

THE ACADEMY OF ELECTRICAL CONTRACTING

Paper Presented by
Stephen Lindheim, Fellow

Traditional Management Structures
Applied to Electrical Contracting Organizations

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TRADITIONAL MANAGEMENT STRUCTURES

APPLIED TO ELECTRICAL CONTRACTING ORGANIZATIONS

The increasing complexities of managing an Electrical Contracting business in a Bureaucratic society, whether induced by government, unions, or the requirements of the commercial world, have resulted in a greater expenditure of time on communications with its associated paper work. The traditional Contractor's organizational structure is not geared to deal economically with these needs.

The accounting, warehousing, and purchasing departments have personnel with traditional back-grounds, while the executive, estimating, and operational sections, historically derive from the field with correspondingly high salary structures. Few contractors have within their organizations an individual or group of individuals, whose task is to support the middle executives who make up the operational nucleus of an electrical contracting business. This results in excessive costs for detail functions which could be better performed at lesser pay, leaving time for the performance of supervisory and management activities by those equipped by training and experience in the performance of the required tasks. No industrial organization would consider itself intelligently structured if it were "top-heavy" in the manner of most electrical contractors.

This initial paper deals with the need to develop an expanded, support structure in the area of project and field management and review the potential "people resources" from which the developed "slots" can be filled. It is assumed that the starting salaries for the "support" employees will range from twelve to fifteen thousand dollars per year.

The Electrical Contracting Industry has historically obtained its operational management from the field by moving qualified field foreman and general foreman into estimating, project managers and other slots as required by the company's management. Since the movement from field to office is not usually accompanied by a reduction in pay, we find that the company salary structure is weighted to the high end of the scale. Paranthetically, it can be pointed out that field people are not paper work oriented and this same lack of interest in paper work extends into their office functions.

job functions and then find individuals to fill them. In actuality, like most things in life, compromise takes place, thru the matching of the job requirements with the available individuals to obtain the maximum match. Obviously every effort must be made to arrive at a good match. If too much compromise is introduced, the resultant performance will in all likelihood be unsatisfactory. This may take an appreciable time to show up and thousands of dollars can well have been spent in the process.

I have stated earlier that this paper deals with improving the "bottom line" thru better utilization of Project and Field management. To further delineate the directions in which we are moving it is necessary to establish generalized job functions for the positions under discussion. Only the project manager will be reviewed in detail, related positions will be referenced below.

PROJECT MANAGER:

- Has overall responsibility for the project and is accountable to executive management
- a. Confirm estimate if project was aquired thru quotation. (not cost plus)
- b. Work with assigned field supervision or obtain appropriate supervision and develop manpower structure for the project
- c. Develop and follow up on manpower requirements. (may be partially delegated to general foreman or foreman.)
- d. Prepare material and tool requirements. with appropriate quantities and scheduling.
- e. Purchasing of materials and tools.
- f. Expediting of materials and tools.
- g. Maintain appropriate relations with the General Contractor, Owner, and Public Authority, and other subcontractors.
- h. Attend meetings as required under item "g".
- i. Be aware at all times of job progress. Inspect and verify all progress and completion reports generated by supervi-

A review of each item in detail will permit a breakdown into delegatable and non delegatable functions. In other words can tasks within each job function be distributed between the project manager and his support persons even though they may have little background and few skills in electrical contracting. It is obviously assumed that even a "green Pea" will, if properly selected, learn quickly and become more and more competent with time. The letter categories, i.e. "a" refer to the project manager's list of duties above.

NON-DELEGATABLE (by project manager)	DELEGATABLE (to support person)
a. Evaluation of the new estimate. Assembly and and final compilation of the estimate .	Quantitative takoff (counting)
b. Organize project supervisory structure with individuals from available sources.	Spread project schedule and place manpower on schedule as directed
c. Non-delegatable	
d. Review and instruction	All detail and research
e. Control of activity	Paper work and contact with vendors.
f. Control of activity	Follow-up and contact with vendors
g. Non-delegatable	Be seen but not heard
h. ditto	ditto
j. Control, preparation and submission of billings	Assist in evaluation of progress and make measurements as required.
k. non-delegatable	Listen and learn

I have outlined above, tasks which can be delegated to an entry level person. Obviously the amount of supervision as well as the amount of delegation will depend upon the level of skills achieved by the trainee.

The purpose of introducing this new level of support into the structure is to achieve greater profit. This is obtained by providing time for the project manager to function in his most cost effective role. By eliminating much of the delegatable detail, time becomes

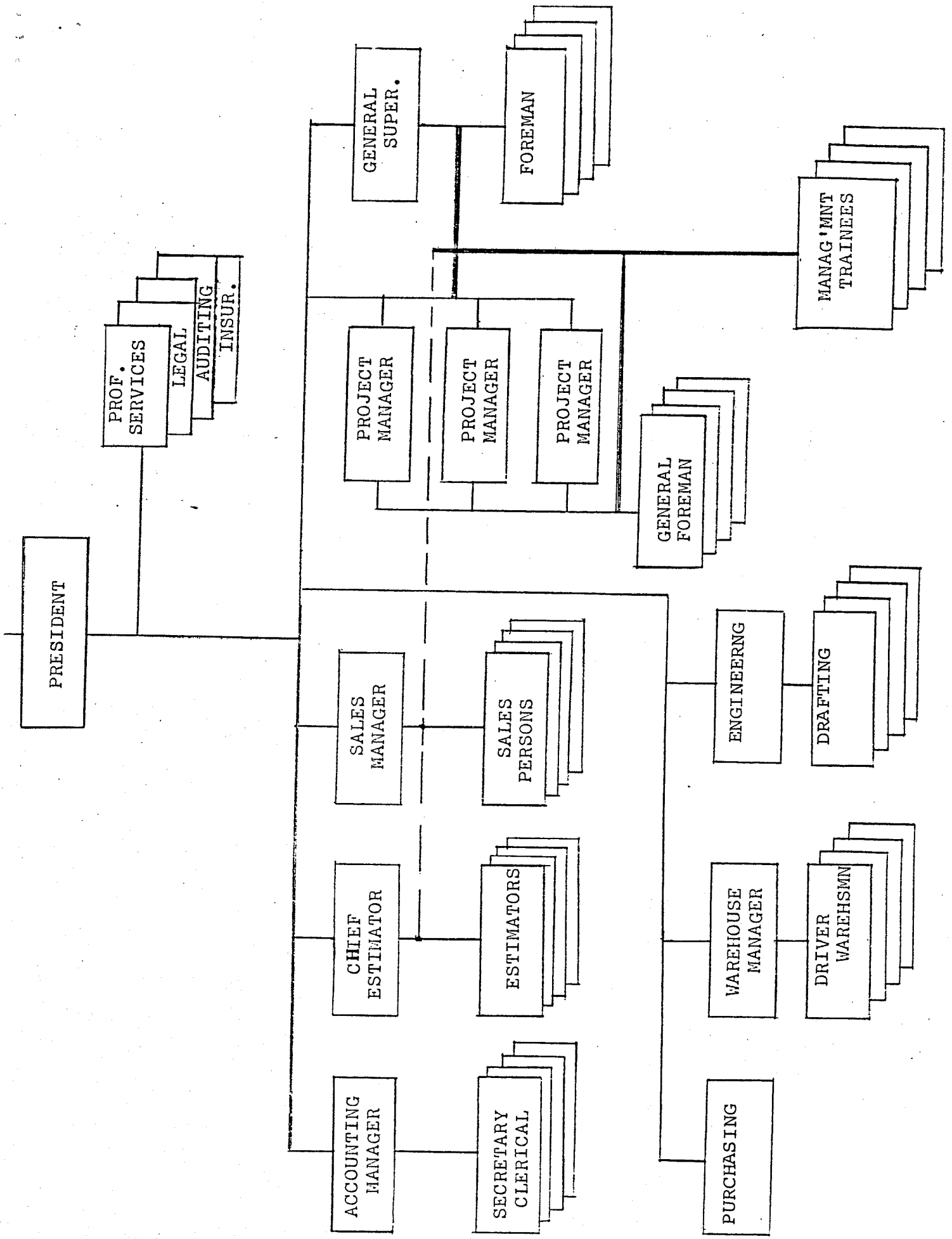
managers of their businesses, to have more time to "manage", and spend less time being harrassed by the inevitable time consuming details. The obvious solution: hire more help. Since, as outlined in the beginning of this paper, the normal inflow of operational employees is from the field, the first reaction was that additional help could not be afforded. Further review and study led us to the concept of establishing an entry level program for bright able, young people, who desired to come into our industry but who knew little or nothing about it. Thru funding by our Industry Trust, The Alameda County Electrical Contractors Trust, we employed a Director of Education, who with a committee of contractors screened approximately fifty candidates, ending up with twenty six. The candidates were found by screening the apprentice program for applicants who had not been accepted into the program, thru word of mouth and the acceptance of entry level employees who had been hired by individual companies.

The curriculum for the trainees is shown in appendix B. Initial training was done during a six week period providing indoctrination as to the structure, manner of operations, paperwork, and the infrastructure of the electrical contracting industry. A further program was established leading to an eventual "AA" from the local Community Colleges upon completion of the required courses.

Our company has two such employees, the first we hired prior to the establishment of the program, in which he was subsequently entered, and the second employee was hired after he had completed the indoctrination sequence. Both are currently continuing with the second phase of the program. Neither individual had any prior association with the electrical contracting field; however, both are making rapid strides in aquiring the necessary knowledge to become productive individuals. Their salaries are being advanced commensurate with their ability to contribute to the operations of the company.

The procedures outlined above are only initial steps in the process of updating management techniques in our industry. I feel that continuing efforts in this direction will provide a more satisfactory, more economical, and more productive environment in which contractors can function. With the ever increasing competition with which we are faced from within our own ranks and from the nonsignatory section every step taken in improving operations should bring compounded rewards.

This paper is, hopefully, the first in a series that will dig more deeply into the problems of



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