The Business Roundtable

SUBJOURNEYMEN IN
UNION CONSTRUCTION

A CONSTRUCTION INDUSTRY COST
EFFECTIVENESS PROJECT REPORT

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SUBJOURNEYMEN IN UNION CONSTRUCTION

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CONSTRUCTION, a complex, diverse and highly localized industry, uses a multiplicity of Crafts and contractors to build residential, commercial, governmental and industrial projects. In each craft - carpenters, electricians, ironworkers, pipefitters, operating engineers and some ten others - there is a wide range of work requiring a wide range of skills. Much work in all crafts requires a high degree of skill, training and prior experience. But much work in all crafts requires little skill, or, at best, skill in a specific area which can be easily and quickly learned.

Obviously, where skilled journeymen are used to perform tasks not requiring that degree of skill, the result is a waste of talent and money. This study focused its efforts on ways to overcome this problem so as to improve the construction industry's cost effectiveness.

Most of the growth in the U.S. construction industry during the past decade has been captured by contractors who operate as merit, or open-shop contractors. The growth of open-shop operations has occurred in all types of construction and is now a significant factor in nearly every area of the country. Even in the few remaining areas still considered union strongholds, it seems inevitable that open-shop contractors will eventually get a portion of the work. Many unionized contractors, recognizing the power of the open-shop movement, have organized separate open-shop companies in order to remain competitive.

This study concludes, however, that to remain vigorous, the construction industry cannot afford the demise of the union sector of the industry which offers experienced and capable contractors and a skilled manpower pool. The long-term interests of owners, contractors and labor will be best served by a competitive balance between the union and open-shop sectors.

The major economic advantage enjoyed by open-shop contractors is the ability to use a high percentage of semiskilled workmen, paid accordingly. This not only brings lower labor costs, but also creates a source of manpower to train into experienced journeymen.

In recent years, several building trades unions have recognized this concept and have established the contractual classification of sub-
journeyman.\textsuperscript{1} The study team found only limited use of subjourneymen in unionized construction, but a sufficient number of union jobs in progress were studied to conclude that real advantage can accrue if broad, permissive subjourneyman clauses are adopted in union agreements. Such clauses are most effective when they provide for a maximum ratio of subjourneymen to journeymen during the entire duration of a project, without restrictions on the contractor’s right to alter this ratio to fit the job requirements. Maximum productivity can best be achieved if contractors actively participate in the recruiting, screening and selecting of individual workmen in order to staff their jobs with qualified subjourneymen.

The key responsibility for getting broad subjourneyman language into labor agreements, and in its implementation, rests with contractors together with national and local union officials. Where this concept is contractually established and accepted, contractors and unions can build a workforce which has the potential to achieve optimum cost efficiency. Union contractors will then be in a much better position to compete in the construction market. They would also be able to augment established training systems to meet the anticipated steady increase in manpower needs of the industry.

\textsuperscript{1} The term subjourneyman, as used in this report, refers to union workers (other than laborers) who are not journeymen or indentured apprentices. These workers have been commonly known as helpers, trainees, learners or by other terms denoting craft classifications below the level of journeyman.
II

INTRODUCTION

In order to understand the advantage held by open-shop contractors, the study team attempted to identify significant differences between the unionized sector of the industry and the open-shop sector. It found that open-shop contractors generally operate on the premise that many tasks can be safely and competently performed by workers who lack some of the varied skills of a journeyman. Among open-shop contractors, typically 40% or more of the craft workforce are helpers. It appears that this arrangement is a major source of the open-shop contractors’ ability to underbid union contractors. This study has explored how this concept might be applied to the unionized sector of the construction industry.

The history of unionized construction shows that helpers have long been an integral part of the workforce. Some labor agreements, such as the National Pipefitter Pipeline Agreement, the National Transient Division Agreement for tank erection and the Elevator Constructors Agreement, still contain this classification. But for the union sector in general, their use has greatly declined, leaving a cost-boosting gap in the structure of much of the construction industry. With the passage of the Davis-Bacon Act in 1931 and the establishment of the Bureau of Apprenticeship Training by the Fitzgerald Act in 1937, the use of helpers became formalized in many crafts as a training classification only. Indentured apprentices replaced helpers, and subsequent contract bargaining placed restrictive language in many agreements which has limited contractors’ ability to use helpers regularly. Periods of low employment and limited apprenticeship facilities both serve to limit the number of apprentices available. Even though some unions have been willing to increase the apprentice/journeyman ratio, they have been unable to supply enough workers to do so. This gap has frequently been filled by unskilled or semi-skilled individuals who have nonmember status with the union but who are issued temporary work permits. In most cases, these workers have been paid at the full journeyman rate.
CURRENT AGREEMENTS

In recent years, the concept of subjourneymen in union agreements has developed as a means of supplying manpower to a union job when qualified local journeymen were unavailable, and when traveling journeymen were reluctant to come into the area. It was recognized by both unions and contractors that these employees were generally not entitled to full journeyman pay, and a fixed lower percentage of the journeyman rate was normally negotiated for the classification. More recently, the subjourneyman category has been added to some union agreements to enhance union contractors’ competitive position against open-shop contractors, and, in some cases, to enable these employees to eventually qualify as journeymen. Existing subjourneyman clauses can be divided into two categories, best exemplified by two disparate agreements: 1) restrictive, as in the Pipefitters National Agreement; and 2) permissive, as in the National Industrial Construction Agreement.

Restrictive agreements let subjourneymen be employed only after all available journeymen have been hired. They require that subjourneymen be laid off, as more journeymen become available in the area. Such agreements do help contractors to meet peak needs for manpower, but they do not give contractors the economic advantage of unrestricted use of subjourneymen over the life of a project.

Permissive agreements allow the use of subjourneymen throughout the project and provide employers with the economic advantage of a stable work force at a lower average wage rate and the benefits of applied training to this group of employees.

Existing labor agreements with Subjourneyman clauses fall into these general categories:

**Local Agreements:** Subjourneyman classifications are rarely, if ever, found in local union agreements. A few local agreements that provide for a Subjourneyman to perform less-skilled duties at a lower rate do exist. All are restrictive, providing only for the use of subjourneymen in case of manpower shortages. There are, however, local agreements that provide for a sliding scale of pay based on skill - usually involving locals of the operating engineers, teamsters or laborers unions.

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^2 Appropriate clauses from each of these agreements are given in Appendices C and E of this report.
**Regional Agreements:** The boilermakers have 21 regional agreements encompassing a number of local area union lodges or several states within a geographical area. Eleven of these agreements (out of 21 covering 32 states) contain specific helper, trainee or subjourneyman provisions which allow a lower wage rate for lesser skilled workers doing work within their capability. Several of these 11 agreements, including the Southeastern Seven State Agreement (Appendix A), contain specific language to let contractors use trainees as long as specified ratios of apprentices to journeymen are maintained. In addition, provisions are also made for trainees to advance to journeymen as they achieve prescribed levels of experience and competence. As a rule, trainees or subjourneymen will not be referred to contractors by the boilermaker hiring halls if journeymen or apprentices are available for referral or if the employer has refused previous referral of journeymen and apprentices.

**Project Agreements:** Scores of multi-craft project agreements have been negotiated for large projects throughout the U.S. Most of these agreements do not address the subject of subjourneymen. In those few instances where a provision for subjourneymen has been included, use of this class of employee has been difficult to arrange unless there is also a provision for recognizing their use in the local agreement. The most notable use of subjourneymen through project agreements is in the southeast and southwest where their use is increasing as a part of an effort to obtain more work for union contractors. (See Appendix B for an example.)

**National Agreements:** Both the pipefitters and the ironworkers national agreements provide for the use of subjourneymen to supplement apprentices and journeymen, and are available to signatory national contractors. The Pipefitters National Agreement (Appendix C) provides, "Subjourneymen shall be utilized to supplement journeymen and apprentices and shall only be employed when the more skilled and qualified journeymen and apprentices are unavailable for work." This provision, agreed to in 1977, has been used primarily as a stopgap measure to ease manpower shortages. Subjourneymen are hired when journeymen are unavailable and they are laid off as journeymen become available. Several large jobs have employed as many as 50% subjourneymen for short periods under this agreement.
The language in the 1979 Ironworkers National Agreement (Appendix D) appears more permissive, allowing as many as 33-1/3% of ironworkers on a job to be trainees and/or apprentices at any one time. In practice, the use of these trainees, like those authorized by the Pipelayers National Agreement, has been limited to easing short-term manpower shortages.

Special Agreements: There are also three special agreements covering limited portions of the construction industry.

1. National Industrial Construction Agreement (NICA) In May 1978, the National Constructors Association and eight international unions entered into this agreement (Appendix E), covering 11 southeast and southwest states, to "promote efficiency" and "secure optimum productivity". The aim was to help union contractors be more competitive against open-shop contractors. The agreement allows the use of up to 33-1/3% of the craft workforces as subjourneymen and/or apprentices without apparent restriction. Even so, it appears that very little use has been made of this provision on jobs performed under NICA in the years since the agreement was signed. The reasons appear to be the relatively small size of projects, the availability of journeymen, and an apparent lack of interest in implementing the clause by individual contractors, unions and owners.

2. The Nuclear Power Construction Stabilization Agreement. In April 1979, agreement was reached between the Building and Construction Trades Department and four national contractors covering work on nuclear power plants. As of late 1981, only one project had been started under this agreement. The agreement recognized that the ratio of journeymen to non-journeymen will vary among crafts and at different stages of a job. It provides that employers may request journeymen and apprentices or trainees, helpers or probationary employees, whichever is the appropriate designation for the craft involved. It is unclear if this language would be interpreted the same way in all parts of the U.S., but signatory contractors made it clear in interviews that they felt the intent of the agreement is to make maximum use of classifications below journeymen to reduce project labor costs.

3 In early 1981, the geographical area of this agreement was expanded to include four mountain states.
3. **Standard Agreement-International Union of Elevator Constructors.** This agreement (Appendix F) allows wide use of helpers, who are hired on a probationary basis for the first six months at 50% of a mechanic's (journeyman) rate. After six months, helpers advance to 70% of the mechanic's rate. After three years, a helper can advance to mechanic by completing courses and passing an examination. A contractor can hire one helper per mechanic on a job. There are no restrictions on helpers' duties when they are under the direction of a mechanic. The ratio of helpers to mechanics remains the same regardless of the availability of mechanics who are out of work.
IV

HOW SUBJOURNEYMEN ARE USED
IN UNION CONSTRUCTION

After reviewing union agreements containing subjourneyman clauses, a survey was conducted of jobs in progress or recently completed which afford a look at actual use of subjourneymen. The results were disappointing in that comparatively few projects were found where subjourneymen were actually used. The broadest and least restrictive subjourneyman language occurs in the National Industrial Construction Agreement (NICA), negotiated to enable members of the National Constructors Association to compete with open-shop contractors. Though several jobs under the NICA were in progress, the study team was unable to find any substantial use of subjourneymen on any of them.

The most extensive experience with subjourneymen was found to occur on projects carried out under special project agreements. Six jobsites - power plants and large industrial projects - were visited and managers concerned with hiring and supervising subjourneyman employees were interviewed. A comprehensive questionnaire/checklist was completed during each project visit to help keep data comparable and uniform. Several other contractors who had some experience using subjourneymen were also interviewed. The contractors reported a wide range of experience with subjourneymen, some unsatisfactory, some very good.

Restrictive language, such as that in some regional boilermaker agreements and under the National Pipefitters Agreement, has led to unsatisfactory results using subjourneymen. Contractors reported that though these agreements allowed them to increase their work-force when union journeymen were scarce, the short duration of employment, poor screening and a lack of acceptance of the subjourneymen by journeymen and foremen probably resulted in a loss of productivity and increased costs.

Permissive language, such as that in some project agreements and in the Southeastern Boilermaker Agreement, led to more satisfactory results. All the jobs where contractors felt their experience had been good, operated with subjourneyman clauses permitting a stated ratio of apprentices and subjourneymen over the full schedule of the project.
Interviews with contractors’ supervisors disclosed the following reasons why subjourneymen were used successfully:

1. There was acceptance by local union officials.
2. Ratios in excess of 30% were permitted.
3. No restrictions were placed on the subjourneyman work assignments.
4. Work assignments were made to maximize the subjourneymen’s prior experience.
5. All hiring and reductions in force were made so as to maintain ratios desired by contractors.

The most successful programs established a progressive wage rate schedule for subjourneymen based on time on the job and a performance evaluation. Productivity was maintained using subjourneymen with no significant difference in total man-hours from that expected with an all journeyman workforce. There was a notable reduction in labor costs.

During the interviews, contractors said that shifting to a workforce with a high percentage of subjourneymen had raised doubts and made some of them reluctant initially. After favorable experience, they were convinced that the use of subjourneymen can and should be pursued on an expanded scale. They stressed the importance of selection and training to maintain or improve productivity and thus reduce costs. They also stressed the need for proper orientation of first-line foremen in the use and acceptance of subjourneymen.
HOW OPEN-SHOP CONTRACTORS USE HELPERS (SUBJOURNEYMEN)

To gain a more complete understanding of how open-short contractors have used semiskilled workers, the study team interviewed several open-shop contractors, ranging in size from very large, with both national and international activity, to medium size with activity primarily in the southeastern U.S. The work of the open-shop companies interviewed was typically performed in the power plant, paper, petrochemical, refinery and metallurgical industries. The following is a profile of the policies and practices which were employed by these companies in the use of helpers:

**Definition** The term "helper" was common to each company. Job descriptions were about the same as those for union sub-journeymen; i.e., they perform tasks within their capability independently of the craftsmen, and provide assistance to the craftsmen where extra help is required. The term "helper" as used by open-shop contractors should be considered synonymous with subjourneyman, trainee or any other name describing a worker below the level of journeyman and who is not a registered apprentice or a laborer.

**Job Manning** Helpers usually were recruited from the area contiguous to the jobsite. Good performers who took advantage of training were encouraged to follow the contractor to the next jobsite. More commonly, they remained in their home area and sought employment with other open-shop contractors. Helpers were recruited through newspaper advertising, state employment agencies, local minority associations, vocational-technical schools, recruitment vans, on-site employment centers and word-of-mouth. All contractors used helpers as standard practice, though the local availability of experienced or trainable people was a major influence on the number used.

**Employment** Responsibility for hiring varied with the size of projects. On small projects, the job superintendent or home office recruiter generally did the hiring. On larger jobs, a personnel director with a full-time team of assistants recruited, screened and selected the employees. Open-shop employment offices were usually erected at or near jobsites. Among larger contractors, the minimums for experience and training were fairly well defined; smaller contractors tended to have less formal employment standards. Each company
indicated that it tried to hire helpers with a wide range of skills, ranging from the beginner to the over-qualified person who was willing to wait for an opening at a higher level of skill. Good performers from previous jobs got preference.

Promotional opportunities and incentives for helpers varied significantly among the contractors interviewed. None offered an automatic progression system. Most promotions - and consequent increases in pay - were based on merit, evidenced through participation in a voluntary training program or by good progress on the job. Training officers and personnel teams made periodic formal evaluations of each helper. In most cases, the job superintendent had authority to promote and usually based his decision on a foreman's recommendation. Helpers enrolled in a structured program advanced every six months, with satisfactory performance, as determined by the foreman and instructor or on-the-job-training evaluator.

**Work Practices** Helpers were normally assigned to a craft discipline according to their experience and the manpower requirements of the project. All companies allowed and encouraged helpers to work with the "tools of the trade". Some firms encouraged acquisition of personal tools through a payroll deduction system. The more experienced helpers assigned to a craft generally stayed with that discipline; however, they could be moved to meet craft needs and the demands of the job. All companies interviewed used specific procedures to evaluate helpers. Normally, the first-line foreman made a written or oral report monthly. Most assignments and job instructions were given to helpers by first-line foremen. The duties of a helper varied with the complexity of the job, but usually the inexperienced beginner started as a "go-fer" or unskilled menial; then advanced to holding, fitting, cutting or to other semiskilled activity according to ability. Some firms had procedural manuals with job descriptions for various stages of a helper's progress, while others progressed only as instructed by their journeymen or foremen. No uniform lay-off procedure, such as last in-first
CONCLUSIONS

Open-shop contractors have a significant economic advantage because of their ability to fully utilize helpers for unskilled and semi-skilled work in all crafts, and to add manpower to labor pools. Despite the limited use of subjourneymen on union construction projects to date, enough experience has been observed to demonstrate the advantages to unions, contractors and owners.

Using a high percentage of subjourneymen, properly screened, may bring labor cost savings, on a particular job, as great as 20%. The long-range benefit may be equally important because it offers the construction industry a new tool for meeting future manpower needs. Open-shop contractors have demonstrated an ability to train large numbers of workmen, including minorities and beginners, in a relatively short time by a variety of successful methods. These techniques should be equally successful in the union sector. Moreover, building trades unions and union contractors would win an increased share of the construction market by a more competitive performance.

Subjourneyman usage can eliminate the inequity of the often used “permit system”, in which referral halls have sent inexperienced workers to a job at the same rate of pay as skilled journeymen. Eliminating unqualified permit workers also helps maintain the integrity of apprenticeship programs. The current system of paving full scale to unqualified workers creates a morale problem with apprentices working on the same site for less pay. Moreover, the use of subjourneymen should help union contractors to meet minority employment goals in a positive manner by training workers onsite until they acquire enough skill and experience to qualify for journeyman status.

There are a variety of factors which retard the broad use of subjourneymen in union construction even though the record clearly shows that increased use is an economic necessity if contractors are to improve their competitive position.

When there is a lack of work in an area and there are men “on the bench” in the hiring halls, business agents are usually reluctant to recruit and supply subjourneymen. In such circumstances, it is likely that a contractor will pressure a business agent to supply subjourneyman manpower, even when it is permitted and provided for in the union contract.
Agreements negotiated so far permitting extensive use of subjourneymen have, in the main, been negotiated at the national level where both union and management officials understand that the extensive use of helpers has been one of the most important forces favoring the growth of open-shop construction. These concessions were sought by contractors whose markets were eroding in certain geographical areas, and the concessions were made by national labor leaders recognizing their plight. However, neither contractors, unions nor users have yet made sufficient efforts to implement locally what was recognized at the national level to be a necessity.

The use of subjourneymen on union projects is often perceived by local union members to be a step backward for them - one they do not willingly accept. Contractors, once they get a job in a traditional union area, are reluctant to push to apply subjourneyman clauses for fear of rocking the boat. Many owners, once they have decided to move forward on a big project, are reluctant to encourage their contractors to use the subjourneyman clause for fear that such action might cause labor unrest and delay completion of the project.

There is still a lack of awareness, among both contractors and users, of the permissive-type agreements covering the use of subjourneymen on industrial projects in many areas of the country. Obviously, where such agreements exist, it makes sense for contractors to exert maximum effort, with full support from users, to use these agreements.

It is unrealistic to assume that unions will recruit and screen subjourneymen solely on their own. Contractors need to participate actively in this process and to take appropriate steps to delineate the type of work that subjourneymen should perform. Historically, union contractors have avoided this type of personnel work. As a result, many are probably not staffed to undertake the function.

There is little incentive for an individual to accept employment as a subjourneyman unless there is reasonable assurance of continued employment. If a subjourneyman’s job lasts only until the next fully qualified journeyman seeks work, there is also little incentive for a contractor to recruit and train such an individual. Unions need to recognize that once hired, a subjourneyman should be retained until there is no further need for him on a given project.

Local unions have resisted referring subjourneymen, preferring instead to attempt to meet this demand with apprentices. In most instances, the study team found, the unavailability of apprentices has limited this system of recruiting to not more than 10% of total craft needs. Some union officials have argued that any system that allows advancement to journeyman by means other than through established apprenticeship programs would reduce or dilute the skill levels
of the craft. History does not support this position. A study prepared for the Department of Labor in 1975 found:

Regarding the sources of training by craft for journeymen who did not serve apprenticeships, there is fairly uniform evidence that a large majority of informally trained journeymen learned their trade either by working as laborers or helpers or by working on the job in open shops. More than half of all craftsmen admitted to journeyman status learned their trades directly through these two methods.\(^4\)

This observation is not intended to minimize the importance of established apprenticeship programs. Most are excellent and provide the industry with journeymen who possess the broad range or skills and knowledge essential to efficient construction. Research of industry practices however, reveals that a high percentage of the man-hours required to perform various tasks in construction do not require workers with the expertise of a fully trained journeyman. Many tasks can be performed by workmen, whether classified as journeymen or not, who have achieved a level of ability through on-the-job training, by working up "through the ranks", or by related experience in other industries, but who have not completed formal training such as an apprenticeship program. At least 40 to 50% of construction work requires a minimum of skill and can be efficiently and safely done by helpers or subjourneymen.

If maximum cost efficiency is to be achieved to allow union contractors to compete, and if the manpower demands of the future are to be met, contractors, unions and users need to recognize this source of labor and be prepared to carry out the necessary changes in current practice to meet the industry's needs.

RECOMMENDATIONS

General Recommendations:
The inclusion and implementation of a subjourneyman clause in the union agreements will not be easy since the exclusive use of journeymen and apprentices is a deeply embedded practice. A planned effort by contractor associations and building trades unions at both the local and national level is essential to achieve this goal. Two time frames for action seem appropriate. Over the shorter run, the aim should be to arrange for more extensive use of subjourneymen on larger jobs where project agreements and/or special agreements are appropriate, especially in those areas where subjourneyman agreements already exist. Over the longer run, the recommended changes will need to be written into locally bargained building trades contracts. Both routes will take commitment by all who are convinced this change in the use of manpower is essential to the health of the construction industry.

Specific Recommendations:
Contract Provisions. The following language is suggested for developing the appropriate provisions in both local and national agreements to authorize the use of subjourneymen:

The employer and union agree to establish a classification entitled subjourneymen. The subjourneyman shall be assigned by the employer to perform any work normally assigned to his craft and which is within the capability of the individual.

The starting rate for the subjourneyman will be 40\% \textsuperscript{5} of the journeyman's rate, but may be adjusted upward by the employer, based on prior similar experience. The employer may grant additional increases on periodic review of the individual's performance and work experience.

The hiring, assignment, promotion and termination of the subjourneyman is the sole responsibility of the employer. The number of subjourneymen will be determined by the employer.

\textsuperscript{5} This percentage may vary but should be consistent with the starting rate for beginners in the craft and area covered. This appears to fall in the 40-50\% range.
Union Contractors and Associations Union contractors and their associations need to recognize and accept that subjourneyman clauses in their collective bargaining agreements are essential if they are to achieve and maintain a competitive position with their open-shop competitors. Such clauses will be more effective if they provide for an unrestricted ratio of subjourneymen to journeymen for the entire duration of a project, without limitations on the contractors’ right to adjust the ratio to the needs of the project.

Contractors by participating actively in the recruiting, screening and selection of subjourneymen can obtain sufficiently qualified workers to reach a competitive level of efficiency.

It is in the interest of each contractor or association to establish effective training procedures to develop qualified subjourneymen. As a practical necessity, records should be maintained on each worker’s experience and performance.

For best results, subjourneymen should be paid on a progressive scale commensurate with their performance. They should also be given credit for any prior similar work experience at the time they are employed.

Local and International Unions As building trades unions at both the local and national levels recognize that the extensive use of helpers has been a key reason for the growth of open shop contractors, they will see that the inclusion of a broad subjourneyman clause in their labor agreements will aid them in obtaining work for their members.

The national leadership of the building trades unions should monitor the implementation of the subjourneyman clauses at the local level to assure their day-to-day effectiveness and to see that opportunities are provided for subjourneymen to progress toward full journeyman status.

Owners Individual owners should analyze their current and prospective construction projects and make their desires known to their construction forces. Appropriate language concerning the use of subjourneymen can be included in bid documents early in the planning stage of individual construction projects. Where a "project agreement" is envisaged, the owner could require a specific plan to use subjourneymen and incorporate the plan in the agreement. Project agreements that include these requirements set positive precedents under job conditions for contractor associations and local unions. Owners should follow-up on their projects to make sure requirements for using subjourneymen are met.
APPENDIX A
SOUTHEASTERN STATES BOILERMAKER AGREEMENT (7 STATES)
FLORIDA, GEORGIA, ALABAMA,
NORTH CAROLINA, SOUTH CAROLINA,
 TENNESSEE AND MISSISSIPPI

Appendix "H" CONSTRUCTION BOILERMAKER TRAINEE
(HELPER-TRAINEE) SOUTHEASTERN STATES AGREEMENT

Employees who are not fully qualified as field construction boilermaker journeymen or field construction boilermaker apprentices under the provisions of Appendix D of the Southeastern States Agreement shall be hired under the classification Helper-Trainee as follows:

1. Helper-trainee rate will be 80 percent of the field construction boilermaker journeyman's rate.

2. Hiring rate for a helper-trainee will be 70 percent for the first 2,000 hours he is employed under the Southeastern States Agreement.

3. Helper-trainees will be assigned by Management to perform any work which is normally performed by field construction boilermakers and falls within the capabilities of the employee.

4. A sufficient number of helper-trainees will be referred to perform all work which they are capable of performing with proper supervision. In order to provide adequate numbers of helper-trainees readily available, a registration list shall be maintained at the local union hall and the number of registrants at any one time should not exceed 50 percent of the indentured apprentices in that local Union.

5. No employer, who fails or refuses to hire field construction boilermaker apprentices when available, in accordance with the agreed-upon ratio of apprentices to journeymen, will be allowed to employ helper-trainees.

6. Helper-trainees shall, after completing 8,000 hours as helper-trainees, become eligible for possible advancement to field construction boilermaker journeymen. Helper-trainees will receive the same credit hours as apprentices for welding
tests, rigging evaluation and tests, and related skill experience.

7. A helper-trainee who establishes his qualifications as a certified welder under A.S.M.E. Code requirements may be temporarily advanced to field construction boilermaker journeyman's rate of pay only while performing Code welding.

8. Helper-trainees shall be subject to all other terms and conditions of the Southeastern States Agreement, including all provisions of Appendix D.

9. The parties agree to cooperate in making and keeping reasonable records on the progress of helper-trainees. Helper-trainees may be issued ID cards showing status. Referrals will clearly designate helper-trainee status and applicable rate of pay due under this Appendix.

10. It is recognized that, due to a skilled-manpower shortage in the area covered by the Southeastern States Articles of Agreement, it may be necessary to modify Appendix H to meet specific problems in the various district and local lodge jurisdictions.
APPENDIX B
PROJECT AGREEMENT -- WA PARRISH JOB
EBASCO SERVICES AND HOUSTON
BUILDING TRADES

ARTICLE XXII
General Working Conditions

1. This Agreement shall apply to all construction work on the project being performed by the Employer.

2. Trainee classifications should be included in all skilled crafts. Such classifications shall be considered a training classification and the rate of pay will be at the equivalent apprentice rate of pay. The trainee may be over-aged for apprentice training, but will have the necessary qualifications to become a skilled craftsman. Training period will be at least the same length as the apprentice. The trainee will be assigned by the Employer to perform any work which is normally performed by his craft and which is within the capability of the trainee. The trainee will remain in training until qualified to become a journeyman. Trainees and/or apprentices shall comprise from 20 to 30 percent of each craft’s workforce at any time and the composition of this ratio shall be at the craft’s discretion.
APPENDIX C

NCA NATIONAL PIPEFITTER AGREEMENT

30. The Employer and the Union agree to establish a classification that shall be entitled SUB JOURNEYMAN. Such subjourneyman may be over-aged for apprentice training but shall be sufficiently experienced and qualified to be referred to work. A subjourneyman shall not be employed or referred in any capacity other than as a subjourneyman. Subjourneymen shall be utilized to supplement journeymen and apprentices and shall only be employed when the more skilled and qualified journeymen and apprentices are unavailable for work. Such subjourneyman shall be considered a training classification and the rate of pay will be at 60 percent of journeyman base hourly rate of pay. In addition, there will be a contribution made to Health and Welfare as specified in the appropriate local agreement. A subjourneyman may become eligible for possible advancement to journeyman status, if they meet the standards of competency as required by the Union. An Employer who fails or refuses to hire apprentices when available in accordance with the agreed-upon ratio of apprentices to journeymen shall not be entitled to hire subjourneymen. The subjourneymen shall not replace journeymen and/or apprentices on a job and shall be selected for layoff before any journeymen and/or apprentices. The subjourneyman shall be assigned by the Employer to perform any work falling within the recognized trade jurisdiction of the United Association and which is within the individual’s capability.
APPENDIX D

NCA NATIONAL IRONWORKER AGREEMENT

ARTICLE 9
Trainees and Apprentices

The Employer may utilize Trainees as well as Apprentices; provided, however, that Apprentices will be employed, to the extent they are available. The Trainee may be over-aged or otherwise ineligible for apprentice training, but will have the potential qualifications to become a skilled journeyman. The training period will be at least the same length as for the Apprentice, and Trainees will remain in training until qualified to become journeymen. The rate of pay will be at the equivalent apprentice rate of pay. A Trainee will be assigned by the Employer to perform any work which is normally performed by Iron Workers and which is within the capability of the Trainee. Trainees and Apprentices shall not exceed thirty-three and one-third (33-1/3) percent of the Iron Worker force at any time.
APPENDIX E

NCA NATIONAL INDUSTRIAL
CONSTRUCTION AGREEMENT

ARTICLE II
Apprentices -- Trainees/Helpers/Subjourneymen

Section 11-1. Recognizing the need to maintain continuing support of programs designed to develop adequate numbers of competent workers in the Construction Industry, the Employer will employ apprentices in the respective crafts to perform such work as is within their capabilities and which is customarily performed by the craft in which they are indentured.

Section 11-2. An Employer may employ trainees/helpers and/or subjourneymen on a regional or local basis. The trainee/helper and/or subjourneyman will not be a currently registered apprentice. The rate of pay for the trainee/helper and/or subjourneyman will be sixty percent (60%) of the established journeyman rate or as established in the appropriate local or area collective bargaining agreement. Trainees/helpers and/or subjourneymen may be reclassified to journeyman status or reclassified to a registered apprentice classification or a formal training program, as appropriate, when they have demonstrated their qualifications for such reclassification to the mutual satisfaction of the Employer and the local union involved.

Section 11-3. When an Employer employs subjourneymen as specified in Section 11-2 above, the combined employment of apprentices under Section 11-1 and subjourneymen under Section 11-2, shall not exceed thirty-three-and-one-third percent (33-1/3%) of the individual craft work force.
APPENDIX F

STANDARD AGREEMENT ELEVATOR CONSTRUCTORS

ARTICLE X
Designation of Helper’s Work and Qualifications

PAR. 1. It is agreed by the Union that there shall be no restrictions placed on the character of work which a Helper may perform under the direction of a Mechanic. However, Helpers on contract service work are subject to the provisions of Article IX.

PAR. 2. The total number of Helpers employed shall not exceed the number of Mechanics on any one job, except on jobs where two teams or more are working, one extra Helper may be employed for the first two teams and an extra Helper for each additional three teams.

Further, the Employer may use as many Helpers as best suits his convenience under the direction of a Mechanic in wrecking old plants and in handling and hoisting material, and on foundation work. When removing old and installing new cables on existing elevator installations, the Employer may use two Helpers to one Mechanic.

PAR. 3. A newly-hired employee without previous mechanical experience shall be classified as a Helper and shall work as a probationary employee in the status of Helper for a period or periods totaling six (6) months within the aggregate period of not more than nine (9) months. The Employer and the Union shall have the privilege of testing the ability of probationary employees during this six months period. If they agree that the Helper during this probationary period does not display sufficient aptitude to become a Helper, he shall be discharged.

Probationary Helpers shall advance from the fifty (50) percent wage rate to seventy (70) percent wage rate upon completion of six (6) months in the elevator industry provided such Probationary Helpers have worked a minimum of one hundred (100) hours in each thirty (30) day period during the six (6) months. The seventy (70) percent wage rate shall be effective at the beginning of the next weekly pay period following completion of the six (6) months.

It is understood that probationary employees during the probationary period above set out may be discharged or laid off at any time with or without cause and no reason need be assigned therefore, and no such discharge shall be construed as a grievance. The proba-
tionary period may be worked with more than one Employer, and the period of six (6) months probation may cover an aggregate period of not more than nine (9) months. A month shall be deemed worked when the probationary employee completes 100 hours in any thirty (30) day period.
CONSTRUCTION INDUSTRY COST
EFFECTIVENESS PROJECT

This Project is a long-range, four-phase effort to develop a comprehensive definition of the fundamental problems in the construction industry and an accompanying program for resolution of those problems leading to an improvement of cost effectiveness in the industry. It is focused primarily on improvement in the industrial, utility, and commercial segments of the industry and has been developed from the point of view of owners or users of construction. Efforts by all segments of the industry, however, are vitally necessary if major improvement is to result.

This report is one of a series of reports from study teams researching individual problem areas. The report series includes:

**Project Management -- Study Area A**
- A-1 Measuring Productivity in Construction
- A-2 Construction Labor Motivation
- A-3 Improving Construction Safety Performance
- A-4 First and Second Level Supervisory Training
- A-5 Management Education and Academic Relations
- A-6 Modern Management Systems
- A-7 Contractual Arrangements

**Construction Technology -- Study Area B**
- B-1 Integrating Construction Resources and Technology into Engineering
- B-2 Technological Progress in the Construction Industry
- B-3 Construction Technology Needs and Priorities

**Labor Effectiveness -- Study Area C**
- C-1 Exclusive Jurisdiction in Construction
- C-2 Scheduled Overtime Effect on Construction Projects
- C-3 Contractor Supervision in Unionized Construction
- C-4 Constraints Imposed by Collective Bargaining Agreements
- C-5 Local Labor Practices
- C-6 Absenteeism and Turnover
- C-7 The Impact of Local Union Politics

**Labor Supply and Training -- Study Area D**
- D-1 Subjourneymen in Union Construction
- D-2 Government Limitations on Training Innovations
- D-3 Construction Training Through Vocational Education
- D-4 Training Problems in Open Shop Construction
- D-5 Labor Supply Information

**Regulations and Codes -- Study Area E**
- E-1 Administration and Enforcement of Building Codes and Regulations