inch than any labor-saving device ever invented. Furniture and equipment should be adaptable enough for all users to maintain proper posture. See Appendix H–Posture Diagram.

Employees must squat, crane their necks and turn up the brightness control until the screen is easy to read. The eyes usually go first, blurring, then burning at odd hours. Soon, chronic neck pain begins, followed by lower-back spasms. Flickering displays can be controlled and glare eliminated. Ergonomic alternatives to yesterday’s stress-inducing screen are emerging every day. Employees should have control over stress inducing video terminals. For starters, consider the major ergonomic advantages in choosing the correct size and color for the screen.
Telephones

Most business in the courtroom that must be conducted by telephone uses a speaker phone that has indisputable ergonomic advantages. One can talk on the telephone without using the hands, thus saving the neck. Also, one can move around, which is always good for the body. Speakers and microphones for these instruments should be strategically placed so that all participants (Judge, interpreter, witness, and attorneys) can hear and be heard without leaving their positions. This is particularly important during Immigration Court Master hearings since interpreters are often provided over the phone for short sessions involving a variety of different languages. The efficiency of the proceedings is greatly hampered by parties having to leave their sets and crowd around the speaker phone to hear or be heard by the person on the other end of the line. This scenario also creates a security risk for Judges and others.

Good quality speaker phones and the ability to adequately place speakers and microphones are especially important to provide for fair hearings and adequate due process when the respondent himself or herself is appearing via telephone. This method is almost always used in the Miami Immigration Court for Master hearings for aliens being held in state correction facilities.

Chairs

With a minimum of fiddling, a personal ergonomic chair must properly support the body in whatever position is most comfortable. (Inlets and Schencke, 1994) If changes are needed they should be effortless and require no tools. Chair height, back support and seat-pan tilt should be easily changeable with fingertip controls while seated. The best chairs have three-way adjustable armrests that maintain crucial support for your arms, neck and shoulders, plus variable seat sizes keyed to male and female body types. The personal ergonomic chair can literally be fine-tuned to each body. The chair should also be light enough for the smallest adults to move with ease. The chair should roll effortlessly. Five-spoked bases make it much safer.

Most people resist making changes to a chair that will be used by others. Solve this problem with self-articulating chairs that will keep everyone remarkably comfortable without asking them to do a thing. These make ideal witness and attorney chairs simply because they flex responsively with the sitter’s body.

True lumbar back support is critical, it maintains the natural curvature of the hollow of the back. A waterfall edge prevents numb legs, cold feet, varicose veins and excruciating late-night calf cramps by relieving pressure on the blood vessels of the mid-thigh. The forward edge of the seat must
slope downward gently. If it can felt pressing against your thigh, it is too high.

With padding, less is more. Too much makes it difficult to get in and out of the chair and defeats other ergonomic features.

Armrests allow the chair (instead of the upper back) to support the weight of the arms. (Inlels and Schencke, 1994) A well-designed armrest does not extend out in front of the chair. If the chair lacks adjustable arms, then armrests should attach to the desk.

Too much depth in the seat pan can be a problem for the small individual, especially in executive chairs. With the back well supported there should be just enough room for a closed fist between the edge of the chair and the knee. The chair should be just high enough so the thighs make a ninety-degree angle with the lower legs while the feet make a ninety degree angle with the floor. Consider a footrest if the chair is too high.

Footrests are an acceptable compromise while working at a high desk or on a chair that cannot be lowered. Simply supporting the feet helps to restore the natural curve of the back. The feet should never dangle in the air. Since a footrest will limit mobility, use a long one that permits healthy squirming.

Table 5: Dimension guideline for chairs used by several people.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>seat pan depth</td>
<td>15 to 18 inches</td>
</tr>
<tr>
<td>seat pan depth</td>
<td>18 inches minimum</td>
</tr>
<tr>
<td>arm rest width</td>
<td>2 inches minimum</td>
</tr>
<tr>
<td>distance between arm rests</td>
<td>18.2 inches minimum</td>
</tr>
<tr>
<td>backrest width</td>
<td>14 inches minimum</td>
</tr>
<tr>
<td>distance from front of seat to pan to arm rest</td>
<td>4 inches minimum</td>
</tr>
</tbody>
</table>

There are significant chair issues for the interpreters in the courtrooms. (OSHA Report, 1998) Depending on where they sit while interpreting for the respondent, turning between the Judge and the respondent, and taking notes, they may be spending considerable time in strained postures. A chair that adjusts and pivots is crucial to interpreters. This eliminates the need to twist the body repetitively back and forth between respondent and Judge. For the interpreters, the chair should not
have armrests. The interpreters are using their arms at all times so armrests will only serve to be an obstruction.

A special requirement of the Judge’s chair is that it be allowed to rock. This encourages some movement during long sitting spells. (OSHA Report, 1998).

All chairs in the courtroom should:

- Have an adjustable seat pan which slides forward and backward to optimize contact with the legs but ensure that it is possible for the shortest person to sit back fully against the chair back without the seat edge contacting them behind the knee.

- Include some lumbar support in the back, which should be height-adjustable by means of a switch which is easily reached from the sitting position. A ratchet design is acceptable, but second choice. A shoulder-height back is recommended. Adjustable lumbar depth would be an added bonus.

- The chair back angle should be independently adjustable from the angle of the seat with a control of its own.

- Casters for a hard surface (assuring the use of a floor mat). The chair must be able to roll easily, but only when the user desires. They should not feel it is slipping out from underneath them, nor should it be necessary to grab the desk to assist in making the chair roll.

- Ensure a range of seat height adjustment so that all users are able to have their feet firmly on the floor while their legs are in optimal contact with the seat. The shortest person might be required to use a footrest.

Attorney Tables

A variable number of attorneys may appear before the court, but provision should be made for the typical two to four persons, including the litigants, at each table. Litigation often requires a great deal of space for large legal books, documents, notes, and evidence. The work surface for attorneys should be sufficient to handle this volume while allowing for comfortable seating and movement of the parties at the tables. Attorneys and litigants should be able to confer in private without being overheard. Attorneys should be able to move easily in the litigation area and be able to approach a lectern or any other participant in the case.
The design and image of the attorney tables should be compatible with the style and finishes of the Judge’s bench and other courtroom furniture. There should be a separation between the attorney tables of 4 feet or more, and they should be positioned to reflect equal status. The tables should be movable. A modesty screen should be considered.

The attorney table should be at least 7 feet long (and 8 to 10 feet long if multiple litigants or attorneys are common). The table top should be 3 to 4 feet wide to accommodate the necessary work materials. The area of each attorney table, including attorney chairs and 2-foot movement space behind the chairs, should be approximately 55 to 80 square feet.

Attorneys should be able to see and hear all courtroom participants clearly. The litigation area lighting above the counsel table should be augmented with direct incandescent task lighting. Glare or reflection from the tables should be reduced.

The attorney tables should be accessible with adequate access to the work area and maneuvering room behind the tables for persons with disabilities. If microphones should be adjustable but permanently attached to the table. The attorney tables and their placement should enhance the attorney’s in-courtroom work and movement throughout the litigation well. The tables should face the bench and provide a full view of the Judge, interpreters, and witnesses. (Hardenbergh, 1999)

The tables should not have drawers or concealed recesses where a weapon may be placed. Furniture should be of sufficient weight that it cannot be picked up and used as a weapon. Electrical receptacles and cable conduits for built-in computer display terminals should be provided for accessing law databases. There should be flush floor-mounted outlets for microphones and telephone lines should be provided at each attorney table so that attorneys may be connected to their office computers by means of a modem.

Attorneys tables should be outfitted with electric hole punch and staple machines.

**Tools**

Everyone who does a lot of handwriting, particularly Judges and interpreters, should identify the optimal pen for their use. Thicker pens require less force in the grip which relieves pressure throughout the forearm. Many pens also avoid smooth surfaces which can slip against the fingers, again requiring more pinch force. Lastly fine points are suggested to relieve force, especially for multi-part forms which are such a common feature of the work. (Pens/tools (OSHA Report, 1998)

Water should be available for all in the court, with cups and pitchers on the bench, witness stand, attorney tables and interpreter station.
Factor 2: Lighting and furniture arrangements that allow for glare-free, clear, unencumbered lines of sight.

The important lines of sight in the Immigration courtroom are:

- from Judge to witnesses, attorneys, spectators, interpreter/clerk, entrance and exit doors, work surface and reading materials.
- from interpreter to Judge, witnesses, attorneys, VDT, and reading materials.
- from witnesses to Judge, attorneys, interpreter, and reading materials.
- from attorneys to Judge, interpreter, witnesses, attorneys, work surface and reading materials.
- from spectators to Judge and witnesses.

Currently, the only lighting in the Miami Immigration Court courtrooms is from 4-6 overhead fluorescent fixtures and in a few courtrooms, natural light through two tall, narrow windows behind the bench.

The traditional courtroom is rectangular and deeper than it is wide. The shape of the courtroom must account for the need for all participants to have clear lines of sight, including the distances between the participants and the angle that they have to turn to view others. Distances between speakers should be short, and sight lines should allow primary participants to observe the proceedings within 60-degree cone of vision. Distance can affect acoustics and the ability to observe changes in facial expression or demeanor. Wide sight angles interfere with concentration and cause physical fatigue as participants must look back and forth. The litigation area of the courtroom should allow all participants involved in the proceedings to see and hear each other clearly. (Hardenbergh, 1999).

The bench work area should be well lighted, but there should be no glare or harsh lights. Normal room lighting should be augmented by incandescent task lighting directly above the bench. Preset controls for lighting the entire courtroom should be located at or near the bench.

While natural lighting is desirable for psychological and aesthetic reasons, courtrooms containing exterior windows can suffer from sunlight shadowing and dappling effects, heating and cooling complications, reduced security, exterior noise, and visual distractions. (Hardenbergh, 1999) If exterior, or natural, lighting is desired, skylights or other devices, rather than regular windows, can be used.
Adequate lighting should be provided, with greater intensification in the litigation area. Changes in lighting are needed for displaying evidence, showing films, and using overhead projectors. Court personnel should be able to make the necessary adjustments from their stations with a minimum of movement, using preset controls. A combination of fluorescent and incandescent lighting should be used, with spot illumination over key participants. Dimmer illumination can be used in the spectator area, but the Judge should still be able to view all visitors clearly.

A task light makes detailed work easier. No matter how brightly lit the courtroom, each participant will benefit greatly from their own task light. Task lights are reachable inner-circle tools, and can be control more precisely than ambient lights. Each task light should be movable, on a flexible arm but attached to the table at the base for security reasons, so that it can be positioned properly for left-and right-handed workers.

Adjustments on an ergonomic lamp must be effortless and utterly predictable; the lamp head should remain cool after hours of use. Look for strong, evenly distributed light that can be directed precisely where it’s needed. The newest adjustable lamps provide asymmetrical light distribution and a color-balanced combination of fluorescent and incandescent bulbs. There is no direct eye contact with the light source and no annoying glare. (Inelis and Schencke, 1994).

A polarized filter with transparent, metal coated glass virtually eliminates glare on CRTs. If grounded, it also intercepts the entire static electrical field generated by a CRT. The effect on CRT users is dramatic; characters that were indistinct are suddenly crystal clear. However, when a bright light (especially direct sunlight) is aimed directly at the monitor, the coated-glass filter will reflect it back into the eyes.

Factor 3: Ability to perform proper lifting and carrying.

Examples of lifting and carrying in the courtroom are:

- Judge lifts and carries books, files, exhibits, and telephones
- Interpreter/clerk carries books, files, exhibits, recorders, microphones, stacks of forms and orders
- Attorneys lift and carry files, exhibits, and books
- Witnesses lift exhibits and documents.
There are currently no special provisions made to ease lifting and carrying functions in the court.

Each courtroom should be equipped with a chute or a turn table from the Judge’s bench to the clerk’s desk. This eliminates the need for the clerk to stand up to retrieve case files from the bench. Orientation of the interpreter desk should be such that the reaching distance between Judge and interpreter is at absolute minimum. Configuration should not require full arm extension at or above shoulder height while grasping objects. (OSHA Report, 1998).

Posturally, there is a wide variety of movement, which on the whole is good in a job. Yet there are many opportunities here for statically-held postures, extension of the neck, twisting of the trunk, and -of particular concern- full extension of the arm at shoulder height while passing sometimes-heavy files. Dropping the chin down to look at papers is the most prevalent static exertion, and passing file folders between the Judge’s bench is equally if not more substantial a concern, while it involves less duration then the head flexion, it is a very high exertion movement.

If a particularly heavy file is being passed the interpreter should - as a matter of training and habit - stand and move close to receive or hand it, rather than extend their arm and body. (OSHA Report, 1998)

All ergonomic knowledge points clearly to the need to avoid full extension of the arm at or above shoulder height, particularly while grasping an object of even modest weight. This places unquestionably excessive strain or the relatively smaller muscles of the shoulder. (OSHA Report, 1998). The shoulder joint is a shallow socket which requires much more assistance from surrounding muscles for its stability. To reach with and extend the arm and shoulder with a file in hand 20 or more times in and hour (a common requirement of the interpreter/clerk job) is a plainly high-risk use of the body.

The courtroom clerks should be provided with carts to carry the ROPs to and from the courtroom. (Ford, 1996)

Factor 4: Work schedules that allow for frequent movements or changes in position.

Hearings often last 3-4 hours with out a break. Currently, no one in the Miami Immigration Court routinely stands in place and no stretch breaks are given. Judges and interpreters must often strain forward or sit tensely at attention to hear all that is being said during testimony. Currently,
interpreters often have to crane to see all parties in order to interpret adequately.

The interpreter’s job is a complex, multi-task position which involves a wide variety of body use and attention to many details, particularly on Master Calendar days. There is much paperwork involved - writing, reaching for forms, stapling, and handing paper back and forth between the Judge and attorneys. Use of a computer is substantial, though intermittent and of lesser emphasis than paperwork. Interaction with the respondent when interpreting is required, and the interpreters must keep their attention on the proceedings at all times, often while involved in their paperwork and computer tasks - a high-concentration and high-stress requirement. Performance of these tasks can continue for as long as three unbroken hours, often with no breaks of any kind, although the interpreter may and sometimes does request a restroom break. (Karp, 1998).

It would be very helpful for Judges and interpreters to have the option of being able to stand during portions for long hearings. A small lectern which could be placed on the bench surface would make this possible.

Short rests taken often provide better protection than longer breaks after longer periods of work. Some studies suggest that a short break every 20 minutes will greatly reduce the chance of an RSI.

**Factor 5: Floor, furniture, and wiring arrangements that allow for unencumbered movement to all parts of the courtroom.**

Miami Immigration courtrooms are currently configured so that the interpreters and witnesses must step over exposed microphone cords to move from the pews, attorney tables, or workstation to other parts of the court. During a typical 3 hour master hearing, an interpreter will rise and walk to each attorney table as many as 30 times to deliver notices or orders dodging not only the wires on the floor but also, the chair corners of the workstations, bench, and attorneys tables. Witnesses must pass through an obstacle course of wires, microphones, and sharp edged furniture to reach their chair. See Figure S.

Computer connection cords are also exposed and lay in tangles around the bench and the interpreter’s workstation. See Figure T. Telephone and recorder wires and cords also are exposed on and around the bench. In most courtrooms, the raised dias is 3-4 inches off the floor and ends only a few inches from the interpreter’s workstation. The step up is extremely narrow. Access for the disabled is not provided in every courtroom.

Ideally, courtrooms would be set on raised accessible flooring so that all wiring, cables, outlets, and ports could be concealed and out of traffic patterns. Computer manufacturers are
beginning to realize that cables can be consolidated. They may even, eventually, be eliminated by using infrared or radio controlled devices which have yet to be perfected. Until this method is available, a simple cable plan will save the courtroom from turning into a jumble of knotted wire. Color coding with plastic tape will differentiate same-color cables. Furniture with slots and compartments for hiding cable provide a tidy but pricey ergonomic solution. (Inles and Schenck, 1994). At a minimum, rubber cord covers should be used to secure cables and microphone wires. Taping is never recommended.

All chairs should be provided with a floor mat for easy rolling.

Factor 6: Work surfaces that are adequate in size and adjustable.

At all workstations in the courtrooms there is insufficient desk surface to accommodate the job without requiring awkward reaching and twisting to perform basic tasks. Many objects-active files, papers in use, computer keyboard and monitor, stamps, staple and supplies such as audiocassette envelopes - need to be within comfortable reach and view at all times, and this requires substantial desk surface in an efficient layout which does not require full extension of the arm in any case.

The current work surfaces are not adjustable. They fit the following descriptions:

Bench: measures 25 inches by 72 inches. On this work surface will be the phones, recorder, files, books, pens, notebooks, microphone, writing pads, and sometimes a laptop computer.

Interpreter/clerk: measures 20 inches by 24 inches. On this surface are computer, monitor, Keyboard, holepunch, phone, mouse, microphone, ROPs, language reference books, forms, and a writing space.

Attorneys tables: measure 38 inches by 74 inches. On this surface are microphones, staplers, holepunch, files, books, laptops, exhibits, note pads, and a writing space.

The work surface layouts should follow these principles:

1) neatness and lack of clutter contribute to efficiency,

2) surrounding activities should present a minimum of distractions,

3) the most frequently used items should be placed within easy reach,

4) the best work surface shape for an individual is a horseshoe,
Figure S: Path to Witness Chair
Figure T: Wires Drape the Bench
5) all surfaces should be rounded, and not project into traffic patterns,

6) The surface should be adjustable for height and slant,

7) the depth of the work surface should be about 30 inches.

8) work surface height should be between 25.4 and 30 inches which accommodates 90 percent of seated adults.

9) The work surface height should be level with, or slightly below, the employees elbows.

10) work surface height should provide sufficient clearance for the employee's thighs when sitting.

11) The most frequently handled objects (pens, paper, telephone, etc.) should be placed close to the body, requiring minimum shoulder movement.

With most fixed height tables taller people must drop their chins and strain the neck, shoulders, and back continuously while doing paperwork. Shorter people must elevate the arms excessively, or else raise themselves too high in the chair to reach a comfortable writing height, robbing themselves of support through their feet and legs. An ideal overall solution would include a height-adjustable desk. Such products are available with motorized controls at the higher price end, while many products involve a simple crank or lever to adjust height.

It would be extremely helpful to be able tilt the paperwork surface forward. This is a substantial method for maintaining a more upright posture and limiting the forward extension of the head. A slant board would be very useful, except that it can only be used if the computer is properly accommodated at the same time - either at a computer desk just to the side of the paperwork surface, or by some means of elevating the keyboard and monitor just ahead of the slant board, within reasonable reach. (OSHA Report, 1998)

Now that desk space has become such a precious commodity, designers evaluate the area that a desk accessory actually occupies by measuring its footprint. This is the precise space that the bottom of the accessory actually takes up on your desk. Thus, a computer with an eighteen-inch screen that rests on a twelve-inch base would have a twelve-inch footprint, while a mouse or pointing device, which needs to move freely across the desk, has a footprint several times its actual size.

Machines leave footprints on the desktop as they advance toward the user. Every inch that is dedicated to a desk accessory is no longer available for writing on or resting the arms. Thought should be given to the space taken up by each object placed on the work surface. Whenever possible, equipment should be built in and flush.
Factor 7: Full range of motion and adequate leg room.

Clear all possible leg room underneath desks. Often computers, cables, wastebaskets, and recycling boxes obstruct the legs and interfere with movement in the chair. This can be another cause of awkward posture, and can require one to reach across a further distance because it is not possible to roll closer in the chair. (OSHA Report, 1998)

The total amount of leg room needed under a desk, known as the clearance envelope, should allow several inches of movement in all directions. Although the user may be able to extend the legs straight out, a desk is useless if it puts pressure on the tops of their thighs. The most critical ergonomic measurement when seated is the amount of clearance between the work surface and the highest points of the thigh. To check that this is enough space, cross the legs under the desk. One should be able to do so without hitting any part of the desk.

Factor 8: Adequate storage space for appropriate access to all necessary tools, equipment, and supplies.

With an ergonomic storage plan one can become intimate with the most important details of one’s work. Users should decide what is actually useless and begin to eliminate things.

Active storage, as a direct extension of the mental habitat, should stimulate, help set priorities and keep one from missing important details. Begin by taking an inventory of the things actually needed all the time to get the work done. One of the less recognized contributions made by computers - with profound ergonomic implications - has occurred recently: access to information without manual searching. By creating a super-active file with a computer, much tedious storage work is eliminated. Users should swivel and scoot around in their chairs to see how far they can easily reach. Then arrange things around the sitting position in a horseshoe shape if at all possible.

Workstation storage system for court forms should be closer to the interpreter to prevent continuous full arm extension and/or leaning forward, supporting weight on arm while reaching for court forms. There should be the ability to remove small things form the desk top by hanging them on tool bars or putting them on a lazy Susan, or by throwing them away.

Whenever possible, get things off the floor. Put them on hanging shelves. Increase visible
storage. Use open or glassed-in shelves, trays, magazine racks and bulletin boards. Visible items are much easier to find quickly.

Avoid very high storage. A large, modular unit can combine all of your storage needs in a single place. Books and forms can be displayed on open shelves. Project files at eye level occupy a space of their own. Interior shelves roll out to expedite loading and unloading. Spring-loaded doors can be set to open and close with the pressure of a single finger. (Inlels and Schencke, 1994)

People who are working with ROPs are generally accessing them in postal bins that are placed on the floor. They are thus made to reach down while bending over. Very often these bins are placed at the sides of desks, or in odd places for lack of space that force people into very awkward and strained postures. At the least, these bins should be elevated so it is not necessary to bend. At best, people working heavily with these files should have more space that can accommodate file holders within comfortable reach at a proper elevation. This issue would be a very high priority for any future selection of office furniture systems. (OSHA Report, 1998)

CONCLUSIONS

User satisfaction is very low in many areas of ergonomics for the Miami Immigration Court. This report points out those areas needing the most attention and provides resources and actions for raising employee satisfaction with safer and more comfortable furniture and equipment. With the building of a new court facility in Miami, a great opportunity exists for using this information in determining changes that should be made in courtroom design to increase efficiency and effectiveness, as well as improving employee satisfaction with the ergonomics of their work environment.
References


Aliens and Nationality, 8 C.F.R. § 3.25 (1998).


APPENDIX A

OSHA REPORT ON THE

SAN FRANCISCO IMMIGRATION COURT
From: Gary Karp
To: Department of Immigration,
    Steve Perkins
Date: Wednesday, December 2, 1998
Re: Updated Report

☑ Urgent ☒ Soon ☐ Whenever

Steve,

Here is the report with the correction you relayed to me. Thank you for clarifying the information.

I also hope that the missing material makes it through on this transmission. Please let me know as soon as possible if I need to make another attempt.

I appreciate your continued support and your interest in pursuing the best possible ergonomic solution to the interpreter job and workstation. I continue to be at your service.

Best regards,

Gary Karp
Ergonomics Consultant
Ergonomic Workstation Evaluation Report

Evaluation Date: November 25, 1998
Company: U.S. Dept. of Immigration

Job Description: Courtroom Interpreters

Job Overview

The interpreter’s job is a complex, multi-task position which involves a wide variety of body use and attention to many details, particularly on Master Schedule days. There is much paperwork involved – writing, reaching for forms, stapling, and handing paper back and forth between the judge and attorneys. Use of a computer is substantial, though intermittent and of lesser emphasis than paperwork. There is interaction with the respondent when interpreting is required, and the interpreter must keep their attention on the proceedings at all times, often while involved in their paperwork and computer tasks – a high-concentration and high-stress requirement. Performance of these tasks can continue for as long as three unabated hours, often with no breaks of any kind, although the interpreter may and sometimes does request a restroom break.

Posturally, there is a wide variety of movement, which on the whole is good in a job. Yet there are many opportunities here for statically-held postures, extension of the neck, twisting of the trunk, and – of particular concern – full extension of the arm at shoulder height while passing sometimes-heavy files. Dropping the chin down to look at papers is the most prevalent static exertion, and passing file folders between the judge’s bench is equally if not more substantial a concern. While it involves less duration then the head flexion, it is a very high exertion movement.

All of these features of the job represent clear ergonomic risks which strongly suggest the need for an optimal workstation setting for the job, and sufficient training of the interpreters.

Current Ergonomics of Workstation

In general, in all courtrooms there is insufficient desk surface to accommodate the job without requiring awkward reaching and twisting to perform basic tasks. Many objects – active files, papers in use, computer keyboard and monitor, stamps, stapler and supplies such as audiocassette envelopes – need to be within comfortable reach and view at all times, and this requires substantial desk surface in an efficient layout which does not require full extension of the arm in any case.

The correct paper storage system also saves the body. In the courtroom #704, for instance, the small size of the desk forces use of a vertical paper tray at the rear, left corner of the desk. This makes the various forms difficult to distinguish from each other, and forces the user to keep the arm fully extended as they leaf through looking for the form they need – a waste of precious time as well. It’s placement at the rear also demands leaning forward, supporting the body with the other arm, straining the back and opposite shoulder.

The fact that many people perform this job, rotating between the various courtrooms argues very strongly for a workstation which is highly adjustable. Clearly, there is a wide range of body type amongst the present staff – tall and short, thin and heavy. Chair, table surface, computer keyboard and monitor position should all be adaptable to the individual who sits at the station.
which is most shared by the interpreter staff. Having identified the optimal product, then additional chairs can be acquired for the remaining courtroom stations. The recommended vendor, Back Designs, will provide chairs for an evaluation period of up to 30 days. They are preparing some suggestions for you which will follow this report soon.

The chair should:

- Have an adjustable seat pan which slides forward and backward to optimize contact with the legs but ensure that it is possible for the shortest person to sit back fully against the chair back without the seat edge contacting them behind the knee.

- Include some lumbar support in the back, which should be height-adjustable by means of a switch which is easily reached from the sitting position. A ratchet design is acceptable, but second choice. A shoulder-height back is recommended. Adjustable lumbar depth would be an added bonus.

- The chair back angle should be independently adjustable from the angle of the seat with a control of its own.

- Casters for a hard surface (assuming the use of a floor mat). The chair must be able to roll easily, but only when the user desires. They should not feel it is slipping out from underneath them, nor should it be necessary to grab the desk to assist in making the chair roll.

- The chair should not have armrests. The interpreter is using their arms at all times so armrests will only serve to be an obstruction.

- Ensure a range of seat height adjustment so that all users are able to have their feet firmly on the floor while their legs are in optimal contact with the seat. The shortest person might be required to use a footrest, but this is best avoided. (See section on table height to follow.)

- The ability for the chair to rock is desirable, for use during those brief times when the interpreter is not active with their arms. Ensure that the spring tension is adjustable so that the lightest person is able to recline gently by virtue of only their body weight. There should be no effort applied through the legs to make the chair rock.

In addition, the chair next to the respondent’s table which is used by the interpreter needs to be on a rotating stem, and height adjustable. This chair does not require the same degree of adjustability as the main workstation. While the interpreter is sitting with the respondent, they are turning back and forth between the judge and respondent, and the current fixed chairs require them to twist their body and/or neck repetitively. They also write on the desk, so need to adjust the chair height for an optimal writing relationship to the surface.
Tables

With most fixed height tables taller people must drop their chins and strain the neck, shoulders, and back continuously while doing paperwork. Shorter people must elevate the arms excessively, or else raise themselves too high in the chair to reach a comfortable writing height, robbing themselves of support through their feet and legs. An ideal overall solution would include a height-adjustable desk. Such products are available with motorized controls at the higher price end, while many products involve a simple crank or lever to adjust height.

Orientation of the desk should be so that the reaching distance between the judge and interpreter is at the absolute minimum. I will emphasize that all ergonomic knowledge points clearly to the need to avoid full extension of the arm at or above shoulder height, particularly while grasping an object of even modest weight. This places unquestionably excessive strain on the relatively smaller muscles of the shoulder.

I will reinforce this with a fact of anatomy: the shoulder joint is a shallow socket which requires much more assistance from surrounding muscles for its stability. To reach with and extend the arm and shoulder with a file in hand 20 or more times in an hour (a common requirement of the job) is a plainly high-risk use of the body and accounts for symptoms which have already appeared.

Information on specific tables will follow this report.

Adjustability

All of this adjustability implies that the user must have time prior to beginning work to make these adjustments. Yet interpreters have reported during their evaluations that they are often rushed at the beginning of a court session. It is their responsibility to manage their time so that they have the few minutes it takes to get themselves properly established, while judges should also be sensitive to this issue and allow the interpreter to prepare sufficiently for optimal comfort before they must begin actual work.

This range of adjustability also implies the need for additional training in its use, which could be performed as a group. It is imperative that everyone fully understand all chair and desk controls, and employ proper principles of posture in order to use the furniture and accessories to best effect.

Short Term, No Cost Measures

- Each person should review all operations of the adjustable chair (and certainly the most adjustable-possible chair should be available to these workstations). The red chair that was in place when I visited courtroom #704, for instance, has the ability to move the back forward or backward, in effect changing the seat pan depth. Most people, I'm sure, are unaware of it, or just don't use it. They should.

- The table in courtroom #704 should be turned to face the gallery. It is injurious to people to have them reach across the desk with files, and have to turn their heads so far to the side to see attorneys and respondents. Even with the small document platform placed above the rear of the desk, a shoulder-high extension of the arm is necessary. Turning the table will also allow the printer to no longer be a visual obstruction as it presently is.
• Provide chairs that swivel next to the respondent desk, as recommended in my original evaluation.

• Provide a floor mat for the current chairs that are not rolling easily on the carpet.

• Experiment with use of an adjustable slantboard for paperwork. This will significantly ease strain on the neck, shoulders, and back. It might be difficult to find an appropriate location for the keyboard when using the slantboard, especially at a smaller desk. This is discussed more below.

**Long Term, More Cost Measures**

• After identifying the optimal chair, provide them for all courtrooms.

• Go to the next stage of experimentation with desks. The first approach would be two desks, one for the computer and the other for paper, but oriented so that the user can turn easily between each task by mainly rotating in the chair with little lateral movement. This serves the desire to independently adjust keyboard, monitor, and paperwork surface height.

• It would be extremely helpful to tilt the paperwork surface forward. This is a substantial method for maintaining a more upright posture and limiting the forward extension of the head. A slantboard would be very useful, except that it can only be used if the computer is properly accommodated at the same time – either at a computer desk just to the side of the paperwork surface, or by some means of elevating the keyboard and monitor just ahead of the slantboard, within reasonable reach.
Respondents and interpreters are presently sitting at opposite sides of the court. The interpreter must turn and lean to hear or speak to the respondent. This is a chronic off-neutral posture which contributes to back and shoulder discomfort (since they generally support their body weight with one arm while leaning over). Either move the respondent to the other side, or switch the interpreter position. In several courtrooms there is actually more space on the opposite side of the bench, which also puts it away from the door where space must be reserved for circulation, and therefore is the better position for the interpreter's workstation.

- Clear all possible leg room underneath desks. Often computers, cables, wastebaskets, and recycling boxes obstruct the legs and interfere with movement in the chair. This can be another cause of awkward posture, and can require one to reach across a further distance because it is not possible to roll closer in the chair.

- If a particularly heavy file is being passed, the interpreter should – as a matter of training and habit – stand and move close to receive or hand it, rather than extend their arm and body.

- Reposition the printer so that it is not between the interpreter and anyone they would need to hear. Its noise interferes with hearing, increases stress, and promotes awkward posture as the workers lean to try and hear better. Experiment with placing the printer directly on a soft mat to see if it quiets the operation by limiting vibrations through the printer stand.

- Interpreters should use the restroom just before a significant court session, drink some water, and then have some more at their desk. Hydration of tissues is crucially important during a long-duration, repetitive job such as this.

Intermediate Term, Low Cost Measures

- Purchase the chair described above.
- Provide electric staplers (identifying the quietest model).
- Ensure that interpreters have ergonomic pens. There are many types available, so each interpreter should be able to find one they like. Have a supply to ensure they are not required to go back to thin profile pens which increase grip force. Use a style of point which makes an impression on multi-part forms with the minimum of pressure. This is a substantial ergonomic issue for them.

- Interpreters have a number of suggestions for modifications to the custom software which would reduce keystrokes and make the process more efficient. In one case, the only way to ask for three copies of a document to be printed is to go through a complex sequence three times, rather than simply being able to enter a print quantity. There should also be single-key keyboard equivalents for the functions most commonly used, so that the keyboard can be used in alternative to the mouse. Those software changes will help the court process move more smoothly, and also aid the interpreter by reducing the number of repetitive keystrokes which have ergonomic impact.

- Provide paper management with stacking trays where papers are stored horizontally, located where all forms are easily visible and can be reached while remaining seated comfortably back in the chair.
U.S. Department of Justice

Executive Office for Immigration Review

Immigration Court

550 Kearny Street, Ste 800
San Francisco, CA 94108

December 18, 1998

Occupational Safety & Health Administration
3221 North 16th Street, Suite 100
ATTN: Ms. Pauline M. Caraher
Phoenix, Arizona 85016

Dear Ms. Caraher:

Attached is the completed ergonomist report of the interpreter workstation/environment in Courtroom 704. His report should be added to my earlier response at TAB C. My remarks here should be placed in that packet over the top of my original letter, since this constitutes and addendum to the same.

The ergonomist was not briefed on the alleged problem, but was allowed to give an unbiased & objective report of the overall situation in the courtroom. Therefore, his findings & recommendations include not only reference to the alleged problem, but also address other potential concerns in the work area.

It is not the purpose of this response to restate what has been addressed in the lengthy report, but merely to present a synopsis and our subsequent actions.

Mr. Karp’s findings include observations as follows:

- The interpreter workstation has insufficient desk surface to accommodate the job without awkward reaching/twisting. Supplies need to be within comfortable reaching distance without full extension of the arms.
- Orientation of the interpreter desk is not such that the reaching distance between judge and interpreter is at absolute minimum. Configuration should not require full arm extension at or above shoulder height while grasping objects.
- Workstation storage system for court forms used should be closer to the interpreter to prevent continuous full arm extension and/or leaning forward, supporting weight on arm while reaching for court forms.
- The workstation should be highly adjustable to accommodate the different sizes/shape of the staff of interpreters who rotate duties in that courtroom. Chair, table surface, computer keyboard & monitor position should all be highly adaptable.
- The second interpreter chair next to the respondent which is used as required, should not be a normal side chair, but one which is adjustable in height and swivels to preclude constant turning of head, neck & body between the respondent & judge.

Mr. Karp’s recommendations are lengthy and contain not only recommendations toward purchase of furniture
items, but also in training for better use, arrangement of furnishings, purchase of desk top items etc. Without going into lengthy restatement of the document itself, the following is a compilation of his thoughts & recommendations regarding the claimant’s charge referring to furniture arrangement in Courtroom 704:

- In the short term, the current interpreter table should be turned to face the gallery. Likewise, the table should either be placed on the other side of the judge’s bench to allow for direct vision with the respondent or the respondent and counsel should be seated at the table which is directly in front of where the interpreter table currently is. Best use of space would be to move the table to the opposite side, since the effective amount of space available for workstation modification in the current configuration is limited by the presence of the entrance door. The printer should be moved so that it is not in the line of vision between interpreter and counsel tables. Two tables should be used and experimentation by the users should be done to arrive at a configuration which applies the ergonomic principles outlined in Mr. Karp’s paper. Longer term, provide larger table top area which is adjustable in height, a better court form organizer and a more ergonomically functional chair.

As stated in my preliminary response, the Court has considered the findings & recommendations of Mr. Karp, the professional ergonomist retained. While the Court fully intends to consider changes in other areas Mr. Karp has addressed, of immediate concern is follow-thru in correcting the situation pertaining to the claimant’s concern in Courtroom 704. To that end, as of Monday, December 21, 1998, the following changes will have been made:

- a. The interpreter workstation will have been moved to the opposite side of the judge’s bench and the table turned toward the gallery. A swivel chair will be placed next to the respondent’s table for use as needed by the interpreter.

- b. The printer will have been either removed from the courtroom or moved to a position not in the line of vision between the interpreter and counsel tables.

- c. A second interpreter table will have been ordered for quick delivery to provide additional work space.

- d. A call will have been placed to Mr. Karp requesting his expeditious forwarding of recommendations as to specific future purchases of ergonomically sound workstation furniture items which address the needs he has pointed out in his paper.

With regard to the tripping hazard alleged and commented on in my earlier response, progress is continuing to be made in acquisition, sizing and placement of rubber “cord covers” in all courtrooms. This project should be completed not later than Wednesday, December 23, 1998.

This concludes the Immigration Court response. If there is any further information which I can provide or questions you would like addressed, please feel free to contact me.

Sincerely,

Stephen P. Perkins
Court Administrator

encl
U.S. Department of Justice
Executive Office for Immigration Review
Immigration Court
550 Kearny Street, Ste 800
San Francisco, CA 94108
November 30, 1998

Occupational Safety & Health Administration
3221 North 16th Street, Suite 100
ATTN: Ms. Pauline M. Carahe
Phoenix, Arizona 85016

RE: Complaint #201767951

Dear Ms. Carahe,

I am in receipt of your November 20, 1998 letter of instruction regarding the above referenced complaint. The complaint itself was attached to the letter. Both are attached at TAB "A". The complaint alleges a tripping hazard caused by cords/wires "strewn about" in our courtrooms and secondly a multi-faceted allegation that: a. Arrangement of court desks in the courtroom of Judge Alberto Gonzalez (Courtroom 704) are posing ergonomic hazards to employees; b. Employees have to stretch & lean over computer monitors to hand heavy files back & forth (to/from the judge); and, c. Employees have been injured.

Following receipt of the complaint and review of it, I directed the following actions:

a. Posting of your letter and the complaint in compliance with your instruction.

b. Visual inspection of each courtroom by staff supervisors with the purpose of identifying any conditions tracking with complainant's allegations.

c. Photographing of courtrooms found in need of changes due to tripping hazards. Before & after photos were to be taken if changes could be made on the spot.

d. Retention of a professional ergonomist to analyze the specific area of Courtroom 704 in question.

e. Polling all employees regarding any injuries sustained from hazards alleged. (See TAB "B")

f. Development of findings based on inspection and analysis of the ergonomist. (See TAB "C")

g. Immediate correction or arrangement for correction of any validated hazard.

The following paragraphs will discuss findings/conclusions and actions based upon carrying out the above.
Section I (Tripping Hazard)
Both visual inspection and polling have indicated potential tripping hazard in most courtrooms. Polling has indicated that of 36 employees asked, 13 have tripped over cords in the courtrooms. None reported injuries resulting.

While verifying that the hazard has existed, let me expand upon what the hazard is and what it is not. Complainant refers to tripping hazards from cords and wires being “strewn about”. To me, this presents a picture of many cords and wires being casually & carelessly allowed in a traffic path. Such is not the case. While installation of new computers and printers at the interpreter’s courtroom workstations created the typical “mass” of cords, these are generally contained to the space beneath the interpreter workstation table on the raised portion of the dais. The appearance is unsightly, but the cords have not been in a walking path for anyone to trip over. Where that irregularity has been discovered, it has been corrected.

The real offender is clearly microphone cords. Because Immigration Court proceedings are recorded on audio tape, a base recording unit is located on the Judge’s Bench. One microphone is positioned at each counsel table in front of the Bench. In a few cases, there is a third microphone located at one of the tables. This presents the dilemma of microphone cords running between the Bench and tables. Because the size of the courtrooms vary, so does the distance between the front of the counsel tables & the front of the dais where the Judge’s Bench rests elevated above and in front of the two counsel tables. Generally, the distance between the Bench and counsel tables is anywhere from 2 to 4 feet. This is not a high traffic area as most of the proceedings are conducted with counsel seated/standing behind the their table. If counsel approaches the bench or the interpreter table however, there is a chance of tripping if attention is not paid to the microphone cords in that small space between the Bench and the tables.

Having identified the tripping hazard as microphone cords, may I direct your attention to TAB “D” for a courtroom by courtroom breakout of specific hazards and what has already been done as a result of the complaint or is in the process of being done to correct the situation. Photos are included.

Section II (Courtroom 704 Desk Arrangement)
The second issue is that of the alleged hazard due to the positioning of “court desks” within the courtroom of Judge Gonzalez. It is also stated that employees have been injured in his courtroom due to this condition.

Firstly, let me direct your attention to TAB “E”. This tab contains a complete copy of the professional ergonomic study of this Court conducted in January of this year by Mr. Gary Karp. The first portion of the written report is general in nature regarding the needs of the Court based upon his findings during inspections of courtrooms, workstations, common areas & questioning of individuals. While here, Mr. Karp conducted two classes addressing very practical things which management & individuals can do to help themselves ergonomically. Also offered were individual consultations. Each person was afforded that opportunity at Court expense. Not everyone opted to participate in that segment. During the individual consultations, Mr. Karp took a more in depth look at individual’s workstations both in and out of the courtroom.

It should be noted that an individual consultation was conducted by Mr. Karp in Courtroom 704 with the interpreter assigned primarily to that courtroom. Mr. Karp’s Findings at TAB “E” do not identify an ergonomic hazard in that room that relates to the complaint alleged. Polling data at TAB “B” would also tend to corroborate those findings and also dispels the claimant allegation that multiple employees have been injured in Courtroom 704. My personal observation as verified by photos at TAB “F” is that there is in fact no monitor to reach over in passing a case file to the judge. The monitor rests on the right side of the interpreter work table and allows a direct clearance to passage of a record. Additionally, following the one reported injury in June of this year, it was
decided that purchase and installation of a small, adjustable-arm monitor platform to the interpreter table could be of great benefit in that courtroom as a record handling tray. This "swing-arm" tray was in fact purchased and installed not for placement of a monitor, but as stated, for placement of records which need to be passed to the judge presiding. With it’s installation, little, if any stretching, leaning or extension of any kind is required. Records are placed on the tray which slightly overhangs the interpreter table, but is at the right height for the judge. The arm is movable. The judge simply picks up the records off the tray.

Nonetheless, since there have been some changes made since his last visit, Mr. Karp was asked to return for a specific look at this courtroom’s interpreter ergonomics on November 25, 1998. Mr. Karp spent three hours here on that date and not only studied Courtroom 704, but also attended some live sessions in order to get a clearer picture of file handling, movements involved in case administration, repetitive movement etc. Following the long weekend, he is now developing observations, findings, conclusions and recommendations. He hopes to have a report to me by December 2, 1998. As soon as it arrives, the report will be studied carefully and if a corrective plan is necessitated, an appropriate one will be implemented. I will then forward a copy of the report along with actions taken.

This response is an interim response pending completion of corrections to tripping hazards in courtrooms and receipt of the ergonomics analysis report for Courtroom 704. As stated earlier, updates will be forwarded as actions are taken. If you have any questions, please do not hesitate to call. My number is 415-705-4415, extension 230.

Sincerely,

Stephen P. Perkins
Court Administrator

Enclosures Tabs A-F

OSHA Response.wpd
APPENDIX B

SURVEY INSTRUMENT
MEMORANDUM

TO: Liaison Judge Sonom & Court Administrator Ringstad

FROM: Gail Padgett
Assistant Chief Immigration Judge

SUBJECT: Survey

Enclosed are copies of the survey instrument on courtroom ergonomics that you have reviewed for me. I now need another favor. Can you please distribute these to the judges and staff in the Miami Court?

Judge Sonom, would you also select three Assistant District Counsels and three private practitioners who might be willing to participate?

Mr. Ringstad, would you randomly select 3 English speaking respondents who are no longer in proceedings but have recently been in the courtrooms? If you will send me names and most recent addresses, I will mail them an explanatory letter with the survey and enclosed stamped envelopes for their use to send it back to me.

Thank you so much for your help in this. If you have questions or suggestions, please give me a call.

Attachments
Survey of User Satisfaction with Ergonomic Factors in the Immigration Courtrooms
Miami, Florida

Dear Courtroom User:

Thank you for participating in this survey. The purpose of this questionnaire is to measure the level of user satisfaction with the ergonomics of several features of the courtrooms in the Miami Immigration Court.

The information you provide will be useful in the planning of new or revised courtrooms and will also be used as part of a project I have to complete for the Court Executive Development Program at the National Institute of State Courts.

Although the purpose of this survey is limited to ergonomic factors, please feel free to include comments on any other factors important to you as a user of the courtroom.

Please return your completed form to me by December 30, 1999. If you have any questions or need more information, please contact me at (703) 305-1247.

Please be candid; written comments are particularly helpful. If you need more space please use the back. If a question or entire section does not apply to you, please circle or answer N/A (not applicable). Where numbers are given, circle the number that best describes your response using the following scale:

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Thank you,

[Signature]
Gail B. Padgett
Assistant Chief Immigration Judge
Indicate you level of satisfaction with:

**Bench Area**

1. The height of Judge’s Bench from floor:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4

   Comments: ____________________________

2. Amount of head room:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4

   Comments: ____________________________

3. Storage space provided in Bench:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4

   Comments: ____________________________

4. Size of work surface:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4

   Comments: ____________________________

5. Height of work surface:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4

   Comments: ____________________________

6. Ability to adjust work surface height:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4

   Comments: ____________________________
7. Rail to keep work surface private: 

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Comments: 

8. Distance from attorneys seats to bench: 

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Comments: 

9. Distance from Spectator area to bench: 

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Comments: 

10. Ease of passing files back and forth between bench and clerk: 

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Comments: 

11. Lighting for bench: 

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Comments: 

12. Position and type of alarm signal: 

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Comments: 

13. Footrest: 

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Comments: 

...
14. Height of platform for bench:

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Comments: ____________________________

15. Width of platform for bench:

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Comments: ____________________________

16. Access to platform:

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Comments: ____________________________

17. Furniture arrangement on platform:

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Comments: ____________________________

18. Space behind bench:

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Comments: ____________________________

19. Lines of sight from bench:

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Comments: ____________________________

20. Access to exit from bench:

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Comments: ____________________________
21. Shelf/barrier in front of bench for use when conferring with counsel at the bench:

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Comments: ________________________________

22. Ease of taking notes on bench work surface:

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Comments: ________________________________

**Interpreter’s/Clerk’s Work Stations**

1. Ease of transferring files to bench:

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Comments: ________________________________

2. Work surface area - size, height, width:

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Comments: ________________________________

3. Ability to adjust height of work surface:

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Comments: ________________________________

4. Ease of movement around work station:

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Comments: ________________________________
5. **Storage space:**

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**Comments:**

6. **Drawers:**

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**Comments:**

7. **Knee room:**

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**Comments:**

8. **Lines of sight to - bench, witness, attorneys, and spectators:**

<table>
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**Comments:**

9. **Footrest:**

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**Comments:**

10. **Access to exit:**

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**Comments:**

11. **File holders:**

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**Comments:**
**Witness Area**

1. Placement of witness: | VU | U | S | VS | NA |
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Comments: 

2. Lines of sight to judge, interpreter, and attorneys: | VU | U | S | VS | NA |
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Comments: 

3. Acoustics: | VU | U | S | VS | NA |
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Comments: 

4. Lighting: | VU | U | S | VS | NA |
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Comments: 

**Spectator Area**

1. Placement: | VU | U | S | VS | NA |
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Comments: 

2. Comfort of pews/chairs: | VU | U | S | VS | NA |
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Comments: 


3. Acoustics:  

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Comments: 

4. Lines of sight to judge, witness, interpreter, and attorneys:  

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Comments: 

5. Lighting:  

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Comments: 

**Attorney Tables**

1. Size of work surface:  

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Comments: 

2. Drawer:  

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Comments: 

3. Other storage:  

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Comments: 

4. File holders:  

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Comments: 
5. Access to PC port - modems:

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Comments: ______________________________________

6. Modesty screen:

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Comments: ______________________________________

7. Lighting:

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Comments: ______________________________________

8. Lines of sight to bench, interpreter, witness, and attorney:

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Comments: ______________________________________

Speaker Phone

1. Placement for bench:

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Comments: ______________________________________

2. Placement for attorneys’ tables:

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Comments: ______________________________________
3. Placement for interpreter:

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Comments: 

4. Placement for witness:

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Comments: 

5. Sound quality:

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Comments: 

6. Ability to reconfigure placement:

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Comments: 

**Visual Display Terminals**

1. Placement:

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Comments: 

2. Screening out glare:

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Comments: 


3. Ability to adjust height:  | VU | U | S | VS | NA
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Comments: 

4. Ability to adjust angle:  | VU | U | S | VS | NA
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</table>
Comments: 

5. Ability to avoid eye strain:  | VU | U | S | VS | NA
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Comments: 

**Keyboard/Mouse**

1. Placement:  | VU | U | S | VS | NA
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2. Ability to adjust placement:  | VU | U | S | VS | NA
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3. Ability to adjust height:  | VU | U | S | VS | NA
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-
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**Comments:**

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### Stapler

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**Comments:**

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**Comments:**

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### Hole Punch

#### Placement:

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**Comments:**

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**Comments:**

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Comments: 

### Lamps

#### Placement

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Comments: 

#### Quality of illumination

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Comments: 

#### Ability to adjust

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Comments: 

### Audio Visual Aids

#### Availability

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Comments: 

#### Quality

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Comments: 


### Recorders

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Comments: ____________________________________________________________

#### Recorders

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Comments: ____________________________________________________________

2. **Sound quality:**

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Comments: ____________________________________________________________

3. **Microphone:**

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Comments: ____________________________________________________________

4. **Volume:**

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Comments: ____________________________________________________________

5. **Ability to adjust volume/sound quality:**

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Comments: ____________________________________________________________
**Printers**

1. Placement:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   Comments: ____________________________________________________________________

2. Base of use:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   Comments: ____________________________________________________________________

3. Noise level:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   Comments: ____________________________________________________________________

**Copiers**

1. Placement:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   Comments: ____________________________________________________________________

2. Base of use:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   Comments: ____________________________________________________________________

3. Noise level:
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   Comments: ____________________________________________________________________
### Security Locks

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Comments: _______________________________________


5. Width of seat: 

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Comments: ________________________________

6. Floor mat: 

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Comments: ________________________________

7. Footrest: 

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Comments: ________________________________

8. Support for appropriate posture: 

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Comments: ________________________________

9. Back support: 

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Comments: ________________________________

10. Armrests: 

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Comments: ________________________________

11. Appropriateness for the other furniture in its area: 

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Comments: ________________________________
## Flooring Area

1. **Conditions of floor:**
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   **Comments:**

2. **Covering:**
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   **Comments:**

3. **Placement of wiring for equipment:**
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   **Comments:**

4. **Placement of electric outlets:**
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   **Comments:**

5. **Comfort:**
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   **Comments:**

6. **Ease of access to all floor areas:**
   - VU: 1
   - U: 2
   - S: 3
   - VS: 4
   - NA

   **Comments:**
Movement Patterns

During an average Master Calendar Hearing:

How many times do you have to rise from your chair?

While court is in session, how many trips do you make from your seat to;

- the bench __________________
- attorneys tables ____________
- witness area ________________
- spectator area ______________
- the copier _________________
- areas outside the courtroom __________

- If your answer to any of the above was higher than 2, please briefly describe the path you have to take for those trips you repeat more than twice in an average session (useful information would include the estimated length (or number of steps), furniture you walk around, other obstacles such as wiring, and any other concerns.)

- While court is in session, do you lift any load that weighs more than 2 pounds? If yes, please describe.

...
After a day in court with a morning Master Calendar of 3 hours, and 2 merit cases in the afternoon, do you experience:

- eye strain;
- discomfort in the back, neck, or shoulder area;
- lack of energy;
- headache;
- wrist or arm pain;
- other discomfort (specify below);

Although the following questions do not relate directly to ergonomic factors inside the courtroom, we would like to use this opportunity to get your input.

- What suggestions do you have for improvements in the waiting areas of the court?

What suggestions do you have for the people traffic flow into and around the courtrooms and court building?

Thank you very much for your assistance in this project.

Date: ____________________

Job Title or Reason for being in the courtroom: ____________________

If you would like to receive the results of this survey, please supply the following information:

Name: ____________________
APPENDIX C

SURVEY RESULTS
Summary of Survey Responses

Indicate your level of satisfaction with:

**Bench Area**

1. The height of Judge's Bench from floor:  
   - VU/U: 4
   - S/VS: 18
   
   Comments:

2. Amount of head room:  
   - VU/U: 1
   - S/VS: 21
   
   Comments:

3. Storage space provided in Bench:  
   - VU/U: 7
   - S/VS: 12
   
   Comments:

4. Size of work surface:  
   - VU/U: 7
   - S/VS: 13
   
   Comments:

5. Height of work surface:  
   - VU/U: 7
   - S/VS: 13
   
   Comments:

6. Ability to adjust work surface height:  
   - VU/U: 10
   - S/VS: 7
   
   Comments:
7. Rail to keep work surface private:  
   VU/U  S/VS  
   8     10  

   Comments:  
   _______________________________________________________

8. Distance from attorneys seats to bench:  
   VU/U  S/VS  
   6     15  

   Comments:  
   _______________________________________________________

9. Distance from Spectator area to bench:  
   VU/U  S/VS  
   3     18  

   Comments:  
   _______________________________________________________

10. Ease of passing files back and forth between bench and clerk:  
    VU/U  S/VS  
    11    16  

    Comments:  
    _______________________________________________________

11. Lighting for bench:  
    VU/U  S/VS  
    5     17  

    Comments:  
    _______________________________________________________

12. Position and type of alarm signal:  
    VU/U  S/VS  
    3     15  

    Comments:  
    _______________________________________________________

13. Footrest:  
    VU/U  S/VS  
    11     3  

    Comments:  
    _______________________________________________________
14. Height of platform for bench: VU/U S/VS
   4   17
   Comments: _______________________________________________________

15. Width of platform for bench: VU/U S/VS
   5   16
   Comments: _______________________________________________________

   6   16
   Comments: _______________________________________________________

17. Furniture arrangement on platform: VU/U S/VS
   11  12
   Comments: _______________________________________________________

18. Space behind bench: VU/U S/VS
   12  9
   Comments: _______________________________________________________

19. Lines of sight from bench: VU/U S/VS
   5   15
   Comments: _______________________________________________________

20. Access to exit from bench: VU/U S/VS
   3   19
   Comments: _______________________________________________________
21. Shelve/barrier in front of bench for use when conferring with counsel at the bench:

   Comments: ________________________________________________________

22. Ease of taking notes on bench work surface:

   Comments: ________________________________________________________

**Interpreter's/Clerk's Work Stations**

1. Ease of transferring files to bench:

   Comments: ________________________________________________________

2. Work surface area - size, height, width:

   Comments: ________________________________________________________

3. Ability to adjust height of work surface:

   Comments: ________________________________________________________

4. Ease of movement around work station:

   Comments: ________________________________________________________
5. Storage space: VU/U S/VS
   21  4
   Comments: ____________________________

6. Drawers: VU/U S/VS
   19  6
   Comments: ____________________________

   20  4
   Comments: ____________________________

8. Lines of sight to - bench, witness, attorneys, and spectators: VU/U S/VS
   11  13
   Comments: ____________________________

   11  2
   Comments: ____________________________

10. Access to exit: VU/U S/VS
    6   19
    Comments: ____________________________

11. File holders: VU/U S/VS
    17  3
    Comments: ____________________________
3. Room to use: VU/U 9 S/VS 16
   Comments: 

**Lamps**

1. Placement: VU/U 7 S/VS 11
   Comments: 

2. Quality of illumination: VU/U 8 S/VS 8
   Comments: 

3. Ability to adjust: VU/U 8 S/VS 5
   Comments: 

**Audio Visual Aids**

1. Availability: VU/U 7 S/VS 9
   Comments: 

2. Quality: VU/U 3 S/VS 10
   Comments: 

3. Ease of use:  

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Recorders

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Comments: __________________________________________

3. Microphone:  

<table>
<thead>
<tr>
<th></th>
<th>VU/U</th>
<th>S/VS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Comments: __________________________________________

4. Volume:  

<table>
<thead>
<tr>
<th></th>
<th>VU/U</th>
<th>S/VS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>

Comments: __________________________________________

5. Ability to adjust volume/sound quality:  

<table>
<thead>
<tr>
<th></th>
<th>VU/U</th>
<th>S/VS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Comments: __________________________________________
### Printers

1. **Placement:**
   - VU/U: 9
   - S/VS: 19
   
   *Comments:*

2. **Ease of use:**
   - VU/U: 5
   - S/VS: 22
   
   *Comments:*

3. **Noise level:**
   - VU/U: 5
   - S/VS: 22
   
   *Comments:*

### Copiers

1. **Placement:**
   - VU/U: 9
   - S/VS: 22
   
   *Comments:*

2. **Ease of use:**
   - VU/U: 8
   - S/VS: 22
   
   *Comments:*

3. **Noise level:**
   - VU/U: 4
   - S/VS: 24
   
   *Comments:*
### Security Locks

1. **Placement:**
   - VU/U: 2
   - S/VS: 29

   **Comments:**

2. **Ease of use:**
   - VU/U: 5
   - S/VS: 25

   **Comments:**

### Chairs

1. **Comfort:**
   - VU/U: 13
   - S/VS: 18

   **Comments:**

2. **Movement:**
   - VU/U: 12
   - S/VS: 20

   **Comments:**

3. **Adjustability:**
   - VU/U: 13
   - S/VS: 19

   **Comments:**

4. **Height:**
   - VU/U: 9
   - S/VS: 22

   **Comments:**

5. Width of seat: VU/U 4 S/VS 26
Comments:

6. Floor mat: VU/U 7 S/VS 22
Comments:

7. Footrest: VU/U 11 S/VS 7
Comments:

8. Support for appropriate posture: VU/U 17 S/VS 13
Comments:

Comments:

10. Armrests: VU/U 13 S/VS 13
Comments:

11. Appropriateness for the other furniture in its area: VU/U 13 S/VS 13
Comments:
Flooring Area

1. Conditions of floor:  
   VU/U  S/VS  
   10    21  
   Comments: ____________________________________________

2. Covering:  
   VU/U  S/VS  
   7     22  
   Comments: ____________________________________________

3. Placement of wiring for equipment:  
   VU/U  S/VS  
   17    21  
   Comments: ____________________________________________

4. Placement of electric outlets:  
   VU/U  S/VS  
   10    17  
   Comments: ____________________________________________

5. Comfort:  
   VU/U  S/VS  
   8     21  
   Comments: ____________________________________________

6. Ease of access to all floor areas:  
   VU/U  S/VS  
   9     26  
   Comments: ____________________________________________
**Movement Patterns**

During an average Master Calendar Hearing:

How many times do you have to rise from your chair?

Range: 1 - 60

While court is in session, how many trips do you make from your seat to;

- the bench
  - Range: 2 - 25
- attorneys tables
  - Range: 2 - 60
- witness area
  - Range: 2 - 60
- spectator area
  - Range: 2 - 60
- the copier
  - Range: 1 - 20
- areas outside the courtroom
  - Range: 1 - 20

If your answer to any of the above was higher than 2, please briefly describe the path you have to take for those trips you repeat more than twice in an average session (useful information would include the estimated length (or number of steps), furniture you walk around, other obstacles such as wiring, and any other concerns.)

While court is in session, do you lift any load that weighs more than 2 pounds? If yes, please describe.

**Positive Responses:**

- Immigration Judges: 5
- Interpreters: 3
- Government Attorneys: 3
Legal Technicians/Clerks: 7

Total: 18

— After a day in court with a morning Master Calendar of 3 hours, and 2 merit cases in the afternoon, do you experience:

Positive Responses:

— eye strain; 16
— discomfort in the back, neck, or shoulder area; 26
— lack of energy; 14
— headache; 12
— wrist or arm pain; 8
— other discomfort (specify below); 8

Although the following questions do not relate directly to ergonomic factors inside the courtroom, we would like to use this opportunity to get your input.

— What suggestions do you have for improvements in the waiting areas of the court?

— What suggestions do you have for the people traffic flow into and around the courtrooms and court building?

Thank you very much for your assistance in this project.

Date: ______________________

Job Title or Reason for being in the courtroom: ______________________

If you would like to receive the results of this survey, please supply the following information:

Name: ______________________
APPENDIX D

TRIAL COURT PERFORMANCE STANDARDS
Trial Court Performance Standards

with Commentary

Commission on
Trial Court Performance Standards

A joint project of the
National Center for State Courts and
the Bureau of Justice Assistance,
U.S. Department of Justice
This volume was prepared as part of the Trial Court Performance Standards project, supported by grants (No. 87-DD-CX-0002 and 91-DD-CX-0013(S-I)) to the National Center for State Courts from the Bureau of Justice Assistance (BJA), United States Department of Justice. The Bureau of Justice Assistance is a component of the Office of Justice Programs which also includes the Bureau of Justice Statistics, the National Institute of Justice, the Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime. Points of view expressed in this document are those of the authors. They do not necessarily represent the official position or policies of the United States Department of Justice or the National Center for State Courts.
Performance Standards
with Commentary

1. ACCESS TO JUSTICE

Trial courts should be open and accessible. Because location, physical structure, procedures, and the responsiveness of its personnel affect accessibility, the five standards grouped under ACCESS TO JUSTICE require a trial court to eliminate unnecessary barriers to its services. Such barriers can be geographic, economic, and procedural. They can be caused by deficiencies in language and knowledge of individuals participating in court proceedings. Additionally, psychological barriers can be created by mysterious, remote, unduly complicated, and intimidating court procedures.

The intent of the first two standards is to bring the administration of justice into the open and make it accessible. Standard 1.1 requires the trial court to conduct its business openly. To ensure that all persons with legitimate business before the court have access to its proceedings, Standard 1.2 requires the trial court to make its facilities safe, accessible, and convenient to use. Accessibility is required not only for those who are guided by an attorney but also for all litigants, jurors, victims, witnesses, and relatives of litigants. Access to trial courts is also required for many others - for example, beneficiaries of decedents in probate matters, parents and guardians in juvenile cases, persons seeking information from public records held by the court, employees of agencies that regularly do business with the courts (investigators, mental health professionals, sheriff's deputies, marshals, etc.), and the public.

Because a trial court may be accessible to most and still hinder access to some, Standard 1.3 requires the court to provide opportunities for the effective participation of all who appear before the court, including those with linguistic difficulties and handicaps. To promote access to justice and to enhance citizens' confidence and trust in the court, Standard 1.4 urges that all court personnel accord respect, courtesy, and dignity to all with whom they come into contact.

Standard 1.5 recognizes that there are financial and procedural barriers to access to justice. It requires that the fees imposed and procedures established by the court be fair and reasonable. Recognizing the importance of the relationship between public records and access to justice, the standard also requires that public records be preserved and made available at reasonable cost.
STANDARD 1.1 PUBLIC PROCEEDINGS
The court conducts its proceedings and other public business openly.

Commentary
This standard requires the trial court to conduct openly all proceedings, contested or uncontested, that are public by law or custom. The court must specify proceedings to which the public is denied access and assure that the restriction is in accordance with the law and reasonable public expectations. Further, the court must ensure that its proceedings are accessible and audible to all participants, including litigants, attorneys, court personnel, and other persons in the courtroom.

STANDARD 1.2 SAFETY, ACCESSIBILITY AND CONVENIENCE
Court facilities are safe, accessible and convenient to use.

Commentary
Standard 1.2 considers three distinct aspects of court performance: the security of persons and property within the courthouse and its facilities, access to the courthouse and its facilities, and the reasonable convenience and accommodation of those unfamiliar with the court's facilities and proceedings. It urges a trial court to be concerned about such things as the centrality of its location in the community that it serves, adequate parking, the availability of public transportation, the degree to which the design of the court provides a secure setting, and the internal layout of court buildings (e.g., the signs that guide visitors to important locations). Because the attitudes and behavior of trial court personnel can make (or fail to make) the courthouse safer, more accessible, and more convenient to use, Standard 1.2 pertains to the conduct of trial court personnel as well.

Unusual or unexpected conditions, such as bomb threats, records destruction, employee strikes, sting operations, mass arrests, and natural disasters, challenge the routine operations of the court. Mechanisms (both internal and operated in coordination with other justice system agencies) may be required to handle emergent situations that could clog the courts and disrupt daily routines.

STANDARD 1.3 EFFECTIVE PARTICIPATION
All who appear before the court are given the opportunity to participate effectively without undue hardship or inconvenience.

Commentary
Standard 1.3 focuses on how a trial court accommodates all participants in its proceedings - especially those who have language difficulties, mental impairments, or physical handicaps. Accommodations made by the court for impaired or handicapped individuals include the provision of interpreters for the deaf and special courtroom arrangements or equipment for blind and speech-impaired litigants.
STANDARD 1.4 COURTESY, RESPONSIVENESS, AND RESPECT
 Judges and other trial court personnel are courteous and responsive to the public and accord respect to all with whom they come into contact.

Commentary
 The intent of Standard 1.4 is to make the justice system more accommodating and less intimidating. A responsive court ensures that judicial officers and other court employees are available to meet both the routine and exceptional needs of those it serves. Requirements of the standard are particularly important in the understanding shown and assistance offered by court personnel to members of minority or disadvantaged groups and to those unfamiliar with the trial court and its procedures. In keeping with the public trust embodied in their position, judges and other court employees should reflect by their conduct the law's respect for the dignity and value of all individuals who come before or make inquiries of the court. No court employee should by words or conduct demonstrate bias or prejudice based on race, religion, ethnicity, gender, sexual orientation, color, age, handicap, or political affiliation. These requirements extend to the manner in which the employees of the court treat each other.

STANDARD 1.5 AFFORDABLE COSTS
 The costs of access to the trial court's proceedings and records - whether measured in terms of money, time, or the procedures that must be followed - are reasonable, fair, and affordable.

Commentary
 Litigants and others who use the services of the trial court (e.g., nonlitigants who require records kept by the courts) face three main financial barriers to effective access to the trial court: court fees, third-party expenses (e.g., deposition costs, expert witness fees), and lawyers' fees. Standard 1.5 requires that the trial court minimize its own fees for access and participation in its proceedings and, where possible, scale its procedures and those of others under its influence or control to the reasonable requirements of a matter before the court. Means to achieve this include the simplification of procedures and reduction of paperwork in uncontested matters, the use of volunteer lawyers to do pro bono work, simplified pretrial procedures, fair control of pretrial discovery, and establishment of appropriate alternative methods for resolving disputes (e.g., referral services for cases that might be resolved by mediation, court-annexed arbitration, early neutral evaluation, tentative ruling procedures, or special settlement conferences).

Although a trial court may control more readily its own fees, it can reduce the overall cost of litigation by, for example, conducting telephone conferences and by making it easier for citizens to handle uncontested matters (e.g., name changes, stepparent adoptions, uncontested divorces) without legal representation. As a general rule, simple disputes should be resolved at low cost and by uncomplicated procedures. Procedural accessibility should be enhanced by clear, concise, and understandable language in instructing the parties, witnesses, and jurors about rights, responsibilities, necessary forms, hearings, and court facilities and resources.
Trial courts have in their possession the record of their own public proceedings as well as important documents generated by others (e.g., police records, laboratory analyses of evidence). These records must be available to those who are authorized to receive them. Standard 1.5 requires that the court maintain a reasonable balance between its actual cost in providing documents or information and what it charges users.

2. EXPEDITION AND TIMELINESS

Courts are entrusted with many duties and responsibilities that affect those involved with the judicial system, including litigants, jurors, attorneys, witnesses, criminal justice agencies, social service agencies, and members of the public. The repercussions from untimely court actions in any of these involvements can have serious consequences for the persons directly concerned, the court, allied agencies, and the community at large.

A trial court should meet its responsibilities to everyone affected by its actions and activities in a timely and expeditious manner (i.e., one that does not cause delay). Unnecessary delay causes injustice and hardship. It is a primary cause of diminished public trust and confidence in the court.

Defining delay requires distinguishing between the amount of time that is and is not acceptable for case processing. National and statewide authorities have articulated time standards for case disposition. To meet these standards, case processing time must be measured beginning with arrest or issuance of a summons in a criminal case and from the date of filing in a civil case.

The three performance standards under EXPEDITION AND TIMELINESS draw attention not only to the prompt resolution of cases, a requirement expressed by Standard 2.1, but also to the expectation that all trial court functions will be expeditiously performed, a requirement of Standard 2.2. Standard 2.3 emphasizes the importance of expedition and timeliness in anticipating, adapting to, and implementing changes in law and procedure.

STANDARD 2.1 CASE PROCESSING
The trial court establishes and complies with recognized guidelines for timely case processing while, at the same time, keeping current with its incoming caseload.

Commentary
The American Bar Association, the Conference of Chief Justices, and the Conference of State Court Administrators have urged the adoption of time standards for expeditious caseflow management. Timely disposition is defined in terms of the elapsed time a case requires for consideration by a court, including the time reasonably required for pleadings, discovery, and other court events. Any time beyond that necessary to prepare and to conclude a case constitutes delay.
The requirement of timely case processing applies to trial as well as to pretrial and posttrial events. The court must control the time from civil case filing or criminal arrest to trial or other final disposition. Early and continuous control establishes judicial responsibility for timely disposition, identifies cases that can be settled, eliminates delay, and assures that matters will be heard when scheduled. Court control of the trial itself will reduce delay and inconvenience to the parties, witnesses, and jurors. During and following a trial, the court must make decisions in a timely manner. Finally, ancillary and postjudgment or postdecree matters need to be handled expeditiously to minimize uncertainty and inconvenience.

In addition to requiring courts to comply with nationally-recognized guidelines for timely case processing, Standard 2.1 urges courts to manage their caseloads to avoid backlog. This may be accomplished, for example, by terminating inactive cases and resolving as many cases as are filed.

STANDARD 2.2 COMPLIANCE WITH SCHEDULES
The trial court disburses funds promptly, provides reports and information according to required schedules, and responds to requests for information and other services on an established schedule that assures their effective use.

Commentary

As public institutions, trial courts have a responsibility to provide information and services to those they serve. Standard 2.2 requires that this be done in a timely and expeditious manner. The source of the information requests may be internal or external to the court. Services provided for those within the court's jurisdiction may include legal representation or mental health evaluation for criminal defendants, protective or social services for abused children, and translation services for some litigants, witnesses, or jurors.

In addition to adhering to case-processing time guidelines, an effective trial court establishes and abides by schedules and guidelines for activities not directly related to case management. Moreover, it meets reasonable time schedules set by those outside the court for filing reports or providing other information stemming from court activities. When disbursements of funds are necessary, payment is made promptly. Standard 2.2 requires that regardless of who determines the schedules, once established, those schedules are met.

Timely disbursement of funds held by the court is particularly important. Fines, fees, restitution, child support payments, and bonds are categories of monies that pass through the court to their lawful recipients. Depending on the category involved and the laws of a given jurisdiction, the recipients may include funding agencies (e.g., state, county, city), public agencies (e.g., police academy, corrections boards), and individuals (e.g., litigants, victims). In addition, courts oversee disbursement of funds from their budgets. These funds go to other branches and units of government, vendors, jurors, litigants, or witnesses. For some recipients, delayed receipt of funds may be an accounting inconvenience; for others, it may create personal hardships. Regardless of who the recipient is, when a trial court is responsible for the disbursement of funds, expeditious and timely performance is crucial.
STANDARD 2.3 PROMPT IMPLEMENTATION OF LAW AND PROCEDURE
The trial court promptly implements changes in law and procedure.

Commentary
Tradition and formality can obscure the reality that both the law and procedures affecting court operations are subject to change. Changes in statutes, case law, and court rules affect what is done in the courts, how it is done, and those who conduct business in the courts. Trial courts must make certain that mandated changes are implemented promptly and correctly. Whether a change can be anticipated and planned or must be reacted to quickly, Standard 2.3 requires that the court not only makes its own personnel aware of the changes but also notifies court users of such changes to the extent practicable. It is imperative that changes mandated by statute, case law, or court rules be integrated into court operations as they become effective. Failure to do so leaves the court open to criticism for failure to comply with the law or required procedures.

3. EQUALITY, FAIRNESS AND INTEGRITY

Trial courts should provide due process and equal protection of the law to all who have business before them, as guaranteed by the federal and state constitutions. Equality and fairness demand equal justice under law. These fundamental constitutional principles have particular significance for those groups who may have suffered bias or prejudice based on race, religion, ethnicity, gender, sexual orientation, color, age, handicap, or political affiliation.

Integrity should characterize the nature and substance of the trial court's procedures, decisions, and the consequences of those decisions. The decisions and actions of a trial court should adhere to duties and obligations imposed on the court by relevant law as well as administrative rules, policies, and ethical and professional standards. What the trial court does and how it does it should be governed by its legal and administrative obligations; and what occurs as a result of the court's decisions should be consistent with those decisions.

Integrity refers not only to the lawfulness of court actions (e.g., compliance with constitutional rights to bail, legal representation, a jury trial, a record of legal proceeding) but also to the results or consequences of its orders. A trial court's performance is diminished when, for example, its mechanisms and procedures for enforcing its child support orders are ineffective or altogether nonexistent. It also is diminished when summonses and orders for payment of fines or restitution are routinely ignored. The court's authority and its orders should guide the actions of those under its jurisdiction both before and after a case is resolved.

The demand for equality, fairness, and integrity is articulated by six performance standards. The first standard encompasses the all-important legal concept of due process
and requires that trial courts adhere to relevant law, rules, and policy when acting in their judicial and administrative capacities. The equality and fairness afforded to litigants and disputes are determined not only by judges and court personnel but also by juries. Recognizing that perfect equality cannot always be expected of juries, Standard 3.2 requires that trial courts do their utmost to encourage equality, fairness, and integrity by ensuring that those called for jury duty are representative of the population from which the jury was drawn. Standard 3.3 focuses upon what many consider the essence of justice. It requires that the decisions and actions of trial courts be based on legally relevant factors consistently applied in all cases. Furthermore, those decisions and actions should be based on individual attention to each case. In accord with the call for integrity in a court's performance, Standard 3.4 urges trial courts to render decisions that clearly state the issues addressed and specify how compliance with their decisions can be achieved. Clarity is a prerequisite for both compliance and enforcement.

Standard 3.5 encourages trial courts to assume responsibility for the enforcement of their orders. Finally, Standard 3.6 requires the prompt and accurate preservation of trial court records. Records of court decisions and the process followed to arrive at the decisions constitute, in an important sense, the law. The accuracy of the records and reliable access to them are fundamental to the achievement of the purposes of trial courts.

STANDARD 3.1 FAIR AND RELIABLE PROCEDURES
Trial court procedures faithfully adhere to relevant laws, procedural rules, and established policies.

Commentary
The first standard in the area of EQUALITY, FAIRNESS, AND INTEGRITY draws from the concept of due process, including notice and a fair opportunity to be informed and heard at all stages of the judicial process. Fairness should characterize the court's compulsory process and discovery. Trial courts should respect the right to legal counsel and the rights of confrontation, cross-examination, impartial hearings, and jury trials. Standard 3.1 requires fair judicial processes through adherence to constitutional and statutory law, case precedent, court rules, and other authoritative guidelines, including policies and administrative regulations. Adherence to established law and procedures contributes to the court's ability to achieve predictability, reliability, and integrity and to satisfy the parties. Because of its centrality to the court's purpose, Standard 3.1 overlaps with standards in the areas of ACCESS TO JUSTICE and PUBLIC TRUST AND CONFIDENCE, which emphasize that justice also should be "perceived to have been done" by those who directly experience the quality of the trial court's adjudicatory process and procedures.
STANDARD 3.2 JURIES
Jury lists are representative of the jurisdiction from which they are drawn.

Commentary
Courts cannot guarantee that juries reach decisions that are always fair and equitable. Nor can they guarantee that the group of individuals chosen through voir dire are representative of the community from which they were chosen. Courts can, however, provide a significant measure of fairness and equality by assuring that the methods employed to compile source lists and to draw the venire provide jurors who are representative of the total adult population of the jurisdiction. Thus, all those individuals qualified to serve on a jury should have equal opportunities to participate, and all parties and the public should be confident that jurors are drawn from a representative pool.

Standard 3.2 parallels the American Bar Association's Standards Relating to Juror Use and Management (1983). These standards emphasize that jury duty should not be denied or limited on the basis of any factor discriminating against a "cognizable group" in the jurisdiction served by the court. Such a group can be "an economical, occupational, social, religious, racial, political, or geographical group in the community such as physicians, blacks, Protestants, or welfare recipients." Procedures designed to achieve representativeness include combining regularly maintained lists of registered voters and licensed drivers and using random selection procedures at each step of the jury selection process.

STANDARD 3.3 COURT DECISIONS AND ACTIONS
Trial courts give individual attention to cases, deciding them without undue disparity among like cases and upon legally relevant factors.

Commentary
Standard 3.3 requires that litigants receive individual attention without variation due to judge assignment or legally irrelevant characteristics of the parties such as race, religion, ethnicity, gender, sexual orientation, color, age, handicap, or political affiliation. Persons similarly situated (e.g., criminal defendants faced with or found guilty of similar offenses and having similar criminal histories) should receive similar treatment. It further requires that the court's decisions and actions be in proper proportion to the nature and magnitude of the case and the characteristics of the parties. Variations should not be predictable from legally irrelevant factors nor should the outcome of a case depend on which judge within a court presides over a hearing or a trial. The standard refers to all decisions, including sentences in criminal cases, the conditions of bail, the amount of child support ordered, the appointment of legal counsel, and court-supervised alternatives to formal litigation.
STANDARD 3.4 CLARITY
Decisions of the trial court unambiguously address the issues presented to it and make clear how compliance can be achieved.

Commentary
An order or decision that sets forth consequences or articulates rights, but fails to tie the actual consequences resulting from the decision to the antecedent issues, breaks the connection required for reliable review and enforcement. A decision that is not clearly communicated poses problems both for the parties and for judges who may be called upon to interpret or apply it.

Standard 3.4 requires that it be clear how compliance with court orders and judgments is to be achieved. Dispositions for each charge or count in a criminal complaint, for example, should be easy to discern, and terms of punishment and sentence should be associated clearly with each count upon which a conviction is returned. Noncompliance with court pronouncements and subsequent difficulties of enforcement sometimes occur because orders are not stated in terms that are readily understood and capable of being monitored. An order that requires a minimum payment per month on a restitution obligation, for example, is more clear and enforceable than one that establishes an obligation but sets no time frame for completion. Decisions in civil cases, especially those unraveling tangled webs of multiple claims and parties, also should connect clearly each issue and its consequences.

STANDARD 3.5 RESPONSIBILITY FOR ENFORCEMENT
The trial court takes appropriate responsibility for the enforcement of its orders.

Commentary
Courts ought not direct that certain things be done or certain actions taken and then allow those bound by their orders to honor them more in the breach than in the observance. Standard 3.5 encourages a trial court to ensure that its orders are enforced. The integrity of the dispute resolution process is reflected in the degree to which parties adhere to awards and settlements arising out of them. Noncompliance may indicate miscommunication, misunderstanding, misrepresentation, or lack of respect toward or confidence in the courts.

Obviously, a trial court cannot assume responsibility for the enforcement of all of its decisions and orders. Court responsibility for enforcement and compliance varies from jurisdiction to jurisdiction, program to program, case to case, and event to event. It is common and proper in some civil matters for a trial court to remain passive with respect to judgment satisfaction until called on to enforce the judgment. Nevertheless, no court should be unaware of or unresponsive to realities that cause its orders to be ignored. For example, patterns of systematic failures to pay child support and to fulfill interim criminal sentences are contrary to the purpose of the courts, undermine the rule of law, and diminish the public's trust and confidence in the courts. Monitoring and enforcement of proper procedures and interim orders while cases are pending are within the scope of this standard.
Standard 3.5 applies also to those circumstances when a court relies upon administrative and quasi-judicial processes to screen and to divert cases by using differentiated case management strategies and alternative dispute resolution. Noncompliance remains an issue when the trial court sponsors such programs or is involved in ratifying the decisions that arise out of them.

STANDARD 3.6 PRODUCTION AND PRESERVATION OF RECORDS
Records of all relevant court decisions and actions are accurate and properly preserved.

Commentary

FAIRNESS, EQUALITY, AND INTEGRITY depend in substantial measure upon the accuracy, availability, and accessibility of records. Standard 3.6 requires that trial courts preserve an accurate record of their proceedings, decisions, orders, and judgments. Relevant court records include indexes, dockets, and various registers of court actions maintained for the purposes of inquiry into the existence, nature, and history of actions at law. Also included are the documents associated with particular cases that make up official case files as well as the verbatim records of proceedings.

Preservation of the case record entails the full range of responsible records management practices. Because records may affect the rights and duties of individuals for generations, their protection and preservation over time are vital. Record systems must ensure that the location of case records is always known, whether the case is active and in frequent circulation, inactive, or in archive status. Inaccuracy, obscurity, loss of court records, or untimely availability of such records seriously compromises the court's integrity and subverts the judicial process.

4. INDEPENDENCE AND ACCOUNTABILITY

The judiciary must assert and maintain its distinctiveness as a separate branch of government. Within the organizational structure of the judicial branch of government, trial courts must establish their legal and organizational boundaries, monitor and control their operations, and account publicly for their performance. Independence and accountability permit government by law, access to justice, timely resolution of disputes with equality, fairness, and integrity. They engender public trust and confidence. Courts must both control their proper functions and demonstrate respect for their coequal partners in government.

Because judicial independence protects individuals from the arbitrary use of government power and ensures the rule of law, it defines court management and legitimates its claim for respect. A trial court possessing institutional independence and accountability protects judges from unwarranted pressures. It operates in accordance with its assigned responsibilities and jurisdiction within the state judicial system. Independence is not likely to be achieved if the trial court is unwilling or unable to manage itself. Accordingly, the trial court must establish and support effective leadership, operate
effectively within the state court system, develop plans of action, obtain resources necessary to implement those plans, measure its performance accurately, and account publicly for its performance.

The five standards in the performance area of INDEPENDENCE AND ACCOUNTABILITY combine principles of separation of powers and judicial independence with the need for comity and public accountability. Standard 4.1 requires the trial court to exercise authority, to manage its overall caseload and other affairs, and to realize the principles of separation of powers, the interdependence of the three branches of government, and comity in its governmental relations. Standard 4.2 requires a trial court to seek adequate resources and to account for their use. Standard 4.3 extends the concept of equal treatment of litigants to the court's own employees by requiring every trial court to operate free of bias on the basis of race, religion, ethnicity, gender, sexual orientation, color, age, handicap, or political affiliation in its personnel practices and decisions. Standard 4.4 requires the trial court to inform the public of its programs and activities. Finally, Standard 4.5 acknowledges that the court's organizational character and activities must allow for adjustments to emergent events, situations, or social trends.

STANDARD 4.1 INDEPENDENCE AND COMITY
A trial court maintains its institutional integrity and observes the principle of comity in its governmental relations.

Commentary

In order for a trial court to persist both in its role as preserver of legal norms and as part of a separate branch of government, it must develop and maintain its distinctive and independent status. It must be conscious of its legal and administrative boundaries and vigilant in protecting them.

Effective trial courts resist being absorbed or managed by the other branches of government. A trial court compromises its independence, for example, when it merely ratifies plea bargains, serves solely as a revenue-producing arm of government, or perfunctorily places its imprimatur on decisions made by others. Effective court management enhances independent decision making by trial judges.

The court's independent status, however, must be achieved without avoidable damage to the reciprocal relationships that must be maintained with others. Trial courts are necessarily dependent upon the cooperation of other components of the justice system over which they have little or no direct authority. For example, elected clerks of court are components of the justice system, yet as to some matters, many function independent of trial courts. Sheriffs and process servers perform both a court-related function and a law-enforcement function. If a trial court is to attain institutional independence, it must clarify, promote, and institutionalize effective working relationships with all the other components of the justice system. The boundaries and the effective relationships between the trial court and other segments of the justice system must, therefore, be apparent both in form and practice.
STANDARD 4.2 ACCOUNTABILITY FOR PUBLIC RESOURCES
The trial court responsibly seeks, uses, and accounts for its public resources.

Commentary
Effective court management requires sufficient resources to do justice and to keep costs affordable. Standard 4.2 requires that a trial court responsibly seek the resources needed to meet its judicial responsibilities, use those resources prudently (even if they are inadequate), and account for their use.

Trial courts must use available resources wisely to address multiple and conflicting demands. Resource allocation to cases, categories of cases, and case processing is at the heart of trial court management. Assignment of judges and allocation of other resources must be responsive to established case processing goals and priorities, implemented effectively, and evaluated continuously.

STANDARD 4.3 PERSONNEL PRACTICES AND DECISIONS
The trial court uses fair employment practices.

Commentary
The trial court stands as an important and visible symbol of government. Equal treatment of all persons before the law is essential to the concept of justice. Extended to its own employees, this concept requires every trial court to operate free of bias - on the basis of race, religion, ethnicity, gender, sexual orientation, color, age, handicap, or political affiliation - in its personnel practices and decisions.

Fairness in the recruitment, compensation, supervision, and development of court personnel helps ensure judicial independence, accountability, and organizational competence. The court's personnel practices and decisions should establish the highest standards of personal integrity and competence among its employees.

STANDARD 4.4 PUBLIC EDUCATION
The trial court informs the community of its programs.

Commentary
Most members of the public do not have direct contact with the courts. Information about the courts is filtered through, among others, the media, lawyers, litigants, jurors, political officeholders, and employees of other components of the justice system. Public opinion polls indicate that the public knows very little about the courts, and what is known is often at odds with reality. Standard 4.4 requires trial courts to inform and educate the public. Effective informational brochures and annual reports help the public understand and appreciate the administration of justice. Participation by court personnel on public affairs commissions is also effective. Moreover, courts can effectively educate and inform the public by including able public representatives on advisory committees, study groups, and boards.
STANDARD 4.5 RESPONSE TO CHANGE
The trial court anticipates new conditions or emergent events and adjusts its operations as necessary.

Commentary
Effective trial courts are responsive to emergent public issues such as drug abuse, AIDS, child and spousal abuse, drunken driving, child support enforcement, crime and public safety, consumer rights, gender bias, and the need to do more with fewer resources. Standard 4.5 requires trial courts to recognize and to respond appropriately to such public issues. A trial court that moves deliberately in response to emergent issues is a stabilizing force in society and acts consistent with its role of maintaining the rule of law.

Courts can support, tolerate, or resist societal pressures for change. In matters for which the trial court may have no direct responsibility, but nonetheless may help identify problems and shape solutions, responsiveness means that the trial court takes appropriate actions to inform responsible individuals, groups, or entities about the effects of these matters on the judiciary and about possible solutions.

5. PUBLIC TRUST AND CONFIDENCE

Compliance with law is dependent to some degree upon public respect for the court. Ideally, public trust and confidence in trial courts stem from the many contacts citizens have with the courts. The maxim "Justice should not only be done but should be seen to be done!" is as true today as in the past. Unfortunately, there is no guarantee that public perceptions reflect actual court performance.

Several constituencies are served by trial courts, and all should have trust and confidence in the courts. These constituencies vary by the type and extent of their contact with the courts. At the most general level is the local community, or the "general public" - the vast majority of citizens and taxpayers who seldom experience the courts directly. A second constituency served by trial courts is a community's opinion leaders (e.g., the local newspaper editor, the reporter assigned to the court, the police chief, local and state executives and legislators, representatives of government organizations with power or influence over the courts, researchers, and members of court watch committees). A third constituency includes those citizens who have appeared before the court as attorneys, litigants, jurors, or witnesses, or who have attended proceedings as a representative, a family friend, or a victim of someone before the court. This group has direct knowledge of the routine activities of a court. The last constituency consists of judicial officers and other employees of the court system and lawyers - within and outside of the jurisdiction of the trial court - who may have an "inside" perspective on how well the court is performing. The trust and confidence of all these constituencies are essential to trial courts.

The central question posed by the three standards in this final performance area is whether a trial court's performance - in accordance with standards in the
areas of ACCESS TO JUSTICE, EXPEDITION AND TIMELINESS, EQUALITY, FAIRNESS, AND INTEGRITY, and INDEPENDENCE AND ACCOUNTABILITY - actually instills public trust and confidence. Standard 5.1 requires that the trial court be perceived by the public as accessible. Standard 5.2 requires that the public believes that the trial court conducts its business in a timely, fair, and equitable manner and that its procedures and decisions have integrity. Finally, Standard 5.3 requires that the trial court be seen as independent and distinct from other branches of government at the state and local level and that the court be seen as accountable for its public resources.

Ideally, a court that meets or exceeds these performance standards is recognized as doing so by the public. Of course, in service of its fundamental goal to resolve disputes justly, expeditiously, and economically, the court will not always be on the side of public opinion. Nevertheless, where performance is good and public communications are effective, trust and confidence is likely to be present. Where public perception is distorted and understanding unclear, good performance may need to be buttressed with educational programs and more effective public information. A court may even be viewed as better than it actually is. Because of this, it is important for courts to rely on objective data as well as public perceptions in accessing court performance.

STANDARD 5.1 ACCESSIBILITY
The trial court and the justice it delivers are perceived by the public as accessible.

Commentary
The five standards grouped in the area of ACCESS TO JUSTICE require the removal of barriers that interfere with access to a trial court's services. Standard 5.1 focuses on the perceptions of the court's accessibility held by different constituencies. A trial court not only should be accessible to those who need its services, but it also should be so perceived by those who may need its services in the future.

STANDARD 5.2 EXPEDITIOUS, FAIR AND RELIABLE COURT FUNCTIONS
The public has trust and confidence that the basic trial court functions are conducted expeditiously and fairly and that its decisions have integrity.

Commentary
As part of effective court performance, Standard 5.2 requires a trial court to instill in the public trust and confidence that its basic functions are conducted in accordance with the standards in the areas of EXPEDITION AND TIMELINESS and EQUALITY, FAIRNESS, AND INTEGRITY.
STANDARD 5.3 JUDICIAL INDEPENDENCE AND INTEGRITY
The trial court is perceived to be independent, not unduly influenced by other components of government, and accountable.

Commentary
The policies and procedures and the nature and consequences of interactions of the trial court with other branches of government affect the perception of the court as an independent and distinct branch of government. A trial court that establishes and respects its own role as part of an independent branch of government and diligently works to define its relationships with the other branches presents a favorable public image. Obviously, the opinions of community leaders and representatives of other branches of government are important when considering perceptions of the court's institutional independence and integrity. Other constituencies' perceptions (e.g., those of court employees) of the court's relationships with other government agencies, its accountability, and its role within the community should not be overlooked as important contributions to the view of the court as both an independent and accountable institution.
APPENDIX E

OSHA DRAFT REGULATIONS
OSHA Draft Ergonomic Protection Standard: Summary Of Key Provisions

ErgoWeb® Note: In 1991, OSHA proposed the creation and implementation of an industry wide ergonomics standard. The agency composed a series of developmental documents, including the Proposed Draft Ergonomics Protection Standard, in accordance with the rulemaking process. Recently, OSHA has stepped back from those documents.

A summary of key provisions of the OSHA Draft Ergonomic Protection Standard as reported in the Occupational Safety and Health Reporter (Vol.24, No.7, p. 345-348) is outlined below.

Approach

- Broad performance-oriented rule with specific guidance in certain areas. Consistent with international quality assurance activities (ISO 9000). Incorporates concept of continuous improvement in working conditions.

- Compliance assistance materials are provided with the document. User-friendly appendices address how to get started, the job improvement process, medical management, and training.

Purpose

- Prevent occurrence of work-related musculoskeletal disorders.

- Inform employees about musculoskeletal disorders and the risk factors that can cause or aggravate them.

- Promote continuous improvement in workplace ergonomic protection.

- Encourage new technology and innovation in ergonomic protection.

- Identify design principles that prevent exposure to risk factors.

- Ensure ongoing and consistent management leadership and employee involvement.

Scope And Application

- Musculoskeletal disorders occur in every type of industry-application for employers depends on extent of their problems.

- Musculoskeletal disorders occur in backs, upper and lower extremities.

Reporting Procedure

- Employer must implement a procedure for receiving and responding to employee reports of risk factors or musculoskeletal disorders.

Information For Employees
• Employees are to be provided information about musculoskeletal disorders.

• A sample information sheet that will satisfy the requirements of the rule will be included. OSHA plans to translate this sheet into a number of languages for the final rule.

Identification Of Problem Jobs

• Employers must determine whether any musculoskeletal disorders have occurred in their workplace during the past two years.
  • This determination is to be made by examining existing records: workers' comp data, OSHA 200 logs.
  • Where the employer does not have workers' comp data or OSHA logs, symptoms survey will have to be completed. A survey will be included in the compliance assistance materials.
  • If musculoskeletal disorders have occurred in the past two years, the employer must proceed to further evaluation of the jobs.
  • The records review is to be repeated annually.

• In addition to examining records for the occurrence of musculoskeletal disorders, the employer must examine jobs that have risk factors to determine the extent to which they are present.
  • Jobs that require the following during the workshift are to be evaluated:
    ■ Performance of the same motions or motion pattern every few seconds for more than two hours at a time.
    ■ Fixed or awkward work postures for more than a total of two hours (for example, overhead work, twisted or bent back, bent wrist, kneeling, stooping, or squatting).
    ■ Use of vibrating or impact tools or equipment for more than a total of two hours.
    ■ Manual handling of objects weighing more than 25 pounds (11.34 kilograms) more than once in each workshift.
    ■ No worker control over work pace (e.g., work is mechanically or electronically paced) for more than four hours at a time (exclusive of regular breaks).

• A risk factor checklist is to be completed for the jobs with these requirements. There are two checklists provided - one for the office work environment, and one for all other types of environments. In addition, guidance for evaluating lifting tasks is provided. Employers may also use their own checklists where they are at least as effective in identifying and assessing risk factors as those provided by OSHA.
  • The checklist results determine whether the employer has to proceed to further evaluation.

Fixing Problem Jobs

• Where employers find "problem" jobs (i.e., those with moderate to high risks), the standard requires them to identify the cause of the problems and fix the jobs.
  • For some jobs, the problem is obvious and the solution is readily accomplished ("quick fix"). If it can be done in 60 days, the employer need not proceed farther.
  • For other jobs, the problem is multifactorial and the causes are less obvious. Employers must do a job analysis to ascertain what can be done to fix the job. A recommended procedure is provided in the compliance assistance materials.

• Employers are to design and implement appropriate control measures. Design guidance is provided in an appendix.
  • A continuous improvement process is anticipated. Employers must consider ergonomics in the design of new processes or purchase of equipment and materials.

Employee Involvement And Training

• Employees are to be involved in all stages of the employer's ergonomic process including
identification, assessment, control, and evaluation of controls.
  - Training will be required for employees in problem jobs.
  - Training includes ergonomic awareness and how to use control measures properly.
  - Employers will be required to evaluate the effectiveness of their training programs.

- A training appendix is being included to provide employers guidance for designing and implementing an effective training program.

Medical Management

- Employees with musculoskeletal disorders must be promptly evaluated by a health care provider, and appropriate treatment and followup provided. The employee must be monitored until able to perform work without restrictions.

- Employees working at video display units (VDU) more than 4 hours a day who report neck/shoulder musculoskeletal disorders may be reimbursed for eye examinations and corrective lenses that are different than what the employee needs for activities outside the workplace.

- A medical management appendix is being included to provide guidance to health care providers.

Evaluating The Effectiveness Of The Process

- Employers will be required to evaluate the effectiveness of their process to fix problem jobs.

- Gradual improvements should be seen in the workplace as the process is implemented. Objective measures include proportion of problem jobs in the workplace, incidence rates, and severity rates.

- Provides a means for employers to know when they have done enough to comply.

Effective Dates

- Plan to include a phase-in period for compliance.
APPENDIX F

EOIR STANDARD

FURNITURE LIST
December 10, 1999

STANDARD FURNITURE, EQUIPMENT AND SUPPLY REQUIREMENTS
FOR OCJC FIELD SITE LOCATIONS
PREMISE: 2 JUDGE/1 CA/3 SUPPORT/1 INTERPRETER/1 LAW CLERK

<table>
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<tr>
<th>QTY</th>
<th>CHAMBERS - IMMIGRATION JUDGE</th>
<th>Price</th>
<th>Vendor</th>
<th>Delivery*</th>
<th>National Stock #</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Double Pedestal Desk (68x30x29 1/2)(Walnut)</td>
<td>$955</td>
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___  Bookcase Upper Unit (Cherry)

$ 245  UNICOR  30 Days  QS7110-01-344-6608
___  Bookcase Upper Unit (Lt. Granite)

$ 285  UNICOR  30 Days  QS7110-01-349-5044
___  Bookcase Base Credenza (Light Oak)

$ 285  UNICOR  30 Days  QS7110-01-347-2314
___  Bookcase Base Credenza (Walnut)

$ 285  UNICOR  30 Days  QS7110-01-356-1597
___  Bookcase Base Credenza (Cherry)

$ 285  UNICOR  30 Days  QS7110-01-349-5043
___  Bookcase Base Credenza (Lt. Granite)

December 10, 1999

STANDARD FURNITURE, EQUIPMENT AND SUPPLY REQUIREMENTS
FOR OCIJ FIELD SITE LOCATIONS
PREMISE: 2 JUDGE/1 CA/3 SUPPORT/1 INTERPRETER/1 LAW CLERK

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<td>___</td>
<td>Traditional bookcase with glass door</td>
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<td>Stand for bookcase</td>
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<td>___</td>
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SUBTOTAL

$___ x ____ (qty) = ____

QTY  COURTROOM - IMMIGRATION JUDGE
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**SUBTOTAL**

$ ____ x ____ (qty) = ____

December 10, 1999

STANDARD FURNITURE, EQUIPMENT AND SUPPLY REQUIREMENTS
FOR OCIJ FIELD SITE LOCATIONS
PREMISE: 2 JUDGE/1 CA/3 SUPPORT/1 INTERPRETER/1 LAW CLERK

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**STANDARD FURNITURE, EQUIPMENT AND SUPPLY REQUIREMENTS FOR OCIJ FIELD SITE LOCATIONS**

**PREMISE: 2 JUDGE/1 CA/3 SUPPORT/1 INTERPRETER/1 LAW CLERK**

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|     | Bookcase Base Credenza (Cherry) | QS7110-01-356-1597 |
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|     | Bookcase Base Credenza (Lt. Granite) | QS7110-01-349-5043 |
|     | $ 285 UNICOR 30 Days |                  |

|     | Ergonomic Chair (without arms) (specify color) | QSUST2004 |
|     | $ 245 UNICOR 30 Days |                  |
|     | Ergonomic Chair (with arms)(specify color) | QSUST2005 |
|     | $ 285 UNICOR 30 Days |                  |
|     | Medium Back (with arms) (specify color) | QSUST2008 |
|     | $ 305 UNICOR 30 Days |                  |
|     | High Back (with arms) (specify color) | QSUST2006 |
|     | $ 320 UNICOR 30 Days |                  |
|     | Coat rack | 7195-00-242-3503 |
|     | $ 107 GSA 120 Days |                  |
|     | Book rack, 2 shelf (book trough) | 7110-00-194-1613 |
|     | $ 155 GSA 120 Days |                  |
|     | Letter size 5-drawer file w/ lock | 7110-00-497-2370 |
|     | $ 167 GSA 120 Days |                  |
|     | Typing table (33x26) | 7110-00-151-6485 |
APPENDIX G

ERGONOMICS CHECK LIST
CHECKLIST of ERGONOMIC FEATURES

Use the following checklist to evaluate your posture, computer workstation design, and job design. If you answer "yes" to each question, then your workstation and job are probably well designed ergonomically. If you answer "no" or are unsure of your answers to any of the questions, then you should take steps to correct situations that may increase the risk of developing repetitive strain injuries.

- POSTURE (when working at the computer)
  - Are your feet resting fully and firmly on the floor or footrest?
  - Are your knees bent at approximately right angles? Are your thighs parallel to the floor, so that the chair does not put pressure on the back of your thighs?
  - Is your upper body straight, with your lower back firmly supported by the chair backrest?
  - Are your upper arms hanging straight down at your sides?
  - Are your elbows against your sides and bent at right angles?
  - Are your forearms parallel to the floor?
  - Are your wrists straight, neither bent up or down nor to the left or right?
  - Is your head looking forward with only a slight downward tilt?

- CHAIR
  - Is your chair adjustable for seat height? If not adjustable, is the chair height right for you?
  - If your chair is adjustable, do you know how to adjust it?
  - Does the backrest give firm support on your lower back?
  - Is the front edge of the seat rounded to avoid pressure on the back of your thighs?
  - Does the chair have casters that roll easily on the floor?
  - Do you have a footrest, if you need one, on which to rest your feet? NOTE: Chair arm rests are optional. If used, they should be padded, not hard.

- THE KEYBOARD AND MOUSE
  - Is the keyboard detached from the monitor?
  - Can the keyboard height be adjusted?
  - Is the keyboard at the right height so that your elbows are at your sides, forearms parallel to the floor, and your wrists are straight?
  - Is the keyboard thin and level with the floor?
  - Is the keyboard on a foam pad to soften the impact of your fingers on the keys?
  - Are the springs in the keys stiff enough to resist the weight of your fingers when relaxed?
  - Do the keys give tactile (you can feel key pressure decrease when the character is registered) or audible (you hear a click when character is registered) feedback to stop you from pressing too hard?
  - Can your fingers reach the shift and function keys without awkward straining?
  - Are you able to keep your typing speed under 10,000 keystrokes per hour?
  - Is the mouse located at the same height as the keyboard and as close to it as possible?
  - NOTE: Wrist rests are sometimes recommended but may do more harm than good. If used, they should be well padded and the proper thickness.

- THE MONITOR
  - Can the monitor height be adjusted?
  - If the screen is small, is the top of the screen opposite eye level? If the screen is large, is the center of the screen opposite eye level?
  - Is the monitor at the proper viewing distance for you? (The distance is usually 1.5 to 2 feet from your eyes.)
  - Is the monitor directly in front of you, rather than off to the side?
  - Do you have a copy stand or document holder to hold the papers you work with?
  - Are the copy stand and the computer screen at the same height, and at about the same distance from your eyes?
  - Is the monitor positioned to avoid glare?
WORK AREA

- Does the desk have a lower surface for the keyboard and higher surface for the monitor (either built-in or attached)?
- Is there enough room for your legs under the desk?
- Is there enough space to put the equipment and other materials at the proper distance without crowding?
- Are you able to use the phone without having to squeeze the receiver with your shoulder while you type?
- Are standing counters available, if appropriate, so you can alternate sitting and standing while doing computer work?

JOB/PROJECT DESIGN

- Do you take short, frequent breaks from computer work? Short rests taken often provide better protection than longer breaks after longer periods of work. Some studies suggest that a short break every 20 minutes will greatly reduce the chance of an RSI.
- Do you usually take a break before you feel any muscle fatigue in your upper body?
- Do you get up and move around whenever you begin to feel any symptoms?
- Do you pause periodically to do relaxation exercises?
- Have you adjusted your workstation furniture?
- Do you use the same workstation all day so that you only have to make adjustments once a day at most?
- Do you have input when your department is purchasing computer equipment and furniture?

TREATMENT and MANAGEMENT of RSI

The best treatment for RSI, of course, is prevention by proper arrangement of your computer workstation and reasonable job or project design. But if you have even mild symptoms, don't wait to take action. Contact your primary care provider for an evaluation if available under your health care plan. In addition, notify your supervisor.

The key to RSI management is to remove an individual from the exposure that causes injury. A period of time away from the keyboard and mouse can be followed by a gradual return to keying in an ergonomically correct work setting. Occasionally a physician will prescribe a medication to help reduce symptomatic inflammation and pain. Regular follow-up visits with your health care provider should be scheduled to monitor your progress. People with more severe forms of RSI may be referred by their medical provider to an occupational therapist who can do further evaluation and recommend a program of localized treatments, stretches, and exercises. For cases where the diagnosis is less clear, blood tests, x-rays, and nerve tests may be indicated. Referral to an orthopedic hand specialist occasionally is needed to clarify diagnostic and treatment options. If the individual is fairly symptomatic even at rest, splints may be recommended; while these are useful in the first stages of recovery they are not the long-term solution.

Workplace Ergonomics
APPENDIX H

POSTURE DIAGRAM
Measures the distance from the floor to the eye when you are sitting properly at a computer workstation. Adjust the monitor screen so that when your eyes are looking straight ahead they are opposite the top of the screen if it is small, or opposite the middle of the screen if it is large.

B
Measures the distance from the floor to the bottom of the wrist when the arm is parallel to the floor. Adjust the keyboard height so that you forearms are parallel to the floor and your wrists are flat.

C
Measures the distance from the bottom of the heel, when it is flat on the floor, to the underside of the knee, when it is bent at right angles. Adjust the height of your chair so that your thighs are horizontal, your knees are at right angles, and your heels are flat on the floor.
APPENDIX I

RELEVANT PHYSIOLOGY
Wrist

Extensor carpi ulnaris

Flexor carpi ulnaris

Radius

Ulna

Radial artery

Ulnar artery

Nerve

Flexor retinaculum

Volar

Volar digitalis brevis muscle

Volar digitalis profundus muscle

Volar carpi manus muscle

Radial carpi manus muscle

Ulnar carpi manus muscle

Flexor digitorum superficialis muscle

Flexor digitorum profundus muscle

Thumb

thenar eminence

Abductor pollicis brevis muscle

Opponens pollicis muscle

Landmark

Scaphoid

Trapezium

Capitate

Hamate

Metacarpals
Shoulder
APPENDIX J

"PREVENTING REPETITIVE STRAIN AT THE KEY BOARD"
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 key-boarding, 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.

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.

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.

1

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.

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.

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.
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 Wrist 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.

Consultant:
Jeffrey R. Jones, MPH, CIH

With contributions by:
Gail M. Burnsed, RN,
Occupational Health Nurse
John E. Marquardt, MD, FACP
Lynn Frank, Safety Manager

This Healthful Information Booklet Provided by the Caring Staff at

California Physical Medicine
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U.S. News and World Report
October 11, 1999