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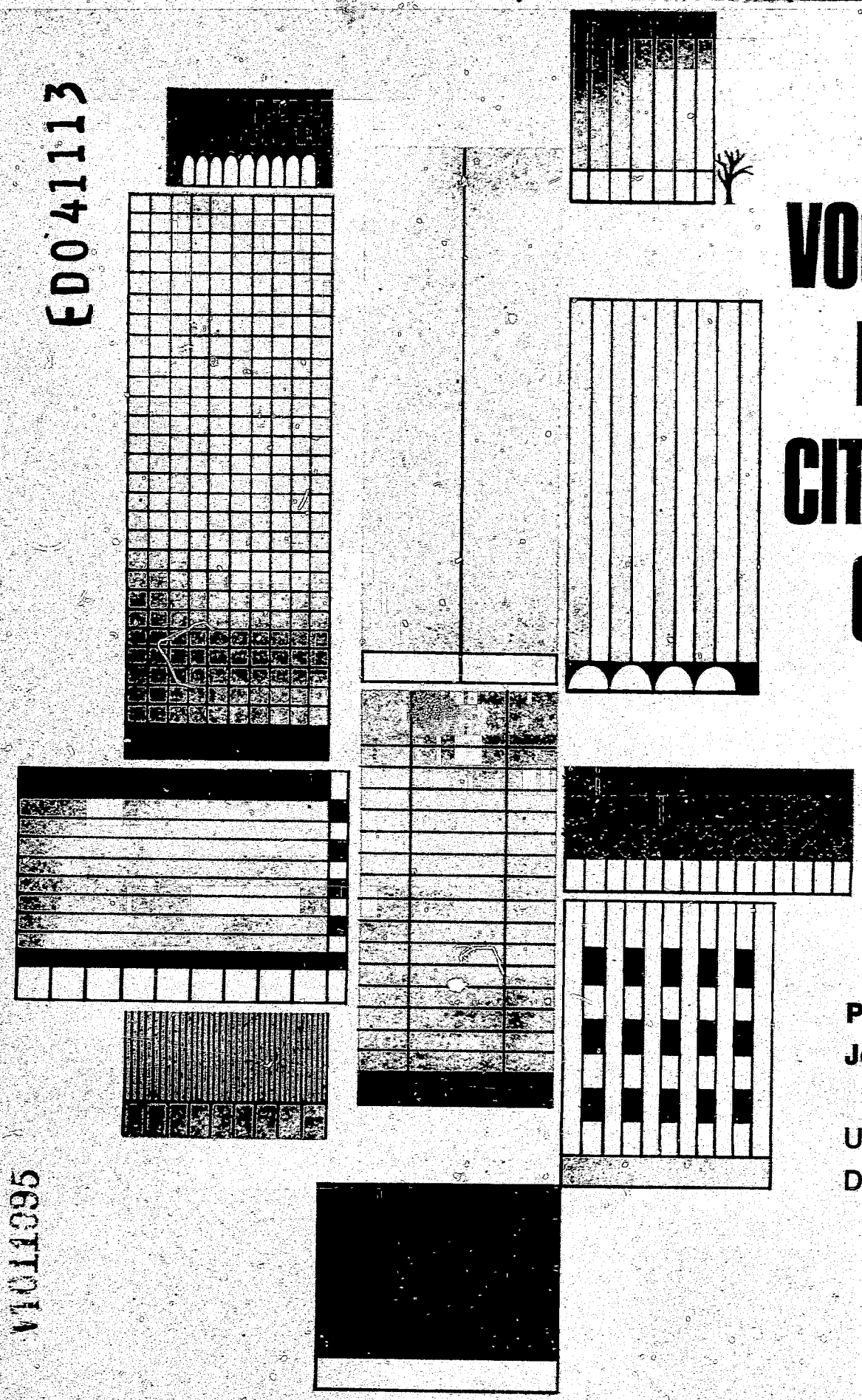
ABSTRACT

Vocational education in large urban areas is a key element in meeting the demands of economic, social, and technological change. The five major California urban centers included in this study are Long Beach, Los Angeles, Oakland, San Diego, and San Francisco. For each city, there is a report on the present program of vocational education at the community or junior college level, employment needs, manpower problems, relationships to apprenticeship, and significant trends. Brief descriptions are included for exemplary programs in Colorado, Minnesota, Michigan, Washington, D.C., Ohio, Pennsylvania, and New York. Recommendations are presented for each section of the report. Expanding the offerings of vocational education to more people in a wider range of occupations is proposed as Phase Two. (CH)



VOCATIONAL EDUCATION IN THE FIVE LARGE CITIES OF CALIFORNIA

Major Urban Centers Vocational Education Project

July 1, 1968 - August 31, 1969

Project Director
Joseph H. Stephenson

University of California, Los Angeles
Division of Vocational Education

VOCATIONAL EDUCATION IN THE FIVE LARGE CITIES OF CALIFORNIA

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

REPORT ON V.E.A. PROJECT 90-1609

July 1, 1968 - August 31, 1969

Project Director
Joseph H. Stephenson

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Division of Vocational Education

In cooperation with the State Department of Education

FOREWORD

Vocational education in the major cities of California is a key element in the adjustment of the city to contemporary social, economic, and technological stress.

The California State Department of Education encouraged representatives of the major city educational departments to participate in a study of vocational education problems. Many of these problems are related to the major cities. Funds to support the study were provided from California's allotment of funds from the Vocational Education Act of 1963. The project was assigned to the Division of Vocational Education, University of California, for general administration.

This progress report represents the work of the group concerned with the project during the year 1968-69. The project will continue throughout the year 1969-70.

Richard S. Nelson, Chief
Program Operations Unit
Vocational Education Section
California State Department of Education
Sacramento, California

PREFACE

The Division of Vocational Education, University of California, is an administrative unit of the University which provides special service to the California State Department of Education in matters related to the general development of vocational and technical education.

Work during the year 1968-69, concerning vocational education in the large cities of California, was essentially a fact finding phase. It was necessary to review and summarize the present program of vocational education, employment needs, manpower problems, relationships to apprenticeship, and to identify significant trends in each of these aspects of the project.

Proposed work for the year 1969-70, will be directed more toward action related activities leading to expanded offerings of vocational education which will serve more people with a wider range of opportunity for occupational preparation. Other groups, such as the Management Council of Los Angeles, and the Urban Coalition, will participate in the project during 1969-70.

Mr. Joseph H. Stephenson, former Director of Vocational Education in San Diego, was the director of the Major Urban Cities Project during 1968-69, and supervised the preparation of this progress report.

Melvin L. Barlow, Director
Division of Vocational Education
University of California
Professor of Education, UCLA

ACKNOWLEDGMENTS

It would be impossible to give recognition to each individual and agency instrumental in furnishing the data and statistics necessary to compile this report, but the following were outstanding in their assistance in locating the needed information.

Among individuals, recognition is given to:

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State Department of Employment
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State Department of Employment
San Diego Area

Wesley P. Smith, Director
Vocational Education
State Department of Education
Sacramento

Richard S. Nelson, Chief
Program Operations Unit
Vocational Education
State Department of Education
Sacramento

Roland M. Boldt, Coordinator
Fiscal Affairs
Vocational Education Section
State Department of Education
Sacramento

Lee B. Bodkin
Regional Coordinator
Vocational Education
Coastal Region

Jane Y. Mills
Regional Supervisor
Bureau of Homemaking
Coastal Region

Richard Wenstrom
Regional Coordinator
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The Sacramento Office
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California State Employment Service
Department of Research and Statistics

The Bureau of Industrial Education
California State Department of Education

The Southern and Coastal Regional Offices
California State Department of Education
Vocational Education Section

THE FIVE MAJOR URBAN CENTERS
INCLUDED IN THIS PROJECT

LONG BEACH

Long Beach Unified School District
including
Long Beach City College*

LOS ANGELES

Los Angeles Unified School District
including
Los Angeles Community Colleges*

OAKLAND

Oakland Unified School District
Peralta Junior College District

SAN DIEGO

San Diego Unified School District
including
San Diego Community Colleges*

SAN FRANCISCO

San Francisco Unified School District
including
San Francisco City College*

*Separate junior college districts may be formed July 1, 1970.

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INTRODUCTION

Section I

Purpose of the Project

This project focuses attention upon vocational education and its relationship to manpower, employment, and poverty in the five large cities in California: Long Beach, Los Angeles, Oakland, San Diego, and San Francisco.

This report represents the first phase of the total project, that of "gathering appropriate data as a basis upon which decisions can be made." It is divided into several sections presenting the position of the urban centers for that particular topic; i.e., Section II, Profiles of the Major Urban Centers, Section III, Employment and Manpower Problems in the Urban Centers, etc. Charts are used throughout the report for statistical comparisons between cities and the State of California.

The report brings to the attention of interested persons "future trends and exemplary programs" in Section V; the highlights and specific recommendations are presented in Section VI entitled "Summary." The statistical data used in this report are for comparative purposes and the indication of trends. Slight variations may be discovered, depending upon which source is used.

The total Major Urban Centers project consists of three large phases:

1. The gathering of appropriate data as a basis upon which decisions can be made;

2. The preparation of an overall plan for long range development of vocational education in the large cities. (Of <u>particular concern</u> is the planning of an expanded program of vocational education in the large cities. This program is needed to provide a better relationship among the unemployed, the employer's needs, and the available trained individuals, placing special emphasis on the problems of disadvantaged youth and adults.);

3. The implementation of the plan.

Included in the first phase of the project were the tasks of:

1. Identifying the current status of vocational education in the large cities in regard to enrollment, occupations served, characteristics of students, and other pertinent data;

2. Studying the potential of each of the cities for expanding program offerings in vocational education;

3. Summarizing employment data for the large cities (together with trends) and providing information concerning actual employment and demand for employment;

4. Making tentative recommendations concerning the expansion of vocational education in terms of critical employment demands.

Objectives of the Project

This project results from the realization that, at the present time, there is a need for:

1. A single, available inventory for vocational education offerings in the cities involved;

2. A method of measuring the nature and extent of vocational education, its values and shortcomings;

3. A method of determining the overall vocational education needs of youth and adults in the urban areas, especially disadvantaged persons, be they black, brown, or white. Without adequate occupational preparation and/or upgrading, these persons have little possibility of success in employment.

On the basis of a meeting held with the Bureau Chiefs in the Vocational Education Section of the State Department of Education and other state vocational education personnel, a meeting was called with the school superintendents and key personnel from each of the five urban centers.[1] The purpose of this meeting was to solicit the cooperation of each of the school districts through their superintendents. Support was solicited for authority to proceed with the project within their districts and to designate persons to be assigned as part of the team to establish guidelines for development of the project. After a detailed explanation of the objectives, the superintendents and all other school representatives present enthusiastically endorsed the project.

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[1]Those in attendance at above meetings are listed in Appendix A.

Organization of State Committee

A committee of twenty[2] was organized representing the various divisions of vocational education in each of the large urban areas. The representative committee members were officially appointed by their respective superintendents to work with the other urban center representatives. The committee, as a whole, has been accepted by Wesley P. Smith, State Director of Vocational Education, as a state committee concerned with the problems of vocational education in the five large urban areas of California. This is an action committee primarily concerned with extending and improving vocational education in the five largest school districts in California. The committee is charged with the responsibility of developing guidelines for the development of a sequentially organized program of vocational education based on a master plan for vocational education in the five large urban areas and tailored to the needs of each of the local areas.

The committee developed a list of common concerns related to vocational education. These concerns constitute the need:

1. To bolster the image of vocational education;
2. To obtain more adequate fiscal support;
3. To develop a clear employment picture;
4. To develop sufficient vocational guidance;
5. To attain articulation with the total program of education;
6. For vocational education to become more greatly concerned with placement and follow-up of students leaving the school program (whether through completion or dropout);
7. To take a more realistic approach to curriculum and program development;
8. To emphasize the training of disadvantaged youth and adults;

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[2] Committee members are listed in Appendix A.

9. To more clearly define "disadvantaged";

10. To tie education, business, and industry (including labor) closer together;

11. To consider more aggressive and persistent promotion of vocational education;

12. To develop vocational education programs around the needs of the individual;

13. To involve the total community, including prospective students;

14. To involve area planning to include areas on the perimeter of the urban centers;

15. To develop a blueprint for the future in vocational education;

16. To constantly stress communications;

17. To develop a realistic teacher recruitment and development program;

18. For the master plan to include all phases of vocational education: elementary, secondary, community colleges, adult, and community.

Tentative Outline for the Development of a Master Plan for Vocational Education

In order to coordinate the thinking of the committee, it was necessary to develop a list of the elements of a master plan for vocational education. Tentative guidelines were approved by the committee as a nucleus for the master plan around which each local area would develop its own plan.

These guidelines include:

1. A statement of philosophy of the school district, point of view, objectives;

2. A description and analysis of student needs, interests, and abilities; e.g., number and distribution of all students including the disadvantaged, dropouts, potentially unemployable, etc.;

3. A description and analysis of community needs, opportunities, and interests including a projection for the future;

4. A description of the educational and guidance programs presently serving the community;

5. An identification of educational programs and guidance services which are needed but which are not presently provided. These needs are to be projected to the future, including needs created by growth, technological change, etc.;

6. An identification of additional data which is needed, and steps which need to be taken in order to provide the program outlined in Item 5. Include for consideration:

   a. Research

   b. Curriculum development needs

      1) Elementary

      2) Secondary

      3) Post Secondary (Adult and Junior College level)

   c. Development of guidance services including placement and follow-up

   d. Teacher recruitment and education

      1) Pre-service

      2) In-service

   e. Organizational change needed

7. Plans for community involvement and for public information services;

8. Determination of probable costs and plans for financing (including federal, state and local sources of revenue);

9. Plans for continuing program evaluation and provision for change as needs are identified;

10. Timetable to be followed.

It was agreed that the committee should take advantage of any techniques, material, or information already available; many fine ideas have been prepared by the "Great Cities" group, State Departments of Education, State Departments of Employment, C.A.M.P.S., various individual school districts, and an exchange of material developed within the five districts.

The Procedure

Each urban center has organized a three committee structure involving: 1) leaders of the various divisions and disciplines within the district, as well as lay persons from the community, and 2) vocational supervisors and administrators with a community representative task force to gather and evaluate statistics.

Each city has appointed one person, who is also a member of the five urban centers committee, to act as chairman and contact persons for the local district. He also acts as leader for the local task force. Periodic reports have been submitted to the state committee not only to indicate progress but also to share techniques and problems in data gathering.

Each urban center will complete and submit its own report based on findings by the local district task force. The reports will follow the same pattern in varying degrees and should cover the information requested in the original charge to the group.

The original target date for the first draft of the local plans was April 30, 1969. Due to unforeseen problems in collecting data within the districts, the first draft should have been submitted on June 27 and the final one for the year on June 30, 1969.

The reports will not be as complete as first expected, but should act as a good base for further study.

Future Development of the Project

Targets for 1968-69 were not reached in every instance and the carryover should be completed in 1969-70. Further consideration should be given to these incomplete areas:

1. Determination of the current status of vocational education has been partially made, but certain decisions have not yet been made regarding interpretation of "what constitutes a vocational student" or "program."

2. Attempting to find data on enrollment of vocational students in years prior to 1966-67 seems to be a hopeless task, since several methods of counting enrollments have been recorded in terms of: 1) A.D.A., 2) single class enrollment, 3) each person counted only once, and 4) hours of attendance. The trends enumerated in this report are fairly accurate, but not auditable. Further study is needed. Recommendations will be included elsewhere in this report.

3. Studying the potential of each of the large cities for expanding program offerings in vocational education has been the focal point of the individual task force, and should be reflected in each of the local center reports. The job is far from complete and its continuance should be given high priority. In spite of insistance that determining unmet needs has nothing to do with money, financial reverses in all except one of the districts and the uncertainty of funding under V.E.A. 90-576 have had a demoralizing effect on this phase of the project.

Enough data has been collected to set up priorities for programs to take care of obvious unmet needs. In depth, program development will depend upon further research which should be included as part of the continuing project.

As a result of the task force's experiences in attempting to gather and report pertinent data, techniques and instruments to be used in future data gathering should be developed.

A study of the total procedure for reporting enrollments, graduates, placements, and dropouts is essential. This should include: 1) a review of the findings of the three pilot schools which are using the program developed by the State Department of Education in 1968, "A Proposed System for

Reporting Job Placement," and 2) a critical analysis of the wording and intent of data gathered on state forms V.E. 45 and V.E. 48.

In the past, the various segments of vocational education within the state, especially within each urban center, have done an excellent job of training and distributing information about development and training within their own selected sphere of influence. No arrangement has been made for a broader distribution. Through the efforts of the Urban Centers Vocational Education Project, a good start has been made in attempting to coordinate all phases of vocational education within the center, but its success will depend upon the continued help of the project. All members of the committee report invaluable results from group contacts and exchange of materials and ideas.

Based on a broad set of guidelines recommended by the total committee, each center has developed its own method of procedure for the collection, interpretation, and evaluation of data necessary to put the first phase of the project in motion. A separate report will be summarized and included in the directors' final report of Phase I of the project.

The momentum gained in the past few months should be capitalized on by continuing the project and expanding it to include at least five more centers with somewhat similar problems of high minority or disadvantaged concentration. The new areas could be selected from San Jose, Fresno, Stockton, San Bernardino, Sacramento, and Bakersfield.

In order to adequately serve the new areas and to continue to work more closely with the present five urban centers, it is recommended that a young person with administrative or supervisory potential be added to the staff. This could serve as an excellent training ground for future vocational leadership. His job would include:

1. Working closely with the director and the district representatives in continuing to collect pertinent data from the five urban centers and the new areas and organizing and evaluating it in terms of the project objectives;

2. Assisting the organization of sub-committees from the five urban centers to establish a uniform format which would be compatible in the collection and evaluation of data collected;

3. Assisting with the collection and evaluation of curricular materials to be used in the development of innovative career programs for the disadvantaged;

4. Assisting with the collection and exchange of new ideas between members of the group and from outside the urban centers and the state;

5. Assisting with the refining of raw data collected in order to make it more meaningful in the continuance of the project;

6. Assisting the urban centers representatives to develop guidelines for the establishment of meaningful cooperative or student intern training programs;

7. Assisting the urban centers personnel in establishing guidelines and techniques in developing more meaningful follow-up programs;

8. Assisting the urban centers in developing techniques and guidelines to minimize problems in the articulation of vocational education, K. through 14, adult, and community.

PROFILES OF THE MAJOR URBAN CENTERS

SECTION II

The Profile of the Urban Centers of Long Beach

Long Beach is located in the southernmost part of Los Angeles County, between Los Angeles Harbor District on the west and Orange County line on the east. Having a population of 490,700 persons, it is the fourth largest urban center included in this study. The total school population of 95,871 places it in fourth position in relation to the number of students served. Within the confines of the school district borders, the population density per square mile of area is approximately 3,833 persons, placing Long Beach in fourth place out of the five districts in terms of density or population congestion. The Long Beach Unified School District includes Long Beach Junior College.

The Long Beach Unified School District covers an area of 128 square miles. The district provides elementary education at 56 sites, junior high school education (grades 7-9) at 17 sites, high school education at seven sites, and a junior-senior high school at Avalon on Catalina Island, California. Long Beach City College provides junior college education at two campuses, includes adult training, and serves as the area vocational center for high school students. Statistics show that approximately 5,000 students are enrolled in the 12th grade, giving some indication of the number of youth reaching employable age annually.

Although the overall representation of minorities is low, 6.2% Negro and 4.5% Mexican-American, there is a relatively large number of minority families among the low income families living in the central district of the City of Long Beach. This city is the second largest in the County of Los Angeles and accounts for over 75% of the total population of the Long Beach School District. Lakewood, with a population of 87,200 is the district's second largest city; Signal Hill is the smallest. Housing in Lakewood consists almost exclusively of single unit dwellings; however, in the cities of Long Beach and Signal Hill multiple unit dwellings are predominant.

Long Beach and the surrounding communities of Hawaiian Gardens, Lakewood, and Signal Hill employ 194,600 persons. The major category of employment, according to statistics from the California State Department of Employment, is that of "manufacturing." Manufacturing employs 59,200 persons or 30.4% of the total. Next is "trade," accounting for 41,800 or 21.4% of the total. Unemployment is presently estimated at 4.2% overall, but manpower studies indicate that in this urban center, as in others in this study, unemployment of youth and minorities is much higher than the average, with youth unemployment being reported as high as 30%.

The map of Long Beach Unified School District which follows shows the borders of the district, the communities in and around the school district, the names and locations of the high schools and community colleges, and an indication of the locations of poverty within the district.

The Profile of the Urban Center of Los Angeles

Located 460 miles southeast of San Francisco and 120 miles northwest of San Diego, Los Angeles is the largest city in the United States in point of area, the second largest city in population, and is presently the fastest growing metropolis in the country. The city has spread in all directions to absorb many communities and surround several municipalities including Beverly Hills, San Fernando, and Santa Monica.

Los Angeles has a total population of 3,477,770 persons. The population in the downtown area and the immediately adjacent section is declining, while the central district total has been relatively static. As a result, the central portion of Los Angeles has been housing a progessively smaller share of the total population while the proportion of racial and ethnic minorities has increased significantly. At the southermmost section of the district (the Wilmington - San Pedro area), there is an exceptionally large proportion of Mexican-Americans and also a sizable Negro representation. The family incomes in this area are generally lower than the averages for both the city and county. The area just east of the central downtown district is also a low income community. Again, the total population has been declining while the number of Mexican-Americans has been growing progressively larger. Presently these residents constitute approximately two-thirds of the population of East Los Angeles. The dominance of Mexican-Americans, many of whom are foreign born, frequently creates language difficulties. Much of this area, with the exception of the City of Commerce, is poverty area. Generally, the areas north of central Los Angeles are expanding as the population grows. These growing areas are: Hollywood, North Hollywood, Van Nuys, and San Fernando. The overall representation of minorities in Los Angeles is estimated at 660,776 Negro residents, or 19%, and 552,965 Mexican-American residents, or 15.9%.

The Los Angeles Unified School District covers an area of 711 square miles. A school population of 737,196 students makes it the largest unified school district in California. The district provides elementary education at 447 sites, junior high school education at 74 sites, and high school education at 60 sites. Adult education is provided at 27 sites within the district. The Los Angeles Junior College District provides post high school education at 8 separate colleges covering a land area of 882 square miles and serving an enrollment of 81,243 students. Statistics showing that 34,473 students were enrolled in the 12th grade during 1968-69, gives some indication of the numbers of youth reaching employable age annually. According to the Manpower Coordination Committee in Los Angeles, there are approximately 176,000 persons who are in need of pre-employment or employment upgrading training.

Los Angeles employs some 1,159,000 persons. The largest categories of employment providing jobs for these people are: 1) "services" employing 284,200 persons, or 24.5% of the total, 2) "trade" employing 266,600 persons, or 23% and 3) "manufacturing" employing 250,800 persons, or 21.6% of the total. The

average rate of unemployment for the Los Angeles area is stated to be 4.5%. In the south central portion of Los Angeles, the last unemployment rate reported was 10.7% with the sub-employment rate estimated to be 33% of the residents of that general area. For Los Angeles proper, statistics show that 19.7% of the population lives in poverty areas. 11.6% of the residents live in poverty with incomes below the poverty level, incomes inadequate to maintain a decent standard of living.

The following map of the Los Angeles City Junior College District shows: 1) the borders of the Junior College and Unified School Districts, 2) the communities in and bordering the districts, 3) the names and locations of the district high schools and junior colleges, and 4) an indication of the locations of poverty within the district.

The Profile of the Urban Center of Oakland

Oakland, which lies on the east side of the San Francisco Bay, is the county seat of Alameda County. The San Francisco Bay Bridge joins Oakland to San Francisco which lies westward across the bay. Oakland has 19 miles of water frontage on the bay and is one of the nation's major deep water berthing facilities. This city has a population of 365,480 persons, with 30% or 110,050 persons being Negro, and 9.6% or 35.200 persons of Mexican-American descent. It is the smallest of the five major urban centers in this study. Oakland has a total school population of 85,438 students. The Oakland Unified School District covers an area of 52 square miles, thus showing a population density of 7,028 persons per square mile. The Oakland Unified School Distict provides elementary education at 65 sites, junior high school education at 15 sites, high school education at 8 sites, and adult education at one adult school and 4 high schools. Statistics show that 3,254 students were enrolled in the 12th grade in 1967-68, giving some indication of the number of persons reaching employable age annually.

The Oakland urban center is served by the Peralta Junior College District whose boundaries parallel that of Alameda County. The Peralta Junior College District covers an area of approximately 78 square miles with an estimated population of 625,000 persons. It includes the cities of Oakland, Berkeley, Alameda, Albany, Piedmont, and Emeryville. Presently the Peralta Junior College District operates two community colleges, Laney College in downtown Oakland, and Merritt College in the northern section of Oakland near Berkeley. Plans are moving forward to build four new community colleges in this district.

The racial characteristics of the City of Oakland are undergoing considerable change. In the period between 1960 and 1966 some 36,000 white persons moved to suburbia while 33,500 Negroes and other non-whites took their places in the central city, settling largely in the Oakland flatlands. The Oakland flatlands is an area running the entire north to south length of the city, extending from the bay on the west to

the foothills on the east. It is the location of Oakland's industry and commerce and is characterized by housing that is substandard and a rate of joblessness three times that of the remainder of Oakland. Employment in the Oakland area (including Emeryville, Piedmont, and San Leandro) totals 249,300 persons. The category of "trade" provides employment for the largest number of persons, 60,100 or 24.1% of the total. The category of "manufacturing" is second in size, employing some 53,900 persons or 21.6% of the total. The average rate of unemployment is approximately 8.4%, being the highest of the five urban centers studied. Youth unemployment was reported as high as 41% during the summer of 1966.

The following map of the Oakland Unified School District shows the borders of the Unified District (Peralta Junior College District is larger), the communities in and around Oakland, the names and locations of high schools and community colleges, and an indication of the location of poverty within the district.

The Profile of the Urban Center of San Diego

San Diego forms the geographical and metropolitan complex in the southwesternmost part of the state. It surrounds one of the finest natural harbors in the world and stretches across the coastal plains to the foothills. It is bounded on the south by Mexico and on the west by the Pacific Ocean. With a population of 692,600 and a central metropolitan area of 196 square miles, San Diego has a population density of 3,551 persons per square mile of area. It is the least congested of the urban centers. The minority representation in San Diego's population shows 69,260 persons or 10% being Negro, and 76,190 persons or 11% being Mexican-American. The large number of Mexican-Americans is indicative of San Diego's location as a border city. Among the cities of the United States, if the surrounding communities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, and National City are included, San Diego ranks 15th in population and 6th in land area. It is the oldest city in California, having been founded in 1769. In population, San Diego is the third largest urban center included in this study, and with a total school population of 161,515, it is the second largest unified school district in California, being surpassed only by Los Angeles.

The San Diego Unified School District provides elementary education at 116 sites, junior high school education at 17 sites, and high school education at 14 sites in the district. The San Diego Community Colleges include both junior college and adult division education at 4 junior colleges and 7 adult school locations. San Diego's fourth junior college, Miramar College, is scheduled to be open for enrollment in September, 1969. San Diego Evening College is one of the first extended day programs

in California to be accredited as a separate and distinct junior college while using the facilities of other parent schools.

According to State Department of Employment statistics, San Diego and the immediately surrounding areas employ 336,300 persons. The two categories of employment that provide jobs for the greatest segment of the population are the categories of "service," employing 74,800 persons or 22.2% of the total, and "government," employing 74,400 persons or 21.2% of the total. These categories are closely followed by "trade," wherein 71,300 persons or 21.2% of the total are employed. The unified school district records show that 6,400 students were enrolled in the 12th grade during the 1967-68 school year, giving some indication of the number of youth reaching employable age annually. The San Diego Manpower Coordinating Committee indicated in their C.A.M.P.S. report that some 45,000 persons in the San Diego County area were in need of either employment preparation or employment upgrading training. These statistice underscore the continuing need for vocational education in this area.

The following map of the San Diego Unified School District shows the borders of the district, the communities in and around the school district, the names and locations of the high schools and community colleges, and an indication of the locations of poverty within the district.

The Profile of the Urban Center of San Francisco

Located on the tip of a narrow peninsula, San Francisco functions as the administrative center for the Bay Area, providing headquarters for many financial, transportation, manufacturing, and government establishments. Its port facilities are extensive. It is rated as the nation's second ranked financial center. Based upon the 1967-68 C.A.M.P.S. report, the population of San Francisco is 725,000 persons. The land area of San Francisco is only 45.5 square miles, indicating a population density of 15,772 persons per square mile. San Francisco is the second most populous city in California and has the highest population density of any city in the state. Minority representation in San Francisco is 477,200 persons or 14.3% Negro, 64,000 or 8.8% Mexican-American, and 81,100 or 11.1% in the "other" category, reflecting San Francisco's large colony of Orientals in Chinatown.

The San Francisco Unified School District provides elementary education at 103 sites, junior high school education at 16 sites, and high school education at 10 sites. San Francisco has one community college serving the area. The total school population of 135,957 makes it the third largest school district in the state. Some 5,800 students are enrolled in the 12th grade giving some indication of

the number of youth reaching employable age annually.

San Francisco, like other large cities, shows a disparity between the types of skills needed to run the city's diverse economy and the types of skills that are possessed by its residents. As a result, tens of thousands of commuters, mainly in the professional, technical, and managerial occupations, enter the city daily from the surrounding Bay counties, while workers residing in the city who lack skills and training required for these jobs are often frustrated in the search for work. Within the core of the city there is a growing number of minority workers who carry the burden of poor job market preparation. Even though the average rate of unemployment is 4.4% (unemployment as of February, 1969 was approximately 62,600), the unemployment rate for minority persons is approximately 11%, or about three times as much as the city's average. Youth unemployment has been reported as high as 35% in the summertime.

San Francisco employs 525,700 persons within the city-county limits. The category of employment that provides the greatest number of jobs is that of "services," showing an employment of 116,800 persons or 22.2% of the total. This category is followed by "trade," which employs 108,800 persons or 20.6% of the total.

The following map of the San Francisco Unified School District shows the borders of the district, the communities within San Francisco, the names and locations of the high schools and the community colleges, and an indication of the locations of poverty within the district.

NOTE: Maps and charts referred to in this section will be found on pages 22-33.

Data included in this section was taken from the following sources:

1. California Community Labor Market Surveys, 1967-68, Department of Employment, Division of Research and Statistics;

2. Annual Financial and Statistical Data, Urban Centers School Districts;

3. Materials collected by the individual Task Forces;

4. Representatives of Chambers of Commerce;

5. The California Cooperative Manpower Plan - C.A.M.P.S., 1969;

6. California State Department of Education.

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

1967-68 PROFILE OF THE URBAN CENTER OF LONG BEACH

POPULATION

Total 490,700 White 427,400 -- 87.1% Negro 30,423 -- 6.2% Mexican-American 22,080 -- 4.5% Other 10,795 -- 2.2%

EMPLOYMENT

Total Employment 194,600 -- 100%

Agriculture-Fishing-Mining	3,600 -- 1.8%	Manufacturing	59,200 -- 30.4%
Construction	7,500 -- 3.8%	Services	33,200 -- 17.0%
Finance-Insurance-Real Estate	5,000 -- 2.5%	Trade	41,800 -- 21.4%
Government (Federal-State-Local)	35,600 -- 18.2%	Transportation-Communication-Utilities	8,700 -- 4.4%

EDUCATION

	Elementary	Junior High	High School	Continuation	Junior College	Adult
Number of Schools	56	14	6	3	1	
School Population	38,383	16,329	15,922	700	21,020	3,260

Total Number of Schools 80 Total School Population 95,871

YOUTH REACHING EMPLOYABLE AGE - ANNUALLY

1962-63 4,846 1964-65 5,473 1967-68 5,011

UNEMPLOYMENT

Total 8,173 Average % Unemployment 4.2% % Unemployment - Youth 30% % Non-White Not Available

GENERAL STATISTICS

Land Area (Square Miles) 128.45 Population Density/Square Mile 3,833

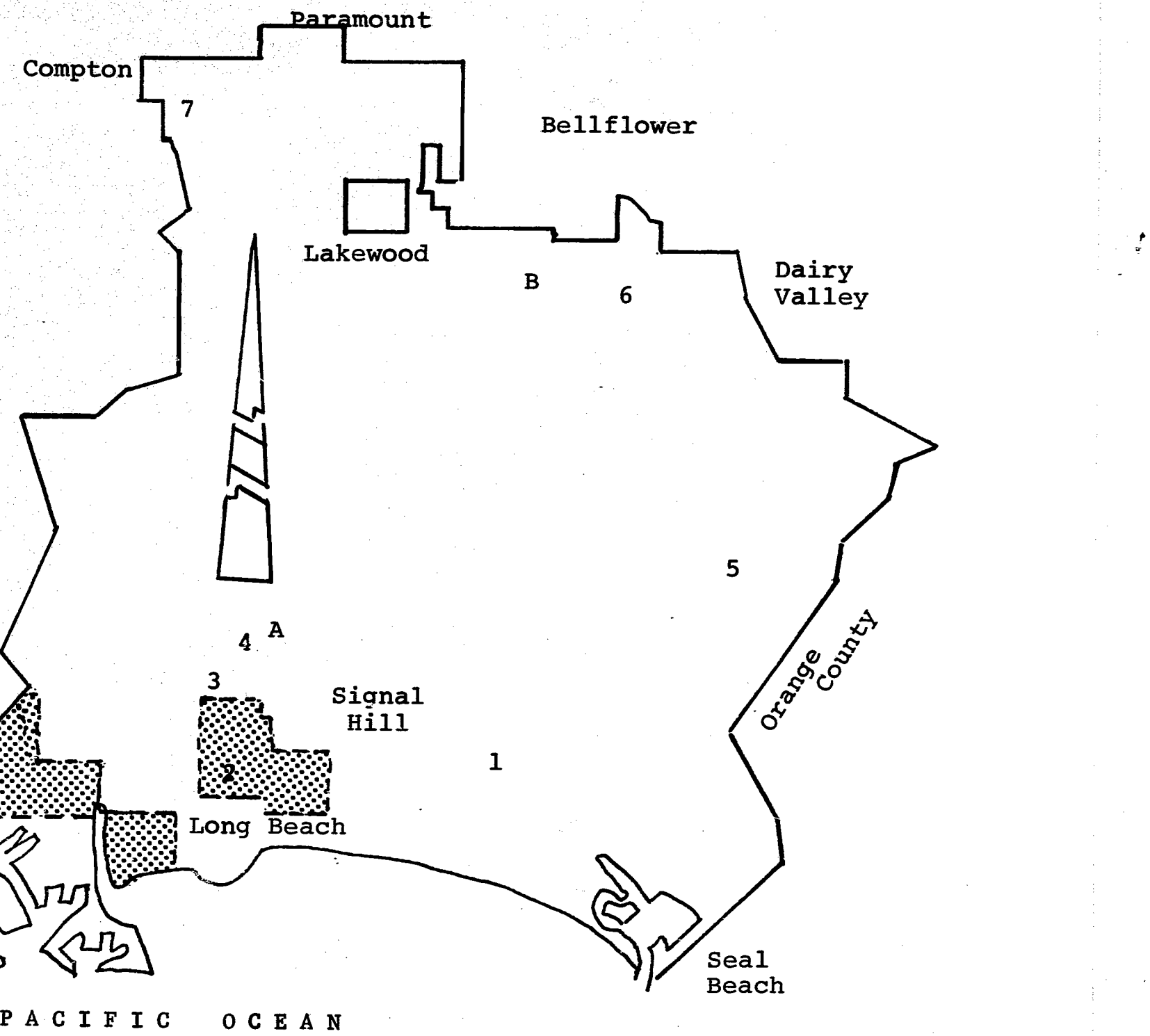
LONG BEACH UNIFIED SCHOOL DISTRICT

Showing high schools (number)
junior colleges (letter)

1. Wilson
2. Boyd
3. Polytechnic
4. Reid
5. Millikan
6. Lakewood
7. Jordan
8. Avalon (Catalina Island)

A. Long Beach City College
Bus. & Tech. Campus

B. Long Beach City College
Lakewood Campus



MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

1967-68 PROFILE OF THE URBAN CENTER OF LOS ANGELES

POPULATION

Total 3,477,770 White 2,121,440 -- 61% Negro 660,776 -- 19% Mexican-American 552,965 -- 15.9% Other 142,589 -- 4.1%

EMPLOYMENT

Total Employment	1,159,000 - 100%		
Agriculture-Fishing-Mining	2,100 -- .1%	Manufacturing	250,800 -- 21.6%
Construction	27,800 -- 2.3%	Services	284,200 -- 24.5%
Finance-Insurance-Real Estate	118,500 -- 10.2%	Trade	266,600 -- 23.0%
Government (Federal-State-Local)	130,800 -- 11.2%	Transportation-Communication-Utilities	78,200 -- 6.7%

EDUCATION

	Elementary	Junior High	High School	Continuation	Junior College	Adult
Number of Schools	447	74	58	2	8	27
School Population	376,897	142,730	133,939		81,243	83,630

Total Number of Schools 616 Total School Population 818,439

YOUTH REACHING EMPLOYABLE AGE - ANNUALLY

1962-63 27,975 1964-65 30,975 1967-68 34,473

UNEMPLOYMENT

Total 52,155 Average % Unemployment 4.5% % Unemployment - Youth 30% % Non-White 10.7%

GENERAL STATISTICS

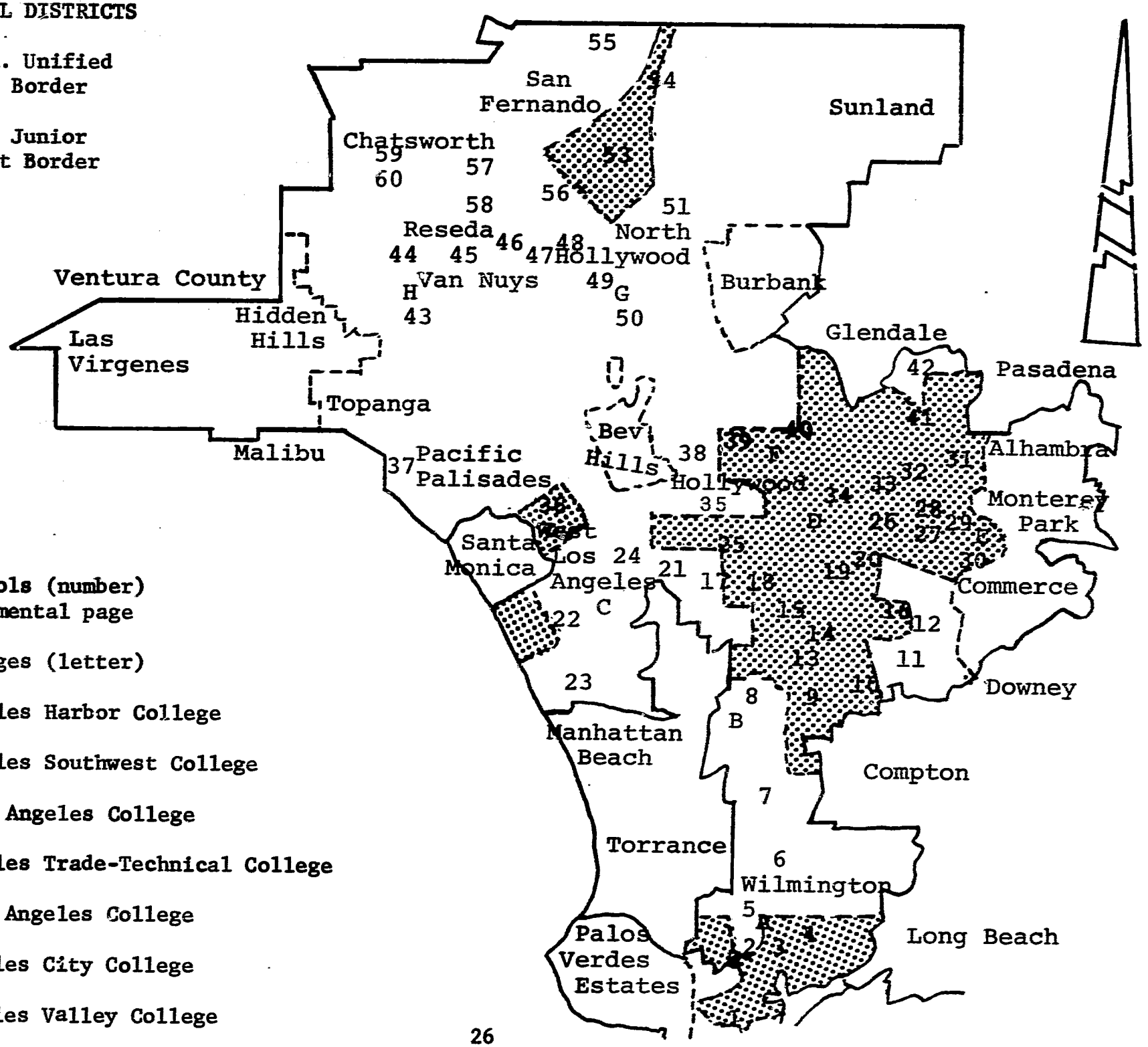
Land Area (Square Miles) Unified - 711 J.C. - 882 Population Density/Square Mile 4,891

LOS ANGELES SCHOOL DISTRICTS

Broken Line - L.A. Unified School District Border

Solid Line - L.A. Junior College District Border

POVERTY AREA



Showing high schools (number)
See supplemental page

junior colleges (letter)

A. Los Angeles Harbor College

B. Los Angeles Southwest College

C. West Los Angeles College

D. Los Angeles Trade-Technical College

E. East Los Angeles College

F. Los Angeles City College

G. Los Angeles Valley College

H. Los Angeles Pierce College

HIGH SCHOOLS IN THE LOS ANGELES UNIFIED SCHOOL DISTRICT

1. San Pedro
2. Cooper
3. Adult Education Center
4. Banning
5. Narbonne
6. Carson
7. Gardena
8. Washington
9. Locke
10. Jordan
11. South Gate
12. Bell
13. Agriculture Center
14. Fremont
15. Riis
16. Huntington Park
17. Crenshaw
18. Manual Arts
19. Garden Gate
20. Jefferson
21. Dorsey
22. Venice
23. Westchester
24. Hamilton
25. Widney
26. Metropolitan
27. Jackson
28. Roosevelt
29. Ramona
30. Garfield
31. Wilson
32. Lincoln
33. Rose
34. Belmont
35. Los Angeles
36. University
37. Palisades
38. Fairfax
39. Hollywood
40. Marshall
41. Franklin
42. Eagle Rock
43. Taft
44. Canoga Park
45. Adult Occupational Training
46. Reseda
47. Birmingham
48. Van Nuys
49. Grant
50. North Hollywood
51. Frances Polytechnic
52. Verdugo Hills
53. San Fernando
54. Sylmar
55. Miller
56. Monroe
57. Granada Hills
58. Cleveland
59. Chatsworth
60. Aggeler

1967-68 PROFILE OF THE URBAN CENTER OF OAKLAND

POPULATION

Total 365,480 White 201,170 -- 55% Negro 110,050 - 30.1% Mexican-American 35,200 -- 9.6% Other 19,060 -- 5.2%

EMPLOYMENT

Total Employment 249,300 -- 100%

Agriculture-Fishing-Mining	900 -- .3%	Manufacturing	53,900 -- 21.6%
Construction	14,600 -- 5.8%	Services	45,800 -- 18.3%
Finance-Insurance-Real Estate	11,400 -- 4.5%	Trade	60,100 -- 24.1%
Government (Federal-State-Local)	36,400 -- 14.6%	Transportation-Communication-Utilities	26,200 -- 10.5%

EDUCATION

	Elementary	Junior High	High School	Continuation	Junior College	Adult
Number of Schools	65	15	6	2	2	5
School Population	36,630	13,392	11,181	3,109	14,334	6,792

Total Number of Schools 90 Total School Population 85,438

YOUTH REACHING EMPLOYABLE AGE - ANNUALLY

1962-63 2,901 1964-65 3,625 1967-68 3,254

UNEMPLOYMENT

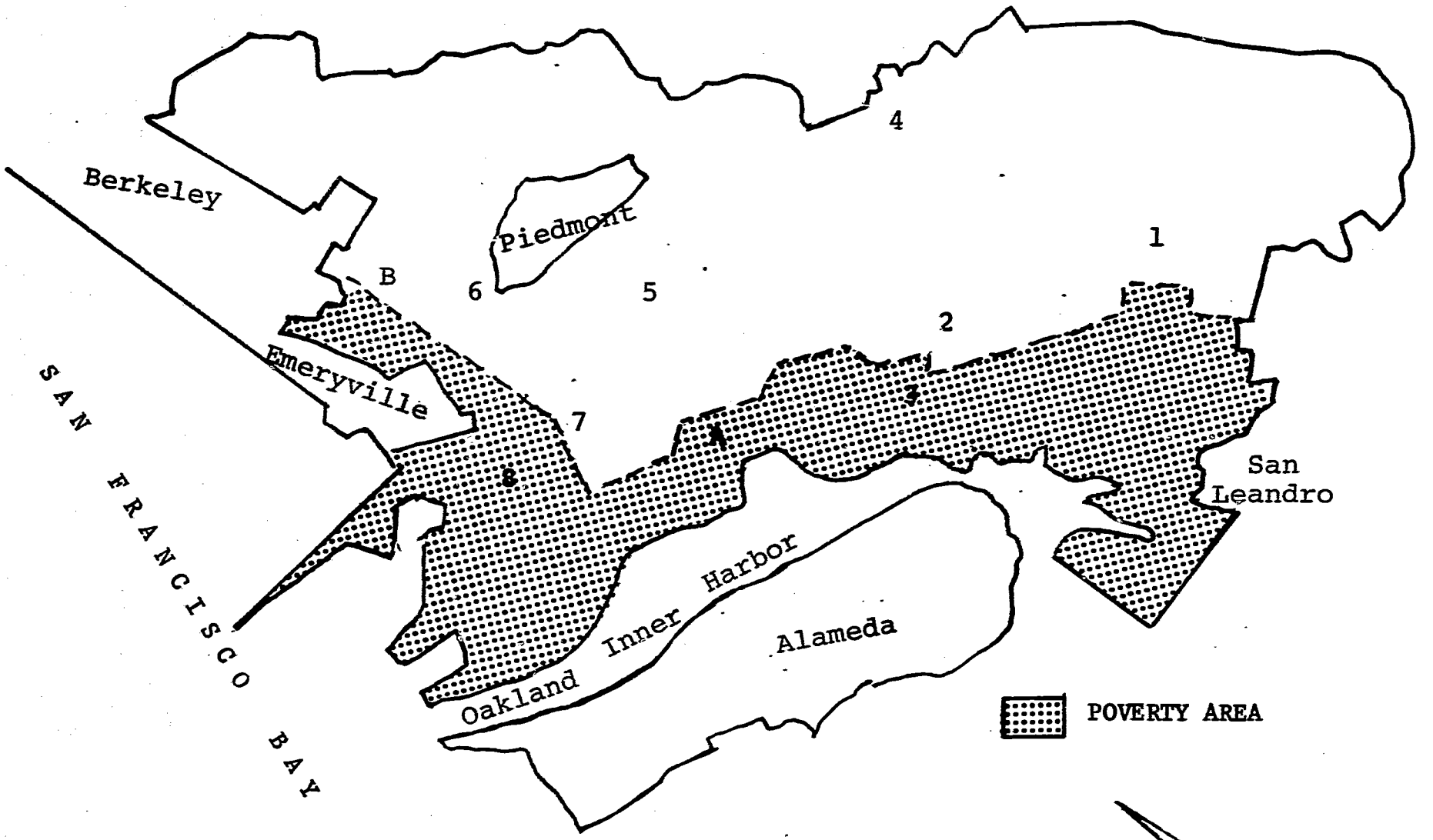
Total 13,700 Average % Unemployment 8.4% % Unemployment - Youth 41% % Non-White 12.6%

GENERAL STATISTICS

Land Area (Square Miles) 52 Population Density/Square Mile 7,028

OAKLAND UNIFIED SCHOOL DISTRICT

Showing Oakland Unified School District high schools (number)
Peralta Junior College District colleges (letter)



1. Castlemont
2. Fremont
3. Dewey
4. Skyline
5. Oakland
6. Oakland Technical
7. Grant
8. McClymonds

A. Laney College
B. Merritt College

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

1967-68 PROFILE OF THE URBAN CENTER OF SAN DIEGO

POPULATION

Total 692,600 White 533,300 -- 77% Negro 69,260 -- 10% Mexican-American 76,190 -- 11% Other 13,850 -- 2%

EMPLOYMENT

Total Employment 336,300 -- 100%

Agriculture-Fishing-Mining	2,700 -- .8%	Manufacturing	61,600 -- 18.3%
Construction	18,500 -- 5.5%	Services	74,800 -- 22.2%
Finance-Insurance-Real Estate	15,900 -- 4.7%	Trade	71,300 -- 21.2%
Government (Federal-State-Local)	74,400 -- 22.1%	Transportation-Communication-Utilities	17,100 -- 5.0%

EDUCATION

	Elementary	Junior High	High School	Continuation	Junior College	Adult
Number of Schools	116	17	11	3	4	7
School Population	74,275	27,279	22,440	1,015	17,843	18,664

Total Number of Schools 157 Total School Population 161,515

YOUTH REACHING EMPLOYABLE AGE - ANNUALLY

1962-63 4,500 1964-65 6,200 1967-68 6,400

UNEMPLOYMENT

Total 14,125 Average % Unemployment 4.2% % Unemployment - Youth 15.5% % Non-White 9.0%

GENERAL STATISTICS

Land Area (Square Miles) 196 Population Density/Square Mile 3,551

SAN DIEGO UNIFIED SCHOOL DISTRICT

Showing high schools (number)
junior colleges (letter)

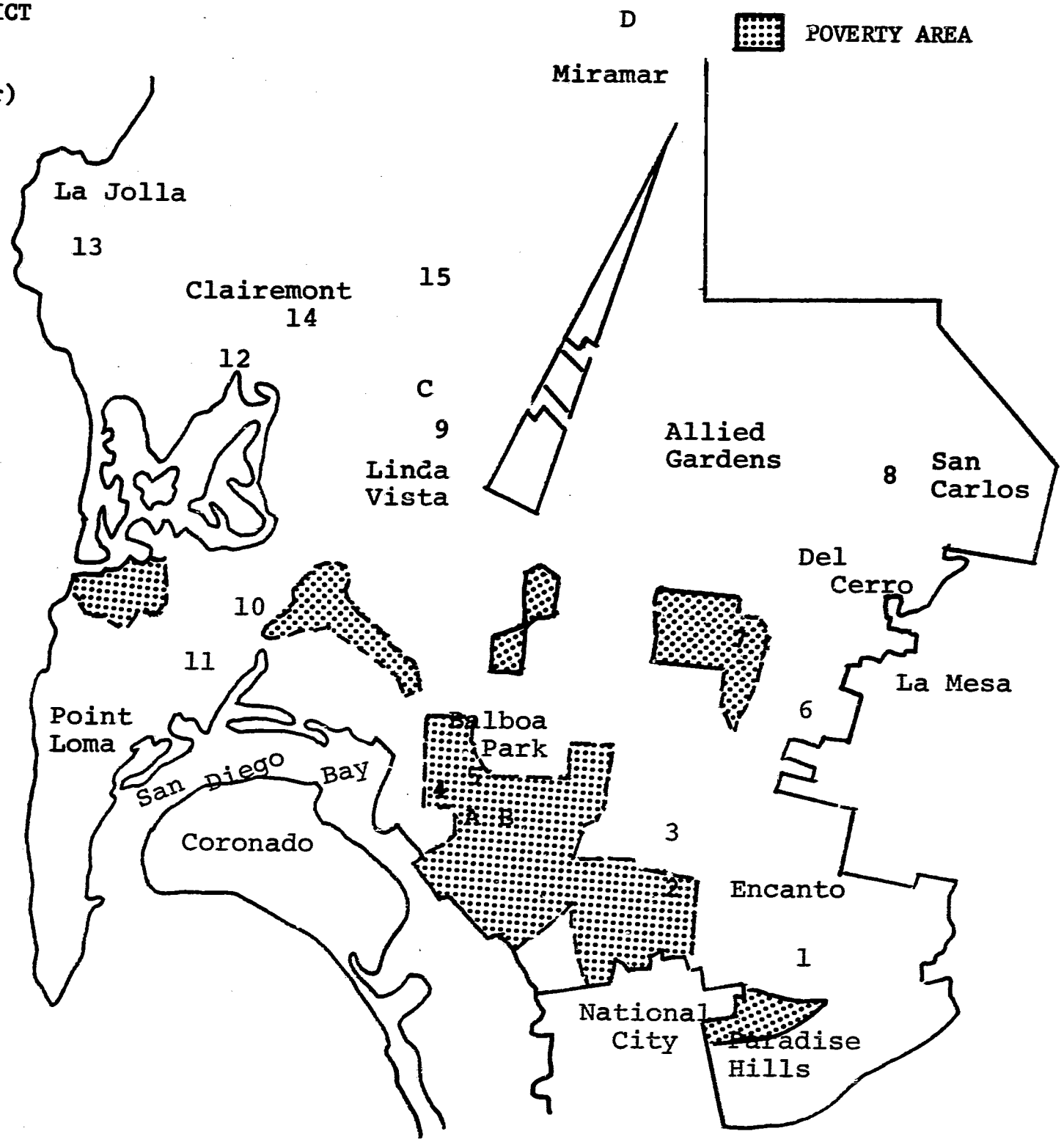
1. Morse
2. Lincoln
3. Wright Brothers
4. Snyder
5. San Diego
6. Crawford
7. Hoover
8. Henry
9. Kearney
10. Midway
11. Point Loma
12. Mission Bay
13. La Jolla
14. Clairemont
15. Madison

A. San Diego City College

B. San Diego Evening College

C. Mesa College

D. Miramar College



1967-68 PROFILE OF THE URBAN CENTER OF SAN FRANCISCO

POPULATION

Total 725,000 White 477,200 -- 65.8% Negro 103,700 - 14.3% Mexican-American 64,000 -- 8.8% Other 81,000 -- 11.1%

EMPLOYMENT

Total Employment	525,700 -- 100%		
Agriculture-Fishing-Mining	1,100 -- .2%	Manufacturing	60,200 -- 11.4%
Construction	21,500 -- 4.0%	Services	116,800 -- 22.2%
Finance-Insurance-Real Estate	64,200 -- 12.2%	Trade	108,800 -- 20.6%
Government (Federal-State-Local)	92,700 -- 17.6%	Transportation-Communication-Utilities	60,400 -- 11.4%

EDUCATION

	Elementary	Junior High	High School	Continuation	Junior College	Adult
Number of Schools	103	16	9	1	1	6
School Population	51,577	20,954	20,288	946	12,126	29,528

Total Number of Schools 136 Total School Population 135,954

YOUTH REACHING EMPLOYABLE AGE - ANNUALLY

1962-63 _____ 1964-65 _____ 1967-68 5,850 Grads
1,745 Dropouts

UNEMPLOYMENT

Total 62,600 Average % Unemployment 4.4%* % Unemployment - Youth 35% % Non-White 11%

GENERAL STATISTICS

Land Area (Square Miles) 45.5 Population Density/Square Mile 15,772

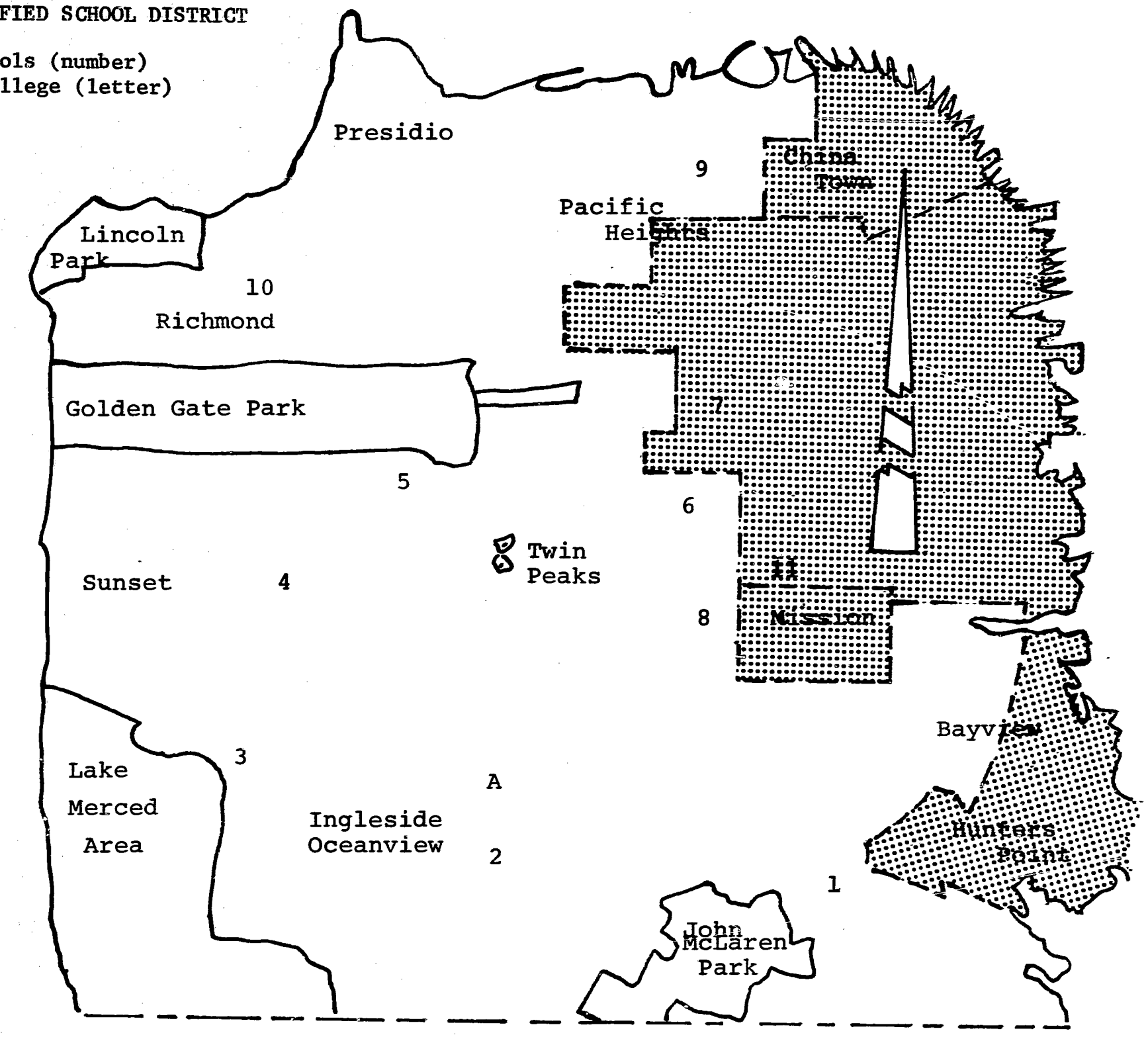
*. . . .

SAN FRANCISCO UNIFIED SCHOOL DISTRICT

Showing high schools (number)
junior college (letter)

1. Wilson
2. Balboa
3. Lowell
4. Lincoln
5. Polytechnic
6. Mission
7. Opportunity
8. Gompers
9. Galileo
10. Washington
11. O'Connell

A. City College of San Francisco



EMPLOYMENT AND MANPOWER PROBLEMS IN THE URBAN CENTERS

SECTION III

Employment in the Urban Centers

Employment totals and trends have been established for each of the five urban centers in this study. The figures used were taken from the California Community Labor Market Survey produced by the California State Department of Employment. The 1963-64 and 1967-68 issues were used. Statistics were taken for July of each year. In all but one case, the borders of the community labor market were not coterminous with that of the school district in that area. In these cases the data reflects the community labor market that shows the employment of the school district area and the smallest possible adjacent area. Specific information showing employment within the confines of the borders of a unified school district was not available.

The State Department of Employment indicates that the total civiliam employment for each community area was estimated by combining independent estimates of seven component parts: 1) employment covered by the California Unemployment Insurance Code, 2) Federal Government employment, 3) railroad employment, 4) non-insured wage and salary employment, 5) employment in private households, 6) agriculture employment, and 7) self-employed and unpaid family workers.

Five-year trends in employment for each of the five urban centers are clearly defined on the following pages, but when an attempt to identify trends in jobs or occupations in the urban centers was made, no information was available other than that used from the Department of Employment. Interpretation of this data with respect to skills training, shortage occupations, or vocational education was difficult as no subcategory or relationship to the instructional codes and titles used by the California State Department of Education could be readily established. A future in-depth study of these relationships and vocational education planning should be strongly considered.

It is recommended that the five districts work more closely with the State Employment Service and other similar agencies as a source of information regarding trends. This information can also be a valuable source of information for counselors.

Additional enrollment in vocational classes should be generated in relation to needs indicated by records of the State Employment Service and similar agencies. This research could also be used to identify new areas of training that will be needed in order to adequately prepare students for emerging occupations.

It is recommended that the State Employment Service and State Department of Education work together to more closely identify areas of employment through cross reference of D.O.T. labor statistics and H.E.W. code. There is a need to separate the large urban areas, the labor market areas, and California State

Employment statistics to show that individual cities can more easily identify data within their borders. It would be especially pertinent to separate Long Beach from Los Angeles and Oakland from San Francisco, and the urban center of San Diego from the community or county of San Diego, as is presently the case.

Employment and Manpower Problems in Long Beach

Statistics showing the trends in employment for Long Beach reflect the employment for the Long Beach labor market. This labor market area includes Long Beach, Lakewood, Signal Hill, and Hawaiian Gardens. Three of the four communities are located within the boundaries of the Long Beach Unified School District.

Total employment for this area shows an increase of 7.8% or 14,200 persons occuring between July, 1963 and July, 1968. The data shows that Long Beach registers an increase in employment in only three of the eight categories in the last five years. The major increase was in the area of "manufacturing," showing an increase of 53.7% in five years. "Services" increased in employment by 11% in the same period of time and the category of "government" also showed an increase of 7.8%. In all other categories, those of "agriculture," "construction," "finance," and "transportation," a loss of at least 20% was reflected. The category of "trade" stayed almost static in this five-year period showing a loss of only 600 persons or a drop of 1.3%. Employment has increased much more rapidly than the population in the last five years, moving the Long Beach area from one of labor supply to one of labor demand. Extensive hiring and training of production workers in aircraft reduced the local labor supply available to employers in the categories of "trade" and "services." Despite lay-offs in 1968 aircraft manufacturing, shortages of machinists, of tool and die makers, milling machine operators, form builders, and sheet metal workers persist. Skilled mechanics, including auto repair specialists are in demand. Engineers and supporting technical personnel are also in demand; there are openings for stenographers, typists, and computer specialists. Unemployment in the Long Beach area shows a steady decrease over the last five years, moving from 6.0% in 1963 to 4.2% in 1968.

Employment and Manpower Problems in Los Angeles

Statistics showing the trends in employment in Los Angeles were taken from the community labor market area of Los Angeles for the years 1963-64. This community labor market area was then divided so that equivalent statistics were taken from four separate labor market areas for 1967-68. The areas which

contributed to the employment statistics for 1968 were: Alhambra, East Los Angeles, Florence, Hollywood, and Central Los Angeles. By using these four labor market areas, employment in the following communities in and adjacent to the Los Angeles Unified School District was tabulated: Alhambra, Bell, Bell Gardens, Beverly Hills, Central Los Angeles City, Commerce, Cudahy, Hollywood, Huntington Park, Maywood, Monterey Park, San Gabriel, South Gate, and Vernon. This will reflect an identifiable trend in employment categories for the past five years, but a future in-depth study to identify more accurately employment needs should be accomplished.

Total employment in this area shows an additional 54,200 workers in the last five years for a 4.8% increase. Increases in employment have been registered in all but three of the labor categories, with the area of "government" showing the largest gains with an increase of 21,000 persons or 19%. Second highest gains were indicated by the category of "services" which showed an increase of 17%. "Construction" was the one category that decreased by a major amount, showing a loss in employment of 16,400 workers or a drop of 37%. "Transportation" and "trade" both registered slight gains of less than 3% each. The central portion of Los Angeles provides residence for only 8% of the county population but provides jobs for 19%, thus it is a major place of work for residents of outlying areas. There is demand for a variety of skills. In the professional group, accountants, auditors, draftsmen, engineers, programmers, librarians, registered nurses, medical technicians, and teachers are sought. People with good office skills are also in demand. Specialty sales persons are needed and job opportunities for cooks, waitresses, and culinary workers are good. Numerous jobs are also available in the garment industry, which is heavily concentrated in the downtown area. At the southernmost section of the district (the Wilmington-San Pedro area), a shortage of skilled workers and a surplus of unskilled workers exists. This occurs primarily because of the substantial number of workers who commute daily from nearby Los Angeles and Orange County. The local labor supply consists mainly of Mexican-Americans, a majority of whom speak Spanish only. Lack of private transportation and an inadequate public transportation system further handicaps these workers. The area just east of the central downtown district has all the urban problems of an inner city. The community has a larger proportion of the metropolitan area's employment than of its population, but unemployment is well above the average. Manpower for staffing the county government facilities, the wholesale distribution firms, and the local manufacturing plants are met by the large numbers of workers who commute into the area. During the past year there has been increased outcommuting (by bussing) of residents to production line jobs in other nearby communities.

The major manpower problems in the Los Angeles area center around substantial and persistent unemployment and underemployment. The unemployment rate during the spring of 1968 was 4.5%. Estimates of the unemployment rate in low income areas are at least twice as high, with high youth unemployment approaching 30%. Unemployment in Los Angeles has consistently been above the national average. Closely associated with unemployment is widespread poverty and social disorganization, especially among minority

group families. Approximately 25% of the residents of South Central and East Los Angeles were members of families with incomes below the poverty level. A very large part of this problem can be attributed to avoidable unemployment which could be alleviated by training for available jobs.

Employment and Manpower Problems in Oakland

Statistics that show employment in this area are from the community labor market of Oakland. This labor market includes Oakland, Emeryville, Piedmont, and San Leandro. Both Emeryville and San Leandro are outside the borders of the Oakland Unified School District; therefore, the employment figures reflect workers in Oakland and the immediately adjacent area. Employment shows an increase of 18,600 workers or an 8% increase in the total. The category of "government" shows the largest increase in the last five years, with a gain of 7,400 people or 23.5%. "Services" was next, having an increase of 6,000 workers or 25%. Two categories declined in employment during the past five years, those of "construction" and "manufacturing," although in both categories the decline was small.

Oakland has many of the problems that are typically associated with central cities and metropolitan areas. The downtown business area has been having difficulty competing with outlying shopping centers; manufacturing firms in the congested areas are relocating in more spacious areas when they expand or modernize their plants. The resident Oakland work force is characterized by substantial numbers of persons competing for jobs in lesser skilled occupations such as laborers, operators, and service workers. In contrast, in the clerical, technical, and skilled occupations there is a continual demand. Well-qualified stenographers and typists are in chronic shortage as are experienced programmers and other computer specialists. Skilled metal workers such as machinists and welders are generally in short supply and there is always a demand for medical personnel, particularly for registered nurses. Many of Oakland's professional, technical, and clerical jobs are filled by commuters, the majority of whom live outside of Alameda County. Canning and other related industries supplying containers give rise to many opportunities for unskilled workers during the summer months only.

During the summer of 1966, a special survey of Oakland revealed an unemployment rate of 8.4% of the labor force. There is little indication that this situation has changed appreciably since then. In the Oakland flatlands (an area running north and south and from the bay to the foothills), the area's poverty problems are most severe, showing unemployment at 13% and underemployment at more than 30%. Within this flatland area live 80% of all Negro residents of the city, 60% of all Mexican-American residents, 40% of all other non-white residents, but only 20% of all white residents.

Employment and Manpower Problems in San Diego

Statistics showing the levels of employment for San Diego were obtained from the San Diego community labor market area. This labor market area includes the communities of San Diego, Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, and National City. The San Diego Unified School District includes only the first community listed; therefore, the employment data reflects the total metropolitan area surrounding San Diego. No data that showed employment within the San Diego Unified School District was available.

Every employment category in the San Diego area shows an increase over the past five years. Total employment is up 69,700 people or 2.6%. "Government" is up 22,900 persons or 44.4%, "services" is up 18,900 workers or 33.8%, "trade" and "transportation" are up 23% each, and "finance" is up some 2,700 persons or 20%. The least amount of gain is shown in "agriculture, fishing, and mining," having an increase in its work force of 100 persons or 3.8% over the past five years. The categories of "government" and "services" are two that are expected to continue their growth; "services" is particularly expected to grow because tourism and recreation are a major source of income to the San Diego economy. Employment in the community is evenly divided among "services," "government," "trade," and "manufacturing." The labor market community of San Diego accounts for approximately 78% of the population of the county, but due to the centralization of industry, approximately 82% of the county's work force is employed within the community. The local labor force is supplemented by a sizable influx of new residents each year, and since the urban area is interconnected by a modern freeway system, there is a high degree of mobility among workers within the community. The most notable shortage of workers recently has been the scarcity of skilled construction workers and machinists. There is, however, a sizable pool of workers whose skills need some upgrading. The unemployment rate for the San Diego area has steadily decreased from 7.4% in 1963 to 4.1% in 1968. The rate of unemployment for non-white residents in the area has been estimated at approximately 9%, with youth unemployment as high as 15.5%. The C.A.M.P.S.* report states that in San Diego County there is in excess of 45,600 persons in need of occupational training. The report also indicates that some 7,000 persons are presently on welfare with a total of 19,000 being poverty stricken.

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*Produced by San Diego Manpower Coordinating Committee

Employment and Manpower Problems in San Francisco

Statistics showing the trends in employment were taken from the community labor market area of San Francisco. This labor market area, the county, the city, and the unified school district, have coterminous borders so that the data accurately reflects the employment of the school district area.

The total employment in the area shows a five-year increase of 46,400 persons or 9.6%. The category of "agriculture" shows the greatest percentage increase of 37.5%, but the number of persons involved in this increase is small, being only 300. The category of "government" has had the next largest percentage of increase with 23% or 17,400 persons. "Services" shows the largest increase in workers, being 19,200 persons or 19.6%. Three of the employment categories showed a loss in workers. The greatest drop was in "manufacturing," 5.7%; both "trade" and "construction" lost 3% each.

San Francisco's industrial pattern and its role as a central city in an expanding metropolitan area do much to explain its labor supply-demand relationships. Heavy in-migration from out of state serves as one of the best sources for filling job openings and gives the city a competitive advantage over less attractively located communities. After becoming established in jobs, many of the new workers move to the suburbs, becoming bay area commuters. San Francisco provides about 40% of the bay area's employment, but only around 25% of its population. These new employees are especially valuable in the professional and technical occupations, but only to an existing surplus in other fields. Professional and clerical occupations, for which demand is consistently high, include: engineers, data processing specialists, stenographers, and well-qualified general office workers. The expansion of hospitals and schools creates a need for licensed medical technicians, vocational nurses, teachers, and registered nurses. Demand for industrial, construction, hotel, and restaurant workers depends upon seasons and economy but opportunities are generally open.

San Francisco has five areas where employment and other measures of poverty are much greater than city-wide rates. The heaviest concentration of the city's poor, mainly of Negro, Mexican-American, and Chinese origin, are found in four of these areas: Western Addition, Mission District, Chinatown, and Hunters Point. In a fifth area in the central city, poor, unattached people are found. All of these areas are also characterized by low education, low income, and high welfare dependency levels, and by high rates of delinquency. Unemployment runs as high as 11% in these areas, with youth unemployment as high as 35%.

Employment Comparisons Between the Urban Centers and the State of California

The chart on the following page was developed to compare the employment totals of each labor category in the urban centers with that of the total state. The statistics are for July of 1968 in every case.

A brief summary indicates that the total employment of the five urban centers in this study (and the area adjacent to each) represents almost one-third of all employed workers in the State of California (30.7%). In the separate categories, the following data is noted: employment in the category of "finance-insurance-real estate" for these five centers totals over one-half of this type of employment in the state (54.7%). The category of "transportation-communication-utilities" reflects 40.7% of this type of employment throughout the State of California. Two labor categories, those of "trade" and "services," indicate employment levels of over one-third of the state totals, being 33.6% and 35.6%, respectively. Over one-fourth of all "manufacturing" and "government" employment in the State of California is localized in the five urban areas. Total employment in the category of "construction" is just under one-quarter of the state's workers or 24.5%. The category that is the smallest in proportion to the state total is "agriculture-fishing-mining," showing only 2.7%. The title of the category reflects the fact that it is one of a rural nature as opposed to the urban characteristics of the centers being studied.

The rate of unemployment in all but one of the urban centers is less than the average unemployment for the State of California for approximately the same period of time. However, in the poverty areas within the urban centers, the unemployment rate doubles or trebles. The unemployment rate for youth in the urban centers shows an alarmingly high rate, ranging from 15.5% in San Diego, probably brought down to that level by the intensive effort of several manpower development groups to obtain summer employment for youth, to a high of 41% estimated by a special study in Oakland during the summer of 1966. The office of Business Economics of the United States Department of Commerce indicated in the January 1967 issue of "Survey of Current Business" that in the United States in 1962 one-fifth of all unemployed persons were teen-agers, but that by 1967 one out of every three unemployed persons was a youth. This trend points up the difficulty that youth are experiencing in securing employment in our expanding economy.

From these studies a relationship of unemployment to several factors can be identified. From information obtained from San Francisco, there is shown a direct relationship with the areas of poverty in that city and the median number of school years completed, the median number being consistently lower in these areas of the city. Also a mobility factor has been identified where,

because of a lack of mobility, disadvantaged and minority persons tend to move to the core of the city for jobs but because of a lack of skills and general discouragement cannot compete or are not accepted for employment.

NOTE: Charts pertaining to this section are found on pages 45-50.

Data included in this section was taken from the following sources:

1. California Community Labor Market Surveys, 1963-64 and 1967-68, Department of Employment, Division of Research and Statistics; and

2. Other California State Department of Employment documents.

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

TRENDS IN EMPLOYMENT FOR LONG BEACH

	July, 1963	July, 1964	July, 1968	% Change 1963-68
Total Employment	180,400	187,500	194,600	+ 7.8%
Agriculture-Fishing Mining	5,000	4,950	3,600	- 28.0%
Construction	11,000	10,900	7,500	- 31.8%
Finance-Insurance Real Estate	6,300	6,500	5,000	- 20.6%
Government (Federal-State-Local)	33,000	33,700	35,600	+ 7.8%
Manufacturing	38,500	42,150	59,200	+ 53.7%
Services	29,900	31,100	33,200	+ 11.0%
Trade (Wholesale-Retail)	42,400	44,000	41,800	- 1.3%
Transportation-Communication Utilities	14,300	14,200	8,700	- 39.1%
Unemployment Rate	6.0%	5.9%	4.2%	
% Youth Unemployment			30.0%	

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

TRENDS IN EMPLOYMENT FOR LOS ANGELES

	July, 1963	July, 1964	July, 1968	% Change 1963-68
Total Employment	1,105,200	1,130,500	1,159,000	+ 4.8%
Agriculture-Fishing Mining	2,500	2,200	2,100	- 16.0%
Construction	44,200	47,600	27,800	- 37.1%
Finance-Insurance Real Estate	105,000	109,200	118,500	+ 12.8%
Government (Federal-State-Local)	109,800	112,200	130,800	+ 19.1%
Manufacturing	262,100	260,900	250,800	- 4.3%
Services	242,700	252,300	284,200	+ 17.0%
Trade (Wholesale-Retail)	262,700	268,900	266,600	+ 1.4%
Transportation-Communication Utilities	76,200	77,200	78,200	+ 2.6%
Unemployment Rate	6.0%	5.9%	4.5%	
% Youth Unemployment			30.0%	

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

TRENDS IN EMPLOYMENT FOR OAKLAND

	July, 1963	July, 1964	July, 1968	% Change 1963-68
Total Employment	230,700	226,200	249,300	+ 8.0%
Agriculture-Fishing Mining	900	900	900	-
Construction	14,900	15,100	14,600	- 2.0%
Finance-Insurance Real Estate	10,800	10,900	11,400	+ 5.5%
Government (Federal-State-Local)	29,000	28,600	36,400	+ 25.5%
Manufacturing	55,700	50,900	53,900	- 3.2%
Services	39,800	40,200	45,800	+ 15.0%
Trade (Wholesale-Retail)	56,600	56,300	60,100	+ 6.1%
Transportation-Communication Utilities	23,000	23,300	26,200	- 13.9%
Unemployment Rate			8.4%	
% Youth Unemployment			41.0% (1966)	

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

TRENDS IN EMPLOYMENT FOR SAN DIEGO

	July, 1963	July, 1964	July, 1968	% Change 1963-68
Total Employment	266,600	264,800	336,300	+ 26.1%
Agriculture-Fishing Mining	2,600	2,600	2,700	+ 3.8%
Construction	17,100	17,500	18,500	+ 8.2%
Finance-Insurance Real Estate	13,200	13,600	15,900	+ 20.4%
Government (Federal-State-Local)	51,500	51,400	74,400	+ 44.4%
Manufacturing	54,600	47,400	61,600	+ 12.8%
Services	55,900	58,200	74,800	+ 33.8%
Trade (Wholesale-Retail)	57,900	59,700	71,300	+ 23.1%
Transportation-Communication Utilities	13,800	14,400	17,100	+ 23.9%
Unemployment Rate	7.4%	5.1%	4.1%	
% Youth Unemployment			15.5%	

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT TRENDS IN EMPLOYMENT FOR SAN FRANCISCO

	July, 1963	July, 1964	July, 1968	% Change 1963-68
Total Employment	479,300	482,200	525,700	+ 9.6%
Agriculture-Fishing Mining	800	800	1,100	+ 37.5%
Construction	22,300	22,300	21,500	- 3.5%
Finance-Insurance Real Estate	55,300	55,800	64,200	+ 16.0%
Government (Federal-State-Local)	75,300	75,700	92,700	+ 23.1%
Manufacturing	63,900	63,700	60,200	- 5.7%
Services	97,600	99,900	116,800	+ 19.6%
Trade (Wholesale-Retail)	112,300	112,500	108,800	- 3.1%
Transportation-Communication Utilities	51,800	51,500	60,400	+ 16.6%
Unemployment Rate			4.4%	
% Youth Unemployment			35.0% (1966)	

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT — JULY, 1968 URBAN CENTERS EMPLOYMENT

	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	Calif. Total	Centers % of State
Total Employment	194,600	1,159,000	249,300	336,300	525,700	7,776,000	31.7%
Agriculture-Fishing Mining	3,600	2,100	900	2,700	1,100	372,000	2.7%
Construction	7,500	27,800	14,600	18,500	21,500	366,000	24.5%
Finance-Insurance Real Estate	5,000	118,500	11,400	15,900	64,200	393,000	54.7%
Government (Federal-State-Local)	35,600	130,800	36,400	74,400	92,700	1,302,000	28.4%
Manufacturing	59,200	250,800	53,900	61,600	60,200	1,691,000	28.7%
Services	33,200	284,200	45,800	74,800	116,800	1,556,000	35.6%
Trade	41,800	266,600	60,100	71,300	108,800	1,628,000	33.6%
Transportation-Communication Facilities	8,700	78,200	26,200	17,100	60,400	468,000	40.7%
Unemployment Rate	4.2%	4.5%	8.4%	4.1%	4.4%	4.8%	
% Youth Unemployment*	30%	30%	41%	15.5%	35%		

*Estimated by local CAMPS report.

VOCATIONAL EDUCATION

IN THE FIVE URBAN CENTERS OF CALIFORNIA

SECTION IV

Total School Enrollment in the Urban Centers

Statistical information has been compiled showing the total facilities and enrollment in each of the five urban centers for providing a program of elementary through adult education for the men, women, and children of each respective district. Whenever possible, the information was obtained from the 1967-68 Statistical Report produced by each of the districts. The comparative state enrollment figures were obtained from the State Department of Education and reflect the school enrollment for the State of California during the 1967-68 school year.

The data indicates, with an acceptable degree of accuracy, that the total school enrollment in these five unified and junior college school districts represents close to one-fourth (23.7% of all pupils in the state.

Interpretation of the data by level of education indicates that the K - 6, or elementary, enrollments represent 20.2% of the state total. In the secondary division, including both junior and senior high school enrollments, the total in the five urban center school districts is 26.2% of all secondary pupils in California. Junior college enrollments total 23.9% of the total state enrollment in this category. It is significant to note that these students, representing approximately one-quarter of all junior college students, are located at 16 sites in the five cities out of a total of 88 public junior colleges in California. Adult education enrollment shows 37.2% of the state total, indicating the highest percentage of enrollment in relation to the state total for any level of activity.

At all levels of educational activity, the district in Los Angeles is the largest both in enrollment and in school sites maintained. San Diego is second in size in both enrollment and sites in all except the adult program. San Francisco is third largest in the K - 12 program in enrollment and sites, but the junior college program enrollment is the smallest of all of the districts. This fact is offset somewhat by the adult division enrollment since it is second only to Los Angeles. Of the two districts having less than 100,000 pupils enrolled, Long Beach has the greater enrollment but Oakland has the greater number of school sites.

When studying these figures in relation to the state totals it is evident that, with the exception of junior college education, the five cities provide an increasing amount of activity as the level of education increases (20.2% in elementary to 37.2% in adult). These facts could be interpreted as meaning that: 1) more urban dwellers take advantage of advanced educational opportunities, or that 2) rural students drop out of school or move to the cities prior to completing their education. This study would also indicate that the potential for providing a greater amount of junior college education (because of the drop in percent between secondary and adult) is present in the cities if additional

opportunities were provided.

The 1967-68 total school enrollment chart points out the investment in physical facilities that the urban centers have: 16 junior college sites, 9 continuation schools, 41 adult school locations, and 91 high school plants, and yet there is a continuing need for more and better facilities to serve the population of the cities. In the years to come, strong consideration should be given to innovative ways of coping with the never-ending cry for more facilities. A greater use of off-campus locations in industry and business establishments is to be encouraged. Not only will that relieve the districts of much capital expense, but it is in these establishments that realistic industry-business oriented training on modern equipment can take place. Closer coordination between all levels of vocational, secondary, and adult education, and community college should take place in all of the districts for the joint use of facilities. A contractual agreement between schools and districts, for the mutual use of facilities, could be prepared outlining a detailed schedule of usage. Future facilities developed by the districts should avoid the connotation of preparing trainees in narrow, dead-end curriculums that could lead to boycott or further segregation, but instead should be designed as area vocational centers which would serve several comprehensive high schools as well as serve as an adult occupational center either concurrently with the high school program or in the evening. The facilities should be designed around multi-service shops and labs to serve not only high school but also adult and junior college recipients on a six-days-a-week, twelve-months-a-year schedule. As an intregal part of any facilities program, the transportation of pupils to and from the site is an obligation that should be undertaken. Transportation is high on the list of items that will reduce unemployment and improve the educational opportunities of those considered to be disadvantaged.

Vocational Education Enrollment in the Urban Centers

Using the enrollment data which the five districts submitted to the state, upon which reimbursement from vocational education funds was anticipated for the year of 1967-68, a listing was made of each district with comparable totals from the State of California. This listing reflects the amount or percentage of involvement that the five centers have, in relation to the state totals, in each category of vocational education.

Perusal of this data indicates that the proportion of vocational education that these districts provide to the state total is 16.5%. This percentage figure reflects a program in vocational education that is considerably smaller than the amount of work force or employees that these five districts (and their immediately adjacent areas) have when compared to the state total. The total employment of these five

urban centers represents almost one-third (31.7%) of all employed workers in the State of California, yet the program of vocational education reflects only 16.5% of the state total.

Further study of this data shows the percentage of involvement, ranging from a low of .8% of the state total in home economics to a high of 26.2% in the category of trade and industry. Four of the eight categories listed here show an involvement of over 20% of the state total. They are: 1) trade and industry with 26.2%, 2) office with 21.3%, 3) health with 21.1%, and 4) technical with 20.1%. The remaining four categories each show an involvement of less than 10%: 1) distribution with 8.6%, 2) vocational work experience with 7.1%, 3) agriculture with 7%, and 4) home economics with .8%.

On the same chart, the total enrollment (K - Adult) for each of the districts has been indicated. This total figure was divided into the total vocational education enrollment figure to provide, for comparison and analysis, the percentage of the total school population which was directly involved with the vocational education program. A comparable computation was made using the State of California totals. The state average was 18.9%. The highest comparable figure was from the San Francisco urban centers, showing 21.1% of the student population involved with vocational education. Long Beach was next to San Francisco showing 14.5%. Both Oakland and Los Angeles indicated slightly over 12% and San Diego was lowest showing only 10.9%.

Several observations can be made from an analysis of this data. To begin, the overall size of the program of vocational education in these five cities is less that it should be when compared with employment statistics for the same area. If these five urban centers show 31% of the employment in the State of California, can we not maintain that approximately the same amount of training will/ should go into these cities to adequately prepare youth for employment and workers for employment and upgrading. Within the specific categories of vocational education, inconsistencies are indicated. For example, work experience programs are an outstanding tool for orientation to employment, yet the urban centers show a very low percentage of the total state effort in this category. Also, statistics show that only 18.9% of the school youth in California are involved in vocational education, a figure that is much too low. Because of its pragmatic nature in a job oriented society, vocational education should reflect a student involvement in the neighborhood of 60% to 70% of the total. In this instance, the low percentage has been caused by the fact that until the passage of VEA '63, most vocational education programs were offered at the post-high school level in the junior colleges. Hopefully, the future will reflect a revitalized program of occupational (in place of vocational) education beginning much earlier in the school preparation of youth and being coordinated through all the disciplines, thus the number of students directly involved will increase to its desired level.

The gaps in statistical data and deficiencies in the depth of reporting in this section, and the ones following, point up the need for continued study and refinement of available data concerning the status

of vocational education. The figures shown should be interpreted as general indications of facts and trends rather than an exact measurement due to variance in data collected and sources of reference.

Vocational Education's Past Trends in the Urban Centers

Enrollment figures were solicited from the five urban center districts (unified and junior colleges) and the State Department of Education, for three of the past seven accounting years, in an attempt to show trends in enrollment in the various categories of vocational education. The three accounting years selected were: 1) 1962-63, as this school year was the one just prior to the passage of VEA'63, 2) 1964-65, as this year would indicate the impact that VEA'63 appropriations had on the enrollment of vocational education, and 3) 1967-68, as this was the latest year for which data was available.

The enrollment figures for all districts for school year 1967-68 were taken from the state reporting form VE-48 and recorded on the form that the state submits to the Department of Health, Education, and Welfare to verfiy enrollment in vocational education categories (form No. OE-4048 revised 2-67). The figures used represented the enrollment statistics submitted by the districts and the state upon which reimbursement was anticipated. They were considered to reflect an acceptable degree of accuracy with regard to enrollment in all vocational education for that year. Because of these considerations, equivalent information was requested from the districts and the state for the two other accounting years in order to study enrollment growth. The districts and the State Department of Education responded with enrollment data for those years.

The information received from the districts indicated the individual methods of record keeping prevalent in each district. In most cases, the enrollment figures from the districts did not compare with those submitted to the state on the VE-48 form. For all three accounting years, the information obtained from the districts tended to show higher enrollments when compared to the state figures. In several cases, enrollment in vocational education classes was submitted in a form that could not be converted into an equivalent listing upon which trends or comparisons could be based. The districts reported enrollment on the basis of: 1) Average Daily Attendance (A.D.A.), 2) single class enrollment, 3) every person counted only once, or 4) hours of attendance. In more than one instance, no information of this nature (enrollment for past years) was available from the district sources. In view of these circumstances, it was decided to attempt to show trends in vocational education based upon the information obtained from the State Department of Education.

The information received from the state for 1962-63 and 1964-65 was an identification of enrollment

by school, cost of instruction to the district, and the amount of reimbursement to the school district from various federal sources. The information was listed by source of funds such as: 1) regular Smith-Hughes and George Barden I, 2) George-Barden II, Health Occupations, and 3) George-Barden III, Technical Education. The enrollment information was totaled and listed so that: 1) all Smith-Hughes and George-Barden I enrollments were indicated in Trade and Industry, 2) all George-Barden II enrollments were indicated in Health, and 3) all George-Barden III enrollments were indicated in Technical. In this manner, it was thought that meaningful trends in these three categories, based upon reimbursement, could be established.

The figures on the next five pages are based on the input from the State Department of Education in lieu of the information received from the districts. The enrollment has been indicated for each of the three accounting years, where available. The enrollment has been separated between the levels of secondary, junior college, and adult, and further divided into either pre-employment (full-time) or occupational extension (part-time). The forms do not reflect the level of accuracy that had been hoped for, and the trends cannot be judged to be meaningful. In many categories the totals show a declining enrollment which cannot be substantiated, and in the case of agriculture, distribution, home economics, and office, the needed information was not available at all or it was in a form which was not comparable to the accounting methods of 1967-68. The attempt to point up trends in vocational education enrollments has indicated that the methods used by the districts lack the uniformity needed for comparison between districts and are not comparable on an annual or vocational education category basis.

A standard method of accounting for vocational education enrollments in all categories to identify full-time and part-time students by enrollment and attendance hours per week is strongly urged. It is recommended that:

1. A study be made to determine an accurate way of showing enrollment figures on an attendance hour basis;

2. The persons or secretaries responsible for completing the state forms attend workshops for instructions on how to complete them, giving due emphasis to standard interpretation of the state requirements;

3. A central repository of all vocational education data, reports, etc., be established in each city in which each district (unified and junior college) would file this information;

4. A concerted effort be made to maintain adequate records on standard forms of all students and programs within vocational education;

5. The terms used or requested on all state forms be defined so that a standard interpretation can be applied; i.e., trade extension, occupational extension, supplementary, full-time, part-time, extended day, vocational education students, occupational education student, etc.

In this way, trends can be established in each district and compared with labor market and manpower trends from other sources so that the future development of vocational education can be more accurately charted.

Vocational Education Student Completions in the Urban Centers

Data available from the Vocational Education Section of the State Department of Education indicates a high placement record of those persons who are registered as having completed the prescribed program of vocational education during the school year 1967-68 as follows: Peralta Junior Colleges 89%; Oakland Unified School District 89%; San Francisco Unified School District, including City College, 62%; Long Beach Junior College 87%; Long Beach Unified School District 35%; and San Diego Community Colleges 73%; for a total average of 72% reported placement.

The figures compiled do not take into account the large number of students who left the program with some job ability prior to completion, but only reflect the "graduates." The total figures are derived from the enrollment figures of all secondary vocational students and all full-time junior college and adult preparatory students. Part-time junior college and adult supplementary enrollments were not included in the tabulation.

Follow-up of Vocational Education Students

Placing students on the job after completion of training and the follow-up of students, be they completion or dropout, is most important and yet it is one of the weakest phases of the total vocational education program. Some of the problems encountered when attempting to establish the meaningful statistics for students who have terminated include the fact that there is a definite need for a better way of determining what happens to dropouts once they leave school. The attrition rate between initial

enrollment and graduation from junior college needs to be studied. Indications as to whether the terminating students: 1) attend school only long enough to learn a phase of training which would allow them to enter the labor market, or 2) whether they become discouraged with the instruction, etc., and leave in search of something else, or 3) what percentage of them leave for jobs and then return to part-time occupational extension training at night, is not available. The attrition rate between the 10th, 11th, and 12th grade enrollments in vocational education programs as shown on VE-48 is not explainable and should be considered a counseling problem that has not been solved. The proper and complete follow-up of part-time and adult special (MDTA and other disadvantaged students) has not been accomplished by a standard accepted method.

A high priority should be given to developing a practical approach to these problems. A study should be initiated into the area of placement and follow-up reporting of students that would include:

1. Placement of students as they leave the school program;

2. Systematic follow-up of all terminating students, both dropouts and graduates;

3. An improved reporting system of placement of graduates on the VE-45 form. It is recommended that the VE-45 form be used for two purposes:

   a. To report placement of graduates of pre-employment programs
   b. To provide information such as:
      1) Total enrollment during the year
      2) Total graduates
      3) Total dropouts
      4) Total placement
         a) Graduates
         b) Dropouts
      5) Total continuing in the program

   It is felt that clarity and the ability to total all columns against a figure that represents the maximum number of students enrolled during the year, is necessary;

4. A follow-through with the pilot program of evaluation of "The Proposed System of Reporting Job Placement Follow-Through," developed by Mr. Wayne Harris;

5. A full-time 12-month employee in each secondary school and junior college who would be responsible for the follow-up of terminating students, maintenance of follow-up records, and coordination with outside agencies and employers to ascertain follow-up information.

At the Cleveland Conference held July 15, 1968, the phase of placement and follow-up was considered by some fifty leaders of vocational education in the great cities of the United States. The following are the major recommendations and justifications concerning placement as developed at that conference:

1. The school must accept primary responsibility for assisting each individual in making a successful transition from school to work and utilizing other agencies to the maximum as resources. The recommendation is made because it is believed that:

    a. The school should have the student as its primary concern.
    b. The school is more knowledgeable of the students.
    c. The educational process is not complete until the individual is successfully placed.

    The acceptance of this responsibility by the school should result in the creation of a new climate within the school; it should be viewed by the student as an avenue to employment. It is believed that students can make better decisions with professional help than they can without it. This is why job placement should be provided.

2. The school must recognize that job placement is more than matching a student with an employer. Job placement does not begin at the point in time when the student initiates his separation from school. It is a continuous process beginning with the student's entrance into the school and continuing beyond his separation from the school. Successful job placement is dependent upon the development of cognitive and effective motor skills. These skills must be developed throughout his entire school career.

3. The job placement program must be developed with the same resources, organization, and earnestness that prevail in the rest of the school. The successful placement of a student on a job is the final step in one phase of education, which if left to chance, can destroy much of what the school has done.

4. The total school staff must accept the responsibility for job placement. Job placement cannot be carried on in isolation from other aspects of the school program. The total school must develop avenues leading to work with the same clarity and concentration that is now focused on the college.

5. The job placement program must be seen as a continuous process. Many students, particularly in the inner city, will need post school assistance if they are to successfully adjust to the world of work.

The chart on the following pages was developed at the 1968 Cleveland Conference and reflects an acceptable outline for a job placement and follow-up program.

Apprenticeship Programs in the Urban Centers

Using enrollment figures obtained from the California State Department of Education publication entitled "Apprentices in California Schools - January, 1969," a listing of all programs with enrollment for each of the five districts, along with the state totals, was compiled. The data clearly reflects the diversity of the apprenticeship training in the five urban centers.

The data shows that just under 50 percent (48.8%) of all apprenticeship training is accomplished in the school districts represented in this study. Analysis indicates that of the 59 trades represented, 20 of them have 100% of the total state enrollment in one or more of the urban centers. The size of the individual programs range from an enrollment of one to a maximum of 674 apprentices in machine shop, tool and die in Los Angeles. The districts collectively provide 140 individual programs in the 59 trades listed. Of these, 13 programs show an enrollment of 10 or less, and another 12 programs show an enrollment between 11 and 14. On the large side, 25 programs show an enrollment of 100 apprentices or more, another 21 showing enrollments between 50 and 99.

Information obtained from the California Department of Industrial Relations Division of Apprenticeship Standards has been included on a separate chart. It shows the percentage of minority partipation in apprenticeship by both counties and by trade.

An exceptional program of education leading the apprentice to a two-year Associate of Science or

Associate of Arts degree is currently being provided by the San Diego Junior Colleges. A regular apprenticeship curriculum is approved and appears in the San Diego Evening College catalog identifying the procedures necessary for receiving credit toward the degree, for the related instruction, and for the work experience of the approved apprenticeship program. Additional course work in general education will provide him with the 60 units necessary for the degree. Along with this school program, the San Diego General Apprenticeshi Committee offers a scholarship of $300 to outstanding apprentices so that they may earn their degree. The scholarship is awarded on a semester basis of $50 upon completion of six units of general education subjects for four semesters, the new journeyman being awarded a stipend of $100 upon receiving his degree.

A Composite Picture of the Urban Centers

By taking the salient figures from all of the charts shown in this report, and presenting them together, an urban centers summary has been developed. To this was added the financial reports from the State Department of Education concerning vocational education costs.

The column at the right entitled "Centers % of State Total" reflects the percentage figure that the five urban centers represent when computed against the total figure for the state. The summary indicates that the population of the five centers is 27.6% of the state, employment represents 31.7% in the state, total school enrollment represents 23.7% of the state, the number of school sites (secondary grades 7 - 12) represents 31% of the number in the state, and the junior college sites represent 18.1% of the total in the state. Vocational Education enrollment shows 16.5% of the total enrollment in the state in these cities. The figure of 16.5% is not an accurate indication of the centers' enrollments in relation to the state total, as many inconsistencies exist between all districts in the state pertaining to the accounting for and reporting of students. The figures used for the urban centers were corrected from state reports by deleting double enrollments wherever possible.

The financial statements in the four lower columns reflect the total costs, reimbursement, and district costs of the program. The bottom column entitled "Percent of District Cost to Total Cost" shows the amount of effort that is supported directly by district funding, ranging from a low of 73% to a high of 82.8%, the average for the State of California being 76.3%. These figures reflect only the direct costs and do not include ancillary efforts such as library, parking, maintenance, etc. that will be allowable under VEA'68. The column on the right indicates the percentage of the total expenditures in the state that the five districts represent, mainly 27.8% of the total cost of vocational education, 23.8% of the total reimbursement, and 29.1% of the total cost expended by all the districts in California.

Inventory of Vocational Programs and Course Offerings, 1969-70

The charts on the following pages were developed to document a comprehensive inventory of vocational offers in the public schools within the five urban centers. The charts also compare the programs offered in each of the urban centers, the level in which the programs are offered, the length of training time for similar objectives, and continuing and new programs. The information available does not indicate the number of individuals involved, but does show the ADA generated. The information not available points up the necessity of each student having an identification number (preferably social security) which can be used to assure that each student is counted only once. This number could be used later to locate ex-students in continuing follow-up studies. The charts also indicate the need for further refinement in the titling of courses covering the same content. The "student hours of instruction per year" as used in these charts are an attempt to translate into one method the many ways these figures were submitted by the various districts and even the schools within a district. The two variables are the student hours attended and the ADA. The great variance in the methods used and the resulting answers in interpreting and recording this one column emphasize the need for more specific directions for reporting required information if uniformity and accuracy are to be accomplished. It is recommended that the figures be rechecked in the fall of 1969.

The statistics were taken from the worksheets of Instructional Programs Planned for 1969-70 as submitted by each school district including secondary, community college, and adult.

Other Aspects of Vocational Education in the Urban Centers

This section of the report considers problems, concerns, and recommendations for specific aspects of the program that are not treated elsewhere.

Coordination

The separation of the secondary and junior college divisions at the state and local level increases the need for a system of vocational coordination to avoid internal and community confusion and to provide an agency which could assure that costly duplication of programs and facilities between the new districts in each urban center is minimized. An across-the-board system of coordination would increase the potential for transportation of students to occupational centers and for the cooperative use of facilities by both secondary and junior college districts. The Urban Centers Committee could act as a liaison committee to recommend coordination techniques during the transition from unified to separate school

districts, if desired. Part of the responsibility of coordinators and supervisors in the future should be the visiting of other areas having vocational programs within and outside the state.

Financing

Financing of the program remains a major source of frustration. An assurance of continuity of funding from state and federal sources is highly desirable. Without the definite assurance of state or federal assistance, the local districts are hard put to obtain approval of their Boards of Education to budget for vocational education programs. Methods to solve the problem of uncertainty of funding from year to year must be determined.

Program Development

Criticism by various manpower development agencies centers on the length of time it takes to being a class after it is initially requested. It is recommended that a careful study be made of the many regulations and requirements which must be met both on the state and local level, before a class or course can be started. If the procedures are well known and the contacts made, it is hoped that the savings in time will counteract this criticism. This problem is particularly acute at the junior college level due to the increasing amount of autonomy at these campuses.

Articulation

With the increase of vocational education programs in the secondary and adult schools, some method that would give recognition for comparable work completed in the high school and/or adult school toward the completion of a major in junior college should be organized. It would not be a matter of allowing double credit for courses taken, but rather would waive the need for repeating basic courses. This would allow outstanding students to select more electives.

Advisory Committees and Community Participation

The importance of developing and operating programs with the advice and participation of the community cannot be over stressed. The use of advisory committees to the vocational programs has been one of its greatest strength, especially in the crafts. These committees have traditionally been made up of management and labor. It would appear that more participation from other segments of the community should be considered. A greater degree of coordination with manpower development and other agencies is necessary due to the lack of orientation and correlation of activities. Closer ties with community planning activities, inner cities, model cities, and industrial development and expansion are becoming most important.

Central Office

As the program grows and the districts become separate, a central clearinghouse for innovative ideas and information both from within the urban center and from other districts, is recommended. The center could distribute information regarding developments in new areas and techniques, serve as the repository of records, etc. It could be the center for determining, from computer runs, the space available at various schools and in various programs to which students could be transported.

Curriculum

One concern that merits attention is the lack of uniformity that exists between the same curriculum being offered in the five urban centers. The disparity exists in the curriculum guides and in the number of units of work within the major. It is recommended that all the districts strive for uniformity in curriculum. The districts should recognize upgrading or extension training equally with that of pre-employment training. Extension training for those employed is just as important in their effort to keep up with the changing technology and advance in employment as the effort to train new workers for employment. High priority should be given this training in an attempt to take care of the unmet needs of disadvantaged youth and adults.

Student Clubs

To develop a greater interest on the part of students, for the overall program of occupational preparation, student organizations such as the Vocational Industrial Clubs of America (VICA) and Distributive Education Clubs of America (DECA) should be organized and strongly supported. Local Chapters, at individual schools, could be developed so that they could arrange to tour various industrial facilities, develop information and articles of interest, and compete between schools for contest prizes, etc. This would be another attempt at the image improvement of vocational education.

Counseling

Since the passage of the Fisher Bill, the number of qualified counselors with occupational backgrounds has declined. It is recommended that the State Education Code be amended to allow certified vocational faculty to serve as vocational counselors; occupational experience as a requirement for vocational guidance should be considered.

Faculty

One of the weaknesses of the high school occupational programs is the inablilty of the school

districts to adequately use the services of full-time vocational instructors, thus limiting the programs to coincide with the 8.1 credentialled instructors available. It is recommended that selected persons holding the part-time designated subjects credential be used up to ten hours a week in occupational programs at the high school level. This would require a rewording in the authorization section of 6357 Title 5 and 6331 Title 5 to include secondary schools as well as junior college and adult schools. Consideration of plans for team teaching could alleviate the problem of having a limited number of vocationally qualified and competent instructors available. Serious consideration should be given to requiring periodic re-entry into the world of work by all vocational instructors for updating techniques, procedures, and equipment. Recognition of this training for salary increases should be considered. A problem of growing concern for many urban centers administrators is the drop in attendance rates in programs for occupations which have lost their appeal or are no longer in demand. There is considerable question as to whether or not a course should operate with only six to eight persons in it. Still, there is the tenured permanent instructor to consider. Teachers with tenure whose work experience is no longer up to date and whose credentials are in limited fields are holding up the progress of vocational education. A suggestion would be to schedule this type of vocational instructor to teach shorter courses in order to take advantage of his strengths other than in a 20-hour block for one group of students. This would necessitate retraining the instructors. In-service training and upgrading is also an important phase of vocational education, particularly in view of the length of service of many instructors. Workshops should be conducted in such areas as: 1) curriculum revision, 2) record keeping, 3) placement and follow-up activities, 4) occupational work experience, etc. All of these activities would help to improve instruction and provide progress.

Programs

As one considers the instruction and the instructor, the evaluation of the total program should also be considered. A concern raised by many pertains to whether or not the present programs are realistic, whether they are up to date with present occupational practices. Consideration should be given, when curriculums are revised, to using the basic core program with advanced courses operated as industry cooperative classes in industrial facilities. In this way relevant up to date occupational preparation can occur.

Urban Centers Committee

It is recommended that the Urban Centers Committee continue to function during 1969-70 with local "across-the-board" committees being strengthened by inclusion of more of the vocational education leaders. A definite understanding of finances for continuing the project should be given early consideration. During the first phase of this project the district task forces in each center worked somewhat independently of the regular coordination staff. This independent work was justifiable in

the inventory stage, but in the next phase of implementation the local coordination staff should be an important part of the project to follow through and help to organize many of the programs recommended in the study.

School Dropouts and Continuation Students

It is recommended that arrangements be made in each urban center for potential school dropouts and "special" students, who will reach the age of 18 prior to graduation, to transfer to a skill center so that they may enter into a concentrated job oriented training program in order to be prepared to enter the world of work with a saleable skill. A further enticement would be to allow high school credit for this type of training. These youths generally represent the segment of society usually referred to as "disadvantaged" and those who become potential delinquents. A good deal of support should be given to programs that will help them.

It is suggested that one or more of the Urban Centers of California consider working with Y.O.C. or some other funding agency in developing a combined project for disadvantaged youth which would provide X number (360 or multiples of 18) of disadvantaged youth ages 16 to 22 an opportunity for guidance services and vocational training that will help relieve their immediate social and financial frustrations and give them a feeling of security while learning skills and knowledge that will fit them for gainful occupations and citizenship.

Students should attend school eight hours a day, five days a week for 36 weeks or until they are ready for employment. A counselor, vocational advisor, remedial basic education and occupational instructor should use the team approach to adjust, prepare, place, and follow-up the trainees as they are ready for advanced training or employment. Cooperative training should be taken advantage of as soon as the trainee can benefit by the occupational experience and a satisfactory co-op arrangement can be made. It cannot be stressed too strongly that in order to succeed it will be necessary to couple the institutional training with a well organized placement and follow-up program.

NOTE: Charts pertaining to this section are found on pages 69-86.

Data included in this section was taken from the following sources:

1. Annual statistical report from each urban center for 1967-68;

2. State of California Enrollment Report, California State Department of Education, 1967-68;

3. V.E.-48 Form, California State Department of Education, 1967-68;

4. V.E.-45 Form, California State Department of Education, 1967-68;

5. "January, 1969 -- Apprentices in California Schools," California State Department of Education;

6. "Minority Participation in Apprentice Programs," California Department of Industrial Relations, Division of Apprentice Studies, April, 1969.

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

1967-68 URBAN CENTERS
TOTAL SCHOOL ENROLLMENTS

	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	State Total	Centers % State Total
Elementary							
Schools	56	447	65	116	103		
Enrollment	38,383	376,897	36,630	74,275	51,577	2,849,275	20.2%
Junior High							
Schools	14	74	15	17	16		
Enrollment	16,329	142,730	13,392	27,279	20,954	1,616,991	26.2%
High School							
Schools	6	58	6	11	10		
Enrollment	15,922	133,939	11,181	22,440	20,823		
Continuation							
Schools	3		2	3	1		
Enrollment	700		3,109	1,015	946		
Junior College							
Schools	1	8	2	3	1		
Enrollment	21,020	81,243	14,334	17,842	12,126	610,769	23.9%
Adult							
Schools		27	1	7	6		
Enrollment	3,260	83,630	6,792	18,664	29,528	381,599	37.2%
Total Enrollment	95,871	818,439	85,438	161,515	135,954	5,458,634	23.7%

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT 1967-68 URBAN CENTERS VOCATIONAL EDUCATION ENROLLMENT

	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	State Total	Centers % State Total
Total Vocational Enrollment	13,928	99,839	10,827	17,645	28,745	1,036,086	16.5%
01 Agriculture	-	1,668	34	110	153	27,986	7.0%
04 Distribution	1,369	6,813	524	1,991	1,101	135,668	8.6%
07 Health	687	2,519	537	527	560	22,821	21.1%
09 Home Economics	513	596	175	46	508	208,721	.8%
14 Office	5,594	46,124	2,168	5,034	12,900	335,992	21.3%
16 Technical	570	5,224	148	1,904	1,164	44,705	20.1%
17 Trade and Industry	4,999	35,055	5,743	5,751	10,668	236,726	26.2%
19 Vocational Work Experience	110	-	-	1,566	-	23,467	7.1%
Special Needs	86	1,840	1,498	716	1,691		
Total District School Enrollment	95,871	818,439	85,438	161,515	135,954	5,458,634	23.7%
% Vocational Enrollment vs. Total Enrollment	14.5%	12.1%	12.6%	10.9%	21.1%	18.9%	

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT 1968-69 URBAN CENTERS VOCATIONAL EDUCATION ENROLLMENT

	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	State Total	Centers % State Total
Total Vocational Enrollment	21,202	141,511	8,749	19,831	18,464	Data available after state report to U.S.O.E. 1969 is completed.	
01 Agriculture	0	1,317	51	111	147		
04 Distribution	2,160	7,002	422	2,374	1,374		
07 Health	520	2,184	413	529	533		
09 Home Economics	2,695	1,049	127	30	16		
14 Office	9,229	64,983	2,603	5,418	6,115		
16 Technical	981	2,792	374	1,748	547		
17 Trade and Industry	5,306	52,323	4,409	6,464	8,946		
19 Vocational Work Experience	95	9,752	0	1,927	786		
Special Needs	216	109	350	1,230	0		
Total District School Enrollment							
% Vocational Enrollment vs. Total Enrollment							

TRENDS IN VOCATIONAL EDUCATION PROGRAM ENROLLMENT FOR LONG BEACH

	1962-63				1964-65				1967-68			
	Secondary	Jr. College*	Adult	Total	Secondary	Jr. College*	Adult	Total	Secondary	Jr. College*	Adult*	Total
01 Agriculture												
04 Distribution									276	94 972	27 0	1,369
07 Health		103 61		164		135 43		178	48	410 229		687
09 Home Economics									213		0 300	513
14 Office									1,539	320 2,137	1,373 225	5,594
16 Technical		224 842	134	1,200		440 1,503		1,943	13	181 376		570
17 Trade and Industrial	35	740 3,455	802	5,032	31	642 3,047		3,720	266	740 3,526	467 0	4,999
19 Work Experience										110		110
Special**											86	86
		TOTAL:		6,396***		TOTAL:		5,841***		TOTAL:		13,928

*Upper figure: **Full time**
Lower figure: Occupational extension

**MDTA - Etc.

***Data compiled for Agriculture, Distribution, Home Economics, and Office does not conform with this chart.

TRENDS IN VOCATIONAL EDUCATION PROGRAM ENROLLMENT FOR LOS ANGELES

	1962-63				1964-65				1967-68			
	Secondary	Jr. College*	Adult*	Total	Secondary	Jr. College*	Adult*	Total	Secondary	Jr. College*	Adult*	Total
01 Agriculture	486		120	606	864		1,806	2,670	842	211 615	3,608	5,276
04 Distribution	2,464		9,162	11,626	3,227		8,209	11,436	4,469	696 923	725 0	6,813
07 Health		251 319	798	1,368		118 741	910	1,769	171	975 1,014	219 140	2,519
09 Home Economics			8,552	8,552	12,741		9,157	21,898	244	233 92	27 0	596
14 Office	31,393		23,740	55,133	30,959		26,404	57,363	37,470	1,871 3,128	3,655 0	46,124
16 Technical	41	2,620 7,792	0 3,671	14,124	496	1,794 5,900	591	8,781	13	1,207 1,335	209 2,460	5,224
17 Trade and Industrial	5,470	5,608 25,851	0 11,727	48,656	352	5,623 27,836	7,800	41,611	6,382	4,347 9,296	2,455 12,575	35,055
19 Work Experience	5,055			5,055					11,741			11,741
Special**											1,840	1,840
	TOTAL:			145,120***	TOTAL:			145,528***	TOTAL:			115,188

*Upper figure: Full time
Lower figure: Occupational extension

**MDTA - Etc.

***Data compiled for Agriculture, Distribution, Home Economics, and Office does not conform with this chart.

TRENDS IN VOCATIONAL EDUCATION PROGRAM
ENROLLMENT FOR OAKLAND

	1962-63				1964-65				1967-68			
	Secondary	Jr. College*	Adult	Total	Secondary	Jr. College*	Adult	Total	Secondary	Jr. College*	Adult*	Total
01 Agriculture					2			2	14		19 1	34
04 Distribution					107			107	409		115 0	524
07 Health		276 106		382		286 182		468	42	120 0	87 288	537
09 Home Economics					56			56	65	110 0		175
14 Office					491			491	1,472	552 30	94 20	2,168
16 Technical		1,073 254		1,327	49	1,266 64		1,379			148 0	148
17 Trade and Industrial		4,780 3,930		8,710	153	4,462 4,226		8,841	307	1,044 0	2,010 2,382	5,743
19 Work Experience												
Special**											1,498	1,498
			TOTAL:	10,419***			TOTAL:	11,344***			TOTAL:	10,827

*Upper figure: Full time
Lower figure: Occupational extension

**MDTA - Etc.

***Data compiled for Agriculture, Distribution, Home Economics, and Office does not conform with this chart.

TRENDS IN VOCATIONAL EDUCATION PROGRAM ENROLLMENT FOR SAN DIEGO

	1962-63				1964-65				1967-68			
	Secondary	Jr. College*	Adult	Total	Secondary	Jr. College*	Adult	Total	Secondary	Jr. College*	Adult	Total
01 Agriculture									20	35 55		110
04 Distribution									357	598 1,036		1,991
07 Health		215 235		450		376 246		622	66	324 137		527
09 Home Economics									46			46
14 Office					2,461	2,573		5,034	2,461	1,026 1,547		5,034
16 Technical		322 1,932		2,254		254 2,020		2,274	20	512 1,372		1,904
17 Trade and Industrial		794 3,972		4,766	162	1,677 6,605		8,444	936	1,458 3,357		5,751
19 Work Experience	691			691	734			734	1,563		3	1,566
Special**			181	181			585	585			716	716
			TOTAL:	8,342***			TOTAL:	17,693***			TOTAL:	17,645

*Upper figure: **Full time**
Lower figure: Occupational extension

**MDTA - Etc.

***Data compiled for Agriculture, Distribution, Home Economics, and Office does not conform with this chart.

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

TRENDS IN VOCATIONAL EDUCATION PROGRAM
ENROLLMENT FOR SAN FRANCISCO

	1962-63				1964-65				1967-68			
	Secondary	Jr. College	Adult*	Total	Secondary	Jr. College	Adult*	Total	Secondary	Jr. College*	Adult*	Total
01 Agriculture										69 84		153
04 Distribution									501	331 194	75 0	1,101
07 Health		130	200 0	330		215	150 0	365		350 56	154 0	560
09 Home Economics									47		461 0	508
14 Office									4,233	513 258	7,896 0	12,900
16 Technical		653	0 676	1,329		217	0 568	785	2	410 93	13 646	1,164
17 Trade and Industrial	1,511	352	0 7,874	9,737	1,469	1,127	0 8,074	10,670	1,054	982 546	1,818 6,268	10,668
19 Work Experience												
Special**											1,691	1,691
			TOTAL:	11,396***			TOTAL:	11,820***			TOTAL:	28,745

*Upper figure: **Full time**
Lower figure: Occupational extension

**MDTA - Etc.

***Data compiled for Agriculture, Distribution, Home Economics, And Office does not conform with this chart.

JOB PLACEMENT AND FOLLOW-UP PROGRAM

Objectives of a Job Placement Program	Central Office Staff Responsibilities	Local School Staff Responsibilities	
		Counselor	Teachers
I. Development of "behavioral pattern" on the part of students that make for successful transition and adjustment to the world of work.	1. Provide resource material that has to do with orientation work. 2. Indicate curriculum changes needed at all levels of education. 3. Conduct in-service programs for local school staff.	1. Conducts individual counseling sessions with students regarding transition from school to work. 2. Conducts organized group guidance classes for students. 3. Works with all teachers in developing understanding and assisting youth in the development of appropriate work attitudes. 4. Arranges conferences with students and parents. 5. Conduct testing and test interpretation.	All teachers develop special activities for relating their subject matter to the world of work.

JOB PLACEMENT AND FOLLOW-UP PROGRAM

Objectives of a Job Placement Program	Central Office Staff Responsibilities	Local School Staff Responsibilities	
		Counselor	Teachers
II. The development of a vehicle through which the students and employers are brought together	1. Arrange for employers to visit the different schools on designated dates to interview students. 2. Serves as continuous clearing house for obtaining and disseminating placement opportunities to the school. 3. Maintain continuous contact with industry. 4. Develop a counselor's guide on local industry.	1. Prepare students for employer interview. 2. Coordinate the employer visitation to the school to interview students. 3. Refer students to potential employers. 4. Maintain an active file on job vacancies. 5. Develop procedures for locating job vacancies utilizing existing resources. 6. Assist teachers to work with students in preparing for a job interview and locating a job.	1. Assist students in preparation of job resume. 2. Conduct units in locating and obtaining a job.
III. The development of continuous program of job placement counseling.	1. Work with employers in helping youth to make successful adjustments to work.	1. Conduct periodic personal contact.	

JOB PLACEMENT AND FOLLOW-UP PROGRAM

Objectives of a Job Placement	Central Office Staff Responsibilities	Local School Staff Responsibilities	
		Counselor	Teachers
	2. Develop information on job ladders that exist in different types of industries.	2. Schedule at least one follow-up counseling interview with each student placed on the job within six weeks. 3. Obtain employer assessment of the student within six weeks. 4. Encourage teacher to stay in contact with former students.	
IV. Development of continuous job placement program for out of school graduates and dropouts.	1. Make available to the school on a continuous basis information on job vacancies. 2. Organize cooperative bridges with other agencies that can assist local schools. 3. Inform graduates and dropouts of continuous job placement service.	1. Maintain information on job vacancies. 2. Develop procedure for maintaining contact with graduates and dropouts unemployed. 3. Inform students of continuous job placement program.	

JOB PLACEMENT AND FOLLOW-UP PROGRAM

Objective of a Job Placement Program	Central Office Staff Responsibilities	Local School Staff Responsibilities	
		Counselor	Teacher
V. Develop a systematic follow-up study of each student.	1. Coordinate the collection and compiling of a follow-up report.	1. Work with teacher in conducting the follow-up study.	1. Conduct and compile follow-up data for their school.

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

1967-68 URBAN CENTERS APPRENTICESHIP ENROLLMENT

Occupation	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	Calif. Total	Centers % of Calif. Total
TOTALS:	599	4,469	1,046	1,236	1,265	17,646	48.8%
Auto Body and Fender	-	14	15	-	35	295	21.6%
Auto and Truck Mechanics	-	216	96	21	127	1,222	37.6%
Auto Painting	-	-	13	-	-	13	100.0%
Barbering	-	19	-	19	18	118	47.4%
Brick Laying	26	32	-	24	14	151	72.1%
Cable Splicing	-	22	-	-	-	22	100.0%
Carpentry	82	261	116	184	122	2,755	27.7%
Carpet and Linoleum	-	69	16	47	26	270	58.5%
Cement Finish and Cement Mason	20	24	21	17	-	136	60.2%
City Civil Service	235	-	-	23	-	258	100.0%
Cooking and Baking	-	-	17	-	-	38	44.7%
Diesel Engine Mechanic	-	77	-	-	-	113	68.1%
Drywall	-	69	-	20	-	182	48.9%
Electricity (Wireman)	94	414	109	83	100	1,826	43.8%
Electric Lineman	-	37	-	-	-	37	100.0%

1967-68 URBAN CENTERS APPRENTICESHIP ENROLLMENT

Occupation	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	Calif. Total	Centers % of Calif. Total
Electric Motor Repairman	-	37	-	-	-	37	100.0%
Electric Motor Repairman	-	-	1	-	-	4	25.0%
Electronics	-	-	-	7	-	15	46.6%
Electronic Technician	-	185	-	-	-	191	96.8%
Flight Line Mechanic	-	38	-	-	-	38	100.0%
Glazing	-	19	20	6	21	108	61.1%
Jig and Fixture	-	-	-	5	-	56	8.9%
Landscape Gardening	-	6	-	-	-	6	100.0%
Lathing	2	-	11	19	-	66	48.4%
Machine Shop - Tool and Die	21	674	83	73	184	1,850	55.9%
Meat Cutting	-	137	24	51	68	721	38.8%
Mechanics (Scale)	-	14	-	-	-	14	100.0%
Metal Plating	-	-	-	-	19	19	100.0%
Metal Polishing	-	-	-	-	13	13	100.0%
Metallurgy (Heat Treat)	-	32	-	-	-	32	100.0%
Mill and Cabinet	3	64	18	23	25	193	68.9%
Millwright	-	48	-	-	-	88	54.5%

Occupation	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	Calif. Total	Centers % of Calif. Total
Molding and Coremaking, Foundry	-	15	45	-	18	101	77.2%
Naval Air Station	-	-	-	235	-	235	100.0%
Office Machine Repair	-	16	-	-	-	42	38.0%
Operating Engineers	-	155	32	-	20	818	25.3%
Painting and Decorating	38	159	18	56	42	632	49.5%
Painting Structural Steel	-	-	12	-	-	12	100.0%
Patternmaking	-	-	-	5	-	26	19.2%
Pile Driving	18	-	14	-	-	32	100.0%
Plastering	-	47	9	13	-	95	72.6%
Plastics Technician	-	6	-	-	-	20	30.0%
Plumbing and Pipe Fitting	36	252	-	64	102	1,221	37.1%
Printing and Graphic Arts	-	43	-	-	49	92	100.0%
Property Makers	-	29	-	-	-	29	100.0%
Radio, Television and Telephone	-	19	-	-	-	52	36.5%
Refrigeration and Air Conditioning	-	142	-	21	18	190	95.2%
Reinforcing Iron Workers	-	31	65	-	-	96	100.0%
Roofing	-	74	14	20	19	239	53.1%

1967-68 URBAN CENTERS APPRENTICESHIP ENROLLMENT

Occupation	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	Calif. Total	Centers % of Calif. Total
Sheet Metal	24	307	105	76	91	1,154	52.2%
Sign Painting	-	1	-	-	-	1	100.0%
Sound Technician	-	-	-	12	-	12	100.0%
Sprinkler Fitting	-	86	22	-	-	132	81.8%
Stationary Engineers	-	-	19	-	27	104	45.0%
Steam Fitting	-	298	58	10	20	386	100.0%
Steel, Structural and Ornamental Iron Workers	-	142	44	33	78	492	60.3%
Surveying	-	31	18	32	9	257	35.0%
Tile Setting	-	18	-	-	-	34	52.9%
Utilities - Gas and Electric	-	-	-	37	-	37	100.0%
Welding	-	127	-	20	-	182	80.7%

Percent of Registered Apprentices in the County and/or Trade*

	All Minorities**		Negroes		Mexican and Other Spanish-Americans	
	1968	1967	1968	1967	1968	1967
San Francisco	30.3	23.1	13.2	6.9	9.9	8.3
Los Angeles (Long Beach & Los Angeles)	20.0	17.4	5.5	4.0	11.7	11.0
Alameda (Oakland)	18.3	15.9	7.0	4.7	7.4	6.7
San Diego	12.0	11.8	2.7	1.4	7.2	8.0
Trades						
Meat	22.2	16.1	5.9	2.9	12.8	10.4
Painters and glaziers	21.3	20.0	5.0	3.2	13.1	12.0
Automobile repair	16.5	15.3	4.1	3.1	9.0	8.0
Sheet metal workers	15.9	15.0	2.0	1.6	11.7	11.0
Carpentry and wood	14.4	13.4	4.5	2.5	7.7	8.3
Machinists, tool and die	14.3	13.4	3.7	3.3	8.7	8.0
Iron workers	12.1	12.9	1.5	1.7	6.4	6.7
Electrical	12.1	11.4	3.1	2.1	6.2	5.8
Operating engineers	9.6	6.8	3.1	1.0	4.5	3.6
Pipe	7.5	7.0	1.1	0.8	4.9	4.6

*Changes in proportions between 1967 and 1968 should be interpreted as general indications of trends rather than as exact measurements of change because of the differing response rates to the questionnaire in the two years.

** Includes Negroes, Mexican and other Spanish-Americans, Chinese and Japanese-Americans, American Indians, Filipinos, and other minorities.

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

1967-68 UKBAN CENTERS COMPOSITE PICTURE

	Long Beach	Los Angeles	Oakland	San Diego	San Francisco	State Total	Centers % State Total
Total Population	490,700	3,477,770	365,480	692,000	725,000	20,770,000	27.6%
Population Density per square mile	3,833	4,891	7,028	3,551	15,772	-	-
Total Employment	194,600	1,159,000	249,300	336,300	525,700	7,776,000	31.7%
Unemployment Rate	4.2%	4.5%	8.4%	4.1%	4.4%	4.8%	-
Total K-14 Enrollment	95,871	818,439	85,438	161,515	135,954	5,458,634	23.7%
Total Vocational Education Enrollment	13,928	99,839	10,827	17,645	28,745	1,036,086	16.5%
% Voc. Ed. Enrollment to K-14 Enrollment	14.5%	12.1%	12.6%	10.9%	21.1%	18.9%	-
No. Secondary Schools 7-12	23	134	23	31	26	764	31.0%
No. Jr. CollegesSites	2	8	2	3	1	88	18.1%
Total Cost of Voc. Ed. Program*	$1,540,141	$10,115,518	$4,232,772	$3,640,118	$2,559,632	$79,206,765	27.8%
Total Reimbursement	$ 415,420	$ 2,039,212	$ 724,187	$ 694,912	$ 589,247	$18,723,694	23.8%
Total District Cost	$1,124,721	$ 8,076,306	$3,508,585	$2,945,206	$1,970,385	$60,483,071	29.1%
% of District Cost of Total Cost	73%	79.8%	82.8%	80.9%	76.9%	76.3%	

*Federally aided

FUTURE TRENDS AND EXEMPLARY PROGRAMS

SECTION V

Vocational Education, Future Trends for the Urban Centers

When vocational education is considered in relation to: 1) the changing economy, 2) the urban problems of unemployment and underemployment brought about by lack of skills, 3) the increasing need for special preparation for entrance into the labor market, 4) the war on poverty, and 5) the numbers of youth who are graduating from school or who are returning from the armed services in anticipation of entrance into the labor market, the centers will realize that vocational education will increase in scope. It will provide more and diverse programs, it will meet the needs of more of the population, and it will raise the ability of its recipients to a meaninfgul level in our mechanized, automated society.

Vocational leaders must look to the future so that they will be able to assert leadership in developing new and revitalized programs of vocational education. They must be backed by educational administration, otherwise the structure of public vocational education will be continually weakened by urgings of such organizations as the Department of Labor and the National Alliance of Businessmen that private schools be used whenever possible and that the public schools have a limited function.

This section of the report treats the thoughts, words, and ideas of many people who are active in vocational education. It is indicative of coming trends as it reveals some of the many outstanding vocational programs being offered in the five urban centers and elsewhere throughout the United States.

The first trend is toward image improvement. As an awareness develops for image improvement and efforts are made in that direction by the districts, the title "Occupational Education" will become standard. Many new programs are presently using that title.

The program of vocational education has, by passage of VEA'63, expanded to include the secondary schools. Under VEA'68, this trend will continue with this expanded program being supplemented by adequate career counseling and work experience. Preparation for the secondary program needs to be accomplished in the late elementary and junior high schools in the form of career experiences, field trips, and information. The program offered in the community colleges will become more technical and degree oriented, with more emphasis on the traditional "trade" program in the secondary and adult levels. The adult division will provide intensive short unit pre-employment training for immediate job placement and short unit upgrading courses for employed workers.

Trends indicate that the curriculum in the future will include modular scheduling of students to

allow for programming in excess of one to three hours a day, five days a week for two years; a vocational student would be able to attend an occupational center full day for one, two, or three days a week. Scheduling would be accomplished on an individual student computer programming basis. The curriculum will include the development of business-industry cooperative programs at the high school level and "student intern" programs at the junior college level in order to provide a relevant program of occupational preparation. Flexible scheduling, incorporating transportation to the occupational center or the business-industry site from the resident school, will be provided. Oakland expects a 500% increase in occupational training through the bussing of students to vocational program locations. Curriculum and curriculum guides will be developed around the spin-off or ladder approach utilizing a cluster of occupations and thus providing every student the chance to "go as far as he can" and then become skillfully employed at his maximum capability.

These are some of the trends for a revitalized program of occupational education and the indications of the direction of the future; but, in the effort to find new and innovative ideas and programs, let us not forget that we are operating and have operated an enviable program of vocational education and that we have not met our potential level of accomplishment in our old standby programs.

There has been indicated in one or more of the Urban Centers in this report an increased interest in the following areas. These interests, if they are formulated and sustained, could well become trends in vocational education. They are the interests in:

1. The integrated or ladder approach to vocational education beginning in the lower grades and coordinating programs and counseling through high school, college, and adult divisions;

2. Using the adult education centers as vocational centers for high school divisions;

3. Providing saleable skills for all students terminating high school;

4. Tying counseling in the lower grades to vocations and vocational interests;

5. The work experience part of a cooperative program, especially in the advanced part of the student's vocational program.

Programs Presently Being Offered or Contemplated Within the Five Urban Centers

This group does not include the many fine programs which are offered in more than one district and does not attempt to cover all of the new and unique projects in the five urban centers, but is given as an illustration of some of the trends in vocational education.

Long Beach

Cooperation between the high schools and Long Beach City College for use of junior college shops and labs as an occupational area for high school occupational programs has successfully operated for several years.

Long Beach is placing heavy emphasis on counseling in the lower grades as a means of assisting students to make a vocational choice. A plan has been devised which is heavily advice-oriented and aimed at students in grades below the high school level. The Director of Occupational Preparation, working closely with business and industry, has organized work experience programs for occupational counselors and advisors. One-third of the total counseling staff is enthusiastically participating in the program each year.

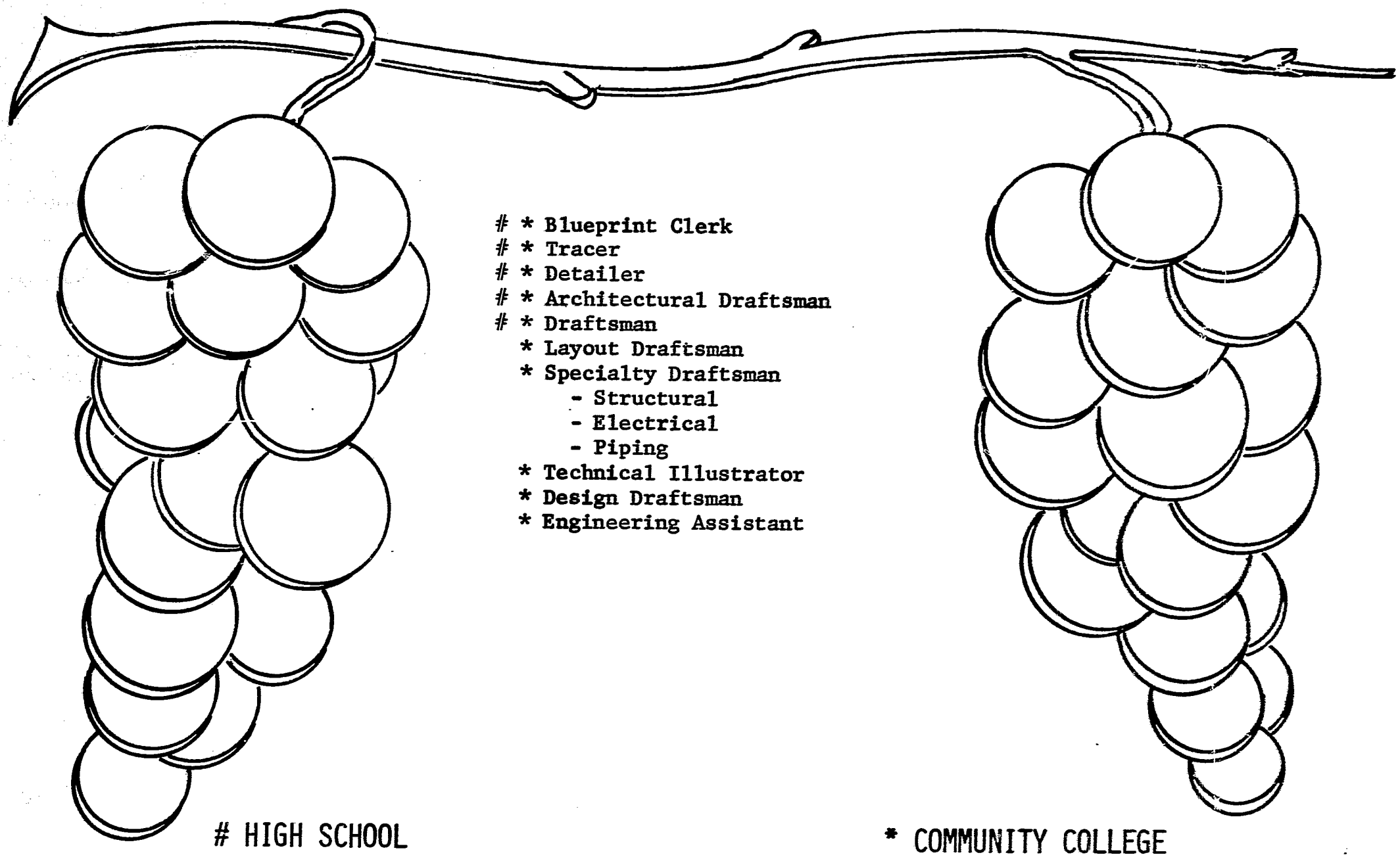
Long Beach has developed occupational cluster charts showing the various types of entry jobs which are available upon completion of certain segments of the occupational cluster, and the level of training required for each hob. Training is correlated between the high schools and the community college. Charts similar to the one following are completed in Automotive, Business Education, Drafting, Electrical-Electronic, Health, Heavy Metalworking, Light Metalworking, and Woodworking.

Long Beach is also offering a "Multi-Occupational Vocational Training Program." The following description and chart explain the program.

Multi-Occupational Vocational Training Program

The purpose of this training program is to prepare the trainee to enter one or more of a group of related occupations. This approach will provide a diversified and flexible program capable of meeting the particular needs and aptitudes of individual trainees and changing demands of the local Labor Market. Not only will more occupational training opportunities be made available to disadvantaged and handicapped persons, but the program will be more sensitive to the individual trainee's needs and capabilities.

DRAFTING: OCCUPATIONAL CLUSTER

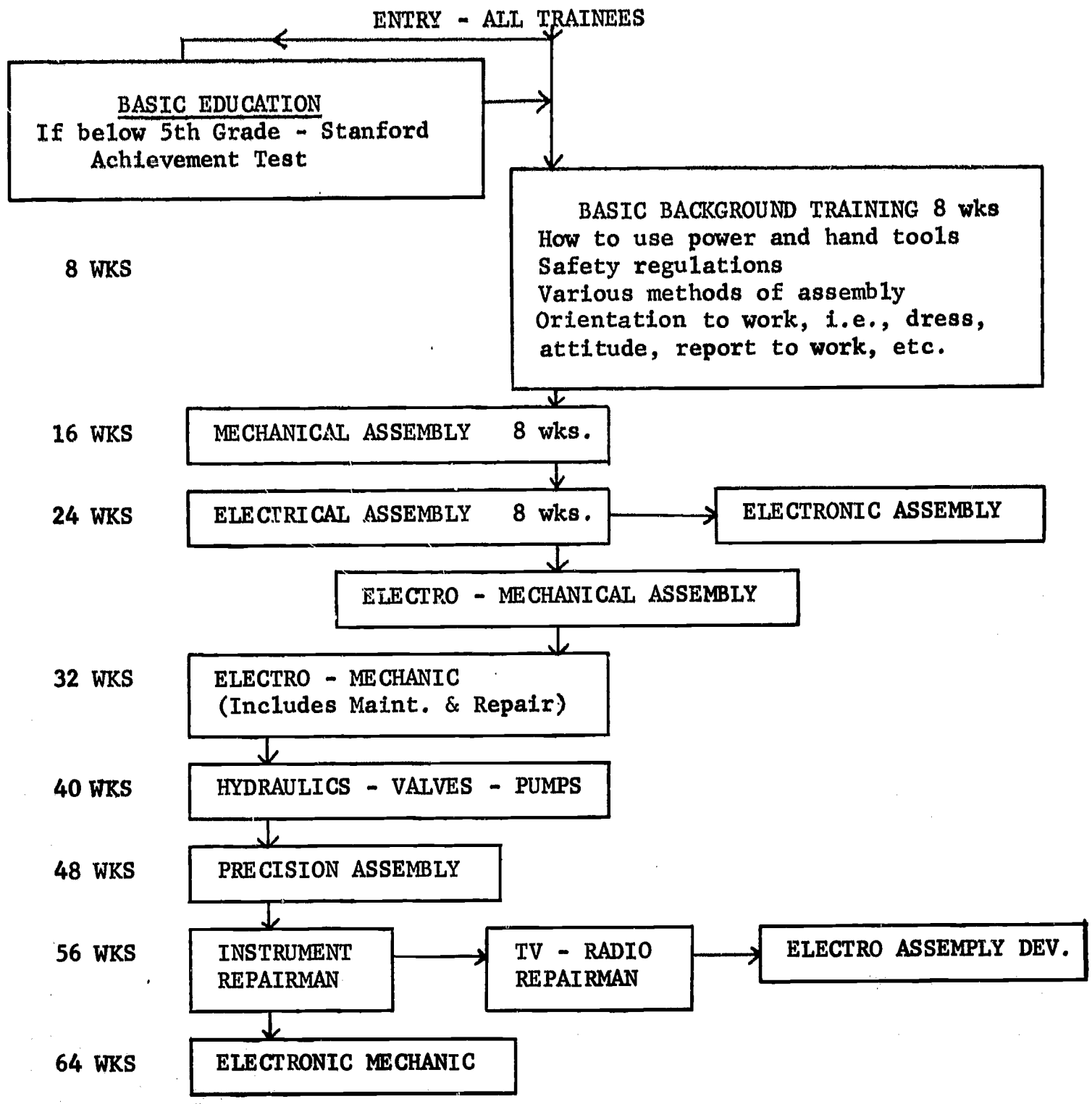


* Blueprint Clerk
* Tracer
* Detailer
* Architectural Draftsman
* Draftsman
* Layout Draftsman
* Specialty Draftsman
  - Structural
  - Electrical
  - Piping
* Technical Illustrator
* Design Draftsman
* Engineering Assistant

HIGH SCHOOL

* COMMUNITY COLLEGE

FLOW CHART ILLUSTRATING OVERALL MULTI-OCCUPATIONAL VOCATIONAL TRAINING CONCEPT



LONG BEACH

The multi-occupational concept of vocational training is to give basic instruction common to a family of occupations, followed by blocks of instructions pertinent to specific occupations and varying skill levels within each occupational area. The trainee will progress to employment through one or more combinations of instructional modules, depending upon his or her potential. This allows the trainee to escape and re-enter at various points in the training program. Other advantages inherent in the multi-occupational vocational concept are the prompt and continuous replacement of dropouts, a substantially increased flexibility in training, and the increased possibilities of trainees advancing to their highest level of occupational skill.

Los Angeles

Los Angeles is undoubtedly one of the foremost districts in the nation regarding tht total field of vocational education and specifically innovative and exemplary programs. Proof of this is in the presence of the high school occupational skills program. This program provides special and intensive training in specific job entry level skills in a wide variety of occupations with the objective of immediate employment at the completion of the course. Classes meet at times which do not conflict with the usual school hours such as Saturdays from 9:00 a.m. until 3:30 p.m. and weekdays between 4:00 and 7:00 p.m. Programs in more than thirty occupational areas are offered.

The Los Angeles Adult Division offers many outstanding programs in vocational education. Among these are included the following:

1. Vocational Rehabilitation Class

   Central City Occupational Center conducts classes in cooperation with the Exceptional Children Foundation Workshop for adults who are mentally and physically retarded. Classes are held five days per week, four hours per day. Training activities include contract work for industry in the assembling of simple toys, packaging of items for market, and simple assembly line activities which can be learned by people with mental and physical problems. The purpose of the program is to enable trainees to become partially self-sustained.

2. Full-Time Department of Employment Representative at West Valley Occupational Center

   The California State Employment Representative serves the West Valley Occupational Center as a full-time employment representative for the students who are trained at the center. This arrangement allows for

close cooperation between the State Employment Service, employment opportunities, training needs, and training programs. Occupational training and curriculum changes are reflected in the current information provided through the Department of Employment. Occupational counseling and job referral are the primary functions of the California State Employment Service.

3. Cooperative Industry, Education, and Employment Agreement

A working relationship has been established involving a partnership among the Adult Education Division, the Department of Employment, and the Management Council for Merit Employment. This is an agreement in which the Los Angeles Chamber of Commerce Rehabilitation Committee will provide industry liaison with the adult schools and 3,400 cooperating business and industry leaders. The Department of Employment and the adult school staff will continually adjust the occupational program on the advice and counsel of the California State Employment Service and the Management Council for Merit Employment. The Los Angeles Board of Education recently endorsed the need for this kind of cooperative arrangement and adopted resolutions to that effect.

4. Home Health Aide Program

The Adult Education Division has developed a program in cooperation with the Visiting Nurse Association and the California Department of Public Health to train individuals to maintain a safe and healthy environment for their patients, to enable such persons to perform personal services directed toward adequate nutrition and personal cleanliness, and to support the continuing medical treatment plan as described. Los Angeles City Schools have been informed by the Vocational Nurses' Association that over 1,000 such trained persons are needed. The adult program is accredited by the California State Department of Public Health and a person receives a certificate upon completion of the program.

5. Education Services for 16 and 17 Year Olds at the Regional Occupational Centers

Two regional occupational centers, West Valley Occupational Center and Central City Occupational Center, regularly serve the educational needs of large numbers of adult students. In addition, selected 16 and 17 year old students are referred to the centers by continuation education teachers and assistant supervisors of Child Welfare and Attendance, for occupational training and opportunity to complete high school graduation requirements.

Students enrolled in this program receive individual and group guidance and an orientation to the world of work. All receive occupational skill training in classes with adults, averaging three secondary to thirty adult students, in addition to academic training. Students spend an average of one and one-quarter hours daily in academic classes and three hours in occupational classes.

At the conclusion of the first year of this program, an evaluation was conducted which indicated that the program was successfully achieving its objectives.

6. Vocational Education for the Handicapped

All adult schools accept referrals from the Department of Vocational Rehabilitation. Such students are placed, after screening and counseling, in regular occupational programs.

7. Vocational Education for the Disadvantaged

The Division of Adult Education offers an extensive program of basic and vocational education in the target areas. Fourteen of the twenty-eight adult schools, one of the two regional occupational centers, and all four skills centers are located in disadvantaged areas. In addition, the other adult schools and regional occupational centers serve many students who are culturally and economically disadvantaged.

Oakland Unified

A comprehensive bulletin or brochure on vocational offerings in the Oakland public schools has been

developed to assist counselors, teachers, parents, students, and others to assist in making a more realistic occupational choice.

With the emphasis being placed on occupational preparation, the high schools are becoming area vocational centers. According to the Director of Vocational Education, a five hundred percent increase in enrollment for occupational training for the next school year will result from the decision of the Board of Education to furnish free transportation to and from each of the three schools involved in the Regional Centers Training Area. Students who enroll in vocational programs not included in their Regional Centers Training Area must provide their own transportation.

Peralta Community Colleges

The Peralta Junior College District is offering several new programs for fiscal 1969-70 and others are planned. Included in these are the following:

1. Experimental College

   The Experimental College is geared for the potential student whose social and economic background put him at a disadvantage in academic competition. Two hundred students will set an occupational goal and a curriculum will be structured around that goal.

2. Preparatory Occupational Program

   The Preparatory Occupational Program is a tailored program in which a deficient student can prepare himself for college level training in the trade-technical fields. A pilot program for the Licensed Vocational Nurse is included.

3. Technical Nursing Program

   The Technical Nursing Program is a foundation program that allows students to upgrade vocational aspirations within the profession without repeating fundamental nursing courses. This program will eventually lead to a laddering of all para-medical professions.

4. Ladder Skills

The Ladder Skills program is designed to train students for job entry and job advancement positions in the medical and legal clerical employment areas. Training would be continuous. A student who reached the qualifications for a medical or legal clerk-typist and obtained employment could return to the extended day program for advanced training.

5. Apprenticeship Recruitment in the Minority Community

Under the Apprenticeship Recruitment in the Minority Community program, minority students from Laney College would be employed to recruit young men of apprenticeable age at congregation centers in the inner-city. Supportive services for the recruits would be provided by the Laney BSU and professional staff.

6. Material Design and Testing Lab for Handicapped Students

Under the program of Material Design and Testing Lab for Handicapped Students, mentally and emotionally handicapped students who cannot cope with the traditional mathematical approach to material strength would be aided by exploring construction material in terms of physical statistics through destructive and non-destructive testing.

7. Careers Unlimited

Careers Unlimited is a flexible, non-pressurized vocational environment utilizing industrial personnel and machine miniaturizations. Students will be able to explore vocational opportunities and receive short term entry level job training at a Careers Unlimited site.

San Diego

The use of industry, business, and public service facilities as extra classrooms and labs has been developed to a high degree by the San Diego Community Colleges with more than two thousand students attending classes in such "off-campus" locations. In every instance where this cooperative agreement exists, the Board of Education officially declares the class to be an extension of the campus.

The use of the junior college shop and lab facilities by high schools, as a vocational area center for high school students who are preparing for immediate employment in a skilled occupation upon graduation, has been working successfully for many years with an enrollment of three hundred. It is anticipated that this number will double or triple when transportation from the school of residence to the vocational center is provided by the school district. In the past, students have been required to pay their own transportation from their school of residence to the center. Since this costs the student as much as sixty cents per day, it has prevented many deserving and interested students from taking advantage of the training.

In selected areas, such as electronics and graphic arts, the work done by the student in high school industrial arts or occupational programs is recognized through credit by examination. This allows the student to enroll with an advanced status, thus avoiding the feeling on the part of the student that he has already covered this material. This excuses the student from repeating basic material and allows him to broaden his or her electives. In no case does the student receive credit twice for the same course.

San Diego Junior Colleges and San Diego State College have worked out a cooperative agreement called "A Career in Industrial Arts Teaching" which allows credit toward the Industrial Arts Teaching Credential for selected shop and lab courses taken in the vocational department of the junior college.

San Francisco

The acquisition of a large hangar at the airport has made it possible for the district to start to develop an extensive program covering many phases of service to the airlines.

Project Feast (Foods, Education, and Service Technology) is starting to receive national recognition. San Francisco City College has had one of the most outstanding hotel and restaurant programs on the junior college level. Project Feast moves the food preparation and service down into the high school, with preparation for a job attained after the first semester, at the same time making it possible and desirable for the more capable students to continue through junior college and even through a four-year program as well as extension training.

A high school student and teacher counselor project involves liaison between high school and city college to allow high school students to sample one or more of the college's occupational programs for college credit, and for teacher counselors to provide vocational counseling in a college setting. This is an oversimplification of an outstanding experiment.

The programs at John O'Connell Technical Institute are an excellent example of multi use of facilities and staff. The facilities house daytime vocational high school, adult day school, adult evening school, and apprenticeship students, and serves as an occupational center for several high schools. Vocational students attend their high school of residence for general education subjects and shops and labs at O'Connell for vocational training. John O'Connell Multi-Media Center will be the key resource center for a planned series of senior high school multi-media centers.

City College of San Francisco is establishing itself as a resource center for occupational guidance and career counseling for secondary students and school staff. The college has recently been concentrating on a two year technical education program. It now offers programs in forty-three different occupational areas with practical application stressed. One of the surprises was the large percentage of Chinese attending the technical programs, approximately twenty-nine percent.

Exemplary Programs From Other Urban Centers of the United States

This material collected from large urban centers in the United States, outside of California, represents considerable forethought and effort by these cities in the attempt to resolve some of the problems of youth and adults, including the disadvantaged. In some instances only the title and source of the article or project are used, in others a more comprehensive coverage is made.

COLORADO: DENVER

Metropolitan State College

Metropolitan State College has 4,629 students. It has no "campus," or buildings, but holds classes in seven downtown office buildings and twenty-seven other public or private facilities. About half of the student body is four-year degree bound and the remainder of students are preparing for vocations requiring less than a baccalaureate degree, such as nursing (two-year and L.V.N.), law enforcement, electronics, etc. They also offer trade or technical extension programs for employed persons.

The development of community colleges in the same area is starting to cause some concern and confusion. Both the state college and community college are state financed and controlled.

The unique feature of educational planning is the development of a complex, in downtown Denver, which will become the higher education center. This will house the Denver center of the University of

Colorado, Metropolitan State College, and the Community College of Denver. It will be built within walking distance of the Denver Opportunity School and the largest high school in Denver. Thirty percent of the facilities will be shared. The complex will house 55,000 students or approximately 30,000 F.T.E. The cost will be approximately $134,000,000.

Emily Griffith Opportunity School

This school is a part of the public schools of Denver responsible for adult, vocational, and technical education. The objective of the school is to offer opportunity for the residents of Denver, whose education has been limited, to take training when they need it. They can come when they like, get the training they need, and leave when they are ready. This is an ideal objective, but sometimes difficult to accomplish. Extensive use is made of instructional materials and self-help aids.

Cooperative education is outstanding, courses are well defined, buildings are well kept, equipment is better than adequate. Cooperation between the school and community is outstanding.

The unique feature of the school is the emphasis on taking care of the educational needs of the individual. Students take advantage of the extensive offerings in general education toward high school graduation.

The Denver high school vocational program has not had the same attention as this opportunity school and some of the other institutions in Denver. It is wide open for improvement. An attempt is being made to make the high school more comprehensive.

MINNESOTA

Minnesota has a very extensive system of vocational education through twenty-six post-secondary area vocational schools, enrolling 12,500 students. In addition, there are several vocational high schools and at least one skills center. There are plans to make all high schools comprehensive either through inclusion of occupational programs "on campus" or in occupational centers serving other high schools.

There is legislation submitted to combine the thirteen state community colleges and the twenty-six area vocational schools. This is causing considerable consternation in vocational education leadership, these leaders foresee loss of status, entity, control, etc. Possibly the greatest threat is the loss of flexibility.

The St. Paul Area Technical Vocational Institute is very impressive with its excellent buildings, space,

and equipment. While it is part of the state system, it is theoretically under the St. Paul Public School System (90% state, 10% local). M.D.T.A. is also included in the school. This is one of the few schools which apprentices attend on their own time. Cooperative part-time training is highly developed.

An experimental program is being developed in Bryant Junior High School, Minneapolis, on the eighth and ninth grade levels. This program's purpose is to motivate students to stay in school by using the interdisciplinary approach developed around occupational training. The second year is build around "on-the-job-training." The daily schedule is broken into thirteen thirty-minute periods with two hours daily spent in the occupational area.

State Level Evaluation

Another interesting project is the development of a procedure for evaluating area vocational schools, administration, teachers, and programs. The evaluation involves a team of staff, administration, and two persons from industry. The evaluation questionnaire is based on a scale of five and is completed individually by each of the evaluators. It covers everything from administration to placement and follow-up.

Since evaluation is an integral part of any vocational program, this instrument would appear to be a valuable guide.

MINNESOTA: MINNEAPOLIS

Dunwoody Technical Institute

Dunwoody is a highly respected private trade and technical school. It has been in business for fifty-one years. There are several features which could be incorporated into public education. Instructional materials are very highly organized.

Individual instruction is stressed. Teachers are hired on a twelve-month basis. They teach ten months, have one month's vacation and spend the remaining month, at the discretion of the school, for such assignments as curriculum development and industrial contacts.

MICHIGAN: DETROIT

The main objective for the visit to Detroit was to see the Galaxy Plan for Career Preparation in action. Several school programs are being developed around the plan, but due to a mandated rule requiring thirty to thirty-five students in a class, the plan is very slow in being implemented.

A recent innovation which should accelerate the plan is the announcement by the Detroit Board of Education that a new program sponsored jointly by the United Auto Workers Union and the Detroit Public Schools takes advantage of the highly developed skills of retired craftsmen in using them as teacher aids in large shop classes. Each U.A.W. retiree working with the students is under the supervision of a regular vocational instructor. He works approximately eight hours per week for which he is paid twenty-five dollars.

A system similar to this could be one answer to the staffing problem in some of our high school occupational programs.

WASHINGTON, D. C.

Washington Technical Institute

Washington Technical Institute is a federal school organized under a federal act for higher education for the District of Columbia. The federal government appropriated $18,000,000 for its construction. (This was approximately the same as all federal vocational reimbursement for the State of California last year.)

The school is operated under a separate board. It is a community college type of institution (technical institute) issuing a certificate or Associate of Arts/Sciences degree. There are no entrance requirements for students except that they must be residents of the District of Columbia. There is a There is a twenty-five dollar per quarter entrance or tuition fee; however, grants are easy to obtain.

No certification for instructors is necessary. The school is coeducational. It has a very sophisticated schedule of curriculum offerings. No one is turned down on the basis of past accomplishments. Most of the entering students receive some remedial training. Twenty percent of the students enter a remedial center within the school, another twenty percent receive remedial and some basic skill training before entering the regular curriculum. Cooperative education is an integral part of the total school program.

The counseling staff is made up of career counselors, the greater proportion of which are occupational advisors, having a ratio of one to thirty students or approximately the same number of counselors as instructors.

This is an intriguing school with a terrific potential. Unfortunately it is somewhat behind in its promises and the students are getting restless because of the lack of follow-through in conjunction with the cooperative education program.

Several innovations are worthy of consideration by California community colleges. They are:

1. Less stress on entrance requirements;
2. More stress on individual student objectives;
3. Lengthening the program if remedial or pre-college work is necessary;
4. Shortening the period of training when the student has reached his occupational objective;
5. More stress on occupational advisement; and
6. More involvement with industry and the community in an organized program of cooperative education.

OHIO

Ohio is going "all out" to take care of the occupational needs of all students K - 12 and adult through the development of comprehensive high schools, area vocational schools, vocational high schools, and vocational educational service centers which administer to the needs of several high schools.

On the adult level, there are two types of residence schools: Mahoning Valley School, which is housed in a semi-active Air Force Base 145 miles north of Columbus, is one example. The facilities do not compare to the rest of the Ohio schools, but the instruction is excellent.

Cooperative education in the schools of Ohio is advanced far beyond any other area. The activities of Ohio are so extensive that it is worth including some of their accomplishments for the 1967-69 period:

1. Major accomplishments in 1967-69

   a. There was a 34.32% increase in services to the youth and a 8.71% increase in service to adults of Ohio.

b. Eight new joint vocational schools opened making a total of eleven in operation.

c. New vocational high schools opened in Cleveland, Ohio and the massive addition to Patterson Cooperative High School in Dayton was completed.

d. Six new joint vocational districts were organized.

e. A new type of center for rehabilitation and job training for potential dropouts and school returnees was initiated in Cleveland and Cincinnati.

f. A family living program, housed in the low income housing in Cleveland and Toledo, was established.

g. There was an expansion of off-the-farm agriculture programs in Ohio's cities.

h. There was an expansion of the statewide testing program in trade industrial education to include cosmetology.

i. There was an expansion of the job training program under home economics educations which included graduation of the first child care classes.

j. A broad in-service program for practical nurses, licensed by waiver, to enable them to take the license examination and be licensed by waiver.

k. A master plan for the organization of vocational districts and identification of the costs of implementing the plan in terms of construction, equipment, and operation was developed.

l. The organization of an experimental program at Kent State University for improved pre-service training of skilled craftsmen as teachers for trade and industrial programs in the public schools was established.

m. An expansion of teacher education services in cooperation with the universities in business, distribution, homemaking, and trade and industrial education was established.

n. The first ceramic technology program in the nation was initiated.

o. The first forestry technology program in the state of Ohio was initiated.

p. Semi-skilled or single skilled occupational programs in each of the occupational areas was initiated.

q. A vocational evaluation and rehabilitation service, in cooperation with the Penta County Joint Vocational School, to identify and serve youth who need and are eligible for such services prior to the period such youth drop out of school, was established.

r. The residential schools at Vienna, Ohio (Mahoning Valley) and Jackson, Ohio (Southern Ohio Manpower Development and Training Center) were successfully operated.

s. Fourteen two-week vocational guidance seminars in connection with the counselor education programs at five state universities, in order to upgrade approximately 280 practicing school counselors in their knowledge and skills concerning vocational education, were sponsored.

t. The first annual two-day conference for counselor educators in Ohio's fourteen approved counselor education institutions was sponsored in order to share with them current trends, legislation, and unmet needs in vocational education.

2. Major Goals for 1969-71 biennium are:

a. Expansion of the number served during the biennium over FY 1969;

b. The establishment of centers for vocational rehabilitation and job training in each of the major cities in the state;

c. The initiation of construction in the eight major cities and joint vocational school districts to serve 55,338 high school youth and 83,007 adults annually. (The investment in construction and equipment of a total of $183,533,571);

d. The establishment of a continuing program for retraining of unemployed adults and A.D.C. parents in cooperation with the Department of Welfare. (This will involve the full cooperation of the Manpower Training Centers in seven of the eight major cities);

e. The initiation of child care centers in the core sections of our major cities in cooperation with the elementary schools in the area, the home economics programs in the public schools, and the Department of Welfare;

f. The opening of seven additional joint vocational schools and the organization of thirteen additional joint vocational school districts;

g. The initiation of a program at the seventh and eight grade levels for the orientation of all youth to the world of work;

h. The implementation of a work adjustment program for dropout prone fourteen and fifteen year olds to retain them in meaningful school programs until they are old enough to enroll in vocational education programs;

i. The expansion of vocational programs into new occupational areas as the number enrolled in vocational programs is increased;

j. The expansion of health occupations programs;

k. The extension of the family living program for low income areas of the major city to all major cities in the state.

OHIO: CLEVELAND

A follow-up of graduates and dropouts from Cleveland vocational programs shows that less than six percent of 1968 enrollments are actually dropouts, the rest of the "starts" were employed in areas compatible with their vocational training. (This points up the necessity for a complete record of all starts.)

Training Center in the Building Donated by the General Electric Company

Having visited this school last July and foreseeing its potential, it was very disappointing to find so little progress being made. Industry has not cooperated to the extent that had been promised. The administration of the school tried to avoid anything which indicated a relationship to vocational education. There is no director, but a manager. There are no instructors, but foremen. The term "class" is out. Their rationale is that the enrollees are so tired of formal schooling that they feel there is a greater opportunity for success if the trainees are not subjected to the atmosphere of a school. With apparent modifications, this could still work in one or more of the urban centers of California. However, let's not downgrade our present good programs through subterfuge.

PENNSYLVANIA: PHILADELPHIA

Philadelphia is presently divided into eight semi-autonomous high school districts with several high schools in each district. There are three vocational centers developed and functioning. Their immediate plans are to build five more, one in each of the high school districts.

Each of these centers will become the vocational division for a group of high schools as well as an adult vocational school.

Of the three now in operation, Dobbins was built to accommodate 1,900 students and Walter Biddle Saul 600 students. These centers will be part of the local school district. Each student's schedule will be individually programmed by computer. They will attend their residence school two to three days a week and the vocational center for the balance of the five days. When they are ready to go to work on the cooperative program they will attend the residence school three days a week, the vocational center one day, and work under a cooperative program one full day per week. This system would work in several of our California schools since it reduces the problem of transportation considerably. The employer can also depend upon a boy or girl for a full day's work.

An innovative way of providing career exploration for younger students is to develop a career center in connection with each vocational center. Junior high (middle school) students, through the counselor, are

scheduled and assigned to an advanced student on a one-to-one basis for a full day. During this day they follow and observe the types of skills and jobs encountered in a given occupation. The student-to-student communication is proving far superior to short class field trips. The young students are rotated through several occupations.

The vocational centers are open daytime, evening, and on Saturdays, twelve months a year. The apprentices attend school one full day every two weeks, on company time. The Skills Center is part of adult education. It appears to be very similar to our skills centers in California. It is interesting to listen to the remedial education classes answering in unison to math problems flashed (very slowly) on the screen. All of their M.D.T.A. projects are on annual contracts with trainees replaced as they drop out or are placed on jobs. This makes a lot of sense.

NEW YORK

New York schools are in the middle of a complete reorganization; they have been for the past three years. The new system will be based on dividing the city into thirty local school districts, each with its own board of education. K - 12 will be divided into Elementary (K-4), Middle School (5-8), and Comprehensive High School (9-12).

There are presently twenty-nine vocational schools of two types, "unitrade" and "multitrade." The unitrade schools will be retained and all but fourteen of the trade schools will be abandoned. (It was interesting to note that the abandoned schools would not be a complete loss as they could be used for the training of dropouts or turned over to Manpower Development.) Thirty-two new comprehensive high s schools are being built and will include business, arts, skilled trades, and unskilled occupations.

There are two methods of entry into vocational programs depending upon the complexity, screened and unscreened. Sixty percent of the vocational students are minority. Vocational teachers are required to have high school or equivalent and nine years of occupational experience. There are plenty of applicants.

Nine schools are following the Correlated Programs which is designed to take care of the high school student who has not decided upon a college program and has not made an occupational choice. (Copies were sent to committee members.) This program is based on two California experiments, Project Feast and The Richmond Plan. The main features of the program are:

1. Exploration courses in the areas of business, health, and industry in the ninth and tenth years;

2. Specialization in one broad occupational area in grades eleven and twelve;

3. Preparation of those students who wish to continue their education beyond high school for a careers program during the 13th and 14th years, in a community college or in an urban center;

4. Special counseling and placement services. (For each pilot school the Board of Education has assigned a guidance counselor who devotes full-time to the project.);

5. New curriculum materials in each course, written by a team of teacher experts with the aid of consultants and advisory committees from industry. (Projects carried out in one classroom are "correlated" or reinforced in other classrooms.);

6. An emphasis on the improvement of basic skills. (The English teacher cooperates with teachers in other subject areas in helping the student improve in his ability to read and write.);

7. Provision of teacher time so that English, mathematics, science, and shop or laboratory teachers can meet daily as a team to plan their work cooperatively. (A block-of-time arrangement keeps teachers and pupils together for selected subjects.);

8. Special training workshops for those who teach the classes.

GENERAL COMMENTS AND OBSERVATIONS

1. If everyone does what they say they are doing or what they say they are going to do, we should have no worry about the future of vocational education in these centers.

2. Most junior or community colleges are state financed and not under the control of local boards.

3. The lack of understanding between local and state programs is apparent.

4. The statistics from the State Employment Service are generally being used to determine job opportunities.

5. Most apprentices attend school during the day, on employers' time.

6. Counseling and guidance are being built into most schools, through exploration experiences in the lower grades.

7. Some form of the family of occupations approach to occupational training is being considered in most of the cities.

8. There is a strong emphasis on cooperative training in each of the cities. In two cities this training starts at the ninth grade level.

SUMMARY OF RECOMMENDATIONS

Section VI

Summary of Recommendations

The study of vocational education in the five large cities of California and its relationship to manpower, employment, and poverty, placed an emphasis upon fact finding as the major thrust of Phase I of the total study.

One of the highlights of the study, during 1968-69, was the opportunity for the vocational education leaders in the large cities to become better acquainted with each other and to discuss common problems. During the year, the group had many opportunities to share their knowledge about these problems and to reach tenable conclusions. Accordingly, the recommendations represent both a consensus and a major step toward concerted action for the future.

A fact which is often overlooked is the realization that the major urban centers of California are operating outstanding programs of occupational education. An objective of this study was to expand and extend such programs to provide for the vocational education needs of persons not presently being served. In order to reach this objective, it was necessary to summarize and describe the innovative and exemplary programs in operation in the large cities. Section V of the report includes a description of many of these programs.

Each area of the report identified contemporary problems. Recommendations, based upon an analysis by the study group, were made for each major area of the report. A summary of these recommendations follows.

1. A method of determining employment statistics and trends in an area coterminous with school districts be worked out between each school district and the local office of the California Department of Employment. (Section III)

2. A cross reference listing be developed between the California Instructional Code used by the California Department of Employment so that training code numbers could be related to job titles. (Section III)

3. More accurate employment statistics be developed for the Los Angeles area schools. (Section III)

4. A greater number of industry-school cooperative programs be developed in the urban centers to offset the astronomical cost of modern equipment and facilities. (Section IV)

5. The joint use of facilities between the secondary divisions, the junior college divisions and the adult program be developed within each of the urban centers to reduce duplication of facilities and increase the weekly utilization of equipment. (Section IV)

6. All new facilities being contemplated be designed with a multiple use in mind and for a utilization rate of six days per week for the full calendar year. (Section IV)

7. Transportation be provided for occupational students from resident school to area technical school or from resident school to a cooperative industry site. (Section IV)

8. A standard method of accounting for vocational education enrollments and the follow-up of students be developed. (Section IV)

9. The state accounting forms be clarified and revised and that state sponsored clinics or workshops be offered to all those who will be working with state forms in an effort to provide uniformity between districts with regards to vocational education statistics. (Section I) (Section IV)

10. A department of inter-districts coordination of vocational education be organized in each of the cities that have both a unified and a junior college district. (Section IV)

11. Each district develop procedures whereby a vocational education program (course) could be initiated within a short period of time after receiving a request from an agency or industry. (Section IV)

12. Each district develop articulation procedures whereby credit can be given the student for beginning courses taken in either the secondary, junior college, or adult divisions without requiring the student to retake them. (Section IV)

13. Each district organize a central clearinghouse for ideas, information and statistics. (Section IV)

14. The State Department of Education, ammend the education code so that vocational-technical personnel would be qualified to counsel without needing a prohibitive number of courses as a requirement. (Section IV)

15. Selected part-time designated subjects credentialled instructors be allowed to teach in the secondary occupational education program. (Section IV)

16. The State Department of Education and California school districts entitle the program "Occupational Education" as one means of image improvement. (Section IV)

17. Emphasis be placed on follow-up of all pre-employment enrollees. (Section IV)

18. The use of selected retired craftsmen as teaching assistants be encouraged. (Section V)

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APPENDIX A

KEY PERSONNEL AND COMMITTEE MEMBERS

Names of Persons Attending the Special Meeting in Sacramento, Friday, July 26, 1968

Mr. Leland Baldwin, Vice Chancellor
Bureau of Junior College Vocational-
Technical Education
Sacramento

Mrs. Dorothy Schnell, Chief
Bureau of Homemaking Education
Sacramento

Mr. E. David Graf, Assistant Chief
Bureau of Agricultural Education
Sacramento

Mr. Richard S. Nelson, Chief
Program Operations Unit
Vocational Education Section
State Department of Education
Sacramento

Mr. Wesley P. Smith, Director
Vocational Education
State Department of Education
Sacramento

Mr. Rulon C. Van Wagenen, Chief
Bureau of Business Education
Sacramento

Mr. Joseph H. Stephenson, Director
California Major Urban Centers
Vocational Education Project
University of California, Los Angeles
San Diego

Superintendents, Assistant Superintendents, and Key Personnel who endorsed the California Major Urban Centers Vocational Education Project

Mr. Odie Wright, Superintendent of Schools
Long Beach Unified School District
Long Beach

Dr. James Plusch, Director
Occupational Preparation
Long Beach Unified School District
Long Beach

Dr. Jack Crowther, Superintendent
Los Angeles City School District
Los Angeles

Dr. William Johnston, Assistant Superintendent
Adult Education
Los Angeles City School District
Los Angeles

Mr. J. Lyman Goldsmith, Supervisor
Vocational Education and Practical Arts Program
Los Angeles City School District
Los Angeles

Mr. William Fortman, Director
Vocational Education
Oakland Unified School District
Oakland

Dr. John W. Dunn, Superintendent
Peralta Junior College District
Oakland

Dr. Harmon Kurtz, Assistant to the Superintendent
San Diego Unified School District
San Diego

Mr. William Steinberg, Director
Vocational Education
San Diego Junior Colleges
San Diego

Dr. Robert Jenkins, Superintendent of Schools
San Francisco Unified School District
San Francisco

Dr. Edward Goldman, Associate Superintendent
Instruction
San Francisco Unified School District
San Francisco

Dr. James Dierke, Assistant Superintendent
Adult and Occupational Education
San Francisco Unified School District
San Francisco

Mr. Wesley P. Smith, Director
Vocational Education
State Department of Education
Sacramento

Mr. Joseph H. Stephenson, Director
California Major Urban Centers
Vocational Education Project
University of California, Los Angeles
San Diego

State Committee for the Urban Centers Vocational Education Project

Dr. James Plusch, Director
Occupational Preparation
Long Beach

Mr. J. Lyman Goldsmith, Supervisor
Vocational and Practical Arts Section
Los Angeles City School District
Los Angeles

Mr. William Fortman, Director
Vocational Education
Oakland Unified School District
Oakland

Mr. Henning Edlund, Director
Adult Education
Oakland

Dr. Ernest Berg, Director
Educational Services
Peralta Junior College District
Oakland

Dr. Jack Michie, Special Projects
Laney College
Oakland

Dr. Dwight Twist, Assistant Superintendent
Secondary Schools Division
San Diego

Mr. William Steinberg, Director
Vocational Education
San Diego Junior Colleges
San Diego

Dr. James Dierke, Assistant Superintendent
Adult and Occupational Education
San Francisco

Mr. Bryant Lane, Director
Occupational Preparation
San Francisco

Mr. Norbert Deggendorfer, Coordinator
Occupational Education
San Francisco

Dr. T. Stanley Warburton, Superintendent
Los Angeles Community College District
Los Angeles

Mr. Allen A. Sebastian, Area Superintendent
Division of Secondary Education
Los Angeles

Mr. Harry Shortess, Director
Vocational Education
Merritt College
Peralta Community College District

Dr. Louis Batmale, Vice President
San Francisco City College
San Francisco

Dr. Ralph Kauer, Assistant Superintendent
Secondary Education
San Francisco Unified School District
San Francisco

Mr. Joseph H. Stephenson, Director
California Major Urban Centers
Vocational Education Project
University of California, Los Angeles
San Diego

Mr. Thomas Nesbitt, Dean of Instruction
San Francisco City College
San Francisco

Mr. Wesley P. Smith, Director
Vocational Education
State Department of Education
Sacramento

Kr. Keith F. James, Dean
Occupational Preparation
Long Beach City College
Long Beach

APPENDIX B

1969-70 INVENTORY OF VOCATIONAL EDUCATION PROGRAMS AND COURSE OFFERINGS

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY
AS - ADULT SUPPLEMENTARY
S - SECONDARY
A - APPRENTICESHIP
PS - POST SECONDARY

OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
01.0000 AGRICULTURE												
Agricultural Mechanics							S	N	356	72	20	13.56
Agriculture Production							S	C	356	72	645	437.37
Gardener - Commercial							AS	C	30	10	500	28.57
Gardening and Landscaping							AP	N	60	20	75	8.57
							AS	C	60	20	386	44.11
Gardening for the Handicapped												
Horticulture - Ornamental							S	C	356	72	715	484.84
							PS	C	240	40	126	57.60
							PS	C	200	40	75	28.57
Nursery and Landscape Technology							PS	C	120	40	95	21.71
04.0000 DISTRIBUTION AND MARKETING												
Advertising Services	PS	C	216	18	75	30.86	PS	C	240	40	28	12.80
	PS	C	108	18	98	20.16	PS	C	760	40	33	47.77
Automotive and Petroleum							AS	C	50	20	220	20.95
Business Mathematics												

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
						AP	C	540	36	45	46.29						
AP	C	228	72	30	13.03	PS	C	90	18	180	30.86	PS	C	414	72	160	126.17
AS	C	144	108	60	16.46	S	N	360	36	36	37.03	S	C	129	36	48	11.79
S	C	360	72	23	15.77	S						PS	C	414	72	160	126.17
S	N	180	36	10	3.43												
						PS	C	54	18	38	3.91						
						PS	C	72	18	32	4.39						
						PS	C	108	18	30	6.17						
						PS	C	144	18	33	9.05						
						PS	C	90	18	6	1.03						
						PS	C	36	18	14	.96						
						AP	C	108	18	40	8.23						
PS	N	300	72	200	114.29	PS	C	54	18	70	7.20						
						PS	C	54	18	292	30.04						
						PS	C	18	6	211	7.23						

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY AS - ADULT SUPPLEMENTARY S - SECONDARY A - APPRENTICESHIP PS - POST SECONDARY OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
04.0000 DIST. & MARKET (cont.)												
Business Mathematics (cont.)												
Distributive Education Occupations	S	C	180	36	210	72.00						
	S	C	540	36	210	216.00						
Economics												
Finance and Credit	PS	C	54	18	40	4.11	AS	C	50	20	220	20.95
	PS	C	54	18	40	4.11	AS	C	50	20	225	25.71
							PS	C	240	40	120	54.86
							PS	C	760	40	43	62.25
Food Distribution	PS	C	216	9	80	32.92						
	PS	N	648	18	70	86.40						
	PS	C	120	6	35	8.00						
Food Services	S	N&C	360	36	75	51.43						
	S	N	180	36	25	8.57						
Food Store Management							PS	C	760	40	12	17.37
Home Furnishings							PS	C	120	40	123	28.11
Hotel Operations							AP	C	120	20	80	18.29
International Trade												
Insurance	PS	C	216	36	94	38.68						
	PS	N	108	36	30	6.17						
Management	PS	C	216	18	90	37.03	PS	C	120	40	343	78.40
	PS	N	108	18	20	4.11	PS	C	400	40	189	144.00

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
						PS	C	36	12	211	14.47						
						PS	C	54	18	1262	129.81						
						PS	C	54	18	180	18.51						
						PS	N	54	18	250	25.71						
						AS	C	54	9	120	12.34						
						PS	N	54	18	70	7.20						
						AS	C	44	12	40	3.35						
						PS	C	54	18	40	4.11						
S	C	360	36	15	10.29	PS	C	90	18	4	.69						
						PS	C	54	18	8	.82						
						PS	C	36	12	25	1.71						
						PS	N	36	12	25	1.71						
						PS	N	54	18	40	4.11						
						PS	C	54	18	120	12.34	PS	C	198	72	45	16.97
						PS	C	54	18	2040	209.83						
						AS	C	12	4	35	.80						

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY AS - ADULT SUPPLEMENTARY S - SECONDARY A - APPRENTICESHIP PS - POST SECONDARY OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
04.0000 DIST. & MARKET (cont.)												
Marketing	PS	C	216	18	158	65.00	PS	C	60	40	150	17.14
							PS	C	160	40	25	7.62
Merchandising - General	PS	C	216	18	89	36.62	S	C	360	36	475	325.71
							AS	C	60	20	420	48.00
							AS	C	120	20	805	184.00
							AS	N	90	6	120	20.57
							AP	N	200	10	240	91.43
							AS	N	120	20	120	27.43
							PS	C	240	40	147	67.20
							PS	C	120	40	512	117.03
							PS	C	1000	40	38	72.38
Real Estate and Insurance	PS	C	108	18	138	28.39	AP & AS	C	60	20	1365	156.00
	PS	C	216	18	340	139.89	PS	C	240	40	75	34.29
	PS	C	486	54	20	18.51	PS	C	120	40	469	107.20
	PS	C	108	6	35	7.20	PS	C	360	40	82	56.23
	PS	C	108	36	22	4.53	PS	C	780	40	41	59.35
	PS	C	108	18	48	9.87	PS	C	160	40	284	86.55
Retail Trade Salesmanship												
Transportation	PS	C	216	18	46	18.93	AS	C	60	20	690	78.86
	PS	C	108	18	23	4.73	PS	C	240	40	35	16.00

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
						PS	N	54	18	517	53.18						
						PS	N	18	18	60	2.06						
						PS	C	54	18	190	19.54						
						PS	C	18	18	10	.34						
S	C	180	72	75	25.71	A	C	90	18	30	5.14	PS	C	162	72	415	128.06
PS	C	760	40	34	49.22	S	C	180	36	520	178.29						
AS	C	250	72	1680	800.00	PS	C	54	18	842	86.61	PS	C	216	72	510	209.83
						AP	C	108	18	128	26.33	AP	C	145	34	160	44.19
						PS	N	54	18	35	3.60						
						AS	C	12	4	120	2.74	PS	C	302	72	65	37.39
S	N&C	180	72	154	52.80	PS	C	54	18	210	21.60						
PS	C	480	36	40	36.57	AS	C	54	18	90	99.26						
PS	N	480	72	40	36.57												
AP	C	288	72	135	74.06	PS	C	54	18	240	24.69	PS	C	162	72	80	24.69

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
04.0000 DIST. & MARKET (cont.)												
Transportation (cont.)	PS	C	54	18	24	2.47	PS	C	120	40	434	99.20
							PS	C	760	40	82	118.70
07.0000 HEALTH OCCUPATIONS												
Dental Assistant	PS	C	54	18	25	2.57	S	N	400	40	50	38.10
	PS	C	56	14	20	2.13	PS	C	240	40	42	19.20
	PS	C	12	4	16	.37	PS	C	800	40	87	132.57
	PS	C	144	18	21	5.76						
	PS	C	70	14	17	2.27						
Dental Laboratory Technician							PS	C	240	40	31	14.17
							PS	C	820	40	135	210.86
Health - Environmental												
Health - General	S	N&C	360	36	100	68.57						
Health Occupation Core	PS	C	220	20	40	16.76						
Hospital Clerk							SP	N	120	40	107	24.46
Hospital Staff Training												
Hospital Unit Management							PS	C	180	40	20	6.86
Inhalation Therapy Technician	AP	N	18	18	41	1.41	PS	C	120	40	120	27.43
							PS	C	200	40	65	24.76

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
PS	C	648	72	30	37.03	PS	C	162	18	89	27.46	PS	C	360	72	125	85.71
						PS	C	90	18	88	15.09						
						PS	C	72	18	39	5.35						
						PS	C	54	18	47	4.83						
						PS	C	45	18	50	4.29						
												PS	C	720	72	80	109.71
						PS	C	54	18	30	3.09						
S	C	360	36	50	34.29												
						PS	N	90	36	180	30.86						
PS	N	306	72	25	14.75												
PS	C	432	72	40	32.91	PS	C	72	18	38	5.21	S	N	720	36	48	65.83
						PS	C	103	18	29	5.97	PS	C	360	72	190	130.29
						PS	C	180	18	53	18.17						
						PS	C	90	18	124	21.26						
						PS	C	180	36	110	37.71						

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
07.0000 HEALTH OCCUPATIONS (cont.)												
Medical and Dental Office Practice							S	N	360	36	75	51.43
							PS	N	240	40	10	4.57
							PS	C	320	40	50	78.10
Medical Records Technician												
Mental Health Worker							PS	N	240	40	17	7.77
							PS	N	760	40	34	49.22
Nurse Aide - Hospital and Home	AP	C	108	9	116	23.86	S	N&C	360	36	216	148.11
							S	C	400	40	255	194.29
							AP & S	N&C	240	40	1055	482.29
							AP	C	60	20	250	28.57
							AP	N&C	120	10	800	182.86
							AP	N	300	10	80	45.71
							AP	N	120	20	80	18.29
							PS	C	160	20	40	12.19
Nurse - Registered												
Nurse - Vocational	PS	C	90	6	25	4.29	AP	C	1960	49	135	504.00
	PS	C	108	18	20	4.11	AP	N	1960	49	85	317.33
	PS	C	108	12	17	3.50	PS	C	240	40	222	101.49
	PS	C	36	6	15	10.29	PS	C	1200	40	80	182.86
							PS	C	80	40	25	3.81
							PS	C	1800	50	92	315.43
							SP	N	120	40	189	43.20
							PS	C	50	50	22	2.10
							PS	C	200	50	37	14.10

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
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S	C	360	36	69	51.43	PS	C	144	18	26	7.13						
AS	C	36	18	40	2.74	PS	C	180	18	42	14.40						
AS	N	54	18	50	5.14	PS	C	54	18	6	.62						
						PS	C	36	18	30	2.06						
												PS	C	270	72	28	14.40
AP	C	430	18	68	55.70	PS	C	180	18	18	6.17						
AP	C	252	18	90	43.20	PS	C	270	18	18	9.26						
						S	C	360	36	15	10.29						
						S	N	360	36	108	74.06						
PS	C	660	78	96	120.69							PS	C	648	72	100	123.43
AP	C	261	72	70	34.80	PS	C	126	18	149	35.76	AP	C	55	46	150	15.71
PS	C	1080	54	105	216.00	PS	C	504	18	149	143.04	AP	N	133	46	36	9.12
AS	C	36	18	120	8.23	PS	C	84	12	149	23.84						
PS	N	1080	72	40	82.29	PS	C	312	12	149	88.55						
PS	N	270	18	100	51.43	PS	N	630	18	30	36.00						
						PS	C	45	18	50	4.29						

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
07.0000 HEALTH OCCUPATIONS (cont.)												
Nurse - Vocational (cont.)							PS	C	150	50	22	6.29
							PS	C	600	50	51	58.29
							PS	C	1200	50	65	148.57
							PS	C	1500	50	18	51.43
							PS	C	1120	40	300	640.00
							PS	C	820	40	433	676.30
Ophthalmic Assistant							PS	N	320	40	30	18.29
							PS	C	780	40	3	4.46
Operating Room							PS	C	800	40	29	44.19
Orthopedic Assistant							PS	C	1000	40	50	95.24
Optometric Assistant												
Physical Therapy Assistant												
							AP	C	60	20	50	5.71
							AP	N	300	10	160	91.43
							AP	N	240	40	40	18.29
							PS	C	240	40	35	16.00
Radiology & Nuclear Medican Tech.							PS	C	780	40	32	47.54
							PS	C	280	40	68	36.27
							PS	C	240	40	102	46.63
							PS	C	770	40	35	51.33
X-Ray Technology	AS & PS	N	72	18	78	10.70	PS	C	780	40	147	218.40

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												PS	N	360	72	25	17.14
AP	C	336	36	15	9.60												
						PS	N	54	18	30	3.09						
AP	C	840	108	110	176.00	PS	C	36	18	102	6.99	PS	C	652	72	100	124.19
AS	N	72	18	20	2.74	PS	C	108	18	43	8.85						
						PS	C	54	18	44	4.53						
						PS	C	36	18	29	1.99						

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09.0000 HOME ECONOMICS												
Care and Guidance of Children	PS	C	4	36	16	.12	S	N&C	360	36	264	181.03
	S	C	360	36	100	68.57	PS	C	160	40	85	25.90
	PS	C	3	18	975	5.57						
	PS	C	5	18	70	.67						
Clothing Production, Management & Service	S	C	180	36	70	24.00	S	C	360	36	64	43.89
	AS & PS	C	3	36	425	2.43	PS	C	160	40	15	4.57
	PS	C	2	18	50	.19						
	PS	C	3	18	25	.14						
	PS	C	5	18	40	.38						
	PS	C	36	9	100	6.86						
Food Management and Diet Aide	AS	C	3	36	85	.49	S	C	360	36	168	115.20
							PS	C	240	40	15	5.86
Food Service Supervision							PS	C	320	40	21	12.80
							PS	C	760	40	18	26.06
Home Furnishings, Sales, & Service							S	C	360	36	24	16.46
							PS	C	240	40	7	3.20
							PS	C	760	40	10	14.48
Home Economics - General							PS	C	320	40	104	63.39
							PS	C	160	40	155	47.24
							PS	C	240	40	174	79.54
							PS	C	400	40	168	128.00
							PS	C	360	40	94	64.46
							PS	C	600	40	46	52.57
							PS	C	560	40	15	16.00
							PS	C	760	40	92	133.18

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S	N&C	360	36	55	37.71												
						S	N	360	36	36	24.69						

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09.0000 HOME ECONOMICS (cont.)												
Institutional Management							S	C	360	36	24	16.46
14.0000 OFFICE OCCUPATIONS												
Accounting, Machine Accounting, and Bookkeeping	S	C	360	36	64	43.89	AP	C	120	20	3500	800.00
	PS	C	360	18	290	198.86	AP	N	60	20	300	34.29
	PS	C	180	36	58	19.89	PS	C	200	40	1736	661.33
	PS	N	900	18	358	613.71	PS	C	320	40	640	390.10
	PS	C	270	36	86	44.23	PS	C	320	40	31	18.90
	PS	C	108	36	54	11.10	PS	CC	240	40	428	195.66
	PS	C	108	18	48	9.87	PS	C	800	40	154	234.67
	PS	C	90	6	62	10.63	PS	C	480	40	113	103.31
	PS	C	540	18	410	421.71	PS	CC	1000	40	173	329.52
	PS	C	180	36	560	192.00	PS	C	120	40	532	121.60
							PS	C	160	40	493	150.25
							PS	C	400	40	560	426.67
							PS	C	800	40	505	769.52
							PS	C	780	40	38	56.46
Business Education - Basic							PS	CC	240	40	202	92.34
							PS	C	360	40	490	336.00
Business Education - Multi-Level												
Business Communications	PS	C	216	18	100	41.14	AP	C	120	20	2670	610.29
	PS	C	108	18	53	10.90						
	PS	C	180	18	51	17.49						
	PS	C	90	6	32	5.49						

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S	N&C	180	72	418	143.32	PS	C	72	18	1045	143.31	PS	C	342	72	235	153.09
PS	C	450	24	625	535.71	PS	C	90	18	1124	192.69						
PS	C	108	72	50	10.29	PS	C	54	18	198	20.37						
AP	C	108	36	118	24.27	AP	C	108	18	90	18.51						
						PS	C	27	9	160	8.23						
						S	C	180	36	563	193.03						
PS	C	760	40	254	367.70	S	C	180	36	8	2.74						
						S	C	180	36	104	35.66						
						AP	C	108	18	40	8.23						
						PS	C	54	18	280	28.80						
						S	C	180	36	300	102.86						

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14.0000 OFFICE OCCUPATIONS (cont.)												
Business Data Processing Systems	S	N	360	36	15	10.29	S	C	180	18	120	41.14
	S	N	180	18	12	4.11	AP	C	120	20	1950	445.71
	PS	C	540	18	301	309.60	AP	N	600	20	150	171.43
	PS	C	1260	18	321	770.40	PS	C	240	40	2349	1703.83
	PS	C	180	18	87	29.83	PS	C	120	40	2394	547.20
	PS	NN	90	18	24	4.11	PS	C	60	20	103	11.77
	PS	C	360	36	39	26.74	PS	C	780	40	910	1352.00
	PS	C	54	18	91	9.36	PS	C	840	40	480	768.00
	PS	C	54	6	55	5.66	PS	C	160	40	110	33.52
	AS	C	27	9	32	1.65						
	AS	N	54	18	28	2.86						
	AS	C	66	11	49	6.16						
	PS	C	180	6	58	19.89						
Business English												
Business Law							PS	C	240	40	56	25.60
							PS	C	760	40	48	69.49
Business Management							AS	C	60	20	360	41.14
							PS	C	240	40	219	100.11
							PS	C	360	40	83	56.91
							PS	C	120	40	432	98.74
							PS	C	200	40	150	57.14
							PS	C	760	40	144	208.45
	S	C	90	18	980	168.00						
	PS	N	108	18	53	10.90						
	PS	C	216	18	130	53.49						

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
S	N	90	18	280	48.00	S	C	180	36	19	6.51	S	N	720	36	50	68.57
PS	C	135	60	110	28.29	PS	C	54	18	1760	181.03	S	C	90	18	240	41.14
AP	C	90	30	142	24.34	PS	C	90	18	8	1.37	S	C	540	36	67	68.91
AP & PS	N	216	72	270	111.09	PS	C	108	18	905	186.17	PS	C	270	72	360	185.14
AP	N	360	18	20	13.71	AP	C	108	18	40	8.23						
						PS	N	54	18	60	6.17						
						S	N	360	36	36	24.69						
						PS	C	54	18	608	62.54						
						PS	C	54	18	1058	108.82						
PS	C	108	72	300	61.71	PS	C	54	18	507	52.15						
AP	C	108	72	175	36.00												
						PS	C	54	18	348	35.79						
						PS	C	90	18	26	4.46						
						AP	C	360	36	38	26.06						

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY
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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
14.0000 OFFICE OCCUPATIONS (cont.)												
Business Practices (cont.)	PS	C	180	18	72	24.69						
Filing, Office Machines, and General Office Clerical	AS	C	540	18	108	112.99	S	N	360	36	125	85.71
	PS	C	180	18	92	31.54	S	C	360	36	45	30.86
							AP	C	1720	43	260	851.81
							AP	N	1720	43	60	196.57
							AP	C	120	20	3780	864.00
							PS	C	320	40	36	21.94
							PS	C	200	40	225	85.71
							PS	C	240	40	43	19.66
							PS	C	560	40	149	158.93
							PS	C	120	40	1535	350.86
							PS	C	400	40	14	10.67
Office Education - Cooperative	S	N	540	36	30	30.86						
Office - General							PS	C	360	40	404	277.03
							PS	C	800	40	68	1049.90
							PS	C	80	40	34	5.18
							PS	C	800	40	28	42.67
Office - Miscellaneous												
Office Training												
Office Preparation for Handicapped												
Personnel Training and Supervision Management							PS	C	120	40	423	96.69
Public Contact Representative and Translating												
							PS	C	320	40	15	9.14
							PS	N	240	40	15	18.29
							PS	N	760	40	31	44.88

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
S	C	180	72	489	167.66	AP	C	90	18	40	6.86						
S	N&C	180	108	150	51.43	AP	C	108	18	80	16.46						
S	N	180	36	290	99.43	PS	C	54	18	45	4.63						
AP	C	108	36	250	51.43	PS	C	90	18	460	78.86						
A	C	180	18	55	18.86	PS	C	108	18	30	6.17						
PS	C	60	12	201	22.97												
PS	C	300	36	400	228.57												
PS	C	108	72	250	51.43												
PS	C	160	40	632	192.61												
PS	C	500	40	700	666.67												
PS	C	150	36	500	142.86												
						S	C	180	36	1013	347.31						
												S	N	150	36	48	13.71
PS	C	60	30	30	3.43												

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
14.0000 OFFICE OCCUPATIONS (cont.)												
Public Contact Representative and Translating							PS	C	320	40	43	26.21
							PS	C	800	40	60	91.43
Record Keeping	S	C	180	36	665	228.00						
Secretarial Science	S	C	360	36	315	216.00	S	C	180	36	1200	411.43
	PS	C	108	18	103	21.18	AS	C	200	20	350	133.33
	PS	C	108	36	57	11.73	AS	C	120	20	240	534.86
	PS	C	90	6	57	9.77	AS	C	160	20	1050	120.00
	PS	C	180	6	55	18.86	AP	N	600	20	450	514.29
	PS	C	180	18	150	51.43	PS	C	480	40	300	274.29
	PS	C	90	9	108	18.75	PS	C	320	40	594	362.06
	PS	C	360	36	30	20.57	PS	C	200	40	1080	411.43
	S	C	180	36	875	300.00	PS	C	800	40	210	320.00
	PS	C	360	18	558	382.63	PS	C	360	40	320	219.43
	PS	C	540	18	170	174.86	PS	C	80	40	40	6.10
	PS	C	216	36	55	22.63	PS	C	40	40	27	2.06
	PS	C	900	18	380	651.43	PS	C	240	40	310	141.72
							PS	C	120	40	402	91.89
							PS	C	480	40	300	274.29
							PS	C	700	40	1960	2613.33
							PS	C	220	40	120	50.29
							PS	C	800	40	511	778.67
							PS	C	780	40	27	40.11
	PS	C	540	18	710	730.29	AP	C	200	20	560	213.33
	S	C	180	36	5162	1769.83	AP	C	120	20	5440	1243.43
	AS	C	180	18	50	17.14	AP	C	100	20	2080	396.19

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
						S	C	180	36	1059	363.09						
S	C	180	108	462	158.40	PS	C	90	18	729	124.97	PS	C	396	72	455	343.20
PS	C	300	36	100	57.14	PS	C	72	18	93	12.76	AP	N	360	36	25	17.14
PS	C	108	72	200	41.14	PS	C	54	18	214	22.01						
AP	C	108	36	200	41.14	AS	C	36	12	110	7.54						
						AS	C	36	18	20	1.37						
						PS	C	180	18	159	54.51						
						AP	C	108	18	330	67.89						
						S	C	180	36	774	265.37						
S	N	180	72	374	128.23	AP	C	45	18	400	34.29						
PS	N	180	36	30	10.29	AP	C	162	18	60	18.52						
PS	N	30	4	200	11.43	PS	C	54	18	451	46.39						

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
14.0000 OFFICE OCCUPATIONS (cont.)												
Typing and Related (cont.)	PS	C	180	18	350	120.00	AS	C	60	20	1440	164.57
	PS	N&C	108	18	48	9.87	AP	N	200	20	1000	380.95
	PS	C	108	36	24	4.93	PS	C	200	40	581	221.33
	PS	C	360	6	110	75.43						
	PS	C	90	6	30	5.14						
	PS	C	180	6	60	20.57						
	PS	C	576	18	410	449.83						
	PS	C	72	36	50	6.86						
	PS	C	180	18	400	137.14						
16.0000 TECHNICAL OCCUPATIONS												
Airplane Pilot	PS	C	648	18	50	61.71						
	PS	N	144	18	25	6.86						
	PS	C	72	6	50	6.86						
Automated Equipment Technician												
Building and Grounds Management							PS	C	120	40	538	122.97
Chemical Laboratory Technician												
Civil Engineering Technician												

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
AS	N	30	4	100	5.71	PS	C	90	1[illegible]	009	172.97						
AS	C	32	8	350	21.33	PS	C	36	18	634	43.47						
						AP	C	360	36	75	51.43						
						AP	C	270	18	200	102.86						
						S	C	180	36	2812	964.11						
A	C	108	18	80	16.46	PS	C	54	18	311	31.99						
						AS	C	90	18	50	8.57						
						AS	C	54	18	50	5.14						
						PS	C	162	18	103	31.78						
						PS	C	18	18	66	2.26						
						PS	C	90	18	7	1.20						
						PS	C	108	18	50	10.29						
												AS	C	54	18	45	4.63
												AP & AS	C	54	18	25	2.57
PS	C	612	72	40	46.63												
PS	C	648	72	45	55.54	PS	C	54	18	72	7.41	PS	C	252	72	30	14.40
						PS	C	90	18	5	.86						

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
16.0000 TECHNICAL OCCUPATIONS (cont.)												
Civil Engineering Technician (cont.)												
Computer Technology							PS	C	320	40	212	129.22
Construction Technician							PS	C	840	40	191	305.60
							PS	C	820	40	71	110.90
							PS	C	280	40	150	80.00
Electrical Technician												
Electromechanical Technician	PS	C	108	18	10	2.06						
	PS	C	324	36	16	9.87						
	PS	C	216	36	40	16.46						
Electronic Technician	PS	N	540	18	10	10.29	PS	C	280	40	305	162.67
	PS	N	128	8	15	3.66	PS	C	240	40	2370	1083.43
	PS	C	216	18	73	30.03	PS	C	440	40	617	517.10
	PS	C	108	18	55	11.32	PS	C	200	40	27	10.29
	PS	N&C	108	18	20	4.11	PS	C	1000	40	209	398.10
	PS	N	54	6	8	.82	PS	C	160	40	151	46.02
	PS	C	144	18	39	10.70	PS	C	400	40	56	42.67
	PS	C	216	36	37	15.22	PS	C	720	40	56	76.80
							PS	C	860	40	273	447.20
							PS	C	80	40	288	43.89

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
						PS	C	126	18	43	10.32						
						PS	C	144	18	34	9.33						
						PS	C	108	18	30	6.17						
PS	C	216	36	30	12.34	PS	C	54	18	97	9.98						
						PS	C	162	18	42	12.96						
						PS	C	90	18	39	6.69						
						PS	C	108	18	80	16.46						
PS	C	576	72	78	85.58							AS	C	54	18	32	3.29
												AS	C	108	36	60	12.34
												AS	C	54	18	76	7.82
												AS	C	108	36	42	8.64
S	N	360	72	10	6.86	PS	C	180	18	171	58.63						
PS	C	648	72	45	55.54	PS	C	54	18	859	88.35						
						PS	C	268	18	75	38.29						
						PS	C	90	18	80	13.71						

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY AS - ADULT SUPPLEMENTARY S - SECONDARY A - APPRENTICESHIP PS - POST SECONDARY OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
16.0000 TECHNICAL OCCUPATIONS (cont.)												
Electro-Optical Technology							PS	N	120	40	45	10.29
Engineering Aide												
Engineering Technician	PS	C	216	36	305	125.49	AS	C	60	20	1120	128.00
							PS	C	240	40	1800	822.86
English - Technical												
Fire and Safety Technology												
Industrial Automated Equipment Tech.												
Industrial Technician	S	N	360	36	50	34.29	PS	C	280	40	21	11.20
							PS	C	240	40	30	13.71
							PS	C	200	40	213	81.14
							PS	C	40	40	36	2.74
							PS	C	120	40	5	1.14
							PS	C	480	40	39	35.66
							PS	C	720	40	24	32.91
							PS	C	800	40	24	35.57
Laboratory - Technical												
Library Technician												
Machine Control							PS	C	420	40	166	132.80
Marine Technology							PS	C	105	40	96	19.20
Mathematics - Technical	PS	C	108	36	126	25.92						
	PS	C	216	18	325	133.72						

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
												AP & AS	C	108	36	70	14.40
						PS	C	126	18	17	4.08						
						PS	C	90	18	60	10.29						
						PS	C	54	18	281	28.90						
						PS	C	54	18	250	25.71						
						PS	C	108	18	50	10.29						
						PS	C	54	18	150	15.43						
AP	C	116	180	99	21.87	PS	C	36	18	27	1.85						
						PS	C	72	18	18	2.47						
						PS	C	108	18	60	12.34						
						PS	C	90	18	10	1.71						
						PS	C	54	18	450	46.29						
						AS	C	72	18	50	6.86						
												S	C	720	36	110	150.86
						PS	N	54	18	30	3.09	PS	C	270	72	110	56.57
												AS	C	36	18	24	1.65
												AS & AP	N	216	36	20	8.23
						PS	C	54	18	424	43.61						
						PS	N	54	18	80	8.23						
						PS	C	90	18	297	50.91						
PS	C	108	18	20	4.11	PS	C	54	18	867	89.18	AS & AP	C	180	36	30	10.29
AS	C	90	36	40	6.86	AS	C	54	18	100	10.29	AP	C	45	18	18	1.54

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
16.0000 TECHNICAL OCCUPATIONS (cont)												
Mathematics - Technical (cont.)	PS	C	720	18	420	576.00						
	PS	C	108	18	30	6.17						
	PS	C	54	8	35	3.60						
Mechanical Repairs Technician							PS	C	1440	40	76	208.46
							PS	C	160	40	4	1.22
							PS	C	480	40	113	103.31
Metallurgy - Applied Physical Metrology							PS	N	240	40	40	18.29
Nuclear Technician												
Paint Technology and Manufacture							PS	C	240	40	47	21.49
							PS	C	800	40	22	33.52
Physics and Chemistry-General	PS	C	216	18	60	24.69	PS	C	240	40	52	23.77
Production Processes Technician	PS	C	324	18	320	197.49						
	PS	C	108	18	300	61.71						
Prosthetics							PS	N	160	40	40	12.19
Pump Plant Operation	PS	C	54	18	60	6.17						
	PS	C	36	18	40	2.74						
Quality Control	PS	N	216	18	360	148.12	PS	C	85	40	84	13.60
	PS	N	648	18	360	444.34						
Report Writer - Technical	PS	C	108	18	100	20.57	AS	C	60	20	800	91.43
Surveyor and Civil Engineering							AP	C	20	40	227	8.65
							AS	C	60	20	60	6.86

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
						AS	C	90	18	60	10.29	AP & AS	C	108	36	65	13.37
												AS	C	54	18	24	2.47
												AP & AS	C	720	36	42	57.60
												AP & AS	C	90	36	138	23.66
												AP & AS	C	36	18	33	2.26
												AP & AS	N	160	8	20	6.10
												AP	C	108	36	55	11.31
												AS	C	54	18	20	2.06
AP	C	216	36	50	12.34												
												AP & AS	C	54	18	30	3.09
AP & AS	C	108	180	112	23.04	PS	C	108	18	50	10.29						
						PS	C	54	18	350	36.00						
						PS	C	108	18	22	4.53						
						PS	C	180	108	50	17.14						

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
16.0000 TECHNICAL OCCUPATIONS (cont.)												
Surveyor & Civil Engineering (cont.)							PS	C	280	40	72	38.40
							PS	C	820	40	475	741.90
Science - Technical												
Water and Sewerage Technician							PS	C	120	40	97	22.17
17.0000 TRADES AND INDUSTRY												
A/C Techniques - Basic							PS	C	1000	40	30	57.14
Aeronautics	PS	C	72	18	50	7.06						
	PS	C	108	18	100	20.57						
Aircraft Assembly	PS	C	112	8	70	14.93	S	C	240	40	22	10.06
	PS	C	216	18	60	24.69						
	PS	C	864	72	77	126.72						
	PS	C	540	36	31	31.89						
	PS	C	540	18	319	328.11						
	PS	C	1080	18	67	137.83						
	PS	C	1080	36	87	178.97						
Aircraft Electricity and Radio												
Aircraft Electronics							AP	C	120	6	450	102.86
							AP	C	300	20	250	142.86

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
						PS	C	36	18	65	4.46						
						PS	C	72	18	219	30.03						
						PS	C	90	18	125	21.43						
						PS	C	54	18	100	10.29						
						PS	C	90	18	40	6.86						
						PS	C	450	18	150	128.57	AS	N	216	36	20	8.23
						AP	C	450	15	40	34.29						
AP	C	450	72	110	94.29							SP & AP	C	540	36	45	46.29
AP	C	216	72	125	51.43							AS & AP	C	72	36	15	2.06
												AS & AP	C	90	18	24	4.11

AP - ADULT PREPARATORY
AS - ADULT SUPPLEMENTARY
S - SECONDARY
A - APPRENTICESHIP
PS - POST SECONDARY

OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Aircraft Electronics (cont.)							PS	C	1000	40	32	60.95
Aircraft Navigation	PS	C	72	18	100	13.75						
Aircraft Plastics							AP	C	60	20	45	5.14
Aircraft Production							PS	C	1000	40	36	68.57
Aircraft Sheet Metal							S	C	240	40	20	9.14
Airplane Ground Support Services	PS	C	432	18	200	16.48						
	PS	C	108	18	100	20.57						
	PS	C	54	8	50	5.14						
Airline Stewardess	PS	C	72	18	162	22.21						
Air Conditioning							AP	C	120	20	490	112.00
							AP	N	1200	40	25	57.14
							AS	N	240	40	200	91.43
							AP	N	1000	40	25	47.62
							PS	C	120	40	212	48.46
							PS	C	1000	40	124	236.19
Appliance Control Repair - Gas												
Appliance Repair - Household							S	C	240	40	21	9.60
							AP	C	120	20	120	27.43
Art - Commercial	PS	C	108	18	98	20.16	AP	C	600	20	25	28.57
							AP	C	120	20	60	13.71
							AP	N	600	20	50	57.14
							PS	C	280	40	81	43.20
							PS	C	280	40	132	70.40
							PS	C	480	40	318	290.74

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
												PS & AP	C	360	18	40	27.43
												PS & AP	C	540	36	40	41.14
												PS & AP	N	216	18	80	32.91
												AS & AP	C	432	36	20	16.46
PS	C	504	72	141	135.36	PS	C	360	18	60	41.14	AS	C	90	36	12	2.06
AS	C	108	18	40	8.23	PS	C	432	18	40	32.91						
												AS	C	108	36	15	3.09
												S	C	360	36	24	16.46
												S	N	540	108	80	82.29
						PS	C	270	18	125	64.29	S	C	360	72	46	31.54
												PS & AS	C	540	108	50	51.43
												PS	C	414	72	310	244.46

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY AS - ADULT SUPPLEMENTARY S - SECONDARY A - APPRENTICESHIP PS - POST SECONDARY OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES & INDUSTRY (cont.)												
Art - Commercial (cont.)							PS	C	1440	40	251	688.46
							PS	C	640	40	9	10.97
							PS	C	240	40	100	45.71
							PS	C	120	40	345	78.86
							PS	C	1000	40	178	339.05
							PS	C	780	40	253	375.89
Auto Body and Fender Repair	PS	C	540	36	40	41.14	S	C	400	40	36	27.43
	S	C	432	36	20	16.46	S	C	600	40	20	22.86
	S	C	540	36	20	20.57	S	C	240	40	30	13.71
	S	C	108	6	25	5.14	AP	N&C	1720	43	100	327.62
							AP	C	600	20	40	45.71
							AP	C	120	20	334	76.34
							AP	N	1200	40	60	137.14
							AP	N	600	20	50	57.14
							AP	N	120	20	50	11.43
							PS	C	240	40	89	40.69
							PS	C	1000	40	80	152.38
Auto-Electrics							AP	C	120	20	48	10.97
Automotive - Ford Program							S	N	400	40	75	57.14
							S	C	240	40	45	20.57
Auto Mechanics	PS	C	144	9	60	16.46	AP	N	1200	40	40	91.43
	PS	C	720	36	40	54.90	AS	N	240	40	40	18.29
	PS	C	540	36	30	30.85	PS	C	240	40	583	257.37
	AP	C	108	6	30	6.17	PS	C	1000	40	570	1085.71
	S	C	360	36	50	34.29	S	C	400	40	1252	953.90

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
PS	C	720	72	28	38.40	PS	C	360	18	35	24.00	AS	C	144	144	55	15.09
AP	C	216	36	38	15.63	PS	C	90	18	100	17.14	AS	C	216	36	18	7.41
AS	C	180	144	84	28.80	PS	C	360	18	135	92.57	S	N	360	36	48	32.91
AP	C	556	72	45	47.66	AP	C	108	18	40	8.23	S	C	360	36	24	16.46
AS	C	180	144	14	4.80	AP	C	780	26	40	59.43	PS & AP	C	540	108	50	51.43
PS	C	792	72	65	98.06	PS	C	90	18	125	21.43	AS	C	144	144	130	35.66
AP	C	216	36	50	20.57	AS	C	45	18	50	4.29	AP & AS	N	160	8	22	6.70

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY
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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.000 TRADES AND INDUSTRY (cont.)												
Auto Mechanics (cont.)	S	N	360	36	25	17.14	S	C	240	40	16	7.31
	PS	C	720	36	40	54.86	AP	N&C	1720	43	120	393.14
	S	C	540	36	20	20.57	AP	C	600	20	80	91.43
	S	C	864	36	20	32.91	AP	C	120	20	1314	300.34
Automotive - Air Conditioning	PS	C	216	36	15	6.17	S	C	240	40	15	6.86
							AP	C	120	20	40	9.14
							PS	C	240	40	35	16.00
Automotive - Foreign Car Service							AP	N	60	20	25	2.86
Automotive - Motorcycle Repair							AP	C	600	20	50	57.14
							AP	N	600	20	30	34.29
							PS	C	240	40	40	18.29
							PS	C	1000	40	36	68.57
Automotive - Service Station Attend.							S	N	400	40	150	114.29
Automotive - Service Station Mech.							AP	N	600	20	60	68.57
							AP	C	600	20	50	57.14
							PS	C	1000	40	94	179.05
Automotive - Service Station Mgr.	AS	C	180	18	26	8.91	AS	N	600	20	30	34.29
							PS	C	240	40	40	18.29
Automotive - Other							S	C	240	40	35	16.00
Automotive Transmissions	AS	C	432	18	65	5.35	AP	C	120	20	204	46.63
							AP	N	120	20	60	13.71
							AP	N	600	20	25	28.57
							PS	C	120	40	115	26.29

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
AP	C	180	18	40	8.23	AS	C	90	18	50	8.58	AS	C	216	36	25	10.29
S	N&C	360	72	176	120.69							AS	C	60	10	18	2.06
S	N	360	36	20	13.72							AS	C	216	36	20	8.23
AS	C	216	36	21	8.64							AS & AP	N	216	36	20	8.23
												AS	C	216	36	25	10.29

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Auto Motor Tune-up	PS	C	432	36	45	37.03	AP	C	600	20	40	45.71
							AP	C	120	20	346	79.09
							AP	N	600	20	90	102.86
Auto Painting							AP	C	600	20	50	57.14
							AP	N	1200	20	60	137.14
Auto Parts							AP	C	120	20	38	8.69
							AP	N	500	20	50	47.62
							AS	N	120	20	120	27.43
							PS	N	120	40	74	18.29
Auto Parts Counterman							S	C	240	40	18	8.23
Auto Radiator Repair							AP	N	600	20	40	45.71
Auto Tune-up, Wheel Alignment & Brakes							S	C	240	40	20	9.14
							AP	C	600	20	40	45.71
							AP	N	120	20	60	13.71
							PS	C	120	40	115	26.29
Auto Upholstery							AP	C	600	20	50	57.14
							AP	N	120	20	50	11.43
Baking	PS	C	780	18	15	22.80	AP	C	500	20	50	47.62
							AP	C	120	20	50	11.43
							PS	C	120	40	116	26.51
							PS	C	1000	40	52	99.05
Barbering	AS	C	108	36	15	3.08	AP	C	120	40	60	13.71
							AP	C	1200	40	20	45.71
							AS	C	240	40	80	36.57
Blueprint Reading	PS	C	108	18	50	10.28	AP	C	120	40	200	45.71

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
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AS	C	216	36	17	6.99												
PS	C	864	72	30	49.37												
AS	C	180	72	20	6.86												
AS	C	90	36	20	3.43												
AS	C	180	108	14	4.80												
						PS	C	72	18	25	3.43	AS	C	108	36	30	6.17
PS	C	36	18	90	6.17	PS	C	90	18	80	13.71	AS	C	72	36	15	2.06

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Blueprint Reading (cont.)	AS	C	108	18	55	11.31	AP	C	120	20	300	68.57
							AP	N	300	10	25	14.29
Boilermaking												
Bricklaying and Tilesetting							AS	N	1200	40	50	114.29
							PS	C	120	40	183	41.83
Broadcasting Technology, Radio & Television							PS	C	800	40	10	15.24
							PS	C	240	40	119	54.40
							PS	C	120	40	160	36.57
							PS	C	810	40	55	84.86
Building Estimating							PS	C	820	40	119	185.87
Building Const. Techniques							AS	C	60	20	160	18.29
Building Estimating							PS	C	1000	40	46	87.62
Building Inspection							AS	C	60	20	80	9.14
Building Trades - General	S	N	360	36	50	34.29	PS	C	120	40	327	74.74
	S	C	180	36	480	164.57						
Cabinetmaking and Millwork	PS	C	720	36	20	27.45	S	C	400	40	840	640.00
	S	C	108	36	12	2.47	S	C	240	40	18	8.23
							AP	C	120	20	125	28.57
							PS	C	120	40	295	67.43
							PS	C	1000	40	178	339.05
Carpentry	PS	C	1440	72	15	41.14	S	C	240	40	15	6.86
	PS	C	216	36	30	12.34	AP	C	100	20	200	38.10
	S	C	108	36	27	5.55	AP	N	1200	40	30	68.57
							AP	N	240	40	90	41.14

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
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AS	C	72	18	150	20.57	AS	C	72	18	50	6.86	AP & AS	C	72	36	147	20.16
												AS	C	36	18	32	2.19
AS	C	117	36	13	2.90	PS	C	180	108	50	17.14	AS	C	108	36	20	4.11
S	N&C	360	72	60	41.14												
PS	C	540	36	20	20.57	PS	C	360	18	34	23.31	S	C	540	108	40	41.14
PS	C	72	18	20	2.74	PS	C	180	36	60	20.57	PS & AP	C	540	72	40	41.14
AS	C	180	144	20	6.86							AS	C	180	36	33	11.31
AP	C	1260	72	97	232.80	PS	C	180	36	400	137.14	PS & AP	C	540	108	40	41.14
S	C	216	144	36	14.81	S	C	360	36	29	19.89	AS	C	90	36	137	23.49
PS	C	432	72	75	61.71							AS	C	108	36	15	3.09
AS	C	216	144	81	33.33							AS	C	288	36	53	29.07

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Carpentry (cont.)							PS	C	1000	40	116	220.95
Carpetlaying							AP	C	60	20	280	32.00
Catering Arts							PS	C	160	40	114	34.74
							PS	C	1000	40	46	87.62
Cement Masonry							S	C	240	40	31	41.17
Cinematography, Theatre Arts, and Stagecraft							PS	N&C	240	40	128	58.51
							PS	C	320	40	204	124.34
Cloth Manufacturing							PS	N	820	40	45	70.29
Communication - Oral and Written							PS	C	1000	40	52	99.05
Communications and Sound							PS	C	240	40	39	17.83
Comp. Maintenance Technology							PS	C	1000	40	30	57.14
Cooking	PS	C	900	18	27	46.30	AP	C	600	20	40	45.71
	PS	C	540	36	12	12.34	AP	N	1000	40	50	95.24
							PS	C	160	40	95	28.95
							PS	C	1000	40	190	361.90
Cosmetology - Advanced Hair Styling												
Cosmetology - Beauty Salon Recept.												
Cosmetology - General							S	N&C	400	40	115	87.62
							S	C	600	40	75	85.71
							S	C	240	40	31	14.17
							AP	N	1200	80	40	91.43
							AP	S	240	40	77	35.20
							PS	C	240	40	169	77.26

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
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												AS	C	144	36	37	10.15
						PS	C	180	108	75	25.71	AS	C	90	36	37	6.34
												AS	C	45	18	20	1.71
AS	C	108	108	22	4.53	PS	C	180	108	25	8.57						
AS	C	216	36	19	7.82												
												AP & AS	C	108	36	52	10.70
PS	C	864	72	50	82.29												
AS	C	108	18	15	3.09												
AP	C	72	18	40	5.49												
S	N&C	360	36	64	43.89												
PS	C	1080	54	106	218.06	PS	C	1600	46	105	320.00						
S	N	144	36	20	5.49	AS	C	36	18	50	3.43						
AS	C	54	18	10	1.03												

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Cosmetology - General (cont.)							PS	C	1750	50	150	500.00
Cosmetology - Hair Straightening												
Cosmetology - Wig Servicing							S	C	240	40	20	9.14
Costume Designing							AP	C	60	20	128	14.63
Custodial Services	PS	C	108	18	50	10.28	AS	C	60	20	750	85.71
							AP	N	60	2	400	45.71
Drafting - Aircraft	PS	C	432	18	80	65.83	S	C	240	40	15	6.86
	PS	C	108	18	45	9.26						
Drafting - Architectural	S	C	360	36	25	17.14	S	C	400	40	651	496.00
	PS	C	864	144	35	57.60	AS	C	60	20	40	4.57
	PS	C	535	72	35	35.67	PS	N&C	280	40	85	45.33
							PS	C	240	40	1188	543.09
							PS	C	120	40	560	128.00
							PS	C	560	40	4	4.27
							PS	C	480	40	264	241.37
							PS	C	1000	40	73	139.05
							PS	C	160	40	30	12.19
							PS	C	40	40	94	7.16
							PS	C	1000	40	209	398.10
							PS	C	820	40	128	199.92
Drafting - Civil							S	C	240	40	32	14.63
Drafting - Electronic	PS	C	216	18	10	4.11	S	C	240	40	25	11.43
							AP	C	120	20	150	34.29

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
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AP	C	72	18	50	6.86												
						AS	C	45	18	50	4.29	PS & AP	C	216	18	25	10.29
						AS	C	54	18	50	5.14	AS & AP	C	144	36	20	5.49
												AS & AP	C	180	36	26	8.91
												AS & AP	C	160	8	40	12.19
AS	C	216	72	90	37.03												
PS	C	648	72	54	66.65												
PS	C	54	18	20	2.06												

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY
AS - ADULT SUPPLEMENTARY
S - SECONDARY
A - APPRENTICESHIP
PS - POST SECONDARY

OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Drafting - Electronic (cont.)							AP	C	500	20	40	38.10
Drafting - General	PS	C	1080	36	10	20.57	S	C	240	40	65	29.71
	PS	C	216	36	10	4.11	PS	C	280	40	34	18.13
	PS	C	324	36	20	12.34	PS	C	840	40	45	72.00
Drafting - Industrial Drawing	PS	C	324	18	15	9.26						
	S	C	360	36	75	51.43						
	PS	C	216	36	20	8.23						
Drafting - Mechanical	PS	C	120	18	75	17.14	S	N&C	400	40	840	640.00
	PS	C	972	36	60	111.09	AP	C	240	40	550	251.43
	PS	C	90	8	25	4.29	AP	C	120	40	125	28.57
	PS	C	540	36	68	69.94	AP	N	600	20	40	45.71
							PS	C	240	40	486	222.17
							PS	C	1000	40	239	455.24
Drafting Office Assistant							PS	C	1000	40	58	110.48
Drafting - Technical Illustration							AP	C	60	20	64	7.31
							AP	N	360	12	50	34.29
							PS	C	240	40	53	24.23
							PS	C	1000	50	156	297.14
Dressmaking and Fashion Design							AP	C	300	20	100	57.14
							AP	C	60	20	150	17.14
							PS	C	240	40	437	199.77
							PS	C	1000	40	390	742.86
Drivers and Chauffeurs							AP	C	80	20	120	18.29
Dry Cleaning and Laundry							PS	C	240	40	142	64.91
							PS	C	1000	40	46	87.62

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
S	N	360	72	25	17.14	PS	C	162	18	229	70.66	AP	C	206	34	194	76.12
						PS	C	108	18	120	24.69						
						PS	C	90	18	11	1.89						
PS	C	648	72	54	66.65	S	C	360	36	18	12.34						
AS	C	216	72	54	22.22												
AS	C	216	72	65	26.74							S	C	360	36	24	16.46
PS	C	108	60	60	12.34							PS & AP	C	540	108	44	45.26
												AP & AS	C	90	36	109	18.69
						PS	C	162	18	30	9.26						
						PS	C	108	18	44	9.05						
						PS	C	90	18	50	8.57						
PS	C	650	36	40	49.52							AS & AP	C	126	36	18	4.32
PS	C	54	36	60	6.17												
AS	C	54	18	15	1.54												
PS	C	720	36	30	41.14	AP	C	360	12	80	54.86	PS & AP	C	540	108	40	41.14
AS	C	576	36	40	43.89	AS	C	90	18	50	8.57	AS & AP	C	216	36	24	9.87

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Dry Cleaning and Laundry												
Drywall Trainee												
Electrical Industrial Cont. Tech.												
Electrical Motor Repair							AP	C	60	20	50	5.71
Electrical Power Generator							AP	C	120	40	30	6.86
Electric Cable Splicing							PS	C	120	40	104	23.77
Electric Code	PS	C	432	36	40	32.90	AP	C	60	20	100	11.43
Electric Lineman	PS	C	216	36	20	84.19	PS	C	120	40	122	27.89
Electric Motor Repair							S	C	240	40	15	6.86
Electrician							PS	C	120	40	79	18.06
	PS	C	720	72	57	78.17	AP	C	120	40	175	40.00
	PS	C	216	36	166	68.29	PS	C	120	40	1740	397.71
	PS	C	432	36	55	45.26	PS	C	60	40	48	5.49
Electronic Communication	PS	C	216	36	60	24.87						
Electronic Computing												
Electronics Assembly - Basic												

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
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												AP & AS	N	150	8	20	6.10
						PS	C	180	36	100	34.29						
AS	C	108	18	15	3.09												
AP	C	54	18	60	6.17												
						PS	C	180	36	70	24.00						
AS	C	180	144	116	39.77	PS	C	360	18	24	16.46	PS & AP	C	540	108	40	41.14
						PS	C	54	18	24	2.47	AS	C	180	36	102	35.92
						PS	C	45	18	80	6.86	AS & AP	C	180	18	47	16.11
						PS	C	90	18	25	4.29						
						AS	N	45	18	30	2.57						
						AS	C	20	10	85	3.24						
						PS	C	180	36	120	41.14						
PS	C	304	72	130	75.28	S	N	360	36	36	24.69						
AS	C	216	36	30	12.34												
AS	C	108	18	40	8.23												
AP	C	144	24	30	8.23	AP	C	108	18	50	10.29	AS & AP	C	180	18	38	13.03
						AP	C	600	20	60	68.57	AS & AP	C	216	36	22	9.05
						AS	C	180	18	30	10.29	AS & AP	C	180	36	20	6.86
						AS	C	90	18	30	5.14						
						AS	C	45	18	35	3.00						

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Electronics Occupations - Other	S	N	360	36	25	17.33	S	C	400	40	610	464.76
	S	C	360	34	75	51.43	S	C	600	40	30	34.29
							PS	C	240	40	30	13.71
Electronics Technology							PS	C	1000	40	390	742.86
							PS	N&C	440	40	83	69.56
Elect. Assist.							PS	C	1000	40	83	158.10
Elect. Const. and Maint.							PS	C	1000	40	208	396.19
Elect. Eng. Tech.							PS	C	1000	40	92	175.24
Elect. Supp.							PS	C	1000	40	42	80.00
Engineering - Operating							PS	C	120	40	131	29.94
Engineering - Stationary												
Engine Repair - Small	S	N	180	36	120	41.14	S	C	240	40	17	7.77
							AP	N	600	20	25	28.57
Equipment Repair - Heavy Duty							AP	C	100	20	50	9.52
							AS	C	100	20	50	9.52
							PS	C	120	40	92	21.03
Food Preperation							PS	C	1000	40	134	255.24
							AP	C	1720	43	60	196.57
Food Services - Commercial												
Food Store Operator												
Fork Lift Machine Operator							AP	N	1720	43	20	65.52

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
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AS	C	216	36	40	16.46	AP	C	108	18	60	12.34	AS	C	72	36	12	1.65
S	C	360	72	60	41.14	S	C	360	36	151	103.54	PS & AP	C	540	36	43	44.23
												S	N	360	36	24	16.46
												S	C	360	36	48	32.91
AS	C	180	108	21	7.20							AS	C	180	36	22	7.54
AS	C	108	144	15	3.09												
AS	C	180	36	24	8.23							AS	C	180	36	43	14.74
												S	C	540	36	72	74.06
												PS & AP	C	540	108	40	41.14
												PS & AP	C	540	36	40	41.14
S	C	720	72	60	82.29												
												AP	C	180	36	20	6.86

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES & INDUSTRY (cont.)												
Foundry Machinist												
Furniture Making & Refinishing							S	C	240	40	15	6.86
							AP	C	120	20	1064	243.20
							AP	C	120	40	255	58.29
Glazing							PS	C	120	40	41	9.37
Graphic Arts, Printing, & Bindery	PS	C	108	36	25	5.14	AP	C	120	20	150	34.29
	S	C	360	36	50	34.20	AP	C	400	20	40	30.48
	S	C	360	36	50	34.29	AS	C	120	20	80	18.29
							PS	C	280	40	38	20.27
							PS	C	1200	40	87	198.86
							AP	C	120	20	200	45.71
							AP	N	600	20	40	45.71
							S	N&C	400	40	870	662.86
							S	C	600	40	15	17.14
							S	C	240	40	63	28.80
Graphic Arts Management							AS	N	120	20	20	4.57
Grocery Clerk Training							PS	C	1000	40	140	266.67
Heating & Ventilating												
							PS	C	240	40	20	9.14
Hotel Management							PS	C	960	40	57	104.23
							PS	C	160	40	30	9.14
Industrial Maintenance	S	N	180	18	25	8.57	S	C	400	40	50	38.10
							S	C	240	40	15	6.86
							AP	N&C	1720	43	40	131.05
							AP	N	1000	40	25	47.62

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
												AS	C	144	144	190	52.11
						PS	C	180	144	10	3.49	AS	C	180	36	24	8.23
S	N&C	360	72	64	43.89	PS	C	162	18	51	15.74	S	C	360	36	48	32.91
S	C	360	72	28	19.20	PS	C	36	18	64	4.39	AS & AP	C	40	20	46	3.50
PS	C	672	72	35	44.80	PS	C	90	18	50	8.57	AS & AP	C	108	36	22	4.53
AS	C	216	32	90	37.03	S	C	360	36	74	50.74	AS	C	180	36	62	21.26
												AS	C	216	36	22	9.05
												AS	C	108	36	18	3.70
												PS & AP	C	360	9	60	41.14
												PS	C	486	72	410	379.54

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	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES & INDUSTRY (cont.)												
Industrial Safety												
Instrument Calibration-Precision												
Instrument Maintenance & Repair							PS	C	240	40	358	163.66
Interior Decorating							AP	C	200	40	25	9.52
Lathing												
Leathercraft												
Locksmithing							PS	C	840	40	205	328.00
Machine Maintenance							AP	N	600	20	40	45.71
Machine Shop												
	PS	C	180	36	45	15.45	PS	C	240	40	895	409.14
	PS	C	720	36	25	34.49	PS	C	120	40	979	223.77
	PS	C	324	36	35	21.60	PS	C	1000	40	446	849.54
	PS	C	432	36	40	32.91	S	C	400	40	290	220.95
	PS	C	108	36	25	5.14	S	C	600	40	20	22.86
	AS	C	576	36	12	13.16	S	C	240	40	51	23.31
	S	C	1080	36	12	24.70	AP	N&C	1520	38	200	579.05
	S	C	108	8	25	5.14	AP	C	240	40	513	234.51
							AP	N	1000	40	50	95.24
							AS	N	240	40	100	45.71
Material Design & Testing Lab for Handicapped												
Materials - Testing												
Meat Cutting							PS	N	240	40	40	18.29
Mechanics-Airfram & Power Plant	AP	C	900	18	20	34.29	AS	C	240	40	140	64.00
	PS	C	108	18	50	10.28						
	PS	C	108	6	31	6.37						
	PS	C	540	18	44	45.26						

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

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AP	C	216	72	40	16.46												
												AS & AP	C	90	18	20	3.43
												AS	N	216	36	20	8.23
AS	C	180	108	50	17.14	PS	C	180	108	50	17.14						
PS	C	288	36	27	14.81												
AS	C	216	36	15	6.17												
S	N&C	360	72	60	41.14	PS	C	108	18	40	8.23	PS & AP	C	540	108	40	41.14
AP	C	540	72	35	36.00	PS	C	270	18	130	66.86	AP	C	180	36	20	6.86
AS	C	180	36	65	22.29	PS	C	90	18	200	34.29	AS	C	36	18	45	3.09
AS	C	180	144	77	26.40	AP	C	720	25	40	57.14	AS	C	144	36	52	14.26
PS	C	240	40	513	234.51							AS	C	72	18	30	4.11
AS	C	216	72	20	8.23												
PS	N	72	18	20	2.74												
												AP & AS	C	54	18	32	3.29
AS	C	180	36	40	13.71	PS	C	180	36	90	30.86	AS	C	180	36	80	27.43
PS	C	648	54	25	30.86	AS	C	90	18	200	34.29	AS & AP	C	216	36	30	12.34
AS	C	108	18	40	8.23							PS & AP	C	540	72	88	90.51

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	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES & INDUSTRY (cont.)												
Mechanics-Airfram & Power Plant (cont.)	PS	C	834	72	77	126.72						
	S	C	540	36	31	31.89						
	PS	C	1080	36	87	178.97						
	PS	C	1080	18	67	137.83						
Mechanic - Diesel	PS	C	720	72	20	27.43	AP	N	1720	43	40	131.05
	S	C	540	36	7	7.20						
	S	C	468	36	8	7.13						
Mechanics - Marine							AP	C	60	20	50	5.71
Mechanics - Power												
Mechanics - Power Sewing Machine							PS	N	240	40	87	39.77
Metallurgical Technician	PS	C	108	36	30	6.17	PS	C	120	40	99	22.63
	PS	C	108	18	25	5.14	PS	C	1000	40	80	152.38
Metal Platers							S	C	400	40	423	322.29
Metalworking-Structural & Ornamental							PS	C	120	40	66	15.09
							AS	C	120	40	220	50.29
							AP	N	1200	40	45	102.86
							AS	N	600	20	50	57.14
							AS	N	120	20	40	9.14
Metrology	PS	C	108	18	50	10.28	PS	N	160	40	40	12.19
Millinery												
Molders & Coremakers												
Music - Commercial							PS	C	240	40	249	113.83
							PS	C	800	40	80	128.00
							PS	C	780	40	209	310.51

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

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AS	C	108	18	40	8.23												
PS	C	756	72	26	37.44	PS	C	360	18	48	32.91	PS & AP	C	540	108	30	30.86
						PS	C	90	18	50	8.57	AP & AS	N	160	8	20	6.10
												S	C	540	18	40	41.14
PS	C	108	36	30	6.17												
AP	C	216	36	40	16.46												
												AS	C	180	36	21	7.20
						S	C	360	36	124	85.03	S	C	360	36	24	16.46
AP	C	1080	72	30	61.71	PS	C	180	108	50	17.14	AS	C	162	36	14	4.32
AS	C	180	108	114	39.09							AS	C	180	36	67	22.97
PS	C	325	36	20	12.38												
AS	C	325	36	20	12.38												
AS	C	180	144	43	14.74							AS	C	180	36	19	6.51

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17.0000 TRADES & INDUSTRY (cont.)												
Naval Air Station Occupations												
Naval Supply												
Office Machine Repair							AP	C	120	20	200	45.71
							AP	C	60	20	100	11.43
							AP	N	600	20	40	45.71
							AS	N	120	20	120	27.43
Painting & Decorating	PS	C	108	36	25	5.14	PS	C	120	40	464	106.06
	PS	C	270	90	25	12.86						
Paperhanging							AS	C	60	20	150	17.14
Pattern Grading & Marking												
PBX Operation	PS	N	112	14	60	12.86	PS	C	240	40	108	49.37
	AS	N	432	9	80	6.58	PS	C	1000	40	203	386.67
Pile Driving	AS	N	96	8	30	5.49						
Pipefitting - Marine							PS	C	216	72	30	12.34
Photography - Commercial							S	C	400	40	40	30.48
							S	C	600	40	15	17.14
							S	C	240	40	15	6.86
							PS	C	280	40	42	22.40
							PS	C	320	40	258	157.26
							PS	C	240	40	297	135.77

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
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						A	C	360	18	500	342.86						
						AP	C	360	36	15	10.29						
PS	C	432	72	50	41.14							AP & PS	C	540	108	40	41.14
												AS	C	108	36	17	3.50
AS	C	180	720	37	12.69	PS	C	180	36	80	27.43	PS & AP	C	540	108	44	45.26
AP	C	1080	72	25	51.43							AS	C	180	36	52	17.83
												AS	C	108	36	22	4.53
												AS	C	36	18	25	1.71
												AS	C	144	36	60	16.46
												AS & AP	C	72	36	16	2.19
AS	C	180	72	7	2.40												
												AS	C	144	36	128	35.11
												AP & AS	N	48	12	20	1.83
PS	C	648	72	40	49.37	PS	C	90	18	140	24.00	PS	C	504	72	240	230.40
AS	C	216	36	19	7.82	PS	C	360	18	83	56.91						
AS	C	72	18	48	6.58												

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY AS - ADULT SUPPLEMENTARY S - SECONDARY A - APPRENTICESHIP PS - POST SECONDARY OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES AND INDUSTRY (cont.)												
Photography-Commercial (cont.)							PS	C	1000	40	126	76.19
							PS	C	820	40	71	110.90
Plastering							AS	C	60	20	50	5.71
							AP	N	240	40	50	22.86
							AP	N	1200	40	50	114.29
Plastics-Fabricating							S	C	400	40	50	38.10
							S	C	240	40	34	15.54
							PS	C	120	40	366	83.66
Plastics Technology							PS	C	800	40	75	114.29
Plumbing & Industrial Pipe Fitting	PS	C	432	72	50	41.14	AS	C	120	40	120	27.43
	PS	C	216	36	25	10.29	PS	C	120	40	1227	280.46
Radio & Electric Parts	PS	C	216	36	20	82.29						
Radio & Television Repair	PS	C	432	36	90	75.96	S	C	240	40	45	20.57
	PS	C	110	8	100	20.95	AP	N&C	1720	43	56	183.47
							AP	C	120	20	1700	388.57
							AP	N	1200	40	210	480.00
							AS	N	240	40	160	73.14
							AP	N	240	80	20	9.14
							AS	N	1200	40	80	182.86
							PS	C	120	40	160	36.57
							PS	C	1000	40	41	78.10
Radio Comm. Radio Operation & Code							PS	C	1000	40	41	78.10

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
AS	C	216	126	13	5.35	PS	C	180	108	50	17.14						
PS	N	324	36	130	80.23												
AP	C	324	36	100	61.72												
AS	N	54	18	100	10.29												
						PS	C	45	18	30	2.57	AS	C	180	36	105	36.00
						PS	C	180	36	180	61.71						
												AS & AP	C	180	36	20	6.86
AS	C	252	42	35	16.80	AP	C	54	18	70	7.20	PS & AP	C	540	36	40	41.14
						PS	C	90	18	20	3.43	AS & AP	C	216	36	45	18.51
												AS	C	72	36	22	3.02

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
						PS	C	90	18	24	4.11	AS	C	180	36	38	13.03
												AP & AS	C	216	36	24	9.87
						PS	C	36	18	106	7.27						
						PS	C	162	18	82	25.30						
						PS	C	54	18	16	1.65						
						PS	C	216	18	16	6.58						
						PS	C	108	18	17	3.50						
						PS	C	306	18	8	4.66						
						PS	C	270	18	3	1.54						
						S	N	360	36	36	24.69						
AS	C	180	108	21	7.20	PS	C	180	108	50	17.14	AS	C	108	36	22	4.53
						PS	C	45	8	90	7.71						
												AS	C	540	36	44	45.26
PS	C	650	36	15	18.57	AP	C	108	18	40	8.23	PS & AP	C	540	72	48	49.37
						AP	C	140	4	240	64.00	AS	C	180	36	41	14.06

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

AP - ADULT PREPARATORY
AS - ADULT SUPPLEMENTARY
S - SECONDARY
A - APPRENTICESHIP
PS - POST SECONDARY

OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES & INDUSTRY (cont.)												
Recreational Leadership							PS	C	240	40	32	14.63
							PS	C	740	40	23	32.42
Refrigeration	PS	C	1080	36	35	73.90	AP	C	60	20	150	17.14
	S	C	540	36	12	12.34	AP	C	120	20	60	13.71
	AP	C	432	36	15	12.15	PS	C	120	40	642	146.74
	AP	C	108	36	15	3.09	PS	C	240	40	273	124.80
							PS	C	1000	40	108	205.71
Restaurant Management & Operations							PS	C	1000	40	79	150.48
							PS	N	160	40	35	10.67
Roofing							AP	C	60	20	150	17.14
School Lunchroom Management												
Seamanship												
Sewing - Power	AS	C	900	6	80	137.14	S	C	400	40	75	57.14
	AP	C	160	8	25	11.43	S	C	600	40	40	45.71
							S	C	240	40	36	16.46
							AP	C	300	20	100	57.14
							AP	C	240	20	200	91.43
							PS	C	1000	40	70	133.34
							PS	C	240	40	60	27.43

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES & INDUSTRY (cont.)												
Sheet Metal	PS	C	1080	36	25	51.43	S	C	400	40	125	95.24
	S	C	540	36	12	12.34	AS	C	240	40	150	68.57
	AS	C	864	36	32	52.66	AP	N	1200	40	20	45.71
	PS	C	108	36	40	8.23	AS	N	600	20	40	45.71
							PS	C	1000	40	36	68.57
Sheetmetal Theory - Marine												
Sheetmetal - Rail Road							PS	C	120	40	38	8.69
Shipbuilding	PS	C	432	36	480	394.97						
	PS	C	288	36	80	43.69						
Shipfitting Practices							AP	C	60	20	45	5.14
Shoe Repairing & Manufacturing												
Sign Painting							PS	C	1000	40	46	87.62
							PS	C	240	40	118	53.94
							AP	C	120	20	56	12.80
Social Service Technology							PS	C	240	40	200	91.43
Sprinkler Fitting							PS	C	240	40	165	75.43
Steamfitting												
Supervision - Foremanship	PS	C	216	18	100	41.14	PS	C	120	40	3225	737.14
	PS	C	72	18	500	70.47	PS	C	240	40	50	22.86
	PS	C	108	18	50	10.29	PS	C	60	40	50	5.71
	PS	C	54	18	25	2.57						
	PS	C	36	18	25	1.73						

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
PS	C	720	36	99	135.77	PS	C	180	36	120	41.14	PS & AP	C	540	108	40	41.14
AS	C	108	72	25	5.14	S	C	360	36	81	55.54	AS	C	180	36	113	38.74
AS	C	180	180	100	34.29							AP & AS	N	160	8	20	6.10
												AS	C	72	36	61	8.37
						AS	C	90	18	150	25.71	AS	C	144	36	44	12.07
												AS	C	72	36	95	13.03
												AS	C	36	18	61	4.18
PS	C	864	72	25	41.14							AP & PS	C	540	72	30	30.86
AP	C	216	36	5	2.06												
						PS	C	108	18	40	8.23						
AS	C	180	180	43	14.74												
AS	C	216	72	35	14.40	AS	C	45	8	26	2.23	AS	C	180	36	17	5.83
AS	C	216	180	63	25.92	PS	C	90	18	44	7.54						
AS	C	116	180	425	93.90	PS	C	45	18	40	3.43	S	N	30	36	180	10.29
						PS	C	54	18	880	90.51	AS & AP	C	108	36	158	32.50
												AP & AS	C	54	18	50	5.14

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES & INDUSTRY (cont.)												
Surveying												
Tailoring												
Television Transmission												
Tool & Die Making							AP	C	60	20	120	13.71
Tool Design	AP	C	720	36	20	27.62						
	PS	C	578	36	20	22.02						
	AP	C	216	36	45	18.51						
Trade Occupations - General							AS	C	60	20	120	13.71
							AP	C	60	20	100	11.43
							AP	C	60	20	310	35.43
							AP	C	40	20	95	7.24
							AP	C	120	20	70	16.00
							AS	C	50	20	50	4.76
Trade Preparation												
Upholstering							S	C	240	40	18	8.23
							AP	C	300	20	490	280.00
							AP	C	600	20	60	68.57
							AP	C	120	20	1140	260.57
Vending Machine Repair							PS	C	120	40	247	56.46
							PS	C	1000	40	82	156.19
Waiter, Waitress	PS	C	45	3	175	15.00						
	AP	C	30	2	50	2.86						

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
												AS	C	108	36	10	2.06
PS	N	108	36	20	4.11												
AP	C	108	36	20	4.11												
AS	C	108	18	40	8.23												
AS	C	72	18	15	20.57												
AS	C	180	144	17	5.83												
												AP	N	360	36	25	17.14
PS	C	972	42	30	55.54												
AP	C	216	42	25	10.29												
AS	C	180	88	20	6.86												
						AS	C	54	18	50	5.14						
PS	C	150	6	24	6.86							PS & AP	C	540	18	40	41.14
												AS & AP	C	144	36	20	5.49
												AS & AP	N	100	20	20	3.81

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
17.0000 TRADES & INDUSTRY (cont.)												
Waiter, Waitress (cont.)												
Watch Repairing												
Welding - General							AP	N	1200	40	40	91.43
	PS	C	216	18	5	2.06	S	C	240	40	15	6.86
	PS	C	720	72	30	41.14	AP	N&C	1120	28	260	554.67
	AS	C	216	72	8	3.29	AP	C	60	20	360	41.14
	AS	C	216	72	18	7.21	AP	C	120	20	80	18.29
	AS	C	112	8	32	6.83	AP	N	120	20	40	9.14
	AS	C	432	72	10	8.23	AS	N	40	60	60	4.57
	AS	C	144	72	10	2.74	PS	C	120	40	599	136.91
	PS	C	540	72	50	51.43	PS	C	1000	40	200	380.95
	PS	C	540	36	12	12.34	PS	C	600	40	56	64.00
	AS	C	432	36	12	9.87						
	AS	C	108	36	12	2.57						
19.0000 WORK EXPERIENCE EDUCATION												
Work Experience for the Mentally Retarded												
Work Experience for the Physically Handicapped												
Vocational Work Experience Education	PS	C	TBA	36	75							
	PS	C	36	36	75	5.14						

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
												AP & AS	N	160	9	25	7.62
												AP & PS	C	108	72	10	2.06
AP	C	1080	72	48	98.74	PS	C	270	18	96	49.37	PS & AP	C	540	108	142	146.06
AS	C	252	72	70	33.60	PS	C	90	18	51	8.74	AS & AP	C	216	36	218	89.69
PS	C	648	72	45	55.54	AP	C	780	26	40	59.43	AS	C	90	36	80	13.71
AS	C	108	18	300	61.71	PS	C	54	18	60	6.17	AS	C	144	36	473	129.74
AP	C	108	18	30	6.17	AS	C	70	18	24	3.20	AP & AS	N	48	12	40	3.66
						AS	C	90	18	290	49.71	AP & AS	N	160	8	20	6.10
												S	N	129	36	24	5.90
												S	N	129	36	24	5.90

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
15.0000 PUBLIC SERVICE												
Community Planning												
Fire Science	PS	C	54	18	2980	306.51	PS	C	120	40	859	196.34
Nursery School Assistant	PS	C	320	18	60	36.57	PS	C	480	40	285	260.57
							PS	C	240	40	240	109.71
Police Science							PS	C	760	40	222	321.37
	PS	N	54	18	260	26.74	S	C	240	40	90	41.14
	PS	C	54	18	2044	210.24	AS	C	60	20	100	11.43
	PS	C	36	18	148	10.15	AS	C	120	20	30	6.86
	PS	C	108	36	161	33.12	PS	C	240	40	175	80.00
							PS	C	120	40	3105	709.71
							PS	C	600	40	247	282.29
							PS	C	760	40	207	299.66
							PS	C	160	40	255	77.71
Public Administration												
Public Housing Administration	PS	N	108	18	60	12.34						
Teaching Aide												

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
AP	C	720	72	61	83.66												
AS	C	720	72	30	41.14												
						PS	C	54	18	335	34.46	PS	C	378	72	80	57.60
						PS	C	108	18	125	25.71						
						PS	N&C	45	18	420	36.00						
AP	C	720	36	300	411.43	PS	C	54	18	1195	122.91	PS	C	540	72	410	421.71
						PS	C	36	18	130	8.91						
						AS	C	54	18	50	5.14						
						PS	C	624	13	240	285.26						
						PS	C	480	12	90	82.29						
AS	C	30	6	20	1.14												
						PS	C	36	18	65	4.46	S	N	701	36	35	46.73
						PS	C	48	18	65	5.94	PS	C	216	72	230	94.63

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
OTHER NOT ELSEWHERE CLASSIFIED												
Career Planning for Adults												
Civil Service Preparation and Review												
Dynamic Reading												
English and Math Essentials for Job Seekers												
Job Finding Workshops												
Municipal Civil Service Rules							AS	C	60	20	50	5.71
Reading and Math Review												
Sheltered Workshop - Basic Education and Electronics												
Special Occupation Education												
Summer Work Study												
Test Familiarization												
Upgrading Journeyman Qualification												
Training for Minority Groups												

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND						SAN DIEGO						SAN FRANCISCO					
Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
AS	C	27	9	150	7.72												
						AP	C	108	18	200	41.14						
						AP	C	36	12	60	4.11						
												AP & AS	C	180	36	50	17.14
AS	C	18	18	300	10.29												
AS	C	18	18	360	12.34												
												AP & AS	N	120	12	60	13.71
						AP	C	108	18	70	14.40						
						AP	C	500	20	80	76.19						
						S	C	180	36	15	5.14						
						S	N	120	10	804	183.77						
												AP & AS	C	36	18	179	12.27
AS	C	252	42	200	96.00												

MAJOR URBAN CENTERS VOCATIONAL EDUCATION PROJECT

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OCCUPATIONAL PROGRAMS	LONG BEACH						LOS ANGELES					
	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated	Grade Level	New &/or Continuing	Hrs. of instruction per student per yr.	Weeks in course	Estimated Enrollment	A.D.A. generated
01.0000 AGRICULTURE												
Floral Design							PS	C	190	40	216	78.17
Small Animal Lab. Tech.							PS	N	160	40	30	9.14
16.0000 TECHNICAL OCCUPATIONS												
Bio-Med. Instrument Maintenance							PS	N	160	40	30	9.14
Fluid Power Technician							PS	C	80	40	27	41.14
Parts-Programmer							PS	N	240	40	55	25.14
17.0000 TRADES AND INDUSTRY												
Aircraft Mechanics							PS	C	120	40	36	8.23
Art - Advertising Photography							PS	N	320	40	50	30.48
Machine Tool Technology							PS	C	120	40	113	25.83

INVENTORY OF VOCATIONAL PROGRAMS AND COURSE OFFERINGS - 1969-70

OAKLAND	SAN DIEGO	SAN FRANCISCO
Grade Level	Grade Level	Grade Level
New &/or Continuing	New &/or Continuing	New &/or Continuing
Hrs. of instruction per student per yr.	Hrs. of instruction per student per yr.	Hrs. of instruction per student per yr.
Weeks in course	Weeks in course	Weeks in course
Estimated Enrollment	Estimated Enrollment	Estimated Enrollment
A.D.A. generated	A.D.A. generated	A.D.A. generated