

# Condition Assessment & Master Planning Final Report

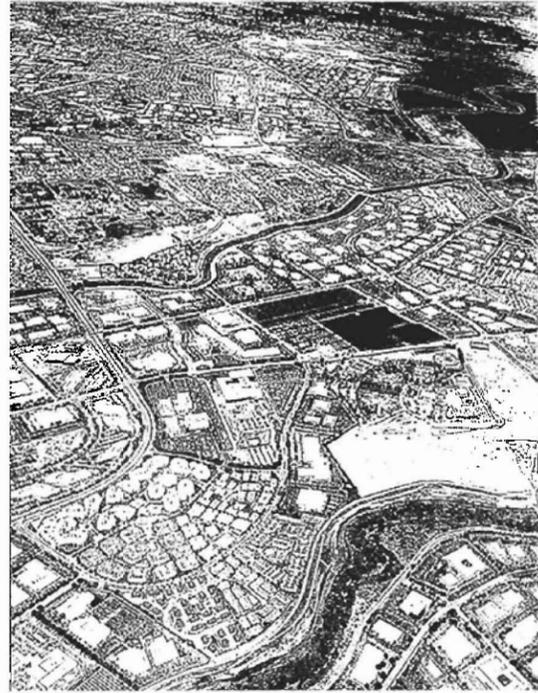
DEPARTMENT  
OF  
DEVELOPMENTAL  
SERVICES

VOLUME 2.3  
FACILITIES SUMMARY - LANTERMAN

DGS•RES•PMB

October 1998

**VANIR**



**Condition Assessment and Master Planning  
DDS Lanterman Developmental Center  
Facility Summary - Volume 2.3 - FINAL REPORT**

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October 1998

**Lanterman Developmental Center  
 Facility Summary - Volume 2.3**

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## Introduction

### History

California has served the needs of developmentally disabled individuals since the first state hospital opened in 1851. The first state institution specifically for persons with mental retardation was opened in 1886. By 1968 eight state facilities served 13,355 persons with developmental disabilities. In 1969 California adopted legislation to establish a community-based service system for citizens with developmental disabilities as a supplement and alternative to the developmental center system. This allowed consumers who did not require institutional care to be transferred from developmental centers to community services under the regional centers. Today, the Department of Development Services (DDS) serves more than 146,000 persons who live primarily with their families or in community residential settings. The developmental center population has declined, resulting in the closure of three facilities and a current population of approximately 3,922 housed in Agnews, Fairview, Lanterman, Porterville, Sonoma Developmental Centers and Napa State Hospital.



*Professional Education Building*

### Definition

The California Department of Developmental Services provides services to persons with developmental disabilities. A developmental disability is one which originates before an individual attains age 18 and continues, or can be expected to continue, indefinitely, and constitutes a substantial

disability for that individual. A developmental disability may result in substantial functional limitations in three or more of the areas of major life activity: self-care, communication, learning, mobility, self-direction, independent living, and economic sufficiency. Developmental disabilities include mental retardation, cerebral palsy, epilepsy, and autism. The term also includes disabling conditions found to be closely related to mental retardation or to require treatment similar to that required for mentally retarded individuals, but does not include other handicapping conditions that are solely physical in nature.

### Licensure

All of the state-operated development centers are licensed according to the laws of California as health facilities. Each has a primary license as a general acute care hospital, with distinct parts for skilled nursing and intermediate care facility/developmentally disabled (ICF/DD) services. The centers are also certified for federal financial participation under the Medicaid program for hospital, nursing facility, and intermediate care/mentally retarded (ICF/MR) levels of care. The majority of the development centers' consumers receive services at the ICF/DD levels of care. An ICF/DD is defined as a licensed health facility that provides inpatient care and support to individuals whose primary need is for developmental services and who have a recurring, but intermittent, need for skilled nursing services.

### Services



*Recreational Activities*

The function of each facility is to provide services and supports that are sufficient to ensure that persons with developmental disabilities have the opportunity to lead more independent, productive and normal lives, regardless of age or degree of disability. All services are designed to move residents to less restrictive placements within the Center, or the community. An Individual Program Plan (IPP) is developed for each consumer to specify the provision of services and supports required to meet the goals and objectives for that consumer. Assessments of his or her health, behavior, and physical, communicative, social, emotional, and cognitive development are used to identify the consumer's needs.

Licensed developmental centers provide a full range of services. Interdisciplinary teams provide residential services that are organized into Programs according to consumer needs. Most consumers spend at least five hours per day off-residence in one or more of the wide-ranging educational or employment activities offered at each developmental center. The physical size and configuration of spacial requirements vary greatly from one type of training to another. The developmental centers provide a variety of social and recreational activities including religious and leisure activities. Licensed or registered staff provide consumer assessment, evaluation, and consultation. Emergency medical, behavioral, and crisis intervention services are available at all times. Quality of service is measured routinely. Staff development and training is provided in accordance with licensing regulations and areas of need. Developmental centers also provide, under special arrangements, selected services to some persons living in the community. The services include follow-up, crisis intervention, evaluation and health care. A summary of the services/programs provided by DDS is shown later in this chapter.

## Staffing

Developmental centers must have a large staff in order to provide this level of care for consumers. Administrative and support personnel are responsible for the support operations of the centers, in addition to those directly involved with providing services to the consumers. These operations include providing food, pharmacy, housekeeping, communications, laundry, police, fire control, client records, purchasing, accounting, facility maintenance and transportation services. Ancillary medical services include dentistry, podiatry, respiratory therapy, surgery, physical therapy, adaptive equipment, occupational therapy, laboratory, EEG/EKG, radiology, public health, and a full spectrum of clinics and medical consultants.

Developmental centers may house employment skills centers, audiology, chaplains, education services, library services, recreation programs, volunteers, and the Foster Grandparents program. In addition, some centers are affiliated with universities and house research centers on their grounds.



*Foster Grandparents*

## Purpose

The State of California, Department of Developmental Services (DDS) is responsible for providing leadership and direction to help ensure that individuals with developmental disabilities have the opportunity to lead more independent, productive and normal lives. These responsibilities are executed by DDS through community-based regional centers and developmental centers.

In 1997, the Department of Developmental Services began contracting for Condition Survey and Master Planning Services for DDS facilities statewide. The decision to pursue this course was in response to 1) a dramatic decline in population of developmental centers, 2) a sharp escalation in costs of operating the centers and 3) changes in the types of clients being served. The state closed two developmental centers and a portion of a third between 1995 and 1997. The master planning/condition assessment goal is to assess the physical condition and the programmatic needs for the five remaining developmental centers (DCs) and to provide updated facility master plans for each. This information will assist DDS to react appropriately to future changes, while maintaining and enhancing its system to ensure that quality services are delivered by the developmental centers.

Several key pieces of legislation and /or litigation have had an impact on the State of California's service system for persons with developmental disabilities and the population of developmental centers:

**1969: Lanterman Mental Retardation Services Act:** This act established California's community-based service system for citizens with developmental disabilities, rather than expand the number of state-operated developmental centers.

RESULT: California became a national leader in developing a community-based system of services. By 1977 twenty-one regional centers (RCs) had been established as a result of this act. Consumers who did not require institutional care were placed in community living arrangements instead of developmental centers.

**1977: Lanterman Developmental Disabilities Services Act: (Lanterman Act):** The prior legislation was expanded to include developmental disabilities other than mental retardation. Under the Lanterman Act, all persons seeking services from the Department are to receive the services prescribed in their Individual Program Plan, IPP. The Lanterman Act mandated that an array of services and supports be established; sufficient to meet the needs and choices of each person with developmental disabilities, regardless of age or degree of disability, and at each stage of life, to support their integration into the mainstream of the community.

**1985: Association for Retarded Citizens-, et. al. v. DDS et. al.** The state Supreme Court determined that the services needed by DDS consumers (as defined by their IPPs) are entitlements, regardless of the number of consumers the state serves.

RESULT: The number of consumers served by DDS continued to increase. Without a "cap" on the number of consumers DDS must serve, nor on the quantity and type of services that must be provided, DDS must continue to meet the growing caseload and increased demand for services within the budget authorized by the Legislature. Most persons with development disabilities found appropriate services in the community setting. However, even though the community system of services continued to develop, by the late 1980s and early 1990s, the community centers had fewer resources for serving consumers with severe behavior challenges and medical needs than for persons with lesser levels of needs.

**1990: Coffelt class action lawsuit and 1993, Coffelt Settlement Agreement.** The Coffelt class action lawsuit made allegations that the Department had failed to provide appropriate community living options for persons residing in DCs who could be served in a less restrictive community program. The plaintiffs' arguments centered around numerous instances where IPPs were not being implemented due to a lack of resources in the community. The court-approved settlement in 1993 required the development of additional community resources through an infusion of \$334 million. In addition, the Department agreed to a goal of a net reduction of 2,000 persons in the developmental center population by 1998.

RESULT: The Department received an augmentation to its staffing for a limited term of five years to implement the Coffelt Settlement agreement. These staffing positions have enabled the Department to increase the amount of federal waiver funds received and expand community services, which have allowed many consumers to move out of the DCs. Many of the consumers remaining are those with 1) severe, life-threatening medical conditions, 2) severe behavioral challenges, and 3) at selected centers, individuals committed by the courts after involvement with the criminal justice system.

**1992: Senate Bill 1383, the "Lanterman Act Amendment":** This bill defined a new service philosophy, emphasizing empowerment of individuals and families, providing person-centered planning, choices, support models and integration into the life of the community. The Amendment also instituted "performance contracting" between the regional centers and DDS, whereby the RCs established measurable objectives of service to which they are held accountable. Decreasing the use of developmental centers became an objective for most regional centers.

**1995: The Budget Act of Fiscal Year 1995/96** included a legislative mandate to develop a strategic plan on the future of developmental centers. The State recognized that even with the expansion of community services, developmental center services will continue to be needed and that DDS must maintain and enhance the services delivered by the DCs in the years ahead to meet current nationwide treatment standards and State and Federal licensing requirements.

RESULT: The *Strategic Plan on the Future of the Developmental Centers* was published in January 1996. It proposed the closure of additional centers if the population continued to decline. Camarillo State Hospital and Developmental Center was closed under this plan in 1996/97. The DDS also produced a strategy plan for the entire service system, not just the institutions. This document, the *DDS Strategic Plan* was published in June 1997. The Plan defines five goals towards ensuring quality of services in the service system. The Department has initiated the Master Planning/Condition Survey effort in support of Goal Five.

## Approach

### 1997 Strategic Plan

The 1997 Strategic Plan was developed to function as a management decision-making tool and a vehicle to communicate the strategic direction of DDS to its staff and the service system for persons with developmental disabilities. The Plan defines five goals to ensure quality of services in the service system. Goals One through Three deal with quality and range of services to safeguard consumers and assure compliance with State and Federal requirements. Goal Four strives to prevent and/or lessen the impact of developmental disabilities through early intervention. Goal Five of the Strategic Plan is to meet the needs of developmentally disabled individuals in an efficient and cost-effective manner for the State of California. In pursuit of meeting these goals, DDS commissioned the preparation of the Condition Assessment and Master Planning Study.

### General

Master planning and condition assessment was divided into two phases. A preliminary report was provided for Phase I. Based on the review of this report and finalization of some facility strategic decisions, the master planning efforts continued, culminating in this final report. The flow chart on the following page outlines the chosen approach for master planning and condition assessment. Major steps in this process as outlined in the flow chart are discussed below by phase.

#### Phase I

- Systemwide Planning

Master planning begins with systemwide issues. DDS developed population projections for the coming years that became the basis for the master planning efforts. DDS also made interim facility strategic decisions indicating that based on current population trends no facilities will close in the foreseeable future. DDS used the services of Carissimi-Rohrer-Associates to develop appropriate space standards for development centers. Vanir CM was brought on board to develop the master plan and condition assessment. Vanir reviewed the space

standards and recommended minor modifications. A prototypical facility master plan was also developed by Vanir to provide a model to use in developing the master plan for each facility. After concluding the systemwide planning, the needs of each facility were studied.

- Condition and Needs Assessment

Facility studies have two distinct, but related components. Condition assessment focuses on the existing conditions of the buildings and infrastructure of the facilities. Programmatic needs assessment deals with the clinical and functional needs of programs and support services and the adequacy of the existing facilities to address those needs. Two separate teams worked on each of these components. Issues related to fire and life safety, American with Disabilities Act (ADA), code requirements and compliance were reviewed by both teams. In this report these issues have been included in the needs assessment section. Condition and needs assessments were developed for each of the five facilities.



*Condition and needs assessment in process*

- Preliminary Master Planning

Options to address needs were developed based on the condition assessment and programmatic needs

assessment to give the State flexibility in making decisions. Facility master plans were developed for each facility that 1) address the needs, 2) apply the space standards, 3) are consistent with the interim strategic decisions, and 4) attempt to reflect the prototypical facility master plan. Detailed cost estimates were developed for the condition assessments. Concepts were developed for all other options.

All the information collected, analyzed and developed was presented in a preliminary report, including recommendations.

DDS used the report in determining the strategy to address facility needs for future capital outlay plans.

#### Phase II

- Final Master Plan

A final master plan was developed, based on final facility strategic decisions further refining the preliminary master plan. More detailed condition assessment and needs assessment were carried out for selected buildings, based on the findings of the preliminary report. Additional infrastructure studies were also prepared.

- Phasing Approach

A phased approach to developing the master plan is necessary due to changes in population and cost. Phasing provides the State with the flexibility to react to actual population and spread out capital outlay investment over multiple years.

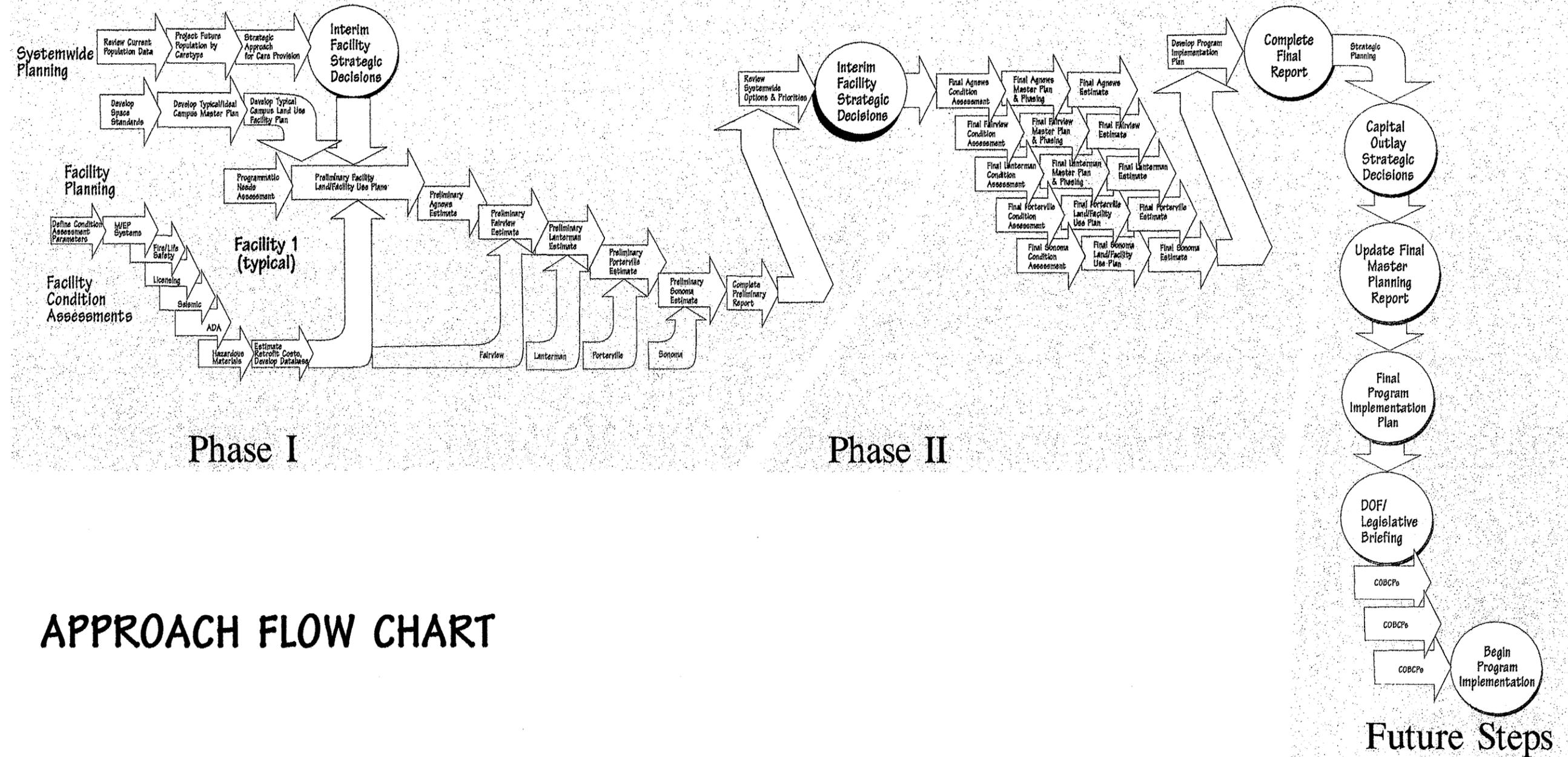
- Implementation Plan

An implementation plan was developed based on the final master plan and phasing. The implementation plan defines the detailed capital outlay plan approach over the coming fiscal years, and provides guidelines for carrying out the design and construction of the final master plan.

## Future Steps

Upon the development of the Master Plan, the Department will have comprehensive information on the facility needs and costs to address those needs. The Department will be in a position at this time to take the following future steps:

- Development of Capital Outlay Budget Change Proposals (COBCPs) for infrastructure improvements needed immediately (completed by January 1999 for inclusion in FY 2000 - 01 budget)
- Development of strategic plan for the future of development centers, including exploration of alternative service delivery options
- Formation of task force to assist in strategic plan development and care provision options
- Finalization of strategic decisions based on master plan findings and strategic plan
- Development of Capital Outlay Budget Change Proposals to address master plan findings and strategic planning decision results (completed by January 2000 for inclusion in FY 2001 - 02 budget)
- Department of Finance, Legislative feedback
- Begin program implementation



# APPROACH FLOW CHART

# Lanterman Developmental Center

## Location

Lanterman Developmental Center (LDC) is located at the eastern edge of Los Angeles County in the City of Pomona. The community of Diamond Bar is immediately adjacent to the campus. LDC is situated along the I-10 (San Bernardino Freeway) and Highway 60 (Pomona Freeway) corridor. This portion of eastern Los Angeles County and San Bernardino County is a rapidly growing industrial and residential area. California State Polytechnic University at Pomona is located approximately one mile northwest of the LDC campus.

## Overview

The facility is located on a 320-acre campus and was first operational in 1927. There are now more than 100 buildings comprising approximately one million gross square feet of occupied space. The Acute Care Hospital was completed in the 1950s. The average age of buildings is 46 years old. Except for the Fire and Life Safety and Environmental Improvements (FLSEI) project that was conducted in the late 1970's, there have been few major renovations to the facility.

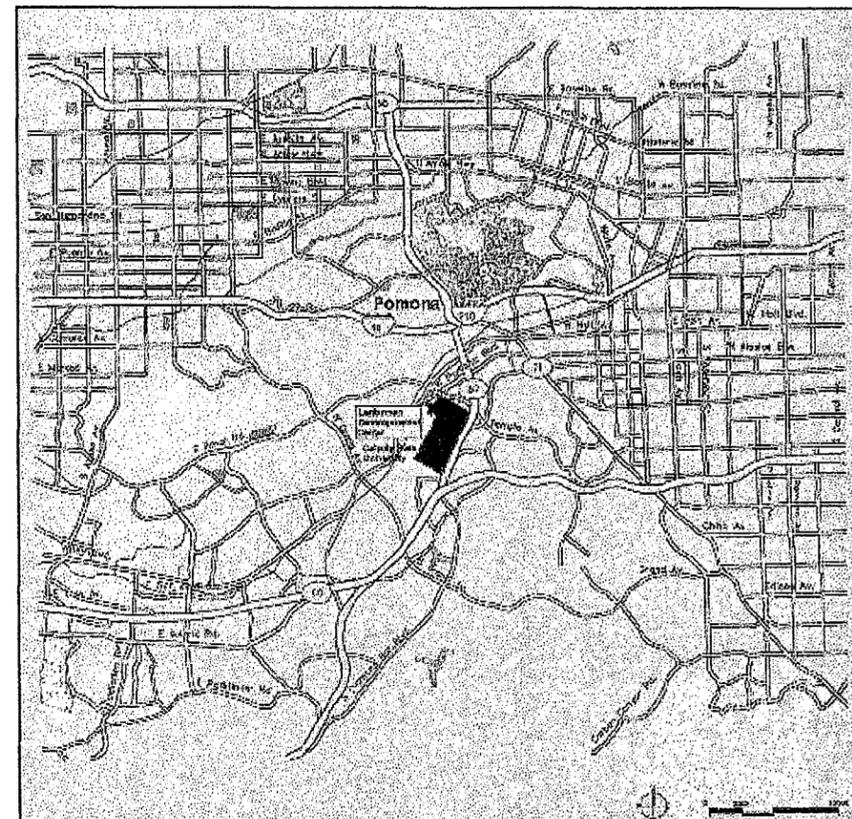


LDC Typical Street Scene

## Programs

Consumers at LDC range from 1-87 years of age, with an average age between 30-50 years. There are no or very few teenaged consumers. Programs at Lanterman are spread, almost uniformly, among the five program types. At the time

that Vanir gathered population data, Lanterman had the largest population of consumers requiring acute care or continuing care (171 consumers). These consumers make up 23 percent of Lanterman's population. Three of Lanterman's programs emphasize behavioral skills or behavioral skills in combination with other development programs. Twenty percent of Lanterman's consumers are in Program II, behavioral development, and an equal number are in Program IV, sensory/behavioral development. Program V for behavioral/social development accounts for 19 percent of consumers. The remaining 18 percent occupy Program III, physical/social development.



Vicinity Map



## Summary of DDS Programs

### Individual Program Plans

DDS meets the needs of consumers through the implementation of each consumer's Individual Program Plan (IPP). The IPP is a guideline developed for each consumer that defines the services the consumer is to receive. Consumers with similar needs are grouped into programs. DDS defines an average sized program as approximately 150 consumers. Programs at each of the five DDS facilities (Agnews, Fairview, Lanterman, Porterville and Sonoma) generally fall into the five categories listed below. Programs are often combined to provide a variety of services. The type of program (i.e., the needs of the consumer) dictates not only the level of care and staffing requirements, but also the physical needs of the space the program occupies. For example, programs for acute medical care requires rooms that are equipped with medical gas, while programs for physical development often require additional space for maneuvering mobility devices.

### Population Needs

Census data can fluctuate daily; consumers may be on therapeutic leave at the time the census is taken. During late January 1998 and early February 1998 census data was gathered from each of the five facilities. This information is shown within each facility's section and summarized in Table #1, Comparison of Programs and Populations included in Volume 3. Gaps in the program numbering may be indicative of changes or combinations of programs and are not significant.

The population data and Table #1 are summarized in Chart #1, Program-wide Comparison of Program Types. Program-wide, the greatest numbers of consumers are in behavioral programs (23 percent) and programs that combine physical and social development (22 percent). Programs that are primarily to improve the social skills of consumers account for 21 percent of consumer participation. Consumers who require continuing or acute medical care account for 17 percent, and programs to increase sensory development account for 13 percent of participation.

### Programs

#### Continuing Medical Care

Services for individuals who are medically fragile, with extensive physically handicapping conditions, usually non-ambulatory and unable to perform the most basic activities of daily living. Most require a high level of nursing care, medical intervention, physical and occupational therapy services, and a wide range of sophisticated technological support and assistive medical devices.

#### Physical Development

Services for individuals who have multiple physical disabilities, are non-ambulatory or have difficulty walking, and require full assistance in activities of daily living. They require services to help them acquire and maintain fine and gross motor skills involved in functional movement. They typically require a high level of nursing care, medical attention, and physical and occupational therapy services, and may require adaptive services and devices for mobility, communication, vision and hearing deficits.

#### Social Development (or emotional development)

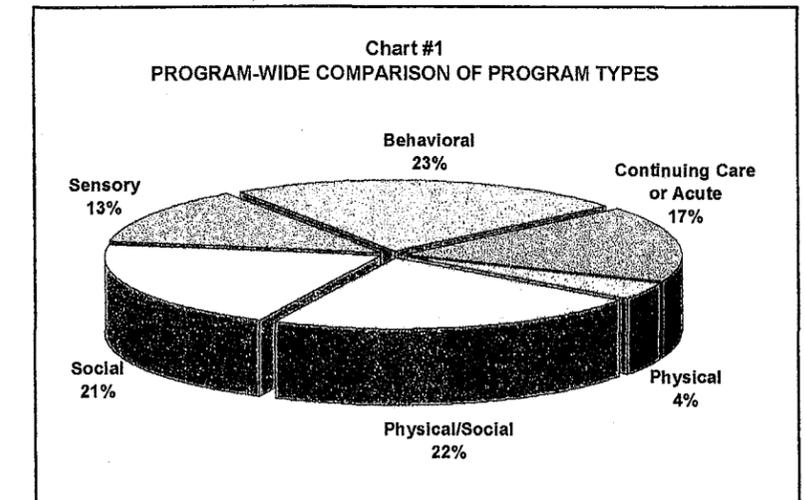
Services for individuals who need extensive training in developing social skills, including basic interactions, emotional expression, communication, and learning. These individuals typically need training to participate in cooperative interactions, develop coping skills, and modulate their response to their environment. They usually have some health problems, may have ambulation and mobility problems and hearing and vision deficits, and require training in activities of daily living, safety awareness, expressive language, adaptive behavior, educational, pre-vocational, leisure, and recreational skills.

#### Behavior Adjustment

Services for individuals who have severely challenging behaviors that prevent them from being integrated into other developmental centers or community programs and who require a high degree of structure and supervision. These individuals may have behaviors which are self injurious, destructive, violent, or abusive. They typically require training in social and self-help skills, educational and vocational skills, independent living, self control, and leisure and recreational activities. Many of these individuals have dual diagnoses, and they may also require mental health services and medication monitoring and management.

### Sensory Development

Services for individuals with sensory impairments whose primary need is for training to increase the coping skills needed to live more independently with their handicaps. These individuals may be visually and/or hearing impaired and can benefit from training in communication skills and the use of adaptive and assistive equipment and devices. These individuals usually also require adaptive training in social, self-help, vocational, recreational, and leisure skills.



## Description of Lanterman's Programs

### Program I - Acute Medical and Continuing Care

Program I provides care for acutely and subacutely ill persons with developmental disabilities. Acute care includes diagnosis and treatment for common medical and surgical programs and for the complex congenital problems encountered in individuals with developmental disabilities. Continuing Care provides care to residents who are severely or profoundly developmentally disabled, or who have multiple physical handicaps which require care from skilled nursing staff.

### Program II - Behavior Adjustment

Program II provides 24-hour intermediate care to residents who are physically stable with unacceptable behavior. Residents are physically stable and not considered to be at risk. Individualized programs are provided that emphasize training in behavior modification, socialization, leisure, educational, and vocational skills.

### Program III - Physical and Social Development

Program III provides services to residents who ambulate with difficulty or have physical conditions requiring extensive physical development; and/or residents who are severely or profoundly developmentally disabled. Most have multiple physical disabilities and medical conditions requiring skilled nursing care to provide or maintain the resident's physical health while enhancing environmental awareness and social responsiveness.

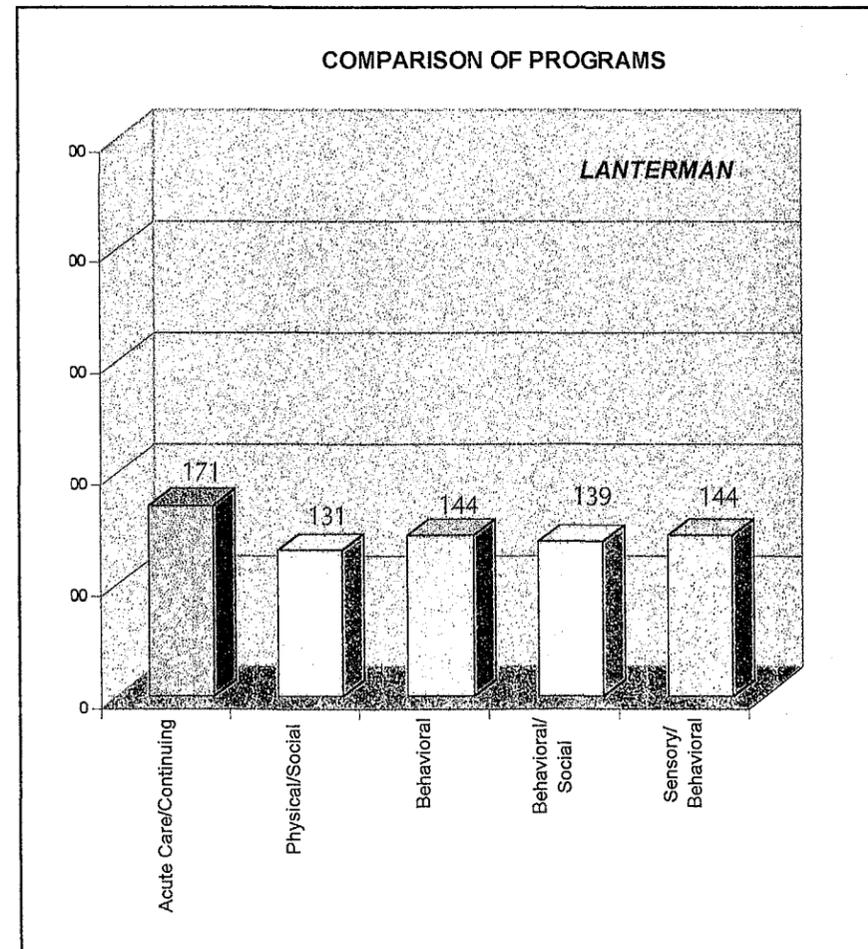
### Program IV - Sensory Development and Behavior Adjustment

Program IV provides intermediate care for individuals with severe to profound developmental disabilities with self-help deficits and moderate to severe behavioral disturbances. Residences 23 & 25 provide care for residents who are blind, deaf, or a combination of both. Training objectives include self-care, socialization, leisure skills acquisition,

mobility, communication, vocational skills acquisition and the amelioration of unacceptable behaviors.

### Program V - Behavior Adjustment and Social Development

Program V assists residents with transition into the community. Training emphasizes safety awareness, self-help, communication, social and vocational skills, and programs leading to paid employment. Community trips are an integral part of the lives of individuals in Program V to prepare them for a successful life in a less restrictive setting.



## Codes and Standards

### Health Facility Codes

Developmental Centers are subject to codes and standards that are typical for California health facilities with acute, skilled and intermediate levels of licensed care. The major applicable codes and standards are:

- 1995 California Building Code
- 1995 California Mechanical Code
- 1995 California Plumbing Code
- 1995 California Electrical Code
- 1995 California Fire Code
- California Code of Regulations, Title 19. Public Safety, State Fire Marshal
- California Code of Regulations, Title 22. Social Security. Division 5, Licensing & Certification of Health Facilities
- California Code of Regulations, Title 24. Americans with Disabilities Act Accessibility Guidelines
- NFPA 101 Life Safety Code, 1991 Edition
- 42 CFR (code of Federal Regulations), part 482, subchapter E and 483, subparts B and I.

### Waivers

Developmental Center operate under two types of waivers:

The most significant waivers were issued by the State of California during the 1979-1981 fire life safety project. These waivers have not been considered time-limited, and have been renewed on an annual basis by the State Fire Marshal and Licensing. However, code enforcement agencies have indicated that these waivers will not be extended for future renovation projects. State granted waivers are for accessibility, minimum bedroom area and number of beds per bedroom, rated corridors, egress, HVAC and electrical systems, and various other health and fire life safety issues.

The second group of waivers was issued by the Federal Department of Health & Human Services for Agnews Developmental Center in 1997. These waivers expired on April 30, 1998. The Federal review and waiver process is continuing at other DDS developmental centers. Federal

granted waivers, issued to date, are primarily for non-rated corridors, smoke barriers and HVAC issues. Substantial renovation is required and recommended to eliminate waivers.

### Seismic Risk Evaluations

#### State Building Seismic Program Seismic Risk Evaluations

The condition assessment of DDS developmental centers included use of seismic risk evaluations performed by the Department of General Services under the State Building Seismic Program. DGS established Risk Levels ranging from I to VII. A building designated as Level I is expected to have nearly perfect performance during an earthquake. Level VII indicates buildings that are considered unsafe in their current condition (even without an earthquake) and should be vacated immediately.

DGS established a 5-step evaluation process in evaluating all State buildings:

#### STEP 1 (Initial survey):

In the first step DGS sent out building surveys to all agencies, including DDS. Upon return, the surveys were evaluated by DGS. The surveys identified more than 400 buildings (approximately 4.9 million square feet) within the five developmental centers (Agnews East, Fairview, Lanterman, Porterville, and Sonoma).

Those with the highest ranking were forwarded to Step 2 for further evaluation.

#### STEP 2 (Preliminary evaluation):

DGS staff engineers reviewed and ranked the buildings forwarded from Step 1 (189 DDS buildings) based upon existing plans, soil reports and structural calculations.

The highest ranked buildings were forwarded to Step 3 for further evaluation.

#### STEP 3 (Engineering evaluation):

Documentation of each building's structural system was reviewed to determine if a potential seismic failure mechanism exists in the building.

- a. Those buildings that were judged to have significant seismic failure mechanisms were prioritized by DGS staff using the results of the prior analysis in combination with the building's occupancy and use. The buildings with the highest priority ranking were assigned to consultants for further evaluation (28 DDS buildings, approximately one third of the square footage of DDS developmental centers). Independent consulting structural engineers prepared detailed structural evaluations and rated the 28 buildings for level of risk in accordance with DGS criteria.
- b. Due to funding limitations, if no potential seismic failure mechanism was noted that would warrant an assessment of Risk Level V or higher, no further evaluation of the building was done. Approximately 3.3 million square feet of DDS space (68%) was not evaluated further than this point.

#### STEP 4 (Develop Cost Models for Retrofit):

The analyses from the consulting engineers of the 28 buildings forwarded from Step 3a were used to develop cost models for retrofit strategies and to estimate the cost alternatives for the buildings judged to be the most critically in need of seismic retrofit. Five of the DDS buildings were selected. From those estimates a Benefit Cost Ratio (BCR) for each of the buildings was prepared.

#### STEP 5 (Recommendations for Funding):

Recommendations for the five proposed seismic retrofit projects were sent to the Department of Finance and the Legislature for review.

#### Condition Assessment and Master Planning Seismic Risk Evaluation

The Condition Assessment and Master Planning task provided the opportunity for further review of some of the buildings that were forwarded to Step 3, but were not assigned to consultants for a preliminary seismic study. Selected structures at the five developmental centers were reviewed by Hrach Kouyoumdjian and Associates (HK&A), structural engineering sub-consultant to Vanir CM. HK&A provided field reviews of selected buildings in order to identify potential failure mechanisms. Like the State Building Seismic Program, this review was also structured to identify

and evaluate the most significant buildings in terms of population at risk and type of use. HK&A determined Risk Levels for 146 DDS buildings. These buildings (2.4 million square feet) represent approximately 49 percent of the square footage of DDS developmental centers.

Due to funding limitations, there are still many small DDS buildings (approximately 229) that have not had a risk level assignment. These buildings total approximately 947,000 square feet, or 20% of the total square footage of all DDS developmental centers combined.

*The following documents are included in Volume 3 of this report:*

- Overview of DGS's 5-Step Evaluation Process
- DGS's Risk Acceptability Table (*this includes definitions of Risk Levels*)
- Listings of DDS buildings and their risk level rating, if known.

### **Accessibility Compliance**

In 1994 the Department of Developmental Services (DDS) surveyed all buildings at Agnews, Fairview, Lanterman, Porterville and Sonoma Developmental Centers for accessibility compliance. This survey detected accessibility deficiencies that needed to be corrected. The majority of these deficiencies have not been corrected.

The general scope of work to correct ADA deficiencies is to:

- Provide access onto site, including path of travel from public transportation to building entrance, parking, signage, curb, and ramps.
- Provide access into buildings, including door widths and hardware, elevators to multi-floor buildings, signage, stairs, handrails, and walks.
- Provide access within buildings, including living, sleeping and health care areas, offices, public service areas, restrooms, drinking fountains, public telephones, shower and locker facilities.

The scope of work identified in this document substantially correlates with Vanir's site reviews. During the more detailed planning and construction document phase,

additional corrective items are expected to be identified. ADA requirements are minimum standards and may not fully provide the level of accessibility required by developmental center consumers.

## Population Projections

### Population History

Developmental center (DC) population peaked in 1968 at over 13,000, when the regional center system was established and a system of community services began to be developed. Regional centers (RC) are diagnostic, counseling, and service coordination centers for persons with developmental disabilities that are operated by private nonprofit community agencies acting as contractors for DDS. The population of DCs declined steadily until the mid-1980's when it stabilized. In 1993 a class action lawsuit settlement (Coffelt) required the population of developmental centers to be reduced by more than 2,000 persons by 1998. The population primarily decreased because more opportunity became available to live in the community and federal funding for the development of community programs increased significantly. Due to the decline in population from 6,517 in January 1993 to 4,391 in January 1997, the State closed developmental centers at Stockton and Camarillo and consolidated operations at Agnews.

### Current Population

The current developmental center population is approximately 4,000 and includes just under 120 consumers currently located at Napa State Hospital. The DDS consumers at Napa State Hospital are expected to be transferred to one or more of the existing developmental centers. The projected population for June 30, 1999 is 3,498. These population figures do not include a possible significant increase in forensic consumers that could result from future criminal justice decisions. Forensic consumers are developmentally disabled individuals committed by the courts after involvement with the criminal justice system.

The current population of the developmental centers (as of late January, 1998) is as follows:

Agnews	541	
Fairview	855	
Lanterman	857	(including 75 new forensic and 53 new behavioral consumers)
Porterville	829	
Sonoma	936	

### Trend

The rate of population decline has slowed in recent years, with the latest figures indicating a projected annual decline of approximately five percent. If the rate of population decrease continues to decline, the downward trend in DC population may stabilize. For the purposes of this study a possible population decrease of five percent per year and a possible population increase of five percent per year is considered. That would result in a maximum population of about 6,500 or a minimum population of 2,400 at the end of a ten-year period. Due to recent declines in population movements from DCs, the State has had to revise its prior DC population estimates significantly. As a result, there is no longer any anticipated need to close any additional development centers for the foreseeable future.

### Approach to Care Provision

Most of the consumers that have left the developmental centers have been transferred to smaller community-based facilities. The remaining consumers at the developmental centers 1) require significant intervention and treatment and have chronic medical needs, 2) have severe behavior challenges and, 3) are forensic consumers (at selected centers). Many of those that remain in developmental centers are the most profoundly disabled and most vulnerable to serious injury. Forensic and behavioral consumers, who generally function at higher cognitive levels than other consumers, can benefit from more challenging vocational training programs than have been required in the past for consumers of developmental centers. As persons with developmental disabilities age along with the general population, their medical needs are expected to increase over the next 10 to 20 years. This may well place additional responsibilities on developmental centers. There are also ongoing discussions about using the expertise at developmental centers, such as medical, dental, occupational and physical therapy, to augment available care at the community level.

Community based facilities are beneficial for most consumers. DDS recognizes that some persons with developmental disabilities require the structured setting and specialized services that are available at developmental centers. One of DDS's primary goals is to have persons with developmental disabilities receive person-centered and family-centered services and supports that are valued by

consumers and their families and enrich their quality of life. The families of some DC consumers are opposed to community placement or for other reasons prefer DC service. How and where to best treat consumers is not an easy decision. Many honest and diverse opinions exist and are under debate. There is not one accepted solution. Until and if community based facilities can adequately care for all consumers, DC services will be needed for many years to come.



*Residence/Training*

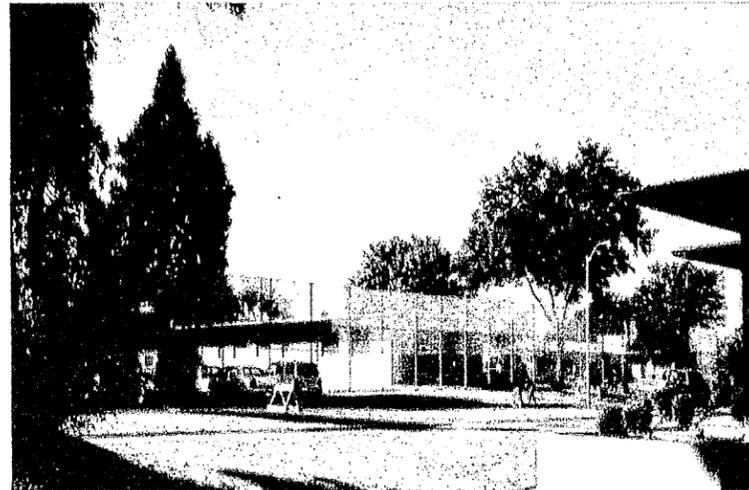
### Forensic Population

The forensic population presents DDS with unique security and programmatic challenges. The majority of the persons admitted to developmental centers since the Coffelt settlement (April 14, 1993) have had some involvement with the criminal justice system. These consumers are typically adult males, primarily between the ages of 18 and 25. Typically, judges determined that a commitment to a developmental center, rather than a prison, was a more appropriate placement for this particular population. Their behavior is often destructive and aggressive, sometimes leading them into criminal activities or other actions that impact their communities' safety and security.

Clinically, the forensic population has a greater ability to care for their own needs and are less impaired from development disabilities than people traditionally served in developmental centers. The level of mental retardation of the forensic population tends to be milder than the remainder of the population, with most able to perform self-care tasks and with better ambulatory movement. Forensic consumers

are taught to substitute acceptable behaviors for destructive or inappropriate actions.

Porterville Developmental Center has six secure forensic units with a capacity of 240 beds. The current population is



*Forensic residential unit*

approximately 180 consumers. DDS occupies six forensic units with a population of 240 consumers at Napa State Hospital. DDS plans to relocate the Napa population to Lanterman Developmental Center (LDC) and other DDS developmental centers, possibly Agnews Developmental Center (ADC). LDC is scheduled to activate three forensic units for 75 new forensic consumers and additional beds for 53 new behavioral consumers. One additional residential unit has been identified for these new behavioral consumers at LDC. There may be an additional 50 behavioral beds developed at LDC and possibly 56 behavioral beds at ADC.

DDS is satisfied that if these current proposals are approved, they can provide for the needs of the current population plus the additional increase for the next several years, based on historical population trends. However, given recent changes in statutes and the diversity with which local courts deal with the forensic population, there is great uncertainty at this time related to projections for the forensic population. It is expected that a portion of existing forensic consumers can be reclassified as behavioral consumers and be placed in a less restrictive environment. Some behavioral consumers may be relocated to the general developmental center population.

People with developmental disabilities currently reside in California Department of Corrections (CDC) facilities, including some consumers formerly associated with regional centers. Tentative resolution of a class action lawsuit against CDC has resulted in CDC agreeing to provide additional health care services to inmates with developmental disabilities. There is no information currently available on when or how this lawsuit may impact DDS. However, it is clear that DDS could not provide adequate security for this particular population in any of its existing facilities based on this facility assessment and a separate security assessment of DDS facilities by CDC.

### **Staffing Requirements**

The trend towards consumers who need a greater level of care and those with severe behavioral challenges has resulted in changes in staffing requirements. New functions and work loads have resulted in the redirection of level of care nursing positions from direct client care activities. The 1998-99 Governor's Budget for the DDS reflects a significant increase in resources to ensure that quality care and necessary oversight are provided in the delivery of services. Overall funding is projected to increase by \$17.1 million (3.7%) over the 1997-98 budget. The budget for developmental centers includes a four year \$106 million proposal (\$30.6 million in 1998-99) that will bring staffing to levels that will meet Health Care Financing Administration's requirements, and meet the staffing needs for forensic consumers. This increase will enable the addition of approximately 1,655 positions (572 in 1998-99) for physicians, nurses, therapists, and provide other direct care services. It will also allow the developmental centers to hire an additional 700 staff to fill existing vacancies over a three year period.<sup>1</sup>

<sup>1</sup> Source: [www.dds.cahwnet.gov/fundprog.htm](http://www.dds.cahwnet.gov/fundprog.htm)

## DDS Space Guidelines

### State Responsibility

The State of California has accepted responsibility for persons with developmental disabilities and is obligated to provide a wide range of services. Consumers, with the help of their families, are to be empowered to be more independent, productive, and lead more normal lives. A mandated array of services has been established to support them.

Services are determined through the Individual Program Plan process. Developmental centers are responsible for providing the physical facilities needed for the provision of required services and for supporting consumers' rights. Many of these consumer rights had not been mandated at the time the developmental centers were originally built.

### Consumer's Rights

Persons with developmental disabilities have rights including:

- A right to treatment, habilitation services and supports in the least restrictive environment.
- A right to dignity, privacy and humane care.
- A right to prompt medical care and practice.
- A right to religious freedom and practice.
- A right to social interaction and participation in community activities.
- A right to physical exercise and recreational opportunities.
- A right to be free from harm, including unnecessary physical restraint or isolation, excessive medication, abuse or neglect.
- A right to be free from hazardous procedures.
- A right to make choices in their own lives.

### Building Codes, Space and Needs

Building codes have been written for generic health care facilities and not specifically for developmental centers. Consumer rights and needs have changed much faster than the building codes. Many significant changes have

occurred since the last major developmental center renovation project in 1982. The decline in population at the developmental centers has allowed the use of vacated space to provide for new consumer activities. However, these spaces were not designed for the functions they now provide. Most of these facilities are inefficient in their use of space and do not provide for specific consumer needs.

Codes that apply to developmental centers do not establish the exact square footage required to adequately fulfill consumer needs. Many of the responsibilities mandated to developmental centers have affected the methods of consumer treatment and have made dramatic changes in space requirements. Advances in mobility engineering have provided consumers with more and larger conveyance devices. Increased education and employment opportunities have created the need for larger training areas. Normalizing consumer lifestyles has affected the way persons with developmental disabilities are housed, nourished and spend time away from their residential units in training and leisure activities.



*Nurse station*

### Recommended Space Guidelines

The purpose of space guidelines is to assist DDS in defining appropriate spacial needs that will become the basis for strategic decisions and master planning. They also help to communicate spacial needs to the administration and Legislature.

The objectives of the space guidelines are to provide:

- Identification of functional activities.
- Identification of required square footage.
- Identification of the relationship between code area requirements and the functional area needs of consumers and staff.

The Recommended Space Guidelines were prepared by Carissimi-Rohrer-Associates and reviewed with comments and revisions by Vanir Construction Management and developmental center staff. The guidelines have attempted to establish the minimum areas required for developmental center activities and are based on building code requirements, standards of comparable facilities, discussions with program staff and actual observance of these activities.

DDS has an obligation to provide the adequate functional space required for the performance of services that have been assigned to developmental services. The unique characteristics of persons with developmental disabilities and their special spatial needs justify the space guidelines identified in this report. Detailed Recommended Space Guidelines for DDS are included in Volume 3.

## Condition Assessment

### General

The assessment of DDS facilities required evaluation of the existing physical conditions, and evaluation of how well the physical space meets the needs of its occupants. The evaluation of physical conditions is referred to in this report as the condition assessment. The evaluation of programmatic needs is included in the Needs Assessment section.

### Methodology

Phase I site reviews were conducted during the fall of 1997 and early 1998. Vanir's team visited each of the sites. Input from both clinical and administrative staff was requested from each facility. The master planning staff met with key program personnel to discuss programmatic needs in relation to current physical conditions and changing use patterns.

Phase 2 site reviews continued during the spring and summer of 1998. Vanir's team was augmented with expertise from several subconsultants: Mazzetti and Associates provided review of mechanical, electrical and site infrastructure items. Hratch Kouyoumdjian and Associates, a structural engineering firm, reviewed facilities for seismic risk. Myra L. Frank & Associates, an environmental consultant, reviewed the historical aspects of developmental centers. Cini•Little International, Inc., a kitchen consultant, reviewed the food service areas of each developmental center. A representative of the State Fire Marshal's office also participated, reviewing each facility's compliance with current fire and life safety codes.

### Assessment Procedure

The preliminary condition assessment was formulated through both visual assessment and review of existing information documenting the condition of existing facilities. A team of condition assessment specialists surveyed each of the buildings and systems on each campus, paying special attention to identified problem areas. Existing buildings, support facilities, mechanical, electrical, and plumbing systems, as well as site infrastructure were reviewed to determine the changes needed to comply with current codes standards. A Plant Operations representative provided

commentary on building and systems issues during the course of the facility inspection. A representative of the State Fire Marshal's office also provided a detailed review of the five facilities. A copy of his report is included in Volume 3. Items noted for correction in the Fire Marshal's review have been incorporated into this report.

In addition to visual assessments, existing documentation was reviewed, including:

- Reports to determine assessment of possible hazardous materials
- Reports to determine assessment of possible seismic deficiencies
- Reports, visual inspection and assessment of American with Disabilities Act (ADA) compliance
- Existing State Fire Marshal waivers (detailed information on existing waivers is included in Volume 3).
- Health Care and Financing Administrations' (HCFA) Life Safety Code surveys (detailed information on HCFA's citations is included in Volume 3.)
- Capital Outlay Infrastructure Report

### Cost Estimates

Site surveys and existing documentation were used to develop a database of obvious deficiencies and minimum corrections needed. Many of these corrections are maintenance items that the State has deferred due to lack of funding. An estimate of costs to make the upgrades and changes was developed. This estimate was used as the minimum level of correction needed, and is referred to as Option 0 in the cost estimate information that follows. (A complete copy of the estimate of costs is included in Volume 4.)

As the costs associated with bringing the facilities into full code compliance will be extensive, various scenarios for renovation were developed as a secondary step in estimating costs. These scenarios are discussed in more detail later in the report.

### Maintenance Background

In addition to improving the quality of the services provided by the developmental centers and the functionality of DDS's operating environment, the quality of the DDS buildings and infrastructure must be improved. Consequently, all of the building systems required careful review to verify their condition and life expectancy. Proper maintenance of facilities has been challenging, due to budgetary limitations:

1. As the population has declined, so has the incentive to adequately maintain the DC facilities. Years of marginal funding have resulted in postponed or minimal maintenance and the lack of significant renovation or new construction projects. Beyond periodic maintenance there has been no major capital outlay investment in the facilities since the Fire and Life Safety and Environmental Improvements projects of 1979-82.
2. Demand for services from Plant Operations has increased, but maintenance staff have decreased. According to the majority of DDS Chiefs of Plant Operations, two-thirds to three-fourths of the allotted positions in their departments were filled, and the rest have been vacant for some time. Maintenance needs have to be prioritized, and sometimes preventive maintenance of the facility has been delayed.
3. An increased number of consumers with behavioral challenges have also had an impact on maintenance of facilities. Repairs made necessary by the willful destruction of property by consumers with behavior problems may consume approximately 40% of Plant Operations staff time in some facilities. Short staffing of caregivers provides increased opportunities for malicious mischief, because the consumers are under supervision less of the time. Staff occupied with repairing property damaged by consumers are not available to provide customary facility maintenance.

### Summary Findings

Vanir's review of the five developmental centers indicates that they have been generally well maintained within available resources. Conditions varied from facility to

facility, depending on the age of the facility, size of the physical plant, climatic conditions, funding available for repairs, and other factors. The information that follows is limited to the physical plant and systems. It does not include fire, life safety and other code deficiencies or programmatic deficiencies. These deficiencies are addressed in the next chapter, under Programmatic Needs Assessment.

## Site

### Roads

LDC places emphasis for repair money on roofs and road. However, due to budgetary limitations, roads are patched each year based on a "wherever needs it the most" fashion instead of a systematic plan.

## Buildings

### General

The majority of buildings at Lanterman have poured in place concrete walls and roofs. Most interior walls are formed of metal studs and lath and plaster. The predominant wall finish is paint. Flooring generally consists of 9" x 9" VAT tile or sheet vinyl flooring. Ceilings are generally acoustic tile. With the exception of the Hospital, most are one-story structures. Many buildings have full or partial basements. Lanterman buildings generally have heating and air conditioning of some type, with varying limitations. For example, half of the Administration building has heating without air conditioning, and half has air conditioning without heating. Some buildings are still being heated with old cast iron steam radiators. The Occupational Therapy area needs more ventilation and cooling capability. Therapy activities are sometimes cancelled because of the closeness of the room. Unit 55 serves acute patients or patients who are recovering from surgery. The area is too hot, despite the efforts of Plant Operations staff to keep it cooler. Paving in playgrounds is in poor condition and needs to be resurfaced. Two residential units are being used for California Conservation Corp.

### Roofs

Residential units have two different types of roofs, depending on when the building was built. Roofs are tile (either slate or clay) or single ply roofing. Roofs at the Administration

building, Research and Ports of the Hospital are built-up roofing.

Roofs are patched routinely. The repair of the flat roofs was made a priority. In the last three years LDC has repaired 75% of flat roofs, and addressed all of the dormers and parapets. Flat roofs have not been repaired on portions of the Administration building, school complex, and part of the Acute building. Single-ply 60 millimeter is used whenever possible instead of built-up roofing.

Per Plant Operations staff, DDS headquarters staff is attempting to procure additional funding to repair tile roofs. Tiles for the Spanish mission tile roofs are not readily available.

### Elevators

Elevators are operational and are supported by a maintenance contract. Because of the ages of the elevators, obtaining repair parts is difficult. Elevators are recommended to be replaced with major building renovations.

When buildings are renovated, the elevator shaft doors are required, by the State Fire Marshal, to be separated from the adjacent exit corridors by a fire rated elevator lobby or an alternate means of protection.

## Mechanical Systems

The following is a summary of the evaluation of mechanical systems at this developmental center. For further information, see Volume 6.

### Chilled Water System

The site is presently served by four water-cooled, centrifugal chillers, all of which are located in a separate building near the Central Plant. Three are manufactured by Trane, 437 tons each, and of 1978 vintage. The third is a York unit, 581 tons, installed in 1985. All four are using R-11 refrigerant. All four appear to be in working condition. The existing demand is approximately 1471 tons, 3550 gpm at 10 degree differential temperature.

There are three chilled water pumps and a jockey pump. Nominally, the 100 hp pump is for the York, and the two 50 hp pumps are for the three Tranes. All three pumps are fitted with variable speed drives. Careful review of the drawings of the existing distribution system indicates that both the pumps and the distribution piping are undersized for the existing demand.

There are two cooling towers. One, 3-cell unit, is manufactured by Pritchard, and was installed in 1975 for the three Trane chillers. The tower contains asbestos (transite), but appears to be in good condition. The second is an Evapco, installed in 1985 for the York chiller. There is one condenser water pump per cell. The towers appear to be slightly under-sized for the existing installed chiller capacity.

Chilled water is distributed throughout the site in buried steel piping, which was installed in 1975. The supply and return lines leaving the building are 6" for the Acute Hospital and 12" for the balance of the site. Combined, they would be appropriate for 2,250 GPM. The existing chilled water system presently feeds all buildings except: The Activity Center, the Main Kitchen, the School and Auditorium, one-half of the Administration Building, Rehab Engineering, the Fashion Center and R2 through R5.

The Acute Hospital was originally supplied by a dedicated absorption chiller, which has since been removed, and the building connected to the campus chilled water distribution system. Two 40 hp main circulating pumps and individual booster pumps at each coil were installed as part of the absorption chiller system, and are still in use. The chilled water line to the Hospital is too small, so the pumping system should remain in place.

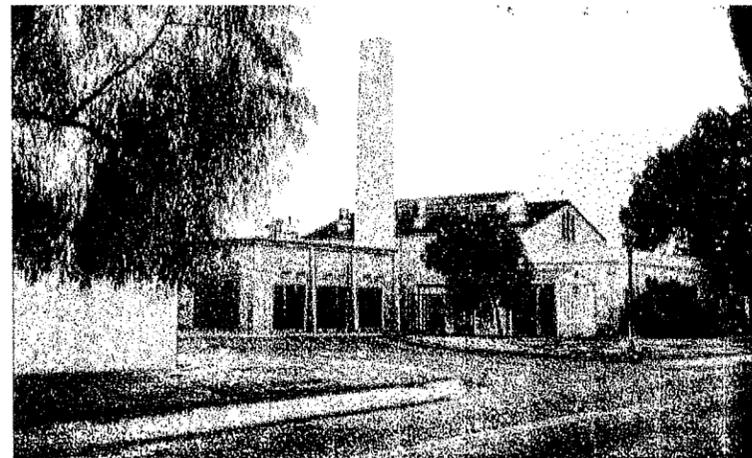
The existing chilled water system design is adequate for this application, except the lack of primary/secondary pumping. There were complaints of hot buildings. The existing chillers presently have enough capacity so that any three of the four chillers can handle the present chilled water demand on all but the hottest days. The existing chillers and towers do not have capacity to connect any additional buildings. The distribution piping and pumps are grossly undersized now. The existing chillers are operating at approximately 0.93 kW per ton. New chillers can achieve better than 0.6 kW per ton. It would not be cost effective to replace the chillers based on energy savings alone.

RECOMMENDATION: Replace two existing, 437 ton chillers with two, 850 ton, 2-stage absorption chillers. This would provide adequate cooling with adequate back-up. The two new chillers should fit in the existing space vacated by the two 431 ton chillers. The 850 ton absorption chillers would be operated as the base-load units. Make the existing pumps into primary circulating pumps. Provide new pumps (three @ 150 hp, each) to act as secondary loop pumps. The secondary loop pumps would be fitted with variable-frequency drives (VSD's). Replace the existing cooling towers with two new, 900 ton towers with VSD's on the fans. Replace the condenser water pumps with four new pumps @ 30 HP each.

Retrofit the remaining 437 and 581 ton chillers with a more benign refrigerant.

### Steam System

There are four 114# steam boilers installed in the Central Plant, and all are manufactured by Union Iron Works. Staff was not certain of the capacity of each boiler, but it was



Central Power Plant

estimated at 30,000 to 39,000 PPH, each. 30,000 PPH is used as the boiler capacity for all calculations in this study. Boiler #1 was installed in 1949, and was taken out of service in 1973. Boiler #2 was installed in 1958, and has been fitted with Lo-NOx burners. Boiler #3 was installed in 1966, and

has been fitted with Lo-NOx burners. Boiler #4 was installed in 1954, and has not been fitted with Lo-NOx burners yet.

With the exception of Boiler #1, they appear to be in good condition and would not be candidates for replacement.

Steam is distributed throughout the campus via insulated, buried steel lines. Portions of the steam distribution system are 70 years old. The newest major loops are 45 years old. More than an average number of leaks are reported per year. The age and frequency of repairs indicates that much of the distribution system is due for replacement.

Steam is used for cooking (in the Kitchen only), and for producing domestic hot water and heating hot water in many buildings.

Only one boiler is required to provide steam at the design winter conditions. The minimum usage is approximately 4,500 PPH in the summer months. The maximum usage is approximately 27,000 PPH in the winter months.

The boilers are fired on natural gas. A 26,000 gallon, buried, single-wall steel fuel oil tank is installed for back-up. This installation is not code-compliant, and a project to replace the tank is planned. A low-sulphur fuel is used. A water softener is provided on the make-up water supply. This extends the life of the boilers. The softener was installed in 1993.

Many of the buildings that were observed have instantaneous heat exchangers for producing heating hot water, and heat exchangers, either with or without storage tanks for domestic hot water. Condensate return tank/pump sets return the condensate. Virtually all of the heat exchange equipment was installed in the 1950's. About one-half of the equipment that was observed, particularly steam traps, manual, control and relief valves, heat exchangers and condensate pump sets were at or near end of useful life. The main Kitchen has been disconnected from the steam system and has no heating.

Over one-half of the steam distribution system is near end of useful life. Approximately one-half of the heat exchange and condensate equipment is at end of useful life. Plant

steam is used directly in the cooking kettles. Latest code requires that a heat exchanger be installed to isolate the plant steam from the cooking steam. One of the three boilers is not provided with Lo-NOx burners. This may not be an issue because a reasonable design would require only two boilers. The existing back-up fuel oil tank is not code-compliant. The steam distribution piping and some of the building components (traps, valves and condensate return pumps) are unreliable.

RECOMMENDATION: Replace approximately one-half of the steam distribution piping and one-half of the domestic and heating hot water equipment to ensure that the system remains reliable. Replace the existing 26,000 gallon back-up fuel oil storage tank.

### Heating Hot Water System

Heating hot water is produced in each building, via steam-water heat exchangers, to heat the building except: (1) Heating in the School of Fashion, Auditorium (Activity Center), Rehab Engineering, School, Main Kitchen, and one-half of the Administration Building are handled by steam baseboard or fan-coil units, and (2) portions of the Auditorium (Activity Center), one-half of the Administration Building, and most of the Acute Hospital is performed by steam coils in the air handling units rather than by hot water. The Canteen is heated by a packaged gas/electric air conditioner. Each building heating hot water system consists of one or two instantaneous, steam-water heat exchangers, and either one or two circulating pumps.

### Air Handling Systems

Most of the buildings are provided with air handling units (AHU's) of various types to provide heating, and in most cases, cooling. Most of the air handlers were installed around 1978. Most of the AHU's are of the hot/cold deck, multi-zone variety. Most of the air handling equipment appears to be in adequate condition, except that the coils in the Acute Hospital are all starting to corrode. There is no obvious reason why this particular building is experiencing this problem. Filtration and outside air values are adequate, except as noted below.

Exhaust values appear to be adequate, on paper, in most areas. However, staff reports that the exhaust ventilation is

inadequate in most restroom/bathing areas. The Residential units rely on central return grilles in many areas, so that air returns to the grille over the 3/4 height walls between living spaces. Full-height, fire-rated walls will impede the return air path.

Air handling units are not installed in the Main Kitchen, one-half of the Administration building, Activity Center, Auditorium, Rehab Engineering and School. These same buildings rely on thru-the-wall air conditioners or evaporative coolers for cooling; and baseboard heaters or fan-coil units for heating.

Portions of the **Kitchen** are heated via steam fan-coil units, though the main kitchen area is not heated at all. It is exhausted by one large utility set and 15, small powered ventilators. It is not cooled. Make-up air to the preparation area is through clear-story windows and doors. Filtration is therefore not adequate. Without chilled-water cooling the Kitchen cannot meet OSHA maximum temperature requirements. Unfiltered make-up air is also a code violation.

The **acute care building** is served by ten AHU's, ranging from 3/4 hp to 15 hp. There were several complaints regarding insufficient cooling. All units, except surgery, are provided with economizers. Surgery is a 100-percent outdoor air unit, and is provided with direct expansion cooling, rather than being connected to the chilled water system. The air handling systems appear to be in adequate condition except that all of the coil fins are beginning to show scaling and corrosion. Total airflow appears to one-half of what it should be. Filtration is inadequate as to filter efficiency and location. The isolation and surgery rooms are not provided with HEPA filtration.

One-half of the **Administration Building** is heated via baseboard units and cooled with thru-the-wall air conditioners. The other half is served by a built-up air handler using steam coil and direct expansion coil. Airflow appears to be adequate in the area served by the AHU, but filtration is less than adequate.

The **Activity Center/Auditorium** is mostly heated via steam baseboard units and cooled by thru-the-wall air conditioners. The one AHU is provided with steam and chilled water coils. We could not observe the AHU because the building was undergoing asbestos abatement. Airflow appears to be

adequate in the portion of the building served by the AHU. The **Rehab Engineering** building is heated by steam baseboard units and steam fan-coil units, and cooled by evaporative coolers and thru-the-wall air conditioners. The Rehab Engineering building is very hot, due primarily to underground steam leaks. We can not evaluate the capacity of the existing system until these leaks are repaired.

The **School** is heated via steam fan-coil units and cooled by thru-the-wall air conditioners. The heating and air conditioning systems were at or beyond end of useful life.

Generally, the **Residences** are served by AHU's with heating hot water coils, chilled water coils and economizers. All AHU's appear to be in adequate condition, and total and outdoor air flows appear to be adequate. The existing ductwork layout will not allow installation of fire-rated corridors as contemplated by the Master Plan.

The **Canteen** is presently served by a packaged gas/electric air conditioner. It is adequate. If the Canteen begins to serve more elaborate meals (it is reported that they intend to install a grill and deep-fat fryer) then more exhaust will be required. This work may be done by the occupant, rather than as a part of this program.

RECOMMENDATION: There are numerous small areas that probably do not have the latest, code-required ventilation rates, or appropriate supply air flows, such as laundry rooms, barber shops, craft rooms, exercise rooms, residences, kitchens and linen rooms. All air handling systems should be reviewed during the design phase and re-balanced for code-required airflows.

### Building Automation Systems

A campus-wide DDC control system is not provided. Only the HVAC equipment in Building 14 is provided with such a system, as a test. The control panel for that unit is located in Plant Operations. All other HVAC equipment is provided with timeclock-type on/off controllers and pneumatic zone control. The boilers are controlled by a Rosemount system installed in 1990. The chilled water system is provided with only stand-alone controls. The main chilled water

circulating pumps are provided with variable speed drives. Building air handling systems are provided with stand-alone pneumatic controls of 1970's vintage, and are not monitored, except Building 14. Building domestic and heating hot water systems are locally controlled, and are not monitored.

Existing pneumatic systems are not reliable and are difficult to find parts for. The steam and chilled water systems do not have an integrated control system. The pneumatic controls are due for replacement. The existing system is 1970's vintage, and, except for pneumatic actuators, cannot be reused. Except for boiler and chiller controls, the existing system is not entirely reliable. Some improvement in operating and maintenance cost could be realized by installing a DDC system.

### Natural Gas System

Natural gas use on the campus is limited to the Boiler House, Main Kitchen, Swimming Center, A9 (Accounting), Administration Building, Canteen, Research Building, Acute Hospital, staff housing and Plant Operations Building. Gas enters the site at the Boiler House and is distributed from there via an underground piping system. We do not foresee the demand changing in the future.

### Domestic Water System

There are two reservoirs, totalling 1,000,000 gallons storage, with two 8" lines and one 12" line connecting to the campus distribution. There is also an 8" and a 12" line connecting the County system at Temple Boulevard. A booster pump house is located near the reservoir. The existing domestic water system was installed in the 1950's. Water is distributed in buried steel pipe. Pressure is adequate, and there are no reported problems related to system age and maintainability. From review of plans the piping system appears to be sized adequately. Individual buildings are not provided with backflow preventers. Campus fire hydrants and fire sprinkler systems are connected to the domestic water distribution system. Water softeners are installed at specific buildings: Two 100-percent capacity softeners are provided for the boilers. They were installed in 1993. Two 100-percent capacity softeners are provided for the Kitchen. The Kitchen water softeners appear to be in good condition,

but the brine tank has deteriorated badly and is need of replacement. The Research Building has a small water softener. The Acute Hospital is provided with one softener. It doesn't work, and the brine tank has deteriorated badly and is need of replacement.

Domestic hot water is produced in each building, generally via either an instantaneous steam-water heat exchangers (e.g. Research, Acute Hospital, Buildings 18 and 19), or by storage tanks with integral steam tubes (e.g. Kitchen, Rehab Engineering, Buildings 5, 12, 14, 27 and 28, and the School Gymnasium).

### Sanitary Sewer System

The existing sanitary sewer system was installed in the 1950's. Piping materials are cast iron in the buildings and buried vitrified clay throughout the campus. Drainage is adequate, and there are no reported problems related to system age and maintainability. The system appears to be sized adequately based on review of the plans. The hospital has a 5 horsepower sewage lift station. A 15" line leaves the campus, and is processed through a sewage grinder before connecting to the County collection system. We do not foresee the demand changing in the future.

### Storm Drainage System

The existing storm sewer system was installed in the 1950's. It discharges into a municipal storm ditch. Piping materials are buried reinforced concrete throughout the campus. Drainage is adequate, and there are no reported problems related to system age and maintainability. The system appears to be sized adequately based on review of the plans. The Hospital has a 5 horsepower lift station. We do not foresee the demand changing in the future.

### Site Compressed Air

Compressed air is distributed throughout the site for the pneumatic controls in most buildings. The compressed air system was installed in the mid-1970's. Two screw compressors are located in the Laundry. One was installed in 1990 and one in 1998. Air is distributed at 90# through buried PVC piping. The system is adequate, and there are

no reported problems related to system age and maintainability. The system appears to be sized adequately. Those buildings that are not connected to the campus-wide system are provided with small reciprocating air compressors.

The central system is a good idea, because the maintenance is limited to two compressors; one as a back-up. The existing system is adequate to handle the foreseeable demand. The only unknown factor is the use of buried PVC piping. There is limited historical data for the longevity of PVC in this application:

### Medical Vacuum System

The Acute Hospital is furnished with a Nash, simplex, water-seal vacuum pump, which is over 50 years old, but which appears to be functional. It discharges into the air handler intake (which is a code violation). It serves Surgery. There is an air compressor, installed "backwards" (which is a code violation) to act as a vacuum pump, outside the hospital and serving the Physical Therapy area and Unit 55. There is a Nash, duplex vacuum pump in a mechanical room in the basement of the Hospital. It is not evident what area it serves. Vacuum outlets were found in Units 51 and 55, with an alarm at the Nurse's Station in Unit 51, and shutoff valves in the corridors of Unit 51 and 55. It was reported that outlets are also installed in the Surgery Suite, but that area was not accessible during our site visit to verify the installation. Portable medical vacuum units are used in areas where vacuum outlets are not installed.

The existing system is fairly-well distributed, but it does not appear that there are as many outlets as should be provided. Much of the existing medical vacuum equipment is either at end of useful life, and/or not code compliant. Staff reported that there is a project underway to install a code-compliant medical vacuum system in the Acute Hospital.

### Oxygen System

A 1500 gallon bulk oxygen tank and a 500 gallon back-up tank are provided outside the Acute Hospital. Only the main tank is provided with dual evaporators. oxygen outlets are found in Units 50, 51, 55, 56 and 57. There is an alarm at the Nurse's Station in Unit 51, and shutoff valves in the corridors of Unit 51 and 55. It was reported that outlets are

also installed in the Surgery Suite, but that area was not accessible during our site visit to verify the installation. Portable oxygen cylinders are used in areas where oxygen outlets are not installed.

The existing system is fairly-well distributed. There are some areas that are not provided with oxygen outlets, and must rely on portable cylinders. The existing bulk oxygen system is in good condition and capacity appears to be adequate. However, the controls and alarms and the quantity of outlets is not per code.



Oxygen Storage

### Medical Air System

A central medical air pump is installed in the Acute Hospital. It is a Nash, simplex, water-seal pump. The intake is adjacent to the medical vacuum exhaust (which is a code violation). The pump is over 50 years old. Medical air outlets were not evident in the Hospital. The only outlets to the medical air system may be in the Surgery Suite, which was not accessible at the time of our site visit. It appears that portable systems are used wherever medical air is required.

### Fire Suppression System

Fire hydrants are installed throughout the campus, connected to the domestic water distribution system. They appear to be spaced according to Uniform Fire Code requirements. From review of the plans, the water distribution piping appears to be adequate to serve domestic water, hydrants and fire sprinkler systems. Most of the distribution is 6", and is looped, which can provide approximately 1000 gpm. Fire risers are installed on many buildings, but ceiling sprinklers were not evident on most.

From review of the plans, Buildings 1-5, 14-17 and 20-33, except 1, 29 and 30, are provided with 4" risers. The sprinkler heads in Buildings 1, 29 and 30 are connected to the building domestic water distribution piping. Coverage in all the aforementioned buildings is limited to utility areas, clothes and linen areas, classrooms, detention rooms and basement storage areas. These systems were installed in 1975. The School and the Main Kitchen are not provided with a fire sprinkler supply. The Administration Building and the Acute Hospital have fire risers, but are not adequately sprinkled. The Laundry needs no work.

### Electrical Systems

The following is a summary of the evaluation of electrical systems at this developmental center. For further information, see Volume 6.

#### Normal Power Service

Lanterman receives its electrical service from two SCE feeders at 12 KV. The two SCE feeders are each capable of serving the facility, and have an automatic transfer switch to select between them, so a failure of one feeder will not cause the facility to lose all access to the utility. However, both feeders originate from the same SCE substation (though from different transformers). Nevertheless, the SCE service has reportedly been extremely reliable, experiencing loss of power only two times in the last two or three years.

The 12 KV feeders serve a set of 12KV switchgear located at the rear of the campus near the railroad tracks. The SCE service selected by the facility is an interruptible rate. However, the one time the facility has been asked to go on

divert, they did not do so for the reason that their standby generators cannot serve the chillers (see below). This failure to divert cost the facility approximately \$36,000, but also caused the utility to refrain from asking the facility to divert on other occasions.

The 12KV main switchgear serves two 12 KV feeders. Three substations each have a switch that allows them to select between either of the two 12KV feeders.

At the time of our site visit (7/20/98, 2:52 pm), the total load for the site was 2550 kw. The peak recorded load for the service was 3228 kw, recorded at 4:00 pm, 8/5/97. This latter figure represents 2.90 watts/sf for the entire site. The largest single use of electricity on the site is the chillers in the Power Plant. The facility uses a maximum of 1500 kw of chillers at this time. The system is adequate to support the Master Plan.

#### Standby Power Service

The standby power service consists of three 800 kw, 2400 volt, Detroit Diesel emergency generators. The generators were installed in 1977, and were rebuilt approximately one year ago. The generators have approximately 700 hours of run-time each, since the re-build. The facility tests the generators weekly.

The generators share a 10,000 gallon fuel oil storage tank. The tank is single-walled, and is already scheduled for replacement before December, 1998.

The generators are paralleled onto a common bus via a set of paralleling switchgear rated for 1000 amps at 2400 volts. The generator bus then serves two feeders. Feeder #1 can act as an input to any of the three substations. Feeder #2 is dedicated as an alternate feeder to the hospital. The generators assume the loads of the site within 45 seconds of loss of SCE power.

In addition to the site standby power system, the facility has a 60kw trailer-mounted generator that can be taken to any one building to serve as a backup to that building in the event of loss of the building service or transformer.

As noted above, the system is configured to carry the load of the entire site upon loss of SCE power. However, the system

is currently unable to carry the existing loads upon loss of SCE power (capacity of 2400 kw vs. peak demand of 3220 kw). Even ignoring the overall capacity issue, the in-rush current of the chillers trips the breakers when the facility transfers to the generators.

The system as such does comply with current codes. However, because it does not assume the emergency loads within 10 seconds; and because it shares feeders with the normal power system (from the 2.4 KV substations); and because it does not ensure service to the hospital and skilled nursing areas at the expense of other areas, it does not meet the requirements for an emergency power system from the perspective of NFPA 99 or NFPA 70. The fuel tank does not meet current requirements and the upgrade project should be continued.

Finally, the existing system has at least one serious reliability deficiency, associated with its starting sequence. The system as originally configured brought the generators up too fast so that two might try to close onto the generator bus simultaneously. This problem was corrected by blocking out generators #1 and #3 until generator #2 comes on line. Once generator #2 has come on line it closes onto the generator bus, and generators #1 and #3 parallel to it and close onto the bus. Once all three generators have closed onto the emergency bus, then all loads transfer. However, the relays dedicated to transferring the loads only attempt to close onto the bus once, based on a time delay. If the generators have not all come up, paralleled, and closed onto the bus, the loads will not transfer. So, sometimes, the loads never transfer onto the generator bus. This problem is at least partly because the generator switchgear was installed in two different phases and consists of switchgear of two different manufacturers which do not work well together.

RECOMMENDATION: DDS should replace the generator switchgear and controls.

#### Power Distribution System

The site has three unit substations that serve all of the electrical loads on campus. Each of the three substations can receive power from either of the site's 12KV feeders (via a transformer) or from the 2.4 KV emergency switchgear. One of the substations is dedicated to the central plant, with one feeder serving the chillers and one feeder serving other

The transformers for these two substations are currently planned for replacement with silicone transformers. The three substations are also tied together with a manually operated tie-circuit for a further level of redundancy.

The hospital can only select between one of the normal feeders and the dedicated emergency feeder. Each building contains a main distribution panel and a distribution system appropriate for the use of that building as of its original installation. Some of these systems have been improved since their original installation. During the 1977 upgrade, a number of the building transformers were replaced as they contained PCB's. The Rustic Camp has its own service from SCE.

The substations and 12 KV feeders have sufficient capacity for the proposed Master Plan. The 2400 volt feeders have sufficient capacity to serve their existing loads for the proposed Master Plan. However, they do not, in all cases, have sufficient capacity to serve all of their own loads plus all of their alternate loads, in the event of a failure of one feeder in the system. The building transformers for the residential units, as well as their main panels, do not have sufficient capacity for the proposed Master Plan. The old 2.4 KV feeders which were not replaced during the 1977 upgrade fail with relative frequency.

The distribution system for some buildings, particularly the Hospital building and the Skilled Nursing Units, do not comply with current codes.

RECOMMENDATION: DDS should commission a coordination and voltage drop study of the system and make noted improvements.

#### Grounding System

The 12 KV lines are grounded at the SCE pole where they intersect at the automatic transfer switch. Some areas contain grounding conductors for branch circuits but most (including the hospital) do not. Test grounding electrode at each building and drive additional grounding rods as required.

#### Fire Detection and Alarm System

The existing fire alarm system is a collection of control panels of differing manufacturers located in the various buildings. Most of the building systems were installed in the 1979 renovations. The code-compliance of the fire alarm systems in the various buildings varies widely. Staff reports that the system has been very reliable. When a building device goes into alarm, it annunciates at a control panel in the PBX in the administration building. The PBX operator dispatches facility police to check into the problem. If the alarm is genuine and the facility staff cannot properly deal with it, the PBX operator calls the local fire department.

Most of the system was installed in 1979. The system has largely reached the end of its useful life. New parts are difficult to obtain, and upgrades difficult. Some areas on campus largely comply with current codes. Many do not.

RECOMMENDATION: DDS should replace the entire existing head-end equipment system.

#### Overhead Paging System

The site has no overhead paging system. The Administration building has its own overhead paging system, activated through the phone system. In addition, the hospital has an overhead paging system.

#### Telephone System

Service to the Lanterman Developmental Center is 200 pair of copper from GTE. The service enters the site in the Administration building, where the Fujitsu 9600 (approximately 2 years old) switch is located. Cabling is run throughout the campus underground, and is old and in poor condition. Three Northstar phone systems are located in plant operations, administration, and the workshops. GTE has also installed fiber optic lines from Pomona Boulevard, but the facility cannot use them because GTE will not provide the switch to use the fiber optics.

The system appears to marginally fulfill all of the required functions. The system has little remaining useful life. The existing system has insufficient capacity for current facility

requirements. The system appears to have frequent reliability problems.

RECOMMENDATION: DDS should replace the existing phone system, both hardware and cable plant.

#### Data System

The data system is built around an IBM AS400 processor. The processor is connected to Sacramento. In addition, the PC network uses 2 Compaq Reliant servers (one is backup). Staff report that the system is slated for upgrade by the end of 1998. The facility is also now in the process of installing a site-wide fiber-optic system, including 6 strands of fiber to each building (2 for PC's, and 4 for future), as well as 12 strands to each of the future forensic buildings (i.e., buildings that exist today that are designated to house forensic patients). The network serves E-mail functions, as well as databases for client incidents and the DOCS physician order system. In the past, the cabling for the system was so poor that nobody used it. In the future, the system may be used for work-orders.

RECOMMENDATION: The existing system is slow and outdated. DDS should continue the system upgrade/replacement currently envisioned.

#### Nurses' Call System

The facility has few nurse call systems, as most consumers are not really capable of operating such a system. Several units have old nurse call systems installed that have never been used, and long since abandoned. We believe that a nurse's call system is not appropriate for this facility. However, as discussed below, current codes require such systems, especially in the hospital building. We recommend that the state review the requirements for this system with the various financing, insuring, and licensing organizations, for verification that they are still required.

#### Security Systems

The facility has a number of local, stand-alone "security" systems. Most significant of these systems are nurse alert systems in several of the buildings. These systems consist of

alarms, ceiling-mounted lights that strobe to the point of alarm, and overhead pages announcing location of alarm. These systems alarm, as well, at the Administration Building. The staff generally report that the systems do not work, and plant operations generally report that the systems do work, but that the staff just do not like to use them. The facility also has door alarms for the trust, the pharmacy, and the snack bar. The facility has no CCTV camera system to monitor the site, but Plant Operations has installed one at their facility to protect it and to test different types of cameras.

### Television System(s) Service

The center currently relies on local MATV systems scattered throughout the site. Cable television is impractical for the facility due to the service cost the local carrier requires. Virtually every building on campus has its own MATV system. In many cases, however, the antennas are in poor condition. Several buildings have antennas lying on their sides on the roofs. The systems provide service to the day rooms in all residential units. There is no service to individual rooms. Where there are systems, they appear to function sporadically. In numerous buildings, users are required to use "rabbit-ears" for their televisions, in lieu of connecting to the MATV system. The systems are of various vintages, but most of the existing systems appear to have no remaining useful life.

### General Electrical Observations

1. Much of the lighting system appears to use T-12 lamps with old magnetic ballasts. Significant energy savings could be realized through the implementation of a lighting retrofit to replace the existing systems with electronic ballasts and T-8 lamps.
2. Site Lighting: Street lighting is generally adequate, however staff has complaints about the lack of lighting on the walkways that lead from parking areas to the various facilities. We toured the campus at approximately 11:00 pm one night, and found the areas lit by the more decorative street

lights to be under-lit. The site lighting is controlled by 2 iron core regulators, both of which require replacement. Conductors for the street lighting system are old, regularly fail, and need to be replaced.

3. Patient bed locations typically do not have the code-required number of outlets (rooms typically have one outlet per bed).
4. The facility does not have a testing and maintenance firm regularly inspect its equipment. Thus, many of the device settings have been turned to "high" and left. The facility should commission a coordination study of the campus system.
5. Staff generally complain about insufficient numbers of outlets.
6. Some buildings have door bell systems that appear to work as well as can be expected.
7. The facility is part of the county-wide "Redi-net" radio system for emergency preparedness purposes.
8. The facility has its own police radio system which appears to be adequate for its intended use.
9. The facility has its own short-range voice page system for doctors and emergency team which appears to be adequate for its intended use.
10. The facility has its own Medical Gas Alarm Panel system which appears adequate for its intended use.
11. The facility has its own air horn system which appears adequate for its intended use.
12. The facility utilizes an outside service for pocket page service.

### Medical Wastes

There is on site storage of medical wastes near the hospital. The container is similar to a shipping container, enclosed in CMU walls. Removal of medical wastes is contracted out to a private company.

### Hazardous Materials

#### PCBs

PCBs from the step down transformer have been removed in the 50 parts per million (PPM) range, but not from the restricted or 2 PPM range.

#### Asbestos

The exact amount of asbestos is unknown, but substantial. It is mostly still present in the older mechanical rooms, in insulation on steam lines, and in the Central Boiler Plant. Many of the steam lines that had the insulation removed were never reinsulated.

The facility has an abundance of the 9" x 9" floor tile containing asbestos that were installed with mastic containing asbestos. There are still many in the Acute area, but few remain in the residences. The facility's policy is to assume all the 9" x 9" tile are asbestos; no testing is performed. Abatement procedures are contracted out. Full abatement is required, not just encapsulation. Because so many of LDC's clients have respiratory problems, hepa-vacuuming is required instead of the lesser "wipe down" routine.

#### Lead Paint

Plant Operations wants extensive training in recognizing and dealing with lead, but needs funding for training.

#### Hazardous Waste

Products that contain materials that are considered hazardous wastes (paints, solvents, oil, etc.) are stored in labeled storage buildings.

## Transportation Systems

LDC owns numerous vehicles that are used to transport consumers around the campus and off-campus for outings, for facility maintenance, security, and transportation of supplies.

A large vehicle compound is needed for the boom truck, backhoes, tractors, dump trucks, service trucks, and motor pool buses to protect them from the weather. The only vehicles stored under cover are the carpenter's service trucks.

A contract has been let to remove the facility gas station and put in an above-ground tank.

## Seismic Evaluation

Buildings at this Developmental Center were reviewed during the seismic risk evaluations performed by the Department of General Services (DGS), under the State Building Seismic Program. DGS structured their evaluation to identify the most significant buildings in terms of population at risk and type of use. DGS assigned Risk Levels ranging from I to VII. A building designated as Level I is expected to have nearly perfect performance during an earthquake. Level VII indicates buildings that are considered unsafe in their current condition (even without an earthquake) and should be vacated immediately.

The Condition Assessment and Master Planning task provided the opportunity for further review of some of the buildings that did not have a Risk Level determination under the State Building Seismic Program due to the Program's budgetary limitations.

During the condition assessment, selected structures at the five developmental centers were reviewed by Hratch Kouyoumdjian and Associates (HK&A), structural engineering sub-consultant to Vanir. Like the State Building Seismic Program, this review was also structured to identify and evaluate the most significant buildings in terms of population at risk and type of use, within available time and budget constraints.

A limited and cursory walk-through at each developmental center was conducted to observe selected buildings. Buildings that were evaluated earlier by DGS but had no

risk level determination were included. Buildings that were rated earlier by DGS were not included. Smaller one-story structures were also excluded due to funding limitations. Where there are repetitive building types, only one unit was reviewed as representative of buildings of that type.

HK&A's observations were made primarily from the exterior of buildings. Exceptions are noted in the descriptions of each building.

The initial phase review was conducted for master planning purposes, with the intent of gaining an order of magnitude of the potential cost impact due to seismic deficiencies. HK&A's preliminary judgment of conditions, future seismic performance, and probable risk levels were made without the benefit of analytical effort in order to work within the budgetary constraints. Review of original structural design documents was limited to a few selected buildings and is specifically noted. During the walk-through reviews, no finishes were removed, no tests were performed and no measurements were made. Accordingly, such assessments are subject to different interpretations by others. If detailed engineering analyses are undertaken in the future, different risk levels may result.

Because the Risk Level evaluations are preliminary judgements, there are cases where the Risk Level cannot be assigned with certainty until additional details are known (for example, *"The Seismic Risk Level postulated for the building is Risk Level III or IV, pending verification of wall anchorages."*) To be conservative, condition assessment cost estimates were based on the higher risk level. This initial phase of seismic assessment did not include the following:

- Geotechnical evaluations
- Assessment of non-structural elements
- Seismic anchorage of equipment, services, walls, or ceilings
- Assessment of falling hazards
- Damage to building contents or loss of use or functions

A seismic evaluation was conducted by Hratch Kouyoumdjian & Associates (HK&A) during the week of July 20, 1998. With the exception of the new structures, all

major buildings on this site have been reviewed and have had Seismic Risk Levels assigned, either previously by DGS or as a part of Vanir's condition assessment.

The results of the evaluation are as follows:

At Lanterman Developmental Center 103 buildings were reviewed. Risk levels were assigned for 42 buildings totaling approximately 808,000 square feet. This represents approximately 73% of the square footage at LDC.

Risk Level VII	0
Risk Level VI	0
Risk Level V	3
Risk Level IV	26
Risk Level III	13
Risk Level II	0
Risk Level I	0

At Lanterman DC, 61 buildings totaling 302,000 square feet (27% of Lanerman's square footage) have not had a risk level assignment.

Discussion of the seismic assessment of primary buildings is below. A detailed listing of buildings on the site and risk level determination follows.

### **Hospital, Building 50 (1931, 1938 and 1955 Wings):**

Seismic Risk Levels assigned by DGS are Risk Level V, Risk Level IV and Risk Level V, respectively.

**Main Kitchen, B1 (1926):** Seismic retrofit work is substantially completed.

**Units 40, 41 and 42 (1939):** The seismic Risk Level assigned by DGS is Risk Level IV.

**Rehabilitation/Activity Center, Building A7 (1928):** On the day of the site visit asbestos removal activities were underway and the building was not accessible. An exterior evaluation reveals 1) extensive cracking of exterior brick

walls, 2) movement of slabs at grade and 3) out of plumb conditions of wood support posts at the covered walkway columns along the back side. The building has three wings forming a "Z" shape in plan with one leg forming a two-story volume. Roofs are terra cotta tile. There may also be areas of terra cotta walls along the interior spaces. There are reports of brick wall cracks opening up during past earthquakes. Anchorages of the roofs at different heights and corners as well as anchorage of the overhangs is not clearly noticeable and may not be there. The likely Seismic Risk Level postulated for the tall portion is Risk Level V and the lower portion may possibly be Risk Level IV. Current uses of the building also include an exercise room and chaplain's office.

**School Buildings A, B, C and D of Building A11 (1952):** Four individual rectangular single story flat-roofed classroom buildings form the school. An adjacent separate structure, Building E, is a taller arched-roof structure used as a multi-purpose space. All structures are interconnected with open sided steel and timber-framed covered walkways. Each of the classroom buildings is a single classroom wide structure with windows along both long walls for most of the length of the buildings. The lateral resistance in the short direction can be provided by the walls separating classrooms. In the long direction there appear to be few short walls. It is likely that some reinforcing will be needed along the long walls to comply with current requirements.

There is some evidence of deterioration in the exposed timber framing of the covered walkways. The buildings are not being used at this time and are in need of maintenance. Walkways appear to connect between different buildings without separations to account for differential movements. Such walkways can be damaged in future earthquakes. The Seismic Risk Level postulated for these buildings is Risk Level III.

**School Building E (1952):** This is a barrel arch multi-purpose building currently used for staff training and other functions. Structural details include a series of arches that appear bolted in the middle, probably of glulam with straight sheathing visible between arches. There is probably a system of purlins or other framing members between arches. All interior spaces are sprayed with an architectural finish,

possibly for sound control, making detailed observations or assessments difficult. Exterior walls are brick construction at both end walls. Conditions of brick wall anchorages were not in evidence and need to be verified. Pending verification of the above, a Seismic Risk Level of IV is noted to account for masonry wall anchorages.



Building E

**Research Building 60 (1963):** This is a one-story concrete structure with extensive solid walls on the exterior perimeter. The Seismic Risk Level postulated for this building is Risk Level III.

**Unit 15 (1939):** Unit 15 has a concrete and terra cotta roof structure. There are areas with extensive glazing and limited shear walls. The Seismic Risk Level postulated for the building is Risk Level III or Risk Level IV depending on the extent of terra cotta.

**Unit 28: (1959):** This building is of an unusual design and use. Although used as a residential unit, it has several exterior openings, similar to roll up doors, that are generally associated with non-residential uses. The structural systems include concrete masonry bearing walls supporting a flat band of exposed concrete and a flat roof structure. There are crawl spaces under several parts of the U-shaped building and there are noticeable exterior grade changes. A

Risk Level III is postulated.

**Unit 1: (1939)** This is a residence of concrete construction consisting of three wings. The Seismic Risk Level is postulated as Risk Level III.

**Unit 10 (1932):** This building is an "L" shaped residential unit currently used as a Day Care Center. Due to the nature of occupancy it is recommended that this building be examined in detail. Accordingly, a Seismic Risk Level of IV is postulated at this time.

### Typical Residential

#### Group 1: Unit 29 and 30 (1959)

Unit 29 was selected as representative of both Units 29 and 30. These are large one-story structures with several wings. Exterior walls vary, but generally include a number of large openings with narrow pilasters in between. Details of construction are not readily determinable for the pilasters. There are few walls along the exterior. It is likely that these buildings have extensive terra cotta walls plus roof tiles. Roof diaphragms are interrupted by elevated monitors. The Seismic Risk Level postulated is Risk Level IV.

#### Group 2: Units 3 - 5, 22 - 27, 31- 33 (1953)

These units are grouped together because they are all residential, built at the same time, have similar floor plans, roof forms, and details. Typically these units have several wings. At least one wing has most of the exterior framed by large windows with concrete columns set behind the windows supporting a concrete roof structure with tile. These buildings are susceptible to serious damage, at least in the open wings, and therefore a Seismic Risk Level of III and IV for the glazed wing is postulated.

**Group 3: Units 16, 17, 20, and 21. (1939)**

These residential units have several add-ons. Their Seismic Risk Level is postulated as Risk Level III.

**Group 4: Units 11, 12, 18 and 19 (constructed between 1928 and 1932).**

Each unit has a different footprint and arrangement of wings. All units are reported as concrete and have large open glazed wings with concrete columns supporting concrete roofs. The Seismic Risk Level postulated is Risk Level IV.

**Group 5: Units 2 and 14 (1947)**

These units are similar but not identical. The Seismic Risk Level postulated is Risk Level III.

**Group 6: Units 6 and 7 (1925)**

This group includes Unit 6 and 7, which were constructed in 1925 in concrete. There are extensive terra cotta walls with large window openings and limited structural resistance. The Seismic Risk Level postulated is Risk Level IV.

**Group 7: Units 8 and 9 (1924)**

This group includes Units 8 and 9 which were constructed in 1924. These buildings have the same construction details as Type 6 and the Seismic Risk Level is postulated as Risk Level IV.



Typical Residence

DGS #	BUILDING NAME	YEAR BUILT	APPROX. SQUARE FEET	DGS RISK LEVEL ASSIGNED	COMMENTS
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**1) Lanterman buildings that have had a seismic study and recommendations have been funded through the State Building Seismic Program.**

3295	Main Kitchen B1	1928	38,253	V	DSA conducted a full study. Construction is underway to implement the study's recommendations, and is substantially complete.
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Subtotal Square Footage: 38,253

**2) Lanterman buildings that have had a seismic study, but recommendations have not been funded through the State Building Seismic Program.**

332501-07	Hospital B50 (1931, 1938, 1955)	1931	127,090	V, IV, V	DSA has conducted a full study, but recommendations have not been implemented. An additional study of possible alternatives was also provided.
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Subtotal Square Footage: 127,090

**3) Lanterman buildings that have had a preliminary evaluation and Risk Level assigned by DGS, but no detailed study or estimate.**

3360	Unit 40 / 41 / 42	1939	35,798	IV	A Risk Level has been assigned by DSA, but no detailed study or estimate has been done.
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Subtotal Square Footage: 35,798

**4) Lanterman buildings that have had a preliminary evaluation by HK&A to determine risk level.**

3278	Rehabilitation/Activity Center -Bldg A7	1928	14,865	V, IV	The taller portion of the building is postulated as Risk Level V. The shorter portion is postulated as Risk Level IV.
3364	Unit 30	1959	19,570	IV	
3365	Unit 29	1959	19,570	IV	
3357	Unit 10	1932	12,769	IV	Due to its function as a daycare facility, HK&A suggests this building be reviewed in detail when funding permits.

Subtotal Square Footage: 66,774

DGS #	BUILDING NAME	YEAR BUILT	APPROX. SQUARE FEET	DGS RISK LEVEL ASSIGNED	COMMENTS
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4) Lanterman buildings that have had a preliminary evaluation by HK&A to determine risk level (continued)

330105	School E Bldg A11	1952	11,796	IV	Possibly Risk Level III, pending verification of condition of brick wall anchorages.
3350	Unit 18	1932	11,795	IV	
3355	Unit 12	1928	11,092	IV	
3356	Unit 11	1928	11,092	IV	
3369	Unit 19	1931	11,092	IV	
3338	Unit 7	1925	10,604	IV	
3339	Unit 6	1925	10,604	IV	
3358	Unit 9	1924	10,033	IV	
3359	Unit 8	1924	10,033	IV	
3353	Unit 15	1939	25,769	III or IV	Postulated as Risk Level is III or IV, depending on extent of terra cotta.
3340	Unit 5	1953	17,016	III and IV	↑ Postulated as Risk Level III for majority of each building. Postulated as Risk Level IV for wings with exterior framed by large windows with concrete columns supporting a concrete roof structure with tile set behind the windows. ↓
3341	Unit 4	1953	17,016	III and IV	
3342	Unit 3	1953	17,016	III and IV	
3344	Unit 25	1953	17,016	III and IV	
3345	Unit 24	1953	17,016	III and IV	
3346	Unit 23	1953	17,016	III and IV	
3347	Unit 22	1953	17,016	III and IV	
3361	Unit 33	1953	17,016	III and IV	
3362	Unit 31	1953	17,016	III and IV	
3363	Unit 32	1953	17,016	III and IV	
3367	Unit 27	1953	17,016	III and IV	
3368	Unit 26	1953	17,016	III and IV	
3324	Research Bldg 60	1963	26,708	III	
Subtotal Square Footage:			354,810		

DGS #	BUILDING NAME	YEAR BUILT	APPROX. SQUARE FEET	DGS RISK LEVEL ASSIGNED	COMMENTS
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4) Lanterman buildings that have had a preliminary evaluation by HK&A to determine risk level (continued)

3366	Unit 28	1959	24,059	III	
3323	Unit 1	1939	18,960	III	
3349	Unit 20	1939	16,355	III	
3351	Unit 17	1939	16,251	III	
3348	Unit 21	1939	16,025	III	
3352	Unit 16	1939	15,810	III	
3343	Unit 2	1947	15,334	III	
3354	Unit 14	1947	15,255	III	
330101	School A Bldg A11	1952	11,796	III	
330102	School B Bldg A11	1952	11,796	III	
330103	School C Bldg A11	1952	11,796	III	
330104	School D Bldg A11	1952	11,796	III	
Subtotal Square Footage:			185,233		
<b>Total Square Footage Assigned a Risk Level:</b>			<b>807,958</b>		

5) Lanterman buildings for which no assignment of risk level has been made

3292	Plant Ops Bldg B-4		50,000		
3291	Laundry Bldg B5	1957	33,564		
3285	Bldg Trades Office B-11	1938	12,745		
3330	Employee Quarters Garage 2		10,000		
3329	Employee Quarters Garage 3		10,000		
3294	Warehouse B-2		10,000		
3288	Chiller Plant B-8		10,000		
3335	Bldg E1	1927	9,928		
3334	Bldg E2	1931	9,778		
3293	Boiler Plant B3	1925	9,311		
328401	Bldg A-1 Administration	1931	7,645		
3296	School Bldg A-15	1952	7,218		
328402	Bldg A-1 Administration (Addition)	1954	7,131		
3282	Canteen A-3	1951	6,563		
3333	Bldg E3	1948	6,277		
3332	Bldg E4	1948	6,277		
Subtotal Square Footage:			206,437		

DGS #	BUILDING NAME	YEAR BUILT	APPROX. SQUARE FEET	DGS RISK LEVEL ASSIGNED	COMMENTS
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5) Lanterman buildings for which no assignment of risk level has been made  
 (continued)

25041	Maint. Warehouse Bldg B-18		5,000		
3331	Employee Quarters Garage 1		5,000		
3322	Residence R-3		5,000		
3303	Residence R-1		5,000		
20004	Private Residence R-8		3,000		
3337	Residence R-12		3,000		
3336	Residence R-13		3,000		
3321	Residence R-4		3,000		
3319	Residence R-6		3,000		
3318	Residence R-7		3,000		
3314	Residence R-11		3,000		
3302	Residence R-2		3,000		
3299	Pool Bldg A-12		3,000		
3289	Audiology Bldg B7		3,000		
3287	Grounds Bldg B-9		3,000		
3283	Bldg A2 Admin Annex 2/Trust		3,000		
3326	Bldg B-15		2,000		
3316	Residence R-9		2,000		
3315	Residence R-10		2,000		
3311	Shop B-16		2,000		
3300	Office A-9		2,000		
3286	Greenhouse Bldg B-10		2,000		
25046	Trailer S-9		1,500		
25045	Trailer S-8		1,500		
25044	Trailer S-7		1,500		
25043	Storage Bldg A-10		1,500		
25042	Trailer S-6		1,500		
3328	PCB Storage B-18		1,500		
3327	Storage B-14		1,500		
3320	Residence R-5		1,500		
3312	Storage B-13		1,500		
3298	Rustic Camp		1,500		
3280	Volunteer Service A-5		1,500		
3279	Volunteer Service A-6		1,500		
3313	Storage B-12		1,000		
			<i>Subtotal Square Footage:</i>	<i>87,000</i>	

DGS #	BUILDING NAME	YEAR BUILT	APPROX. SQUARE FEET	DGS RISK LEVEL ASSIGNED	COMMENTS
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5) Lanterman buildings for which no assignment of risk level has been made  
 (continued)

3310	Storage Bldg B-17		1,000		
3309	Comprehensive Educ 1		1,000		
3308	Comprehensive Educ 2		1,000		
3307	Comprehensive Educ 3		1,000		
3306	Comprehensive Educ 4		1,000		
3297	Security A-14		1,000		
3281	Psychology A-4		1,000		
3305	Emergency Housing S	1970	982		
3304	Chlorinator Bldg U-3		400		
3290	Gas Station B-6		400		
			<i>Subtotal Square Footage:</i>	<i>8,782</i>	
			<b>Total Square Footage Not Assigned a Risk Level:</b>	<b>302,219</b>	

Other small buildings may be present on site but not detailed in the above list

## Historical Evaluation

The following is a summary of the historical evaluation at this developmental center. For further information, see Volume 7.

On July 20, 22, and August 4, 1998, site visits were conducted<sup>1</sup> by a representative of Myra L. Frank & Associates to evaluate the architectural and historical significance of the buildings located within the Lanterman Developmental Center, and identify their potential for inclusion in the California Register of Historical Resources (CRHR). Based on construction dates, integrity of materials, architectural style, and historical significance, buildings constructed prior to 1939 were found to appear potentially eligible for the CRHR as a historic district under Criteria 1 and 3. This finding is subject to concurrence from the California State Historic Preservation Officer (SHPO), who has jurisdiction over state-owned historic properties (PRC 5024.5). If the SHPO concurs with the findings of this memo, additional historical resources analysis would be required at the Lanterman Developmental Center. More detailed historic contextual information would need to be prepared along with a California Historic Resources Inventory Form (DPR 523) for the historic district and each of the key contributors. In addition, a summary Historic Resources Evaluation Report (HRER) would need to be prepared for each of the district contributors where construction is proposed. The HRER would analyze the potential effect of proposed construction on historical resources and recommend mitigation, if necessary. Following review of the HRER, the SHPO may also require that archival documentation be prepared for buildings where substantial construction efforts are proposed.

### Methodology

Using a list of construction dates provided by the Plant Operations office as a preliminary basis, a brief visual assessment was undertaken to determine overall building characteristics and degree of integrity to determine which buildings, if any, could be considered eligible for inclusion in the CRHR. In the field, current conditions were photographed, key architectural features were recorded, and alterations were noted for those buildings aged fifty years or more. Cohesive groupings of buildings, linked by age or architectural style, were also noted during the field

survey. Several individuals were contacted to establish the Center's developmental history and construction chronology, including the Irene Kim, Assistant to the Executive Director, and the site librarian.

### Historical Background

Lanterman Developmental Center, first called "Pacific Colony," had its initial site located on an 800-acre parcel of land located in Walnut, approximately 10 miles west of its present location.<sup>2</sup> The result of a bill passed through the state legislature in 1917, Pacific Colony officially opened in 1921, becoming the first institution for the care of the mentally handicapped located in southern California. Even before construction was completed, the site was found to be lacking some of the amenities necessary to support the operation of the facility, including sufficient water and easy access to transportation routes. An additional 200-acre parcel located near the railroad tracks east of the main campus was purchased to provide additional water. The increase in landholding did not alleviate the problem entirely, however, because the water had to be transported from the annexed parcel through a 500-acre, privately-owned parcel to the main campus. Shortly after construction was complete, Dr. Sisson, the acting superintendent of the facility, reported to the state that the cost of transporting water to the facility amounted to \$1,080 per person and promoted the idea of moving the Colony to the 200-acre parcel at its present location. Although it was originally purchased for the additional water it could supply, the subject parcel was actually a much better location for the facility, not only for its aquifers but for its proximity to railroad lines and Valley (now West Pomona) Boulevard. Dr. Sisson's suggestion was taken, and Pacific Colony closed on January 23, 1923, only to open at its new location on May 12, 1927.

The contract for construction of the first buildings at the new site went to Louis A. Geisler who submitted a bid of \$92,585. When the facility opened in 1927, the compound included a power house, four ward buildings, a Medical Superintendent's Residence, and a laundry. The buildings were all constructed in the Spanish Eclectic style, with stucco facades, Spanish or Mission tile roofs, and decorative details common to the style, such as arched openings, chimney caps, iron balconies, elaborate door surrounds, and decorative stucco vents. The Superintendent's Residence

was situated near the entrance to the facility, which was at that time the intersection of State Street and West Pomona Boulevard, with the wards and service buildings located on State Street south of the railroad. Construction of a commissary building was completed in 1928 and several more buildings were erected in 1929, including a combined school and auditorium and two more ward buildings. From the first year it opened, Pacific Colony maintained an active waiting list. In an attempt to meet the demand for housing, the Colony purchased 41 acres of land known as Hartig Ranch in 1930, acquiring with it a two-story Craftsman house now located on north State Street across from the Medical Superintendent's Residence. During the 1930s, thirteen additional buildings were constructed to provide housing for the residents and two were built to house the



Residential Unit 16

<sup>1</sup> On behalf of the Department of Developmental Services and Vanir Construction Management, Inc., the survey was conducted by architectural historians meeting the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9), Richard Starzak and Gail Miller of Myra L. Frank & Associates, Inc.

<sup>2</sup> Sources consulted for the historical background portion of this report include: Kim, Irene, "History of the Establishment and Growth of Lanterman Developmental Center," on file, Lanterman Developmental Center, 1995; Kohler, Hugh, "Pacific State Hospital, 1921-1965," *Pomona Valley Historian*, 1971; and, Shotwell, Anne M., "History of Pacific State Hospital," on file, Lanterman Developmental Center, 1959.

increasing number of employees. Reflecting the appearance of the first structures, the buildings erected prior to 1940 were also in the Spanish Eclectic style, creating a visually cohesive community of one or two-story, stucco buildings.

World War II and the resulting economy caused the cessation of construction efforts at Pacific Colony. Once the war ended, however, the center resumed growing to meet the needs of its residents and to alleviate the overcrowded conditions that seem to be a consistent factor at the facility. The majority of the buildings constructed during 1948 and 1949 were housing units, with a few new structures to accommodate administrative and support functions. Although an attempt was made to follow the tradition set by the buildings constructed during the previous decades, the architectural style of the buildings erected in the late 1940s is perceptively different. The earlier structures have irregular plans and a fair amount of decorative detailing, whereas the buildings constructed after 1939 are more rectangular in plan and have a minimum of decoration. Although the later buildings are aesthetically compatible with those built earlier, they lack the character of the Spanish Eclectic buildings and reflect a changing attitude toward expending funds and energy on decorative elements.

Pacific State Hospital, as the compound became known in 1953, continued to grow throughout the 1950s and 1960s, incorporating new methods used in treating mental illness along the way. The facility experienced a construction boom in 1953 when nine ward buildings were constructed on the 253-acre parcel acquired from Diamond Bar Ranch in 1950. The new residential units were similar in style to those building in the late 1940s, with stucco cladding and red tile roofs. Three additional wards constructed on the same parcel in 1959, however, are dramatically different than the neighboring buildings, with flat roofs and no reference to the Spanish eclectic influence seen in earlier designs.

Construction during the latter half of the twentieth century has been relatively minor, with new buildings interspersed among the old. In addition, some significant additions have been made to the earlier buildings, such as the large wing added to the Acute Care. Although the architectural style used in recent construction efforts is noticeably different, the occurrence of incompatible buildings or additions is limited,

does not detract from the overall appearance of the site, and reflects the continuing use and evolution of the campus through time.

In 1979 Pacific State Hospital was renamed Lanterman State Hospital in honor of Assemblyman Frank D. Lanterman, a state legislator who was active in introducing numerous acts to improve the living conditions and treatment of patients with mental illnesses. The final convocation of Lanterman Developmental Center's name resulted from a state-wide move to drop the word "hospital" from all state-operated facilities for the developmentally disabled.

#### Recommendations

All of the buildings over 50 years of age in the Lanterman Developmental Center retain a high degree of integrity of design, materials, workmanship, location, and setting (with the exception of those properties moved to the residential area from adjacent parcels) and appear to be eligible for nomination to the California Register of Historical Resources as a district. Due in large part to budget limitations throughout Lanterman's history, very few additions or alterations have been made to the buildings, with the most noticeable exception being the addition of mechanical rooms to provide space for heating and air conditioning units. The architectural style shifted perceptibly in the 1940s, however, when the design of the buildings becomes more rectilinear and lacking in decorative details. The recommended period of significance for the district is, therefore, 1927 through 1939.

Buildings in the Center constructed in or before 1939 should undergo further evaluation as an historic district and be recorded on California Department of Parks and Recreation (DPR) 523 Forms, according to SHPO instructions, with key buildings given individual evaluation and the district boundaries carefully delineated. The table following this section provides construction dates and notations as to which buildings constructed before 1939 should be included as part of the district nomination, and which merit individual evaluation. Key buildings are denoted by an asterisk (\*). These findings are subject to change if the SHPO determines that a different period of significance is more appropriate.

Preparation of the DPR 523 forms for nomination to the state register would require additional, in-depth historical and architectural analysis. Historical analysis should include archival research at the Historical Society of Pomona Valley and the Pomona Public Library for newspaper clippings and general background history. The Lanterman Developmental Center Plant Operations office should be searched for pertinent plans and maps of the buildings and facility. Further examination should be made of the materials available at the site museum. Additional architectural evaluation in the form of site visits and archival research is required to gather data necessary for the completion of the forms, such as exact construction dates and architects' names, if available. Further, a majority of the mature vegetation present is the result of a planting program initiated by Dr. Fred Otis Butler, Superintendent of the hospital from 1918 until his retirement in 1949.

After preliminary construction plans are prepared, an Historical Resources Evaluation Report (HRER) should be completed that would analyze whether the proposed construction would result in a substantial adverse change in the significance of a district contributor, and if so, recommend mitigation measures. The HRER should be submitted to the SHPO early in the planning process so that their comments have ample time to be taken into consideration. Typically, the SHPO may be expected to require archival documentation of historical resources that will be substantially modified by proposed construction.

#### Construction Considerations

The physical appearance of the buildings is the most significant element to consider when planning or implementing construction projects. Most of the buildings retain a high level of integrity, with few additions or alterations evident. It is, therefore, of the utmost importance to ensure that no changes be made to the exterior of a building unless absolutely necessary for its continued use. When changes are deemed necessary, they should follow the examples set forth in *The Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings*. In addition, the setting in which the buildings are placed is a contributing factor to the

overall character of the historic district. Care must be taken to retain the general appearance of the campus when considering the location of new buildings or additions to old.

In order to aid in the implementation of the Secretary of the Interior's *Standards*, following is an annotated summary including examples of their application to this project.

1. **A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.**

Since the project does not include changing the use of the Center from its historic function, this standard need only be considered when the use of a specific building is changed, such as if a industrial building is scheduled for conversion to housing, or housing to office or service. In such a case, conversion should not alter the exterior appearance of the building and alterations to the interior spaces should be kept to a minimum.

2. **The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.**



Building 50 details

The majority of the buildings at the Lanterman Developmental Center share several features that contribute to their historic character. For example, all of the historic buildings have stucco facades and red, clay tile roofs. In many cases, the stucco is the original exterior material and should not be disturbed during construction activities. The same applies to decorative features, original windows, iron balconies, etc.

If materials must be removed during construction efforts, they should be safely stored in order to allow their reuse when the construction is completed. Damaged stucco should be replaced in kind with a material that matches the original in color, texture, composition, strength, and decoration.

3. **Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.**

The buildings constructed during the 1940s and early 1950s reflect the influence of the Spanish Eclectic style but are more boxy and lack the decorative detailing of earlier buildings. The later buildings are, however, a product of their time and should not be altered in any way as to make them appear more similar to their predecessors. To do so would create a false sense of history and confuse the visual chronology of construction at the Center.

4. **Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.**

Any alterations or additions that are 50 years or older show the evolution of the building through time and should not be removed or altered. The changes should be treated with the same consideration as the original portion of the building.

5. **Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.**

The majority of the buildings aged 50 years or more at the facility have Spanish or Mission tile roofs. If the tiles must be disturbed, for example to replace rafters or sheathing beneath, the original tiles should be returned once the work is completed.

6. **Deteriorated historic features shall be repaired rather than replaced.**

Wood sash windows tend to exhibit severe signs of wear if not properly maintained. All available methods should be used to repair any damaged windows in order to preserve the original material. If necessary, an irreparable window should be replaced in kind. Under no circumstances should this type of window be replaced with aluminum or vinyl sash without prior review and comment by the SHPO.

7. **Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials.**

In kind replacement to repair tile roofs, plaster and stucco walls, and cement floors is permissible. When replacing elements in kind, an effort should be made to locate materials salvaged from previously altered or demolished buildings.

8. **Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.**

Replacing missing features should not be conjectural. The appearance of missing elements should be documented in photographs, drawings, or written descriptions to ensure historical accuracy.

9. **Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.**

Construction methods used during the project should be the least invasive to the fabric of the building. For example, plaster or stucco should be removed using a reciprocating saw, not a sledgehammer.

10. **Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.**

If construction includes any ground-moving procedures, personnel should be instructed to watch for signs of archaeological resources and alert their supervisor immediately if they encounter any such evidence.

11. **New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.**

The addition of air conditioning or heating units should be placed in such a way as to not disturb the fabric of a building. For example, removable window units should be installed so as not to damage the sash or sill.

Disability access ramps should be installed in a manner that causes the least visual impact to the building and does not damage the historic fabric. Ramps should be constructed in a design that is compatible with the building but provides visual evidence that it is not part of the original construction. Ramps should be built over steps without causing their removal, and railings should be attached to the original building in an easily reversible manner.

12. **New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.**

New construction should be planned in areas outside district boundaries or where intrusions already exist.

Building No./Name	Construction Date	California Register Recommendation
Building 50, Acute Care Hospital*	1927	District and Individual
Residence #1, Superintendent's House	1927	District and Individual
Building B-3, Power House*	1927	District and Individual
Unit 6, Client Residence	1927	District
Unit 7, Client Residence	1927	District
Unit 8, Client Residence	1927	District
Unit 9, Client Residence	1927	District
Building B-1, Main Kitchen*	1928	District (integrity too compromised for individual)
Building B-4, Plant Operations	1928	District
Unit 11, Client Residence	1929	District
Unit 12, Client Residence	1929	District
Building A-7, Auditorium and School	1929	District and Individual
Residence 2, Staff Residence	1931	District and Individual
Building A-1, Administration	1931	District and Individual
Building E-2, Staff Residence	1931	District and Individual
Building E-1, Staff Residence	1931	District and Individual
Unit 10, Client Housing	1932	District
Unit 18, Client Housing	1932	District
Unit 19, Client Housing	1932	District
Unit 1, Client Housing	1939	District
Unit 15, Client Housing	1939	District
Unit 16, Client Housing	1939	District
Unit 17, Client Housing	1939	District
Unit 20, Client Housing	1939	District
Unit 21, Client Housing	1939	District
Building Trades & Garage	1939	District and Individual

\* -Key Buildings

## Kitchen Summary

The following is a summary of the evaluation of the food service areas at this developmental center. For further information, see Volume 5.

### Purpose:

The State of California Department of Developmental Services (DDS), in 1996 and 1997, developed a Strategic Plan to address the future of the current Developmental Centers. DDS also requested a detailed dietetics operational review and equipment condition assessment at each DDS site, resulting in recommendations for improvements including the preparation of a foodservice budget estimate.

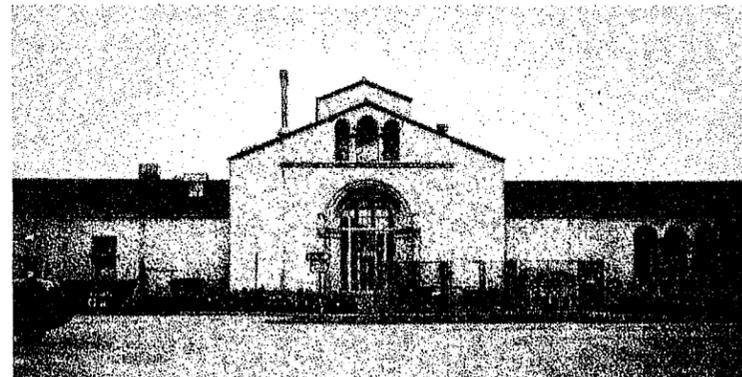
Cini•Little, International, Inc. was retained by Vanir Construction Management, Inc. to assist them in these efforts. Cini•Little visited the Lanterman Developmental Center in Pomona, California in July 1998. A focused review of the dietetic services was conducted, with a concentration of effort on *equipment condition assessment and operational procedures*.

### Findings:

Cini•Little found that the Dietetic management staff and employees are extremely dedicated in their efforts to provide the consumers with the best possible food and nutrition services; this effort has been hindered by several factors. A review of Lanterman Developmental Center's main kitchen indicated that it has been maintained within the available resources. It is obvious that little major capital equipment outlay investment in the kitchen facility has occurred. Of the five DDS centers, Lanterman is in need of the most structural modifications, equipment repairs, and equipment and structural replacements. The center had purchased new or acquired used equipment, but found it to be unusable because of inadequate space and utility load issues. These issues could have been avoided had a master plan, including proper foodservice equipment needs, been in place.

A significant seismic upgrade project has recently been completed. Cini•Little observed that most of the campus'

foodservice facilities and equipment were antiquated and did not meet code. Cold food storage space at the main kitchen and residential kitchens are either inadequate or inoperable. Spatial constraints in some of the residences preclude adequate refrigeration and preparation for food products. Procurement procedures do not achieve economies of scale and require excessive levels of inventory, unnecessary administrative paperwork and additional receiving labor due to the vast number of vendors currently in use. Current manual systems in place are cumbersome and require duplication of effort.



Main Kitchen

### Recommendations

It is recommended that the State implement operational items at the existing Center that do not require significant investment immediately. Whatever the State's decision, a detailed design phase, including contract documents, should occur. This plan will account for space, utility, and equipment requirements for either the new or existing kitchen. A phased approach should be implemented, so that future needs are addressed in a timely fashion. We have addressed these items in two categories, immediate action and future action:

#### Immediate Action

- A group meeting with all the Developmental Centers' representatives should be held to discuss the many system-wide facilities and operational issues, and opportunities included in this report. Detailed system-

wide operational planning will be determined as a result of this meeting, including the development of an action plan for phased implementation.

- A prime vendor contract, which provides 70% to 80% percent of food and supplies, should be implemented to decrease the number of vendors; achieve economies of scale; and decrease overall inventory levels, requiring less storage space requirements, less cash tied up in inventory, lower administrative costs, and decreased labor needed to receive goods.
- It is recommended that an integrated food and nutrition software application with the necessary PC based hardware be implemented. A wide-area network should be installed with the capability to interface the food and nutrition processes with the accounts payable, purchasing, consumer order, and the prime food distributor. The food and nutrition management information system should be accessible from each of the residential kitchens, storeroom, diet office, and by the clinical nutritionist.

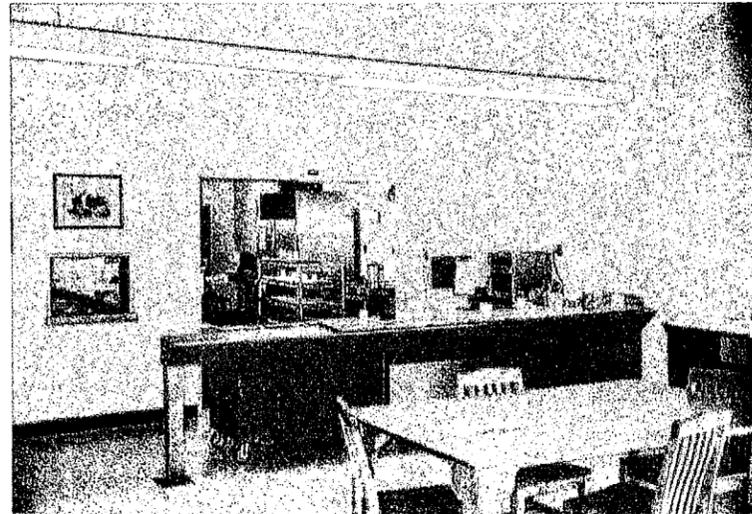


Existing storage

- Design and implement a seven- (7) step Hazard Analysis Critical Control Point (HACCP) plan. This food safety plan decreases the possibility of improper food handling which can lead to foodborne illness. The need to implement corrective action has been noted by code agency surveys.

#### Future Action

- Air conditioning should be provided to the main kitchen and residential kitchens to ensure that an acceptable work environment and proper storage temperatures are maintained. Regulatory agency guidelines state that dry food products should be stored in a range of 50° to 70° Fahrenheit degrees, with 50% to 60% humidity. Implementation will result in compliance with coding agencies. A cooler residential kitchen area will allow this structure to be closed off from the residential dining area which will decrease noise that currently travels from the kitchen to the dining areas.



Typical residential Dining/Kitchen

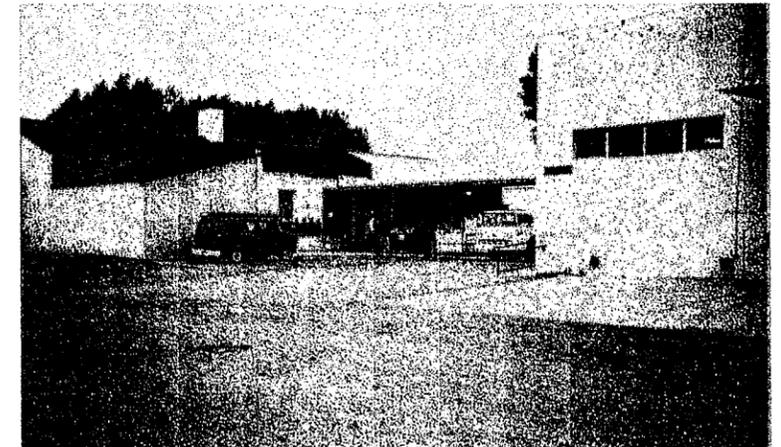
- Walk-in refrigerators and freezers at Lanterman should either be replaced or upgraded as they do not maintain correct temperatures or meet code. Evaporator coils should be replaced as well. The chilled room should be expanded to accommodate more than one meal delivery. The refrigerator room should be converted to a grain refrigerator. A walk-in cooler should be added to the cook chill finished product storage and Cambro loading area.
- A refrigerated truck should be purchased with a hydraulic lift gate to ensure that safe delivery of milk and other food products occurs through the maintenance of

correct holding temperatures.

- The addition of new equipment including agitator kettles, pump-fill stations, blast chillers, atmospheric steamers, rotating rack ovens, exhaust hoods, Admixer Rotosat, hot well units, cart wash station, high temperature dishmachines, residential kitchen finishing equipment, and an air compressor should result in increased productivity, safety, energy efficiency, better space utilization, and compliance with code agencies.
- To provide correct hot and cold food temperatures, resident finishing kitchens should add, replace, and/or upgrade equipment.
- Some structural improvements, in both the main and residential kitchens, need to be made to comply with code agencies recommendations.
- Heat and hold ovens with convection capabilities should replace microwaves in the acute care area to increase the quality of finished food products.
- The main kitchen storage building should be expanded to properly accommodate inventory and to eliminate existing employee safety risks.

Implementation of these items will reduce the overall operating expenses currently incurred. Understanding that the smooth implementation of these items is critical to the Lanterman Developmental Center, Cini•Little recommends a phased approach so that foodservice experiences the least possible disruption. A phased approach will also allow for the implementation of changes due to future unforeseen census increases or decreases.

If the kitchen of this developmental center were renovated as an individual project, the project costs are estimated to be \$5,824,000.



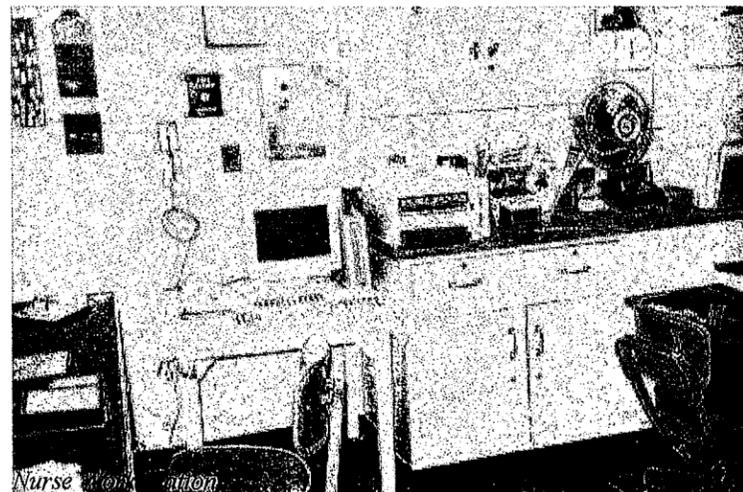
Main kitchen storage building

## Programmatic Needs Assessment

The major deficiencies at Lanterman Developmental Center are:

### General

- Bedroom areas are smaller than code requirements and significantly smaller than an optimum living environment.
- The number of consumers per bedroom is generally four; two consumers per bedroom affords significantly more privacy and a better environment.
- Bathing areas are too small.
- Facilities are not designed for large adaptive equipment.
- Storage is inadequate for equipment and supplies.
- Nurse work areas need improvement.
- Provide additional security systems of new forensic units.



- Consumer training areas are generally occupying converted residential units.
- Staff training areas are inadequate.
- Food preparation and serving need further study.
- Electrical power and communication systems are

inadequate. Upgrade grounding systems, power distribution system. Upgrade television system.

- Fire rated corridors are lacking in residential units.
- Facilities are not in compliance with ADA or State accessibility requirements.
- HVAC systems will need enhancement for code compliance, especially after the introduction of rated corridors. Provide chilled water piping to various buildings, including School, Gymnasium, Kitchen, Activity Center, Administration and buildings 1-5, and 26-28. Upgrade heating hot water systems. Provide campus-wide DDC system.
- Non-code complying construction that has resulted in fire and life safety waivers will need to be corrected.
- Consumer television reception needs to be improved.
- Upgrade fire suppression system and fire detection alarm system.

### Recommended Enhancements

The following information further details the programmatic and code related enhancements needed for specific areas of the campus.

#### Site

- Improve quality of landscaping.

#### Medical

- Most medical functions are currently housed in Building 50. This building has many conditions that would require extensive renovation, including seismic strengthening. If this building can not be economically renovated, medical functions would need to be relocated to a new building.

### Audiology/Speech

- The current building, an old fire station, is not adequate. Relocate audiology/speech with other medical clinics.

### Program I - Acute Medical and Continuing Care (SNF)

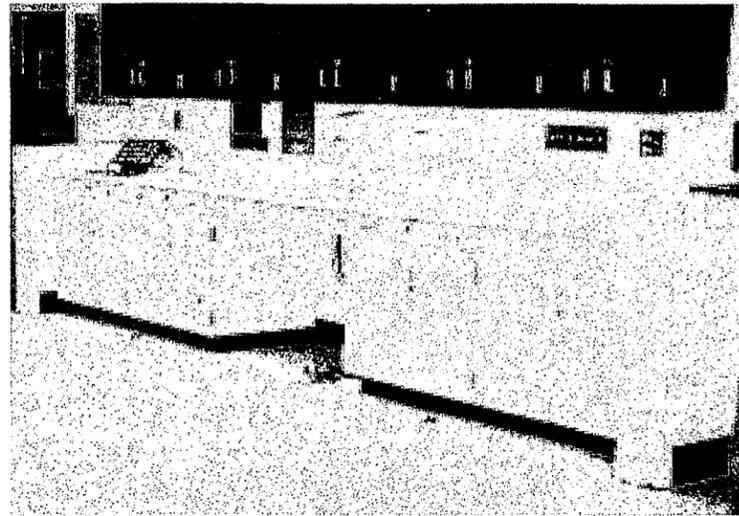
- Provide code compliant isolation rooms (1 per 35 beds but not less than 1 per unit).
- Renovate additional multi-bed spaces to private bedrooms (to total a maximum of 25 percent of beds).
- Renovate remainder of multi-bed spaces to two bed units.
- Provide fire rated corridors with doors on electric hold open devices.
- Develop additional storage (general consumer, clothing, food/formula, wheelchair & equipment) for each unit in this program. Note: providing additional space for storage or any other function will likely require displacement of other existing functions.
- Provide more area for clean and soiled linen.
- Provide separate staff break room.
- Provide additional DTAC spaces adjacent to each unit.
- Renovate warming kitchen(s) per Kitchen Study.
- Provide additional electrical outlets and lighting on emergency power circuits. Provide new emergency generator.
- Renovate existing and provide additional headwall units. Upgrade medical Gas systems.
- Provide additional and larger bathing areas.
- Provide larger treatment rooms.
- Provide wider doors (42") at all doorways used by non-ambulatory consumers. This is in addition to ADA requirements.

- Upgrade voice/data systems.
- Renovate HVAC system for code compliance including heating, cooling, air changes and filtration.
- Provide additional washing sinks.
- Upgrade night lights.
- Provide additional activity rooms.
- Provide automatic opening doors at all main entries.
- Provide larger soiled and clean linen rooms.

## Program II - Behavior Adjustment (ICF)

### Buildings 215, 228, 230 & 232

- Provide code compliant isolation rooms (1 per 35 beds but not less than 1 per unit).
- Renovate additional multi-bed spaces to private bedrooms (to total a maximum of 25 percent of beds).
- Renovate remainder of multi-bed spaces to two bed units.
- Provide fire rated corridors with doors on electric hold open devices.
- Develop additional storage (general consumer, clothing, wheelchair & equipment) for each unit in this program. Note: providing additional space for storage or any other function will likely require displacement of other existing functions.
- Provide more area for clean and soiled linen.
- Provide separate staff break room.
- Renovate warming kitchens per Kitchen Study.
- Provide additional electrical outlets and lighting on emergency power circuits.
- Provide larger bathing areas.
- Provide larger treatment rooms.
- Provide wider doors (42") at all doorways used by non-ambulatory consumers. This is in addition to ADA requirements.



Nurse station

- Renovate nurse station area. Provide better staff security, lighting, more electrical power and voice/data outlets. Provide workroom adjacent to nurse station.
- Upgrade voice/data systems.
- Renovate HVAC system for code compliance including heating, cooling, air changes and filtration.
- Minimize noise between kitchen and dining areas.
- Provide additional hand washing sinks at dining areas.
- Provide commercial grade washers and dryers.
- Improve acoustics.
- Provide shade structures and fencing at patio areas.
- Provide additional activity areas.
- Provide self locking entry/exit doors.
- Provide staff locker and break room.

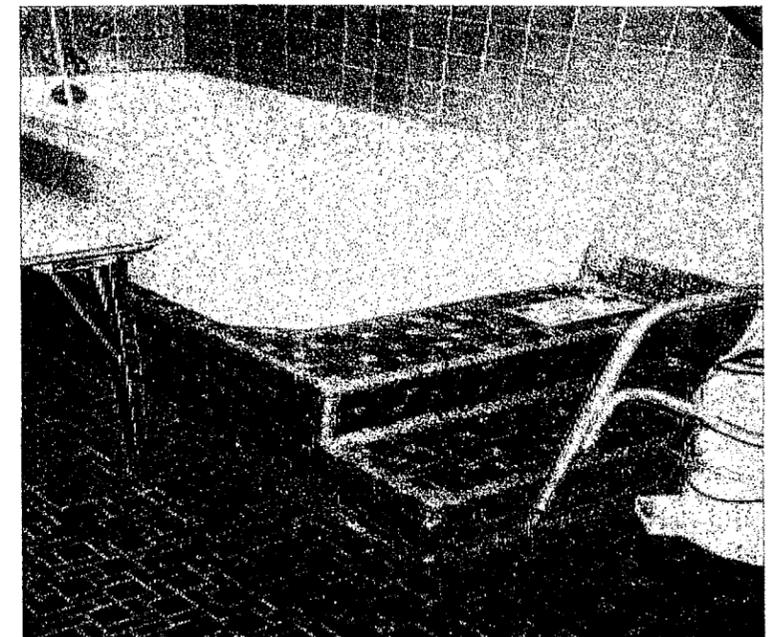
## Program III - Physical and Social Development (SNF/ICF)

### Buildings 314, 317, 320 & 321

- Provide code compliant isolation rooms (1 per 35

beds but not less than 1 per unit).

- Renovate additional multi-bed spaces to private bedrooms (to total a maximum of 25 percent of beds).
- Renovate remainder of multi-bed spaces to two bed units.
- Provide fire rated corridors with doors on electric hold open devices.
- Provide automatic opening entry doors.
- Renovate warming kitchens per Kitchen Study.
- Provide larger treatment rooms.
- Provide wider doors (42") at all doorways used by non-ambulatory consumers. This is in addition to ADA requirements.
- Provide automatic opening doors at all main entries to buildings and units.
- Renovate HVAC system for code compliance including heating, cooling, air changes and filtration.
- Provide larger bathing areas with more working area around tubs and showers.



Bath tub

- Provide additional pedestal tubs.
- Renovate nurse station area. Provide better lighting, more electrical power and voice/data outlets. Provide workroom adjacent to nurse station.
- Develop additional storage (general consumer, clothing, linen, wheelchair & equipment) for each unit in this program. Note: providing additional space for storage or any other function will likely require displacement of other existing functions.
- Upgrade voice/data systems.
- Provide smaller dining areas with additional hand washing sinks.
- Provide small consumer food prep area (warming kitchens can not be used by consumers or non-dietary staff).
- Minimize noise between kitchen and dining areas.

### Program IV - Sensory Development and Behavior Adjustment (ICF)

#### Buildings 432, 425, 426 & 431

- Provide code compliant isolation rooms (1 per 35 beds but not less than 1 per unit).
- Renovate additional multi-bed spaces to private bedrooms (to total a maximum of 25% of beds).
- Renovate remainder of multi-bed spaces to two bed units.
- Provide fire rated corridors with doors on electric hold open devices.
- Renovate warming kitchens per Kitchen Study.
- Provide larger treatment rooms.
- Provide wider doors (42") at all doorways used by non-ambulatory consumers. This is in addition to ADA requirements.
- Develop additional storage (general consumer, clothing, linen, wheelchair & equipment) for each unit in this program. Note: providing additional space

for storage or any other function will likely require displacement of other existing functions.

- Provide toilet rooms between or adjacent to bedrooms.
- Provide larger bathing areas with more working area around tubs and adjacent to showers. Provide 75% showers and 25% tubs.
- Renovate nurse station area. Provide better lighting, more electrical power and voice/data outlets. Provide workroom adjacent to nurse station.
- Upgrade voice/data systems.
- Provide smaller dining areas.
- Renovate HVAC system for code compliance including heating, cooling, air changes and filtration.
- Minimize noise between kitchen and dining areas.

### Program V - Behavior Adjustment and Social Development (ICF)

#### Buildings 501, 502, 504 & 516

- Provide code compliant isolation rooms (1 per 35 beds but not less than 1 per unit).
- Renovate additional multi-bed spaces to private bedrooms (to total a maximum of 25 percent of beds).
- Renovate remainder of multi-bed spaces to two bed units.
- Provide fire rated corridors with doors on electric hold open devices.
- Renovate warming kitchens per Kitchen Study.
- Provide larger treatment rooms.
- Provide wider doors (42") at all doorways used by non-ambulatory consumers. This is in addition to ADA requirements.
- Develop additional storage (general consumer, clothing, linen, wheelchair & equipment) for each unit in this program. Note: providing additional space

for storage or any other function will likely require displacement of other existing functions.

- Provide toilet rooms between or adjacent to bedrooms.
- Provide larger bathing areas with more working area around tubs and adjacent to showers. Provide 75 percent showers and 25 percent tubs.
- Renovate nurse station area. Provide better lighting, more electrical power and voice/data outlets. Provide workroom adjacent to nurse station.
- Upgrade voice/data systems.
- Provide smaller dining areas with additional hand washing sinks.
- Provide small consumer food prep area (warming kitchens can not be used by consumers or non-dietary staff).
- Renovate HVAC system for code compliance including heating, cooling, air changes and filtration.
- Provide commercial grade washers and dryers.
- Provide staff shower, locker and break area.
- Provide better acoustics.
- Minimize noise between kitchen and dining areas.
- Provide additional covered areas at patios.
- Provide additional exterior lighting.

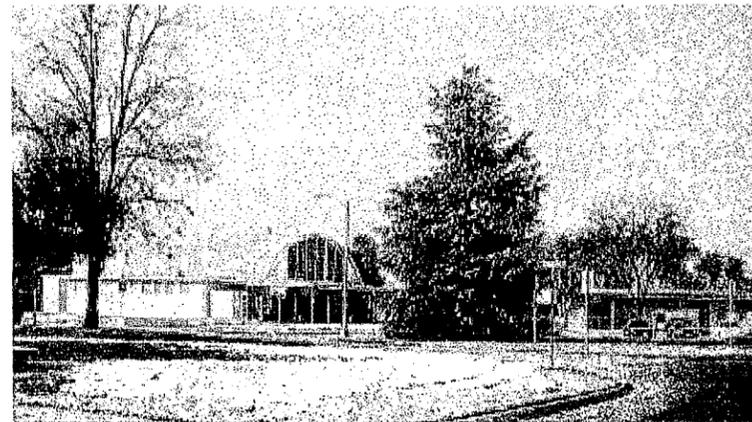
## Central Program Services

### Education and Employment (located in various buildings)

- Provide additional spaces for both interior and exterior activities.
- Provide additional classrooms, larger toilets, changing areas and staff offices.
- Upgrade electrical power and voice/data systems.
- Upgrade HVAC system.

### School

- The school has been in a deteriorated condition, but is being renovated as a training facility.
- Upgrade HVAC system.
- Upgrade electrical power and voice/data systems.



School

### Activity Center/Auditorium

- Activity Center/Auditorium is in very deteriorated condition, but is considered historically significant and therefore should be renovated.
- Upgrade HVAC system.
- Upgrade electrical power and voice/data systems.

### Barber/Beauty Shop

- Provide accessible toilet.

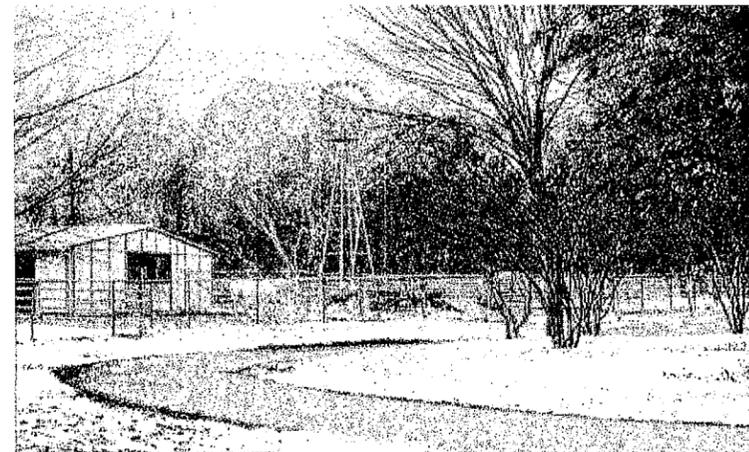
- Provide additional electrical power.

### Pool Building

- Provide equipment storage area.

### Rustic Camp

- Provide additional exterior lighting.
- Provide additional side walks.
- Improve accessibility.
- Provide HVAC
- Provide additional covered areas.
- Provide accessible toilets, showers and changing areas.



Rustic Camp

### Play Fields (adjacent to existing school)

- Improve lighting.
- Provide toilets with showers and changing areas.

### Vocational Training

- Provide additional storage and loading dock.
- Upgrade electrical system for vocational training equipment.

- Provide additional space for increased consumer demand.
- Provide cooling.

## Administrative Services

### Kitchen

- Kitchen will require extensive renovation or replacement (Refer to the Kitchen Study for details).
- Provide steam - steam heat exchanger for kettles.
- Upgrade HVAC system.

### Building 40, 41 & 42

- This building is currently being used for training and administrative services, but is being considered for behavioral customer use. This building will require extensive renovation if it is selected for a behavioral use.

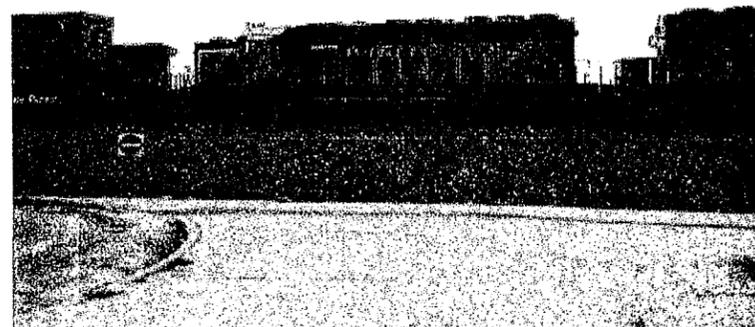
## Land Use Assessment

### Property Description

LDC is a residential facility providing specialized services for people with developmental disabilities. LDC occupies approximately 302 acres, with a core campus of 207 acres. There are 117 buildings on the campus containing approximately 1,056,569 square feet of floor space. The facility was founded as the Pacific Colony and State Narcotics Hospital in 1927. A number of the buildings may be eligible for the California Inventory of Historical Resources.

### Access

LDC has excellent regional access. Major freeways and rail lines serve the property. The facility is located on Highway 57 (Orange Freeway). Approximately one mile north of the site, Highway 57 intersects with I-10 and Highway 71 (Corona Expressway). These freeways provide access to the broader Los Angeles and San Bernardino region. There are two ways to access the site: the primary access currently via Highland Valley Road off Highway 57 and a secondary access off Pomona Boulevard. In addition to vehicular access, active Union Pacific and Southern Pacific rail lines are located on the western edge of the site.



*Union Pacific*

### Land Use Character of Local Area

This area is a major industrial center in Southern California. The region is home to a variety of large and small-scale light

and heavy manufacturing facilities and R&D activities. Industrial growth is likely to continue in this region. The hillside property east of Highway 57 and at higher elevations is developed with higher-end residences.

### Immediate Adjacent Land Uses

A 165 acre parcel on the western edge of the LDC is used by California State University at Pomona for agricultural/ educational purposes. The main university campus is located west of this agricultural property. Between the university and LDC is a landfill serving the Pomona area. The area north of the site is largely vacant. The eastern edge of the facility includes a vacant hillside that is currently used by the university for cattle grazing. At the intersection of Highway 57 and Highland Valley Road there is a Shilo Inn and related commercial activities. The area south of LDC is largely residential.

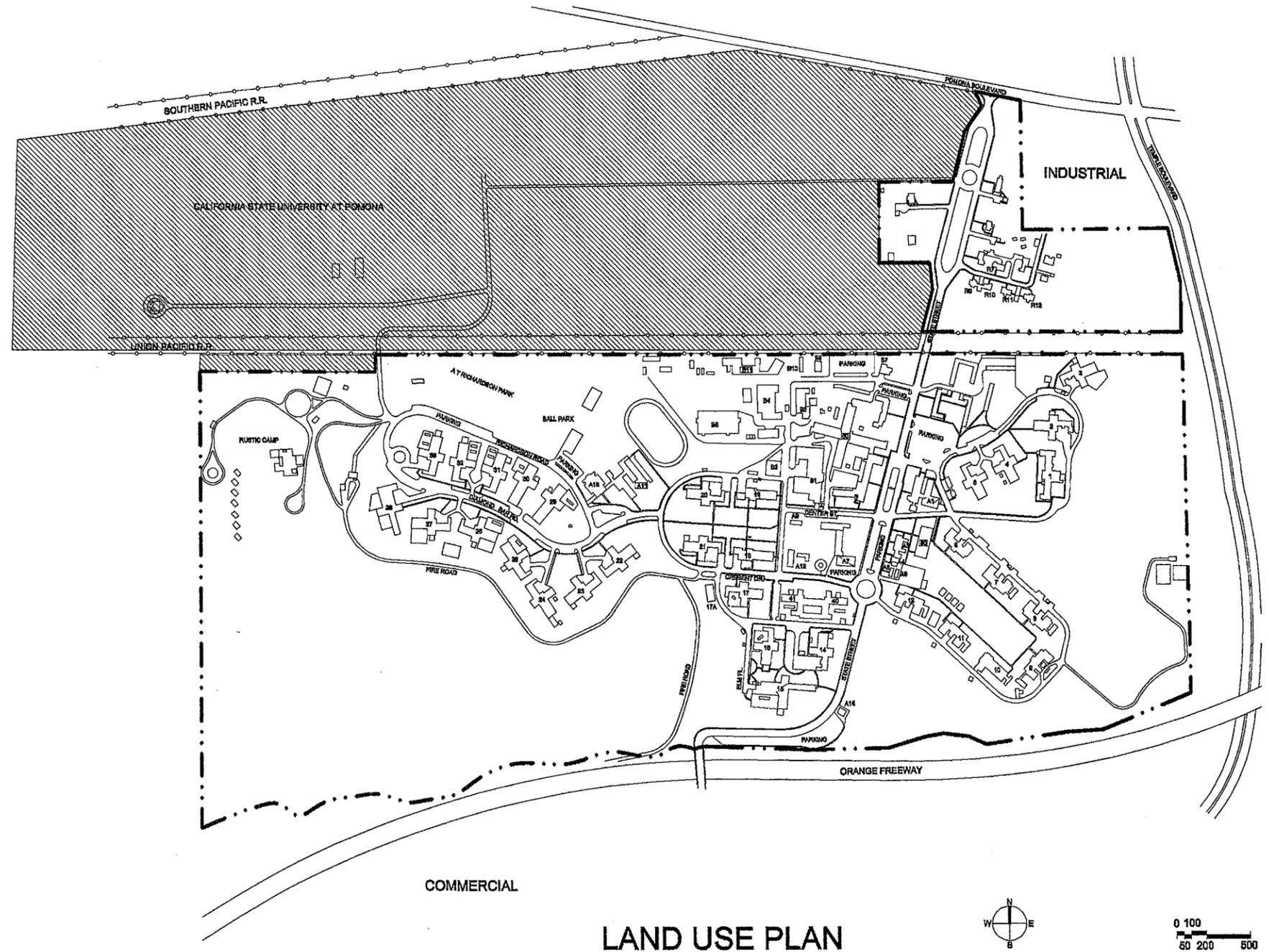


*Typical Residence/Cattle Grazing Area Beyond*

### Future Land Use Opportunities

LDC has a considerable amount of land that, because of steep terrain, would be difficult and costly to develop for health care functions. Most of this land could be suitable for residential development similar to the existing subdivision adjacent to the southerly boundary of the developmental center. The 57 Freeway and the Union Pacific railroad further limit the ability to develop these areas. It should be noted that any part of the developmental center that might become available at some future date would most likely be claimed by California State University at Pomona.

- Important Southern California Industrial Center
- California State University at Pomona, north of LDC
- 302 acres, with 207 acre core campus
- Unoccupied land consists of moderate to steep terrain suitable for residential development
- Major freeways and rail lines limit development of property



## Prototypes

### Objective

Each consumer is intended to live in a facility that will help develop physical, intellectual, social and emotional capacities to the fullest extent and increase skills in order to live in the least restrictive setting possible. The prototypical Developmental Center Master Plan has been designed to provide persons with developmental disabilities a physical environment that will provide the opportunity to maximize their capabilities and independence.

### Prototypical Baseline

The five existing (remaining) developmental centers were designed and constructed between the late 1800s and 1964, with the last major renovation completed in 1982. To determine the relationship between what the existing developmental centers were capable of providing and what was actually needed at each existing facility, a prototypical developmental center was planned. The prototype established a baseline model to compare the demands of each of the five existing sites to meet future needs and proposed master planning recommendations.

Once the prototype was developed, each facility could be evaluated with respect to its ability to support existing functions and its capacity to support master planning goals, assumptions and priorities. The prototype would help to identify major developmental center issues, space and operational problems, and point to solutions. Prototypical Residential and Training facilities were also designed. Analysis, similar to the prototypical Campus Master Plan, was undertaken for both the residential and training prototypes. The prototypical Campus Master Plan was developed based on a preliminary on-site review of the five existing developmental centers, the functional organization of each developmental center, and area allowances identified in the Recommended Space Guidelines. Staff from each developmental center indicated their functional needs, space requirements and recommended adjacencies.

### Ideal Population

In establishing prototypes, optimum sizes for the facilities were considered. Higher population results in a reduction of operating costs but may also result in reduction in quality of services. DDS is currently operating with 900 consumers as

the maximum size for any facility. The current population at Sonoma, Porterville, Lanterman and Fairview Developmental Centers are close to this population. For planning purposes, a population of 300 consumers is considered a minimum facility that can still function with relative economic efficiency. Central main kitchens and central power plants are not effective at facilities with populations less than 300. An interim point of 600 consumers is also considered in the development of the prototype. This size is close to the current population of Agnews Developmental Center.

Area requirements for bed capacities of 300, 600 and 900 were calculated. Spatial relationships, materials movement and traffic flows were determined for the ideal facility. Master plans were created for facility capacities of 300, 600 and 900 beds. Multiple programs, of 150 beds, were used for each of the three master plans; two programs for the 300-bed master plan, four programs for the 600-bed master plan and six programs for the 900-bed master plan.

### Concept

The prototypical Developmental Center Master Plan is designed in three phases of 300 bed capacity each. The initial phase would require the construction of a majority of the support functions for the future 900 consumers. These support functions are required for the initial population of 300 consumers. Education and employment is increased in proportion to the increase in consumers, from 300 to 600 and to 900. Functions such as the central power plant would be designed for the maximum of 900 consumers, but could be constructed in modular units as the population increased.

When compared to the existing developmental centers, the prototypical master plan has approximately the same total area, but with a greater proportion of the area devoted to residential and training functions. Residential programs were designed to be adjacent to their supporting services. Medical and technical and therapeutic activities are concentrated toward the center core of the facility but also adjacent to consumers with the highest medical needs who reside in programs one and two. Training facilities have been positioned adjacent to each residential program. Individual program offices are located within or adjacent to their respective residences. Administrative services, including plant operations, are at the exterior of the campus.

The graphic representation of the functional segments, depicted on the various plans, are in proportion to the actual amount of space they would occupy within the facility. As an example, the total residential program area for 900 consumers is approximately half of the total site-wide building area.

### Typical Functional Organization

The following is the functional organization for a prototypical developmental center. The prototypical Developmental Center Master Plan is grouped together in accordance with this functional organization. When reviewing the master plan drawings, the reader is encouraged to reference this organization to identify the various components of areas indicated in the master plan.

#### Administration

- Executive Director
- Nursing Services
- Quality Assurance
  - Standards Compliance
  - Staff Development
  - Professional Library
- Incident Review Team
- Clinical Records

#### Medical

- Medical Staff
- MOD
- Public/Employee Health
- Specialty Clinics
- GYN
- Respiratory
- EEG/EKG
- Podiatry
- Radiology
- Dental
- Laboratory

**Clinical**

Programs

Central Program Services

Education and Employment

Education Services

Employment Services

Client Training

Technical and Therapeutic

Beauty and Barber

Occupational and Physical Therapy

Biomechanical Engineering

Volunteer Services

Foster Grandparents

Religious Services

Leisure

Multi-Purpose Auditorium

Activity Center

Canteen

Library

Recreation

Swimming Complex

Camping

Research

**Administrative Services**

Computer Services

Personnel

Training and Staff Development

Fiscal Services

Accounting

Trust

Police

Fire Prevention

Pharmacy

Dietetic Services

Central Supply

General Services

Laundry

Warehouse

Property

Transportation

Janitorial Services

Fashion Center

Child Care

Plant Operations

Building Trades

Contracts

Engineering

Landscape

Maintenance

**Prototypical Residence**

A Typical Residence, for 24 consumers, was designed using an approach similar to that of the master plan analysis. The bedroom and toilet areas are divided into four groups and are adjacent to the consumer activity, storage and bathing areas. Toilet areas with showers are located between bedrooms for consumers that require minimal staff assistance for those activities. For consumers who require greater staff assistance, the toilet and bathing areas are consolidated and located adjacent to their bedrooms.

The nurse station is centralized and adjacent to related medical activities. The nurse station is open to the consumer bedroom corridor, and the consumer activity areas. On the opposite side of the nurse station is a more private nurse work area. From the nurse station, staff monitors consumer activities and provides assistance. The nurse work room

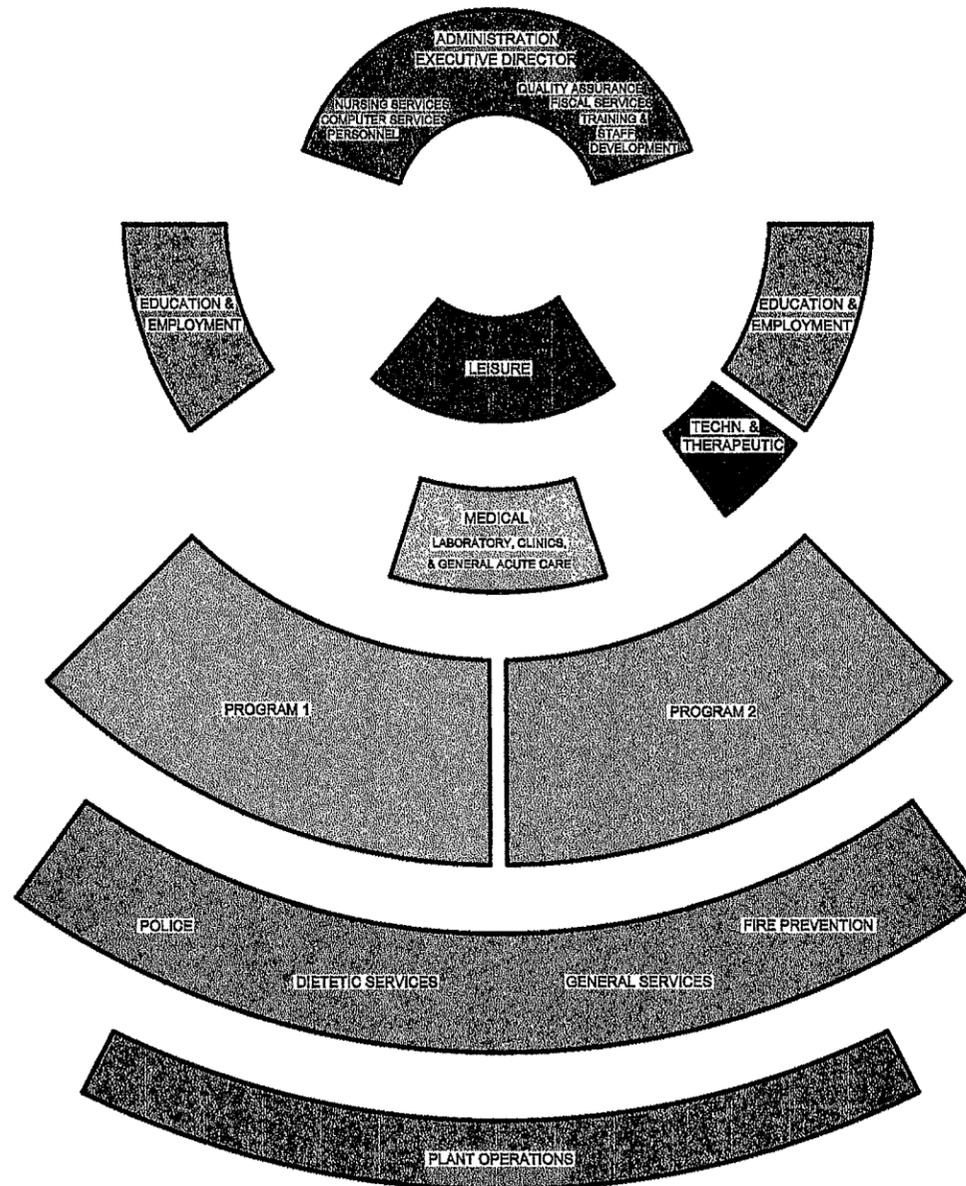
provides an area for activities of a confidential nature, such as consumer charting and for work activities that require a less disruptive atmosphere than the open nurse station can often provide. Staff lockers, lounge and toilets are located next to the nurse work area.

The family visiting room can also serve as a general conference room and is located adjacent to a public/staff toilet and the unit director's office and entry vestibule. Non-consumer areas, such as the kitchen and mechanical/electrical functions, are clustered and separated from the remainder of the facility.

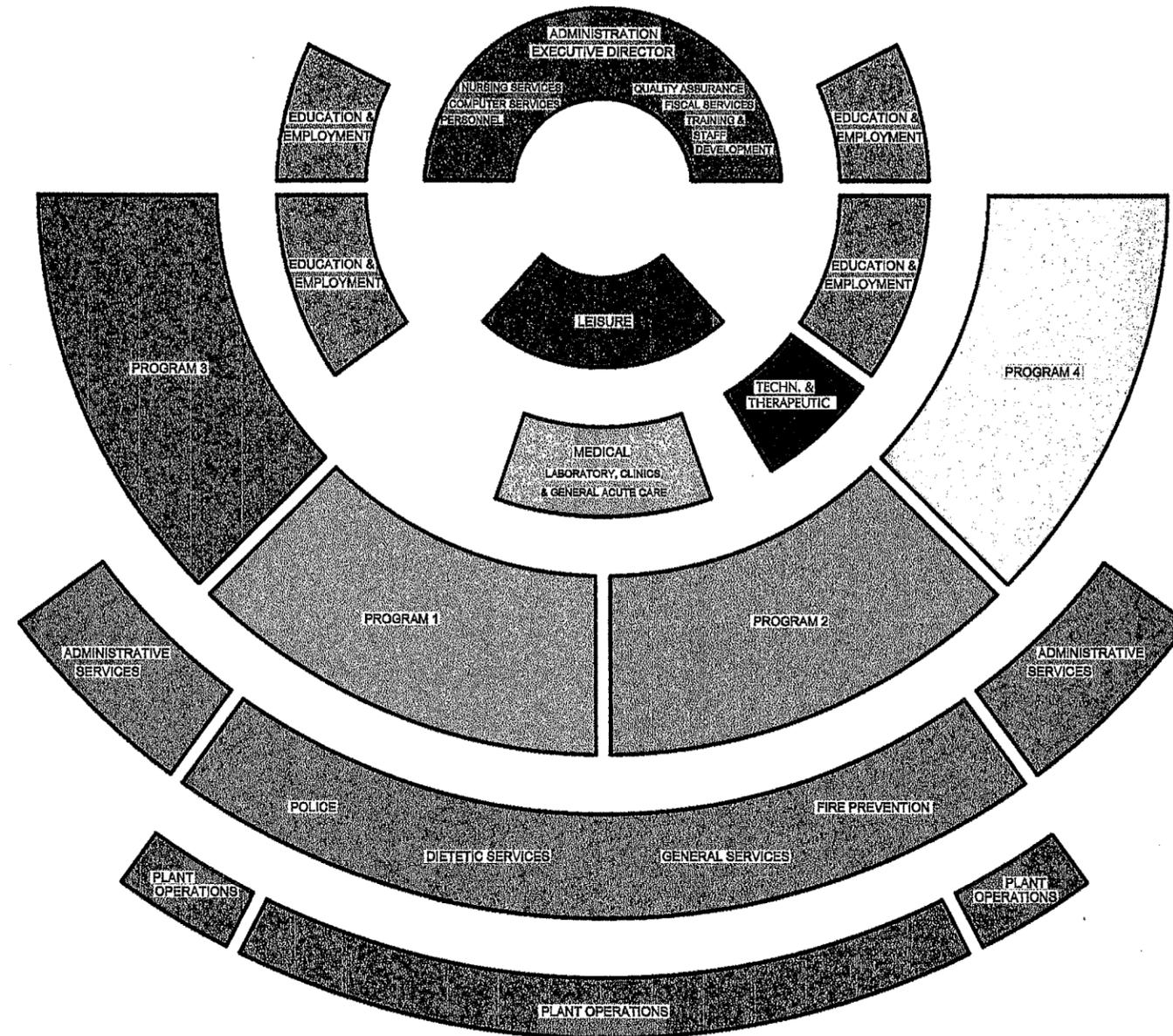
An exterior covered patio is located next to and accessible from the activity rooms. A covered entry space will provide a protected area for consumers who are waiting for transportation.

**Prototypical Training Facility**

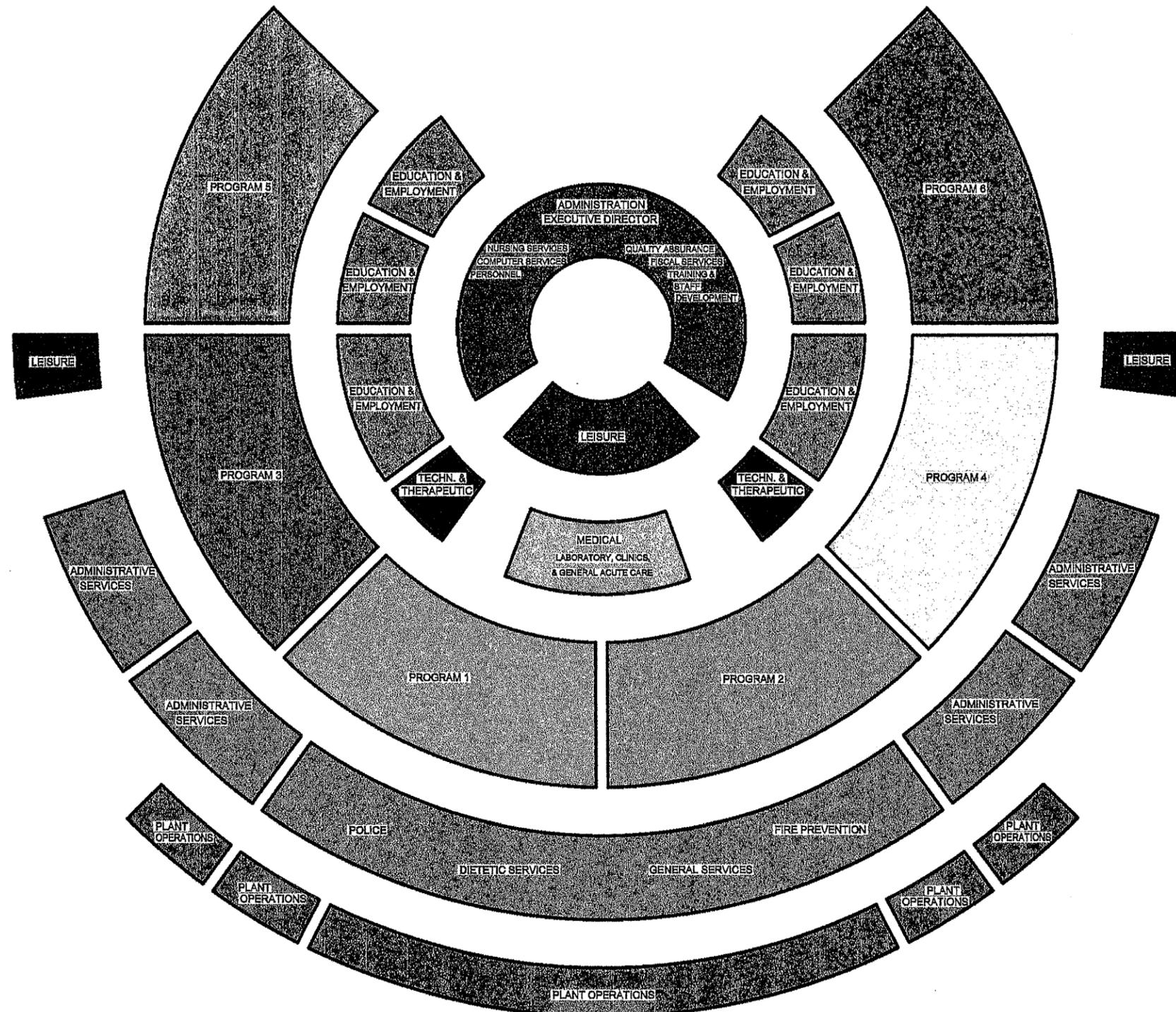
DDS and PMB provided program information from two prototypical training facility studies. This information was reviewed, updated with data from the needs assessment and incorporated into a final typical training facility (DTAC). Training modules can be separate smaller buildings or grouped into larger building areas. Four classrooms, at 800 square feet to 1,600 square feet each, were designed to provide a variety of room sizes to accommodate various consumer training needs. Individual classrooms can be combined or divided to provide larger or smaller spaces for specific training activities. Accessible toilet and changing rooms are located adjacent to the classrooms. A small laundry room for cleaning consumer clothing that might be soiled during training activities is provided. Storage area(s), located adjacent to the loading dock, can be increased in size to meet the requirements of individual training activities. A medical room is used for minor medical needs, without having to send the consumer away from the training units. A quiet room provides consumers with a temporary space away from busier group training activity areas. A covered entry space provides a protected area for consumers who are waiting for transportation. An exterior covered patio area is provided for exterior recreation and training. Warming kitchens and formal dining rooms have not been provided. Lunches that are brought to training facilities by consumers may be eaten in the classrooms.



PROTOTYPICAL DEVELOPMENTAL CENTER MASTER PLAN  
POPULATION : 300 CONSUMERS



PROTOTYPICAL DEVELOPMENTAL CENTER MASTER PLAN  
POPULATION : 600 CONSUMERS

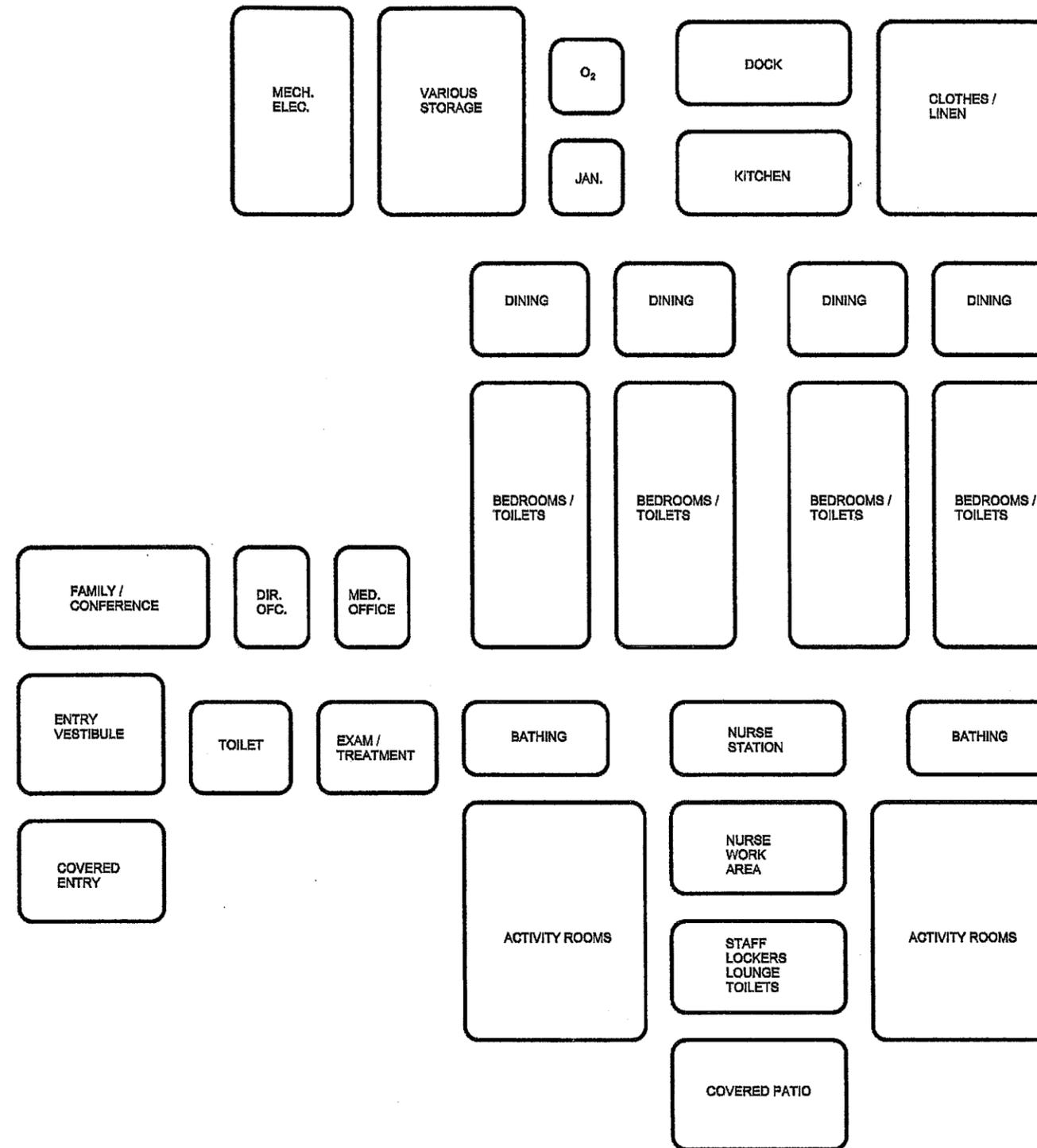


PROTOTYPICAL DEVELOPMENTAL CENTER MASTER PLAN  
POPULATION : 900 CONSUMERS

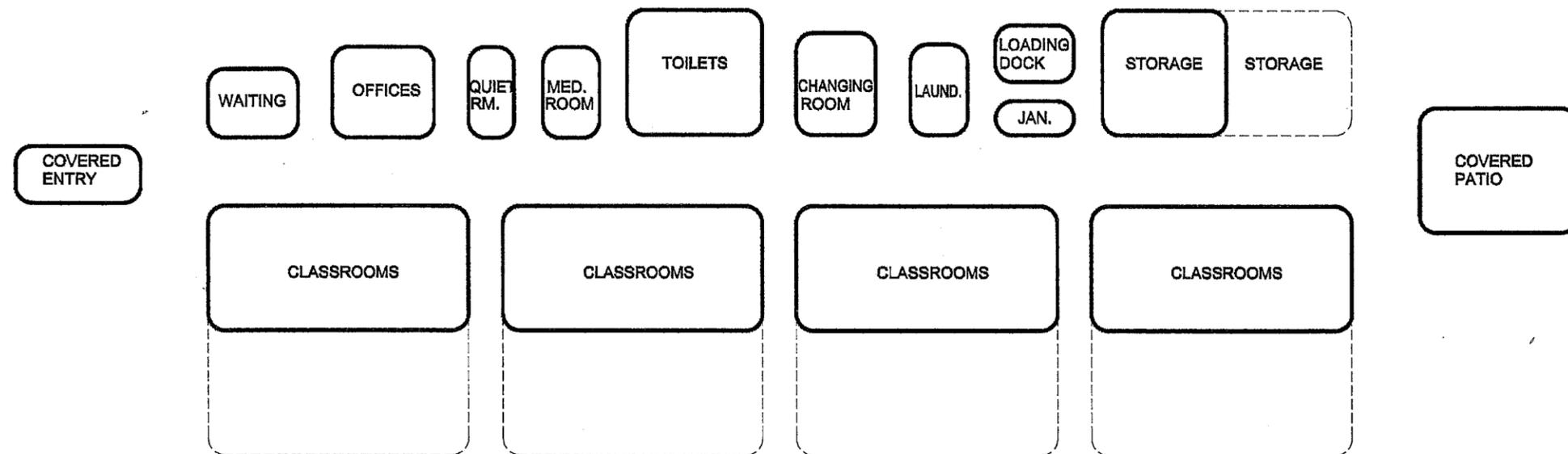
### Conceptual Prototype Budget Estimate

The building descriptions and the assigned areas were developed based on existing Developmental Centers and the Recommended Space Guidelines. Budget data was compiled for populations of 300, 600 and 900 consumers. Soft costs at twenty five percent of the construction costs were used to obtain the total project costs. Off-site costs would be site specific and therefore have not been included. All costs are in today's dollars.

No	DESCRIPTION	Cost/sf	300 Resident		600 Resident		900 Resident	
			Sf	Total Cost	Sf	Total Cost	Sf	Total Cost
1	<b>Residences (Including retherm kitchen and dining)</b>	\$ 200.00	208,000	\$ 41,600,000	416,000	\$ 83,200,000	624,000	\$ 124,800,000
	One story residential units	\$ 200.00	208,000	\$ 41,600,000	416,000	\$ 83,200,000	624,000	\$ 124,800,000
2	<b>Training</b>	\$ 160.00	62,000	\$ 9,920,000	116,000	\$ 18,560,000	155,000	\$ 24,800,000
	School, school annex & client day use	\$ 160.00	62,000	\$ 9,920,000	116,000	\$ 18,560,000	155,000	\$ 24,800,000
3	<b>Support</b>	\$ 141.82	110,000	\$ 15,600,000	177,000	\$ 24,825,000	242,000	\$ 33,800,000
	Plant op. Central Plant, & shops (bldg only)	\$ 150.00	25,000	\$ 3,750,000	40,000	\$ 6,000,000	54,000	\$ 8,100,000
	Auditorium, Gym, Activity center & pool	\$ 185.00	30,000	\$ 5,550,000	45,000	\$ 8,325,000	60,000	\$ 11,100,000
	Warehouses	\$ 100.00	15,000	\$ 1,500,000	27,000	\$ 2,700,000	38,000	\$ 3,800,000
	Offices, Misc. support and other bldgs	\$ 120.00	40,000	\$ 4,800,000	65,000	\$ 7,800,000	90,000	\$ 10,800,000
4	<b>Medical</b>	\$ 245.00	30,000	\$ 7,350,000	40,000	\$ 9,800,000	47,000	\$ 11,515,000
	Clinics & Acute Care	\$ 245.00	30,000	\$ 7,350,000	40,000	\$ 9,800,000	47,000	\$ 11,515,000
5	<b>Kitchen</b>	\$ 335.00	14,000	\$ 4,690,000	22,000	\$ 6,600,000	30,000	\$ 9,000,000
	Kitchen equipment	\$ 175.00	14,000	\$ 2,450,000	22,000	\$ 3,080,000	30,000	\$ 4,200,000
	Kitchen building	\$ 160.00	14,000	\$ 2,240,000	22,000	\$ 3,520,000	30,000	\$ 4,800,000
6	<b>Site and infrastructure (Acre)</b>	\$ 312,500	75	\$ 23,437,500	115	\$ 35,937,500	150	\$ 46,875,000
	Sitework(Road, parking, landscape, fence, ....)	\$ 95,000	75	\$ 7,125,000	115	\$ 10,925,000	150	\$ 14,250,000
	Steam & Chilled water system	\$ 124,500	75	\$ 9,337,500	115	\$ 14,317,500	150	\$ 18,675,000
	Natural Gas system	\$ 3,000	75	\$ 225,000	115	\$ 345,000	150	\$ 450,000
	Water and Fire system	\$ 25,000	75	\$ 1,875,000	115	\$ 2,875,000	150	\$ 3,750,000
	Storm Drain system	\$ 15,000	75	\$ 1,125,000	115	\$ 1,725,000	150	\$ 2,250,000
	Sanitary Sewer system	\$ 7,500	75	\$ 562,500	115	\$ 862,500	150	\$ 1,125,000
	Electrical, lighting and low voltage	\$ 42,500	75	\$ 3,187,500	115	\$ 4,887,500	150	\$ 6,375,000
	<b>Subtotal Construction Cost</b>	\$ 241.98	424,000	\$ 102,597,500	771,000	\$ 178,922,500	1,098,000	\$ 250,790,000
Soft Cost ( Design fee, Inspection, PM, CM, Bid process) @ 25%				\$ 25,649,000		\$ 44,731,000		\$ 62,698,000
<b>Total Project Cost (As of 4th quarter of 1998)</b>				\$ 128,246,500		\$ 223,653,500		\$ 313,488,000
Cost per bed				\$ 427,488		\$ 372,756		\$ 348,320



PROTOTYPICAL RESIDENCE



PROTOTYPICAL TRAINING FACILITY

## Master Planning Summary

### Overview

The Master Plan develops the approach to address long term facility needs of DDS. It includes the definition of the overall method of addressing these needs and the specific physical campus plans for each facility. The Master Plan summarizes existing developmental center conditions and needs, and proceeds to define options and recommendations to address the needs.

### Process

Specific information concerning the five developmental centers was collected, evaluated and analyzed during the master planning process. DDS provided long term goals for the developmental centers and for the overall study. The 1996 and 1997 Strategic Plans developed by DDS were reviewed. Initially, and as the planning process continued, DDS defined its scope of operations including population and staff projections.

The existing condition of the site, infrastructure and buildings for each of the five facilities was documented and analyzed. Existing documents and studies were collected and reviewed. Land use information was obtained and analyzed. Control agencies, codes and standards were identified.

At the completion of the first phase, preliminary master planning documents were produced by Vanir CM and reviewed by DDS and various control agencies. Review comments have been incorporated in the final master plan information. Specialty consultants were brought on board during the final phase. They provided input to the master planning process in the areas of fire and life safety, seismic retrofit, food service, historical significance and mechanical and electrical infrastructure. This information helped refine the final Master Plan.

The staff of each facility identified major programmatic needs, including space requirements and operational problems. The existing capacity and scope of operations for each developmental center was reviewed with facility staff. Existing functional relationships and adjacencies, materials movement and traffic flows were observed and discussed at each site.

Prototypical block plans were developed for an ideal facility and residential and training units. Typical existing residential

unit floor plans for each site were obtained, and revised plans for various options were developed, applying the new space guidelines.

### Options

Five options, with increasing scope of work, were identified during the master planning process and are outlined below.

#### Option 0

- Condition Assessment corrections, limited to correcting existing physical plant defects.

#### Option I

- Condition Assessment corrections
- Moderate code corrections to include accessibility compliance
- Existing waivers to remain in place
- No program enhancements beyond those resulting from code corrections

#### Option II

- Condition Assessment corrections
- Full code compliance within the restrictions of existing building footprints
- Seismic renovation for buildings that are Risk Level IV and above
- Most waivers to be eliminated
- No substantial program enhancements beyond those resulting from code compliance

#### Option III

- Condition Assessment corrections
- Full code compliance within the restrictions of existing building footprints
- Seismic renovation for buildings that are Risk Level IV and above
- Most waivers to be eliminated

- Full program enhancements, including DDS Space Guidelines, within the restrictions of existing building footprints

#### Option IV

- Complete facility replacement in the existing location

A cost estimate for each option was developed and is included in the next section.

## Master Plan Recommendations

### General

The overall master plan goal is to address all identified needs at optimum cost. Consequently, the prudent approach is to select a combination of options for various functions. It was determined that resource allocation should be focused towards residential and training spaces where consumers spend most of their time, and essential functions such as food service to consumers.

Using these criteria, all residential and training buildings and the kitchens are recommended to be renovated to Option III level. Administrative and other support buildings will be limited to Option I or II level.

The decision to use Option IV, Replacement, is dependent upon the relative costs of Option III and Option IV. If full renovation is more than 80% of replacement cost, replacement could be the preferred option. If the cost is between 70% and 80%, a judgement needs to be made for the specific building and situation in making the choice. The cost estimates indicate that all buildings are best suited for renovation (Option III) rather than replacement (Option IV), with the exception of the R&T Buildings. The cost comparison indicates that these large buildings, due to seismic deficiencies and other code and programmatic deficiencies, will be more cost effective to replace.

The existing Master Plan for each Developmental Center was studied. Corresponding proposed master plans were developed by applying the chosen options to the existing

master plan, with efforts made to match the prototype block plan of an ideal facility, to the extent feasible.

### Residences

A considerable amount of the master planning process involved the analysis of existing and proposed renovated residential buildings. Application of programmatic needs assessment, code compliance, and adoption of DDS Space Guidelines reduced the number of beds for typical residential units. The decrease in number of beds per residential unit varies for each developmental center depending on specific unit configuration and current occupancy rate. The recommended master plan includes construction of new residential and training units to address the increased space needs.



*Typical existing residential unit*

The goal is to provide two beds per bedroom and where possible, several one bed per bedroom units. In some situations three beds per bedroom is the best solution allowed by existing conditions. Nurse stations are centralized, open to the consumer bedroom corridor(s), and adjacent to related medical activities wherever possible. Staff workrooms are located adjacent to the nurse stations and separated from the fire rated corridors. This satisfies fire codes and provides an improved working environment. Toilets and bathing areas have been enlarged to meet accessibility requirements. (Reference the specific floor plan sketch for each site).

The recommended master plan addresses all the major deficiencies identified in the condition assessment and programmatic needs assessment.

It is proposed that all residential units (ICF & SNF) be renovated to the marginally higher level of standards for Skilled Nursing Facilities, in order to provide the developmental centers with the flexibility to address population transitions for various care types.

### Receiving and Treatment Buildings

Receiving and Treatment (R&T) type buildings, which house programs for high acuity consumers and the majority of the medical and clinical areas, are the most functionally complex buildings within developmental centers. Sonoma DC does not have a specific R&T building, but does have similar functions located in several adjacent buildings. More in-depth building condition and needs assessments, master planning and cost estimating were done for these buildings. As discussed previously, the result of this effort is the recommendation to replace these buildings. The existing functions were assigned areas based on the proposed space guidelines. Where land was available, similar functions were grouped together and placed in separate one and two story buildings. The cost of these buildings is thereby reduced and future flexibility is enhanced.



*Receiving & Treatment Building*

### Population Baseline

The proposed final master plans were developed to meet the

needs of the current population. From a long-term view, the current population is just a point in time. However, this approach helps identify the magnitude of the costs for previously stated options and for various facilities to help make strategic decisions.

### Phased Approach

Population projections show a possible increase of 5% per year or decrease of 5% per year in future years. This uncertainty with the future population makes it prudent to adopt a phased approach to capital improvements. This approach will allow the flexibility to discontinue capital outlay investment, if the population does decrease significantly. If the population remains stable or increases, the investment can continue. A three-phased approach is recommended. Using this approach, one third of each facility will be renovated during each phase. Each facility's actual population at the time Phase I is nearing completion will either trigger the second phase or stop the program. The same methodology will be used for the remainder of construction; the population as the second phase of construction nears completion will determine if Phase 3 proceeds.

The goal of each of the three phases of renovation is to renovate sufficient areas and services to accommodate 300 consumers. (Note, as Agnews DC has a smaller population than the other developmental centers, Agnews can be implemented in two phases rather than three.)

Renovation of a portion of the housing, training, and support units will be done in each phase:

- Phase I will include renovation of about a third of the housing, training, administrative and support units and the refurbishment of housing units being used for non-residential functions. Phase 1 will also include improvements to facility infrastructure, and renovation of the kitchen and food services areas.
- Phase 2 will include renovation of about a third of the housing, training, administrative and support units.

- Phase 3 will include renovation of the remaining third of the housing, training, administrative and support units and the construction of new buildings.

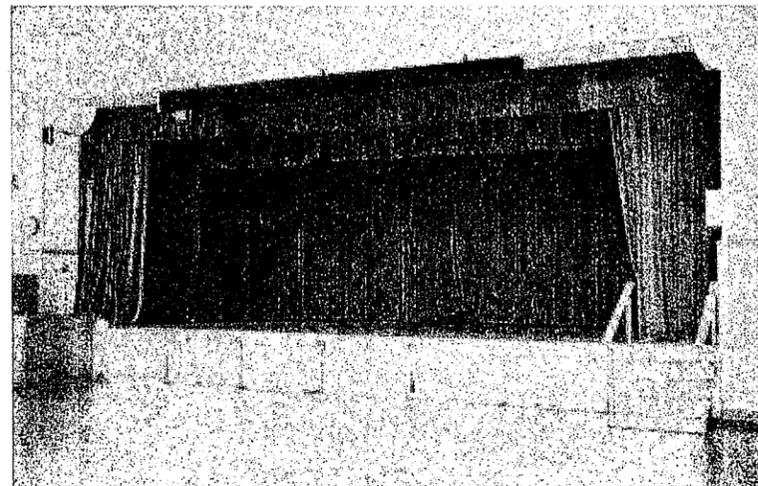
The location of the units to be renovated during the first phase was chosen with consideration for the possibility of a future need to consolidate the population onto a portion of the campus, in the event the population drops to 300 consumers.

The master plan drawings indicate the layout of the facility in each phase.

## Lanterman Master Plan

### Overview

Lanterman Developmental Center (LDC) occupies approximately 302 acres with a core campus of 207 acres. Unoccupied portions of the campus have moderate to steep terrain that would be difficult to accommodate persons with developmental disabilities. There are approximately 117 buildings indicated on the existing master plan, with approximately 1,056,569 square feet of floor space. The school, building A11, is being renovated as a training facility. Residential type buildings 6, 7, 8, 9, 10, 11 & 12, at the southeast corner of the site, were not upgraded in the previous FLS renovation and are in poor condition. The Activities Center/Auditorium, Building A7, is in very deteriorated condition. Both the Existing and Proposed Master Plans assume the population includes 75 new forensic and 53 new behavioral consumers. This would bring the total population used for planning purposes to 860.



*Auditorium Stage*

### Option IV Replacement

Building 50, the hospital which includes consumer residential units and the majority of the medical and clinical areas, is the most functionally complex building within LDC. More in-depth building condition and needs assessments, master planning and cost estimating were done in Phase II. Proposed Space Guidelines were applied to both renovation and replacement options for building 50. Replacement of this building is recommended because of marginal increased cost and major functional benefits over the renovation

option. Because there is not enough available vacant land to replace building 50 at a new location, the existing building is to be demolished and a new building built in its place. This will require additional swing space, during construction, for activities currently housed in this building. If the staff residence buildings currently occupying area northeast of building 50, were removed or relocated, the new building could be located there as an alternate site. This would decrease the need for swing space and be less disruptive to consumers and staff.

Because of limited available land at LDC the replacement facility will be one building with two floors above grade and a partial basement. The typical floors will be 72,000 square feet each and the basement 36,048 square feet. The total building area is 180,048 square feet. Most, if not all, existing functions would be relocated to the new building.

### Option III Renovation

Programs 2, 3, 4 & 5 plus additional forensic and behavioral consumers are in twenty one-story buildings, with a total area of approximately 340,000 square feet. Specific locations of all program areas are indicated on the following existing master plan. The school and the kitchen require extensive renovation. These buildings are also recommended to be renovated to option III scope, which includes:

- Full program enhancements, including DDS Space Guidelines, within the restrictions of existing building footprints
- Full code compliance within the restrictions of existing building footprints
- Seismic renovation for Risk Level IV and above buildings
- Elimination of most, if not all, waivers

Application of programmatic needs assessment, code compliance and adoption of DDS Space Guidelines will reduce the number of beds for typical residential units from 42 to 32. (Reference the attached floor plan sketch for the proposed 32 bed typical residential unit). Bedrooms that currently have four beds are proposed to be reconfigured to two and three beds per bedroom. Typical residential units have adjacent toilet rooms and bathing areas. Group activity



*Central Program Services*

rooms are located in several non-bedroom areas. The nurse station is adjacent to a nurse work room and an exam/treatment room.

Several residential type buildings are currently vacant or are being used for training. Decreasing the number of beds per residential unit will require three of these buildings to be renovated for residential use. The remainder of buildings that are currently being used for training will be renovated and new training space will be built.

### Option II Renovation

Most of the remaining buildings are recommended to be renovated to level II scope, which includes:

- Full code compliance within the restrictions of existing building footprints
- Seismic renovation for Risk Level IV and above buildings
- Elimination of most, if not all, waivers
- No substantial program enhancements beyond those resulting from code compliance



*Building 40-41-42*

## Option I Renovation

Support buildings such as plant operations structures and storage facilities are recommended to be renovated to Option I scope, which includes:

- Condition Assessment corrections
- Moderate code corrections to include accessibility compliance
- Existing waivers to remain in place

## Proposed Phased Master Plan

The proposed master plan for LDC can be implemented, in three phases, over a multi-year period. The limits of work for each phase of the LDC master plan are indicated on the following phasing plans. The buildings and adjacent site area included in each cumulative phase are highlighted in color. The general scope of work indicated above will be similar for all three phases of the master plan. Phase I accommodates 300 consumers. If the consumer population decreases significantly over the next several years to approximately 300, the portions of the site indicated on the Phase I scheme accommodates that population decline. The Phase 2 scheme accommodates 600 consumers in a similar manner.

### Phase I Proposed Master Plan - 300 Consumers

Phase I proposes 300 consumers, to be located in 11 one-story renovated residential units. Support service buildings are to be renovated to meet specific functional requirements. Education and employment functions are located in the renovated school and former residential units. The central plant and Main Kitchen are renovated in this phase. This scheme allows the southeast and west portions of the campus to be used for non-Developmental Center activities, if the population falls to 300 consumers.

### Phase 2 Proposed Master Plan - 600 Consumers

Phase 2 proposes 600 consumers located in 20 one-story renovated residential units. Additional support function areas will be renovated in proportion to the increase in consumers from 300 to 600. New support and training buildings are proposed to be built adjacent to A.T. Richardson Park (51,000 SF). Phase 2, as a continuation of Phase I, will allow

most of the activities in Phase I to remain undisturbed during Phase 2 construction.

### Phase 3 Proposed Master Plan - 860 Consumers

The existing Hospital is replaced with a new 180,048 SF building. The master plan for approximately 860 consumers, indicated on the following plan, will complete the utilization of this site, leaving minimal open space for consumer leisure activities.

	PROGRAM # 1
	PROGRAM # 2
	PROGRAM # 3
	PROGRAM # 4
	PROGRAM # 5
	PROGRAM # 6
	ADMINISTRATION
	MEDICAL
	EDUCATION & EMPLOYMENT
	TECHNICAL & THERAPEUTIC
	LEISURE
	ADMINISTRATIVE SERVICES
	PLANT OPERATIONS
	NEW PROGRAM OFFICES
	NEW EDUCATION & EMPLOYMENT
	NEW ADMINISTRATIVE SERVICES
	NEW PROGRAM #1
	NEW MEDICAL
	ADDITIONAL RESIDENTIAL RENOVATION

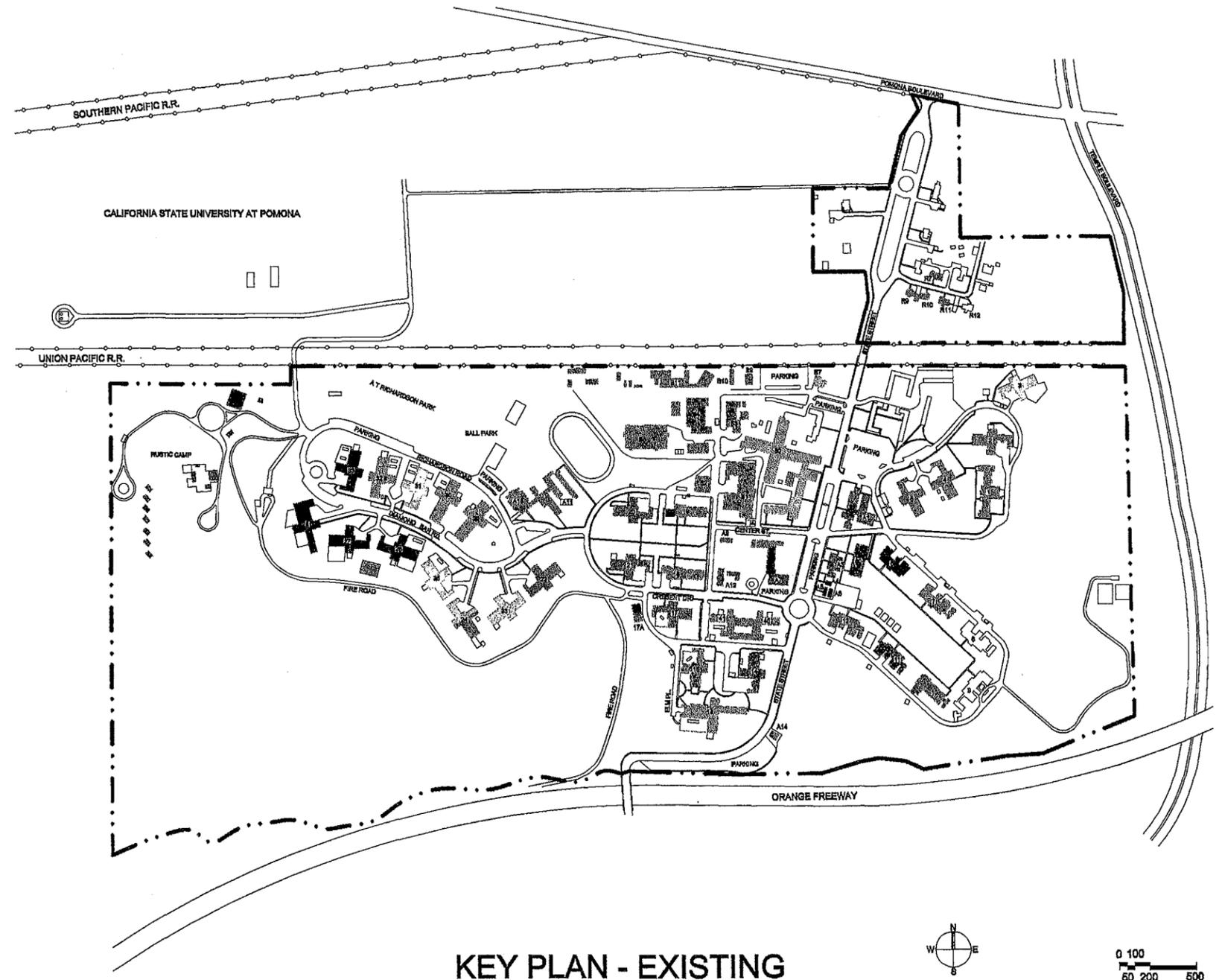
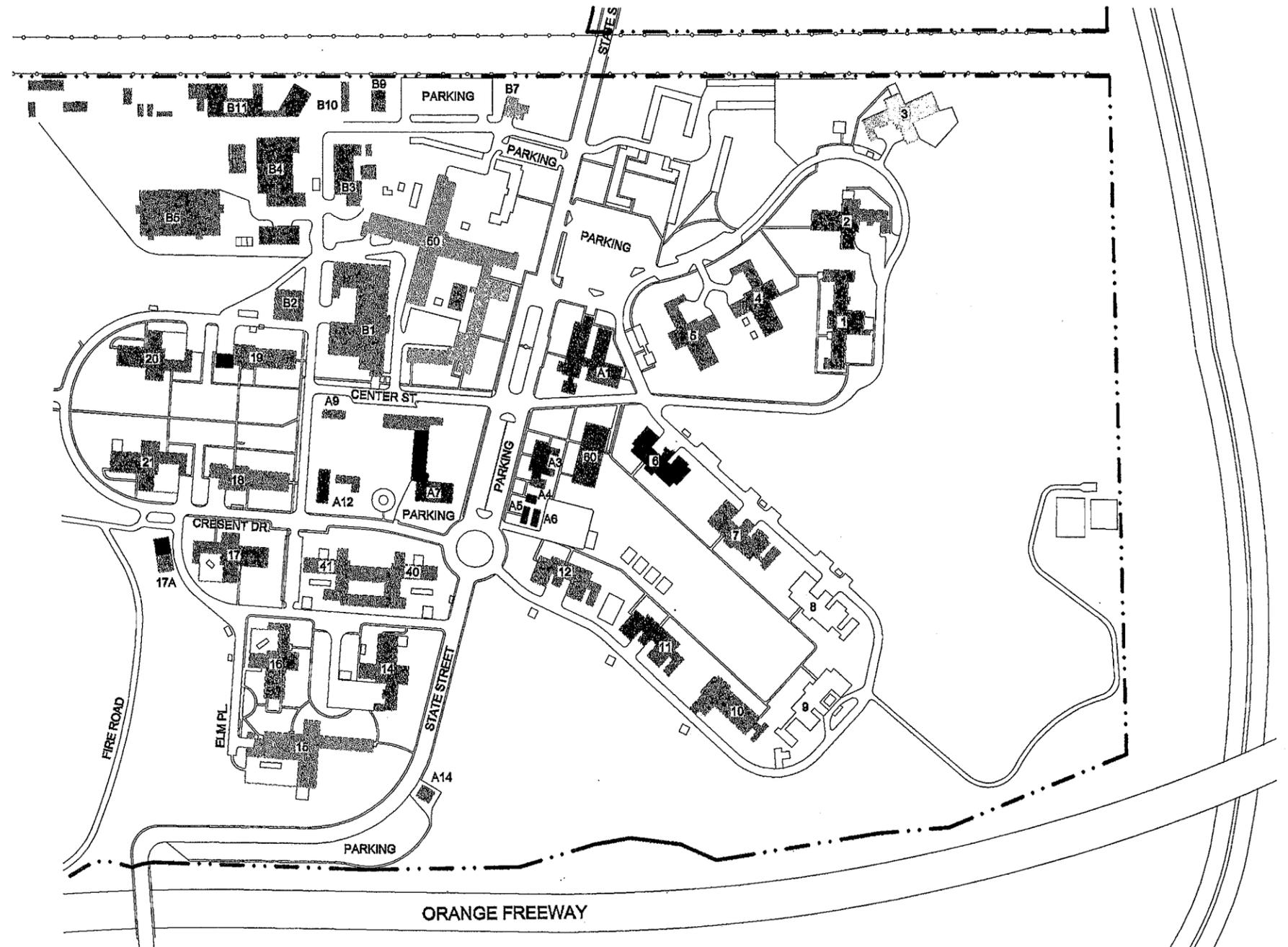


Figure L-7

- 6 Programs with approximately 860 consumers
- 302 acres, with 207 acre core campus
- Unoccupied land consists of moderate to steep terrain
- 1,056,569 SF building area
- Buildings 6, 7, 8, 9, 11 & 12 Activities Center / Auditorium and the school are in poor condition

	PROGRAM # 1
	PROGRAM # 2
	PROGRAM # 3
	PROGRAM # 4
	PROGRAM # 5
	PROGRAM # 6
	ADMINISTRATION
	MEDICAL
	EDUCATION & EMPLOYMENT
	TECHNICAL & THERAPEUTIC
	LEISURE
	ADMINISTRATIVE SERVICES
	PLANT OPERATIONS
	NEW PROGRAM OFFICES
	NEW EDUCATION & EMPLOYMENT
	NEW ADMINISTRATIVE SERVICES
	NEW PROGRAM #1
	NEW MEDICAL
	ADDITIONAL RESIDENTIAL RENOVATION

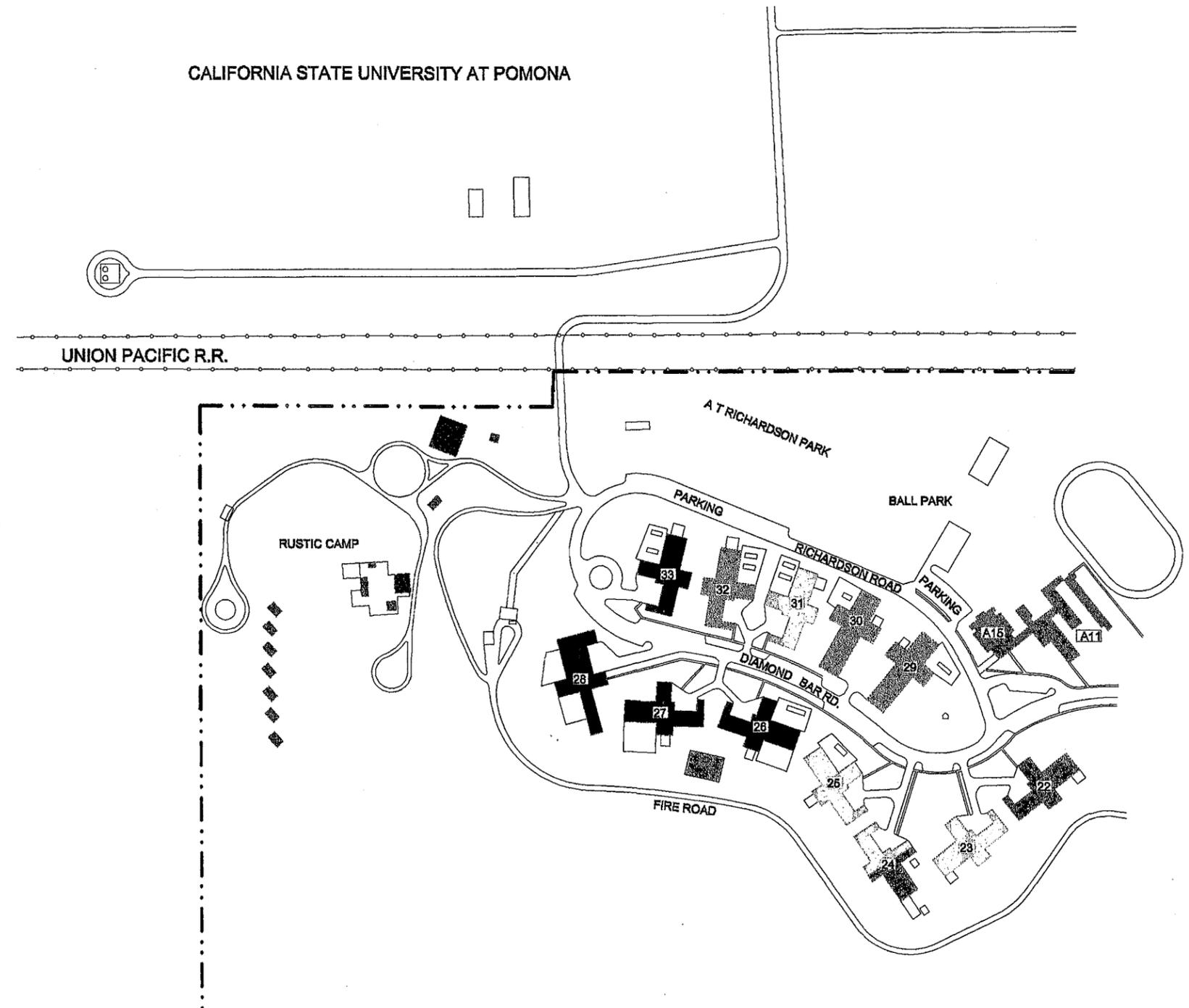


EXISTING MASTER PLAN (1)

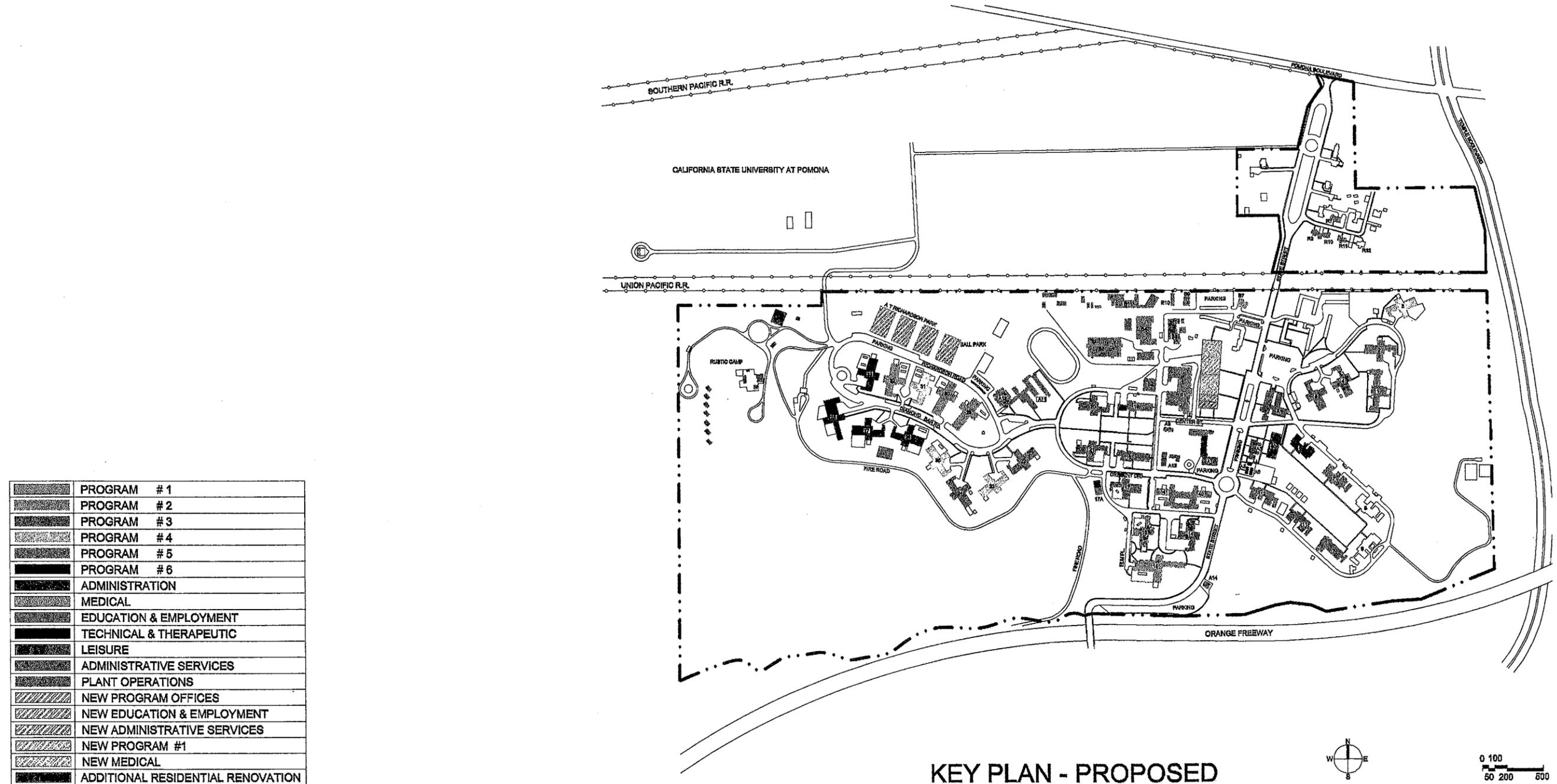
Figure L-8

- 6 Programs with approximately 860 consumers
- 302 acres, with 207 acre core campus
- Unoccupied land consists of moderate to steep terrain
- 1,056,569 SF building area
- Buildings 6, 7, 8, 9, 11 & 12 Activities Center / Auditorium and the school are in poor condition

	PROGRAM # 1
	PROGRAM # 2
	PROGRAM # 3
	PROGRAM # 4
	PROGRAM # 5
	PROGRAM # 6
	ADMINISTRATION
	MEDICAL
	EDUCATION & EMPLOYMENT
	TECHNICAL & THERAPEUTIC
	LEISURE
	ADMINISTRATIVE SERVICES
	PLANT OPERATIONS
	NEW PROGRAM OFFICES
	NEW EDUCATION & EMPLOYMENT
	NEW ADMINISTRATIVE SERVICES
	NEW PROGRAM #1
	NEW MEDICAL
	ADDITIONAL RESIDENTIAL RENOVATION

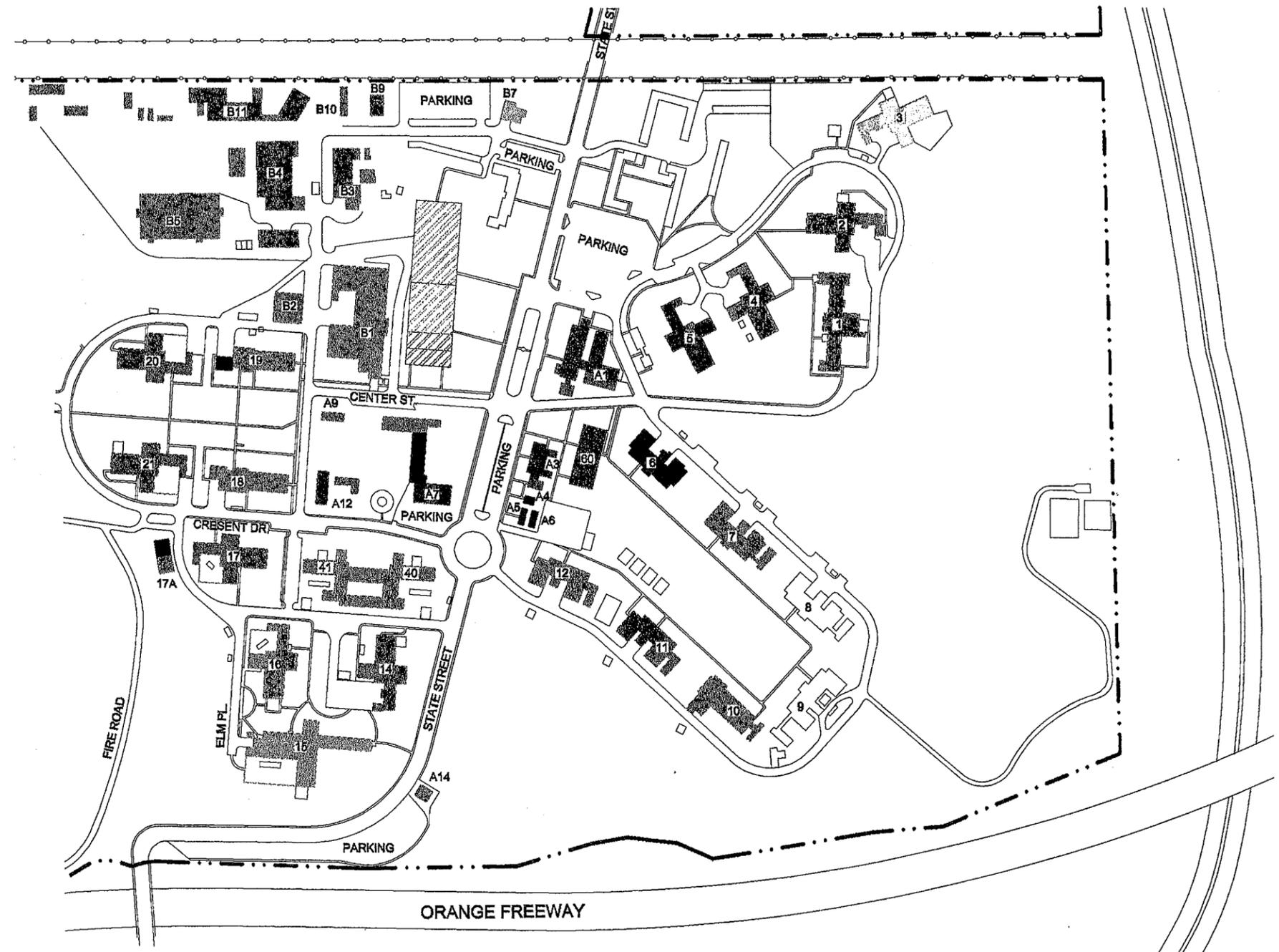


EXISTING MASTER PLAN (2)

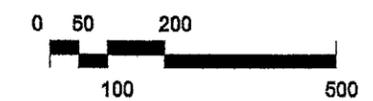


- 6 programs with approximately 860 consumers
- Existing hospital, building 50, to be replaced with new building (180,048 SF)
- Existing one-story residential program and training areas are to be renovated to the Option III scope
- Most remaining buildings will be renovated to Option II scope
- Code compliance and adoption of DDS Space Guidelines will reduce the number of beds for typical residential units from 42 to 32
- Existing support, training and program office areas that are within the existing residential type buildings are to be renovated or relocated to 4 new buildings (17,000 SF each)

	PROGRAM # 1
	PROGRAM # 2
	PROGRAM # 3
	PROGRAM # 4
	PROGRAM # 5
	PROGRAM # 6
	ADMINISTRATION
	MEDICAL
	EDUCATION & EMPLOYMENT
	TECHNICAL & THERAPEUTIC
	LEISURE
	ADMINISTRATIVE SERVICES
	PLANT OPERATIONS
	NEW PROGRAM OFFICES
	NEW EDUCATION & EMPLOYMENT
	NEW ADMINISTRATIVE SERVICES
	NEW PROGRAM #1
	NEW MEDICAL
	ADDITIONAL RESIDENTIAL RENOVATION

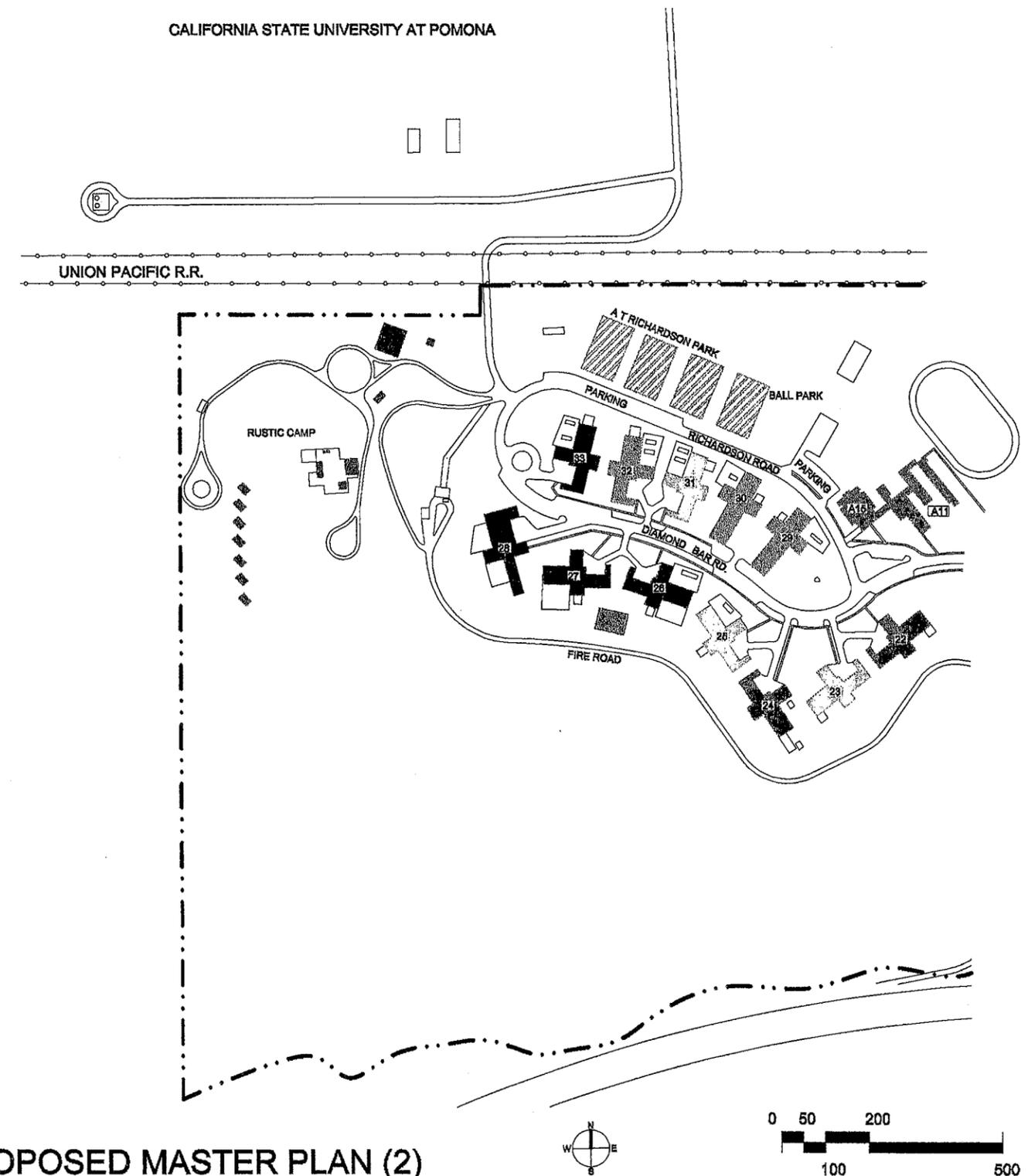


PROPOSED MASTER PLAN (1)



- 6 programs with approximately 860 consumers
- Existing hospital, building 50, to be replaced with new building (180,048 SF)
- Existing one-story residential program and training areas are to be renovated to the Option III scope
- Most remaining buildings will be renovated to Option II scope
- Code compliance and adoption of DDS Space Guidelines will reduce the number of beds for typical residential units from 42 to 32
- Existing support, training and program office areas that are within the existing residential type buildings are to be renovated or relocated to 4 new buildings (17,000 SF each)

	PROGRAM # 1
	PROGRAM # 2
	PROGRAM # 3
	PROGRAM # 4
	PROGRAM # 5
	PROGRAM # 6
	ADMINISTRATION
	MEDICAL
	EDUCATION & EMPLOYMENT
	TECHNICAL & THERAPEUTIC
	LEISURE
	ADMINISTRATIVE SERVICES
	PLANT OPERATIONS
	NEW PROGRAM OFFICES
	NEW EDUCATION & EMPLOYMENT
	NEW ADMINISTRATIVE SERVICES
	NEW PROGRAM #1
	NEW MEDICAL
	ADDITIONAL RESIDENTIAL RENOVATION

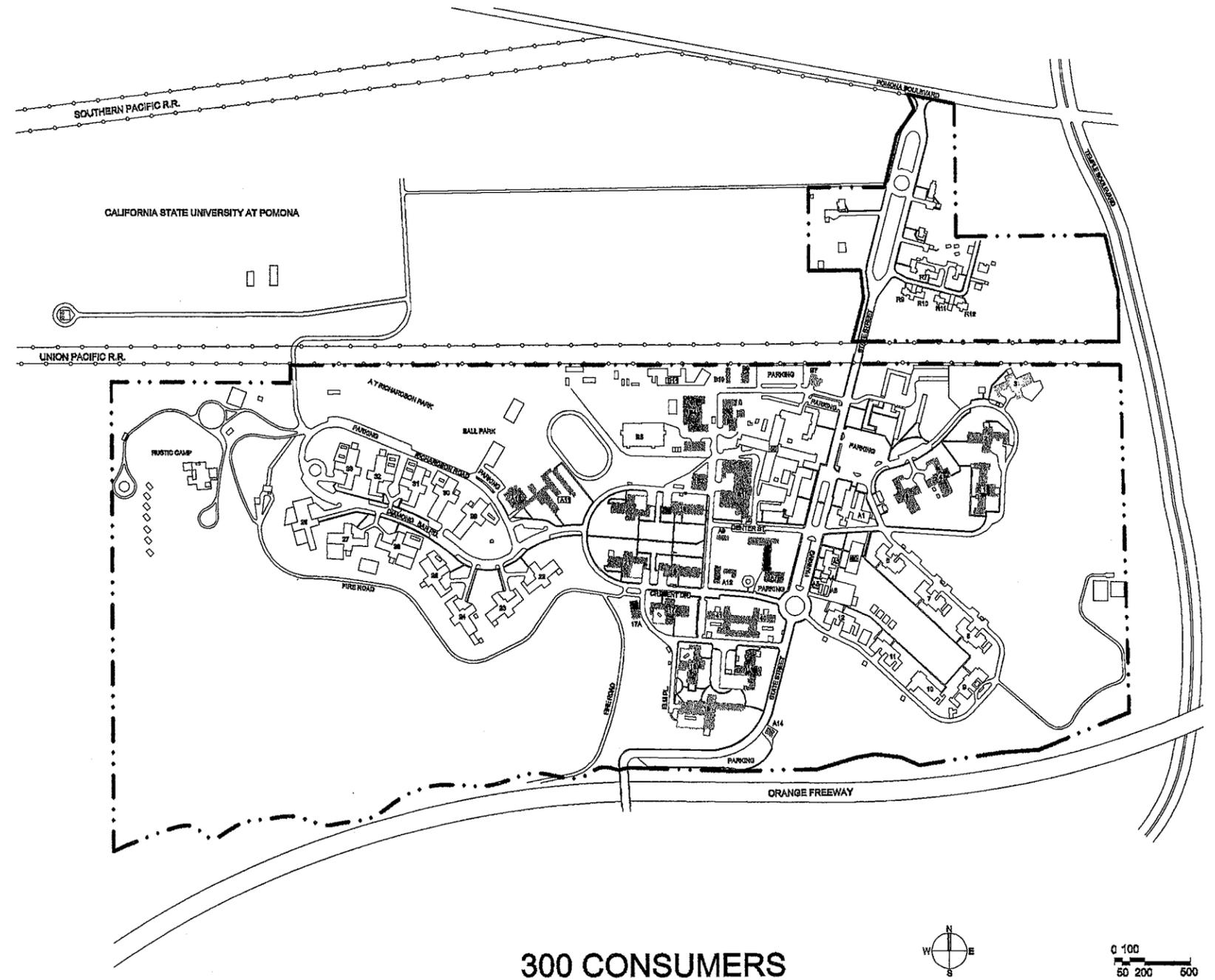


PROPOSED MASTER PLAN (2)

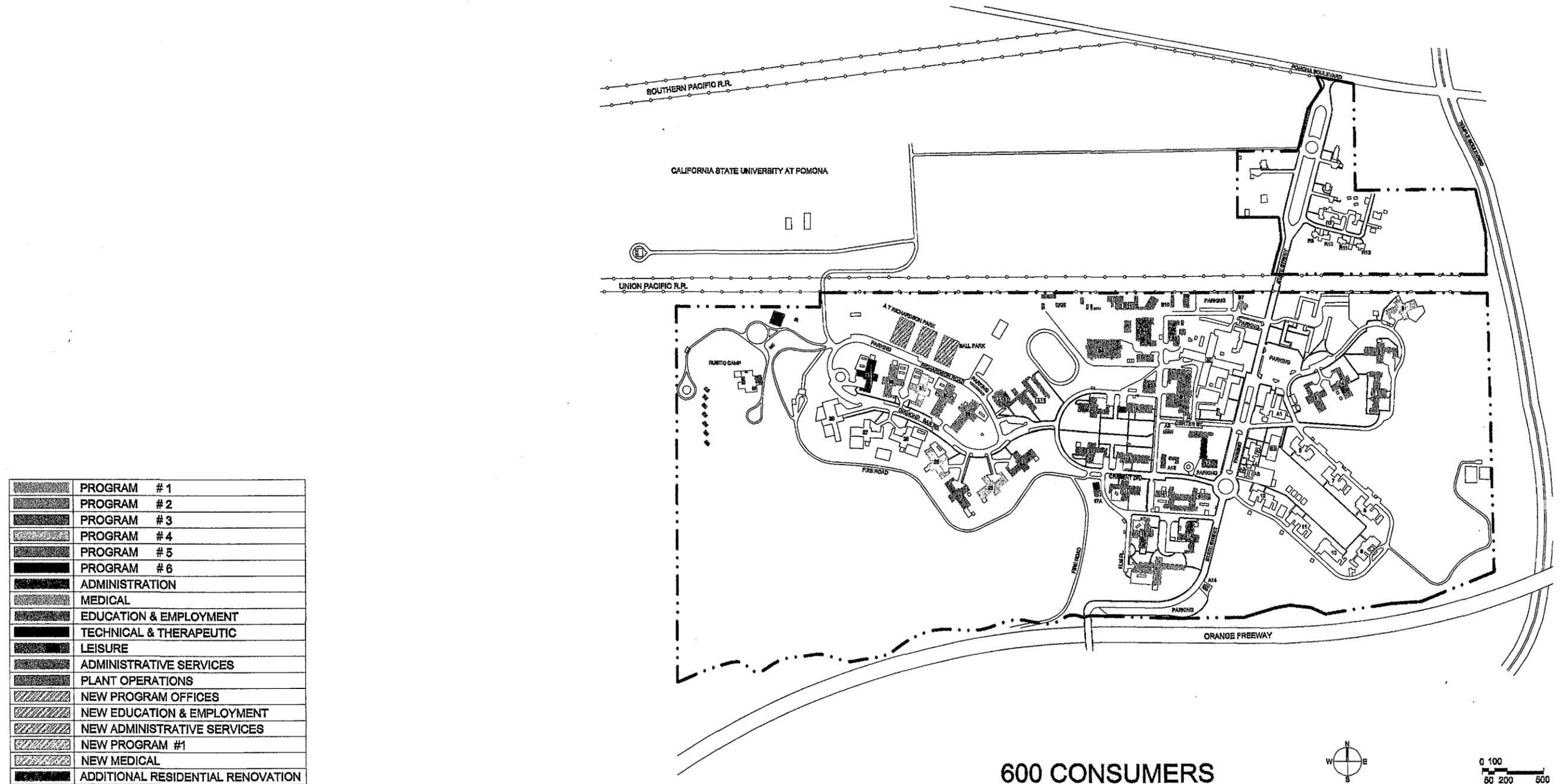
Figure L-12

- Facility master planned for significant population decline
- 300 consumers in 11 one-story renovated residential units
- Education and Employment functions located in renovated school and former residential units
- Southeast and West portions of the campus could be used for non-Developmental Center activities

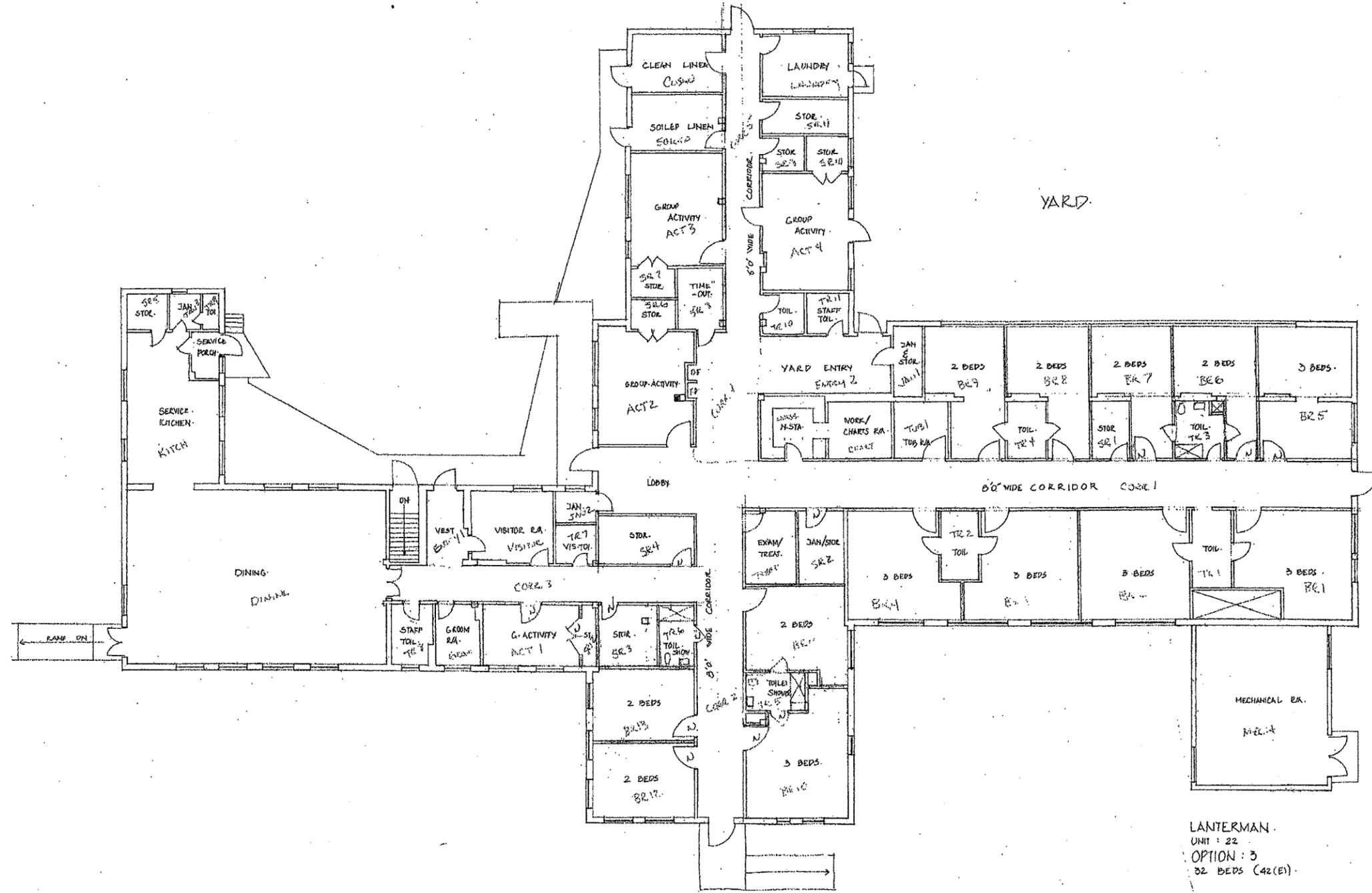
	PROGRAM # 1
	PROGRAM # 2
	PROGRAM # 3
	PROGRAM # 4
	PROGRAM # 5
	PROGRAM # 6
	ADMINISTRATION
	MEDICAL
	EDUCATION & EMPLOYMENT
	TECHNICAL & THERAPEUTIC
	LEISURE
	ADMINISTRATIVE SERVICES
	PLANT OPERATIONS
	NEW PROGRAM OFFICES
	NEW EDUCATION & EMPLOYMENT
	NEW ADMINISTRATIVE SERVICES
	NEW PROGRAM #1
	NEW MEDICAL
	ADDITIONAL RESIDENTIAL RENOVATION



- 600 consumers in 20 one-story renovated residential units
- New Education & Employment and office buildings (51,000 SF)



# Option III - Residential Floor Plan



(3 bed - 61sq  
 35 - 325 sq ft)

LANTERMAN  
 UNIT : 22  
 OPTION : 3  
 32 BEDS (42(E)).

## Summary Cost Estimates

### General

Based on the findings of the condition assessment, programmatic needs assessment, and master planning approach, cost estimates were developed. The cost estimates are conceptual in nature and are intended to provide "order of magnitude" costs for various options, and to help make strategic decisions.

### Options and Costs

#### OPTION 0

Cost estimates for Option 0 were developed based on condition assessment. The condition assessment findings for all buildings in all facilities were entered into a database. All database line items were priced to arrive at Option 0 costs, summarized for each facility on the next page.

#### OPTION I, II AND III

Cost estimates for Options I, II and III were developed conceptually, based on typical residential building floor plans developed by the master planning team. Estimates for other buildings and infrastructure are also conceptual in nature and based on the data gathered.

#### OPTION IV

Cost estimates for Option IV replacement buildings are based on cost models for similar new buildings. All costs are in today's dollars.

The cost information shows that the development centers have a current identified condition assessment need (Option 0) ranging from \$16.1 to \$37.9 million for the various facilities, with a total cost of \$144.1 million. Cost per bed for this option range from \$25,366 to \$41,417.

Option I results in total cost of \$365.7 million, but will result in only minimum code upgrades. Cost per bed for this option range from \$73,388 to \$92,770.

Option II results in total cost of \$629.0 million, resulting in full code upgrade, but without addressing many of the programmatic deficiencies and without full application of the space standards. Cost per bed for this option range from \$128,505 to \$163,312.

Option III, addressing all identified needs, results in total cost of about \$966.9 million. Cost per bed for this option range from \$204,259 to \$240,600.

Option IV, the cost of full replacement, is estimated at \$1.47 billion which suggests that full renovation could be the preferred option for most of the facilities. Cost per bed for this option range from \$310,546 to \$353,292.

### Recommendation

A combination of Option II, Option III and Option IV is recommended to be used in finalizing the master plan approach. All residential units can be fully renovated per Option III and all support buildings can be renovated to Option II. The R&T buildings are recommended to be replaced. Such an approach results in total costs of approximately \$985.8 million. Cost per bed for the recommended option range from \$204,028 per bed to \$237,965 per bed.

Considering that population projections indicate a possible five percent decrease per year in the future years, it would be prudent to adopt a phased approach to capital improvement. Assuming a three phased approach will result in a total cost of approximately \$333 million for the initial phase.

### Cost Analysis

The following charts provide summary level cost information for the recommended options for all facilities. Volume 4 provides more detailed cost information. Close to 50% of the recommended costs are spent in residential units. The per bed cost is driven by the space standards that exceed code minimum, one to two bed per residence, dining and activity spaces in the residences, required training spaces and the necessary support spaces.

Relative costs of Option III and Option IV are also heavily influenced by the number of new buildings required to accommodate the current population after application of the space standards and satisfaction of identified needs.

**LDC Comparative Options  
 Estimate – Summary**

This chart summarizes the costs of options 0, I, II, III and IV as defined in the previous section.

Residences - Options 0, I and II require minimum to extensive renovation of existing residential units. Residences - Options III and IV provide full program enhancements, including DDS Recommended Space Guidelines, and reduces the number of consumer beds per residential unit. This requires additional residential units to be renovated for Residences - Option III and replaced for Residences - Option IV to maintain the same bed capacity.

Training - Options 0, I and II require minimum to extensive renovation of existing training facilities. Training - Options III and IV require less existing area to be renovated or replaced, but do require 34,000 SF of additional new training facility construction because existing training spaces are reclaimed for residential use.

Support - Options 0, I and II require minimum to extensive renovation of existing support facilities. Support - Options III and IV require less existing area to be renovated or replaced, but do require 34,000 SF of new support facility construction.

The area increase for the R&T Building in Options III and IV results from the inclusion of full program enhancements, including DDS Recommended Space Guidelines.

No	DESCRIPTION	Current Bldg SF / Site Acre	Option 0, Condition Assessment		Option I, Min. Code Upgrade		Option II, Full Code Upgrade		Option III, Full Renovation		Option IV, Replacement	
			Cost/SF-Acre	Total Cost	Cost/SF-Acre	Total Cost	Cost/SF-Acre	Total Cost	Cost/SF-Acre	Total Cost	Cost/SF-Acre	Total Cost
1a	Residences - Options 0, I and II	340,000	\$ 26	\$ 8,771,400	\$ 74	\$ 25,194,000	\$ 134	\$ 45,436,000				
1b	Residences - Options III and IV	391,000							\$ 172	\$ 67,256,350	\$ 204	\$ 79,611,960
2a	Training - Options 0, I and II	147,717	\$ 25	\$ 3,647,625	\$ 50	\$ 7,422,017	\$ 77	\$ 11,334,794				
2b	Training - Options III and IV	113,717							\$ 101	\$ 11,434,809	\$ 161	\$ 18,289,675
3a	Support - Options 0, I and II	403,509	\$ 14	\$ 5,748,000	\$ 23	\$ 9,319,779	\$ 31	\$ 12,434,672				
3b	Support - Options III and IV	333,551							\$ 40	\$ 13,379,991	\$ 119	\$ 39,775,672
4a	R & T Building - Options 0, I and II	127,090	\$ 19	\$ 2,374,060	\$ 81	\$ 10,300,645	\$ 174	\$ 22,148,830				
4b	R & T Building - Option III	180,048							\$ 194	\$ 34,877,305		
4c	R & T Building - Option IV	180,048									\$ 243	\$ 43,790,664
5	Kitchen	38,253	\$ 3	\$ 133,600	\$ 55	\$ 2,115,978	\$ 63	\$ 2,420,693	\$ 76	\$ 2,925,360	\$ 279	\$ 10,654,145
6	Site and infrastructure (Acre)	207	\$ 40,644	\$ 8,413,300	\$ 52,175	\$ 10,800,189	\$ 63,311	\$ 13,105,392	\$ 80,197	\$ 16,600,792	\$ 160,165	\$ 33,154,100
7	New Construction - Options III and IV	68,000							\$ 130	\$ 8,840,000	\$ 110	\$ 7,480,000
	<b>Total - Options 0, I and II</b>	<b>1,056,569</b>	<b>\$ 28</b>	<b>\$ 29,088,000</b>	<b>\$ 62</b>	<b>\$ 65,153,000</b>	<b>\$ 101</b>	<b>\$ 106,880,000</b>				
	<b>Total - Option III</b>	<b>1,124,569</b>							<b>\$ 138</b>	<b>155,315,000</b>	<b>\$ 207</b>	<b>\$ 232,756,000</b>
	<b>Total - Option IV</b>	<b>1,124,569</b>										
	Swing Space and Soft Costs			\$ 8,726,000		\$ 19,546,000		\$ 32,064,000		\$ 46,595,000		\$ 69,827,000
	<b>Total Project Cost (As of 4th quarter 1998)</b>			<b>\$ 37,814,000</b>		<b>\$ 84,699,000</b>		<b>\$ 138,944,000</b>		<b>\$ 201,910,000</b>		<b>\$ 302,583,000</b>
	<b>Cost per bed</b>	<b>913</b>		<b>\$ 41,417</b>		<b>\$ 92,770</b>		<b>\$ 152,184</b>		<b>\$ 221,150</b>		<b>\$ 331,416</b>

**Recommended Master Plan Budget  
 Estimate**

Budget data was based on existing consumer population. Based on the master planning criteria established, specific options for renovation or replacement were selected for each building type and for site and infrastructure systems. Refer to the previous Master Planning section for a detailed description of various renovation and replacement options. Swing space provides for the rotation of consumers, staff and services into and out of temporary space until all planned construction has been completed. Swing space and soft costs at twenty five percent of the construction costs were used to obtain the total project costs. All costs are in today's dollars.

No	DESCRIPTION	Selected Option	Current Bldg SF / Site Acre	Construction Cost	
				Cost/SF-Acre	Total Cost
1	<b>Residences</b>	III	391,000	\$ 172.01	\$ 67,256,350
2	<b>Training</b>	III	113,717	\$ 100.55	\$ 11,434,809
3	<b>Support</b>		<b>333,551</b>	<b>\$ 29.11</b>	<b>\$ 9,708,636</b>
	Auditorium, Swimming pool bldg./rest rooms	II	2,532	\$ 42.50	\$ 107,610
	Central Plant, pump station, well (bldg only)	II	26,071	\$ 33.49	\$ 873,066
	Plant operation shops, storage, office	I	57,915	\$ 13.00	\$ 752,895
	Laundry warehouse	I	33,564	\$ 20.00	\$ 671,280
	General/kitchen warehouse	I	39,994	\$ 20.00	\$ 799,880
	Admin, Activity center, Offices, Misc. support and other bldgs	II	173,475	\$ 30.49	\$ 5,288,906
	Seismic	N/A	63,000	\$ 19.29	\$ 1,215,000
4	<b>R &amp; T Building</b>	IV	<b>180,048</b>	<b>\$ 243.22</b>	<b>\$ 43,790,664</b>
5	<b>Kitchen</b>	III	<b>38,253</b>	<b>\$ 76.47</b>	<b>\$ 2,925,360</b>
6	<b>Site and infrastructure (Acre)</b>	III	<b>207</b>	<b>\$ 80,197</b>	<b>\$ 16,600,792</b>
	Sitework(Road, parking, landscape, fence, ....)	III		\$	\$ 6,368,600
	Security fence for forensic units	III		\$	\$ 510,000
	Steam & Chilled water system	III		\$	\$ 7,232,000
	Natural Gas system	III		\$	\$ 120,000
	Water and Fire system	III		\$	\$ 338,192
	Storm Drain system	III		\$	\$ 100,000
	Sanitary Sewer system	III		\$	\$ 100,000
	Electrical, lighting and low voltage	III		\$	\$ 1,832,000
7	<b>New Construction</b>	III	<b>68,000</b>	<b>\$ 130.00</b>	<b>\$ 8,840,000</b>
	Relocatable for training	III	34,000	\$ 130.00	\$ 4,420,000
	Relocatable for support	III	34,000	\$ 130.00	\$ 4,420,000
	<b>Subtotal Construction Cost</b>		<b>1,090,569</b>	<b>\$ 147.22</b>	<b>\$ 160,557,000</b>
8	<b>Swing Space &amp; Soft Cost</b>				<b>\$ 44,449,250</b>
	Swing space	N/A	27,572		\$ 3,448,000
	Soft Cost ( Design fee, Inspection, PM, CM, Bid process)	N/A		25.00%	\$ 41,001,250
	<b>Total Project Cost (As of 4th quarter of 1998)</b>		<b>1,090,569</b>	<b>\$ 187.98</b>	<b>\$ 205,006,000</b>
	Cost per bed		913	\$ 224,541	

**Recommended Master Plan Budget  
 Estimate - By Phases**

As discussed in the master planning section, due to the uncertainty with future population, a phased approach to master plan implementation is prudent. Budget data was compiled in three phases for corresponding populations of 300, 600 and current population. Refer to the preceding Master Planning section for additional phasing information. Refer to the following Implementation Plan for a detailed description of Phase 1 construction. All costs are in today's dollars.

No	DESCRIPTION	Phase I Cost	Phase II Cost	Phase III Cost	Total Cost
1	Residences	\$ 30,042,947	\$ 27,221,105	\$ 9,992,298	\$ 67,256,350
2	Training	\$ 9,253,168	\$ -	\$ 2,181,640	\$ 11,434,809
3	Support	\$ 4,329,885	\$ 2,370,233	\$ 3,008,519	\$ 9,708,636
4	R & T Building	\$ -	\$ -	\$ 43,790,664	\$ 43,790,664
5	Kitchen	\$ 2,925,360	\$ -	\$ -	\$ 2,925,360
6	Site and Infrastructure (Acre)	\$ 8,300,396	\$ 4,150,198	\$ 4,150,198	\$ 16,600,792
7	New Construction	\$ -	\$ 6,630,000	\$ 2,210,000	\$ 8,840,000
	Relocatable for training				\$ 4,420,000
	Relocatable for support				\$ 4,420,000
	<b>Subtotal Construction Cost</b>	<b>\$ 54,851,756</b>	<b>\$ 40,371,536</b>	<b>\$ 65,333,319</b>	<b>\$ 160,557,000</b>
8	Swing Space & Soft Cost	\$ 15,629,189	\$ 11,459,134	\$ 17,362,080	\$ 44,449,250
	Swing space	\$ 1,533,000	\$ 1,093,000	\$ 823,000	\$ 3,448,000
	Soft Cost ( Design fee, Inspection, PM, CM, Bid process)	\$ 14,096,189	\$ 10,366,134	\$ 16,539,080	\$ 41,001,250
	<b>Total Project Cost (As of 4th quarter of 1998)</b>	<b>\$ 70,481,000</b>	<b>\$ 51,831,000</b>	<b>\$ 82,695,000</b>	<b>\$ 205,006,000</b>

## Program Implementation Plan

The DDS Master Planning and Condition Assessment review has resulted in the recommendations detailed earlier in this report. A suggested approach for implementation of these recommendations is outlined below.

The planning, design and installation of the improvements described earlier can be implemented as one Program. The cost of the recommended upgrade, for all five facilities, is \$985.8 million. The Program is estimated to require nine years from design through completion. A conceptual schedule is shown on the following page.

The approach of developing a specific program management team for the delivery of these projects should be adopted to maximize the probability of getting the facilities into operation on time and within the budget allocated, at the minimum overall program-level cost to the State of California. The team approach is based upon the concept that there are many diverse sets of talents possessed by different groups that need to be utilized as resources to successfully deliver a design/construction program.

### Program Management Team

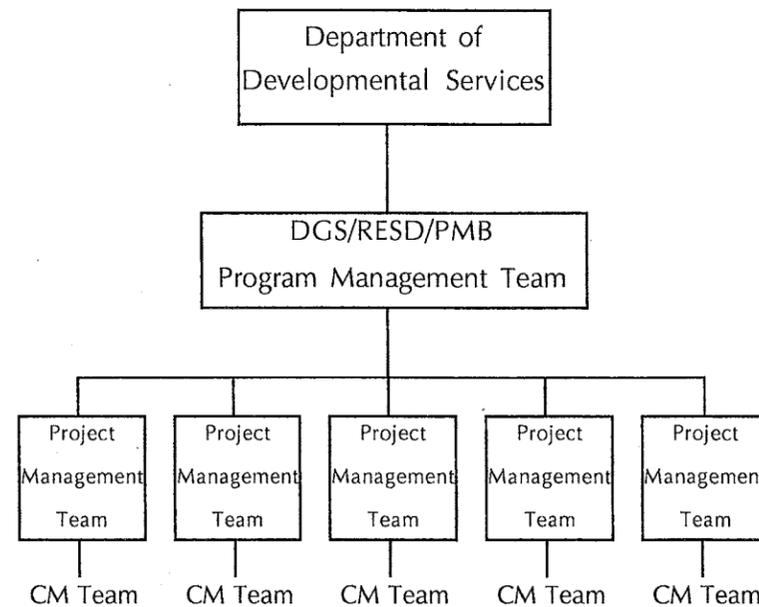
The Department of Developmental Services, Program Support Section, will be responsible for planning of the program requirements. DDS Program Support Section will also provide design review for function, code, and standards compliance. Assistance with securing waivers of certain code requirements may also be needed.

DDS Developmental Center staff will be asked to provide assistance with design review, preparation of swing space schedules, coordination and scheduling relocation of consumers and services during renovation, coordination to minimize disruption to DC activities, and inspection services.

Program management will be provided by the Real Estate Services Division (RESD), Project Management Branch. As Manager of the overall program, RESD staff will be responsible for budget and schedule control of the program. RESD will also provide contract management; including the

letting and management of consultant contracts with architects/engineers, construction manager, and other consultants. RESD will also serve as the contracting office for all contracts.

Under the overall guidance and direction of a program management team, project teams will be assigned by each facility. The conceptual organization chart below outlines this approach.



Review of the Program will be an ongoing function of many different groups, such as the Legislature, the Office of the Legislative Analyst, the Department of Finance, the Public Works Board, and the Office of Statewide Health Planning.

### Definition of Program Criteria

Under the direction of RESD, the program management team will further define the program requirements, scope of work, implementation plan, and the preliminary anticipated cost for completion. This will include but is not limited to roles and responsibilities of each member group; communications and reporting protocols; a master program completion schedule; design phase submittal requirements; program budget and project budgets.

### Design Phase

Design will be done by private sector architectural engineering firms, to ensure development of designs for the renovation work that are functional, cost effective, and produced in a timely fashion. Private sector architects/engineers will be solicited through a Request for Qualifications for architectural/engineering services to provide typical planning and design services for this project. RESD will contract with the successful firm(s) on behalf of DDS. In general, one architectural firm should be selected to provide the design services for each developmental center, regardless of the number of projects required. This approach helps to provide continuity of design, and minimizes the cost to the State of bringing a new A/E firm "up to speed" for each project with regard to local site conditions, program requirements, and the requirements of the State capital outlay system. Retention of the same A/E for future phases will be based on acceptable performance.

Each architectural firm has a contractual obligation to design the project and prepare contract documents consistent with the established scope, budget, and program guidelines. DDS will participate in design reviews to ensure that the design is in compliance with the established scope and program requirements and the functionality of the design as it relates to their operational needs. RESD will review the design for both scope and budget compliance.

A consultant for hazardous materials management and monitoring ("haz-mat") will be retained during the preliminary plan phase. The consultant will initiate preparation of haz-mat procedures, review the amount of removal work projected, and costs that have been budgeted for removal of hazardous materials.

The services of a private sector construction manager will be solicited through a Request for Qualifications. RESD will contract with the successful firm on behalf of DDS. In general, one firm should be selected to provide construction management services for all developmental centers. This approach provides the systematic application of management and construction expertise to the construction process. The construction manager is responsible for the control of time, cost and quality of the project.

**Bid/Award Phase** (Traditional, using General Contractors)

The project will be marketed to achieve appropriate and competitive bids. Marketing efforts will include locating appropriate bidders, advising contractors of the State's requirements and providing clarifications on bid documents. Based on the decisions made in the design phase, there may be one or more bid packages resulting in one or more contracts. Regardless of the number of contracts, an additional strategy will be to utilize additive alternates in order to maximize the possibilities that the bids received are within the allocated budget. After the bids are received it will be determined if adequate funds are available to include some or all of the alternates.

**Construction Phase**

**Management:** Management of the construction process will be overseen by Real Estate Services Division, which may elect to contract with the private sector for construction management services for assistance.

**On-Site Coordination:** Participation by developmental center staff in on-site coordination of construction activities will be needed to ensure minimal disruption to the care of the developmentally disabled consumers.

Project teams will be put together to include headquarters administrative staff (DDS), developmental center staff, RESD and its consultants. A management plan would be put together by the team to facilitate each of the anticipated projects. This will ensure that details will be captured, communication will occur, reducing problems that could arise from such on-going and all-encompassing projects.

**Multiple Contracts:** The construction at each facility will be divided into several bid packages, anticipating that several different types of construction/remodeling activities, budgeting periods, phasing limitations, etc. will be required.

**Construction Phasing:** As noted above, each construction phase may have multiple construction contracts. Larger contracts will be done in stages. As an example, the first phase of renovation of housing units for 300 consumers is

proposed to be divided into three consecutive stages of four residential units each. The number of construction stages will be determined during the design phase and will be based on the extent of renovations, available swing space, size of the campus, or other factors.

**Inspection:** Construction inspection will be provided by the RESD's Professional Services Branch to ensure that the facilities are renovated in accordance with the plans and specifications.

**Swing space:** "Swing space" is a term used to describe moving consumers or services from one portion of the campus to another, unoccupied portion, allowing the first area to be free for renovation. When the first area has been renovated, the consumers or services return, or a new group of consumers or services moves into the renovated space. Then the area that has been vacated is unoccupied and available for renovation. The rotation of consumers and services into and out of the temporary space continues until all the planned renovation has been completed. In this way a minimum amount of vacant space can serve as temporary accommodations for the whole campus.

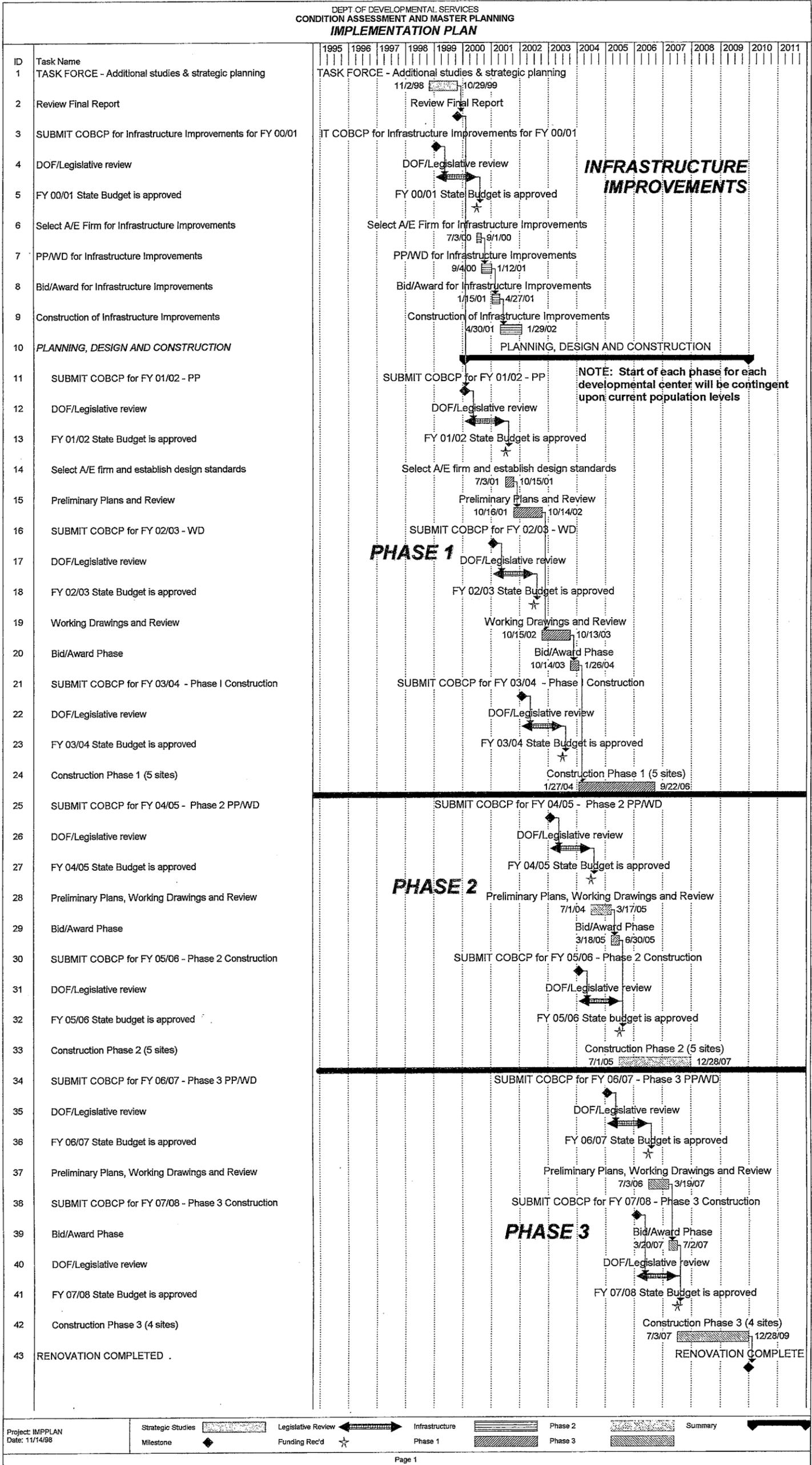
During the design process the amount of swing space needed during construction at each developmental center will be determined. As the majority of developmental centers have little or no vacant space on campus, modular buildings will be obtained for use as temporary accommodations while renovation of existing buildings is in process. Modular buildings for consumer residences will cost two to three times as much as modular buildings for administrative, training, or support functions. In order to reduce costs, an attempt will be made to acquire residential swing space by reclaiming existing areas in residences that are being used for non-residential purposes. Most developmental centers have buildings that were originally built as residences that are currently being used for non-residential activities. Some of these areas are still licensed as nursing facilities. Therefore, the first action during the first phase will be to refurbish those areas that are licensed for use as nursing facilities but have licenses that are held "in suspense". The administrative, training and support functions in these areas will be relocated to new modular buildings or other space if available, and the areas will be reclaimed for licensed residential use. Modular buildings will be brought in

as needed for housing the remaining residents, training, administrative and support functions.

During the design phase an evaluation will be made as to whether it will be more cost effective to lease-purchase the temporary modular buildings or rent them, depending on DDS's long range plans after this project.

The Master Plan for Porterville and Lanterman developmental centers shows the addition of new modular buildings, permanent to the site, during Construction Phase 3. Therefore, it is recommended that the modulares be purchased during Phase I and used to offset swing space costs, rather than waiting until Phase 3.

**Schedule:** Each stage will provide renovation of residences for about 100 consumers, and will require between eight-ten months. Each of the three construction phases is estimated to require two to two and a half years. Construction phases will be overlapped, so that the total duration is six years for all phases. A conceptual schedule is shown on the following page.



## Lanterman Implementation Plan

### Phase I Construction

*The following is a description of one method of implementing the first phase of construction. Phases 2 and 3 will be conducted in a similar manner.*

The goal of the initial phase of renovation is to renovate sufficient areas and services to accommodate 300 consumers. The location of the renovated units was chosen with consideration for the possibility of a future need to consolidate the population onto a portion of the campus, in the event the population drops to this level.

“Swing space” is a term used to describe moving consumers or services from one portion of the campus to another, unoccupied portion, allowing the first area to be free for renovation. When the first area has been renovated, the consumers or services return, or a new group of consumers or services moves into the renovated space. Then the area that has been vacated is unoccupied and available for renovation. The rotation of consumers and services into and out of the temporary space continues until all the planned renovation has been completed. In this way a minimum amount of vacant space can serve as temporary accommodations for the whole campus. As there is little available space on campus, temporary modular buildings will be brought in for the construction duration, and several new modular buildings will be purchased.

### Goals of the first phase of renovation:

1. Renovate 11 residential units (totaling approximately 190,000 square feet) to Option III for three programs of 100 consumers each.
2. Renovate approximately 102,000 square feet used for education and employment functions to Option III.
3. Renovate approximately 43,000 square feet used for administrative and support functions to Option II and Option I, respectively.
4. Renovate the kitchen in accordance with recommendations in the Kitchen Study. This work will

be done in phases so that the Kitchen can continue its current operations.

5. Provide improvements to the plant operations buildings, Central Plant and infrastructure in accordance with the recommendations of the condition assessment, without interrupting services.
6. Provide Option 1 improvements to the main warehouse.

### Assumptions and discussion of swing space:

This proposed implementation plan is based on the following assumptions. Confirmation of existing conditions and further study will be made during the design phase.

1. Renovation of program space for consumers in acute care will not be done in this initial phase.
2. This implementation plan assumes that a full environmental impact report will not be required.

3. It is assumed that the California Conservation Corps will continue to occupy two units on the campus. If not, these units could be used as swing space after they are refurbished.
4. The current population of 858 (including 75 forensic and 53 behavioral consumers) reside in 18 residential units of approximately 272,000 square feet. To renovate residences for 300 consumers, with application of the DDS space standards, eleven residential units will be needed.
5. After the planned addition of new forensic and behavioral consumers, there will be no available space for use as swing space functions. Rather than use temporary modulares for housing residential, administrative, training, and support functions during the renovation process, new modulares will be purchased and used for these functions during renovation. These structures will remain on campus after renovation is completed and be used in subsequent construction phases.



6. Four residential units will be renovated at a time. Modular units totaling 51,000 square feet will be purchased and used for residential swing space. In addition, temporary modular units totaling 13,000 square feet will be needed for residences.
7. Renovation of the school and units 40-42 will be managed in phases so that swing space will not be needed for these functions.
8. Approximately 14,000 square feet will be needed for swing space to house administrative and support functions.
9. During this initial phase, the Kitchen will be renovated in stages so that food service operations are not disrupted. Additional refrigerated and dry storage space will need to be acquired.
10. Removal of hazardous materials will need to be done in some areas before construction can begin in that area.

**Conclusions:**

Construction of Phase 1 can be done in three stages, each approximately eight to ten months, for total construction duration of 2 years to 2½ years. Four residences and a portion of the training, administrative and support areas will be renovated in each stage. New modulares totaling 51,000 square feet will be purchased for residential use and remain on site after construction of all phases is completed. In addition, temporary modulares totaling 27,000 square feet will be needed as swing space.

