NOISE ASSESSMENT FOR
EL CAMINO COLLEGE
2012 FACILITIES MASTER PLAN
COUNTY OF LOS ANGELES

REPORT #537201N01
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1.0 INTRODUCTION

The purpose of this report is to assess the potential noise impacts from the development of the El Camino College 2012 Facilities Master Plan (2012 FMP). Short-term noise impacts due to construction activities associated with the project are analyzed along with long-term changes in traffic noise levels and potential noise impacts from activities at the College with the project. A description of the project is presented below.

Section 2.0, Existing Setting, presents background information on noise and community noise assessment. This is intended to give the reader a greater understanding of noise and the criteria used to assess potential impacts from noise. Relevant noise criteria and regulations are presented. Existing noise levels are presented to describe the existing noise environment. Section 3.0, Potential Noise Impacts, presents the thresholds of significance that will be used to assess the noise impacts. Construction noise levels are estimated and compared with the applicable standards. Long-term changes in traffic noise along roadways in the vicinity project are examined along with potential noise impacts from on-site activities. Section 4.0, Mitigation Measures, presents measures can be implemented to mitigate any significant noise impacts identified in Section 3.0. Section 5.0, Unavoidable Significant Impacts, discusses any noise impacts that are not reduced to a level of insignificance with the mitigation measures identified in Section 4.0.

1.1 Project Description

El Camino College is located on a 126-acre parcel bounded by Manhattan Beach Boulevard to the north, Dominguez Channel to the south, Crenshaw Boulevard to the east and Alondra Community Regional Park to the west. The main campus, north of Redondo Beach Boulevard, is located in in the El Camino Village Community of Unincorporated Los Angeles County. The portion of the college south of Redondo Beach Boulevard, Parking Lot L, is located in the City of Torrance. The project borders the City of Gardenia, which is to the east of Crenshaw Boulevard and north of Redondo Beach Boulevard. A vicinity map showing the project location is presented in Figure 1.

Enrollment at the college was 18,224 full time equivalent students (FTES) on- and off-campus for the 2011-2012 school year. The existing facilities at the school total 819,740 assignable square feet (ASF) and 1,277,546 overall gross square footage (OGSF). Figure 2 presents a map showing the existing facilities at the school.

The District's Facilities Planning and Services Division (FPS) projects that the campus will have an on-campus student enrollment of 20,025 FTES in 2020. The 2012 FMP was developed by the FPS to accommodate the projected future enrollment, to modify prior Master Plan Updates for the projected facility needs, and to address new planning elements not previously included in the 2003 FMP. The 2012 FMP includes the construction nine new buildings with a total of 695,356 OGSF and renovation of six buildings. Thirteen existing buildings with a total of 646,672 OGSF will be demolished with the project. The net increase in building space with the project is 49,684 OGSF (34,721 ASF). Figure 3 presents a map of the college with the buildout of the 2012 FMP.

The 2012 FMP also includes the structural rehabilitation of the Lot F Channel Parking Structure located on the western campus boundary along with the addition of a third parking level to add approximately 700 parking spaces.

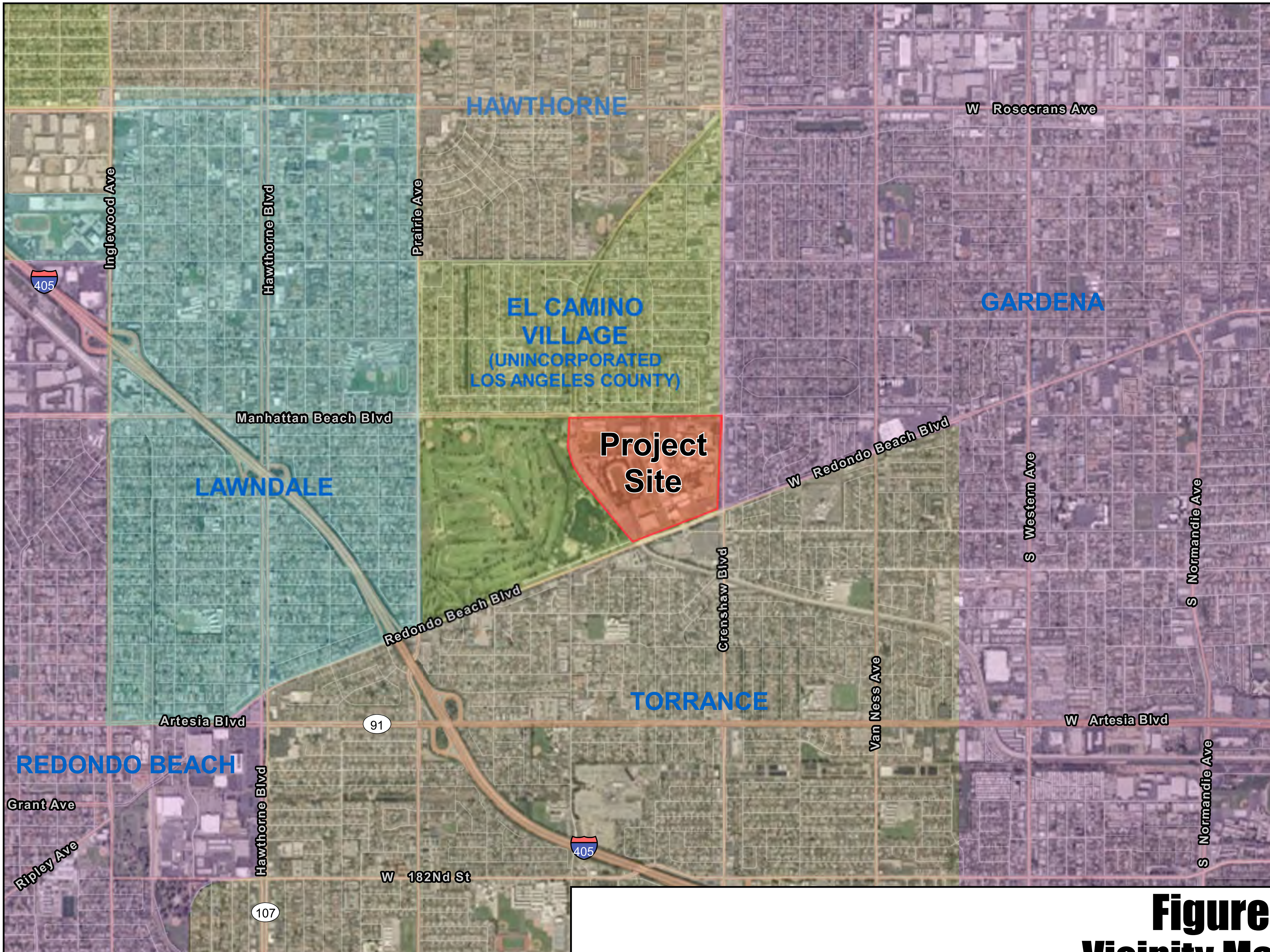

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Figure 1
Vicinity Map

EXISTING CAMPUS PLAN

- EXISTING FACILITIES
- TEMPORARY FACILITIES
- IN DESIGN / CONSTRUCTION

N

0' 175' 350'

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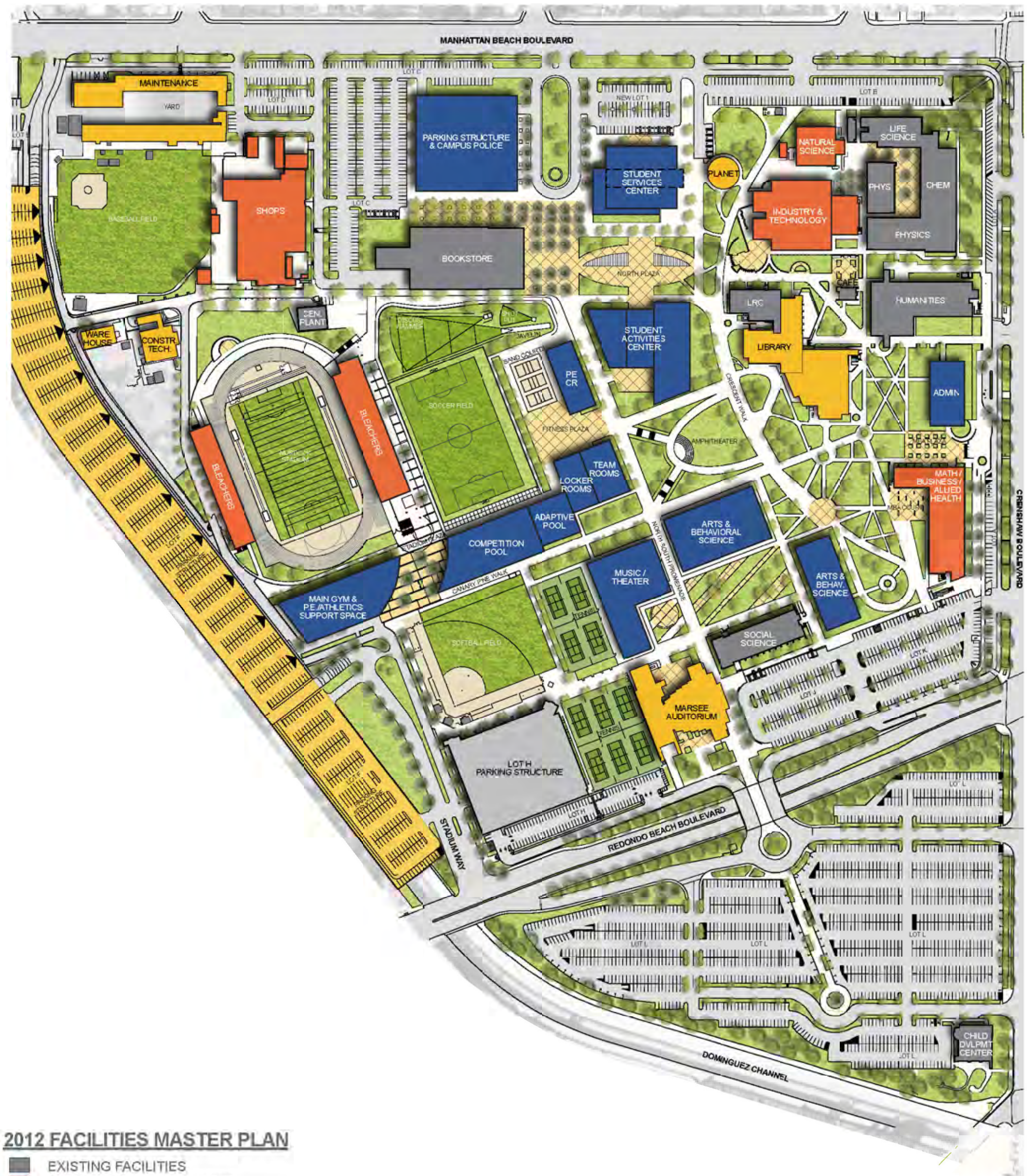
Figure 2
Existing Campus Facilities Map



2012 FACILITIES MASTER PLAN

- EXISTING FACILITIES
- IN DESIGN / CONSTRUCTION
- PROPOSED NEW CONSTRUCTION
- PROPOSED RENOVATIONS

N

0' 175' 350'

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Figure 3
Proposed Master Plan Buildout

2.0 EXISTING SETTING

This section provides background information on noise and noise impact criteria along with a description of the existing noise environment in the project area. Section 2.1 presents information on noise criteria and the metrics used to measure noise and it's impacts. Section 2.2 presents the Noise Criteria applicable to the project. Section 2.3 presents existing noise levels in the area through the results of a noise measurement survey and modeled existing traffic noise levels.

2.1 Background Information on Noise

This subsection provides background information on noise and noise impact criteria. Section 2.1.1 provides basic information about noise and the general criteria for assessing impacts. Section 2.1.2 presents a discussion of the various noise metrics used to measure noise levels and noise impacts.

2.1.1 Noise Criteria Background

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; a sound 20 dB higher is perceived to be four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Figure 4 provides examples of various noises and their typical A-weighted noise level.

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature and humidity also play a significant role in determining the degree of attenuation. Intervening topography can also have a substantial effect on the effective perceived noise levels.

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criterion is based on known impacts of noise on people, such as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS

Numbers in Parentheses are the A-Scale Weighted Sound Levels for that Noise Event

dB(A)	OVER-ALL LEVEL	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
120		Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
110	UNCOMFORTABLY LOUD	Concord Takeoff (113)*	Riveting Machine (110) Rock-N-Roll Band (108-114)	110 dB(A) 16 Times as Loud
100		Boeing 747-200 Takeoff (101)*		100 dB(A) 8 Times as Loud
90	VERY LOUD	Power Mower (96) DC-10-30 Takeoff (96)* Motorcycle @25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times as Loud
80		Car Wash @ 20 Ft. (89) Boeing 727 w/ Hushkit Takeoff (96)* Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times as Loud
70	MODERATELY LOUD	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 +or- 6) Boeing 757 Takeoff (76)*	Living Room Music (76) TV-Audio, Vacuum Cleaner	70 dB(A)
60		Propeller Airplane Takeoff (67)* Air Conditioning Unit @ 100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	60 dB(A) 1/2 as Loud
50	QUIET	Large Transformers @ 100 Ft. (50)		50 dB(A) 1/4 as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		40 dB(A) 1/8 as Loud
20	JUST AUDIBLE	(dB[A] Scale Interrupted) Desert at Night		
10	THRESHOLD OF HEARING			

*Aircraft takeoff noise measured 6,500 meters from beginning of takeoff roll

Source:
Leo L. Beranek "Noise And Vibration Control," 1971
*Aircraft Levels From FAA Advisory Circular AC-36-3G

FIGURE 4

TYPICAL A-WEIGHTED NOISE LEVELS

HEARING LOSS is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud as to cause hearing loss.

SPEECH INTERFERENCE is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

SLEEP INTERFERENCE is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

PHYSIOLOGICAL RESPONSES are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is to which these physiological responses cause harm or are signs of harm is presently unknown.

ANNOYANCE is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

2.1.2 Noise Assessment Metrics

The description, analysis and reporting of community noise levels around communities is made difficult by the complexity of human response to noise and the myriad of noise metrics that have been developed for describing noise impacts. Each of these metrics attempts to quantify noise levels with respect to community response. Most of the metrics use the A-Weighted noise level to quantify noise impacts on humans. A-Weighting is a frequency weighting that accounts for human sensitivity to different frequencies.

Noise metrics can be divided into two categories: single event and cumulative. Single-event metrics describe the noise levels from an individual event such as an aircraft fly-over or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific period, which is typically 1 or 24-hours for community noise problems. For this type of analysis, cumulative noise metrics is typically used.

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. They are designed to account for the known health effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. The two most predominate noise scales are the: Equivalent Noise Level (LEQ) and the Community Noise Equivalent Level

(CNEL). These scales are described in the following paragraphs along with the Ldn and L(%) scales that are also used for community noise assessment.

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the period of the sample. LEQ can be measured for any period, but is typically measured for 1 hour. This 1-hour noise level can also be referred to as the Hourly Noise Level (HNL), the energy average of all the events and background noise levels that occur during that period.

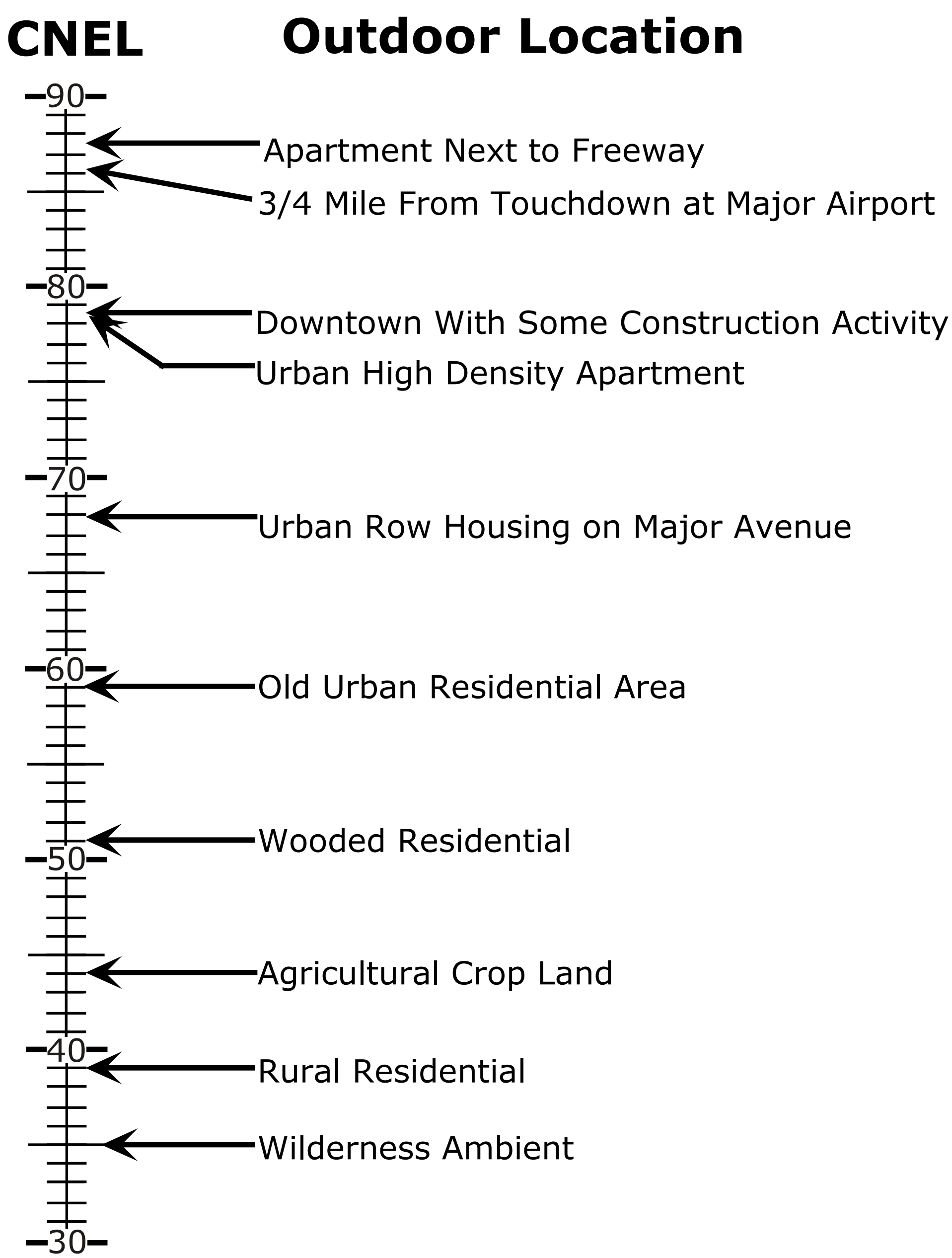
CNEL, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive periods is penalized. The evening period (7 p.m. to 10 p.m.) penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA. These time periods and penalties were selected to reflect people's increased sensitivity to noise during these periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Figure 5.

LDN, the day-night scale is similar to the CNEL scale except that evening noises are not penalized. It is a measure of the overall noise experienced during an entire day. The time-weighted refers to the fact that noise that occurs during certain sensitive periods is penalized. In the Ldn scale, those noise levels that occur during the night (10 pm to 7 am) are penalized by 10 dB. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of a day, where resting at home and sleep are the most probable activities.

L(%) is a statistical method of describing noise which accounts for variance in noise levels throughout a given measurement period. L(%) is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example since 5 minutes is 25% of 20 minutes, L(25) is the noise level that is equal to or exceeded for five minutes in a twenty-minute measurement period. It is L(%) that is used for many Noise Ordinance standards. For example, most daytime City, State and City Noise Ordinances use an ordinance standard of 55 dBA for 30 minutes per hour or an L(50) level of 55 dBA. In other words, the Noise Ordinance states that no noise level should exceed 55 dBA for more that fifty percent of a given period. The L(%) levels are not used for the City of Noise Ordinance.

2.2 Noise Criteria

The Noise Ordinance and Noise Element of the General Plan contain a municipality's policies on noise. The Noise Ordinance applies to noise on one property impacting a neighboring property. Typically, it sets limits on noise levels that can be experienced at the neighboring property. The Noise Ordinance is part of the Municipal Code and is enforceable throughout the municipality. The Noise Element of the General Plan presents limits on noise levels from transportation noise sources, vehicles on public roadways, railroads and aircraft. These limits are imposed on new developments. The new developments must incorporate the measures to ensure that the limits are not exceeded. The County of Los Angeles Noise Element and Noise Ordinance policies are presented below in Sections 2.2.1 and 2.2.2.



Source:
U.S. Environmental Protection Agency, "Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Cumulative Noise Exposure," EPA Report NTID 73.4, 1973.

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Figure 5
Typical Outdoor Noise Levels

2.2.1 County of Los Angeles Noise Element

The current Los Angeles County Noise Element was adopted in 1975. This document does not present any specific noise standards for land uses impacted by transportation noise sources. The document does mention the recently established (at that time) 45 CNEL standard for residential uses adopted by the state Commission of Housing and Community Development. Since that time this standard has been incorporated to Title 24 of the state's building code and is applicable to multi-family housing and hotel/motel structures. The 1975 Noise Element contained six goals:

- Reduce transportation noise to a level that does not jeopardize heath and welfare.
- Minimize noise levels of future transportation facilities.
- Establish compatible land use adjacent to transportation facilities.
- Allocate noise mitigation costs among those who produce the noise.
- Alert the public regarding the potential impact of transportation noise.
- Protect areas that are presently quiet from future noise impact.

Fifteen policies are presented in the Noise Element to provide direction for the achievement of the goals. These policies include establishing a central governmental authority to address noise related issues, the establishment of noise standards, using technology, planning and regulatory measures to reduce the impact of noise, increase public awareness, encouraging cities to adopt noise standards consistent throughout the county and coordinate with and assist them in addressing noise issues, coordinating development and implementation of noise abatement programs with federal, state and city governments, seek funding from government sources for noise abatement programs, monitoring special district, regional, state, and federal agencies programs and policies in respect to noise, encourage Caltrans to conduct a highway noise abatement program, recommend needed legislation to state and federal government, and encourage federal and state governments and other agencies to work for the standardization and simplification of the measurement methods used in assessing noise impacts.

The County is currently in the process of updating its General Plan and published a draft of the Los Angeles County 2035 General Plan in May 2012. It is anticipated that the Draft EIR for the General Plan will be completed in the spring of 2013 with adoption of the plan to follow. The 2012 Noise Element contains 11 policies:

Policy N 1.1: Utilize land uses to buffer noise-sensitive uses from adverse noise impacts.

Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.

Policy N 1.3: Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers or berms.

Policy N 1.4: Enhance and promote noise abatement programs in an effort to maintain acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards and other applicable noise standards.

Policy N 1.5: Ensure compliance with the jurisdictions of State Noise Insulation Standards (Title 24, California Code of Regulations and Chapter 35 of the Uniform Building Code), such as noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or Ldn) noise exposure contours.

Policy N 1.6: Ensure cumulative impacts related to noise do not exceed excessive levels.

Policy N 1.7: Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation systems.

Policy N 1.8: Minimize noise impacts to pedestrians and transit-riders in the design of transportation facilities and mobility networks.

Policy N 1.9: Require construction of noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.

Policy N 1.10: Orient residential units away from major noise sources (in conjunction with applicable building codes). Exterior walls should have minimal surface openings (i.e., windows, balconies, sliding doors, etc.) not to exceed 10% of the total wall surface.

Policy N 1.11: Maximize buffer distances and design and orient sensitive receptor structures (hospitals, residential, etc.) to prevent noise and vibration transfer from commercial/light industrial uses.

Three programs are described to implement these policies. The first is the development of a Countywide Noise Assessment Survey to identify major sources of noise and noise issues in the county and to revise the County's Noise Ordinance and update the vibration standard. The second is to prepare a map of detailed noise controls and associated land uses within the County if it is determined to be feasible. The final program is to create guidelines to mitigate noise issues in development projects and at a countywide level.

2.2.2 County of Los Angeles Noise Ordinance

The County of Los Angeles' noise ordinance is presented in Title 12, Environmental Protection, Chapter 12.08, Noise, of the Los Angeles County Municipal Code. Parts 1 and 2 of the code provide general provisions and definitions used in the code. Part 3 specifies the community noise criteria and specifies maximum outdoor and indoor noise levels that one property can be exposed to created by activity on a neighboring property. Part 4 presents noise restrictions for specific sources of noise and Part 5 provides exemptions from the ordinance for specific activities. Part 6 provides for allowing variances to the noise ordinance and Part 7 describes enforcement and penalties.

In Part 3, Section 12.08.380 specifies four different noise zones. These noise zones are presented in Table 1. Noise sensitive zones are designated by the health-officer and denoted by conspicuous signs in at least three locations within one-tenth of a mile from the institution or facility. Section 12.08.390 present the exterior noise standards and Section 12.08.400 present the interior noise standards. These are summarized in Tables 2 and 3.

Table 1
Noise Zones

Noise Zone	Receptor Property Land Use
I	Noise Sensitive
II	Residential
III	Commercial
IV	Industrial

Table 2 presents the exterior noise standards defined in the noise ordinance. These are the outdoor noise levels that cannot be exceeded at one property from activity at a neighboring property. The noise standards are defined as noise levels that cannot be exceeded for a portion of an hour. These time limits are noted in the heading of the table along with the equivalent L% noise metric. For the residential and commercial noise zones (II and III) separate daytime and nighttime noise standards are presented with the nighttime noise standard being 5 dB less than the daytime standard. The standards for the noise sensitive and industrial noise zones (I and IV) are the same at all times of day. The code defines three conditions where the standards presented in Table 2 are modified:

- If the measurement location is on the boundary of two different Noise Zones then the applicable standard is the arithmetic average of the standards for the two zones.
- If the ambient noise levels (i.e.; the noise level with the offending source inoperative) at the receptor location exceeds the exterior noise standard given in Table 2 then the ambient level becomes the standard.
- If the offending source emits pure tone noise or impulsive noise then the noise standards are reduced by 5 dB.

Table 2
Exterior Noise Standards

Noise Zone	Time	L50 (30 min/hr)	L25 (15 min/hr)	L8.3 (5 min/hr)	L1.7 (1 min/hr)	Lmax (at no time)
I	Anytime	45 dBA	50 dBA	55 dBA	60 dBA	65 dBA
II	10 pm to 7 am	45 dBA	50 dBA	55 dBA	60 dBA	65 dBA
	7 am to 10 pm	50 dBA	55 dBA	60 dBA	65 dBA	70 dBA
III	10 pm to 7 am	55 dBA	60 dBA	65 dBA	70 dBA	75 dBA
	7 am to 10 pm	60 dBA	65 dBA	70 dBA	75 dBA	80 dBA
IV	Anytime	70 dBA	75 dBA	80 dBA	85 dBA	90 dBA

Table 3 presents the interior noise standards defined by the noise ordinance. These are the interior noise levels that cannot be exceeded in one dwelling unit due to activity in a neighboring dwelling unit. As with the exterior standards, the noise standards are defined as noise levels that cannot be exceeded for a portion of an hour. These time limits are noted in the heading of the table along with the equivalent L% noise metric. A single standard is specified for all noise zones with nighttime limits 5 dB lower than the daytime limits. The code defines two conditions where the standards presented in Table 3 are modified:

- If the ambient L50 noise level exceeds the interior noise standard than the standards presented in Table 3 are increased in 5 dB increments to reflect the L50 ambient noise level.
- If the offending source emits pure tone noise or impulsive noise then the noise standards are reduced by 5 dB.

Table 3
Interior Noise Standards

Noise Zone	Time	L8.3 (5 min/hr)	L1.7 (1 min/hr)	Lmax (at no time)
All	10 pm to 7 am	40 dBA	45 dBA	50 dBA
	7 am to 10 pm	50 dBA	55 dBA	60 dBA

Part 4 of the code consisting of sections 12.08.430 through 12.08.560 presents noise restrictions for specific sources of noise including, construction noise, blowers at car washes, loading and unloading operations, places of public entertainment, powered model vehicles, emergency signaling devices, stationary nonemergency signaling devices, refuse collection vehicles, residential air conditioning or refrigeration equipment, street sales, and vehicle or motorboat repair and testing. The section also includes vibration limits. The only noise source included in Part 4 of the noise ordinance that is applicable to this project is construction noise.

Limits on construction noise are defined Section 12.08.440 of the noise ordinance. This section prohibits "operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or Holidays, such that the sound there from creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer is prohibited." Further, the section defines maximum noise levels that cannot be exceeded by construction activities at nearby off-site structures. These noise level limits are presented in Table 4. In addition, mobile equipment, cannot generate a noise level exceeding 85 dBA at the face of business structures.

Table 4
Construction Noise Level Limits

	Maximum Noise Level at Building Face		
	Single-Family Residential	Multi-Family Residential	Semi-residential /commercial
Mobile Equipment[1]			
Daily except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and Legal Holidays	60 dBA	64 dBA	70 dBA
Stationary Equipment[2]			
Daily except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and Legal Holidays	50 dBA	55 dBA	60 dBA

1. Maximum noise level for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment.
2. Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment.

Part 5 of the code specifies activities that are exempt from the noise ordinance. Excluded activities include:

- Sound emitted to alert persons of an emergency or perform emergency work.
- Warning devices (e.g.; sirens and train horns).
- Activities conducted on public playgrounds and public or private school grounds including but not limited to school athletic and school entertainment events.
- Sources specifically regulated in Part 4 of the ordinance including; construction, stationary non-emergency signaling devices, emergency signaling devices, refuse collection vehicles, residential air conditioning or refrigeration equipment, and forced air blowers.
- Motion picture production and related activities.
- Railroad activities.
- Activities who's regulation is preempted by state or federal law.
- Public heath and safety activities
- Motor vehicles on private right-of-way and private property (except for testing as regulated in Part 4).
- Seismic surveys authorized by the State Land Commission.
- Agricultural operations under specific conditions.
- Minor Maintenance to residential real property (during daytime hours).
- Operation of oil and gas wells under specific conditions.

2.3 Existing Noise Levels

This section presents information regarding existing noise levels in the project area. Section 2.3.1 presents the results of a noise measurement survey conducted in and around the campus. Section 2.3.2 presents existing traffic noise levels along roadways in the vicinity of the project.

2.3.1 Measured Noise Levels

To document the existing noise environment in the vicinity of the project site, ambient noise measurements were made at eight locations in the project vicinity. The locations of the measurements are shown in Figure 6.

The noise measurement utilized a Brüel & Kjær 2238 automated digital noise data acquisition system. This instrument automatically calculates both the Equivalent Noise Level (LEQ) and Percent Noise Level (L%) for any specific period. The noise monitor was equipped with a Brüel & Kjær 1/2-inch electret microphone and was calibrated with a Brüel & Kjær calibrator with calibration traceable to the National Bureau of Standards before and after each measurement. Calibration for the instrument is performed annually and is certified through the duration of the measurements. This measurement system satisfies the ANSI (American National Standards Institute) Standards 1.4 for Type 1 precision noise measurement instrumentation. The monitor was set up to record the Leq noise levels every one-second.

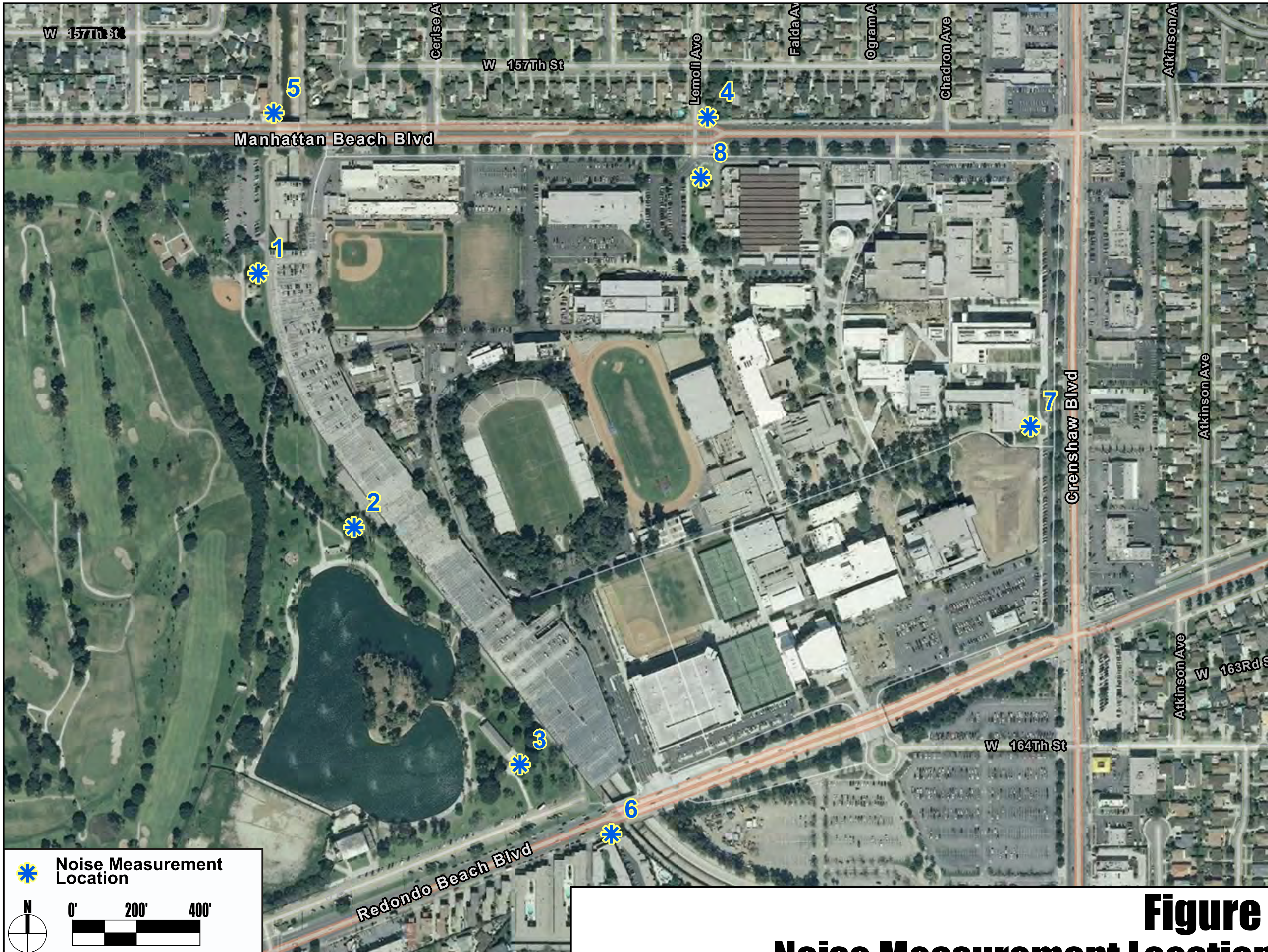

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Figure 6
Noise Measurement Locations

The measurement results are presented in Table 5 in terms of the equivalent noise level (Leq), maximum noise level, minimum noise level and percentile noise levels (L%) from the Noise Ordinance criteria for each measurement period. The L50 percentile level represents the noise level that was exceeded 50 percent of the measurement period and represents the median ambient noise level. The L90 noise levels represent the background noise level that is exceeded 90 percent of the time. The L1.7, L8.3, L25 and L50 correspond with the noise ordnance metrics described in Section 2.2.2.

Table 5
Noise Measurement Results

		Measured Noise Level (dBA)							
Site	**Start**	**Leq**	**Lmax**	**L1.7**	**L8.3**	**L25**	**L50**	**L90**	**Lmin**
1	12:40 PM	58.3	77.7	67.7	61.0	55.3	52.5	49.9	47.8
2	1:05 PM	51.8	61.9	57.0	53.7	51.9	50.9	49.8	48.8
3	1:32 PM	55.9	63.1	59.4	57.9	56.8	55.6	52.8	50.1
4	2:35 PM	68.5	84.8	77.2	72.0	68.2	63.5	56.5	51.1
5	2:55 PM	67.9	79.5	75.9	72.1	68.8	64.7	53.6	50.6
6	3:29 PM	71.1	81.0	77.4	75.0	72.4	69.6	63.0	53.6
7	4:40 PM	63.2	81.9	67.8	65.7	63.7	61.2	55.0	52.2
8	5:19 PM	61.4	70.5	67.1	64.5	62.6	60.2	54.9	51.1

Sites 1, 2, and 3 were located in Alondra Park along the western boundary of the college. Parking Lot F, a two story parking structure is located along this boundary. The project proposes the addition of a third parking deck as well as structural upgrades. The results of the measurements show that most of the time noise levels within the park are between approximately 50 and 57 dBA. Noise levels at the north and south ends of the park, Sites 1 and 3 respectively, are higher than near the middle of the park due to traffic noise from Manhattan Beach Boulevard to the north and Redondo Beach Boulevard to the south. As discussed below, during the measurement, a group of persons in the park and a group of students playing hacky sack in the parking garage generated occasional high noise levels as the park goers spoke with loud voices or communicated over long distances and as the students reacted to highlights of the game. This resulted in the considerably higher noise levels at Site 1 for the shorter-term noise metrics (i.e., L8.3, L1.7 and Lmax)

Site 1 was located near the north end of the park in an area with picnic tables. During the measurement, there was a group of about 10 people having lunch in this area. The monitor was located at the edge of the picnic area away from this group. Noise generated by the group consisted of some occasional loud talking and shouts to a distant person. There was also a group of male students in the lower level of the parking structure playing hacky sack during the measurement period. This group generated semi regular outbursts lasting a few seconds. One of these outbursts caused the maximum noise level during the measurement. There was also a single engine propeller aircraft overflight during the measurement that generated a maximum noise level of 73 dBA.

Site 2 was located in the center of the park (north to south) in an area with picnic tables. This area was relatively quiet with little activity and the most prominent noise source being distant traffic. The yells of a child in the distance were occasionally audible and near the end of the measurement, a person sat at a picnic table near the sound level meter and made a phone call. This caused the maximum noise level during the measurement. Two separate single engine propeller aircraft overflights during the measurement generated the next highest noise levels with maximum levels of 57dBA and 60 dBA.

Site 3 was located near the south end of the park at the south entrance to the Lakeside Park Picnic Area. This gated covered picnic area is available for use by reservation. The primary source of noise was traffic on Redondo Beach Boulevard. Occasional park activities such as distant yells, honking geese and a skateboarder passing on the path near the monitor also created distinct noise sources. The cause of the maximum noise level during the measurement was not identified.

Site 4 was located at the northeast corner of Manhattan Beach Boulevard and Lemoli Avenue along the border of the residential uses located north of the college. The dominant source of noise at this site was traffic on Manhattan Beach Boulevard. A truck pass caused the maximum noise level and a trash collection truck pass by generated the same maximum noise level. Peak noise levels during passing traffic were typically between approximately 70 and 75 dBA with six events (include the two truck passes), generating noise levels greater than 75 dBA. Other than the two truck passes, peak noise levels did not exceed 80 dBA. Many of the homes backing up to Manhattan Beach Boulevard have block walls that will reduce noise levels in their rear yards by approximately 5-8 dBA. A few homes have chain link fences or wood fences that provide only a small reduction in the noise levels. The noise levels measured at Site 4 are typical of what one would expect directly adjacent to an arterial roadway.

Site 5 was located on the north side of Manhattan Beach Boulevard adjacent to the home at the end of the frontage road east of Cranbrook Avenue along the Dominguez Channel. As with Site 4, traffic on Manhattan Beach Boulevard was the dominant source of noise and a truck or loud car generated the maximum noise level. Peak noise levels as traffic was passing on Manhattan Beach Boulevard typically ranged from between 71 dBA and 76 dBA and only exceeded 76 dBA for a few seconds during each of four events during the measurement period. As with Site 4, some of the homes in the area along Manhattan Beach Boulevard have block walls that will reduce noise levels in their rear yards by approximately 5-8 dBA. A few homes have chain link fences or wood fences that provide only a small reduction in the noise levels. The noise levels measured at Site 5 are typical of what one would expect directly adjacent to an arterial roadway.

Site 6 was located on the south side of Redondo Beach Boulevard in front of and between the apartment buildings located at 3320 and 3338 Redondo Bach Boulevard. These are the nearest residences to the main campus to the south and are directly across the street from Parking Lot F, the parking structure proposed for an additional level and structural upgrades. Traffic on Redondo Beach Boulevard was the dominant source of noise and a truck or loud car generated the maximum noise level. Peak noise levels as traffic was passing on Redondo Beach Boulevard typically ranged from between 72 dBA and 77 dBA and only exceeded 77 dBA for a few seconds during each of three events during the measurement period. Table 5 shows that the minimum noise level recorded during the measurement was 54 dBA. There were only two short periods, totaling less than 10 seconds where the noise level dropped below 60 dBA. The measured L90 noise level shows that the noise level exceeded 63 dBA for 90% of the measurement period and was less than this during the remainder. The level dropped below 63 dBA during significant breaks in traffic on Redondo Beach Boulevard. The noise levels measured at Site 6 are typical of what one would expect directly adjacent to an arterial roadway.

Site 7 was located in front of the college's administration building along Crenshaw Boulevard. Traffic on Crenshaw Boulevard was the dominant source of noise. There is a pickup/drop off area in front of the administration building and students conversing while waiting were audible at the site along with noise as vehicles picked up and dropped off students. However, the noise levels generated by these activities were not substantial. A loud motorcycle traveling on Crenshaw Boulevard generated the maximum noise level of 82 dBA, which was much greater than the noise levels during the rest of the period. There were only two other events, likely a loud vehicle pass, which generated maximum noise levels greater than 70 dBA. Typically, peak noise levels as groups of vehicles passed on Crenshaw Boulevard generated noise levels between 64 and 68 dBA.

Site 8 was located near the northern boundary of the college along Manhattan Beach Boulevard approximately the same distance from the roadway as the proposed new Student Services Center. Traffic on Manhattan Beach Boulevard was the dominant source of noise with vehicles entering and exiting the college contributing. The maximum noise level was caused by the backup warning beeper on van backing up into the yard area on the west side of the Shops building. Typically, maximum noise levels during traffic passing on Manhattan Beach Boulevard were between 63 and 66 dBA with three events generating noise levels between 66 dBA and 70 dBA.

2.3.2 Traffic Noise Levels

The highway noise levels projected in this report were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." A computer code has been written which computes equivalent noise levels for each of the periods used in the calculation of CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used. CNEL contours are found by iterating over many distances until the distances to the 60, 65, and 70 CNEL contours are found.

The distances to the CNEL contours for the roadways in the vicinity of the project site are given in Table 6. These represent the distance from the centerline of the roadway to the contour value shown. Note that the values given in Table 6 do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. The traffic data used to calculate the noise levels presented in Table 6 were provided by the traffic engineer for the proposed project by Kunzman Associates. The traffic volumes, speeds, and distribution used in the calculations are presented in the Appendix of this report.

Table 6
Existing Roadway Traffic Noise Levels

Road Segment	CNEL @ 100' †	Distance To CNEL Contour (ft) † 70 CNEL	65 CNEL	60 CNEL
Hawthorne Boulevard				
North of Manhattan Beach Blvd.	64.6	RW	94	202
Manhattan Beach Blvd. to I-405	64.8	RW	97	208
Prairie Avenue				
North of Manhattan Beach Blvd.	64.1	RW	87	187
South of Manhattan Beach Blvd.	64.0	RW	86	184
North of Redondo Beach Blvd.	64.0	RW	85	184
Redondo Beach Blvd. to I-405	63.5	RW	80	172
Yukon Avenue				
Redondo Beach Blvd. to Artesia Blvd.	52.5	RW	RW	31
Lemoli Avenue				
North of Manhattan Beach Blvd.	49.9	RW	RW	RW
Crenshaw Boulevard				
North of Manhattan Beach Blvd.	64.4	RW	91	196
South of Manhattan Beach Blvd.	64.9	46	98	212
North of Redondo Beach Blvd.	65.0	46	100	215
South of Redondo Beach Blvd.	64.8	RW	96	208
North of Artesia Blvd.	64.7	RW	95	205
Artesia Blvd. to 182nd St.	65.1	47	102	220
182nd St. to I-405	66.2	56	121	260
South of I-405	66.9	62	134	289
Manhattan Beach Boulevard				
I-405 to Hawthorne Blvd.	63.9	RW	85	183
Hawthorne Blvd. to Prairie Ave.	64.9	45	98	211
East of Prairie Ave.	64.8	45	97	209
West of Lemoli Ave.	64.9	45	98	211
Lemoli Ave. to Crenshaw Blvd.	61.8	RW	61	132
East of Crenshaw Blvd.	60.0	RW	46	100

(Table Continued on Next Page)

Table 6 (Continued)
Existing Roadway Traffic Noise Levels

Road Segment	CNEL @ 100' †	Distance To CNEL Contour (ft) † 70 CNEL	65 CNEL	60 CNEL
Redondo Beach Boulevard				
West of I-405	62.1	RW	64	138
I-405 to Prairie Ave.	63.7	RW	82	177
Prairie Ave. to Yukon Ave.	63.6	RW	81	174
East of Yukon Ave.	63.4	RW	78	168
West of Crenshaw Blvd.	63.2	RW	76	164
East of Crenshaw Blvd.	64.1	RW	88	189
Artesia Boulevard				
Yukon Ave. to Crenshaw Blvd.	64.4	RW	91	197
East of Crenshaw Blvd.	65.2	48	103	222
182nd Street				
West of Crenshaw Blvd.	61.1	RW	55	118
Crenshaw Blvd. to I-405 NB Ramps	63.7	38	82	177
East of I-405 NB Ramps	60.9	RW	54	115

RW – Noise contour falls within roadway right-of-way.
† – From roadway centerline.

3.0 POTENTIAL NOISE IMPACTS

Potential noise impacts are commonly divided into two groups; temporary, or short-term, and long-term. Temporary, or short-term, impacts are usually associated with noise generated by construction activities. Long-term impacts are the impacts caused by the long-term operation of the proposed project.

3.1 Noise Impact Criteria

Off-site impacts from on-site activities, short-term and long-term, are measured against the County of Los Angeles Noise Ordinance criteria discussed in Section 2.2.2. Construction or on-site operational activities that violate the provisions of the Noise Ordinance will result in a significant noise impact. The Los Angeles County Noise Ordinance requires that construction noise level at the single-family structures to not exceed 75 dBA for mobile equipment and 60 dBA for stationary equipment. The limits are 80 dBA and 65 dBA for stationary and mobile sources, respectively, at multi-family homes and 85 dBA and 70 dBA for sources at commercial uses.

An off-site traffic noise impact occurs when there is a discernable increase in traffic noise AND the resulting noise level exceeds an established noise standard. In community noise assessment, changes in noise levels greater than 3 dB are often identified as substantial, while changes less than 1 dB will not be discernible to local residents. In the range of 1 to 3 dB, residents who are very sensitive to noise may perceive a slight change. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dB. This is based on a direct immediate comparison of two sound levels. In a community noise situation, however, noise exposures are over a long period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dB, and 3 dB is the most commonly accepted discernable difference. A 5 dB change is generally recognized as a clearly discernable difference.

Because traffic noise levels at sensitive uses likely approach or exceed the 65 CNEL standard, a 3.0 dB increase due to the project will be used as the increase threshold for project. The project will result in a significant noise impact when it causes a permanent increase in ambient noise levels of 3.0 dB and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use.

A cumulative significant noise impact will occur if a 3.0 dB increase over existing conditions and the resulting noise level exceeds the applicable exterior standard at a sensitive use. The project will have considerably contributed to a significant cumulative impact if it contributes 1 dB or more to the cumulative noise level increase.

3.2 Temporary Impacts

The only source of temporary noise impacts associated with the project is construction. Impacts from on-site construction activities are discussed below in Section 3.2.1. Construction of project will not generate substantial amounts of on-road traffic that could be expected to result in a significant impact. The greatest levels of traffic during construction will be during excavation and import of materials for the Stadium, demolition (for removal of materials) and during concrete pours. These activities are not expected to generate more than 100 truck trips per day, which would not be expected to substantially alter roadway noise levels. Therefore, there is no reason to believe that the construction of project would result in a significant off-site traffic noise impact.

3.2.1 Construction Noise

Construction noise represents a short-term impact on ambient noise levels. The El Camino College 2012 FMP includes approximately 36 different demolition, construction, or renovation projects to implement the plan. In some cases, the construction required to implement the plan have already begun and buildout of the plan is anticipated in early 2022. Table 7 presents a listing of the individual demolition, construction and renovation projects that are proposed by the project along with the expected starting data and duration of each activity. Figure 7 presents the locations of the demolition activities. Figure 8 presents the locations of the construction activities. Buildings that will be renovated are shown in Figure 3. Building renovations will primarily consist of interior renovations and will not generate substantial outdoor noise levels. The proposed project's demolition, grading and construction activities are expected to utilize typical construction equipment

Noise generated by demolition activities will likely cause the highest construction related noise levels. Building demolition will likely be completed by pulling the building down with large hydraulic breakers, excavators, and/or bulldozers. Loaders would be used to load debris into trucks for disposal. Hardscape areas, including parking lots, sidewalks, and planters would typically be removed with a loader and may involve the use of jackhammers and/or concrete saws to break up the hardscape before being removed by the loader.

After demolition, the individual project area will be graded. The site is essentially flat and only fine grading will be required to prepare each site for construction. Grading is not expected to last for more than three weeks. Equipment used for grading will likely involve bulldozers and graders and possibly scrapers. Noise levels during actual construction are typically lower than during grading and demolition, because less heavy equipment is required. Cranes, the largest piece of equipment typically used during building construction, can be located away from noise sensitive uses. It is our understanding that no pile driving will be required for the implementation of the 2012 FMP. The project does not propose conducting noise generating construction activities during the hours prohibited by the County's Municipal Code (7 p.m. to 7 a.m. weekdays or at any time Sundays or Holidays).

Table 7
Anticipated Construction Activities and Schedule

Phase	What	Project	Start	Duration (Months)
1a	Demolish	Stadium, Field House, Community Advancement	5/2012	12
1a	Construct	Stadium Complex/Field House	6/2013	12
1b	Construct	Math Business & Health Science	2/2012	12
1c	Construct	Shops	11/2012	18
	Renovate	Natural Science/STEM	1/2013	6
2a	Demolish	Shops	3/2016	6
2a	Construct	Student Services Center	11/2013	18

Table Continued on Next Page

Table 7 (Continued)
Anticipated Construction Activities and Schedule

Phase	What	Project	Start	Duration (Months)
	Renovate	Industry and Technology	3/2014	6
	Renovate	Planetarium	4/2014	6
	Renovate	Warehouse	4/2014	6
	Renovate	Construction Technology	4/2014	6
2b	Demolish	Technical Arts	10/2013	6
2b	Construct	Parking Structure & Campus Police	6/2014	12
2c	Demolish	Campus Police	7/2015	6
	Renovate	Maintenance	6/2014	6
2c	Construct	Lot F Parking Structure Expansion	6/2013	33
2d	Demolish	Physical Education South/South Gym & Handball Courts	2/2015	6
2d	Construct	Adaptive Pool	9/2015	12
3a	Demolish	Administration	4/2015	6
3a	Construct	Administration	11/2015	12
2e	Demolish	North Gym/Physical Education North	2/2016	6
2e	Construct	Main Gym/Athletic Support Space	12/2016	18
4	Construct	Music/Theater	5/2017	18
	Renovate	Library	6/2017	6
2f	Construct	Locker Rooms	7/2017	12
2f	Construct	Team Rooms	7/2017	12
2f	Construct	PE CR	7/2017	12
5	Demolish	Art/North B/Gallery & Music/Campus Theatre	12/2017	6
	Renovate	Marsee Auditorium	6/2018	6
5	Construct	Art & Behavioral Science I	7/2018	18
5	Construct	Art & Behavioral Science II	7/2018	18
3b	Demolish	Student Services & Communications	10/2018	6
3b	Construct	Student Activities Center	4/2019	12
3c	Demolish	Activities Center	10/2020	9
3c	Construct	Amphitheater area	8/2021	6

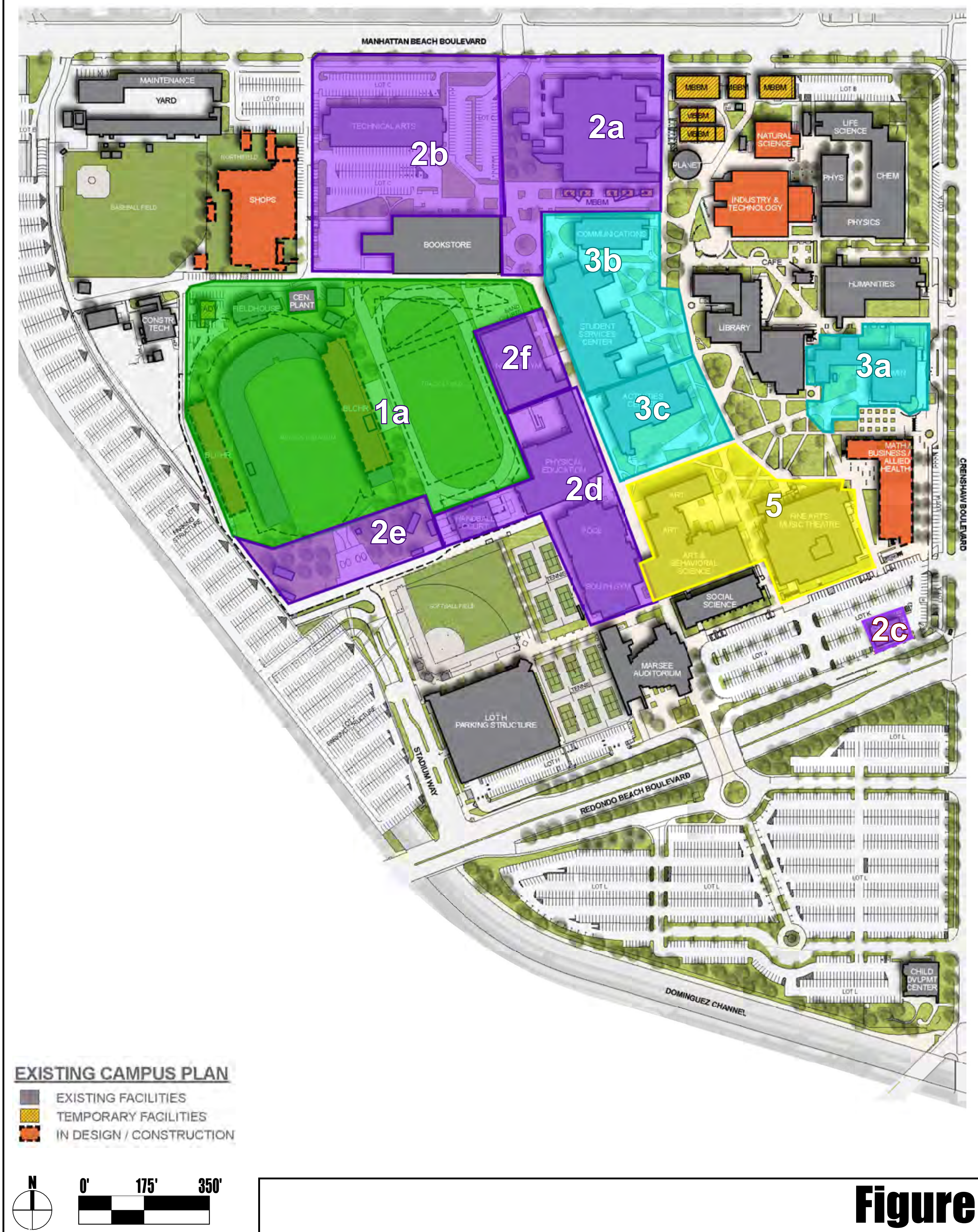


Figure 7
Demolition Activity Locations

Mestre Greve Associates

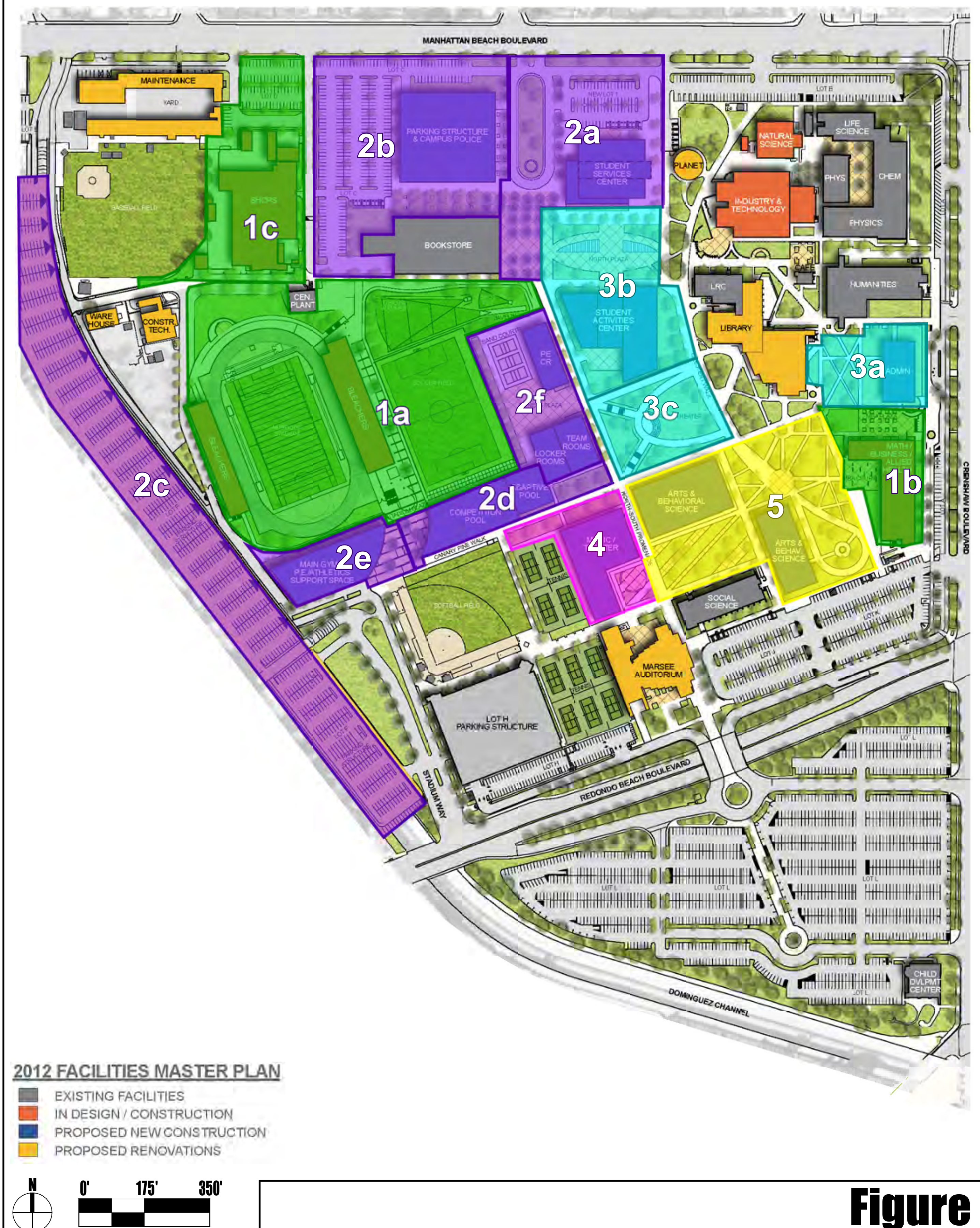


Figure 8
Construction Activity Locations

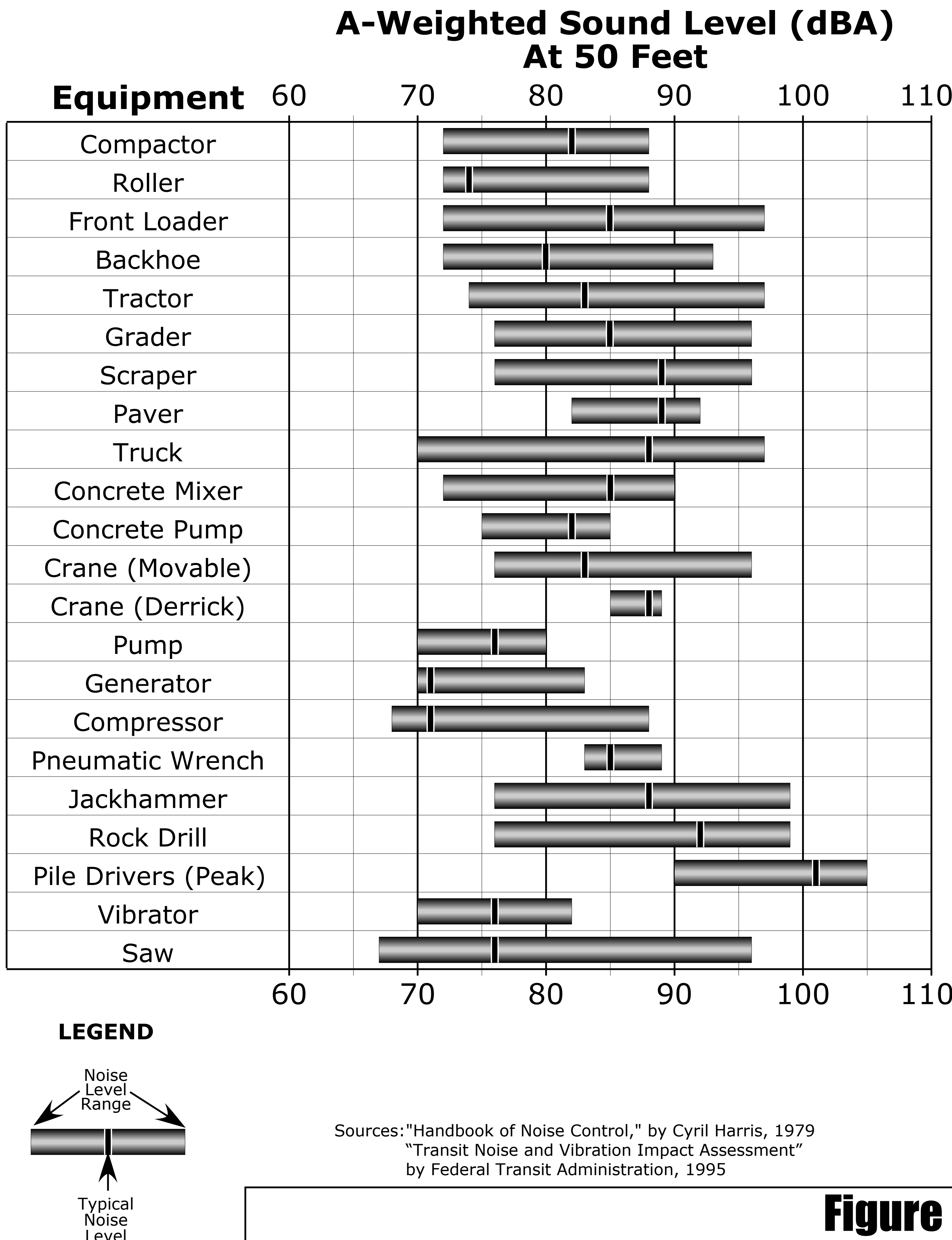
The nearest demolition and construction activities to residential uses will be Demolition Phases 2a and 2b (demolition of the Shops and the Technical Arts buildings) and Construction Phases 1d, 2a, and 2b (construction of the new Shops building, new Student Services Center building and new Parking Structure & Campus Police building). Single-family homes are located along the north side of Manhattan Beach Boulevard. The only other residential uses located near proposed construction activities are the multi-family homes located south of Redondo Beach Boulevard and west of Dominguez Channel which are approximately 165 feet south of Parking Lot F which is proposed for structural reinforcement and addition of a third level.

The nearest demolition and construction activities to commercial uses will be demolition and Construction Phase 3a (Administration Building). Construction Phase 1b (Math/Business/Allied Health building) is located at the same distance but construction of this building is nearly complete at this time with only interior finishing work remaining.

Worst-case examples of construction noise at 50 feet are presented in Figure 9. The peak noise level for most of the equipment that will be used during the construction is 70 to 95 dBA at a distance of 50 feet. At 200 feet, the peak construction noise levels range from 58 to 83 dBA. At 400 feet, the peak noise levels range from 52 to 77 dBA. Note that these noise levels are based upon worst-case conditions. Typically, noise levels near the site will be less. Noise measurements made by Mestre Greve Associates for other projects show that the noise levels generated by commonly used grading equipment (i.e. loaders, graders and trucks) generate noise levels that typically do not exceed the middle of the range shown in Figure 9.

Backup warning systems, which are required by California labor law for heavy equipment, typically employ audible alarms in the form of backup beepers. These beepers produce sound levels between 53 to 57 dBA measured at 50 feet. Backup beepers tend to be audible over large distances, even when the sound may not be readily measurable. In general, the sound level generated by backup beepers is low enough that it would not increase the overall sound level produced by heavy equipment operating concurrently with the beepers. Accordingly, no attempt is made to project over distance the sound level produced by backup beepers. However, given the nature of the sound produced by backup beepers, they could be audible over several thousand feet when background noise levels are low.

The nearest single-family homes are located north of the project, across Manhattan Beach Boulevard. The property line of these homes is located approximately 110 feet from the south curb of Manhattan Beach Boulevard and the structures are located approximately 145 feet from the south curb. The nearest building proposed for demolition, the Shops, is located approximately 65 feet south of the south curb and the nearest future building, Parking Structure and Campus Police, is located approximately 110 feet from the south curb. Demolition and construction activities along the north edge of the campus will generate the highest noise levels at these homes. Activities in this area include demolition of the existing Shops and Technical Arts Buildings and construction of a new Student Services Building and Parking Structure & Campus Police building.



Sources: "Handbook of Noise Control," by Cyril Harris, 1979
"Transit Noise and Vibration Impact Assessment" by Federal Transit Administration, 1995

Figure 9
Construction Equipment Noise Levels

Mestre Greve Associates

At 110 feet, equipment noise levels are approximately 7 dB lower than the levels shown in Figure 9. These represent the loudest noise levels that will be experienced in the rear yards of the single-family homes north of Manhattan Beach Boulevard. Note that noise levels in the rear yards of homes with concrete block walls along Manhattan Beach Boulevard will be an additional 5-8 dB lower because of the noise reduction provided by the wall. Demolition or grading equipment, including jack hammering, operating along the northern campus boundary would be expected generate noise levels as high as 92 dBA and more typically approximately 80 dBA in the rear yards of homes without concrete walls. These levels will only be experienced during periods when equipment is operating in its loudest mode along the northern boundary of the campus. Equipment operating 220 feet from the property line would generate noise levels 6 dB less than this, typically about 74 dBA but as high as 86 dBA.

The nearest building to be demolished is located approximately 175 from the property line of the single family homes located to the north and represents the nearest distance to the homes for the majority of the demolition activities. At this distance, noise levels are approximately 11 dB lower than the levels shown in Figure 9. Heavy equipment could generate noise levels as high as approximately 85 dBA in the rear yards of the homes without concrete walls. Typically, the noise levels from this equipment would be expected to be around 75 dBA.

The building faces of the single family homes north of Manhattan Beach Boulevard are located approximately 145 feet from the south curb. At this distance, equipment noise levels are approximately 9 dB less than the levels shown in Figure 9. Noise levels at the single-family home building faces could be as high as 88 dBA during jackhammering along the northern edge of the campus but would typically be around 77 dBA. Other heavy equipment could generate a worst-case maximum noise level of approximately 86 dBA at the building face but noise levels around 75 dBA would be expected. These represent the loudest noise levels that will be experienced at the building face of these homes as equipment operates in its loudest mode at the northern boundary of the campus.

The nearest building to be demolished is located approximately 210 feet from the building faces of the homes north of Manhattan Beach Boulevard. At this distance, equipment noise levels are approximately 12 dB less than the levels shown in Figure 9. Noise levels at the single family home building faces could be as high as 85 dBA during jackhammering along the northern edge of the campus but would typically be around 74 dBA. Other heavy equipment could generate a worst-case maximum noise level of approximately 83 dBA at the building face but peak noise levels around 72 dBA would be expected.

The Los Angeles County Noise Ordinance requires that construction noise level at the single-family structures to not exceed 75 dBA for mobile equipment and 60 dBA for stationary equipment. The analysis presented above shows that mobile equipment used for demolition and grading at the northern boundary of the campus could generate noise levels greater than 75 dBA at the homes. Further, while unlikely, stationary equipment could generate noise levels that exceed 60 dBA at these homes. Therefore, demolition of the Shops and Theater Arts buildings (demolition phases 2a and 2b) and construction of the new Shops, Student Services Center, and Parking Structure & Campus Police Building (construction phases 1d, 2a, and 2b) have the potential to generate noise levels in excess of the County Noise Ordinance and result in a significant noise impact. Mitigation is discussed in Section 4.1.

The nearest demolition/construction activities to a commercial use are the demolition and construction of the Administration Building (Phase 3a). The nearest commercial building face is located approximately 170 feet from the nearest activity area and 210 feet from the administration building. At 170 feet, equipment noise levels are approximately 11 dB lower than the levels shown in Figure 9. At 210 feet, noise levels are approximately 12 dB lower. Equipment operating at the extreme high end of the ranges shown in Figure 9 (i.e. above 96 dB on the figure) would generate noise levels greater than the 85 dBA County of Los Angeles Noise Ordinance limit at the commercial building to the east as it operated at the near edge of the construction area. However, as discussed above, it has been Mestre Greve Associates experience that most construction equipment in use today generate maximum noise levels around the middle of the ranges shown in Figure 9. Therefore, while it is not likely that the demolition and construction activities during Phase 3a will exceed the County Noise Ordinance, it is possible. Therefore, demolition and construction of the Administration Building could result in a significant noise impact. Mitigation is discussed in Section 4.1.

The proposed structural reinforcement and addition of a third parking level to Parking Lot F, Construction Phase 2c, is the only other construction project that will occur at the edge of the campus and potentially impact the surrounding uses. However, heavy equipment used for this activity will likely be limited to forklifts and small loaders. However, it is possible that this activity will require jack hammering and/or concrete sawing. The structural reinforcement portion of the work will likely involve the attachment of steel reinforcing beams to the existing parking structure. A forklift or small loader would be used to move the beams around the site and install them. Hand tools would be used to actually affix the reinforcement elements to the structure. Jackhammers and/or concrete saws could be needed to remove portions of the existing structure. Addition of the third level will involve the construction of forms and then pouring concrete into the forms. The forms will generally be constructed with hand tools and a forklift or small loader moving materials around the site. Concrete would be delivered by concrete mixing trucks and likely poured into a concrete pump and pumped into the forms.

There are single-family homes located approximately 435 feet north of Parking Lot F across Manhattan Beach Boulevard, and there are multi-family homes located approximately 160 feet south of Parking Lot F across Redondo Beach Boulevard. At a distance of 435 feet, Parking Lot F construction most activities would not be expected to generate a noise level in excess of 75 dBA, the Noise Ordinance limit, at the single-family home structures to the north. At this distance, the highest noise level expected from a concrete pump would be 66 dBA. However, jack hammering or concrete sawing at the north end of the structure could generate noise levels as high as 80 dBA at the homes.

A concrete pump located along the southern boundary of the project area would be expected to generate a nosie level of less than 75 dBA at the multi-family homes to the south and most other noise levels from activities at the structure would generate lower nosie levels. Jackhammering or concrete sawing could generate noise levels of about 85 dBA at these homes. This is greater than the 80 dBA Noise Ordinance Standard. Therefore, while it is not likely that activities during Construction Phase 2c, Parking Lot F, will exceed the County Noise Ordinance, it is possible. Therefore, construction of the Parking Lot F could result in a significant noise impact. Mitigation is discussed in Section 4.1.

Parking Lot F construction activities could generate temporarily high noise levels at Alondra Park located directly west of the project site. However, the primary noise impacting the park would be from the use of hand tools to install the structural reinforcements and construction of the forms for the third level, and forklifts or loaders moving materials around the site as some these activities will occur directly adjacent to the park. During concrete pours, concrete pumps would be expected to be located on the campus side of the parking structure. The distance and reduction provided by the structure itself, acting as a noise barrier, will help minimize the noise levels at the park during the concrete pours.

The County of Los Angeles' Noise Ordinance does not contain any standards relative to noise levels at parks. Construction activities proposed for Parking Lot F will generate noise in the park and, occasionally those noise levels will be relatively high. While activities will make the park area in the immediate vicinity of the construction activity less desirable to park patrons, they will not preclude use of those areas of the park. Noise levels would not be expected to reach levels in the park that could cause hearing damage. Speech communication in these areas of the park could also be impaired by the construction noise, but would not be eliminated. The most likely result is that park patrons will choose to stay away from the construction activities and utilize other areas of the park away from the noise. Because the Parking Lot F construction would not preclude the use of the park, it is not considered result in a significant noise impact. However, because the Parking Lot F construction activities could exceed the Noise Ordinance limits at the nearest residences a Construction Noise Abatement Plan will be required as discussed in Section 4.1. The plan prepared for Parking Lot F will also require the plan to present practical measures to minimize construction noise level sin the park such as locating noise generation stationary equipment as far as possible from the park.

All of the other construction activities proposed by the 2012 FMP will be located towards the interior of the campus and would not be expected to generate significant noise levels outside of the campus. Therefore, except for the construction activities noted above, the construction associated with the implementation of the 2012 FMP would not be expected to result in a significant noise impact.

3.3 Long-Term Off-Site Impacts

This section examines long-term noise impacts from the proposed project on the surrounding land uses. Increases in traffic noise levels due to traffic generated by the proposed project are examined in Section 3.3.1. First, traffic noise impacts due to the proposed project are examined. Second, cumulative traffic noise impacts are assessed. Finally, potential impacts from noise generated on the project site affecting nearby uses is discussed in Section 3.3.2.

3.3.1 Traffic Noise Impacts Due to Project

As discussed in Section 2.1, noise impacts due to traffic generated by the proposed project are measured against two criteria, the change in noise level and the absolute noise levels. Table 8 presents the projected changes in traffic noise levels both due to the proposed project and cumulative (over existing). Table 9 presents the projected opening year traffic noise levels with the proposed project.

Traffic Noise Level Increases

Table 8 shows the projected traffic noise CNEL level changes on the roadways in the vicinity of the project site for existing conditions and for the buildout year (2020). The first column of noise level changes "Existing Due to Project" presents the change in traffic noise CNEL levels over current conditions with no other changes to the traffic volumes. This represent the theoretical condition where the project immediately begins operation at full capacity with no changes to the surrounding area. The next two columns show the noise level increases projected for the buildout year of the project. The first value shows the projected cumulative change over existing conditions and the second value shows the portion of this increase that is due to the project. Increases due the project of 3.0 dB or greater are shown in bold-italics as are cumulative increases (over existing conditions) greater than 3.0 dBA. The noise level increases were calculated using traffic volume data provided by the traffic engineer for the proposed project, Kunzman Associates, Inc. The traffic volumes used are presented in the Appendix of this report.

Table 8
Traffic Noise Level Changes with the Project (dB CNEL)

Roadway Segment	Existing Due to Project	Buildout (2020) Over Existing	Buildout (2020) Due to Project
Hawthorne Boulevard			
North of Manhattan Beach Blvd.	0.0	0.1	0.0
Manhattan Beach Blvd. to I-405	0.0	0.1	0.0
Prairie Avenue			
North of Manhattan Beach Blvd.	0.0	0.1	0.0
South of Manhattan Beach Blvd.	0.0	0.1	0.0
North of Redondo Beach Blvd.	0.0	0.1	0.0
Redondo Beach Blvd. of I-405	0.0	0.1	0.0
Yukon Avenue			
Redondo Beach Blvd. to Artesia Blvd.	0.2	0.3	0.2
Lemoli Avenue			
North of Manhattan Beach Blvd.	0.2	0.2	0.2
Crenshaw Boulevard			
North of Manhattan Beach Blvd.	0.1	0.2	0.1
South of Manhattan Beach Blvd.	0.2	0.3	0.2
North of Redondo Beach Blvd.	0.2	0.3	0.2
South of Redondo Beach Blvd.	0.2	0.3	0.2
North of Artesia Blvd.	0.2	0.3	0.2
Artesia Blvd. to 182nd St.	0.2	0.2	0.2
182nd St. to I-405	0.0	0.1	0.0
South of I-405	0.0	0.1	0.0
Manhattan Beach Boulevard			
I-405 to Hawthorne Blvd.	0.1	0.2	0.1
Hawthorne Blvd. to Prairie Ave.	0.2	0.2	0.2
East of Prairie Ave.	0.2	0.3	0.2
West of Lemoli Ave.	0.3	0.4	0.3
Lemoli Ave. to Crenshaw Blvd.	0.4	0.5	0.4
East of Crenshaw Blvd.	0.0	0.1	0.0

Continued on Next Page

Table 8 (Continued)
Traffic Noise Level Changes with the Project (dB CNEL)

Roadway Segment	Existing Due to Project	Buildout (2020) Over Existing	Buildout (2020) Due to Project
Redondo Beach Boulevard			
West of I-405	0.0	0.2	0.0
I-405 to Prairie Ave.	0.1	0.2	0.1
Prairie Ave. to Yukon Ave.	0.1	0.3	0.1
East of Yukon Ave.	0.2	0.3	0.2
West of Crenshaw Blvd.	0.1	0.2	0.1
East of Crenshaw Blvd.	0.1	0.3	0.1
Artesia Boulevard			
Yukon Ave. to Crenshaw Blvd.	0.0	0.1	0.0
East of Crenshaw Blvd.	0.0	0.1	0.0
182nd Street			
West of Crenshaw Blvd.	0.0	0.1	0.0
Crenshaw Blvd. to I-405 NB Ramps	0.1	0.1	0.1
East of I-405 NB Ramps	0.0	0.1	0.0

Future Traffic Noise Levels

The distances to the buildout year (2020) 60, 65 and 70 CNEL contours with the proposed project are presented in Table 9. These represent the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. The contours do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. The traffic data used to calculate these noise levels is presented in the Appendix of this report.

Table 9
Buildout Year (2020) with Project Traffic Noise Levels

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (ft) 70 CNEL	65 CNEL	60 CNEL
Hawthorne Boulevard				
North of Manhattan Beach Blvd.	64.7	RW	95	205
Manhattan Beach Blvd. to I-405	64.9	RW	98	212
Prairie Avenue				
North of Manhattan Beach Blvd.	64.2	RW	88	190
South of Manhattan Beach Blvd.	64.1	RW	87	187
North of Redondo Beach Blvd.	64.1	RW	87	187
Redondo Beach Blvd. of I-405	63.6	RW	81	175
Yukon Avenue				
Redondo Beach Blvd. to Artesia Blvd.	52.8	RW	RW	33
Lemoli Avenue				
North of Manhattan Beach Blvd.	50.0	RW	RW	RW
Crenshaw Boulevard				
North of Manhattan Beach Blvd.	64.6	RW	94	202
South of Manhattan Beach Blvd.	65.2	48	103	222
North of Redondo Beach Blvd.	65.3	48	104	224
South of Redondo Beach Blvd.	65.0	47	101	217
North of Artesia Blvd.	64.9	46	99	214
Artesia Blvd. to 182nd St.	65.4	49	106	228
182nd St. to I-405	66.3	57	123	265
South of I-405	67.0	63	136	293
Manhattan Beach Boulevard				
I-405 to Hawthorne Blvd.	64.1	RW	87	188
Hawthorne Blvd. to Prairie Ave.	65.1	47	102	219
East of Prairie Ave.	65.1	47	102	220
West of Lemoli Ave.	65.3	48	104	225
Lemoli Ave. to Crenshaw Blvd.	62.3	RW	66	142
East of Crenshaw Blvd.	60.1	RW	47	102

Table Continued on Next Page

Table 9 (Continued)
Buildout Year (2020) with Project Traffic Noise Levels

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (ft) 70 CNEL	65 CNEL	60 CNEL
Redondo Beach Boulevard				
West of I-405	62.3	RW	66	142
I-405 to Prairie Ave.	64.0	RW	85	184
Prairie Ave. to Yukon Ave.	63.8	RW	84	181
East of Yukon Ave.	63.7	RW	82	176
West of Crenshaw Blvd.	63.5	RW	79	171
East of Crenshaw Blvd.	64.4	RW	91	197
Artesia Boulevard				
Yukon Ave. to Crenshaw Blvd.	64.5	RW	92	199
East of Crenshaw Blvd.	65.3	49	105	225
182nd Street				
West of Crenshaw Blvd.	61.2	RW	56	120
Crenshaw Blvd. to I-405 NB Ramps	63.8	39	84	181
East of I-405 NB Ramps	61.0	RW	54	117

RW – Noise contour falls within roadway right-of-way.
† – From roadway centerline.

Project Traffic Noise Impacts

Table 8 shows that the highest traffic noise CNEL increase due to the project is 0.4 dB under the existing and buildout conditions. This increase is not perceptible. Therefore, the project will not result in a significant off-site traffic noise impact.

Cumulative Traffic Noise Impacts

Table 8 shows that the maximum cumulative noise level increase at buildout over existing conditions is 0.5 dB. This increase is not perceptible. Therefore, the project will not result in a significant cumulative off-site traffic noise impact.

3.3.2 Noise Impacts from On-Site Activities

There are only two components of the proposed 2012 FMP that have the potential to generate considerable noise levels in the surrounding area. The first is the renovation of Murdoch Stadium and the second is the structural upgrade and addition of a third level of parking lot to the Parking Lot F Structure. Noise levels generated by the proposed modifications to these facilities are discussed below.

Murdock Stadium is located approximately 850 feet from the residences to the north across Manhattan Beach Boulevard and approximately 950 feet from the residences to the south across Redondo Beach Boulevard. Currently, the stadium is surrounded by an earthen berm to the north, east, and west and partially to the south. This berm acts as a noise barrier reducing noise levels in the surrounding community and would be removed with the project. However, at distances greater than 500 feet, atmospheric conditions such as wind or temperature inversions, can result in the noise from activities within the stadium traveling over the top of the berm "bending" downward into the surrounding community negating the noise reducing effects of the berm. Further, the new Shops building proposed to be located in the existing north field north of the stadium and the new Main Gym located to the south of the stadium will provide similar noise barrier effects as the existing berm.

Even without the exiting berm and new buildings acting as noise barriers, noise from activities at the stadium would not be expected to generate noise levels that would considerably interfere with activities in the surrounding neighborhoods. Noise levels in the nearest residential neighborhoods will be approximately 25 dB less than the level 50 feet from the edge of the stadium which would be 5 to 10 dB less than inside the stadium without including any noise barrier effects. Therefore, noise levels in the nearest residential area will be, perceptibly, eight times quieter than inside the stadium (a noise level change of 10 dB is perceived as a halving or doubling of the noise level).

Currently, the west side of the Parking Lot F structure is blocked from use, due to the structural issues proposed to be corrected by the project, and not accessible to traffic. The structural upgrades would open this area and allow for more vehicles to park in the structure along with allowing vehicles to travel along the western boundary of the structure, adjacent to Alondra Park. The addition of the third level would allow for even more parking next to the park.

During the noise measurements at Sites 1, 2, and 3, vehicles traveling within the parking structure did not generate clearly discernable noise. The vehicles are generally traveling at low speeds. While the structural upgrades would allow vehicles to travel closer to the park, they would not be expected to generate noise levels considerably higher than those currently experienced in the park along it's eastern boundary. The wall along the second level of the structure, along with the height of the structure, results in an observer in the park not having direct line of site to vehicles on the structure. This results in the wall acting as a noise barrier reducing noise levels from activity on the top level of the parking structure by approximately 5 to 10 dB. The reduction provided by the edge of the structure barrier for the third level would be even greater due to the geometry provided by the increased elevation.

As noted in Section 2.2.2 the Los Angeles County Noise Ordinance specifically exempts "activities conducted on public playgrounds and public or private school grounds including but not limited to school athletic and school entertainment events." Therefore, the County has determined that noise generated at schools do not typically generate significant noise impacts. As discussed above, the two sources of noise that have the greatest potential to adversely impact the neighboring uses are not expected to generate noise levels high enough to considerably interfere with activities in these areas. The levels would not be expected to be objectionable to most persons and would not begin to approach the levels that would interfere with speech communication or disturb sound sleep. Therefore, the project is not expected to result in a significant noise impact due to activities within the park.

4.0 MITIGATION MEASURES

4.1 Temporary Impacts

The analysis presented in Section 3.2 concluded that demolition of the Shops and Technical Arts Buildings (Demolition Phases 2a and 2b) and construction of the new Shops, Parking Structure & Campus Police, and Student Services Center buildings could generate noise levels in excess of the County's 75 dBA limit at the single family homes located to the north of Manhattan Beach Boulevard. In addition, it was concluded that the demolition and construction of the Administration Building (Demolition and Construction Phases 3a) could generate noise levels in excess of the County's 85 dBA limit at the commercial building to the east across Crenshaw Boulevard. Further, it was concluded that the Parking Lot F structural reinforcement and third level addition could generate noise levels in excess of the 75 dBA limit at the single-family homes to the north, and the 80 dBA limit at the multi-family homes to the south. To mitigate these impacts, the following mitigation measure is recommended.

> **Mitigation Measure N-1:** Prior to the commencement of demolition on the Shops, Technical Arts, and Administration buildings, the construction of the new Shops, Parking Structure & Campus Police, Student Services Center, and Administration buildings, and the Structural Upgrades and Third Level Addition to Parking Lot F, the contractor shall prepare a construction noise abatement plan for each project. This plan shall present a list of the equipment to be used for the activity and the noise levels generated by each piece of equipment and the nearest distance to off-site uses. This plan shall demonstrate compliance with the County of Los Angeles Noise Ordinance and clearly describe any measures required for compliance. In addition, the plan prepared for the Parking Lot F construction activities should include practical measures to minimize noise levels in Alondra Park such as locating noise sources away from the park whenever possible.

4.2 Long Term Off-Site Impacts

The analysis presented in Section 3.3.1 showed that the project will not result in any significant traffic noise impacts and the analysis presented in Section 3.3.2 showed that the project would not result in any significant off-site noise impacts from on-site activities. Therefore, no mitigation is required.

5.0 UNAVOIDABLE SIGNIFICANT IMPACTS

With the implementation of mitigation measure N-1 described in Section 4.0 all significant impacts will be reduced to a level of insignificance. There will be no noise related unavoidable significant impacts due to the proposed project.

APPENDIX

Table A-1
Average Daily Traffic Volumes (1,000's) and Speeds Used to Model Traffic Noise Levels

Roadway Segment	Speed (mph)	No Project Existing	No Project Opening Year	With Project Existing	With Project Opening Year
Hawthorne Boulevard					
North of Manhattan Beach Blvd.	35	33.4	34.0	33.6	34.2
Manhattan Beach Blvd. to I-405	35	35.0	35.6	35.2	35.8
Prairie Avenue					
North of Manhattan Beach Blvd.	40	21.4	21.8	21.6	22.0
South of Manhattan Beach Blvd.	40	21.0	21.4	21.1	21.5
North of Redondo Beach Blvd.	40	20.9	21.3	21.0	21.4
Redondo Beach Blvd. of I-405	35	26.2	26.6	26.4	26.8
Yukon Avenue					
Redondo Beach Blvd. to Artesia Blvd.	25	4.0	4.1	4.2	4.3
Lemoli Avenue					
North of Manhattan Beach Blvd.	25	2.2	2.2	2.3	2.3
Crenshaw Boulevard					
North of Manhattan Beach Blvd.	40	23.1	23.7	23.5	24.1
South of Manhattan Beach Blvd.	40	25.9	26.5	27.1	27.7
North of Redondo Beach Blvd.	40	26.4	27.0	27.6	28.2
South of Redondo Beach Blvd.	40	25.1	25.5	26.4	26.8
North of Artesia Blvd.	40	24.6	25.0	25.8	26.2
Artesia Blvd. to 182nd St.	40	27.4	27.9	28.4	28.9
182nd St. to I-405	40	35.2	35.8	35.6	36.2
South of I-405	40	41.2	41.9	41.4	42.1
Manhattan Beach Boulevard					
I-405 to Hawthorne Blvd.	40	20.7	21.3	21.0	21.6
Hawthorne Blvd. to Prairie Ave.	45	19.1	19.5	19.8	20.2
East of Prairie Ave.	45	18.9	19.3	19.9	20.3
West of Lemoli Ave.	45	19.1	19.5	20.6	21.0
Lemoli Ave. to Crenshaw Blvd.	35	17.6	18.0	19.3	19.7
East of Crenshaw Blvd.	35	11.6	11.9	11.7	12.0

Table Continued on Next Page

Table A-1 (Continued)
Average Daily Traffic Volumes (1,000's) and Speeds Used to Model Traffic Noise Levels

Roadway Segment	Speed (mph)	No Project Existing	No Project Opening Year	With Project Existing	With Project Opening Year
Redondo Beach Boulevard					
West of I-405	35	18.9	19.5	19.1	19.7
I-405 to Prairie Ave.	35	27.4	28.2	28.1	28.9
Prairie Ave. to Yukon Ave.	35	26.6	27.4	27.4	28.2
East of Yukon Ave.	35	25.4	26.1	26.4	27.1
West of Crenshaw Blvd.	35	24.5	25.2	25.2	25.9
East of Crenshaw Blvd.	40	21.8	22.6	22.4	23.2
Artesia Boulevard					
Yukon Ave. to Crenshaw Blvd.	40	23.2	23.6	23.2	23.6
East of Crenshaw Blvd.	40	27.7	28.2	27.9	28.4
182nd Street					
West of Crenshaw Blvd.	35	14.9	15.2	15.0	15.3
Crenshaw Blvd. to I-405 NB Ramps	35	27.3	27.8	27.7	28.2
East of I-405 NB Ramps	35	14.4	14.6	14.5	14.7

CONDITION ASSESSMENT
OF

EL CAMINO COLLEGE PARKING STRUCTURE - LOT F
16007 CRENSHAW BLVD
TORRANCE, CA, 90506

FOR

El Camino Community College District
16007 Crenshaw Blvd
Torrance, California 90506

IDS Project Number: 12.114

BY

IDS GROUP

1 Peters Canyon Road, Suite 130, Irvine, CA 92606
Tel: 949-387-8500 Fax: 949-387-0800

April 9, 2012

April 9, 2012

Mr. Thomas Brown
Director, Facilities Planning & Services
El Camino Community College District
16007 Crenshaw Blvd, Torrance, CA 90506

Re: **Condition Assessment – Job No. 12.114**
El Camino Parking Structure – Lot F
16007 Crenshaw Boulevard, Torrance, CA 90506

Dear Mr. Brown:

IDS Group, Inc. (IDS) is pleased to present this report evaluating the El Camino Parking Structure – Lot F at 16007 Crenshaw Boulevard, Torrance CA 90506.

This report provides a background of the project; summarizes our site visits, review of available drawings, deferred maintenance review, compliance to ADA accessibility, and structural engineering reviews; and provides a conceptual cost estimate of the recommended repairs and seismic upgrades, including the option for vertical expansion.

Please contact IDS Group to discuss the findings of this report as soon as possible; some of the areas of concern are related to life/safety issues. I may be reached at 949-387-8500, ext. 116 or electronically at said.hilmy@idsgi.com.

Sincerely,
IDS Group, Inc.

Said Hilmy, Ph.D., SE, LEED AP
Principal

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1.0 PROJECT BACKGROUND

The design of the Lot F parking structure was envisioned in the early 1960s; the parking structure was built in 1968. This nearly one-half mile long, two-level parking structure is located on the west side of the campus and spans across the Dominguez flood control channel. With space for over 1,700 cars, it provides more than one-third of the entire parking needs for the campus.

The lower parking level includes structured parking over the flood channel and spans 83 feet, with on-grade parking east of the flood channel and a two-way drive lane on the west side of the channel. The structure is supported on piles and conventional concrete footings. It includes cast-in-place concrete columns and beam, precast double-tee beams, and spancrete prestressed planks with concrete topping. The precast double-tee beams were custom manufactured, and with a span of 83 feet could be considered one of the largest-ever built for a parking structure in Southern California. The parking structure was also designed to accommodate one more level of parking that was never built. It is noted the agencies having jurisdiction over the parking structure are DSA and, possibly, the County of Los Angeles since the parking structure expands over a big area of its flood control channel.

Since 1968, the parking structure served the campus very well, but as with many concrete parking structures with over 40 years of services, signs of deterioration and distress became evident, necessitating immediate investigation. Accordingly, in January 2006, Walker Parking Consultants performed a condition assessment report that addressed several deferred maintenance items, but with no review of the structural integrity of the parking structure. The proposed total cost of repair at that time was estimated at $4,759,000 including the base repairs, enhancements, and needed maintenance. The base repair included concrete and waterproofing repairs and mechanical/drainage repairs. The recommended repair included lighting system upgrade, adding elevators, and striping. Preventative maintenance repair included repair of expansion joints, among others.

On Friday March 16, 2012, IDS Group was requested to attend a Job Walk to review the most recent report of concrete spalling that occurred at the western drive lane of the parking structure. During our site visit it became evident that numerous prestressed spancrete planks along the western drive lane experienced significant concrete deterioration and rust, making their structural integrity very questionable. Pieces of fallen concrete were found on the ground. In addition, significant floor cracks were observed along the entire parking structure and one of the exterior precast barriers was recently hit by a vehicle and experienced significant damage, making it structurally unstable. Other areas of observed damage included expansion joints, seats of the precast doubles-tee beams, deterioration at the base of some concrete columns, and staircase rust and concrete spalling that was typical in all locations. The Campus police closed the parking structure over the weekend, and opened it partially on Monday, March 19, 2012.

On Monday March 19, 2012, IDS engineers met with the Campus facility managers and police to address our concerns, with the goal of providing safety to the users of the parking facility. Based upon this meeting, several items were recommended:

- The west drive lane would be temporarily closed to traffic along its entire length at both levels.
- A new lane east to the west lane would be re-stripped to allow for the traffic circulation.
- IDS would provide an immediate repair design to stabilize the damaged precast barrier panel.
- IDS would provide a proposal to conduct a condition assessment of the parking structural with emphasis on immediate structural repair and practical recommendations to the college including options of repair and cost-effective remedies addressing the structure's deficiencies.

Consequently, El Camino College authorized IDS Group to conduct a condition assessment study of the parking structure with the following scope of work:

(1) Provide emergency repair details of the precast panel that was damaged by a vehicle impact.
(2) Provide thorough field investigation of the entire structure to investigate areas with life-safety concerns.
(3) Review all available documents as related to the original design.
(4) Provide options of repair of the structural damage observed in the parking structure.
(5) Provide options of additional miscellaneous repairs that will be needed by DSA to obtain a permit, including seismic upgrade if needed.
(6) Provide a preliminary cost estimate of the construction to include all repair items and deferred maintenance measures, such as water proofing and expansion joints.
(7) Investigate the feasibility of adding an additional level above the existing Lot F parking structure.

<u>2.0 STRUCTURAL ASSESSMENTS</u>

The structural investigation of El Camino Lot F Parking Structure was conducted by a team consisting of Said Hilmy, Ph.D., S.E, Matt Kani, S.E, Victor Mercado, S.E, and Robert Freeman, registered architect, all with IDS Group. The site visits were performed on March 16, March 19, March 21, and March 23, 2012. We observed all exposed areas in the parking structure including assessment of the double-tee beams covering the channel.

The structural review included site inspections, review of existing drawings, structural code checks, and preliminary structural calculations. No physical material testing was performed. The parking structure is located on the west on the campus as shown in Photo # 1 of the Campus Map. We reviewed the original architectural and structural drawings of the parking structures with DSA approval stamp dated Feb 5, 1968. The drawings are titled “Channel Parking.” The architect is Powell Morgridge Richard & Coghlan. The structural engineer is Hillman, Biddison & Lovenguth.

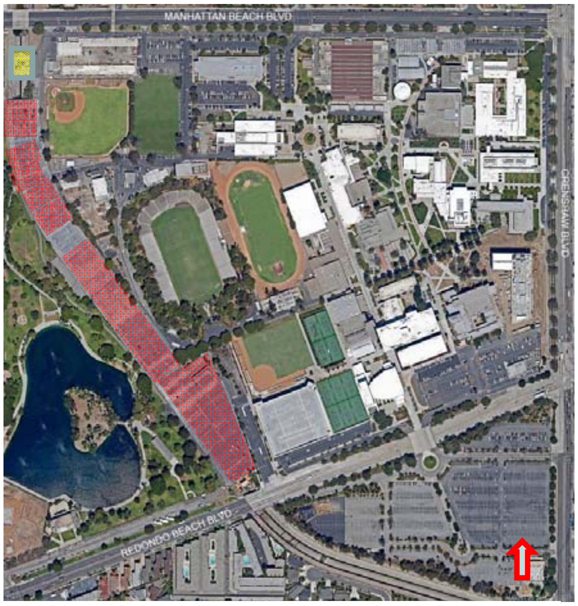


Photo # 1 Campus Map with Parking Lot F Parking Structure (shown in red.)

We also reviewed a copy of Walker Parking Consultant report dated January 2006 entitled *Condition Appraisal, Lot F Parking structure, Torrance, California.*

2.1 Description of the Parking Structure:

Photos # 2 through Photos # 7 show the current condition of the parking structure. Additional photos and drawings are provided in the appendix C for further documentation. This two-level parking structure has two ramps leading to the upper level. One ramp is at the north side of the parking structure adjacent to Parking Lot E and Manhattan Blvd. The other ramp is from the east-south providing access from Redondo Beach Blvd.

Photo # 2 View of Dominguez Flood Control Channel-Looking North.

Photo # 3 View of the north ramp leading to the parking structure.

Photo # 4 Double-tee beams span across the Channel and provide parking at first level.

Photo # 5 Two-inch wide expansion joints separate the structure into several structural segments.

Photo # 6 The Western Drive includes two lanes for traffic circulation. Its 20ft span is covered by spancrete hollow core precast planks.

Photo # 7 View of the upper level of the parking structure looking South.

Photo # 8 shows a typical cross section of the structural framing of the parking structure. Columns are located at Grid Lines A, B, C and D (from left to right (West to east). At the south portion of the parking structure additional spans are provided at Grid Line E, F, and G.

The main span of the parking structure is 83" wide and is covered with a precast double-tee beams at both levels. The east span is 45 feet and is covered with a smaller double-tee beams. A typical cross section of the three-feet deep double-tees is shown in Photo # 9 (which is a cropped image from the as-built structural drawings.)

The slab of the Western Lane consists of Hollow core blanks termed Spancrete®. A typical cross section of the hollow core is shown in Photo # 9 as well. These planks were manufactured containing continuous voids that reduce weight and cost and make them an excellent fire resistant. Above the Spancrete and the double-tees, 2 ½ " reinforced concrete topping was cast in place to provide a continuous parking surface (Photo #7). As shown in Photo # 5, the parking structure includes two-inch wide expansion joints that separate the structural into several segments (nine in total).

Reinforced concrete columns and girders provide the main gravity supporting and lateral resisting systems. The columns adjacent to the flood channel (Grid Line B and C) are supported on 24" diameters piles and 50 feet deep. The columns outside the channel are supported on shallower piles. All piles are reinforced only at the upper one-third of the overall length of the piles.

It is also noted from Photo #8 that pipe drains are located at Grid Line B and D and dump water directly into the channel.

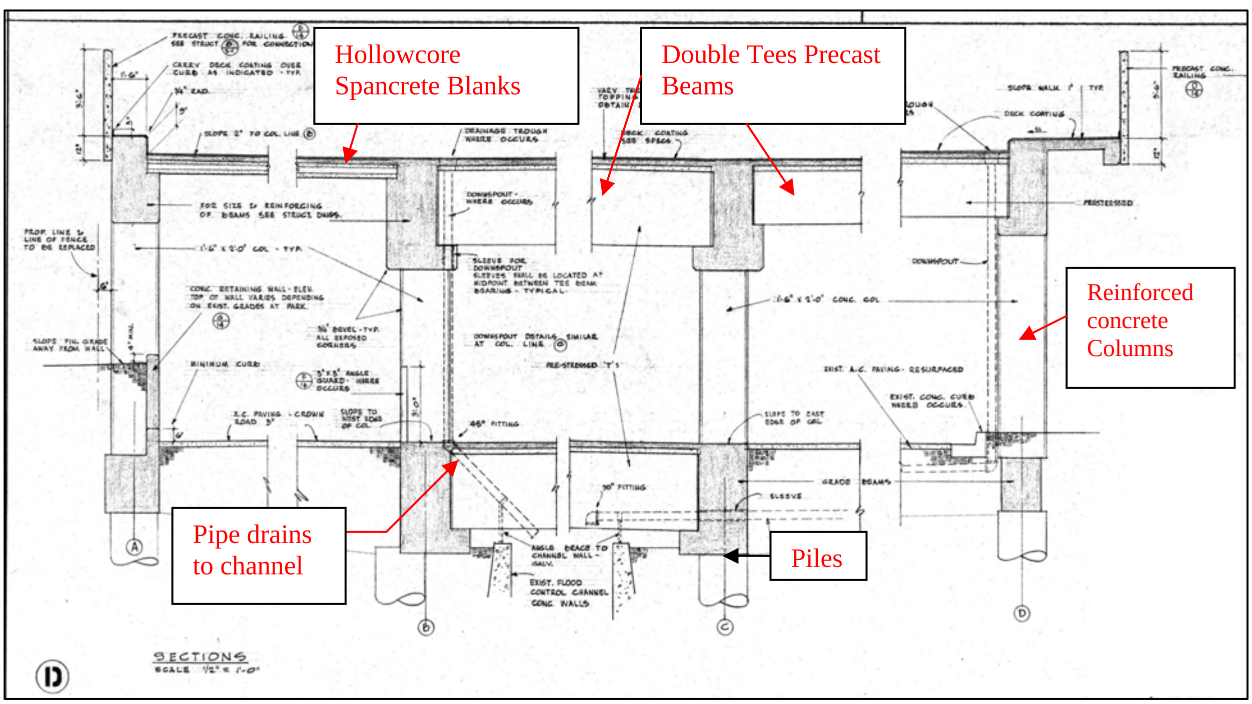


Photo # 8: A typical profile of the structural system of the parking structure. The elevation is approximately 150 ft wide. The distance between the flood channel reinforced concrete wall is 75 ft. Walls are adjacent to Grid Lines B and C. The main span of the precast double-tee beams is 83 ft.

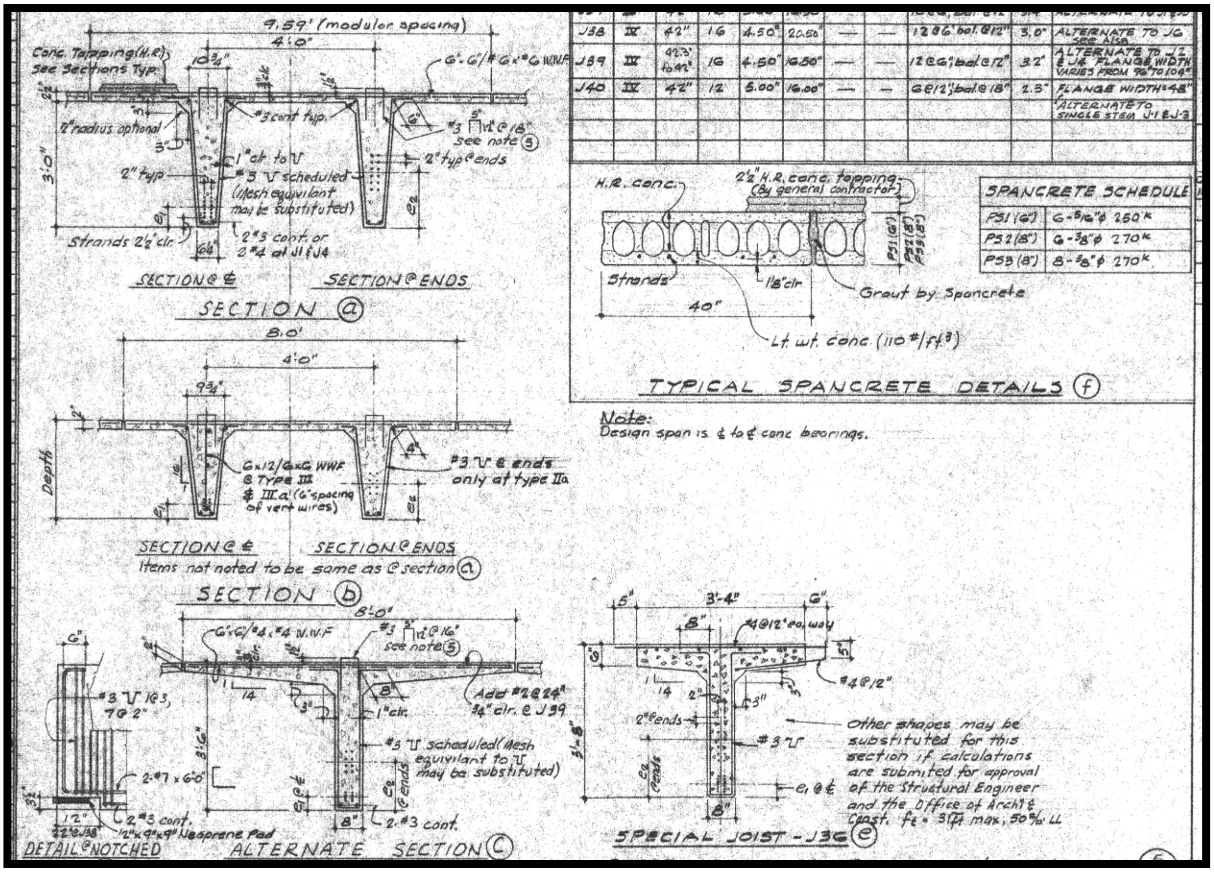


Photo # 9: Typical cross section of the precast prestressed system used in the parking structure. Double-tee beams are used for large spans (between Grid Lines B through G). Hollow-core spancrete planks are used for smaller spans (between Grid Line A & B). The double-tee beans are 8 ft to 10 wide and are supported on cast-in-place concrete girders. The detail of the double-tee beams concrete seat calls for the use of 9" neoprene pads.

2.2 Main Source of the Observed Damage at the Parking Structure:

During our site visits (two of the visits after rainy nights), it was clear that the parking structure showed signs of aging and distress. The elastomeric coating that used to cover the upper deck is almost gone. The expansion joints are badly deteriorated. Cracks were visible in the concrete slabs, and water ponding was evident in numerous places. One of the most important findings is shown visually in Photo # 10. In the upper deck we found all water drains are clogged or don't exist. Rain water infiltrated through the concrete cracks and to the supporting concrete member, which lead to serious corrosion of the steel and spalling of the concrete. Photo 11 shows the areas where several distress were found; they are circled in red.

Photo # 10: Longitudinal cracks we found along grid lines B, D and G causing corrosion and concrete spalls

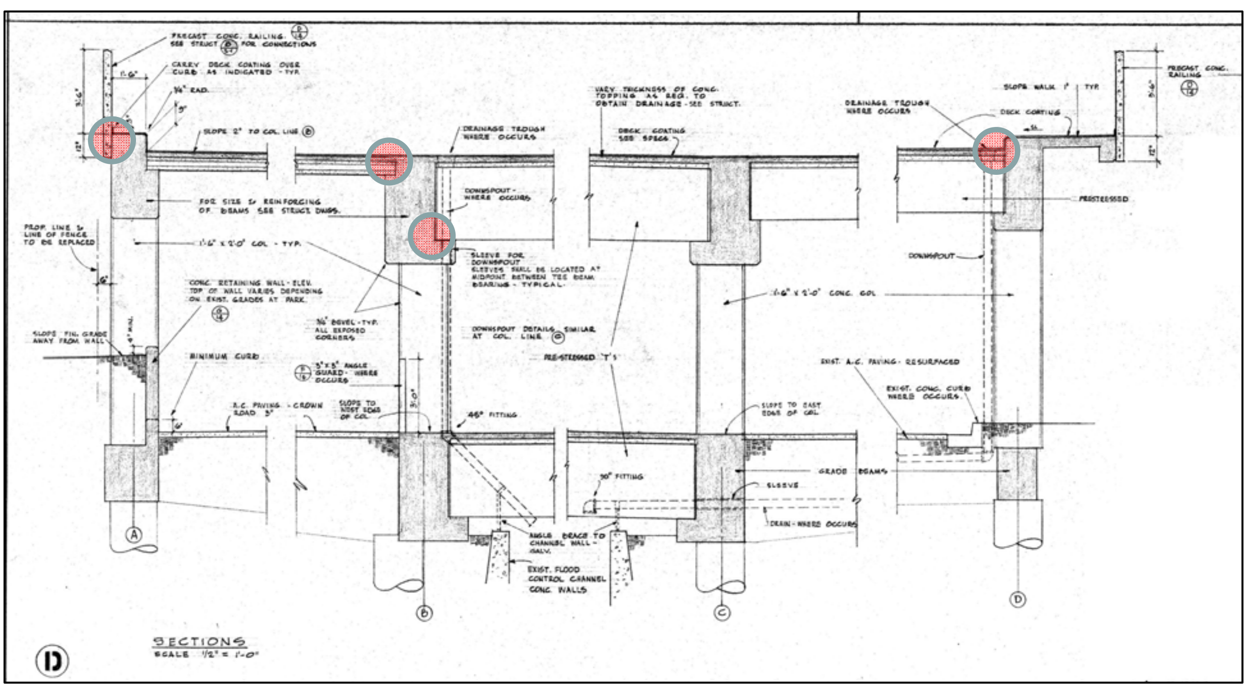


Photo # 11: Illustration of severely damaged areas in the concrete structural supporting system.

The following are examples of the main areas of distress and major concerns found in the parking structure:

(1) Spancrete Damage: The prestressed hollow core spancrete planks spanning 20 feet between grids A and B at the west drive lane have experienced significant concrete and steel reinforcing deterioration, compromising their structural integrity. These planks were manufactured with continuous voids in them. Water was able to penetrate through surface cracking and led to the corrosion of the prestressed wires. Signs of moisture were evident on the bottom surface of the planks along its entire one-half mile long length. Pieces of falling concrete were found at several areas in the west drive lane close to Grid Line B. We found others areas where concrete falling is imminent and with a large void to allow birds to nest. At the second level in the north-south direction along Grid B there are large continuous cracks in the slab on each side of the columns lines. These cracks have allowed water to infiltrate to the level below and into the circular voids of the hollow core spancrete planks. Rust of the prestressed wires were noticeable along the entire west drive lane, with supporting evidence that the concrete strength of the spancrete planks have been significantly compromised.

Photo # 12. Concrete spalls at the bottom of the spancrete planks adjacent to Grid Line B

Photo # 13. Revealed voids and total failure of the prestressed wire

Photo # 14. Spalled concrete on the drive lane. The entire bottom surface of the upper deck is stained and wet.

Photo # 15. Hollow cores are exposed. Concrete strength is compromised.

(2) **Damage at the supports of the double-tee precast beams:** The beam seats of various precast doubles-tees were found to be cracked. Water intrusion from the level above has distressed the concrete and caused cracks to form in a critical zone of the double tees beams. Beams with shear cracks at the beam seat are susceptible to collapse. Corrosion damage to the precast beams reinforcing at the interface with the girders was also observed throughout the parking structure.

Photo # 16. Evidence of spalled concrete at the supporting ends of the 83 ft long Double Tees.

Photo # 17 Transverse cracks at the beam end.

Photo # 18 Concrete cracking at the beam's end and signs of water intrusion.

Photo # 19 Corrosion of rebars at the Double Tees Flanges.

(3) **Cracking and spalling in of the Concrete Slab:** There are numerous areas in the first level and second level where concrete has deteriorated and spalled, exposing slab reinforcement that is significantly corroded. In addition, there are large visible cracks in the range of 1/16-inch to 1/4-inch. The extensive water infiltration through the cracks has significantly exacerbated the deterioration and distress of concrete members in numerous areas of the parking structure. Accordingly, the seismic resistance of the floor diaphragms are potentially compromised due to the slab reinforcement corrosion and cracking. It is possible the damaged slabs have become ineffective in transferring seismic loads.

Photo # 20. In numerous places, rebars in the concrete topping at both levels are exposed and corroded leading to concrete spall as well

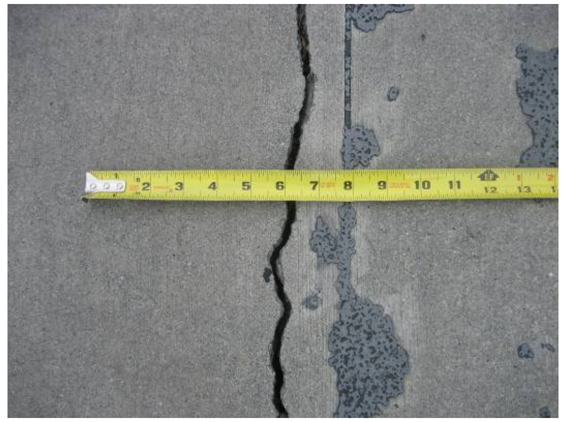


Photo # 21. Cracks up to one-quarter-inch wide are scattered on the top surface of the upper deck.

(4) Girder Damage: Concrete delaminations and spalling have occurred along some of the girders spanning in the north-south direction along Grid Lines B, D, and G. The most damage was found at Grid Line G for the girders the double-tee beams of the second level at the south end of the parking structure. Since these girders are seismic resisting elements as well, they become vulnerable to collapse in a large seismic event

Photo # 22 Concrete cracking cased by rust of the top ebards.

Photo # 23 Concrete spalling caused by water intrusion and rust of bottom rebars

(5) Damage at Some Columns: Concrete spalling and corrosion of the reinforcing steel ties at the base of some columns were observed along Grids B, C, D and G. This is possibly the result of vehicle collisions and water exposure from landscaping sprinklers that caused rust of the reinforcing and spalling of the concrete. It is noted that all columns in the parking structure were designed to carry gravity loads and participate in the seismic resistance system.

Photo # 24 Concrete cracking caused by rust of the steel reinforcing.

Photo # 25 Damage at the bottom of the column

(6) Expansion Joint Damage: The majority of the expansion joints in the parking structure are significantly damaged. Cover plates were found missing from most of the joints. The compression seal of many of the joints were observed dangling from the level above and creating a falling hazard for the users of the parking structure. In addition, at many locations the concrete lip at the expansion joint was found broken off.

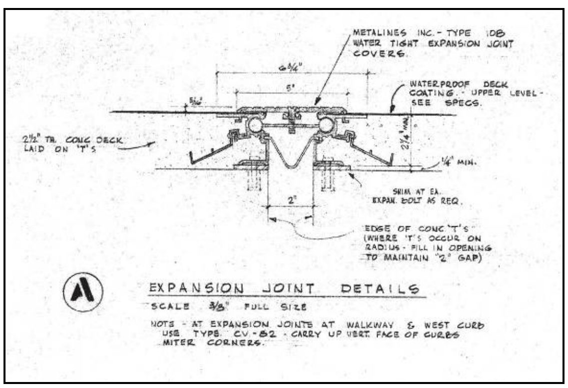


Photo # 26 As built details of the expansion joints. In most locations this configuration no longer exists.

Photo # 27 Deteriorated joint at west drive

Photo # 28 Deteriorated expansion Joint.

Photo #29 Failed joints between the double-tee beams

(7) Ramp Damage: The south ramp entrance was found to be significantly distressed. The slab at the expansion joist has become a large void that poses car safety issues in addition to creating a falling and tripping hazard. Cracks were observed in the north ramp walls, which appear to be due to the inadequate joint between the precast double tees and the walls. In a seismic event, the precast beam presses against the wall, causing excessive displacements which the wall is unable to sustain.

Photo # 30 Deterioration at Ramp Entrance.

Photo # 31 Spalled concrete at the ramp joint

(8) Cracks in Short Columns: Along Grid A, the existing retaining wall ramps up while connected to the columns creating short-column condition. From a structural point of view, a short column is several folds stiffer than a taller column, and will attract a larger seismic force, In addition, it becomes more vulnerable to cracks due to thermal expansion/ contraction. Flexural cracks were noticed in shorter columns along Grid Line A.

Photo # 32 Deterioration at Ramp Entrance

Photo # 33 Flexural cracks at short columns

(9) Precast Rail Wall Damage: Several of the west precast rail wall panels along Grid A were struck in the past by vehicles and experienced significant damage, making them structurally unstable. Failure of these precast panels could lead to falling hazards to hikers walking along the trail in the adjacent park. It was observed that attempts were made in the past to repair some of these damaged precast panels, but it appears this repair was temporary and marginal. In addition to vehicle related damage rusted rebars and spalled concrete were found in numerous panels.

Photo # 34 Temporary Repair of Precast Joints

Photo # 35 Damaged Precast units

(10) **Architectural Screen Wall:** At the north and south end of the parking structure there is an architectural screen wall approximately 9 feet tall comprised of steel tubes spaced at 4'-0" O.C. vertically. The screen wall is supported vertically and laterally from the edge of the slab with steel angle embeds spaced at 4'-0" O.C. The deterioration of the second level slab has exposed the anchors of the embeds making the wall unstable. This poses a significant fall hazard threatening individuals and cars entering the structure at the north entrance.

Photo # 35 View of North Screen

Photo # 36 Damaged screen connections

3.0 DEFFERED MAINTENANCE REVIEW:

During our site visits it was clear the parking structure is showing signs of aging and problems relating to a lack of maintenance. Main issues are related to failed expansion joints, addressed above, and clogged roof drains that affect the drainage system of the entire garage. After rainy days, water ponding can be found in numerous locations of the structure. Other areas of deferred maintenance included damage of the screen and precast panel barriers, spalled concrete, and corrosion of the railing of the stair towers leading to the upper level. The following are the main areas of deferred maintenance issues we observed (more documentations are provided in Appendix B):

(1) Clogged Roof Drains leading to Water Ponding: The majority of deck drains are clogged, rusted, and non-functioning. Some of them were found to be covered with waterproofing material. Due to the deflection at upper deck and the extensive cracks of the deck slab water infiltrates and creates water ponding.


Photo # 37 Example of clogged drain- Grid Line A


Photo # 28 Example of clogged drain- Grid Line D


Photo # 39. Water ponding after rain at Grid Line B


Photo # 40. Water entering parking structure from adjacent Park at Grid Line A.

(2) Car Stop Damage and Tripping Hazards: Precast reinforced concrete parking stops were noticeable in the parking structure. The damage is caused by vehicle impact leading to concrete cracking and spalls. Rust of rebars led to more concrete spalling, which creates tripping hazards.


Photo # 41 Damaged Car Stops


Photo # 42 opened expansion joints

(3) Damage at Stairs: There are nine reinforced concrete stair towers with steel railing leading to the upper level. Many of the guard rails and handrails were found to be corroded (some of them are heavily corroded), which led to concrete spalling. Spalling extended to treads, raisers, and landings. The railing in some areas has become unstable and needs immediate repair or replacement.

Photo # 43 Typical railing rust at stairs

Photo # 44 Railing rut and concrete spalling

(4) Delaminating elastomeric coating and concrete overlay: In many location at the upper deck, concrete “shim-coat” overlays have been installed to alleviate ponding water conditions. We found most of these overlays have failed and are breaking apart. In addition, the upper deck received a traffic-topping waterproofing elastomeric material. This traffic topping was found to be severely worn and has left bare concrete exposed over most of the upper level. Signs of corrosion of the rebar in the concrete topping were found, particularly in the areas collecting water.

Photo # 45 Delaminating Elastomeric coating.

Photo # 46 rust of rebars in concrete topping

(5) Damage to Asphalt Drive Lanes and Ramps: These drive lanes, especially between Grid A and B, included aging asphalt overlay that is cracked and distressed. Sub-grade settlement at grade-level perimeter drive was observed. Photos #47 and #48 show some examples:

Photo # 47 Distressed asphalt overlay.

Photo # 48 West Drive Lane Looking South

4.0 SEISMIC INVESTIGATION

The lateral load resisting system of the parking structure consists of cantilevered concrete columns in the east-west direction and concrete moment frames in the north-south direction. The specific structural and seismic systems used in this building were carefully scrutinized. It is noted that current Building Codes are mainly for new construction, rather than the evaluation of existing facilities.

IDS preliminary analysis utilizes "ASCE 31- Seismic Evaluation of Existing Building." This recognized standard in the structural profession uses performance-based criteria, which specify the different performance levels of a building during several levels of ground shaking. This may range from collapse-prevention to fully operational buildings with no damage following an earthquake. The recommended design earthquake mitigation for life-safety measures is based on a 10% probability in 50 years (475 year recurrence period). In our evaluation, we considered the life-safety performance level. Appendix "E" of this report includes a summary of the preliminary structural calculations performed, most of which were performed using the commercially-available ETABS computer program.

For a detailed discussion of the Life-Safety Performance Level, we refer to a publication by FEMA defining the Life-Safety Performance Level in the "NEHRP Guidelines for the Seismic Rehabilitation of Buildings":

> *Structural Performance Level S-3, Life Safety, means the post-earthquake damage state in which significant damage to the structure has occurred, but some margin against either partial or total structural collapse remains. Some structural elements and components are severely damaged, but this has not resulted in large falling debris hazards, either within or outside the building. Injuries may occur during the earthquake; however, it is expected that the overall risk of life-threatening injury as a result of structural damage is low. It should be possible to repair the structure; however, for economic reasons this may not be practical. While the damaged structure is not an imminent collapse risk, it would be prudent to implement structural repairs or install temporary bracing prior to re-occupancy.*

Based upon the preliminary analyses, the following is a summary of our findings:

- **Lateral Load Resisting System in the East-West Direction:** Seismic inelastic drifts are expected to be high. The cantilevered concrete columns of the seismic resisting system are likely to be highly stressed in a large seismic event. The column shear stresses exceed 160% of the allowable shear stresses permitted in ASCE 31. In addition, the bending stresses in the columns exceed four times the column capacity.
- **Lateral Load Resisting System in the North-South Direction:** Seismic inelastic drifts are relatively low. Low ductility of concrete columns will limit the effectiveness of the lateral system. Concrete columns will be highly stresses in large seismic events. The column shear stresses exceed 160% of the allowable shear stresses permitted in ASCE 31. In addition, the bending stresses in the columns exceed two times the column capacity.
- **Foundations:** Existing piles are not effective for seismic resistance. The piles are under-reinforced with reinforcement provided only in the top 1/3 of the pile length

Based upon the summary above, we conclude the seismic response of the structure doesn't meet the life safety objectives. Seismic upgrade is needed, which is to be expected for this type of structure since the code in 1960s was based upon much lower seismic demands, More stringent concrete detailing is required by current building codes. Appendix D illustrates preliminary seismic upgrade concepts which were developed for cost estimate purpose

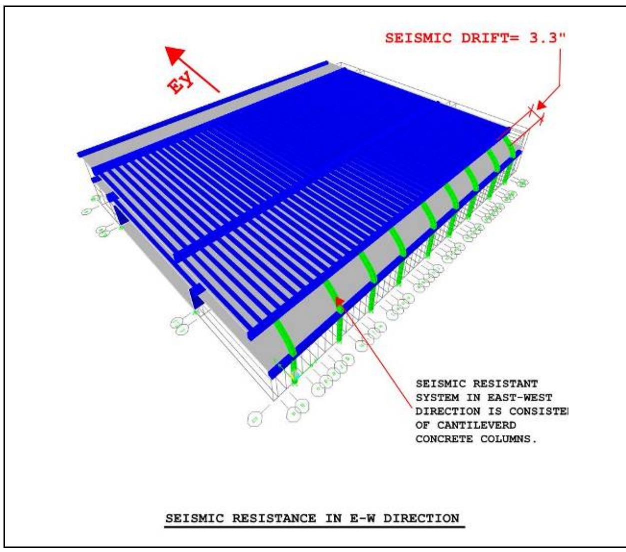


Photo # 49 Computer model shows large seismic drift in the East-West direction and overstressed columns in flexure and shear.

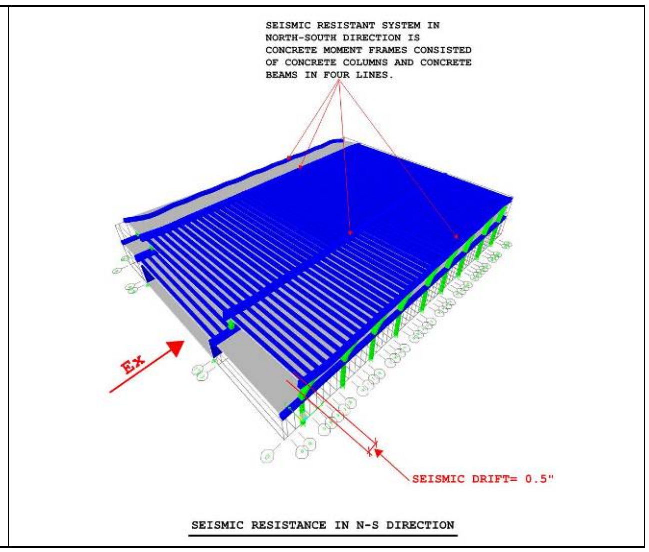


Photo # 50 Computer model shows better seismic performance along the North-South direction, but the columns are still overstressed.

5.0 ACCESSIBILITY REVIEW

An accessibility review was performed by Robert Freeman, RA with IDS Group. See Appendix A for photos of areas of concern. The following are the main findings.

1. There are no Accessible Parking Spaces at Lot F, Parking Garage. (See Append A Photo A5) IDS Group recommends adding accessible spaces on the Upper Level. Headroom clearance for accessible spaces in a Parking Garage is 8'-2". The Lower Level has 6'-8" vertical headroom clearance.
2. Stairs do not conform to Accessibility Code. (See Appendix Photo A7)

3. There are no elevators at the Parking Garage. They are not required by ADA Code for 2-level parking structures.
4. Steeply sloped and damaged asphalt on the Ground Level parking and driveway is not accessible.
5. Considering the option of adding new parking levels above the existing garage means that Elevators will then be required by ADA Code. Any parking structure containing more than two levels is required to be served by elevators.

6.0 RECOMMENDATIONS

The parking structure shows signs of aging. In particular, there are several areas that require immediate attention as related to structural repair, seismic upgrade, architectural and deferred maintenance and accessibility requirements.

6.1 Structural Recommendations:

Items of structural concern were described in this report. Because of life safety concerns we recommend the following repair measures to be implemented as soon as possible:

1. Replace entire slab of the west drive lane with new construction
2. Repair damage at the end of the double-tee beams
3. Repair damage at the main girders and beams. Spalling of the girders should be repaired by cleaning the damaged surface and applying non-shrink grout or epoxy material. In addition, concrete girders experiencing severe concrete and steel reinforcing deterioration should be repaired with FRP. Concrete girders with severe damage must be inspected during construction for the extent of the damage and repaired as required
4. Repair damage at the columns
5. Repair the cracks and spalled concrete at the upper deck
6. Repair expansion joints
7. Repair Structural supports of the screens and barrier walls

6.2 Seismic Improvement Measures include the following:

1. At every other column line between Grids A & B, add new concrete beams and stiffening of existing columns to create concrete moment frame system to resist seismic forces in the east-west direction
2. Stiffening of all concrete columns with FRP to increase seismic capacity.
3. A collector line should be provided at each concrete frame using two HSS 6X6X ½ beams.
4. Addition of one new cast in place concrete piles at all columns.
5. Modification of the concrete retaining wall connection to the concrete columns on line A to eliminate the short column condition.

6.3 Deferred Maintenance Items include:

1. Remove all remaining expansion joint components in supported structure and install new expansion joints. Repair damaged concrete at the joints and replace all joint sealants.
2. Repair delaminated and/ or de-bonded concrete topping and curbs.
3. Re-profile upper level surface for drainage
4. Replace corroded/broken drains and associated piping
5. Repair spalled/ delaminated concrete beams and columns
6. Repair impact-damaged wall sections at upper level, west perimeter wall.
7. Re-surface lower level asphalt drive lane between column lines A to B 1 to 95
8. Subgrade settlement at grade-level perimeter drive.

9. Many of the pre-cast concrete wheel stops need to be replaced.

More photos documenting the our concerns are included in Appendix A, B, and C.

7.0 OPTION FOR VERTICAL EXPANSION

The original parking structure was designed with an option of one additional level. El-Camino College requested IDS to briefly investigate the possibility of adding one more level that could support 800 additional spaces in addition to the needed repair and seismic upgrade work.

IDS has reviewed the requirements related to the option including:

1. New vehicle ramps would be added near the existing north vehicle ramp and near the east vehicle ramp. The ramps would take cars from the second floor to the proposed third floor
2. Elevators are required by ADA. Six hydraulic elevators are proposed. Masonry structures with equipment rooms at the lower-level are anticipated.
3. Existing concrete stairs will be removed and replaced from the foundation up with new steel stairs conforming to the California Accessibility Code and ADA.
4. Required accessible parking spaces are proposed for the second level. Clearance for this level will be set at 8’-2” clear under all structural members for use by accessible vans.
5. Structural requirements would require foundation strengthening in addition to the seismic upgrade of existing structure.
6. Opinion of Probable Construction cost is included in Appendix E.

8.0 OPINION OF PROBABLE COST

Our opinion of probable cost of the repair construction is presented in Appendix F and summarized herein:

Total Repair- ADA- Deferred Maintenance and Seismic Upgrade **$10,869,310**

Option for Vertical Expansion- Adding one more level (800 Cars) **$10,375,326**

This opinion is preliminary due to the limited scope and the short schedule of this investigation. It is based upon the current condition of the structure as of our last site visit of March 27, 2012. A more thorough investigation during the preparation of the Schematic Design documents could revise the construction costs provided above, as more repair details are developed.

9.0 CONCLUSION

The Parking Structure F needs immediate repair to restore its structural integrity and address the concerns shown herein. The structural repair and seismic upgrade is feasible. Construction could be performed in phasing while allowing the partial use of the parking structure. The cost estimate of the total repair project is $10,870.00 IDS has also considered the option of vertical expansion of one more level to the parking structure to add 800 stalls. The cost for this option is estimated at $10,375.00

Recommendations for repair and maintenance presented in this report are preliminary in nature and are not considered a repair design document; they are intended to identify the scope of design work needed to make the structure safer and more functional and minimize future damage. Additional engineering and design work is required to translate the general repair recommendations into actual construction documents to perform the repair work.

LIMITATIONS

The findings in this report are for the sole use of the El Camino Community College District in its evaluation of the subject property for the purpose of consultation and review of the parking garage. The findings are not intended for use by other parties and may not contain sufficient information for purposes of other parties or other uses. Our professional services have been performed with the degree of care and skill ordinarily exercised, under similar circumstances, by reputable consultants practicing in this field at this time.

APPENDIX A

ACCESSIBLITY REVIEW PHOTOS

Photo A1: North end of Parking Structure

Photo A2: Channel at north end

Photo A3: North End at Ramp

Photo A4: North-West Upper Level

Photo A5: North-West Upper Level

Photo A6: Expansion Joint Tripping Hazard

Photo A7: Stairs

Photo A8: Stair Handrails Not Accessible

Photo A9: Stair Guardrails Not Accessible

Photo A10: Stair Handrails Not Accessible

Photo A11: Stair Guardrails

Photo A12: Stair Guardrails

Photo A13: Stair Handrails

Photo A14: Asphalt Parking Tripping Hazard

Photo A15: Asphalt Parking Tripping Hazard

Photo A16: Stair Guardrail Rusting

APPENDIX B

DEFERRED MAINTENANCE REVIEW PHOTOS

Photo B1: North end of Parking Structure

Photo B2: Channel at north end

Photo B3: North Face at Ramp

Photo B3: North-West Upper Level

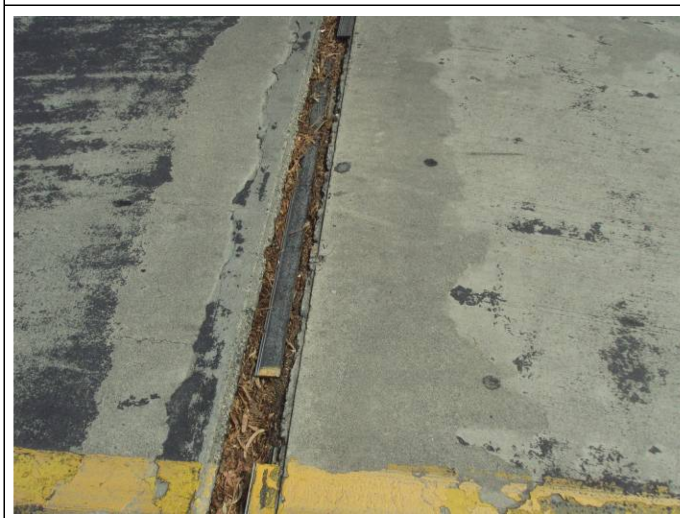


Photo B5: Damaged Expansion Joint

Photo B6: Waterproof Deck Coating gone

Photo B7: Parking

Photo B8: Clogged Deck Drain and Spalled Concrete

Photo B9: Clogged Deck Drain

Photo B10: Clogged Deck Drain

Photo B11: Damaged Expansion Joint

Photo B12: Damaged Expansion Joint

Photo B13: Precast Fascia Damage

Photo B14: Precast Fascia Spall

Photo B15: Precast Fascia Spall and Crack

Photo B16: Precast Fascia Spall

Photo B17: Stair

Photo B18: Stair Handrail Damage

Photo B19: Stair Landing Rusting/Spalling

Photo B20: Stair Concrete Spalling

Photo B21: Stair Landing Concrete Spall

Photo B22: Stair Landing Concrete Spall

Photo B23: Stair Tread Concrete Spalling

Photo B24: Stair Concrete Stringer Damage

Photo B25: North Side Chain Link Guardrail

Photo B26: South Side Chain Link Guardrail

Photo B27: South Side Chain Link Guardrail

Photo B28: Cain Link Guardrail

Photo B29: Ground Level Asphalt Distress

Photo B30: Ground Level Asphalt Tripping Hazard

Photo B31: Lower Level Concrete Beam Distress

Photo B32: Column at North Wall Lower Level

Photo B33: Column at North Wall Lower Level

Photo B34: Lower Level Concrete Beam Distress

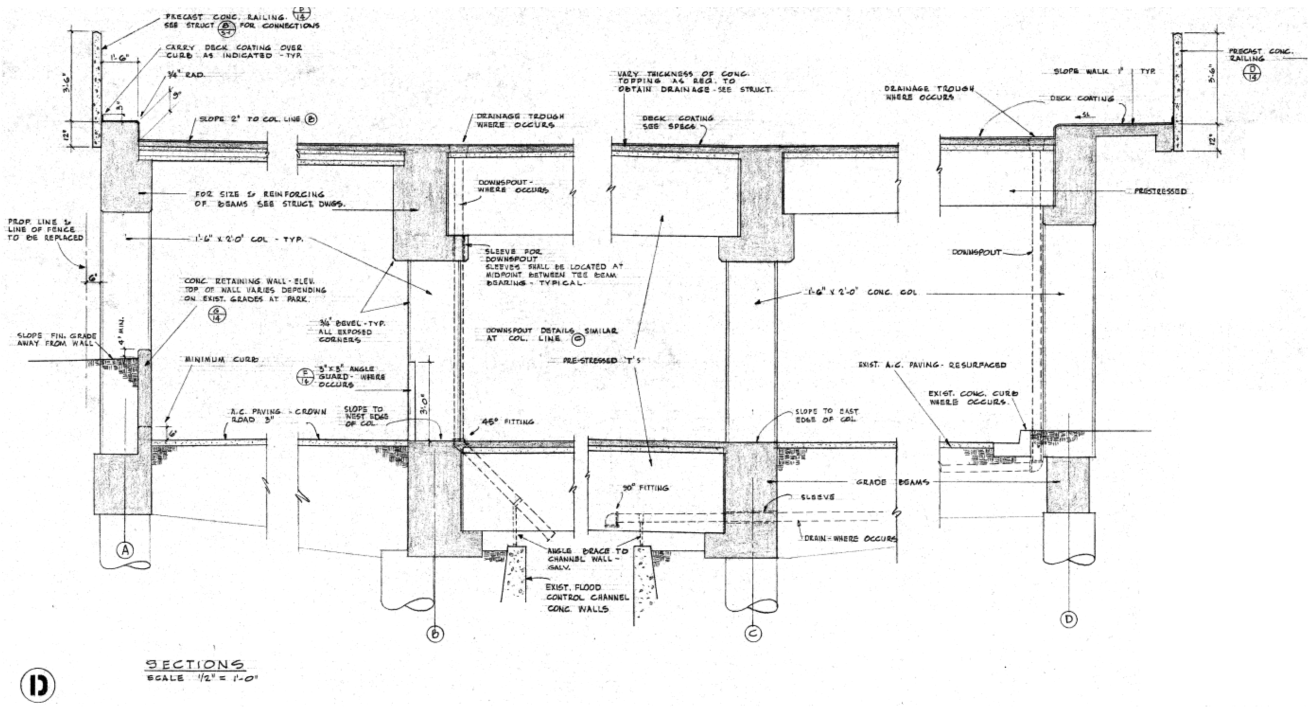
Photo B35: Hollow Core Slab Distress

Photo B36: Hollow Core Slab Distress

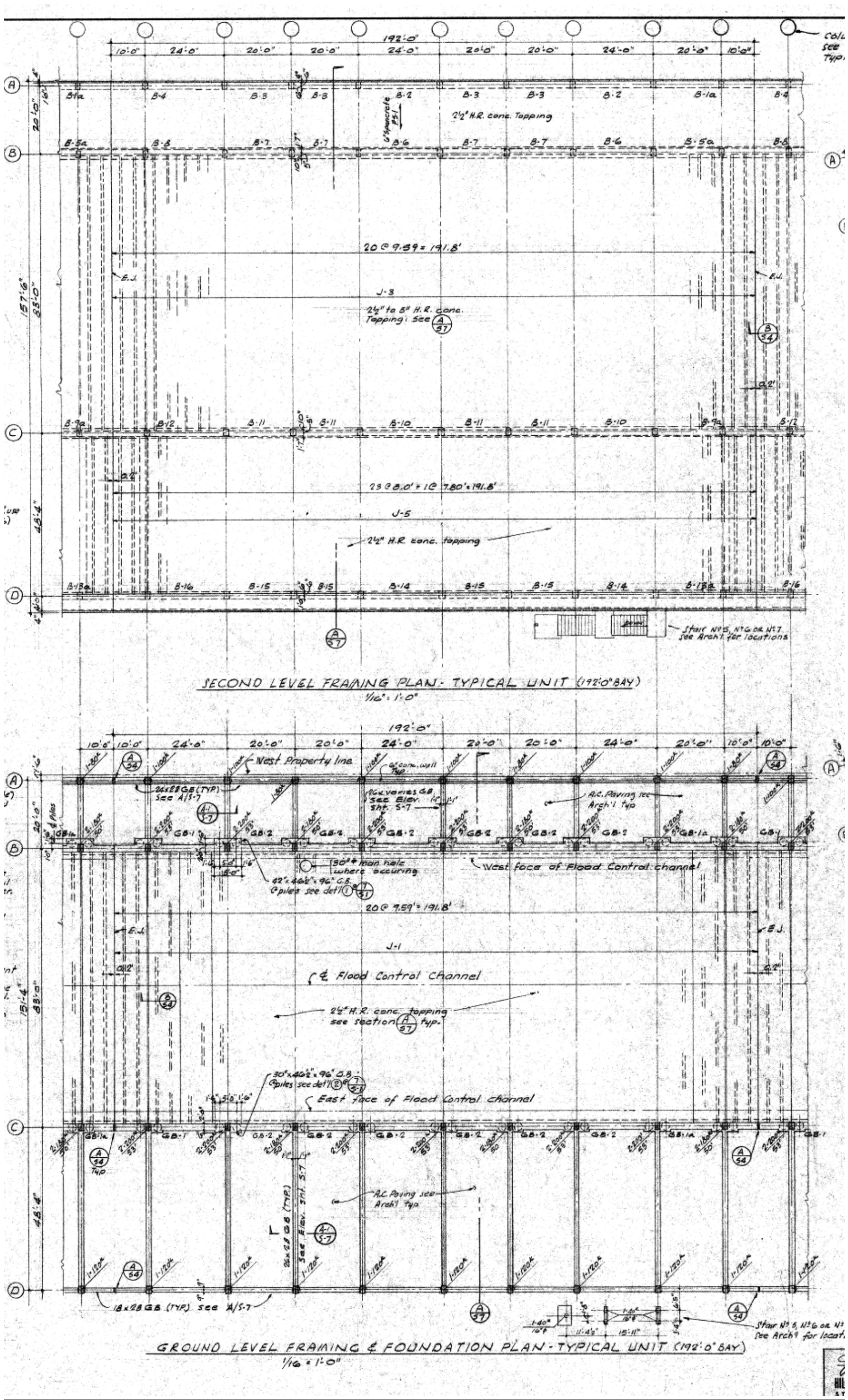
APPENDIX C

STRUCTURAL DETAILS & PHOTOS

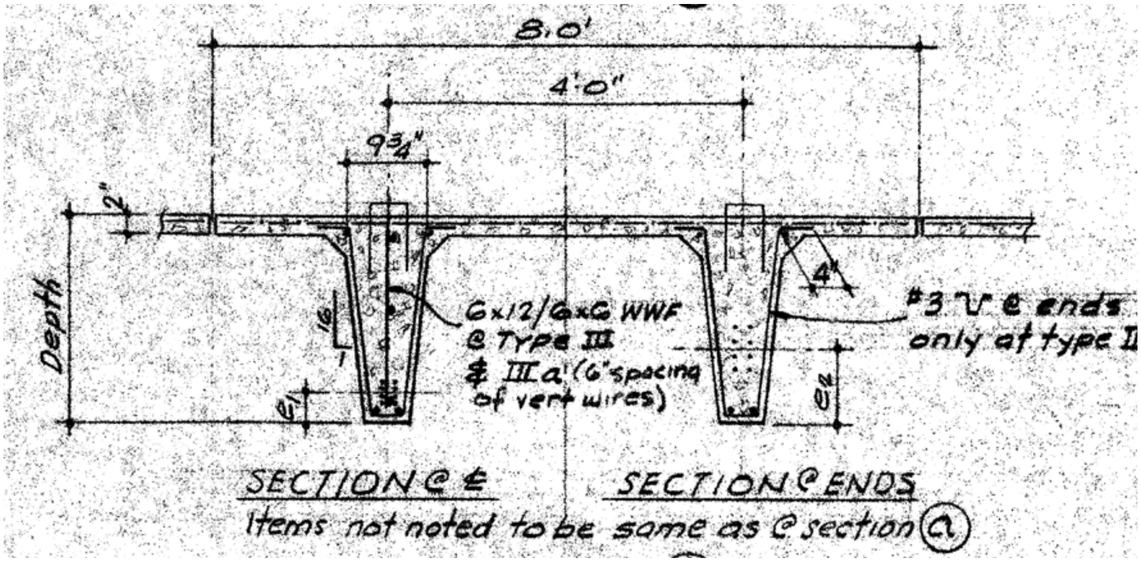
C-01: KEY PLAN



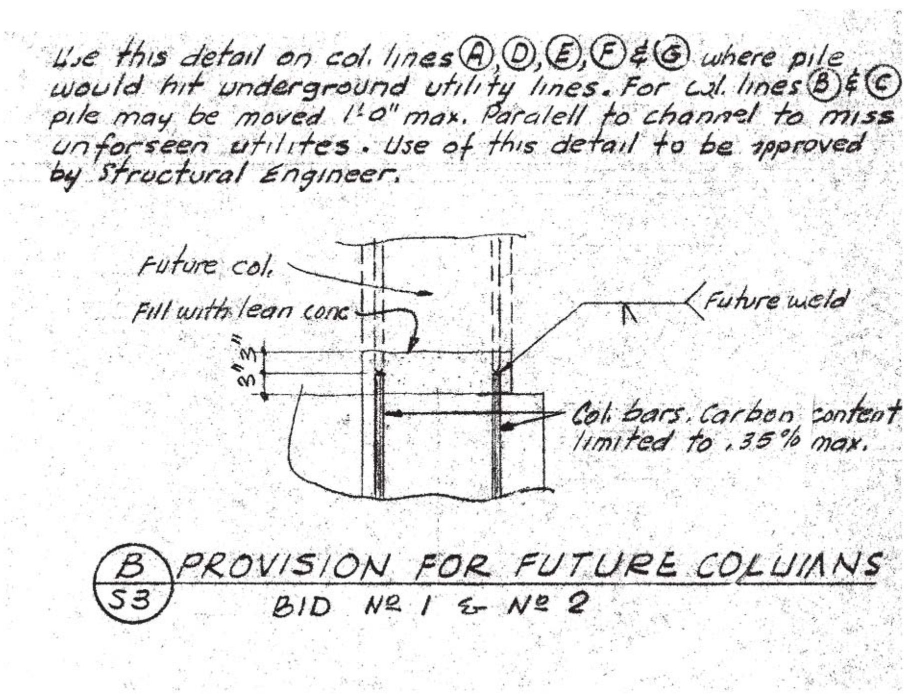
C-02: Typical Cross Section



C-02: Typical Framing Plans



C-03: Typical Joist section



C-03: Provovison for Future Columns

Photo C1: Column Damage

Photo C2: Column Damage

Photo C3: Column Damage

Photo C4: Column Damage

Photo C5: Drive Lane A-B

Photo C6: Spancrete Slab Damage

Photo C7: Slab Spalling/Deteriorated Reinforcing

Photo C8: Slab Spalling/Deteriorated Reinforcing

Photo C9: Typical Spancrete Slab Spalling

Photo C10: Typical Spancrete Slab Cracking

Photo C11: Typical Spancrete Slab Cracking

Photo C12: Typical Spancrete Slab Cracking

	
Photo C13: Typical Water Infiltration	**Photo C14: Typical Water Infiltration**
	
Photo C15: Girder Damage	**Photo C16: Girder Damage**
	
Photo C17: Girder Damage	**Photo C18: Girder Damage**

Photo C19: Girder Damage

Photo C20: Girder Damage

Photo C21: Girder Damage

Photo C22: Girder Damage

Photo C23: Typical Girder Cracks

Photo C24: Poor Concrete at Girder

Photo C25: Typical Double Tee Seat Damage

Photo C26: Typical Double Tee Seat Damage

Photo C27: Typical Double Tee Seat Damage

Photo C28: Typical Corrosion at Double Tee

Photo C29: Typical Corrosion at Double Tee

Photo C30: Crack at North Ramp Wall

Photo C31: Crack at North Ramp Wall

Photo C32: Inadequate Gap at Double Tee/Wall

Photo C33: South Ramp

Photo C34: Slab Deterioration at South Ramp

Photo C35: Slab Deterioration at South Ramp

Photo C36: Slab Deterioration at South Ramp

Photo C37: View of Second Level

Photo C38: Typical Slab Cracking at Girder

Photo C39: Slab Crack

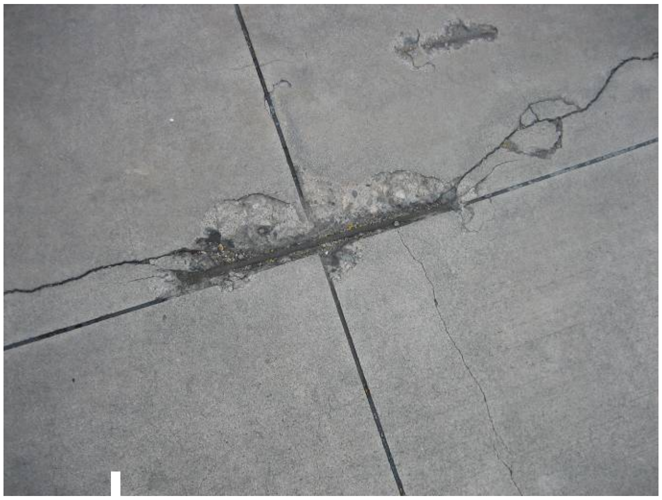


Photo C40: Slab Crack/Exposed Reinforcing

Photo C41: Exposed Slab Reinforcing

Photo C42: Typical Control Joint

Photo C43: Exposed Slab Reinforcing

Photo C44: Typical Slab Cracking at Girder

Photo C45: Short Columns at Drive Lane A-B

Photo C45: Short Columns at Drive Lane A-B

Photo C47: Cracks at Short Columns

Photo C48: Cracks at Short Columns

Photo C49: Concrete Rail Wall Along Grid A

Photo C50: Exposed Reinforcing at Wall

Photo C51: Damaged Wall Support

Photo C52: Damaged Wall Support

Photo C53: Damaged Wall Support

Photo C54: Damaged Wall Support

Photo C55: Concrete Rail Wall Along Grid D

Photo C56: Wall Damage at North Ramp

Photo C57: View of First Level

Photo C58: Typical Slab Damage at First Level

Photo C59: South View of Parking Structure

Photo C60: North View of Parking Structure

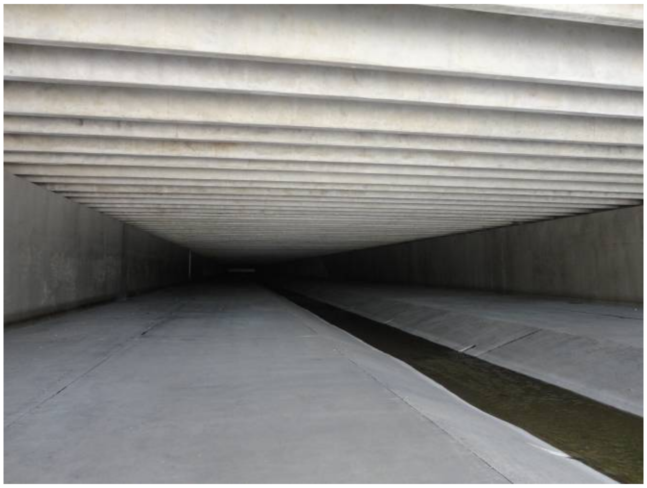
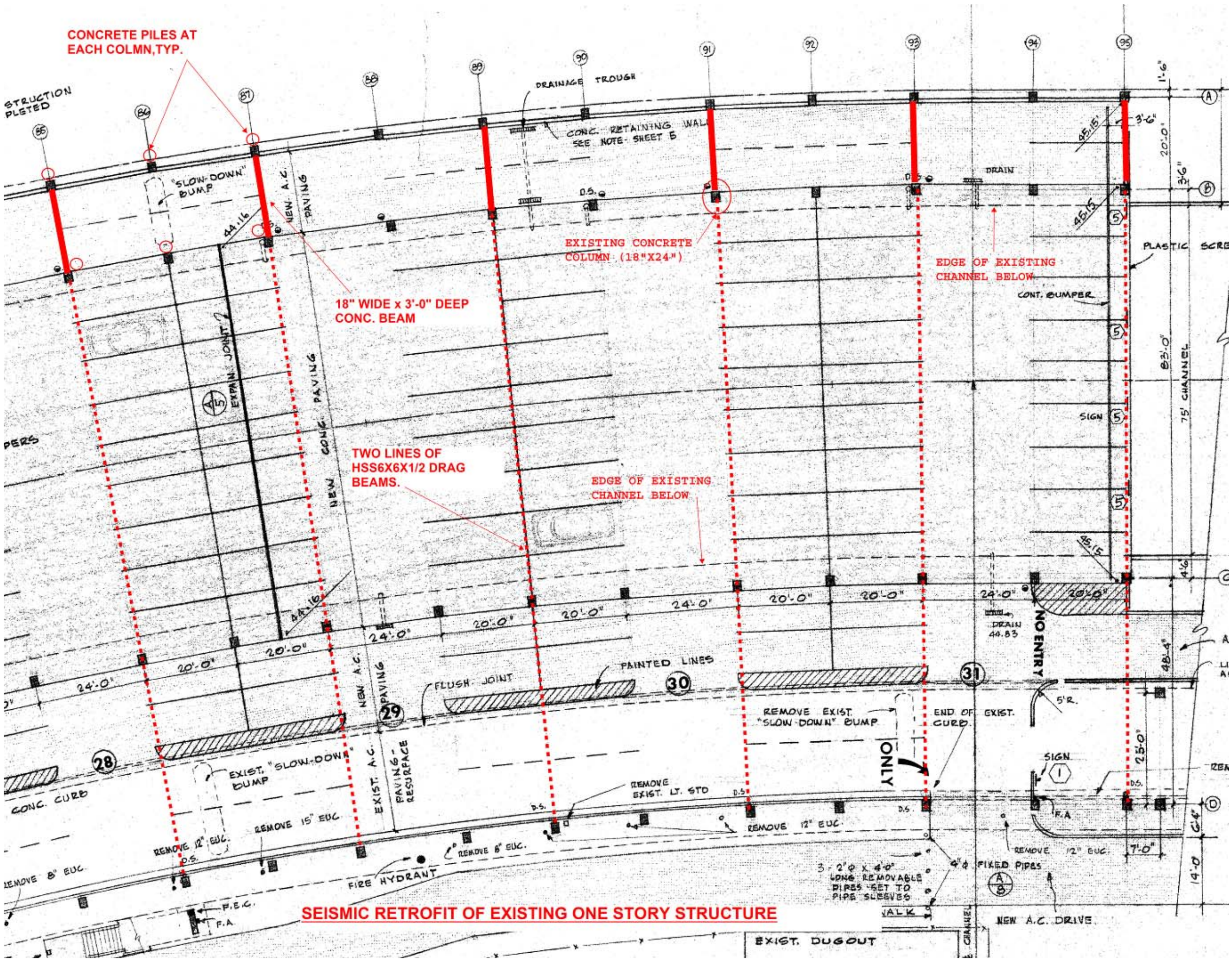


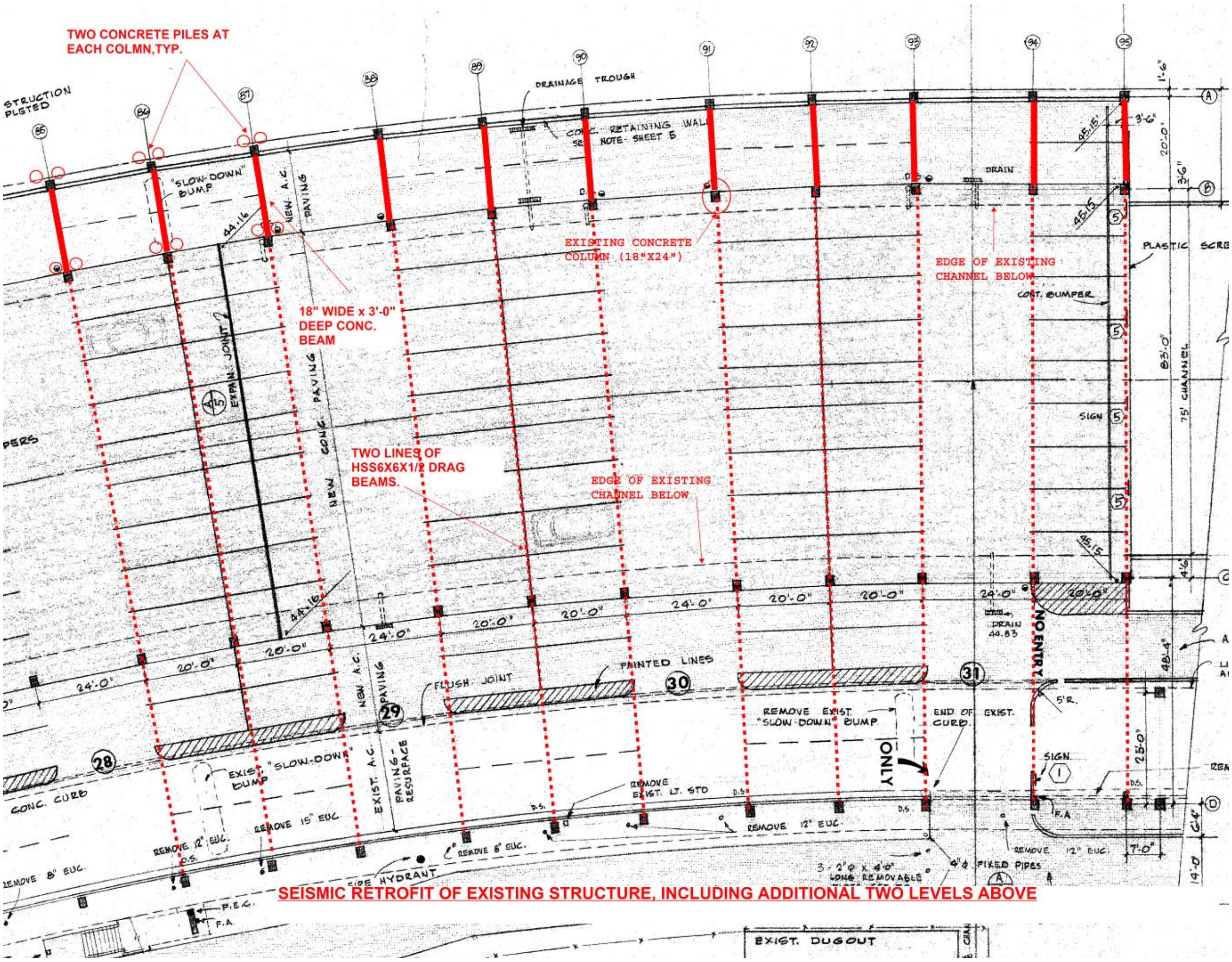
Photo C61: Typical Double Tee over Channel	**Photo C62: Typical Double Tee over Channel**
	
Photo C63: Double Tee Support over Channel	**Photo C64: Double Tee Support over Channel**
	
Photo C65: Typical Double Tee over Channel	**Photo C66: Double Tee Support over Channel**

APPENDIX D

SEISMIC RETROFIT CONCEPTS



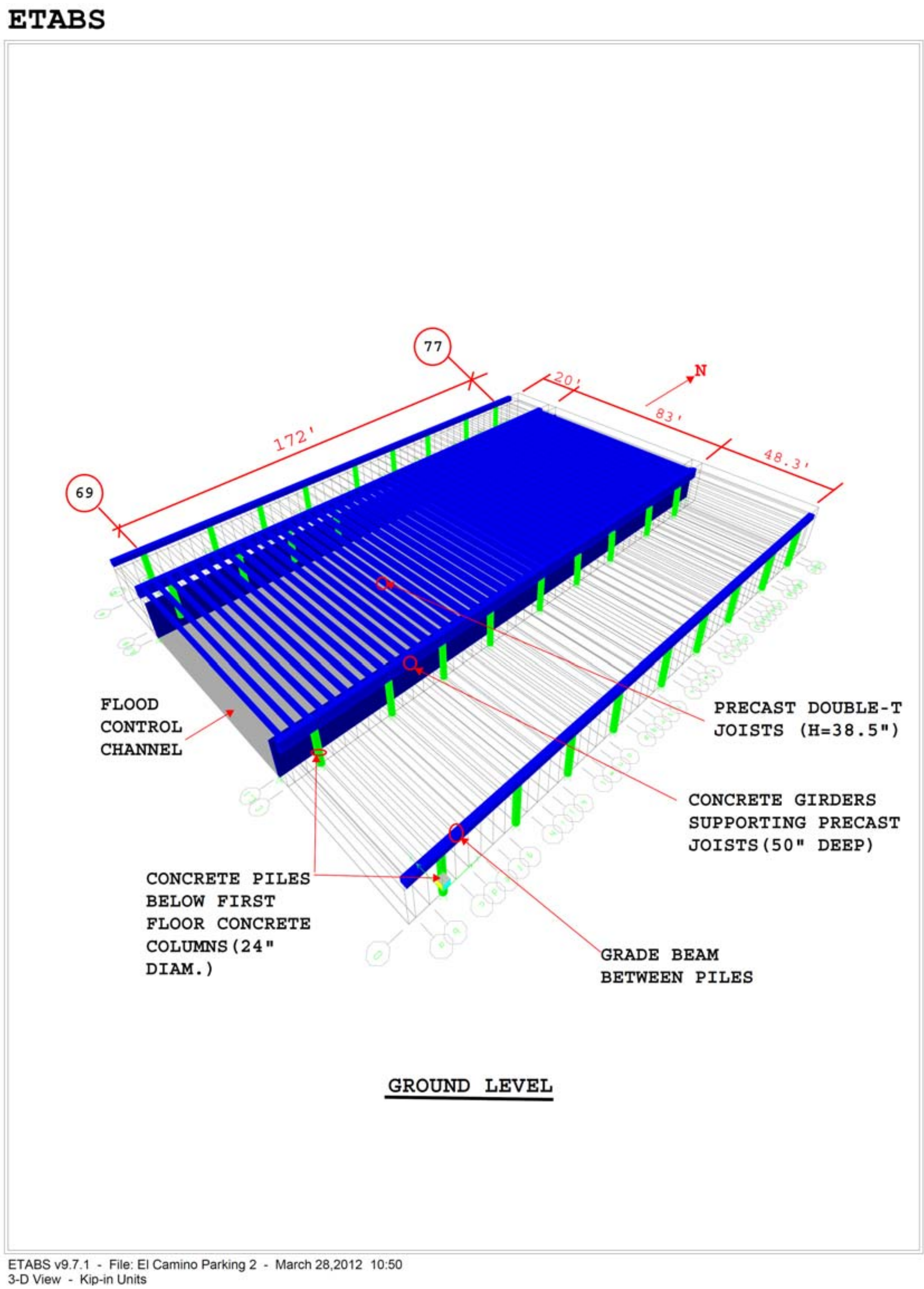
D-01: Seismic Retrofit of Existing One Story Structure



D-01: Seismic Retrofit Including Additional Two Levels

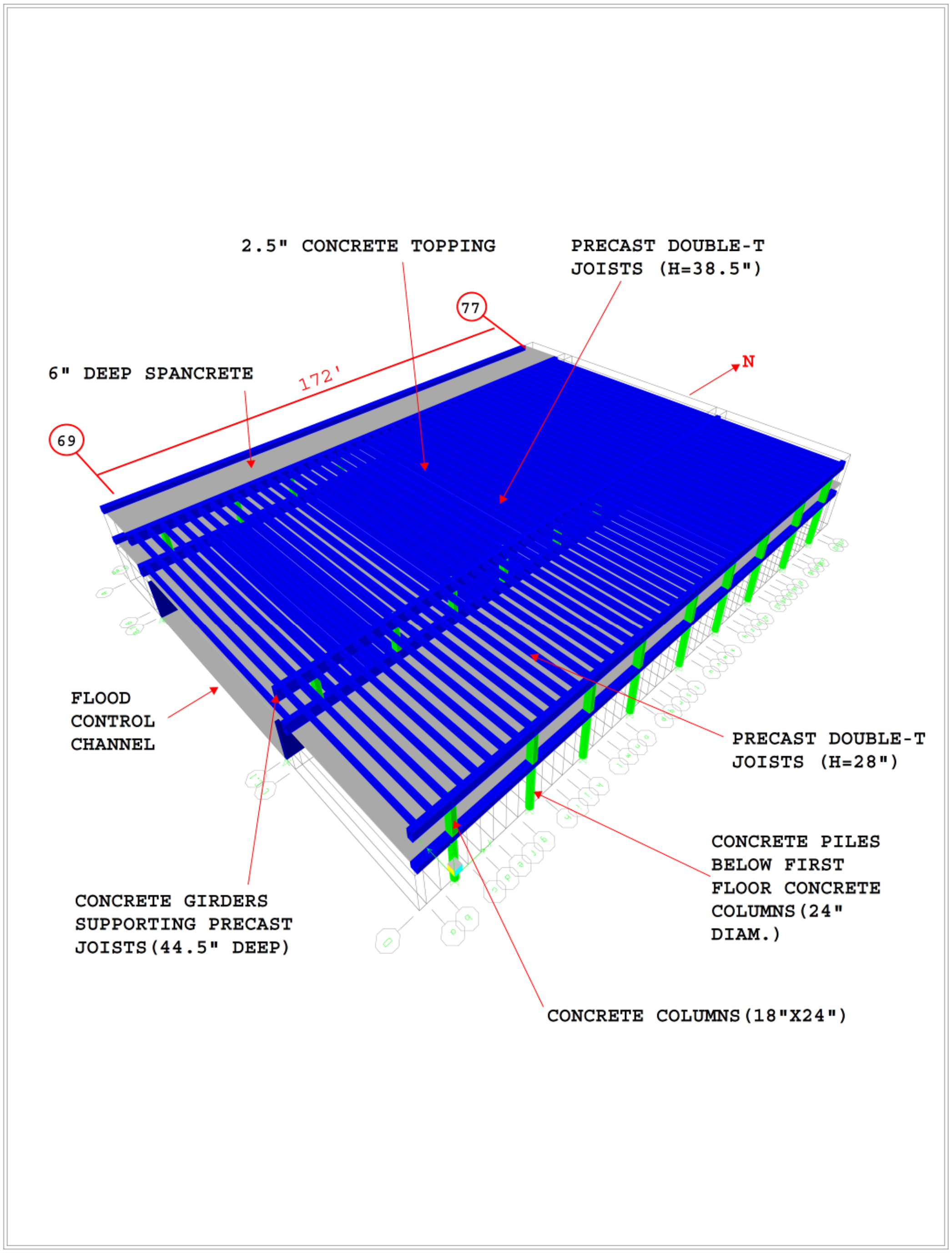
APPENDIX E

PRELIMINARY COMPUTER MODEL



E-01: First Level

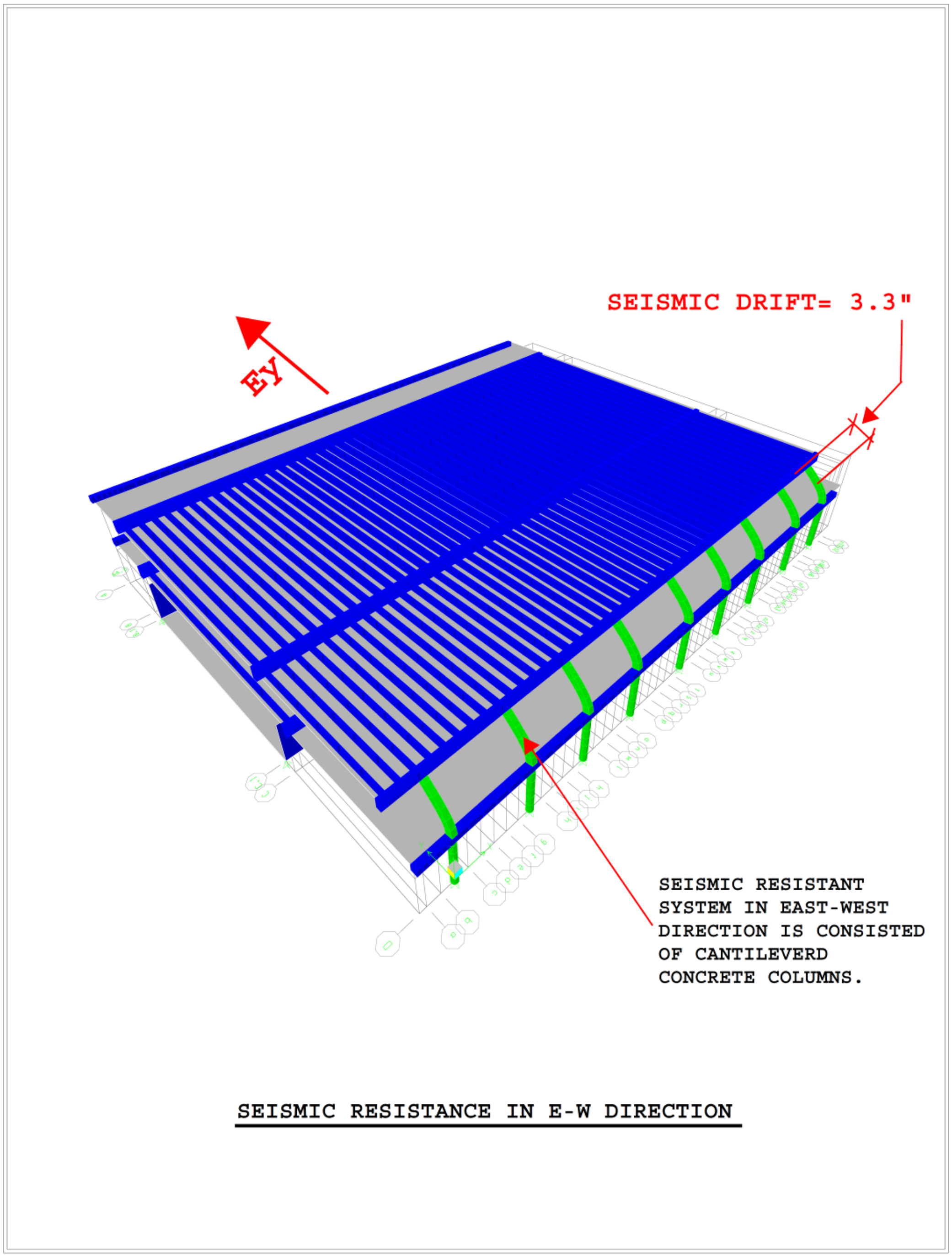
ETABS



ETABS v9.7.1 - File: El Camino Parking 2 - March 28,2012 10:55
3-D View - Kip-in Units

E-02: Second Level

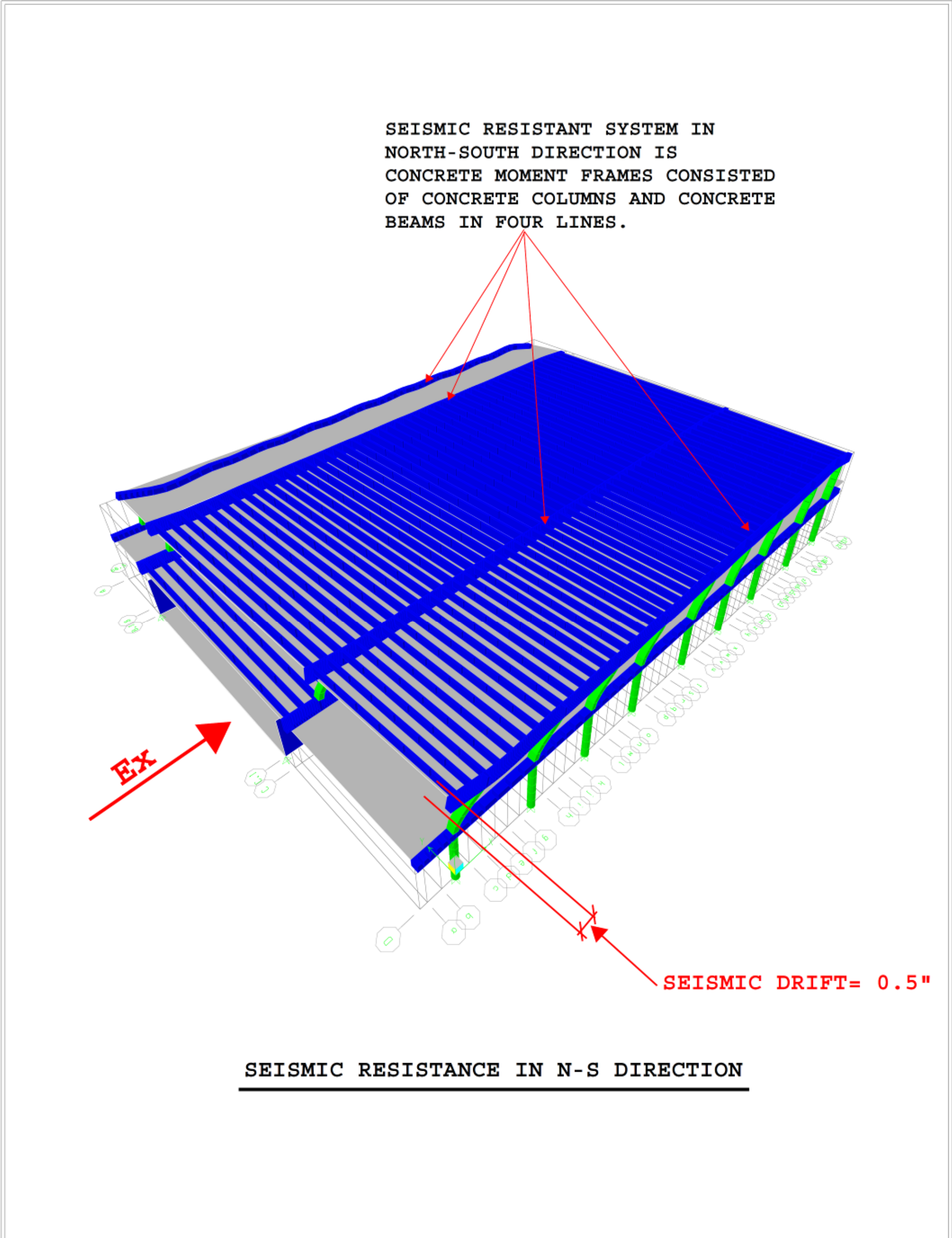
ETABS



ETABS v9.7.1 - File: El Camino Parking Analysis - March 28,2012 14:58
3-D View Deformed Shape (EY) - Kip-in Units

E-03: Drift in East-West Direction

ETABS



ETABS v9.7.1 - File: El Camino Parking Analysis - March 28,2012 14:57
3-D View Deformed Shape (EX) - Kip-in Units

E-04: Drift in North-South Direction

APPENDIX F

OPINION OF PROBABLE COST

	LOT F PARKING STRUCTURE	Repair and Seismic Strengthening	Date:	06-Apr-12
	EL CAMINO COLLEGE	No Expansion	Date Revised:	
	TORRANCE, CA		Status:	Pre-SD
	IDS GROUP, INC.		Status:	
			Revision No.:	0
	IDS GROUP		IDS No.:	12.114

Item	DESCRIPTION	QTY	U	UNIT/RATE		AMT		SEC. TOTAL
	SUMMARY OF COSTS							
								TOTAL
01	PREPARTION / GENERAL REQUIREMENT						$	585,000
02	DEMOLITION						$	636,100
03	SOIL TREATMENT						$	1,250
04	CONCRETE						$	1,074,000
05	CONCRETE REPAIRS						$	610,050
06	SEISMIC STRENGTHENING						$	2,191,480
07	WATERPROOFING						$	1,466,960
08	STAIR/ELEVATOR						$	238,000
09	MECHANICAL AND PLUMBING						$	232,500
10	ARCHITECTURAL/MISCELLANEOUS						$	1,037,000
	TOTAL DIRECT COSTS						**$**	**8,072,340**
	GENERAL CONDITIONS			7.00%			$	565,060
	INSURANCE AND BONDS			4.00%			$	345,500
	OVERHEAD AND PROFIT			10.00%			$	898,290
	CONSTRUCTION CONTINGENCY			10.00%			$	988,120
	TOTAL PROBABLE COST OF REPAIR CONSTRUCTION APRIL 2012						**$**	**10,869,310**
11	**VERTICAL EXPASION -ADDING ONE MORE LEVEL- Direct Cost**						**$**	**7,981,020**
	Cost for GC- Insurance- Profi and Contingancy 30%						**$**	**2,394,306**
	TOTAL PROBABLE COST OF VERTICAL EXPASION						**$**	**10,375,326**
	TOTAL REPAIR- SEISMIC UPGRADE AND VERTICAL EXPASION APRIL 2012						**$**	**21,244,636**
01	**PREPARATION / GENERAL REQUIREMENT:**						$	585,000
	General Requirement allowance including protecting adjacent properties, safety, dust control, noise control etc.,	18,000,000.00	%	3%	$	540,000		
	Barricades around construction	4,500.00	ls	$ 10.00	$	45,000		
	TOTAL PREPARATION/GENERAL REQUIREMENTS				**$**	**585,000**	**$**	**585,000**
02	**DEMOLITION**						$	636,100
	Demo Existing Spancrete Slab, Between Grids A-B / 1-95	40,000.00	sf	$ 15.00	$	600,000		
	Demo Portion of Existing Wall at Short Columns	300.00	sf	$ 27.00	$	8,100		
	Demo stairs, handrails and guardrails	10.00	ea	$ 2,800.00	$	28,000		
	TOTAL DEMOLITION				**$**	**636,100**	**$**	**636,100**
03	**SOIL TREATMENT:**						$	1,250
	Over excavate under elevator mat foundation 12" below the bottom elevation of beams, stockpile on site.	50	cy	$ 25.00	$	1,250		
	TOTAL SOIL TREATMENT				**$**	**1,250**	**$**	**1,250**
04	**CONCRETE:**						$	1,074,000

	Spancrete Slab:								
	Spancrete Planks, Between Grids A-B / 1-95	40,000	sf	$	18.00	$	720,000		
	2 1/2" Concrete Topping Slab	40,000	sf	$	8.00	$	320,000		
	Slab Doweling, Along Grid Grids A & B	2,000	ea	$	10.00	$	20,000		
	Cure and finish concrete	40,000		$	0.35	$	14,000		
	TOTAL CONCRETE					**$**	**1,074,000**	**$**	**1,074,000**
05	**CONCRETE REPAIRS:**							$	610,050
	Second Level Slab:								
	Slab Cracks, Clean and Fill w/ sealant or Epoxy Injection	12,450	lf	$	10.00	$	124,500		
	Slab Spalling, Clean and Grout	100	plcs	$	150.00	$	15,000		
	Slab Exposed Rebar, Clean and Grout	20	plcs	$	250.00	$	5,000		
	First Level Slab:								
	Slab Cracks, Clean and Fill w/ Epoxy Injection	1,200	lf	$	10.00	$	12,000		
	Slab Spalling, Clean and Grout	805	plcs	$	150.00	$	120,750		
	Slab Exposed Rebar, Clean and Grout	45	plcs	$	250.00	$	11,250		
	Concrete Girders:								
	Girder Cracks, Clean and Fill w/ Epoxy Injection	300	lf	$	20.00	$	6,000		
	Girder Spalls/Flaking, Clean and Grout	121	plcs	$	500.00	$	60,500		
	Girders Repair with FRP	25	plcs		$450	$	11,250		
	Precast Double Tee Beams:								
	Cracks	140	lf	$	25.00	$	3,500		
	Spalling	18	plcs	$	500.00	$	9,000		
	Slab Exposed Rebar	85	plcs	$	350.00	$	29,750		
	Beam Seat Repair	30	plcs	$	1,200.00	$	36,000		
	Concrete Columns:								
	Column Cracks, Clean and Fill w/ Epoxy Injection	60	lf	$	40.00	$	2,400		
	Column Spalls/Flaking, Clean and Grout	6	plcs	$	375.00	$	2,250		
	Concrete Stair Repairs:								
	Cracks	7	ea	$	3,000.00	$	21,000		
	Spalling	7	ea	$	5,000.00	$	35,000		
	Concrete Rail Wall Repairs:								
	Wall Support Repair	4	plcs	$	350.00	$	1,400		
	Slab Cracking	60	lf	$	25.00	$	1,500		
	Spalling/Exposed Rebar	340	plcs	$	300.00	$	102,000		
	Ramp Repairs:								
	CMU Wall Crack	50	ft	$	50.00	$	2,500		
	Cracks	200	ft	$	20.00	$	4,000		
	Spalling/Exposed Rebar	50	sf	$	35.00	$	1,750		
	TOTAL CONCRETE REPAIRS					**$**	**610,050**	**$**	**610,050**
06	**SEISMIC STRENGTHENING**							$	2,191,480
	Concrete Beam :								
	Concrete Beams in moment Frame (18"X36" deep) Every Other Bay between grid A & B	720	ft	$	110.00	$	79,200		
	Steel Collector Beams :								
	HSS 6X6X 1/2 Beam- 2 each column line	11,000	ft	$	100.00	$	1,100,000		
	Epoxy dowels of HSS beam to Double T (1/2" dia X 2 1/2 " Embed. @ 24" O.C.)	4,750	ea	$	20.00	$	95,000		

	Concrete Columns :									
	Addition of FRP Composite wrap at all columns (18"x24"x11.5')	144		$	650.00	$	93,600			
	Concrete Piles:									
	Cast in Place Concrete Piles (18" Dia X 30ft deep) All columns	288		$	2,500.00	$	720,000			
	Column Cap addition to exitsing caps (6'x4')	288		$	300.00	$	86,400			
	Epoxy Doweling to (E) cap (12-1"dia X 18" embed)	288		$	60.00	$	17,280			
	TOTAL SEISMIC STRENGTHENING					**$**	**2,191,480**	**$**	**-**	
07	**WATERPROOFING:**							$	1,466,960	
	Expansion Joint Replacement	2,140	lf	$	60.00	$	128,400			
	Control Joint Sealant Replacement	2,140	lf	$	8.00	$	17,120			
	Waterproof Deck Coating	550,600	sf	$	2.40	$	1,321,440			
	TOTAL WATERPROOFING					**$**	**1,466,960**	$	1,466,960	
08	**STAIR:**							$	238,000	
	New Handrails/Guardrails	7	ea	$	8,000.00	$	56,000			
	Paint Handrails/Guardrails	7	ea	$	1,000.00	$	7,000			
	Install new stairway each level - 1 level	7		$	25,000.00	$	175,000			
	TOTAL STAIR					**$**	**238,000**	**$**	**238,000**	
09	**MECHANICAL AND PLUMBING**							$	232,500	
	Drain Repair / Replacement	50		$	1,800.00	$	90,000			
	Filtration System	50		$	1,600.00	$	80,000			
	Fluorescent Lighting at new West drive lane	50,000	sf	$	1.25	$	62,500			
	TOTAL MECHANICAL AND PLUMBING					**$**	**232,500**	**$**	**232,500**	
10	**ARCHITECTURAL/MISCELLANEOUS**							$	1,037,000	
	Repaint Traffic Markings	1,300	car	$	15.00	$	19,500			
	Accessible parking spaces at 2nd Level	25	car	$	300.00	$	7,500			
	Path of Travel Blue Line Striping	25	car	$	100.00	$	2,500			
	Power wash underside of decks, girders, joists and columns	400,000	sf	$	1.00	$	400,000			
	Paint Slabs/Columns/Beams	500,000	sf	$	1.00	$	500,000			
	Material Testing	1	ls	$	25,000.00	$	25,000			
	Asphalt Re-surfacing (Drive Lane @ Grids A-B / 1 -95)	42,000		$	0.75	$	31,500			
	Asphalt Re-surfacing (Drive Lane @ C-D, E-F_G)	68,000		$	0.75	$	51,000			
	TOTAL ARCHITECTURAL/MISCELLANEOUS					**$**	**1,037,000**	**$**	**1,037,000**	

DALY & ASSOCIATES
4486 University Avenue, Riverside, California 92501
(951) 369-1366 ■ daly.rvrsde@sbcglobal.net

January 16, 2013

Sid Lindmark, AICP
10 Aspen Creek Lane
Laguna Hills, CA 92653

Re: Initial Study of Historic Resources for the Supplemental Environmental Impact Report, 2012 Facilities Master Plan El Camino College, Torrance, CA

Dear Mr. Lindmark;

Daly & Associates has completed an investigation of the built-environment resources that would be impacted by activities associated with the 2012 Facility Master Plan of El Camino College, Torrance, Los Angeles County, California. This investigation was performed to identify any potential historic resources that may be impacted by implementation of the proposed project action, and to facilitate initial environmental compliance of the project under the provisions of the California Environmental Quality Act (CEQA).

The investigation consisted of a pedestrian survey of all the buildings and structures in the project area, research into the historic development of the area, and a review of individual property information available from the Facilities Department at El Camino College. The purpose of the investigation is to identify any buildings, structures, objects, features, or landscape that may be associated with the lives of persons important in our past; that were associated with any important patterns or events in local, state or national history; or that were constructed or designed by important individuals. The National Historic Preservation Act (NHPA), of 1966, as amended, and the California Register of Historical Resources (CRHR) are the primary federal, state, and local laws and regulations governing the evaluation and significance of historic resources of national, state, regional, and local importance.

<u>Project Site Existing Conditions</u>

The proposed project is located on the campus of El Camino College in a section of unincorporated County of Los Angeles and the City of Torrance, west of Crenshaw Boulevard and south of Manhattan Beach Boulevard. Regional access is obtained from Interstate 405 with access from Crenshaw Boulevard, Prairie Avenue or Hawthorne Boulevard (SR 107).

The 126-acre college campus is located immediately east of the Alondra Park Golf Course and the Dominquez Channel. The Lot F Channel Parking Structure is located over the channel. The 2012 Facilities Master Plan (FMP) identifies the proposed new buildings and renovations on campus. The potential environmental impacts of student enrollment increases and a net increase of 34,721 ASF from existing conditions to build out will be evaluated in the current CEQA documentation. The project also includes rehabilitation of the Lot F Channel Parking Structure and an addition of approximately 700 spaces to the existing parking structure by adding a third level.

Nine new buildings will be constructed in the 2012 FMP and six buildings will be renovated. Thirteen existing buildings will be demolished. The 2003 El Camino Facilities Master Plan Final Program EIR (SCH 2003061012) evaluated some, but not all of the buildings involved in the 2012 FMP.

Prior Studies

In July 2003, Tim Gregory, a historian, conducted a reconnaissance level survey of ten buildings on the El Camino College campus. In 2003, seven of the buildings were at least 45 years of age. They were:

Field House, 1949
Shops Building, 1949
Humanities Building, 1950
Administration Building, 1950
Student Services Center, 1950
Library, 1952
Business Building, 1953

Mr. Gregory determined that four of the buildings could not be considered significant historical resources because they no longer retained sufficient integrity due to alterations and additions. What those alterations were, or the impact of the additions to the original design of the buildings, were not described in his report. He did not specifically state how the alterations had significantly altered the building's ability to convey its historic significance. The buildings he determined not eligible to be historic resources were:

Shops Building, 1949
Administration Building, 1950
Student Services Center, 1950
Library, 1952

Our review of Mr. Gregory's report found that he appears not to have used the guideline documents required by the California State Office of Historic Preservation (SHPO) to conduct his survey of the buildings and structures on the El Camino College campus. The primary reference documents with guidelines for conducting a survey, evaluating the built-environment (and campus), and presenting the results are found in:

- U.S. Department of the Interior. *National Register Bulletin #24 Guidelines for Local Surveys: a Basis for Preservation Planning,* revised 1985.
- U.S. Department of the Interior. *National Register Bulletin 15, "How to Apply the National Register Criteria for Evaluation*, rev. 1991.
- California Office of Historic Preservation. *Instructions for Recording Historical Resources*, 1995.

Mr. Gregory was presented with ten buildings that he knew to be of the relative same age, same architectural firm, and same modern design aesthetics, yet he did not survey the campus as a cohesive collection of Mid-Century Modern architecture as required by the above mentioned reference documents. Mr. Gregory appears to have been unfamiliar with the correct process to survey, evaluate, and describe the buildings on the campus under Federal or California guidelines. He did not evaluate the campus or buildings against the criteria of National Register of Historic Places or the California Register of Historical Resources. Instead, Mr. Gregory incorrectly used a code system created by the California State Office of Historic Preservation (SHPO) to present his findings, when he should have evaluated the buildings against National Register criteria A, B, C, and D, and California Register Criteria 1, 2, 3, and 4, as required by CEQA regulations.

In November 2003, Mr. Gregory was asked to evaluate an additional four buildings/structures for determination of eligibility. They were:

Student Service Center, 1950
Murdock Stadium, 1951
Social Science Building, 1960
Technical Arts Building, 1959

Mr. Gregory determined that Murdock Stadium and the Social Science Building appeared eligible only for local listing. (Mr. Gregory did not record, photograph, or evaluate the Track Field and Handball Court facility which have since been demolished.) Since there is no "local" government oversight, only the authority of the El Camino College District, this level of eligibility is moot. (As a legal entity, the El Camino College District must, at a minimum, evaluate its resources using the California Register.) The other two buildings he declared had been so altered as to have severely changed their original appearance, but he did not present any text describing the original design of the buildings versus their current condition, and how the alterations had significantly altered the buildings architectural integrity.

Methodology

This historic resource assessment and evaluation of the built-environment resources at El Camino College was conducted by Pamela Daly, M.S.H.P., Architectural Historian. In order to identify and evaluate the subject building as a potential historic resource, a multi-step methodology was utilized. An inspection of the buildings on campus, combined with a review of accessible archival sources for this parcel, was performed to document existing conditions and assist in assessing and evaluating the building for significance. Photographs were taken of the building, including photographs of architectural details or other points of interest, during the pedestrian-level survey. The National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) criteria were employed to evaluate the significance of the buildings and structures at El Camino College.

In addition, the following tasks were performed for this study:

- Archival copies of *Los Angeles Times* dating from 1935 to 2012 were accessed.

- Site-specific research was conducted on the subject property utilizing maps, original blueprints and drawings, newspaper articles, historical photographs, and other published sources including the *Avery Index to Architectural Periodicals*.

- Background research was performed about the architects Norman Foote Marsh, David Smith, Herbert Powell F.A.I.A., and Howard H. Morgridge F.A.I.A. Research was performed on the architectural firms of Marsh, Smith & Powell; Powell, Smith & Morgridge; Powell, Morgridge, Richards & Coghlan; and Morgridge and Associates through written publications available in print and on internet websites.

- Ordinances, statutes, regulations, bulletins, and technical materials relating to federal, state, and local historic preservation, designation assessment processes, and related programs were reviewed and analyzed.

The following buildings and structures were evaluated during this study:

Table 1. Buildings constructed up to 1969

Historic Resource	Buildings located within boundary of Historic District	Date of Construction	Contributor to Historic District	Building is also Individually Eligible	National Register and California Register Criteria	California Historical Resource Status Code
El Camino College Historic District (1949 – 1969)		1949 - 1969			Meets NR criterion C. Meets CR criterion 3.	3D
	Field House	1949	Y			
	Shops	1949	N			
	South Gym	1949	Y			
	Administration	1950	Y	Y	Meets NR criterion C. Meets CR criterion 3.	3CB
	Activities Center	1950	Y			
	Life Sciences	1951	Y			
	Murdoch Stadium and associated restroom buildings	1951	Y			
	Library	1952	N			
	Art – North Wing	1955	Y			
	Music and Campus Theater	1955	Y			
	Physical Education – North	1957	Y			
	Facilities/Receiving	1958	N			
	Physics	1958	Y			
	Technical Arts	1959	Y			
	Student Services	1960	Y			
	Social Sciences	1960	Y			
	Communications	1962	Y			
	Natural Science	1962	Y			
	North Gym	1963	Y			
	Auditorium	1967	Y			
	Behavioral Science	1968	Y			
	Math/Computer	1969	Y			
	Planetarium	1969	Y	Y	Meets NR criterion C. Meets CR criterion 3.	3CB

Table 2. Buildings to be demolished under the proposed project

Historic Resource	Buildings located within boundary of Historic District	Date of Construction	Contributor to Historic District	Building is also Individually Eligible	National Register and California Register Criteria	California Historical Resource Status Code
El Camino College Historic District (1949 – 1969)		1949 - 1969			Meets NR criterion C. Meets CR criterion 3.	3D
	Field House	1949	Y			
	Shops	1949	N			
	South Gym	1949	Y			
	Administration	1950	Y	Y	Meets NR criterion C. Meets CR criterion 3.	3CB
	Activities Center	1950	Y			
	Murdoch Stadium and associated restroom buildings	1951	Y			
	Art – North Wing	1955	Y			
	Music and Campus Theater	1955	Y			
	Physical Education – North	1957	Y			
	Technical Arts	1959	Y			
	Student Services	1960	Y			
	Social Sciences	1960	Y			
	Communications	1962	Y			
	North Gym	1963	Y			
	Behavioral Science	1968	Y			

Historic Buildings that are scheduled to be renovated

The Secretary of the Interior's Standards for the Treatment of Historic Properties (Grimmer and Weeks, 1995) and the *Guidelines for the Treatment of Cultural Landscapes* (National Park Service, 1996) are used to evaluate any project activities that may change, alter, demolish, destroy or relocate a significant historic resource. *The Secretary of the Interior's Standards for the Treatment of Historic Properties* and the *Guidelines for the Treatment of Cultural Landscapes* should be used to provide guidance to cultural landscape owners, stewards and managers, landscape architects, preservation planners, architects, contractors, and project reviewers prior to and during the planning and implementation of project work.

As such, projects actions that will affect contributing buildings and structures to the El Camino College Historic District must be evaluated in accordance with CEQA under the guideline documents noted above. Since alterations/additions are being considered to the Planetarium and the Auditorium, the Rehabilitation Treatment guidelines must be referenced when considering if a project will follow the recommendations of the Secretary of the Interior's Guidelines for the acceptable treatment of the historic property.

A project that follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* and/or *Guidelines for the Treatment of Cultural Landscapes* may be considered as mitigated to a level of less than significant impact on the historical resource.

<u>Assessment of Potential for Historic Resources</u>

A survey is performed to identify the historic, cultural, aesthetic, and visual relationships that unify and define a particular area, and to identify properties that may provide information about the community's past. Complexes of buildings, such as a college campus, comprise a functionally and historically interrelated whole. A historic district may be comprised of groups of buildings that physically and spatially comprise a specific environment, or a cohesive collection of buildings and structures that are related in their architectural style and period. The National Register of Historic Places defines a historic district as that which possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. Contributing buildings to a historic district do not have to be individually significant.

A historic context is a broad pattern of historical development in a community or its region that may be represented by historic resources. "The importance of taking historic contexts into account cannot be overemphasized. Failure to do so can lead to the application of survey methods that fail to identify significant resources or that contain uncontrolled biases." (National Register Bulletin #24.) A thorough historic context was developed for this survey based on research of the history of El Camino College, its role in post-World War II college education, and the history of the projects architects that were highly respected on a national level for their design of educational complexes.

In 2003, Tim Gregory surveyed and evaluated eleven buildings on the El Camino College campus that were over 45 years of age. Mr. Gregory did not follow survey guidelines as presented in the *National Register Bulletin #24*, and failed to recognize the existence of a cohesive group of buildings associated by design, architects, aesthetics, and age. He also failed to evaluate the buildings under the guidelines of the National Register and California Register using the appropriate criteria to determine the buildings significance. There is no "locally interesting" level of significance, but a property may be found eligible for listing in the National Register and/or California Register if it is of significance at a local level.

Pamela Daly performed a pedestrian survey of the campus on October 6, 2012. She reviewed original drawings for the buildings constructed before 1970, and the drawings of the alterations to any of the early buildings on file in the Plan Room of the Facilities Department on October 18, 2012. Ms. Daly ascertained during her visit to the campus that there existed an excellent example of a cohesive group of Mid-Century Modern buildings (particularly International style buildings), constructed for the purpose of education, present on the campus. Researching the history of the campus and its construction, it was apparent that the architects had devised a stylistic vision for the campus with recurring design themes, materials, and features. By viewing the architecture of the individual buildings in conjunction with the history of the college, one can see where the architects were forced to alter their original building designs to accommodate the rapidly increasing level of enrollment, yet stay true to their vision.

For the purpose of this evaluation, the collection of buildings designed by the architectural firm of Marsh, Smith & Powell (and its official successors) between 1949 and 1969, (presented in Table 1) have been determined eligible for listing in the National Register of Historic Places and the California Register of Historical Resources as contributors to a historic district under Criteria C/3. The El Camino College 1949 - 1969 Historic District presents an excellent collection of buildings constructed over a twenty year span that are related by architectural design and project architects. Although three of the original campus buildings designed by Marsh, Smith & Powell have been demolished, the proposed historic district as a whole still retains its levels of integrity in location, design, setting, materials, workmanship, feeling, and association.

None of the contributing buildings individually, or as a historic district, were found to be eligible for listing under Criteria A/1 relating to a properties association with important events on a national, state, or local level. It was also determined that none of the buildings individually, or as a historic district, had a direct association with any person important on a national, state, or local level, and were therefore not eligible for being listed under Criteria B/2.

In accordance with the findings stated above, the demolition or significant alteration of the contributing buildings within the proposed El Camino College (1949 – 1969) Historic District would result in a significant adverse impact on a historical resource.

Recommended Mitigation Measures

The implementation of the proposed major renovation of the El Camino College campus will result in a substantial adverse change to the collection of buildings that have been identified as El Camino College (1949 – 1969) Historic District (Historic District). It has been determined through this survey and evaluation that the proposed Historic District is potentially eligible for listing in the National Register and/or California Register as a historic resource having significance for its architectural design and project architects.

Substantial adverse change means the physical demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that the significance of a historic resource would be materially impaired. The significance of a historic resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a resource that convey its historic significance and that justify its eligibility for inclusion in the National Register or California Register.

Depending on the effects of a project, mitigation measures may include, but are not limited to:

- Implementing the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (Grimmer and Weeks 1995) or the Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Applying the Standards (Grimmer and Weeks 1992)

- Preparing a historic resource management plan (Historic Structures Report) for the adaptive reuse of historical buildings using the California Historical Building Code 2010, CCR Title 24, Part 8.

- Screening incompatible new construction from view through the use of berms, walls, and landscaping in keeping with the historic period and character of the resource

- Designing protection measures for buildings and for integral features of historic landscapes

- Implementing measures to ensure the materials, features, or finishes that are important to the integrity of a property are not altered in the event of unintended direct construction-related physical impacts

Mitigation Measure 1 (MM1): It is recommended that the Historic District not be materially altered or demolished, and that the property retain its eligibility for listing in the National Register and/or California Register (14 CCR § 4852(d) (1)). If found feasible to initiate by the El Camino College District, MM1 will avoid adverse impacts altogether by not materially altering those physical characteristics that convey the Historic District's significance.

Mitigation Measure 2 (MM2): El Camino College District would retain the services of a qualified historic preservation consultant with experience in architectural preservation to review structural designs and construction activities affecting historic resources, and would require onsite periodic construction monitoring by a historic preservation consultant to ensure protection of historic fabric and compliance with approved designs and the *Secretary of the Interior's Standards for the Rehabilitation of Historic Properties*. This action would address the required repair of unintended direct physical adverse effects to materials, features, or finishes that are important to the integrity of historic properties. Such repairs would conform to the Standards and would be approved by the consultant in consultation with other experts.

Mitigation Measure 3 (MM3): An alternative, though less preferred method of mitigation, will be to prepare documentation of all the buildings that comprise the entire identified Historic District using the Historic American Building Survey (HABS) Level 2 standards as guidelines for recording the buildings through photographs, drawings and written description.

MM3 will be initiated when it is determined that changes to the Historic District will materially alter in an adverse manner *any* of the buildings identified as contributors to the El Camino College (1949 – 1969) Historic District. The proposed Historic District has been surveyed and documented as a means of identifying and recording those buildings designed over 20 years by the principal architects at the architectural firm Marsh, Smith & Powell and approved successors up to Howard Morgridge & Associates, and their vision for the campus. A substantial adverse change to any of the buildings in the proposed historic district will cause the district to lose its levels of integrity in setting, feeling, design and association, and therefore lose its eligibility to be determined a historic resource.

The initiation of MM3 will not reduce or eliminate the adverse impacts of materially altering those physical characteristics that convey the proposed historic districts significance. The following documentation will be determined as adequate to document and record the historic resource:

Written Data: The history of the property as presented in the attached DPR form set for the Historic District will suffice as baseline information about the subject buildings. It is recommended that additional archival research be performed to supplement the exiting information. (The renowned photographer Julius Shulman took many of the photos for the Los Angeles Times articles about El Camino College. His archives in the Getty Center Collection should be searched for early photographs of the campus.)

Sketch Plan: All of the existing pages of drawings prepared by Marsh, Smith & Powell and approved successors up to Howard Morgridge & Associates, for the buildings determined to be contributors to the proposed historic district at ECC should be preserved in an archivally safe environment. The extensive collection of existing drawings located in the Plan Room of the Facilities Department should be transferred to the Special Collections at Schauerman Library. Due to fragile condition of the original drawings, all plans and drawings should be digitally scanned to create a permanent record.

Photographs: HABS Level II documentation requires large-format photographs and negatives be produced to capture interior and exterior views of the collection of buildings identified as historic resources. A professional photographer qualified by the National Park Service is required to document the buildings and landscape. It is also recommended that large format photographs be taken to show the contributing buildings location in context, and in relationship to the other buildings on the campus.

Document: The HABS Level II document must be produced on archival-quality paper, and all large format photographs and negatives labeled to HABS standards.

An archival quality copy of the HABS document, containing original photographs and negatives, should be submitted to the Special Collections archives at Schauerman Library, El Camino College. A copy of the HABS document, blueprints and photographs should also be scanned, and a copy delivered to the Torrance Historical Society & Museum, 1345 Post Avenue, Torrance, CA.

It is recommended that the preparation of any HABS documentation required under CEQA for this project be managed by a qualified Architectural Historian. It does not appear that the required mitigation documentation associated with the demolition of the Humanities, Social Studies, or Murdock Stadium was prepared as prescribed by Tim Gregory in 2003. It is also recommended that the custom-made depictions/drawings of the buildings of ECC campus buildings rendered by Marsh, Smith & Powell that hang on the wall of the Facilities Department be sent to the college's archival depository in Schauerman Library.

We hope the information within this letter will prove to be helpful as you continue through the environmental review and entitlement processes. Please do not hesitate to contact me if you have any questions.

Sincerely,

Pamela Daly, M.S.H.P.
Principal - Architectural Historian

Attachment: State of California, Department of Parks and Recreation (DPR)
Series 523 Inventory Site Forms: *El Camino College Historic District (1949 – 1968)*

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

 ***Resource Name or #:** El Camino College Historic District (1949 – 1968)

P1. Other Identifier: El Camino Community College; El Camino Junior College
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles
and
***b. USGS 7.5' Quad:** Inglewood **Date:** 1964/1981 **T** 3S ;**R** 14W ; **¼ of ¼ of Sec ;** S.B.**B.M.**
c. Address: 16007 Crenshaw Boulevard City: Torrance Zip: 90506
d. UTM: See attached Location Map
e. Other Locational Data: The college campus is bound on the south by Redondo Beach Boulevard, on the east by Crenshaw Boulevard, on the north by Manhattan Beach Boulevard, and on the west by Alondra Park. Elevation: 38 feet a.b.s.l.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

See attached Continuation sheets for complete text.

***P3b. Resource Attributes:** HP 15 (Educational buildings), HP 42 (stadium).
***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐Site ☒District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: Planetarium, view looking northeast, October 2012.

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
The proposed district dates from 1949 to 1968.

***P7. Owner and Address:**
El Camino Community College District
16007 Crenshaw Boulevard
Torrance, CA 90506

***P8. Recorded by:**
Pamela Daly, M.S.H.P.
Daly & Associates
4486 University Avenue
Riverside, CA 92501

***P9. Date Recorded:**
January 16, 2013.

***P10. Survey Type:** Intensive, CEQA**.**

***P11. Report Citation:** .
Daly, Pamela. *Initial Study of Historic Resources for the Supplemental Environmental Impact Report, 2012 Facilities Master Plan El Camino College, Torrance, CA*. 2013

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☒District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

DISTRICT RECORD

***NRHP Status Code: 3B/3CB**

***Resource Name or #: El Camino College Historic District**

D1. Historic Name: El Camino Junior College

D2. Common Name: El Camino College

***D3. Detailed Description** (Discuss overall coherence of the district, its setting, visual characteristics, and minor features. List all elements of district.):

See attached Continuation Sheets for full text of descriptions.

***D4. Boundary Description** (Describe limits of district and attach map showing boundary and district elements.):

See attached maps with boundary lines.

***D5. Boundary Justification:**

Boundary line is the original property line of the 80 acres transferred from Los Angeles County to the El Camino College District in 1946.

***D6. Significance:** **Theme:** College Education **Area:** Los Angeles County

Period of Significance: 1946 - 1968 **Applicable Criteria:** NR/CR

See attached Continuation Sheets for full text of significance.

***D7. References**:

El Camino Community College, Department of Facilities and Maintenance: Plans and Drawings. Accessed October 2012.

See attached Bibliography pages for additional references used for this project.

***D8. Evaluator:** Pamela Daly, M.S.H.P. **Date:** January 16, 2013

Affiliation and Address: Daly & Associates, 4486 University Avenue, Riverside, CA 92501

D6. Significance:

Historic context:
Servicemen and women returning from serving in World War II were the beneficiaries of The Servicemen's Readjustment Act of 1944 known informally as the G.I. Bill. The G.I. Bill grew out of the efforts of Congress to avoid the mistakes in the treatment of the soldiers who served in World War I. After World War I ended, soldiers were sent home with not much more than cash-out payment of $60. The Bonus Act of 1924 was passed to try to made amends by awarding each soldier a payment of $1.00 for each day served.[1] While the effort to support the veterans was appreciated, the Government failed to make good on their promises of financial payment. When the Great Depression took hold of the country, all the veterans were still waiting for the Government to pay them for their service from ten years earlier. Veterans protested and created camp cities in Washington, as they had no other place to go.

The soldiers that came home from the European and Pacific theatres of war in 1944, and even those who had not seen combat, were supplied with a range of benefits to choose from. The G.I. Bill offered the availability of low-cost mortgages, loans to start a business or farm, cash payments of tuition and living expenses to attend college, high school or vocational education, as well as one year of unemployment compensation. It was available to every veteran who had been on active duty during the war years for at least ninety days and had not been dishonorably discharged. [2]

At the end of World War II, the Los Angeles County Board of Supervisors (LACBS) knew that the county would be faced with the challenge of providing college-level classes and vocational training to the thousands of returning veterans in the Southland. The LACBS chose some vacant land that had been set aside for a regional park in an area known as Alondra Park as the potential site of a new junior college campus. (Junior colleges are now called community colleges.) The site is east of Lawndale, south of Hawthorne, west of Gardena, and north of Torrance, sitting between Manhattan Beach Boulevard and Crenshaw Boulevard. The site sits inside both Alondra Park and Torrance legal boundaries.

In 1946, LACBS appropriated 75 acres of Alondra Park for the use of a college. The transfer would need to be approved by the California State Legislature to permit the county to transfer the land to the college district. Applications were being completed with the Federal Works Agency to pay for government-owned buildings to be erected on the college site at government expense in connection with the veterans' education program.[3] Assemblyman Glenn Anderson put through a bill enabling the new junior college in the Inglewood area, now organized but holding classes in high school buildings, to acquire a tract of land formerly used as a public park. Use of the park land will save taxpayers $150,000. The new college is known as El Camino Junior College (ECC).[4]

Once the state and the county were assured that the new college was just a signature away, the interim board of trustees of ECC announced that the architectural firm of Marsh Smith & Powell, located in downtown Los Angeles, were chosen to prepare plans for the buildings and campus, in January of 1947.[5] Due to the large enrollment of veterans, the Federal government was supplying 10 to 12 buildings from Southland air bases that are no longer needed. Governor Earl Warren signed a bill on January 29, 1947, authorizing the LACBS to grant 75-acres of the park tract to the college.

Forrest G. Murdock was appointed president of the college in April 1947.[6] He had been the superintendent of Centinela Union High School District for two years. Before that, he had been principal of San Jose High School. When Murdock became president the ECC classes were conducted mostly at night, at Inglewood, Redondo Beach and El Segundo High Schools.

The official groundbreaking ceremonies for the new El Camino Junior College were held June 23, 1947. Robert Russell of Redondo Beach, president of the college board of trustees, "turned the first shovel of hard adobe earth, using a gilded shovel."[7] The college district will pay nearly $1000 per month rental to the Centinela Valley Union High School District for the use of Leuzinger High School buildings. The schools buildings are to be used in the late afternoon and at night until former air base barracks from Santa Ana Army Air Corps Base are re-conditioned for use at the ECC campus.[8]

From its early days of using high school classrooms and converted barrack buildings, ECC quickly grew into a full-fledged college campus. An open house was held May 23, 1948, to show off the new campus for the 1,400 enrolled students. The campus consisted of converted barrack buildings and some new modern, one-story buildings.[9] Gallinger Construction Company (responsible for the new campus construction and grading) presented to the trustee president a huge gilded “key to the campus.” Other speakers were a division engineer from the Federal Works Agency and U.S. Office of Education.

ECC had been operating on its new campus for just over a year, when in June of 1949, it was announced that new construction projects were to begin. The new work, costing approximately $1 million, includes a new gymnasium, field house, shop building with 10,000 square feet of floor space, the first part of a stadium which eventually will be enlarged to seat 20,000, and utilities sufficient for a student body of 5,000 to 10,000. Plans are being drawn for a student union-cafeteria building and an administration-classroom unit, scheduled to start in December. The new buildings were being financed by the 25-cent per $100, pay-as-you-go, 5-year plan.[10]

The center of campus was to be dominated by a new building aptly named “Campus Center.” “This building, being the center of student activities, contains a large dining room with a seating capacity of 850 and auxiliary private dining rooms separated by Modern Fold doors, student association offices, student cooperative bookstore, soda fountain, student lunge and two outside dining patios. Design of building is contemporary modern with construction of reinforced concrete with large areas faced with architectural brick. In keeping with California’s climate, lavish use of glass predominates. Porcelain treatment of fascias has been utilized for permanency and beauty and to avoid expensive maintenance.”[11] The Campus Center building was planned to cost $114,000 and provide cafeteria facilities, a student lounge, offices, a walled patio, soda fountain, and a bookstore.[12]

Just six months later, in January of 1950, a two-year building program to cost an estimated $2 million had been approved by the board of trustees. The college was facing an enrollment of 4,000 students and a critical shortage of classrooms in the next two years.[13] Across Southern California, there was an investment into the expansion of junior colleges for $70,000,000. “We now are experiencing after the lapse of a half century is the sudden projection on a large scale of education for at least two years beyond the high school level – and for the most part for the benefit of the semi-professional and semi-technical class that now is needed so badly in modern business and industry” said assistant superintendent Howard a. Campion of the Los Angeles School District.

Under the two-year, $2,000,000 building program, the school architects prepared plans for additional permanent classrooms and other facilities for the campus. The college approved a plan that calls for work to start on a $440,000 administration-classroom unit. Shortly after, the construction of a machine shop, science laboratories, and more classrooms will be initiated along with ground improvements, additional parking areas and new stadium lighting. Additional classrooms for art and music students, a library, and shop additions are planned under a follow-on $1 million project budget. All these new facilities were for an enrollment that had now exceeded 3,000 students at ECC.[14]

Meanwhile, the area around ECC was also undergoing changes with the construction of multiple housing tracts, and a growing local population. In February 1951, the Wagner Construction Company announced the opening of El Camino Homes, a tract consisting of 90 three-bedroom homes located at 164th Street and Crenshaw Boulevard, adjoining El Camino College.[15]

Milton Kaufman Construction Company was contracted to construct the $500,000 new science hall in 1951. The building designed by Marsh Smith & Powell “of reinforced concrete and brick construction occupies the northeast corner of the campus is of functional modern architectural design in keeping with the style of school buildings already completed.”[16] Kaufman was also the builder of El Camino Manor housing tract, immediately adjacent to the campus, and had built Hawthorne High School at the corner of El Segundo and Inglewood Boulevards.

Kaufman Construction Company was also awarded the task of constructing the 412,000 library building. Marsh, Smith & Powell were the architects for the library with principal architect Howard H. Morgridge in charge of the project. "The building will be of reinforced concrete construction with brick and precast concrete facing similar to the motif employed in the administration building. Major wings will house the stock room, which can be expanded to accommodate 90,000 volumes without additional building, and the periodical reading room. The building has been designed to allow for construction of a future wing which will provide another reading room seating 150 persons."[17]

In February1955, the new 100 foot x 30 foot health center was completed along with the new swimming pool. The health center was designed to have space for a reception room, nurse's office, treatment and examination rooms, and separate resting rooms for men and women. These buildings were constructed to serve the 6700 students at ECC for sports injuries and public health issues.

When Dr. Stuart E. Marsee, assistant superintendent of Pasadena City Schools, was named president of El Camino College in August 1958, enrollment had climbed from 1,400 in 1947, to the present 9,600 students – a 600% increase in ten years. An Applied Arts building, estimated to $500,000, was planned to be constructed later this same year. Architects Smith, Powell and Morgridge, designed the new structure as a loft-type building.[18]

A year later in 1959, ECC planned for the construction of new two-story buildings on campus. The newest additions to the campus were the Humanities Building with 20 classrooms and 60 office spaces for instructors, the enlargement of the Campus Center which will provide space for student activities offices, a larger bookstore and additional classrooms. The classrooms will be converted into a faculty dining room when the shortage of classrooms is alleviated. A two-story wing was also added to the library building.

ECC would purchase an additional 14 acres of land to address the need to remove parking from the campus in 1959, and continued to add new buildings to the campus. Howard Morgridge, who had worked on the ECC project from his early days at MSP, would continue to be the primary architect for the college until the late 1980s. His oversight led to each new building or addition presenting the most current architectural styling, while assuring that the new design would coalesce with the existing buildings and landscape.

Architects

In early 1947, the board of trustees of the new El Camino Junior College decided to have the architectural firm of Marsh, Smith & Powell (MSP) create a campus plan and all the buildings therein for the new college. The College Board of Trustees of ECC knew at the time that they had chosen one of Southern California's most respected architecture firms in the field of designing educational facilities. Norman Foote Marsh had been born in Illinois in 1871. He graduated from the University of Illinois and Cornell University School of Architecture in the class of 1897. After spending three years with the American Luxfer Prism Company in Chicago, Illinois, he resigned and moved with his wife to Los Angeles, California in 1900. He immediately formed a partnership with J.N. Preston and they worked primarily on residential projects. After a year he left Preston and formed an alliance with C.H. Russell. For six years the team of Marsh & Russell worked on a variety of projects including the project of developing the architectural design theme and development of Venice, California. Using the historic city in Italy as their reference, Marsh & Russell designed buildings, bridges, canals, using eclectic styles of architecture in the California seaside village. Their partnership lasted six years until Russell moved to San Francisco to work on rebuilding after the great earthquake of 1906. Marsh found himself with a practice based on his expertise designing public buildings, churches, schools, and libraries. He seems to have run the small practice for many years until being recruited by the University of Southern California in the late 1920s to head their office of campus architect. It appears to be there that he teamed up with David Drake Smith and Herbert James Powell to create the firm of Marsh, Smith & Powell. The firm was located in downtown Los Angeles at 5th and Figueroa Streets.

David Smith, born in 1886, had come out from Versailles, Kentucky, in 1910 with his widowed mother and six siblings. Smith graduated from the school of architecture at Stanford University. Herbert Powell had also been born in Chicago, Illinois, in 1898, and moved to California in the mid-1920s, after graduating from Harvard.

Marsh, Smith & Powell quickly became renowned for their designs of schools, churches, and large public buildings. Among their projects are Pasadena High School, First Methodist Church of Oakland, First Methodist Church in Long Beach, First Baptist Church in Pomona, and a group of campus buildings at Redlands University in Redlands, CA. Other schools include: Montebello Unified School District – Suva Street School, Corona-Del-Mar Elementary School, Roosevelt School in Santa Monica, and Upland Elementary School. Many of the school projects were the result of the Long Beach earthquake in 1933 that damaged and destroyed many schools in the greater Los Angeles area, and the upgrading of existing schools to meet new seismic guidelines. At the highpoint of the firm, they engaged over 50 draftsmen to work on projects. In 1955, the principals were quoted as estimating that since Marsh had started his firm in 1927, they had "designed more than 500 Southern California school projects."[19]

Marsh retired in 1937, but his name stayed as the founding partner until 1955. Howard Henry Morgridge had joined the firm in 1943, and was named a principal partner of the firm in 1947. He had earned his degree in architecture from University of Southern California. The firm of Smith, Powell, & Morgridge was intact until David Smith died in 1964, and Powell retired in 1966. The firm then morphed into Powell, Morgridge, Richards & Coghlan, and remained such for many years until 1980 when it became Morgridge & Associates, located in Tustin.

Both Herbert Powell and Howard Morgridge were named Fellows of the American Institute of Architects in 1947, and 1966, respectively. The College of Fellows of the AIA was founded in the early 1900s, and is composed of members of the Institute who are elected to Fellowship by a jury of their peers. Fellowship is one of the highest honors the AIA can bestow upon a member. Elevation to Fellowship not only recognizes the achievements of the architect as an individual but also elevates before the public and the profession those architects who have made significant contributions to architecture and to society.[20] Powell and Morgridge joined the ranks of such prominent American architects as Daniel H. Burnham, Walter Gropius, Louis I. Kahn, John O. Merrill, Nathaniel A. Owings, Eero Saarinen, Louis Skidmore, Ludwig Mies van der Rohe, and William W. Wurster.

What makes Marsh, Smith & Powell (and the firms that directly evolved out of the original partnership) an architectural firm of merit, was their constant adherence to continuing the advancement of new architectural styles and designs trends while meeting their clients' needs. In 1936 when the firm received a contract to building a new two-story classroom building for Hollywood High School, they could have chosen to go with a more sedate design in a Georgian or Spanish Revival style, but they presented a Streamline Moderne design that is looked upon as an excellent example of that style architecture today.[21]

From before World War II, Marsh, Smith & Powell was continually chosen by their peers and those in the construction industry to showcase their projects as example of the best of schools and public buildings, and exhibit their designs in showcases alongside Richard Neutra, R.M. Schnidler, and Paul R. Williams. In 1949, their design of the Corona del Mar School won the National First Honor Award at the A.I.A. annual conference.[22] That was followed in 1954, by winning the award again for the design of the Santa Monica City College campus.[23]

Howard H. Morgridge was interviewed by the Los Angeles Times in 1961, regarding the future needs of schools and how to design for those needs.[24] Morgridge used El Camino College as an example of a school that was built for the present with an eye towards the future. Morgridge recognized that future designs for schools would have to include advances in technology and address the needs of increasing, and diverse student populations. In the 1951 article from *Architect and Engineer Magazine* regarding the ECC campus buildings and master plan, Morgridge stated "seldom has a Junior College had an opportunity to grow from the soil, free from the inheritance of a cast-off high school plant with its inadequate site which forever paralyses a college plan and thwarts future growth."[25]

Not confined by existing buildings, MSP was free to design a group of buildings all integrated in style, features, and details. Using the International style of modern architecture that came after World War II, MSP created a collection of building over a twenty two year span, that referenced seemingly all the design elements of the International style such as: contrast of light and dark elements using projecting and receding masses and features; contrast of horizontal and vertical elements; contrast of hard and soft elements using rough brick versus smooth concrete finishes; “spider leg” support posts, glass curtain walls, floating buildings, butterfly roofs, curved walls in landscapes and outdoor corridors, and a repeating decorative motif. The Planetarium Building is the first building on campus that shows the use of a new architectural style that was becoming popular in the late 1960s – New Formalism. MSP used great judgment by using a small, discrete building, for the new style so as not to clash with existing buildings and the overall master plan.

For the purpose of this evaluation, the collection of buildings designed by MSP (and its heirs) between 1949 and 1968, have been determined eligible for listing in the National Register of Historic Places and the California Register of Historical Resources as a historic district under Criteria C/3. The ECC historic district presents an excellent collection of buildings constructed over a twenty-two year span that are related by architectural design and project architects.

None of the buildings individually, or as a historic district, were found to be eligible for listing under Criteria A/1 relating to a properties association with important events on a national, state, or local level. It was also determined that none of the buildings individually, or as a historic district, had a direct association with any person important on a national, state, or local level.

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[1] American Red Cross, "World War Adjusted Compensation Act," updated: July 19, 1926. http://books.google.com/books?id=0WYXAAAAYAAJ&.
[2] United States Department of Veteran Affairs. “History of the G.I. Bill.” http://www.gibill.va.gov/benefits/history_timeline/index.html
[3] *Los Angeles Times*. “College Seeks Site in Park.” December 21, 1946.
[4] *Los Angeles Times*. “Fight Brewing Over Warren’s Health Program.” January 10, 1947.
[5] *Los Angeles Times*. “School Plans Ordered.” January 19, 1947.
[6] *Los Angeles Times*. “Murdock Named to Head College.” April 4, 1947.
[7] *Los Angeles Times*. “Ground Broken on Campus for New College.” June 24, 1947.
[8] *Architect and Engineer*. “From Barracks to Beauty: El Camino College, Southern California.” November 1951. Pages 14 to 23.
[9] *Los Angeles Times*. “Camino College Greets Visitors on Opening Day.” May 24, 1948.
[10] *Los Angeles Times*. “El Camino’s Projects at $1,000,000.” June 21, 1949.
[11] *Architect and Engineer*. “From Barracks to Beauty: El Camino College, Southern California.” November 1951. Pages 14 to 23.
[12] *Los Angeles Times*. “Student Union Building Begun. January 19, 1950.
[13] *Los Angeles Times*. “College Plans $2,000,000 in Buildings.” February 16, 1950.
[14] Ibid.
[15] *Los Angeles Times*. “New Home Area Being Developed.” February 18, 1951.
[16] *Los Angeles Times*. “New College Structure Being Built by Community Builder.” December 9, 1951.
[17] *Los Angeles Times*. “Junior College Library Costing $412,000 to Rise.” April 20, 1952.
[18] *Los Angeles Times*. “Arts Building Plan Drawn for Beach College.” June 22, 1958.
[19] *Los Angeles Times*. “Architectural and Engineering Firm Changes Name.” January 16 1955.
[20] The American Institute of Architects: http://www.aia.org/practicing/groups/cof/AIAS077445
[21] Gebhard, David and Robert Winter. An Architectural Guidebook to Los Angeles. Gibbs Smith Publisher, Salt Lake City: 2003.
[22] *Los Angeles Times*. “Architectural and Engineering Firm Changes Name.” January 16 1955.
[23] Ibid.
[24] *Los Angeles Times*. “Future’s Schools: How Many, for What Goals?” January 15, 1961.
[25] *Architect and Engineer*. “From Barracks to Beauty: El Camino College, Southern California.” November 1951. Pages 14 to 23.

Building Descriptions:

1.Field House. Constructed in 1949. Architect: Marsh, Smith & Powell

The field house was one of the first buildings constructed on campus. It was constructed in association with Murdock Stadium and the adjoining track (The original track was demolished in 2012.) The field house building is a large, one-story, rectangular-massed building measuring approximately 112 feet long by 47 feet wide. A single, large, low-pitch gable roof, set on a northwest/southeast axis covers the building. Ribbon windows set at the top of the walls, under the overhanging eaves, act as clerestory lights for the interior space. The building was most probably overpainted entirely in white after its original construction and would have originally matched the color scheme and palette of the other buildings on campus. A central entrance area is located on the north elevation. The Field House is considered a contributor to the historic district for its architectural design.

2.Shops Building. Constructed in 1949. Architect: Marsh, Smith & Powell

The Shop Building was originally constructed as two separate saw-tooth roofed buildings, set side-by-side, with one being constructed before the other and connected by enclosed hallways. It appears that the two buildings were renovated in 1984 with the addition of one roof covering both buildings, and a new formal entrance built on the north elevation. The building measures approximately 192 feet long by 268 feet wide. While it is a good example of the updating of an older structure, the building does not truly convey its historic appearance from before 1968. The substantial alterations are not old enough to be part of the historic fabric of the building. It is not considered a contributor to the historic district.

3.South Gymnasium/Women's Gymnasium. Constructed in 1949. Architect: Marsh, Smith & Powell
Physical Education Building South. Constructed in 1950. Architect: Marsh, Smith & Powell
Indoor Pool and Health Center. Constructed in 1954. Architect: Marsh, Smith & Powell

The South Gymnasium was one of the first buildings on campus built for athletics, and was designed to serve as the temporary facility for men and women to be use for athletic events or for auditorium space. The fixed-arch building, so reminiscent of military Quonset huts, was one-half of two buildings built side-by-side, and measures approximately 106 feet long by 90 feet wide. This type of building could be quickly erected, and was an inexpensive alternative to a full gymnasium facility. A rigid arch building is a simple structure, but is capable of creating large covered open areas. The first physical education building was constructed along the north elevation of the South Gymnasium in 1950, and the Pool and Health Center were constructed adjoining that in 1954. When the Men's Gymnasium was constructed in 1963, the South Gym building was assigned to the women's athletic department. According to Howard Morgridge of Marsh, Smith & Powell, the South Gym building was constructed using Lamella beams instead of steel trusses, and concrete cantilever sidewalls were used to support the beams. As the South Gymnasium and adjoining buildings have retained sufficient integrity to convey their historic construction, the grouping is considered a contributor to the historic district.

4.Administration Building. Constructed in1950/enlarged 1963. Architect: Marsh, Smith & Powell (1950), Smith; Powell & Morgridge (1963).

In 1951, Howard Morgridge wrote in the article about El Camino College for the *Architect and Engineer* magazine that "the newly completed administration and class room building is the only two-story structure on the site. The two-story design was adapted to add dignity and express the purpose of the building. The entire first floor is devoted to Administrative space where all but the basic areas have been kept as free and flexible as possible by use of metal partitions. On the exterior of the building at the entrance, a pre-cast concrete motif is cast as an over-all wall pattern, a decorative symbol which is being used on other buildings in the same manner and as a theme for tile patterns at drinking fountain panels and in other various ways." When the new campus of ECC was planned by Marsh, Smith & Powell in 1946 (while Morgridge was a principal architect with the firm), they could not have foreseen that the student enrollment would increase 600% over the next ten years. So the Administration Building was constructed to be the focal point of the campus from the public entrance off of Crenshaw Boulevard, with its two-story height and striking modern style façade. Using what are now the classic architectural features of the International style of Post World War II architecture, the Administration Building is a long, rectangular-massed building using an "L" plan, with an emphasis on its horizontal alignment, yet accented by vertical brick-faced walls set at perpendicular angles, and flush with the main building. The visually striking front elevation of projecting and recessed walls, set with large window units, is supported by large posts on the first level giving the front façade the illusion of floating above the ground. The main entrance is set under the front façade in what appears to be negative space. The building measures approximately 127 feet long on the elevation that faces Crenshaw Boulevard, and extends approximately 271 feet to the west along the ell. (Text is continued on the next page.)

4.Administration Building, continued:

The front elevation of the building originally appeared similar to the entrance of Marsee Auditorium and the Music Building (facing Redondo Beach Boulevard), with the light terra cotta colored motif tiles. An addition was made to the Administration Building in 1963, when it became apparent that all the buildings on campus would need to be enlarged to deal with the increasing student and faculty population. The addition was made on the west elevation of the building, and does not interfere with the l integrity of the original design of the building. The Administration Building is not only considered a contributor to the ECC historic district, but is also eligible to be considered individually eligible for listing in the National Register and California Register under Criteria C.

5.Student Activities (Campus Center). Constructed in 1950. Architect: Marsh, Smith & Powell

The Campus Center was designed in the International style of Post World War II modern architecture using an emphasis on low, horizontal, rectangular shapes. The building was integrated with the surrounding landscape with the use of long narrow steps, walls to hold plantings, and wide walkways. The building is located within the campus and its primary façade faces east. For this irregularly shaped building, the architectural surprise was the “butterfly” roof over the dining room and office portion (north portion) of the building, and the use of large areas of curtain glass wall. (The Campus Center was co-joined with the Student Activities Building along its north elevation in 1960.) The patio portion of outdoor eating area at the south end of the Campus Center was designed for easy access to food service for students. Yet, the patio is designed with low curved walls surrounding the area, and as entrance corridors from the athletic complex to the west. The S-curve is one of the most common and graceful lines used in composition, and is used to beckon the eye and produce a feeling of calm. The Campus Center is considered a contributing building to the historic district.

6.Student Services Center (Addition to Campus Center). Constructed in 1959-1960. Architect: Smith, Powell & Morgridge.

To meet the needs of the growing student population, the Student Services Center was constructed just to the north of the Campus Center in 1960. Designed to accentuate its own use and purpose, triangular shapes were used to complement the angular qualities of the Campus Center butterfly roof, yet used in a way to create its own visual identity. The Student Services building was constructed in a “U” plan, with the south section of the building accented by architectural details on its west elevation facing the large campus lawn. While the wall is faced with the ruffled Norman brick, the windows at the top of the wall are triangular in shape to match the triangular roof supports that project from the building to support the triangular edges of the flat roof. The roof supports could be considered almost Googie style for their use of 3-dimensional geometric elements to enhance the facade. (Triangular shapes were also used in the design of the public restroom adjacent to Murdock Stadium. The sharp triangle shaped buildings were used to counterpoint the large oval structure of the stadium.) Glass curtain walls are used in the Student Services Center to open the interior space to the outdoors. The addition that was made to the west elevation of the Student Services Building in 1975 can be considered an appropriate alteration to the building. Whether architects of the addition, Powell, Morgridge, Richards & Coghlan, were aware of the Secretary of the Interiors Guidelines for the recommended placement and design of an addition to a building, they did just that. The addition was made to a heretofore minor elevation (rear of the building), and it was designed in a different architectural style (Abstract Modern), and could be removed in the future without harming the significant front elevations of the building. The 1975 addition achieves all those goals and does not remove the original buildings ability to convey its historic architectural design and significance. The Student Services Center building is considered to be a contributor to the historic district.

7.Library. Constructed in 1952. Architect: Marsh, Smith & Powell. Additions: Smith, Powell & Morgridge 1960; Morgridge & Associates 1992.

The library was originally designed in a “pin wheel” plan so that indirect lighting could be used to offset the use of artificial light within the building. The center of the building was a rectangular massed shape with an angled wing extending to the south, another angled shaped wing extending to the east, and a long rectangular wing extending to the north. While the building was designed to be enlarged in the future, and was, with a large rectangular mass extending to the west constructed in the 1960s, the building had to be significantly enlarged with two other major additions in the 1980s and 1990s. These later alterations caused the building to lose the integrity of its original design. The Library is not considered to be a contributor to the historic district.

8.Life Sciences Building. Constructed in 1951. Architect: Marsh, Smith & Powell

The Life Sciences Building was the first of the collection of science-related studies buildings constructed in the northeast corner of the campus, at the intersection of Crenshaw and Manhattan Beach Boulevards. The north façade of the Life Sciences Building was designed to complement the Administration Building as a long, rectangular-massed building with an emphasis on low horizontal elements. The horizontal sight lines are intentionally interrupted by vertical accents provided by a long band of tall window units and large blocks of the red, ruffled Norman brick. On the east elevation, a wide overhanging eave extension has square cutouts to allow light into an otherwise continually shady area of the building. This building is considered a contributor to the historic district.

9.Chemistry Building. Constructed in 1955. Architect: Smith, Powell & Morgridge

The Chemistry Building and the Physics Building were constructed almost simultaneously to enlarge the amount of classroom space allocated to the sciences at ECC. While the Chemistry Building appears to have a very plain presentation to the public, its east elevation (that faces Crenshaw Boulevard) was specifically designed not to draw attention away from the Administration Building. Its façade was purposefully made to look almost industrial in nature, so that newcomers to the campus could tell visually that this building was not intended to attract visitors. While it is exceedingly plain in appearance, its design reflects the overall plan by Marsh, Smith & Powell (now having evolved to Smith, Powell & Morgridge) of having a low, horizontal massing, with vertical accents created by walls of the red, ruffled Norman brick. This building is considered a contributor to the historic district.

10.Physics Building and Physics Addition. Constructed in 1954, with the addition in 1958. Architects: Marsh, Smith, & Powell (1954), and Smith, Powell, & Morgridge (1958).

The Physics building was designed along with the Life Sciences Building and Chemistry Building to create a dedicated set of classroom and laboratory space for the sciences. When the addition to the Physics Building was completed in 1958 the sciences complex was a ring of rectangular buildings with an open courtyard area in the center. The Physics Building and the Addition were also designed to complement the overall plan of the campus with low, horizontal massing, wide overhanging eaves, and vertical accents created by walls of the red, ruffled Norman brick. This building is considered a contributor to the historic district.

11.Campus Theater and Music Building. Constructed in 1955, Architect: Marsh, Smith & Powell.

The Campus Theater building repeats the use of a large span of wall space, filled with the concrete motif tiles as found on the Administration Building, and uses the motif to tie the Theater building, located on the Redondo Beach Boulevard side of the campus, to the campus as a whole. The front of the Theater becomes the focal point of the Music building's, and ECC campus', south elevation. The eastern portion of the elevation then presents a contrast with the building heading to the east in a low, horizontal massing, and inset with large windows under a broad projecting fascia. When the Auditorium was constructed in 1967, its front elevation was designed to complement the Theater Building, and present a choreographed "face" for the southern entrance to the ECC campus. The building massing is almost square as it measures approximately 215 feet by 220 feet, and it is built around an inner open courtyard area. This building is to be considered a contributor to the historic district.

12.Art Buildings. Constructed in 1955. Architect: Marsh, Smith & Powell.

The exterior design of the Art Building was kept very simple, with the use of a long, low horizontal massing. Bands of large windows span the north elevation situated under an overhanging eave and wide fascia board. The wall is clad in the dark red Norman brick, while the ends of the building are large, white rectangular blocks presenting a subtle vertical presence. The Arts Building consists of the Art North Wing, situated on an east/west axis, and the ell, set perpendicular to the North Wing at its west end. The Behavioral Science Building is located to the south of the Art Buildings. The Art North Wing is considered a contributor to the historic district.

13.Physical Education North. Constructed in 1957. Architect: Smith, Powell & Morgridge.

The Physical Education North Building with its facilities and offices was the first to be constructed in 1957, but it was designed specifically to complement in design and function, the North (Men's) Gymnasium that would be erected in 1963. While the two buildings certainly have their specific functions in rectangular massed structures, the front arcade that spans between the two buildings, and the design of the courtyard between the two buildings within the arcade, appears to be a unique exterior treatment of a campus area assigned to athletics. Smith, Powell & Morgridge brought in the architectural styling of Minimalist Modern when they designed the arcade. The arcade references elements of classic architecture, yet has been stripped of all decorative elements and presented in strict geometric lines. Not content to just build a utilitarian staircase and ramp to connect the courtyard with the Gymnasium, and hide them out of view, the architects designed an oversized ramp that almost becomes a sculptural element within the courtyard. The building itself uses large, bold, rectangular areas of the applied brick to represent solid and bold values. The Physical Education North Building is to be considered a contributor to the historic district.

14.Facilities and Receiving. Constructed in 1958. Architect: Smith, Powell & Morgridge

While the Facilities Administration Building was given architectural design elements to tie it into the overall campus design, it does not present an integral part of the campus architectural plan. The Facilities and Receiving complex consists of two separate buildings that parallel each other and contain offices for personnel and repair and maintenance shops. The Facilities Building, that faces Manhattan Beach Boulevard, is comprised of two rectangular shaped masses that intersect at the shipping bays. The mass to the east is approximately 275 feet long and 38 feet wide, the shipping dock is approximately 118 feet by 57 feet wide. It is not considered a contributor to the historic district.

15.Technical Arts Building. Constructed in1961. Architect: Smith, Powell & Morgridge.

It appears that in the early 1960s, the overall concept design of the earlier campus would not provide the classroom space required by the rapidly multiplying student population. The Technical Arts Building appears to the first two-story building constructed on campus, other than the Administration Building that had been intended to be the only two-story structure on campus. With the increase in size, and construction costs rising, the two-story classroom buildings that are built on campus after 1960, lack the high-style architectural details of the earlier buildings, yet are still designed to contribute to the overall visual cohesiveness of the campus. The Technical Arts Building is a rectangular mass that measures approximately 314 feet long by 102 feet wide, faces Manhattan Beach Boulevard, and is set on an east/west axis. A wide overhanging flat roof and projecting cantilevered second-floor walkways, which surround the building, present visual dark and light elements. The large horizontal massed building is anchored at each end by vertical brick faced stairwells or elevator units. The Technical Arts Building is considered a contributor to the historic district.

16.Social Science Building. Constructed in 1960. Architect: Smith, Powell & Morgridge. Elevator addition 1976.

The architects brought to the southern entrance of the campus design elements applied to a two-story building that references the Administration Building. A long, horizontally massed building with wide overhangs from the roof, and panels at each end of the building, give the impression that the long row of windows is recessed from the front façade of the main body of the building. On the first level of the south elevation, non-supporting brick walls, bring in vertical accents to the façade, and because they are short walls, a suggestion of tension. The main body of the building is relatively simple in design, but by using architectural details, the building presents light and dark elements, vertical and horizontal elements, and soft versus hard/rough elements. The blue tinted windows bring in just a touch of color to contrast with the orange motif tiles and red brick. The building measures approximately 221 feet long by 80 feet wide. The elevator was added to the east elevation in 1976, but does not reduce the buildings ability to convey its historic significance. A photograph of the building taken by Tim Gregory in October 2003 shows that the front (south) elevation of the building had architectural metal screens spanning across the windows. The Social Science Building is to be considered a contributor to the historic district.

17.Natural Science Building. Constructed in1962. Architect: Smith, Powell & Morgridge.

Built during the same phase with the Technical Arts Building, this building lacks the high-style architectural details of the earlier buildings, yet is still designed to contribute to the overall visual cohesiveness of the campus. The Natural Science Building is square massed building that measures approximately 98 feet long by 98 feet wide. The recurring decorative motif tiles are used on the northwest elevation. The architectural details used to create interest for this building are the solid sections of panel railings used on the cantilevered (unsupported) walkways that encircle the building, used again at the roof line. The Natural Sciences Building is considered a contributor to the historic district.

18.Communications Building. Constructed in 1962. Architect: Smith, Powell & Morgridge.

Built during the same phase with the Technical Arts and Natural Sciences Buildings, this building lacks the high-style architectural details of the 1940s and 1950s campus buildings, yet is still designed to contribute to the overall visual cohesiveness of the campus. The Communications Building is a rectangular massed building that measures approximately 177 feet long by 65 feet wide. The architectural details used to create interest for this building are the solid sections of panel railings used on the cantilevered (unsupported) walkways that encircle the building, used again at the roof line. The depth of the walkways create wide bands of negative space to contract against the smooth white concrete railing panels, and the solid vertical elements at the ends of the building. The east elevation has an elevator within the brick faced end-block. The Communications Building is considered a contributor to the historic district.

19.North Gymnasium. Constructed in 1963. Architect: Smith, Powell & Morgridge.

This is a straightforward building as far as its function, but its location and exterior design elements make it an important anchor building to the entire collection of physical education buildings on the west side of the main campus area. Constructed as the "men's" gym, its east elevation is rather simple with red brick and smooth concrete, while the south elevation (that faces the courtyard) is faced almost entirely with the decorative concrete motif tiles found throughout the campus. The North Gym is to be considered a contributor to the historic district.

20.Auditorium. Constructed in 1967. Architect: Powell, Morgridge, Richards, Coghlin.

While it was one of the last buildings constructed in during the 1960s to enlarge the campus and its facilities space, it was designed with the same attention to exterior elements as the Technical, Natural Science, and Communication Buildings. Up to the 1960s, most auditoriums on schools (high schools and colleges) were constructed of a large rectangular mass with internal framing defining the functional space within. This evaluator has seen other auditorium buildings (Palm Springs High School) where the architects designed the exterior of the building to follow the shape of the auditoriums inner space. For ECC, the architects decided to use a more static, stepped, exterior shape for the body of the auditorium, possibly to offset the wide, flat, front (east) façade, and the very tall fly tower at the rear of the building. The front façade is faced with the decorative concrete motif tiles and the red Norman brick, while the body of the building is clad in smooth concrete. A wide awing projects from the front elevation to bring in a horizontal element. The Auditorium is to be considered a contributor to the historic district.

21.Behavioral Science Building. Constructed in 1968. Architect: Powell, Morgridge, Richards, Coghlin.

The Behavioral Science Building was most likely the last classroom building designed for the ECC campus. The building measures approximately 275 feet long by 106 feet wide. It has an exceptionally bold presence that may be attributed its three-story size and the way it seems to loom out over the sidewalks. A visitor must pass through a portal that is created by the building's wide first floor overhang connecting with the stand-apart staircase to the west of the main mass. The entrance to the building must be gained by going well under the second-floor area. Because of it large size, the architects emphasized its horizontal elements by using projecting walkways and cantilevered roof, but using metal mesh railing panels that seem to disappear letting the light colored concrete pull the viewers attention in a horizontal line. Again the architects were able to design a building to suit the needs of the college with its ever increasing enrollment, but stay absolutely true to the overall design of the campus. The Behavioral Science Building is to be considered a contributor to the historic district.

22.Math & Computer Science Building with Observatory. Constructed in 1969.
Architect: Powell, Morgridge, Richards, Coghlin.

This building is very similar in appearance to Technical, Communications, and Natural Science Buildings on its minor elevations. The front (west) elevation was designed to present a very different design element to the campus landscape. There is a large rectangular mass with a tall vertical element that projects from the main body of the building. The projecting section is clad with the decorative concrete motif tiles above a formal entrance and lobby area. This projecting section may be related to the observatory dome located on the eastern end of the flat roof. The Math & Computer Science Building is to be considered a contributor to the historic district.

23.Planetarium. Constructed in 1969. Architect: Powell, Morgridge, Richards, Coghlin.

The Planetarium Building is an excellent example of New Formalism architecture used on a small scale. The Los Angeles Forum and the Mark Taper Forum are two buildings located in Los Angeles that were designed in New Formalism style. The style was an evolution away from the strict rectangular shape and hard angles used in the International style. The exterior walls are clad with red Norman brick, with engaged columns of smooth concrete rising to support the cantilever roof that curves outward. The main entrance is located in the east quadrant and projecting from the wall surface from the entrance, heading counter-clockwise, are showcase windows. The Planetarium at ECC is also significant for its interior treatment as well. The Planetarium is not only considered a contributor to the ECC historic district, but is also eligible to be considered individually eligible for listing in the National Register and California Register under Criteria C.

24. Murdock Stadium, Track Field, and associated restroom buildings. Constructed in 1951. Architect: Marsh, Smith & Powell.

The oval-shaped Murdock Stadium was constructed using tall, earthen-berm exterior walls and lined with concrete walls, steps, and stadium seating. It measures approximately 600 feet long by 350 feet wide. Due to the amount of open land available when the campus was designed in 1949, the track and field track was constructed immediately adjacent to the stadium as its own facility, not within the stadium as is usually found on college campuses. The exterior east wall of the Stadium was fitted with the bleachers for the Track and Field events. The original dirt Track measured approximately 600 feet long by 275 feet wide. Murdock Stadium and the Track field were set on a northwest/southeast axis. The Stadium was fitted with wood bench seating that is still in place in the north quadrant of the structure, while modern aluminum benches were installed into the east and west seating area walls. A wide concrete walkway tops the stadium walls with an announcers booth situated at the peak of the west wall and a press box was constructed at the peak of the east wall. The scoreboard is set at the north end of the field opposite the formal entrance to the stadium. Visitors enter the Stadium at the south end and gain entrance to the seating area by brick-faced concrete ramps leading to a set of steps in the visitors and homeside seating areas. The sets of steps that climb into the seating areas go to the top of the stadium and then continue to the backside of the stadium to lead to the public restroom buildings located immediately adjacent to the southeast and southwest corners of the Stadium.

When the Stadium was first constructed and the vegetation was just beginning on the exterior walls of the structure, the bathroom buildings would have been very noticeable for their unusual triangular shaped bodies and roof system. The bathroom buildings were designed to provide a sharp visual contrast to the large oval (smooth) shaped Stadium. The architects used very simple techniques of creating angles of less than 90° combined with brick laid in stack bond coursing and interlocking bricks at the projecting front façade to create a visually vibrant exterior. This front façade was then set to contrast the low-pitched gable roof that topped the bathroom facilities. Large, flat concrete panels were set around the restroom entrances to create privacy and depth to the façade. Not only is the exterior design unusual in a stadium setting, but the fronts of the small buildings were left open to the elements. While the building provided shelter to the occupants, the open façade allowed for ample natural ventilation of the space.

The original Track, and a separate facility of indoor and outdoor handball courts that was located to the south of the Track, were recently demolished. A new modern track facility was constructed in the same location as the original track. There are also two small buildings located near the Stadium that appear to have been used for the sale of tickets and concessions. These buildings do not appear to have been designed by Marsh, Smith & Powell, and are should not be considered contributors to the historic district.

Murdock Stadium, its landscaping, and the associated bathroom buildings, is a significant collection of related buildings and should be considered a contributor to the ECC historic district.

***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒ Continuation ☐ Update

1.Field House. Constructed in 1949. Architect: Marsh, Smith & Powell

2. Shops Building. Constructed in 1949. Architect: Marsh, Smith & Powell

3. South Gymnasium/Women's Gymnasium. Constructed in 1949. Architect: Marsh, Smith & Powell

4.Administration Building. Constructed in1950/enlarged 1963. Architect: Marsh, Smith & Powell

***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒Continuation ☐ Update

5.Student Activities (Campus Center). Constructed in 1950. Architect: Marsh, Smith & Powell

6.Student Services Center (Addition to Campus Center). Constructed in 1959-1960. Architect: Smith, Powell & Morgridge.

7.Library. Constructed in 1952. Architect: Marsh, Smith & Powell. Additions: Smith, Powell & Morgridge 1960; Morgridge & Associates 1992.

8.Life Sciences Building. Constructed in 1951. Architect: Marsh, Smith & Powell

9.Chemistry Building. Constructed in 1955. Architect: Smith, Powell & Morgridge

10.Physics Building and Physics Addition. Constructed in 1954, with the addition in 1958. Architects: Marsh, Smith, & Powell (1954), and Smith, Powell, & Morgridge (1958).

***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒Continuation ☐ Update

11.Campus Theater and Music Building. Constructed in 1955, Architect: Marsh, Smith & Powell

12.Art Buildings. Constructed in 1955. Architect: Marsh, Smith & Powell

***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒ Continuation ☐ Update

13.Physical Education North. Constructed in 1957. Architect: Smith, Powell & Morgridge

14.Facilities and Receiving. Constructed in 1958. Architect: Smith, Powell & Morgridge

15.Technical Arts Building. Constructed in 1961. Architect: Smith, Powell & Morgridge

16.Social Science Building. Constructed in 1960. Architect: Smith, Powell & Morgridge. Elevator addition 1976

***Resource Name or #: El Camino College Historic District**

***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒ Continuation ☐ Update

17.Natural Science Building. Constructed in1962. Architect: Smith, Powell & Morgridge

18.Communications Building. Constructed in 1962. Architect: Smith, Powell & Morgridge

19.North Gymnasium. Constructed in 1963. Architect: Smith, Powell & Morgridge

20.Auditorium. Constructed in 1967. Architect: Powell, Morgridge, Richards, Coghlin

***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒Continuation ☐ Update

21.Behavioral Science Building. Constructed in 1968. Architect: Powell, Morgridge, Richards, Coghlin

22.Math & Computer Science Building with Observatory. Constructed in 1969.
Architect: Powell, Morgridge, Richards, Coghlin

23.Planetarium. Constructed in 1969. Architect: Powell, Morgridge, Richards, Coghlin

24.a. Murdock Stadium. Constructed in 1951. Architect: Marsh, Smith & Powell

*Resource Name or #: El Camino College Historic District

*Recorded by: Pamela Daly, M.S.H.P. *Date: January 2013 ☒Continuation ☐ Update

24. b. Murdock Stadium. Constructed in 1951. Architect: Marsh, Smith & Powell

24.c. Murdock Stadium, restroom (southwest). Constructed in 1951. Architect: Marsh, Smith & Powell

***Resource Name or #: El Camino College Historic District**

***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒Continuation ☐ Update

24. d. Murdock Stadium - entranceway. Constructed in 1951. Architect: Marsh, Smith & Powell

24.e. Murdock Stadium, restroom (southeast). Constructed in 1951. Architect: Marsh, Smith & Powell

***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒Continuation ☐ Update

EL CAMINO COLLEGE

BUILDING / LOCATION	ABBREVIATION	BUILDING / LOCATION	ABBREVIATION
ADMINISTRATION	ADM	MURDOCK STADIUM	STAD
ART AND BEHAVIORAL SCIENCE	ARTB	MUSIC	MUSI
ART BUILDING - NORTH	ARTN	NATURAL SCIENCE	NATS
BASEBALL FIELD	BBFL	NORTH FIELD	NFLD
BOOKSTORE	BKST	NORTH GYM	NGYM
BUSINESS	BUSI	PHYSICAL EDUCATION NORTH	PE-N
POLICE DEPARTMENT	ECPD	PHYSICAL EDUCATION SOUTH	PE-S
CAMPUS THEATRE	TH	PHYSICS	PHYS
CHEMISTRY	CHEM	PLANETARIUM	PLAN
CHERRY TREE OFFICES	CTO	POOL	POOL
CHILD DEVELOPMENT CENTER	CHIL	SAND COURTS	SAND
COMMUNICATIONS	COMM	SHOPS	SHOP
COMMUNITY ADVANCEMENT OFFICE	CADV	SOFTBALL FIELD	SBFL
CONSTRUCTION TECHNOLOGY	CNST	SOCIAL SCIENCE	SOCS
FIELDHOUSE	FLDH	SOUTH GYM	SGYM
HANDBALL COURTS	HBCT	SPECIAL RESOURCE CENTER	SRC
HUMANITIES	H	STUDENT ACTIVITIES CENTER	ACTC
SCHAUERMAN LIBRARY	LIB	STUDENT SERVICES CENTER	SSVC
LIFE SCIENCE	LS	TECHNICAL ARTS	TECH
MANHATTAN BEACH BLVD. MODULES	MBBM	TENNIS COURTS	TENN
MARSEE AUDITORIUM	AUD	TRACK/TRACK FIELD	TRAK/TRFL
MATH / COMPUTER SCIENCE	MCS	YARD	YARD

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***Recorded by:** Pamela Daly, M.S.H.P. ***Date:** January 2013 ☒Continuation ☐ Update

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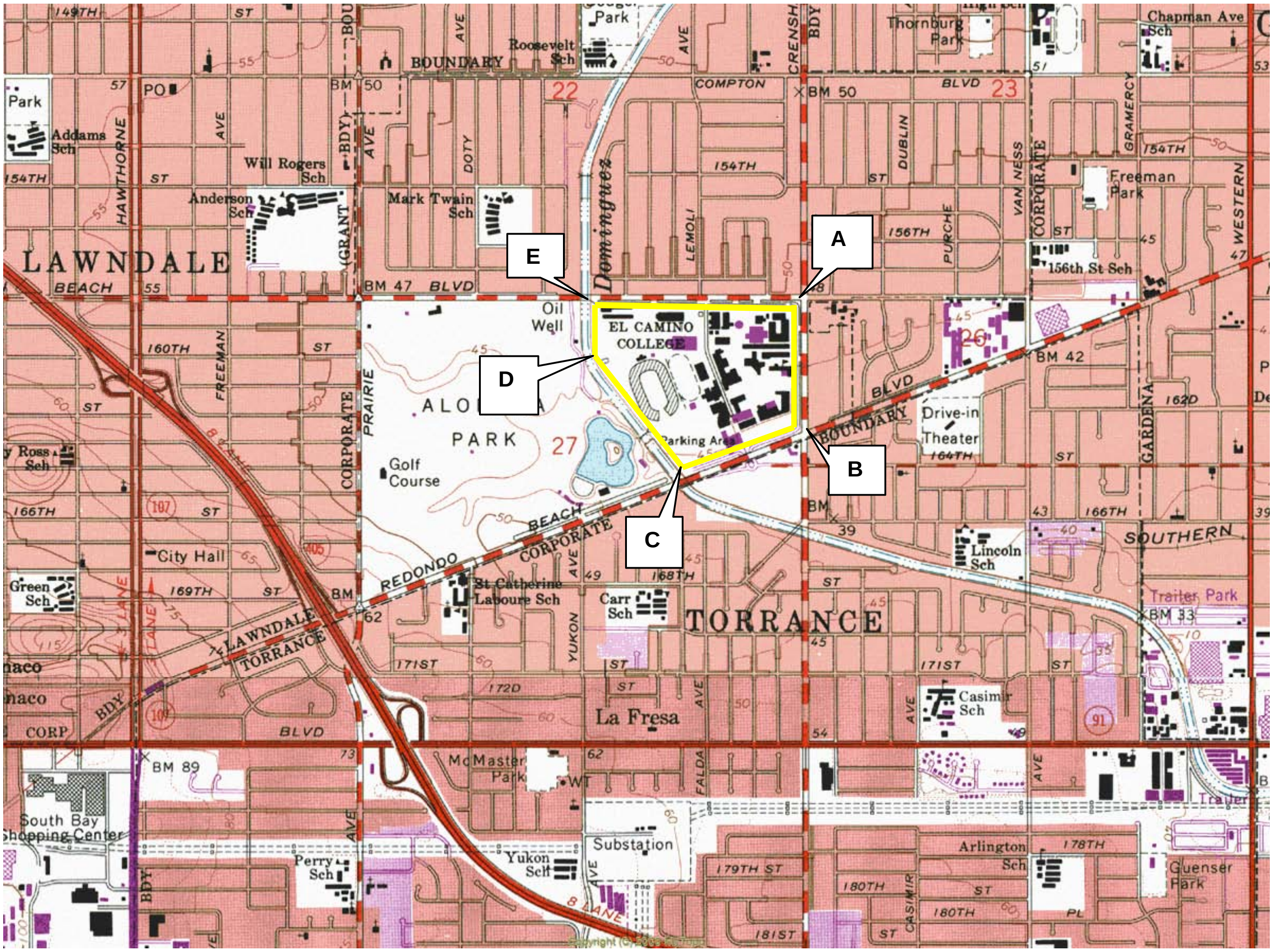
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 31 **of** 31 ***Resource Name or #:** El Camino College Historic District

***Map Name:** Inglewood ***Scale:** 1:24,000 ***Date of Map:** 1961/1984



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Point B: 377311m/E 3749981 m/N
Point C: 376859m/E 3749803 m/N
Point D: 376541m/E 3750261 m/N
Point E: 376535m/E 3750457 m/N

THE BUILDING BIOGRAPHER
TIM GREGORY
❖ Building Histories
❖ Cultural Resource Studies
❖ Historic Resources Surveys
❖ Local, State, and National Landmarking
❖ Historic Preservation and Archival Consulting

November 7, 2003

Sid Lindmark, AICP
10 Aspen Creek Lane
Laguna Hills, CA 92653-7401

Subject: Additional Historical Resources Found on the Campus of El Camino College

Dear Mr. Lindmark:

On July 17, 2003 I submitted to you a report on the ten buildings on the campus of El Camino College that were identified by the College as being impacted by the proposed new Master Plan through demolition, planned additions, or major renovations. Since then, the campus has identified four additional buildings that will be impacted: the Student Service Center, Stadium, Social Science Building, and Technical Arts Building. (The Snack Bar was dropped from consideration per your instructions.)

On October 30, 2003, I conducted a walking reconnaissance of the four additional buildings listed above. With the aid of building summary reports furnished by the College, it was determined that three of the four buildings were at least forty-five years old and that one, the Social Science Building was forty-three years old. All four buildings were observed, recorded, mapped and photographed. (Although a fifty-year age is the normal cut-off for eligibility for the National Register of Historic Places and California Register of Historical Resources, many consultants undertaking surveys such as this one are now using an age of forty-five years or less so that their surveys will become less quickly outdated.)

Research was undertaken before and after the site visit in order to further identify the history of the buildings and their context. The first step was to investigate whether information on any potential historic resources on the property had already been recorded at the South Central Coastal Information Center of the State Office of Historic Preservation (SHPO) located at California State University, Fullerton. No records were found.

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Further research was conducted at the El Camino College library and the Los Angeles Public Library, the oldest public library collection in Southern California. The focus of this research was to determine if any of the identified potential historic resources were of local or regional significance. As many additional sources as possible within realistic time and budget constraints were also investigated.

The consultant observed that land use on the campus is entirely educational. All buildings with non-academic uses house such related back-up needs as maintenance facilities and student, faculty, and administrative services. Many buildings on the campus are utilitarian in nature and are of a vernacular or nondescript design. A number of new buildings are pleasing esthetically and show an attention to architectural style. Older buildings dating back to the earliest days of the College have varying degrees of historical and/or architectural interest. However, the entire campus is unified through landscaping and by the fact that the primary exterior finishes of almost all buildings are brick and/or stucco.

Of the four buildings surveyed, the Technical Arts Building (built 1959) and the Student Services Center (built in stages between 1950 and 1956, with some later additions) could not be considered significant resources. The Student Services Center no longer retains sufficient integrity (i.e. it has undergone so many alterations and additions over the years that its original appearance has been severely changed). The Technical Arts Building, although much more intact, is not architecturally distinguished. The other two structures, Murdock Stadium (built 1951) and the Social Science Building (built 1960), were found to have sufficient architectural and/or historical importance and retained sufficient integrity to be considered significant.

The National Register of Historic Places has developed a system of alpha-numeric evaluation codes for pinpointing the status or significance of historic resources. The two codes used for the two buildings under discussion are:

5S1 Not eligible for the National Register, but of local interest and eligible for listing in a local historic resources survey and thus also potentially eligible for listing on the California Register of Historical Resources (Murdock Stadium)

5S3 Not eligible for the National Register or for a local historic resources survey, but eligible for consideration in local planning (Social Science Building)

Mitigations--

1) The only mitigation that would lessen the impact of the El Camino College Master Plan on the California Register-eligible Murdock Stadium to a point of insignificance would be to retain it and restore it using the Secretary of the Interior's Standards for the Treatment of Historic Properties. If the College finds this mitigation to be financially or practically impossible, then it must furnish for the record sound reasons why demolition is necessary. A Statement of Overriding Considerations will also need to be issued.

2) If it is decided that Murdock Stadium will be removed, further documentation of this resource should be undertaken utilizing the standards of the Historic American Building Survey (HABS), including photo-documentation and measured drawings. (If a complete set of the architect's original measured drawings are still on file at the College, then only photographs will be necessary.)

3) If it is decided that the Social Sciences Building will be removed, its recording on State of California DPR forms should be sufficient mitigation.

I have attached completed forms for both buildings, including Primary Records; Building, Structure, and Object Records; and Continuation Sheets (DPR 523A, B and L forms). In completing the forms, I followed the guidelines as presented in "Instructions for Recording Historical Resources" issued by SHPO in March 1995 and regularly updated. I will send copies of the DPR reports to the SHPO who will forward them to their South Central Coastal Information Center at California State University, Fullerton.

4) As with the buildings previously surveyed, I highly recommend that the client transmit copies of this letter and the DPR forms to the El Camino College Archives housed at the campus Library for future reference by historians.

Sincerely,

Tim Gregory
Registered Public Historian #562

cc: Hugh Brownlee
Maas Companies
3400 West Manhattan Beach Blvd.
Torrance, CA 90506

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 5S1

Other Listings
Review Code ____ **Reviewer** ____________ **Date** ______

Resource Name or #: (Assigned by recorder) *Murdock Stadium*

P1. Other Identifier:

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted** **a. County** *Los Angeles*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad *Inglewood* **Date** *1981* **T** ; **R** ; *NE* **1/4 of** *NE* **1/4 of Sec** *27* ;

c. Address: *16007* *Crenshaw Blvd.* City *Torrance* Zip *90506*

d. UTM: (Give more than one for large and/linear resources) *11* ; *37730* **mE/** *3750150* **mN**

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Murdock Stadium is an oval sports stadium, open on its south end. It is a concrete structure, the walls, steps, and seating tiers all made out of that material. Seating consists of approximately twenty continuous rows of benches with backs. Most of the benches are made of newer metal, but some at the north end are of older wood. Enclosed press boxes with bands of windows appear on th top of the stadium on both east and west sides. There is a scoreboard centered on the north end. Three banks of flood-lights rise c each side of the stadium. A flagpole and a pole carrying public-address speakers are situated at the south end. The exterior of the stadium consists of a continuous heavily-landscaped berm reaching to the top of the structure. Although the main entrance to the stadium is on the south side, several regularly-spaced concrete stairways traverse the berm allowing access to the top of the stadiu from all sides. Landscaping at the main entrance consists of low brick walls, mature trees, tall palms, shrubs, and flower beds. Mature trees can be seen peeking over the top of the stadium. A brick-and-stucco bathroom structure is located on the *southeast corner of the stadium's exterior.*

P3b. Resource Attributes: (List attributes and codes) *HP42 - Stadium/sports arena* *HP15 - Educational building*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, accession #)
West side (View toward northwest). Photo No: 90-1, 10/30/3

P6. Date Constructed/Age and Sources:
☐ Prehistoric ☒ Historic ☐ Both

1951--campus records

P7. Owner and Address
El Camino College
16007 Crenshaw Blvd.
Torrance, CA 90506

P8. Recorded by: (Name, affiliation, and address)
Tim Gregory DBA The Building Biographer, 400 East California Blvd. #3, Pasadena, CA 91106

P9. Date Recorded: *11/7/2003*

P10. Survey Type: (Describe)
Project-oriented: master plan

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☒ Photograph Record ☐ Other: (List)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary #
HRI #
NRHP Status Code

Resource Name or #: (Assigned by recorder) *Murdock Stadium*

B1. Historic Name:
B2. Common Name:
B3. Original Use: *Stadium* B4. Present Use: *Stadium*
B5. Architectural Style: *Traditional*
B6. Construction History: (Construction date, alterations, and date of alterations)
1951--orginally constructed; no major alterations

B7. Moved? ☒ No ☐ Yes ☐ Unknown Date : Original Location:
B8. Related Features:

B9a. Architect: *Marsh, Smith & Powell* b. Builder: *Unknown*
B10. Significance: Theme: *Education* Area: *Torrance*
Period of Significance: *1951-* **Property Type:** *Stadium/Sports Arena* **Applicable Criteria:** *A, C*
(Discuss importance in terms of historical or architectural context as defined by theme, period and geographic scope. Also address integrity.)

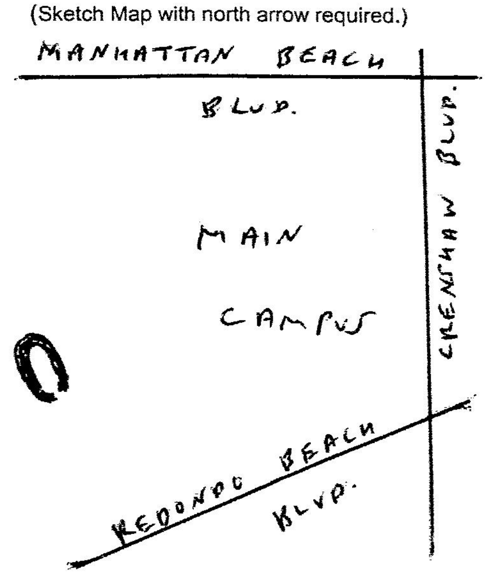
In 1946, after strong recommendations by a consulting team to establish a two-year college in the Inglewood-South Bay area, the governing boards of the Centinela Valley, Redondo (later to become the South Bay district), Inglewood and El Segundo School Districts had won a 10-1 voter approval for the creation of a junior college. Torrance soon joined the newly chartered group and the El Camino Community College District was officially established as of July 1, 1947. Located centrally in the South Bay, the District encompassed five unified and high school districts, twelve elementary school districts and nine cities with a combined population of almost one million. For the first two years of its existence, El Camino College classes were spread out among four local high schools and had to be conducted only at night.

Soon the founders of the College were able to buy from the County the original eighty acres forming the eastern part of Alondra Park as a site for the new campus The cost was $1,000 per acre–not to be paid to the County in cash but promised to be spent by the College on athletic facilities that County residents could enjoy. The land was estimated to be worth $225,000 when the transaction was approved on May 23, 1947. Early classrooms were surplus World War II barracks which were trucked north from the old Santa Ana Army Air Base in Orange County. The first permanent building for classroom instruction was the shop which opened in 1949. The women's gym, field house, another shop building and the social science building (now the southerly humanities building) came shortly thereafter. *(see continuation sheet)*

B11. Additional Resource Attributes: (List attributes and codes)

B12. References:
Bulletin of Information, 1951-52
A Celebration: El Camino College, 1946-1996
Warrior yearbooks, 1952-

(Sketch Map with north arrow required.)



B13. Remarks:

B14. Evaluator: *Tim Gregory*
Date of Evaluation: *11/7/2003*

(This space reserved for official comments.)

B10. Significance

The architect of the original buildings and of the first campus' master plan was the partnership of Marsh, Smith & Powell who was well-known for its forward-looking educational designs. In fact, at the same time it was designing the El Camino campus plan, the partnership was in charge of devising a new plan for the University of Southern California. Later El Camino College buildings, including the Administration, Humanities, Library, and Campus Center complexes were also the work of Marsh, Smith & Powell. The architects were noted for having designed the campus with a "signature": in addition to white stucco in horizontal insets, bricks were laid in straight lines instead of being staggered, giving the buildings a more streamlined look. They also pioneered in the layout of educational buildings, replacing interior hallways with exterior passageways so that classrooms could have two exterior walls enhancing the use of natural light and ventilation.

The firm was organized in 1901 by Norman Foote Marsh, a graduate of the University of Illinois. David B. Smith and Herbert James Powell were taken on as partners in 1928. Smith was the former Commissioner of Building and Safety for the City of Los Angeles and Powell taught architecture at U.S.C. After Marsh retired in the late 1940s, the firm took on another partner: Howard H. Morgridge. Among other works by Marsh and his partners: the canals and Renaissance Revival buildings in Venice, California; many local schools, churches, and libraries; the University of Redlands campus; and the Good Samaritan Hospital. Powell and Morgridge were to be associated with El Camino College buildings until at least 1968.

The first El Camino faculty numbered only thirty and the student body in 1947 was just five hundred. Forrest G. Murdock was appointed president and served until 1965. The campus Stadium is named after him. Today, the campus has grown to 25,000 students and 800 full- and part-time instructors. Structures on campus now number 37, spread over 126 acres. The campus is currently formulating a new master plan that will impact several of the original buildings.

Murdock Sadium (named after the College's first president to honor his eighteen-year tenure) is of local significance for both structural and historical reasons. It is one of the few remaining and recognizable permanent buildings on campus dating from the first years of the College and designed by the original architects. With a seating capacity of 12,600, it is one of the best and most well-preserved examples of early post-World War II small college stadiums in Southern California. It was also one of the first such stadiums to adopt the oval shape more commonly found in the the stadiums of large academic and public institutions. (Up to this time, most small campuses had rectangular-shaped fields with grandstand type seating along the larger sides.) The landscaped berms surrounding the exterior of the Stadium are also rather unique and not commonly found in the area. The Stadium gains historical significance for being the setting for over fifty years of football games and other athletic events, as well as commencement exercises. Just as the Humanities complex was the primary campus academic gathering spot, the Stadium, on the other side of campus, was the major gathering spot for extracurricular activities before construction of the campus Theater. The integrity of the Stadium is excellent ; comparison with historic photographs show very few alterations. The extant mature landscaping is in excellent shape and still recalls the original design.

A16. Photographs

List of attached photographs:

1 *Stadium seen from parking lot, looking northeast*

2 *Stadium seen from south entrance, looking northeast*

3 *East side of Stadium, looking northeast*

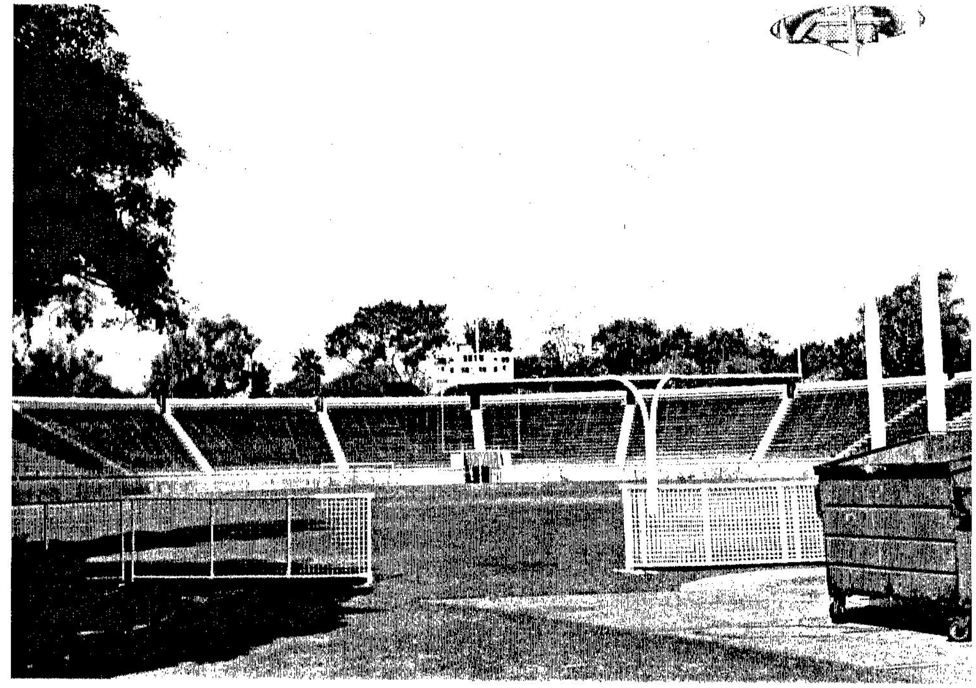
4 *North side of Stadium, looking north*

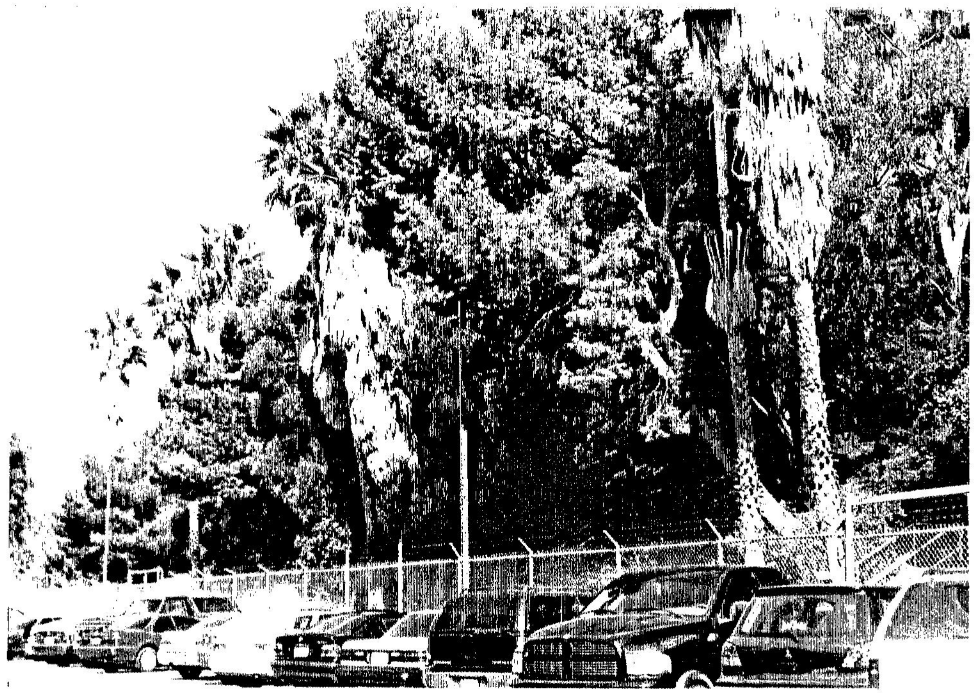
5 *Berm on east side of Stadium exterior, looking northwest*

1

2


3


4


5

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # ______
HRI # ______
Trinomial ______
NRHP Status Code 5S3

Other Listings
Review Code ______ **Reviewer** ______ **Date** ______

 Resource Name or #: (Assigned by recorder) *Social Science Building*

P1. Other Identifier:

P2. Location: ☐ Not for Publication ☒ Unrestricted **a. County** *Los Angeles*
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
b. USGS 7.5' Quad *Inglewood* **Date** *1981* **T** ; **R** ; *Ne* **1/4 of** *NE* **1/4 of Sec** *27* ;
c. Address: *16007 Crenshaw Blvd.* City *Torrance* Zip *90506*
d. UTM: (Give more than one for large and/linear resources) *11* ; *37730* mE/ *3750150* mN
e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

Parcel No.

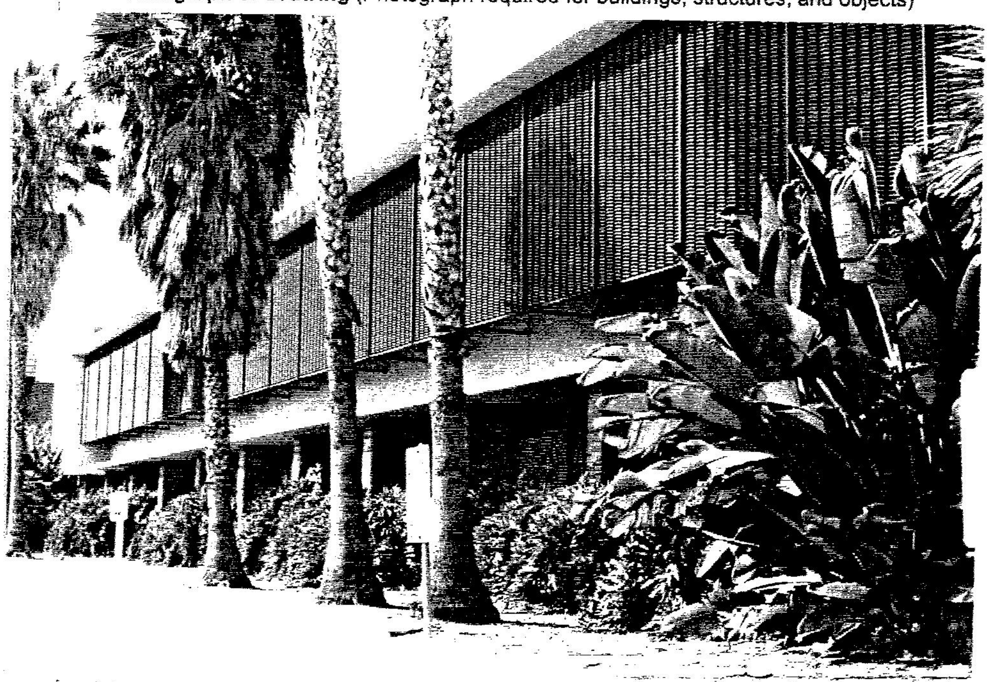
P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Social Science Building on the campus of El Camino College is a two-story rectangular building, basically of concrete, brick and stucco. The first floor of the southerly side is made up of a series of brick piers supporting a flat canopy roof. The walls between the piers are mostly glass fronted by decorative metal grills. The second floor has a continuous band of windows completely covered by a metal grill of the same pattern as the lower floor. The projecting canopy roof of the first floor in conjunction with the projecting main roof give the impression that the second floor is "framed." The east facade is all brick except for an unobtrusive band of louver-covered windows at the south end. Both floors of the north facade have continuous bands of small-paned windows with centered transoms. The west side of the building is stucco and has been altered with the addition of an elevator and walkways structures connecting it with the Art & Behavioral Science Building to the north. Mature landscaping includes palms, banana plants, and other tropical varieties.

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #)
South side (View toward northeast). Photo No: 90-2, 10/30/3

P6. Date Constructed/Age and Sources: ☐ Prehistoric ☒ Historic ☐ Both
1960--campus records

P7. Owner and Address
El Camino College
16007 Crenshaw Blvd.
Torrance, CA 90506

P8. Recorded by: (Name, affiliation, and address)
Tim Gregory DBA The Building Biographer, 400 East California Blvd. #3, Pasadena, CA 91106

P9. Date Recorded: *11/7/2003*

P10. Survey Type: (Describe)
Project-oriented: master plan

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other: (List)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI #

BUILDING, STRUCTURE, AND OBJECT RECORD

NRHP Status Code 5S3

Resource Name or #: (Assigned by recorder) *Social Science Building*

B1. Historic Name:

B2. Common Name:

B3. Original Use: *Educational building* B4. Present Use: *Educational building*

B5. Architectural Style: *Contemporary*

B6. Construction History: (Construction date, alterations, and date of alterations)

1960--Originally constructed
ca. 1990s--West end altered with addition of elevator

B7. Moved? ☒ No ☐ Yes ☐ Unknown Date : Original Location:

B8. Related Features:

B9a. Architect: *Powell, Morgridge, Richards and Coghlan* b. Builder: *Unknown*

B10. Significance: Theme: *Education* Area: *Torrance*

Period of Significance: *1960-* **Property Type:** *Educational building* **Applicable Criteria:** *C*

(Discuss importance in terms of historical or architectural context as defined by theme, period and geographic scope. Also address integrity.)

In 1946, after strong recommendations by a consulting team to establish a two-year college in the Inglewood-South Bay area, the governing boards of the Centinela Valley, Redondo (later to become the South Bay district), Inglewood and El Segundo School Districts had won a 10-1 voter approval for the creation of a junior college. Torrance soon joined the newly chartered group and the El Camino Community College District was officially established as of July 1, 1947. Located centrally in the South Bay, the District encompassed five unified and high school districts, twelve elementary school districts and nine cities with a combined population of almost one million. For the first two years of its existence, El Camino College classes were spread out among four local high schools and had to be conducted only at night.

Soon the founders of the College were able to buy from the County the original eighty acres forming the eastern part of Alondra Park as a site for the new campus The cost was $1,000 per acre–not to be paid to the County in cash but promised to be spent by the College on athletic facilities that County residents could enjoy. The land was estimated to be worth $225,000 when the transaction was approved on May 23, 1947. Early classrooms were surplus World War II barracks which were trucked north from the old Santa Ana Army Air Base in Orange County. The first permanent building for classroom instruction was the shop which opened in 1949. The women's gym, field house, another shop building and the social science building (now the southerly humanities building) came shortly thereafter. *(see continuation sheet)*

B11. Additional Resource Attributes: (List attributes and codes) *HP15 - Educational building*

B12. References:

Bulletin of Information, 1951-52
A Celebration: El Camino College, 1946-1996
Warrior yearbooks, 1952-

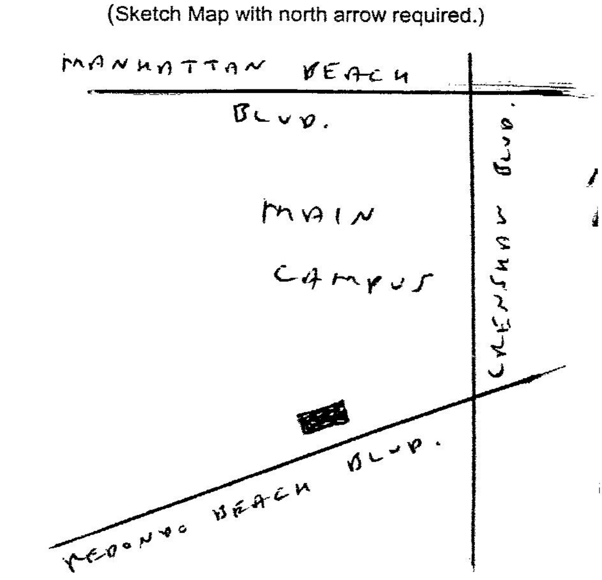
B13. Remarks:

B14. Evaluator: *Tim Gregory*

Date of Evaluation: *11/7/2003*

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



B10. Significance

The architect of the original buildings and of the first campus' master plan was the partnership of Marsh, Smith & Powell who was well-known for its forward-looking educational designs. In fact, at the same time it was designing the El Camino campus plan, the partnership was in charge of devising a new plan for the University of Southern California. Later El Camino College buildings, including the Administration, Humanities, Library, and Campus Center complexes were also the work of Marsh, Smith & Powell. The architects were noted for having designed the campus with a "signature": in addition to white stucco in horizontal insets, bricks were laid in straight lines instead of being staggered, giving the buildings a more streamlined look. They also pioneered in the layout of educational buildings, replacing interior hallways with exterior passageways so that classrooms could have two exterior walls enhancing the use of natural light and ventilation.

The firm was organized in 1901 by Norman Foote Marsh, a graduate of the University of Illinois. David B. Smith and Herbert James Powell were taken on as partners in 1928. Smith was the former Commissioner of Building and Safety for the City of Los Angeles and Powell taught architecture at U.S.C. After Marsh retired in the late 1940s, the firm took on another partner: Howard H. Morgridge. Among other works by Marsh and his partners: the canals and Renaissance Revival buildings in Venice, California; many local schools, churches and libraries; the University of Redlands campus; and the Good Samaritan Hospital. Powell and Morgridge were to be associated with El Camino College buildings until at least 1968.

The first El Camino faculty numbered only thirty and the student body in 1947 was just five hundred. Forrest G. Murdock was appointed president and served until 1965. The campus Stadium is named after him. Today, the campus has grown to 25,000 students and 800 full- and part-time instructors. Structures on campus now number 37, spread over 126 acres. The campus is currently formulating a new master plan that will impact several of the original buildings.

The Social Science Building was designed by the successor firm to the original architects: Powell, Morgridge, Richards and Coghlan. It is the most architecturally significant of all the buildings constructed during the second phase of campus development in the late 1950s and early 1960s. Its clean lines, use of materials, and minimal but integral decorative elements well represent the era of "modern" architecture as applied to academic buildings. Its integrity is good, the only visible alteration occurring on the west end with the recent addition of an elevator structure and two-level pedestrian walkways.

THE BUILDING BIOGRAPHER
TIM GREGORY
❖ Building Histories
❖ Cultural Resource Studies
❖ Historic Resources Surveys
❖ Local, State, and National Landmarking
❖ Historic Preservation and Archival Consulting

July 21, 2003

Sid Lindmark, AICP
10 Aspen Creek Lane
Laguna Hills, CA 92653-7401

Dear Sid:

I am enclosing a copy of an article on El Camino College from the November 1951 issue of *Architect and Engineer*. One of the co-authors of the article was an employee (and later a partner) of Marsh, Smith & Powell, the architects.

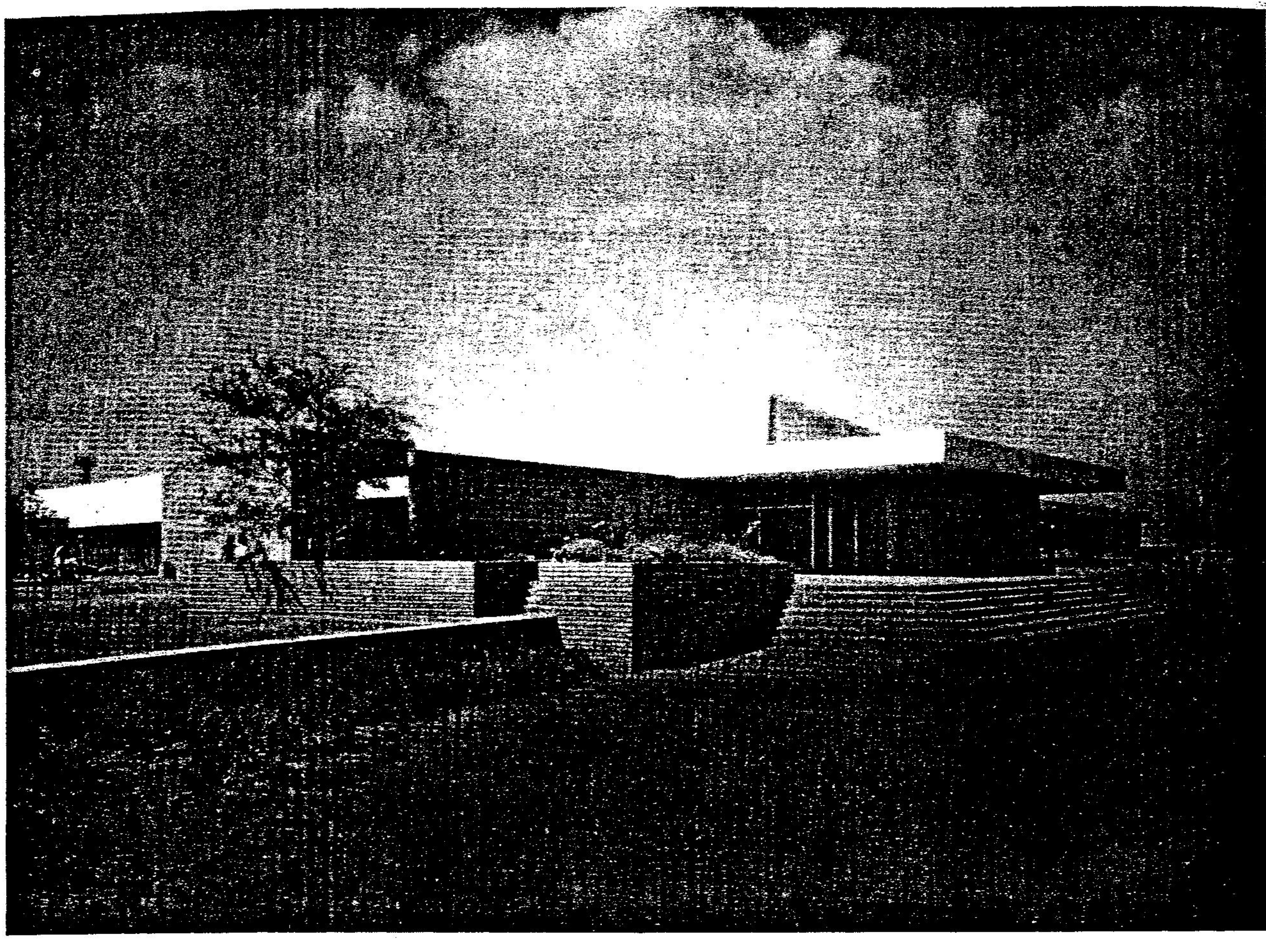
I had ordered the article through Interlibrary Loan, since no local library carried the periodical, but it arrived too late to be included in my report. I suggest it be added as an appendix, since it reinforces the fact that the College worked very hard on a master plan from the very beginning and that the original classroom buildings were considered sufficiently significant to be written up in a national professional journal.

Thanks.

Sincerely,

Tim Gregory

Tel/Fax: (626) 792-7465
E-mail: timothygregory@earthlink.net
400 East California Boulevard, #3 ❖ Pasadena, California 91106-3763



ENTRANCE TO STUDENT UNION BUILDING

FROM BARRACKS TO BEAUTY

EL CAMINO COLLEGE

SOUTHERN CALIFORNIA

By

CARL G. ARFWEDSON* and HOWARD H. MORGRIDGE**

ARCHITECTS
LOS ANGELES

MARSH,
SMITH &
POWELL

Architect and Engineer
November 1951; p. 14+

*The astonishing growth of the public schools in California is no longer a phenomena but continues to evoke amazement in new-comers to the state. The impact of thousands of new industries established in the state during World War II and since revitalized by the Korean war has resulted in the construction of literally miles of homes, particularly in Southern California, with a result that school populations have doubled and trebled and more in the past few years.

California, the Golden State, has long led the nation in the establishment of junior colleges (although the term "junior" is being disregarded in polite educational circles because of the connotation of possible inferiority). The junior college is now referred to as a two-year institution of higher learning, or community college, some half dozen of which have been added in the southern part of the state within the past five years.

El Camino College situated at Alondra Park, some ten miles southwest of Los Angeles, is one of these newer colleges founded as a result of the tremendous population increase in the area. Established just four years ago, El Camino's enrollment has, in the four years of its existence, increased from 1100 students to an enrollment this September of over 4200.

In its first year of existence El Camino College, a public school supported by local taxpayers and subsidized in some measure by the state, established its first classes in three public schools of the area while negotiations were carried on for the securing of its own campus. Faced with a need for land and without funds, since the district at that time had not become a taxing entity, negotiations were entered into with the Los Angeles County Board of Supervisors for some eighty acres of land in Alondra Park, a county park of approximately 319 acres, which lay undeveloped. Enabling bills were introduced in the State Legislature and signed by the Governor permitting the County Supervisors to transfer the park land to the school district. Under the terms of the agreement the college leased the property from the county with an option to purchase at an agreed price. The agreement also provided that if the college expended the amount of the purchase price for recreational facilities which could be used jointly by both the college and the general public the land would be deeded to the school district free and clear. After acquisition of the property, barracks type buildings were secured from the Federal Government and moved at government expense from the Santa Ana Army Air Base to the college site. These buildings, together with other

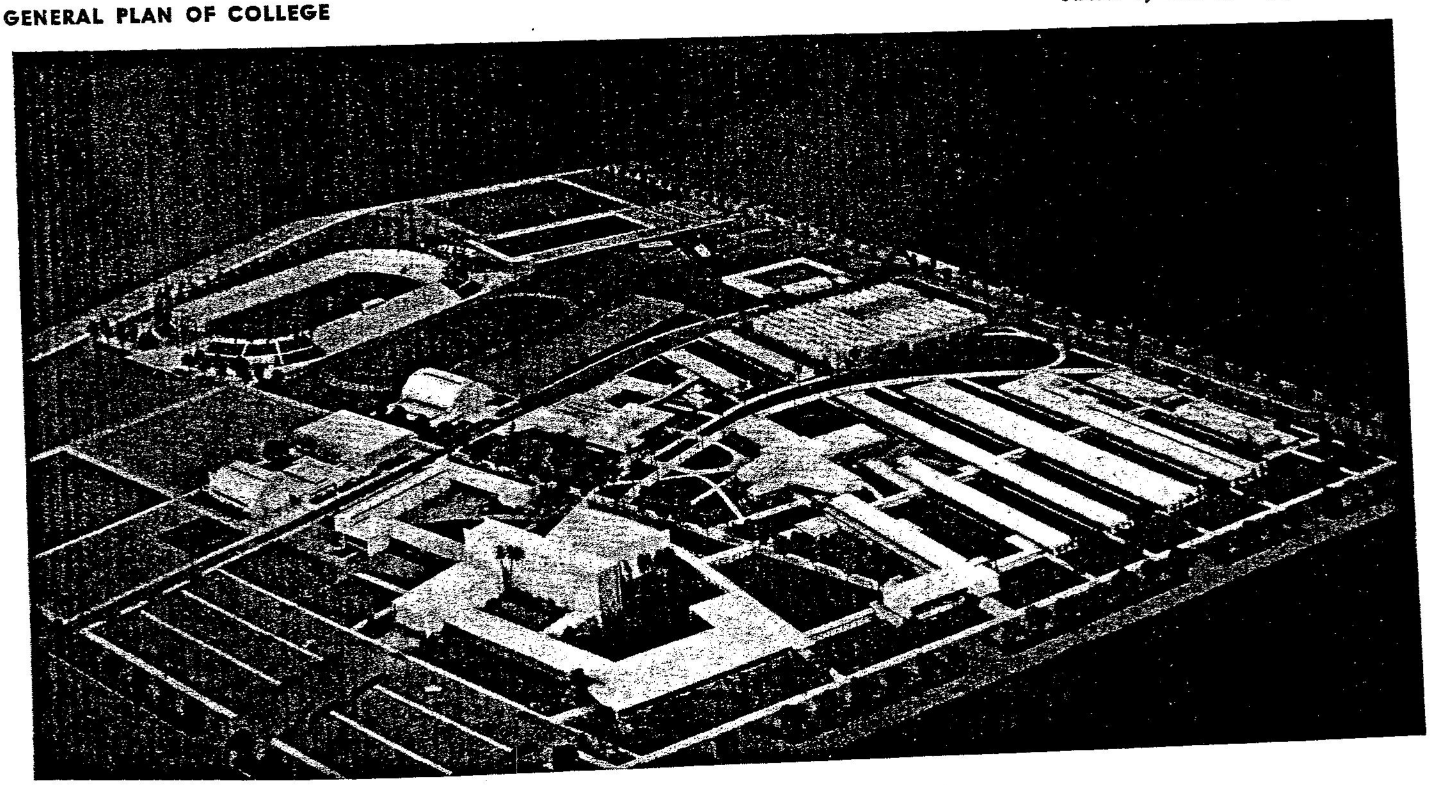
---

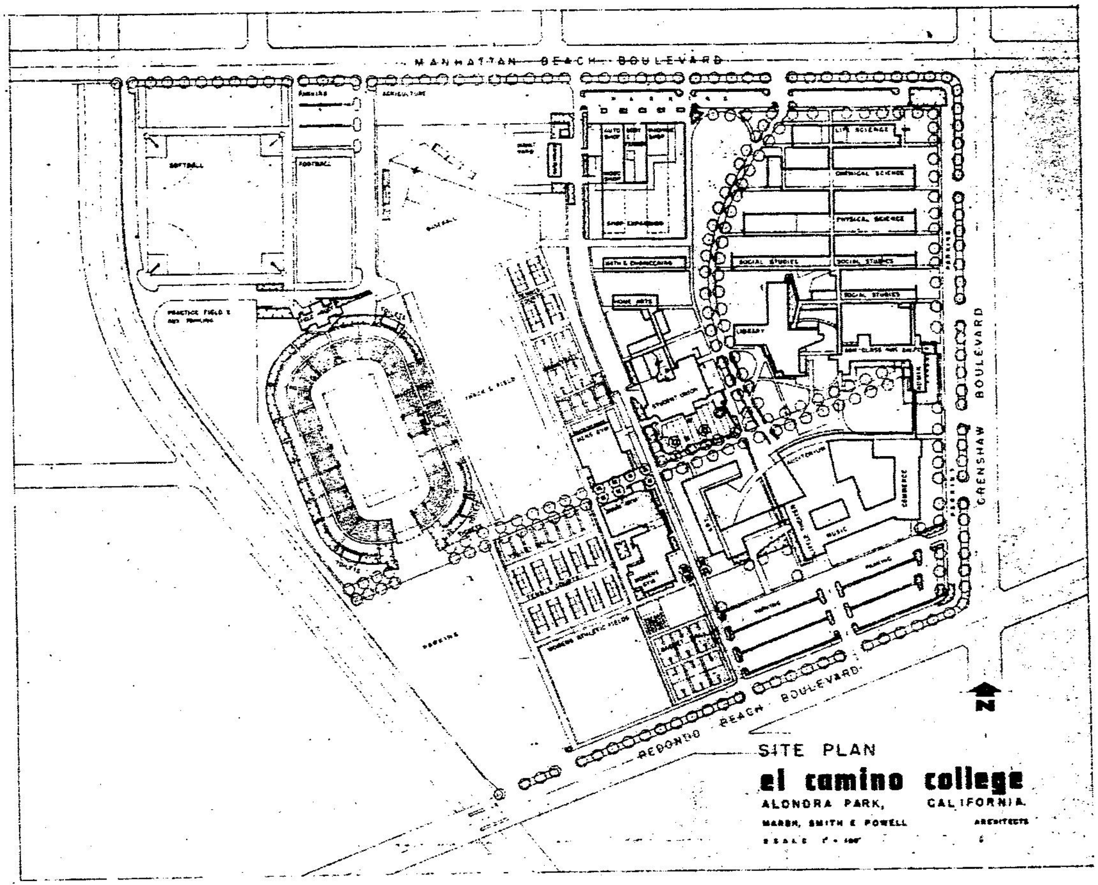
** Carl G. Arfwedson is Director of Business Management of El Camino College and is one of the co-founders of this rapidly developing institution.*

*** Howard H. Morgridge is one of the partners in the architectural firm of Marsh, Smith & Powell, Architects, one of the outstanding architectural firms on the West Coast.*

Photos by Fred R. Dapprich

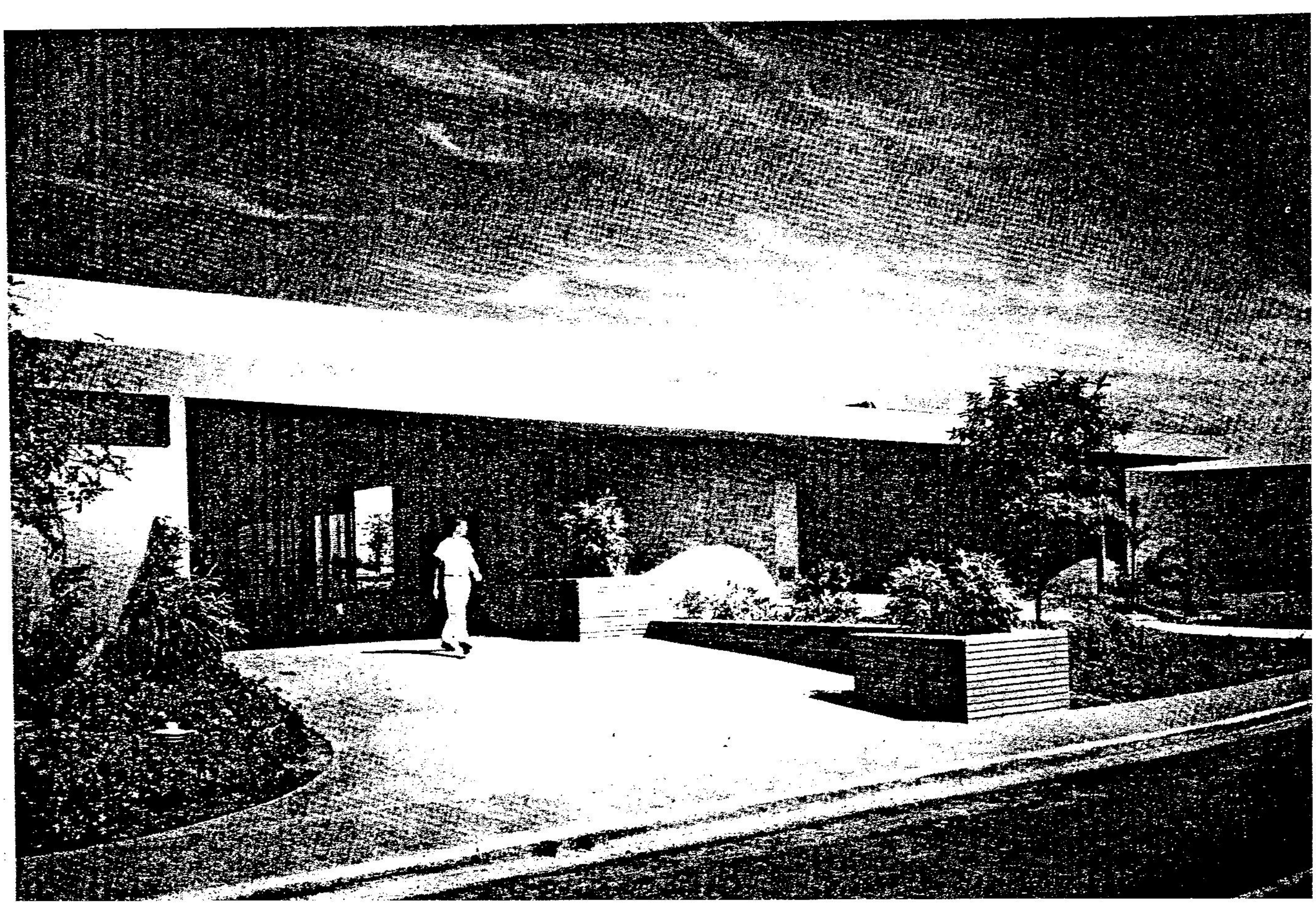
GENERAL PLAN OF COLLEGE

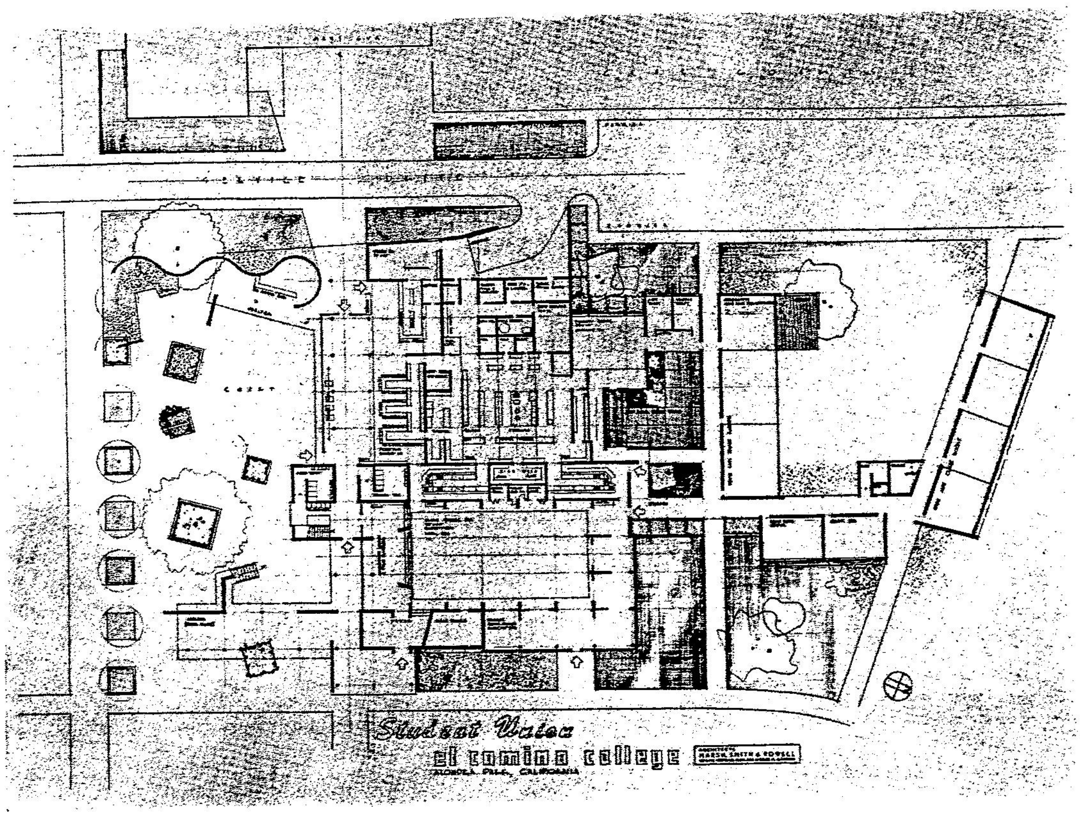




ABOVE—Site Plan of El Camino College

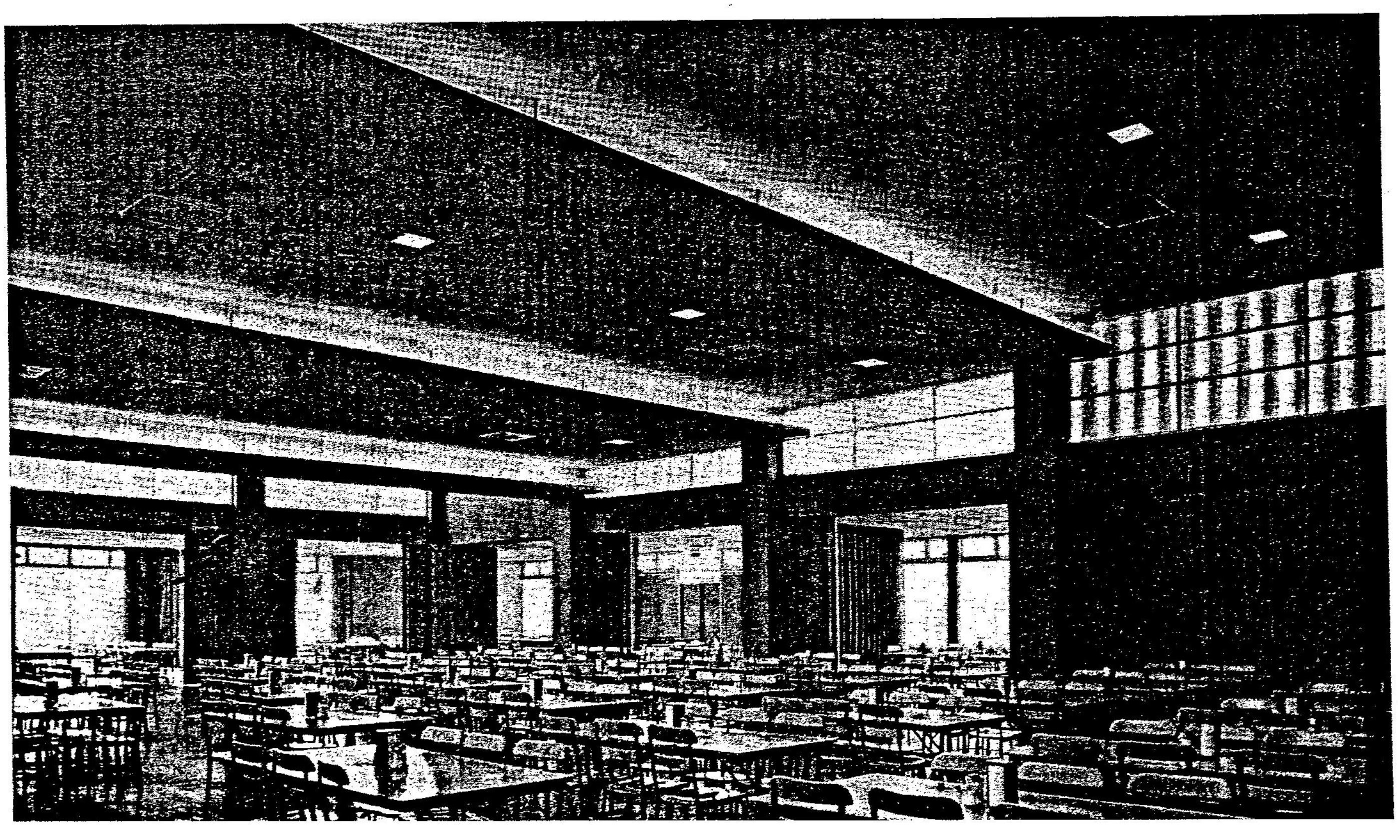
BELOW—Building entrance and landscaping

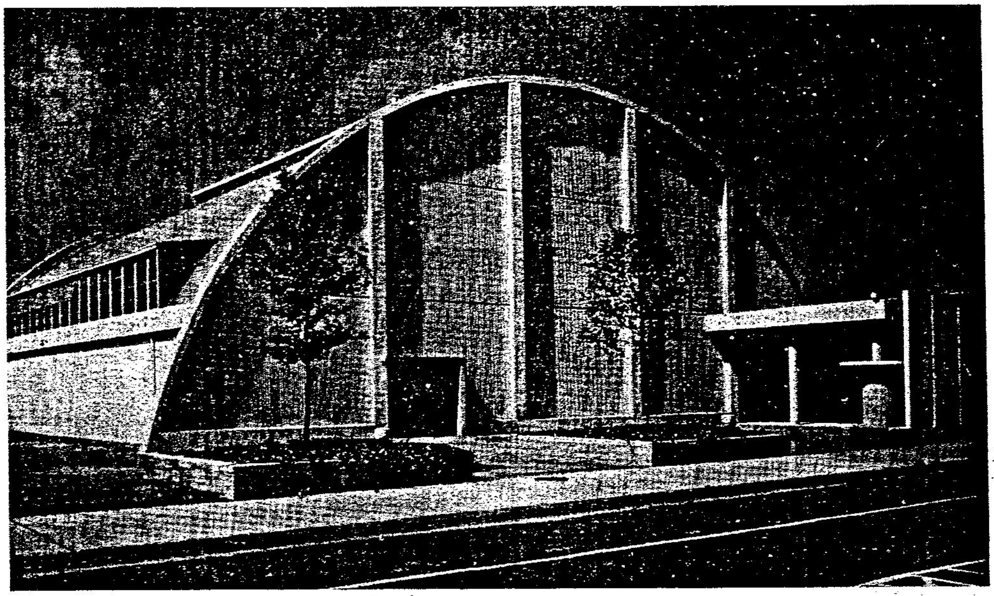




ABOVE—Site Plan Student Union

BELOW—Dining Room Student Union





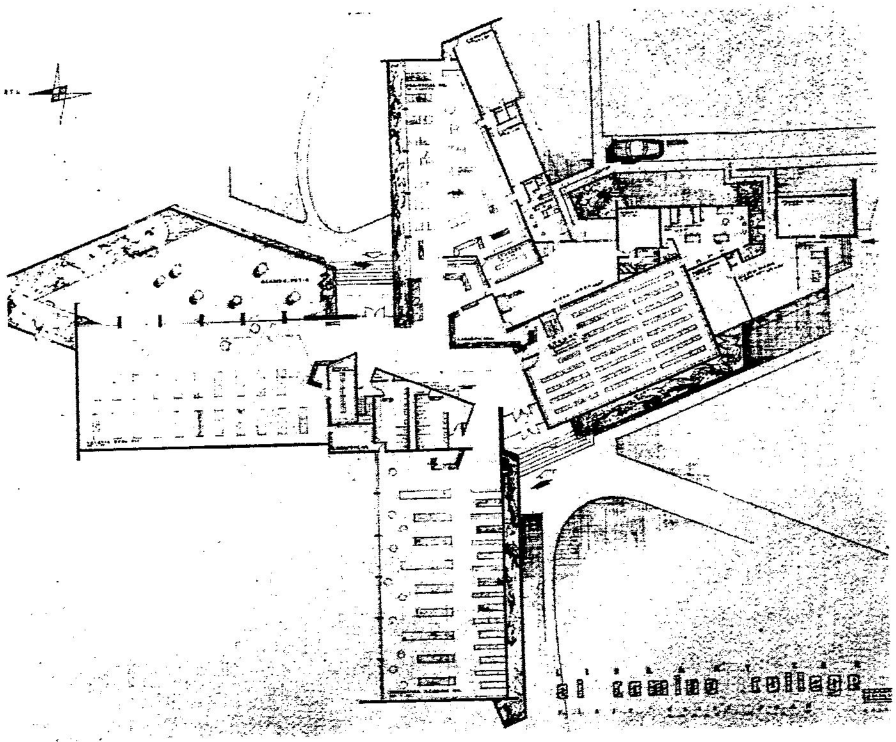
Women's Gymnasium Building

temporary units, were erected on an area of the campus planned for later use as a parking lot.

Due to the purchase agreement with Los Angeles County the first permanent structures commenced were, necessarily, of a recreational nature. Utility lines were laid, campus streets and drives graded and paved, closely followed by a gymnasium building, concrete tennis courts, three football fields, a baseball diamond, Field House and Maintenance Shops and a stadium. This latter structure, when eventually completed, will seat between 19,000 and 20,000 persons. Upon near completion of the athletic recreational facilities work was commenced on permanent academic buildings. Units so far completed include a shops building, nine classroom social science building, a new two story unit housing the administrative staff and ten classrooms. Construction is now commenced on a new life science building. Nearly $3,500,000 has been spent to date for site improvements and building construction on the El Camino College campus which now embraces some ninety acres.

Center of the campus is dominated by a new building aptly named "Campus Center." This building being the center of student activities con-

STUDENT UNION SODA FOUNTAIN AND LUNCHEON AREA

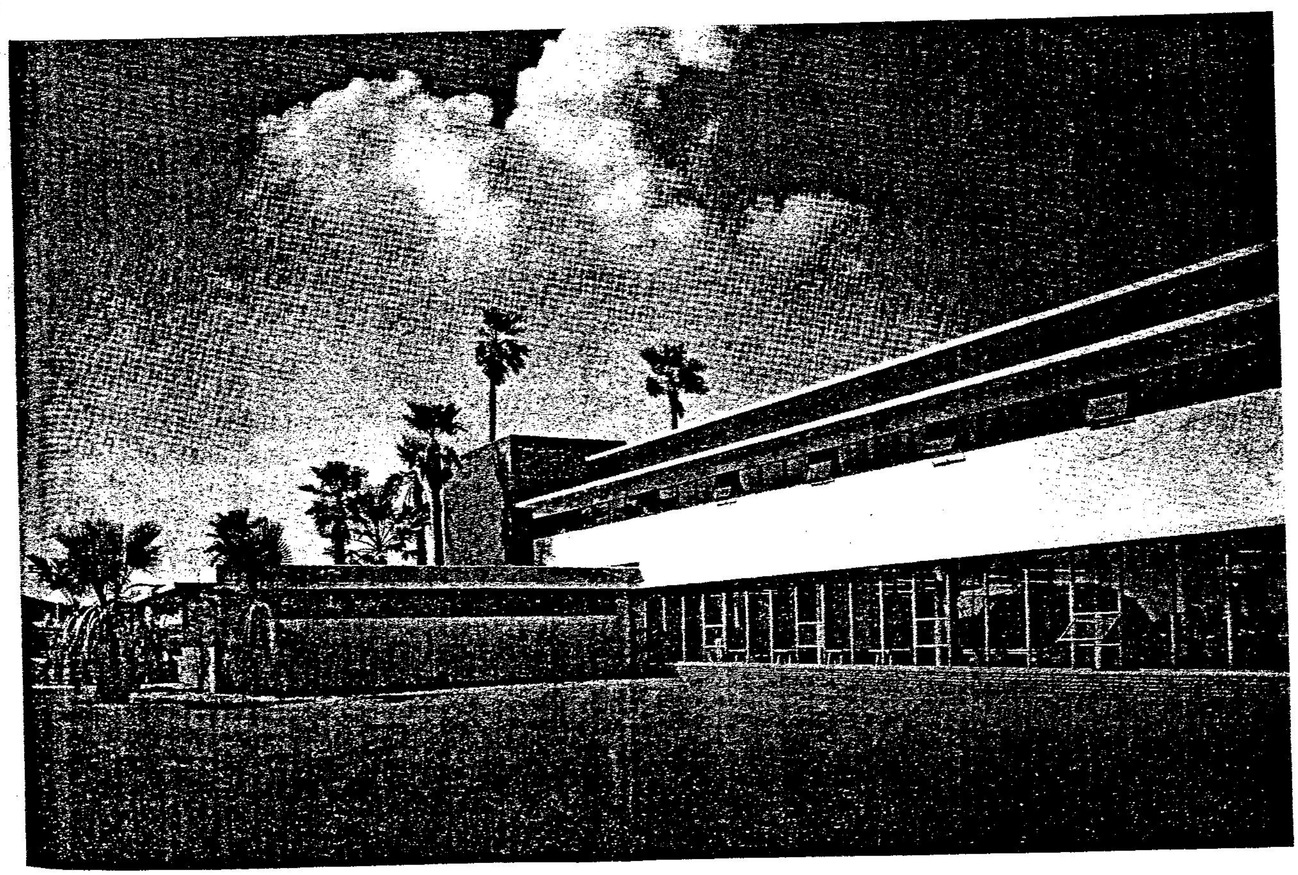


Plan of LIBRARY BUILDING First Floor

Below—One of the classroom and Administration Buildings

tains a large dining room with a seating capacity of 850 and auxiliary private dining rooms separated by Modern Fold doors, student association offices, student cooperative bookstore, soda fountain, student lounge and two outside dining patios. This building was built and furnished at a cost of $500,000 and is of sufficient magnitude to provide eating and recreational facilities for the estimated 10,000 students who will ultimately attend the college.

Master site plan of the campus and engineering of permanent buildings has been done by one of the state's leading architectural firms, Marsh, Smith and Powell, of Los Angeles. Design of build-



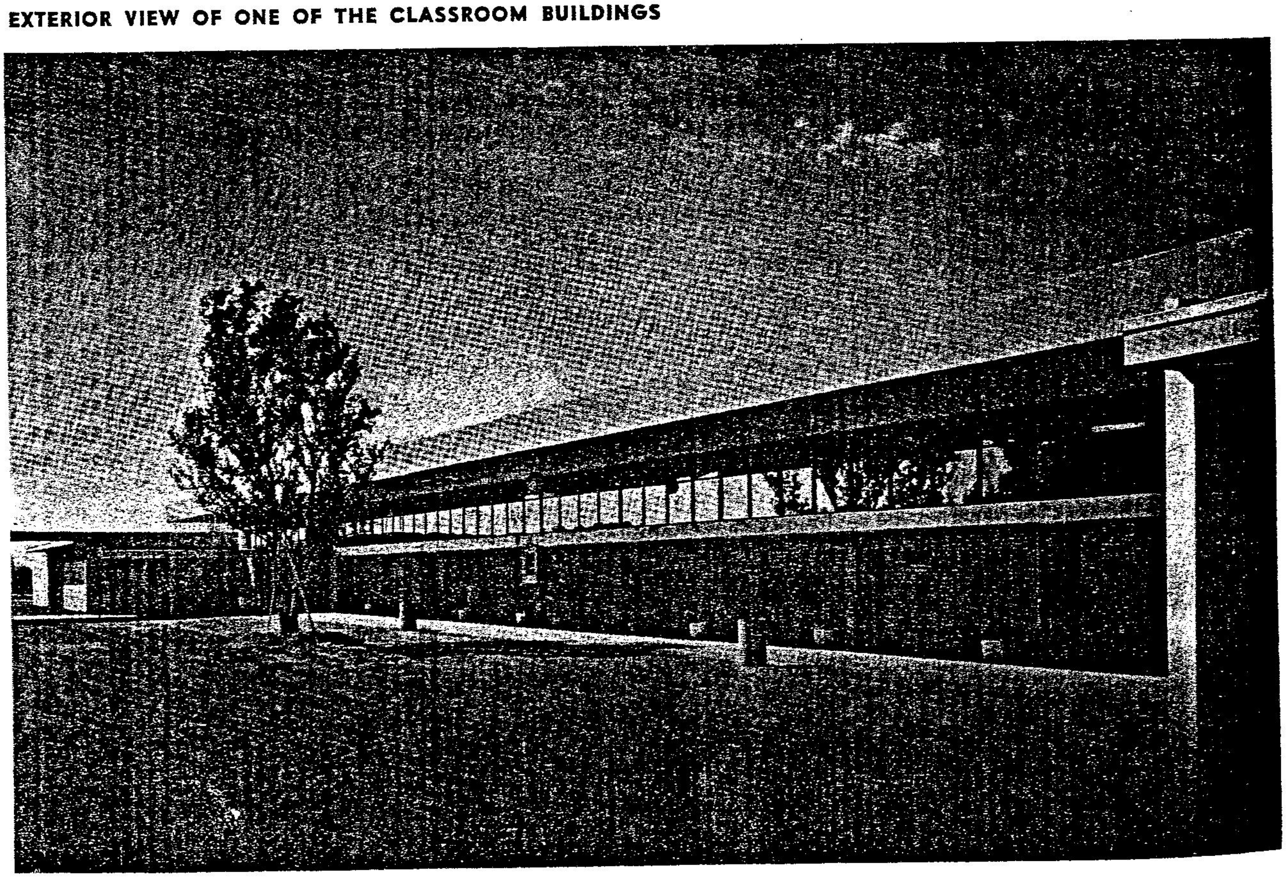
ings is contemporary modern with construction of reinforced concrete with large areas faced with architectural brick. In keeping with California's climate, lavish use of glass predominates. Bilateral lighting of classrooms has been emphasized with more extensive glass areas on north exposures. Porcelain treatment of facias has been utilized for permanency and beauty and to avoid expensive maintenance. Main entrance foyer in the new administration-classroom unit features quarry tile flooring with ceramic tile wall design depicting the master site plan of the campus.

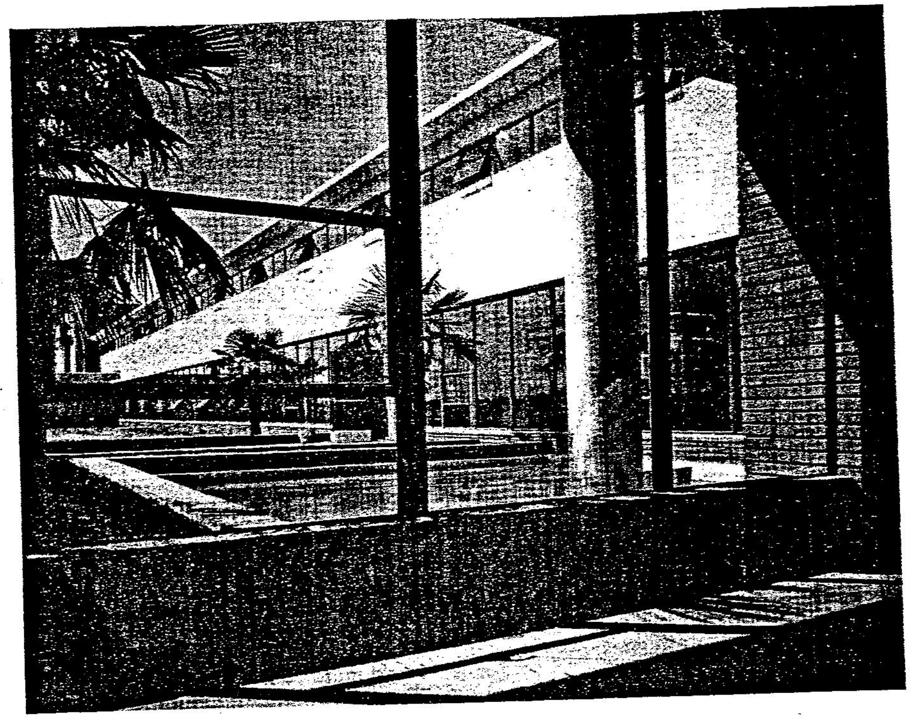
The educational staff, headed by Dr. William H. Harless as Director, has completed a study of the future educational needs of the college. As a result of this study the Board of Trustees has inaugurated a progressive building program which, if not delayed by war shortages, calls for construction of a magnificent college library building, additional vocational shop units, vocational and avocational instruction units for women, a large auditorium and additional classroom buildings. In the El Camino program emphasis has been laid upon the building of a community college in the fullest sense. Classes are scheduled both day and evening to permit citizens served by the college to continue their education while employed in gainful occupations in industry. Laymen advisory committees comprised of both labor and management executives have been formed to advise the college administrative staff as to the educational needs of the communities served by the college. This democratic spirit of cooperation has resulted in both a friendly atmosphere and a solid support by the citizens of their college. The institution offers not only two years of college work preparatory to university entrance at the third year level, but also a general curriculum leading to an Associate of Arts degree upon completion of the two year course. Emphasis has also been placed upon so-called "terminal courses" in vocational fields including apprentice carpenter courses, auto shop and auto, body and fender and welding, a complete course in cosmetology leading to completion of state license requirements, radio and other electronics courses, agriculture, animal husbandry and landscape architecture. Altogether over 250 courses of instruction are offered.

Enrollment estimates made in 1947 by the administrative staff headed by Founder-President Forrest G. Murdock called for a building program to house 5000 students. These sights have now been raised so that the building program as it continues will ultimately care for a student enrollment of 10,000.

As illustrated by the reproductions on these

EXTERIOR VIEW OF ONE OF THE CLASSROOM BUILDINGS





View from interior of Administration and Classroom Building

Below—Is shown exterior of Shop Building

pages, El Camino College in California has truly grown from barracks to beauty in four short years.

**A challenging opportunity was presented to the Board of Trustees, College staff, and the architects in the planning of El Camino College.

Seldom has a Junior College had an opportunity to grow from the soil, free from the inheritance of a cast-off high school plant with its inadequate site which forever paralyzes a college plan and thwarts future growth.

El Camino College grew from a clear and level eighty acres, the extreme levelness and the adobe soil being the only obstacles the land presented. Proper surface drainage had to be developed to conquer the mud flats for there was but four feet of fall across the huge expanse. A foundation system of concrete piles had to be employed on all major buildings to protect the structures against

the five foot depth of adobe which heaves and swells during wet weather. A 12-inch to 18-inch layer of sand and top soil was imported to dress the grounds.

Architecturally, one of the most significant points of interest in the preparation of the plant was the stress given to first arriving at a sound and workable master plan which would inspire the conception of individual projects as money became available for their construction. The validity of the master plan has become more and more apparent during the four years of planning devoted to individual buildings.

Many times, ideas that have been projected on individual projects which were at cross purposes to the basic principals of the master plan have been rejected by the architects or the Board of Trustees because of respect and devotion to the master plan as an instrument of sound over-all planning.

The Board of Trustees has challenged our office, as architects, to produce buildings that will serve their expanding needs for years to come. The Board has thought in big terms and the rewards have been recognized already as the enrollment reaches for 5000.

The buildings are of Types I and II construction, using primarily reinforced concrete walls on the special purpose buildings with accents of Norman Ruffled brick masonry. The Classroom buildings have used light steel frames in conjunction with concrete and masonry walls. Materials have been chosen for ease of maintenance as well as beauty. Porcelain enamel fascias have been utilized on all buildings where light roof framing sections have been used in lieu of concrete. The porcelain enamel was selected because of its permanent finish and to guard against settlement cracks which might have occurred had a plastic material been used.

The first building to be designed was an increment of shops which included an auto shop, body and fender, welding, and wood shop. It was apparent that the ultimate program to be handled in vocational trades would require approximately 100,000 sq. ft. of space. In order to save ground space, this first unit of shop construction was designed to be an integral part of a future building which would comprise 2½ acres. An over-all pattern of north exposed saw-tooth skylights was used in order to light the interior shop areas. Major circulation arteries were master planned in conjunction with utility cores and rest room facilities so as to provide services for most any type of future development. The height of the building is enough to allow the introduction of mezzanine classrooms or work areas anywhere within the building.

The Women's Gymnasium was designed to serve as a temporary facility for both men and women, permitting use as a spectator gymnasium or as an interim auditorium with stage. The Men's shower room can easily be converted to expansion for the women when the men's gymnasium has been completed. The stage area will be converted to a corrective room for the women, when an Auditorium is built. Lamella roof construction was used to give the maximum amount of head room on the playing floor with a minimum amount of volume in the building. Concrete cantilever side walls were used to take the trust of the lamella roof. This type of construction proved to be very economical.

The Campus Center building is unique in the methods employed for the serving of food. An advisory committee of professional restaurant management, wished the help of union counsel to better relate the course to the conditions pupils would meet in everyday life. The professional management advised that a variety of services be used to disburse the crowds of students and to appeal to the type of appetite and time schedule they might have. The main dining room for cafeteria service accommodates 500 people. In addition to this, a fountain and quick order grille serves approximately 40 at one time. This facility is operated 12 hours a day. There are also three types of hand-out services at different approaches to the building for serving of ice cream, soft drinks, hamburgers, etc.

The main dining room has a series of flexible sized individual rooms which can be opened completely to the main room, serving as dining expansion as well as conference and instruction spaces during the day. A student lounge is located in a slightly raised area at one end of the main dining room and also doubles as a platform for entertainment at dinners or as a band stand for student dances.

The newly completed administration and class room building is the only two-story structure on the site. The two-story design was adapted to add dignity and express the purpose of the building. The entire first floor is devoted to Administrative space where all but the basic areas have been kept as free and flexible as possible by use of metal demountable partitions. On the exterior of the building at the entrance, a pre-cast concrete motif is cast as an over-all wall pattern, a decora-

THE BUILDING BIOGRAPHER
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- ❖ Historic Resources Surveys
- ❖ Local, State, and National Landmarking
- ❖ Historic Preservation and Archival Consulting

HISTORIC RESOURCES IMPACTED BY THE PROPOSED CAMPUS MASTER PLAN

EL CAMINO COLLEGE

TORRANCE, CALIFORNIA

Prepared for:

Sid Lindmark, AICP
10 Aspen Creek Lane
Laguna Hills, CA 92653

July 17, 2003

Tel/Fax: (626) 792-7465
E-mail: timothygregory@earthlink.net
400 East California Boulevard, #3 ❖ Pasadena, California 91106-3763

THE BUILDING BIOGRAPHER
TIM GREGORY
❖ Building Histories
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❖ Local, State, and National Landmarking
❖ Historic Preservation and Archival Consulting

July 17, 2003

Sid Lindmark, AICP
10 Aspen Creek Lane
Laguna Hills, CA 92653-7401

Subject: Historical Resources Found on the Campus of El Camino College

Dear Mr. Lindmark:

On June 17, 2003, I conducted a "windshield survey"(actually, in this case, a walking reconnaissance) of the ten buildings on the campus of El Camino College that were identified by the College as being impacted by the proposed new Master Plan through demolition, planned additions, or major renovations. With the aid of building summary reports furnished by the College, it was determined that seven of those buildings were at least forty-five years old. They were observed, recorded, mapped and photographed. (Although a fifty-year age is the normal cut-off for eligibility for the National Register of Historic Places and California Register of Historical Resources, many consultants undertaking surveys such as this one are now using an age of forty-five years so that their surveys will become less quickly outdated.)

Research was undertaken before and after the site visit in order to further identify the history of the buildings and their context. The first step was to investigate whether information on any potential historic resources on the property had already been recorded at the South Central Coastal Information Center of the State Office of Historic Preservation (SHPO) located at California State University, Fullerton. No records were found.

Further research was conducted at the El Camino College library and the Los Angeles Public Library, the oldest public library collection in Southern California. The focus of this research was to determine if any of the identified potential historic resources were of local or regional significance. As many additional sources as possible within realistic time and budget constraints were also investigated.

Tel/Fax: (626) 792-7465
E-mail: timothygregory@earthlink.net
400 East California Boulevard, #3 ❖ Pasadena, California 91106-3763

The consultant observed that land use on the campus is entirely educational. All buildings with non-academic uses house such related back-up needs as maintenance facilities and student, faculty, and administrative services. Many buildings on the campus are utilitarian in nature and are of a vernacular or nondescript design. A number of new buildings are pleasing esthetically and show an attention to architectural style. Older buildings dating back to the earliest days of the College have varying degrees of historical and/or architectural interest. However, the entire campus is unified through landscaping and by the fact that the primary exterior finishes of almost all buildings are brick and/or stucco.

The seven buildings on campus to be impacted by the Master Plan and identified as forty-five years old or older are listed below, followed by the year of construction:

Field House (1949)
Shops (1949)
Humanities (1950)
Administration (1950)
Student Services Center (1950)
Library (1952)
Business (1953)

Of these, it was determined that the following four buildings could not be considered significant historical resources because they no longer retained sufficient integrity (i.e. they had undergone so many alterations and additions over the years that their original appearance had been severely changed): Shops, Administration, Student Services Center, and Library. However, the Field House, Humanities, and Business buildings did retain sufficient integrity to be considered historically significant.

The National Register of Historic Places has developed a system of alpha-numeric evaluation codes for pinpointing the status or significance of historic resources. The two codes used for the three buildings under discussion are:

5S1 Not eligible for the National Register, but of local interest and eligible for listing in a local historic resources survey and thus also potentially eligible for listing on the California Register of Historical Resources (Humanities Building)

5S3 Not eligible for the National Register or for a local historic resources survey, but eligible for consideration in local planning (Business and Field House Buildings)

Mitigations--

1) The only mitigation that would lessen the impact of the El Camino College Master Plan on the California Register-eligible Humanities Building to a point of insignificance would be to retain both northerly and southerly structures on-site and restore their exteriors using the Secretary of the Interior's Standards for the Treatment of Historic Properties. If the College finds this mitigation to be financially or practically impossible, then it must furnish for the record sound reasons why demolition is necessary. A Statement of Overriding Considerations will also need to be issued.

2) If it is decided that the Humanities Building will be removed, further documentation of this resource should be undertaken utilizing the standards of the Historic American Building Survey (HABS), including photo-documentation and measured drawings. (If a complete set of the architect's original measured drawings are still on file at the College, then only photographs will be necessary.)

3) Since the Business and Field House buildings were found to be only locally "interesting," their recording on State of California DPR forms should be sufficient mitigation. I have attached completed forms for all three buildings, including Primary Records; Building, Structure, and Object Records; and Continuation Sheets (DPR 523A, B and L forms). In completing the forms, I followed the guidelines as presented in "Instructions for Recording Historical Resources" issued by SHPO in March 1995 and regularly updated. I will send copies of the DPR reports to the SHPO who will forward them to their South Central Coastal Information Center at California State University, Fullerton.

4) I highly recommend that the client transmit copies of this letter, the DPR forms, and any resulting HABS recordations to the El Camino College Archives housed at the campus Library for future reference by historians.

Sincerely,

Tim Gregory

Tim Gregory
Registered Public Historian #562

Note: I noticed that the South Gym (formerly the Women's Gym) had been omitted from the College's building inventory. I recommend that it be added as a separate structure. Based on photographic and documentary evidence, this building was one of the first five constructed at the new College site in 1949. If the Field House, Shop, and southerly Humanities Building (originally the Social Sciences Building) are demolished, the South Gym will be the last original, relatively unchanged, building still standing on campus. Studies on any future proposed projects impacting it would need to include a formal historical assessment.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 5S3

Other Listings
Review Code ____ **Reviewer** ______________ **Date** ______

Resource Name or #: (Assigned by recorder) *Field House*

P1. Other Identifier:

P2. Location: ☐ Not for Publication ☒ Unrestricted **a. County** *Los Angeles*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad *Inglewood* **Date** *1981* **T** ; **R** ; *SE* **1/4 of** *NE* **1/4 of Sec** *27* ; *S.B.* **E**

c. Address: *16007 Crenshaw Blvd.* City *Torrance* Zip *90506*

d. UTM: (Give more than one for large and/linear resources) *11* ; *376800* **mE/** *3750000* **mN**

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This is a basically rectangular contemporary-style building with scored-stucco walls and a very low-pitched gabled roof. Surrounding the building just below the roof-line is a continuous band of transom-style windows. The only break in this band occurs on the east and west sides of the building where it is interrupted centrally by a plaster wall. The main pedestrian entrance to the building is located at its northwest corner recessed under a flat canopy roof that is supported by a single wall attached to the building at its easterly end. The Field House is surrounded on three sides by paved parking areas and abuts the campus Stadium on its south side.

P3b. Resource Attributes: (List attributes and codes) *HP4 - Ancillary Building*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, accession #)
North and west sides (View toward southeast).
Photo No: 81-1, 6/17/3

P6. Date Constructed/Age and Sources:
☐ Prehistoric ☒ Historic ☐ Both

1949--campus records

P7. Owner and Address
El Camino College
16007 Crenshaw Blvd.
Torrance, CA 90506

P8. Recorded by: (Name, affiliation, and address)
Tim Gregory DBA The Building Biographer, 400 East California Blvd. #3, Pasadena, CA 91106

P9. Date Recorded: *7/16/2003*

P10. Survey Type: (Describe)
Project-oriented: master plan

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments
☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other: (List)

NRHP Status Code 5S3

Resource Name or #: (Assigned by recorder) *Field House*

B1. Historic Name:
B2. Common Name:
B3. Original Use: *Field House* B4. Present Use: *Field House*
B5. Architectural Style: *Contemporary*
B6. Construction History: (Construction date, alterations, and date of alterations)
1949--originally constructed

B7. Moved? ☒ No ☐ Yes ☐ Unknown Date : Original Location:
B8. Related Features:

B9a. Architect: *Marsh, Smith & Powell* b. Builder: *Unknown*
B10. Significance: Theme: *Education* Area: *Torrance*
Period of Significance: *1949-* **Property Type:** *Ancillary Building* **Applicable Criteria:** *A,*
(Discuss importance in terms of historical or architectural context as defined by theme, period and geographic scope. Also address integrity.)

In 1946, after strong recommendations by a consulting team to establish a two-year college in the Inglewood-South Bay area, governing boards of the Centinela Valley, Redondo (later to become the South Bay district), Inglewood and El Segundo Sc Districts had won a 10-1 voter approval for the creation of a junior college. Torrance soon joined the newly chartered group the El Camino Community College District was officially established as of July 1, 1947. Located centrally in the South Bay, District encompassed five unified and high school districts, twelve elementary school districts and nine cities with a combi population of almost one million. For the first two years of its existence, El Camino College classes were spread out among local high schools and had to be conducted only at night.

Soon the founders of the College were able to buy from the County the original eighty acres forming the eastern part of Alo Park as a site for the new campus The cost was $1,000 per acre–not to be paid to the County in cash but promised to be spen the College on athletic facilities that County residents could enjoy. The land was estimated to be worth $225,000 when transaction was approved on May 23, 1947. Early classrooms were surplus World War II barracks which were trucked north the old Santa Ana Army Air Base in Orange County. The first permanent building for classroom instruction was the shop w opened in 1949. The women's gym, field house, another shop building and the social science building came shortly therea *(see continuation sheet)*

B11. Additional Resource Attributes: (List attributes and codes) *HP4 - Ancillary Building* *HP15 - Educational building*

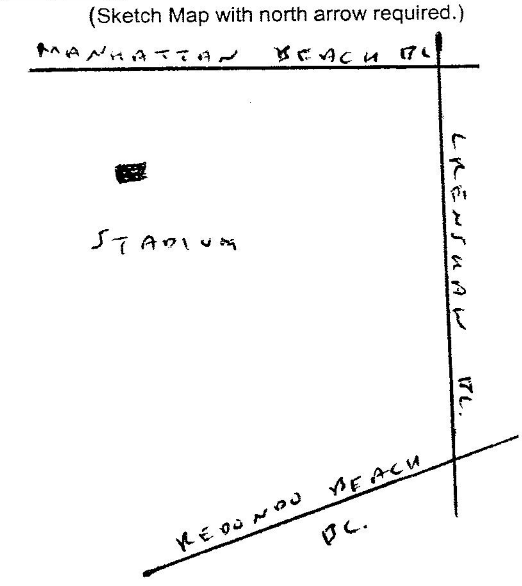
B12. References:
Bulletin of Information, 1951-52
A Celebration: El Camino College 1946-1996
Warrior Yearbooks, 1952-

B13. Remarks:

B14. Evaluator: *Tim Gregory*
Date of Evaluation: *7/16/2003*

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



B10. Significance

The architect of the original buildings and of the first campus' master plan was the partnership of Marsh, Smith & Powell who was well-known for its forward-looking educational designs. In fact, at the same time it was designing the El Camino campus plan, the partnership was in charge of devising a new plan for the University of Southern California. Later El Camino College buildings, including the Administration, Humanities, Library, and Campus Center complexes were also the work of Marsh, Smith & Powell. The architects were noted for having designed the campus with a "signature": in addition to white stucco in horizontal insets, bricks were laid in straight lines instead of being staggered, giving the buildings a more streamlined look. They also pioneered in the layout of educational buildings, replacing interior hallways with exterior passageways so that classrooms could have two exterior walls enhancing the use of natural light and ventilation.

The firm was organized in 1901 by Norman Foote Marsh, a graduate of the University of Illinois. David B. Smith and Herbert James Powell were taken on as partners in 1928. Smith was the former Commissioner of Building and Safety for the City of Los Angeles and Powell taught architecture at U.S.C. After Marsh retired in the late 1940s, the firm took on another partner: Howard H. Morgridge. Among other works by Marsh and his partners: the canals and Renaissance Revival buildings in Venice, California; many local schools, churches, and libraries; the University of Redlands campus; and the Good Samaritan Hospital.

The first El Camino faculty numbered only thirty and the student body in 1947 was just five hundred. Forrest G. Murdock was appointed president and served until 1965. The campus Stadium is named after him. Today, the campus has grown to 25,000 students and 800 full- and part-time instructors. Structures on campus now number 37, spread over 126 acres. The campus is currently formulating a new master plan that will impact several of the original buildings.

The Field House is of minor local significance due to its being one of the few remaining and recognizable original permanent buildings on campus. Its architecture is undistinguished and some alterations and additions have harmed its integrity.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 5S3

Other Listings
Review Code ____ **Reviewer** ____ **Date** ____

Resource Name or #: (Assigned by recorder) *Business Building*

P1. Other Identifier:

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted** **a. County** *Los Angeles*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad *Inglewood* **Date** *1981* **T** **; R** **;** *NE* **1/4 of** *NE* **1/4 of Sec** *27* **;** *S.B.* **E**

c. Address: *16007* *Crenshaw Blvd.* City *Torrance* Zip *90506*

d. UTM: (Give more than one for large and/linear resources) *11* ; *377240* **mE/** *3749800* **mN**

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

Parcel No.

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Business Building is an L-shaped one-story flat-roofed structure, the walls of which are mostly brick. The roof and fascia extend over the northerly side of the building to create a canopy roof above the exterior walkways. This roof is supported by regularly-spaced metal poles. At the center of the northerly elevation is an inset planted area. Opening out onto the external walkway are both glass and solid doors, as well as floor-to-ceiling windows. A bulletin board and glass-doored display panels are positioned mid-wall on the westerly end. The easterly side of the building facing Crenshaw Blvd. has a stucco wall surface. The windows are covered with a continuous band of ridged metal louvers. Another external walkway runs along the southerly side, its sheltering flat roof supported by a series of brick piers. An enclosed structure now connects the Business Building with the newer adjacent Fine Arts Building.

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, accession #)
North side (View toward southeast). Photo No: 81-2, 6/17/3

P6. Date Constructed/Age and Sources:
☐ Prehistoric ☒ Historic ☐ Both

1953--campus records

P7. Owner and Address
El Camino College
16007 Crenshaw Blvd.
Torrance, CA 90506

P8. Recorded by: (Name, affiliation, and address)
Tim Gregory DBA The Building Biographer, 400 East California Blvd. #3, Pasadena, CA 91106

P9. Date Recorded: *7/16/2003*

P10. Survey Type: (Describe)
Project-oriented: master plan

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments
☐ NONE
☐ Location Map
☐ Sketch Map
☒ Continuation Sheet
☒ Building, Structure, and Object Record
☐ Archaeological Record
☐ District Record
☐ Linear Feature Record
☐ Milling Station Record
☐ Rock Art Record
☐ Artifact Record
☐ Photograph Record
☐ Other: (List)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

Primary #
HRI #

NRHP Status Code 5S3

Resource Name or #: (Assigned by recorder) *Business Building*

B1. Historic Name:
B2. Common Name:
B3. Original Use: *Classroom building*
B4. Present Use: *Classroom building*
B5. Architectural Style: *Contemporary*
B6. Construction History: (Construction date, alterations, and date of alterations)
1953--originally constructed

B7. Moved? ☒ No ☐ Yes ☐ Unknown Date : Original Location:
B8. Related Features:

B9a. Architect: *Marsh, Smith & Powell* b. Builder: *Unknown*
B10. Significance: Theme: *Education* Area: *Torrance*
Period of Significance: *1953-* **Property Type:** *Educational building* **Applicable Criteria:** *A, C*
(Discuss importance in terms of historical or architectural context as defined by theme, period and geographic scope. Also address integrity.)

In 1946, after strong recommendations by a consulting team to establish a two-year college in the Inglewood-South Bay area, th governing boards of the Centinela Valley, Redondo (later to become the South Bay district), Inglewood and El Segundo Schoo Districts had won a 10-1 voter approval for the creation of a junior college. Torrance soon joined the newly chartered group an the El Camino Community College District was officially established as of July 1, 1947. Located centrally in the South Bay, th District encompassed five unified and high school districts, twelve elementary school districts and nine cities with a combine population of almost one million. For the first two years of its existence, El Camino College classes were spread out among fou local high schools and had to be conducted only at night.

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B11. Additional Resource Attributes: (List attributes and codes) *HP15 - Educational building*

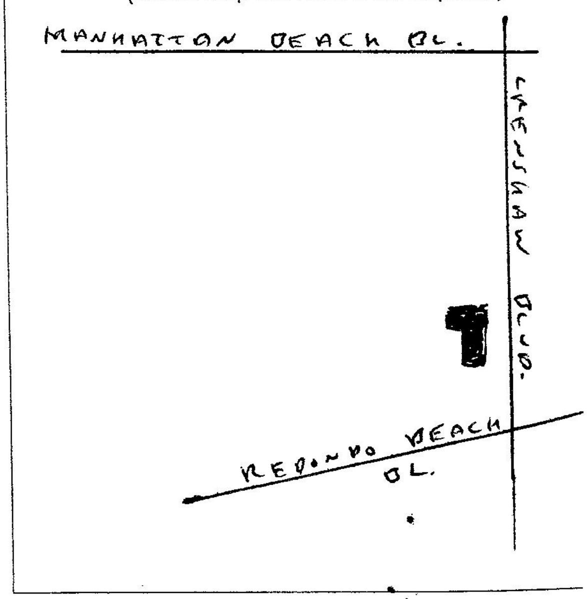
B12. References:
Bulletin of Information, 1951-52
A Celebration: El Camino College 1946-1996
Warrior Yearbooks, 1952-

B13. Remarks:

B14. Evaluator:
Date of Evaluation: *7/16/2003*

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #
HRI #
Trinomial

 Resource Name or #: (Assigned by recorder) Business Building

Recorded by: **Date** 7/16/2003 ☒ Continuation ☐ Update

B10. Significance

The architect of the original buildings and of the first campus' master plan was the partnership of Marsh, Smith & Powell who was well-known for its forward-looking educational designs. In fact, at the same time it was designing the El Camino campus plan, the partnership was in charge of devising a new plan for the University of Southern California. Later El Camino College buildings, including the Administration, Humanities, Library, and Campus Center complexes were also the work of Marsh, Smith & Powell. The architects were noted for having designed the campus with a "signature": in addition to white stucco in horizontal insets, bricks were laid in straight lines instead of being staggered, giving the buildings a more streamlined look. They also pioneered in the layout of educational buildings, replacing interior hallways with exterior passageways so that classrooms could have two exterior walls enhancing the use of natural light and ventilation.

The firm was organized in 1901 by Norman Foote Marsh, a graduate of the University of Illinois. David B. Smith and Herbert James Powell were taken on as partners in 1928. Smith was the former Commissioner of Building and Safety for the City of Los Angeles and Powell taught architecture at U.S.C. After Marsh retired in the late 1940s, the firm took on another partner: Howard H. Morgridge. Among other works by Marsh and his partners: the canals and Renaissance Revival buildings in Venice, California; many local schools, churches, and libraries; the University of Redlands campus; and the Good Samaritan Hospital.

The first El Camino faculty numbered only thirty and the student body in 1947 was just five hundred. Forrest G. Murdock was appointed president and served until 1965. The campus Stadium is named after him. Today, the campus has grown to 25,000 students and 800 full- and part-time instructors. Structures on campus now number 37, spread over 126 acres. The campus is currently formulating a new master plan that will impact several of the original buildings.

The Business Building is of minor local significance due to its being one of the few remaining and recognizable permanent buildings on campus dating from the first years of the College. Its architecture, typical of the output of its architect, is not unique on campus. It has, however, retained much of its integrity.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code *5S1*

Other Listings
Review Code ____ **Reviewer** ____ **Date** ____

Resource Name or #: (Assigned by recorder) *Humanities Building*

P1. Other Identifier:

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted** **a. County** *Los Angeles*

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad *Inglewood* **Date** *1981* **T** **; R** **;** *NE* **1/4 of** *NE* **1/4 of Sec** *27* **;** **E**

c. Address: *16007* *Crenshaw Blvd.* City *Torrance* Zip *90506*

d. UTM: (Give more than one for large and/linear resources) *11* ; *377300* mE/ *3750150* mN

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

Parcel No.

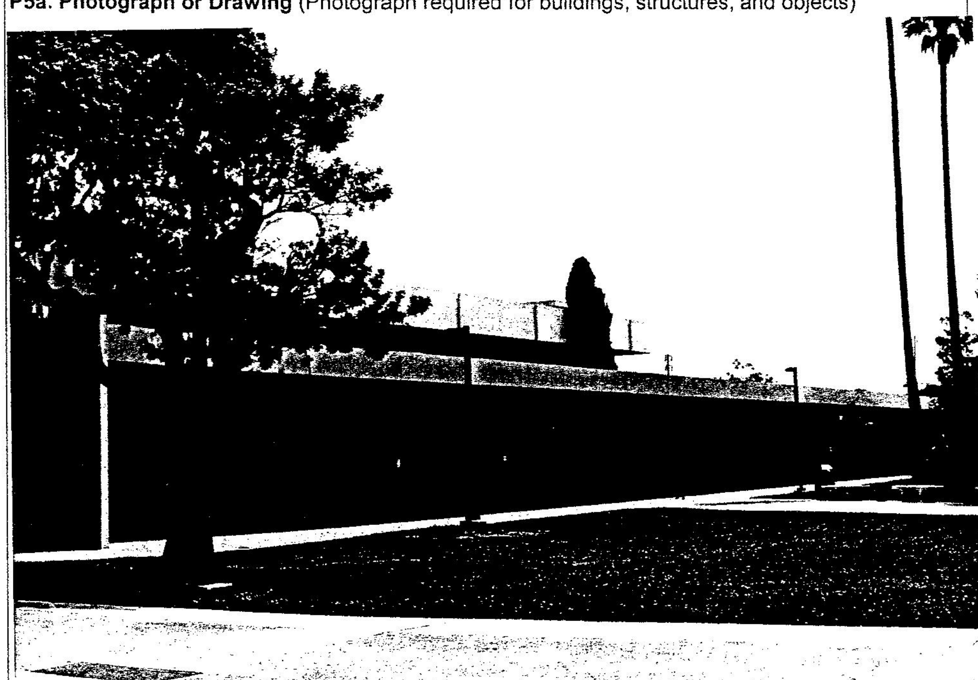
P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Humanities Building (orginally Social Sciences Building) is actually two long, very horizontally-oriented one-story buildings of similar design that are positioned parallel to each other. The southerly building is less than half the length of its northerly neighbor from which it is separated by a landscaped mall. The westerly end of each building is a sheer concrete wall, but running east of it on the south side is a continuous fascia. Recessed below the fascia is a brick wall into which intermittent solid classroom doors are inset. Running above the brick wall is a continuous band of tall clerestory windows separated by vertical metal members. The overhanging roof shelters a continuous concrete walkway that connects the classrooms. Analog clocks are suspended on metal supports from the projecting outdoor ceiling. The north wall of both buildings consists almost entirely of full-height openable windows with large glass panels at the top and two smaller squares below. The easterly end of each building is again sheer concrete, but is topped with a fascia that wraps around from the south side. The complex is well-landscaped with grass and mature trees in the malls between the two buildings and between the southerly building and the Administration Building. The buildings are linked across the malls by concrete paths protected by flat-topped roofs.

P3b. Resource Attributes: (List attributes and codes) *HP15 - Educational building*

P4. Resources Present ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #)
North bldg., south side (View toward northeast). Photo No: 81-3, 6/17/3

P6. Date Constructed/Age and Sources: ☐ Prehistoric ☒ Historic ☐ Both

1950--campus records

P7. Owner and Address
El Camino College
16007 Crenshaw Blvd.
Torrance, CA 90506

P8. Recorded by: (Name, affiliation, and address)
Tim Gregory DBA The Building Biographer, 400 East California Blvd. #3, Pasadena, CA 91106

P9. Date Recorded: *7/16/2003*

P10. Survey Type: (Describe)
Project-oriented: master plan

P11. Report Citation: (Cite survey report and other sources, or enter "none")

Attachments ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☒ Photograph Record ☐ Other: (List)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

Primary #
HRI #

NRHP Status Code 5S1

Resource Name or #: (Assigned by recorder) *Humanities Building*

B1. Historic Name:
B2. Common Name:
B3. Original Use: *Classroom building* B4. Present Use: *Classroom building*
B5. Architectural Style: *Contemporary*
B6. Construction History: (Construction date, alterations, and date of alterations)
1949--southerly building;
1950--northerly building

B7. Moved? ☒ No ☐ Yes ☐ Unknown Date : Original Location:
B8. Related Features:

B9a. Architect: *Marsh, Smith & Powell* b. Builder: *Unknown*
B10. Significance: Theme: *Education* Area: *Torrance*
Period of Significance: *1950-* **Property Type:** *Educational building* **Applicable Criteria:** *A, C*
(Discuss importance in terms of historical or architectural context as defined by theme, period and geographic scope. Also address integrity.)

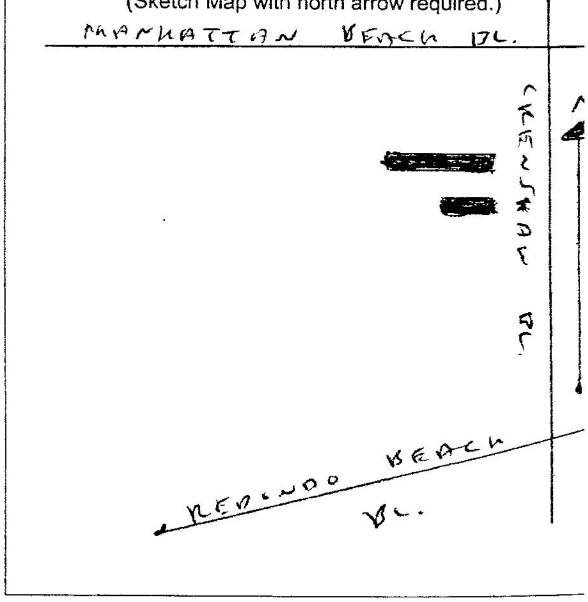
In 1946, after strong recommendations by a consulting team to establish a two-year college in the Inglewood-South Bay area, th governing boards of the Centinela Valley, Redondo (later to become the South Bay district), Inglewood and El Segundo Scho Districts had won a 10-1 voter approval for the creation of a junior college. Torrance soon joined the newly chartered group ar the El Camino Community College District was officially established as of July 1, 1947. Located centrally in the South Bay, th District encompassed five unified and high school districts, twelve elementary school districts and nine cities with a combine population of almost one million. For the first two years of its existence, El Camino College classes were spread out among fo local high schools and had to be conducted only at night.

Soon the founders of the College were able to buy from the County the original eighty acres forming the eastern part of Alond Park as a site for the new campus The cost was $1,000 per acre–not to be paid to the County in cash but promised to be spent b the College on athletic facilities that County residents could enjoy. The land was estimated to be worth $225,000 when th transaction was approved on May 23, 1947. Early classrooms were surplus World War II barracks which were trucked north fro the old Santa Ana Army Air Base in Orange County. The first permanent building for classroom instruction was the shop whic opened in 1949. The women's gym, field house, another shop building and the social science building (now the souther humanities building) came shortly thereafter. *(see continuation sheet)*

B11. Additional Resource Attributes: (List attributes and codes) *HP15 - Educational building*

B12. References:
Bulletin of Information, 1951-52
A Celebration: El Camino College 1946-1996
Warrior Yearbooks, 1952-

(Sketch Map with north arrow required.)



B13. Remarks:

B14. Evaluator:
Date of Evaluation: *7/16/2003*

(This space reserved for official comments.)

B10. Significance

The architect of the original buildings and of the first campus' master plan was the partnership of Marsh, Smith & Powell who was well-known for its forward-looking educational designs. In fact, at the same time it was designing the El Camino campus plan, the partnership was in charge of devising a new plan for the University of Southern California. Later El Camino College buildings, including the Administration, Humanities, Library, and Campus Center complexes were also the work of Marsh, Smith & Powell. The architects were noted for having designed the campus with a "signature": in addition to white stucco in horizontal insets, bricks were laid in straight lines instead of being staggered, giving the buildings a more streamlined look. They also pioneered in the layout of educational buildings, replacing interior hallways with exterior passageways so that classrooms could have two exterior walls enhancing the use of natural light and ventilation.

The firm was organized in 1901 by Norman Foote Marsh, a graduate of the University of Illinois. David B. Smith and Herbert James Powell were taken on as partners in 1928. Smith was the former Commissioner of Building and Safety for the City of Los Angeles and Powell taught architecture at U.S.C. After Marsh retired in the late 1940s, the firm took on another partner: Howard H. Morgridge. Among other works by Marsh and his partners: the canals and Renaissance Revival buildings in Venice, California; many local schools, churches, and libraries; the University of Redlands campus; and the Good Samaritan Hospital. Powell and Morgridge were to be associated with El Camino College buildings until at least 1968.

The first El Camino faculty numbered only thirty and the student body in 1947 was just five hundred. Forrest G. Murdock was appointed president and served until 1965. The campus Stadium is named after him. Today, the campus has grown to 25,000 students and 800 full- and part-time instructors. Structures on campus now number 37, spread over 126 acres. The campus is currently formulating a new master plan that will impact several of the original buildings.

The Humanities Building (both southerly and northerly sections) is of local significance due to its being one of the few remaining and recognizable permanent buildings on campus dating from the first years of the College. The southerly building, originally constructed as the social science building, is slightly older than the northerly building. While typical of the output of its architect, the Humanities Building is the best and most well-preserved example of an early classroom building on campus. Its integrity is excellent: comparison with photographs from 1953 show almost no alterations--even the exterior clocks appear to be the same. The extant landscaping is in excellent shape and still recalls the original design.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #
HRI #
Trinomial

 Resource Name or #: (Assigned by recorder) Humanities Building
Recorded by: **Date** 7/16/2003 ☒ Continuation ☐ Update

A16. Photographs

List of attached photographs:

CURRENT PHOTOGRAPHS:

1 *North building, west and south sides, looking east*

2 *North building, north side, looking southeast*

3 *North building, east side, looking west*

4 *Mall between north and south buildings, looking west*

5 *South building, south side, looking northwest*

6 *South building, south side, looking northeast*

7 *South building, north and east sides, looking southwest*

8 *South building, east side, looking west*

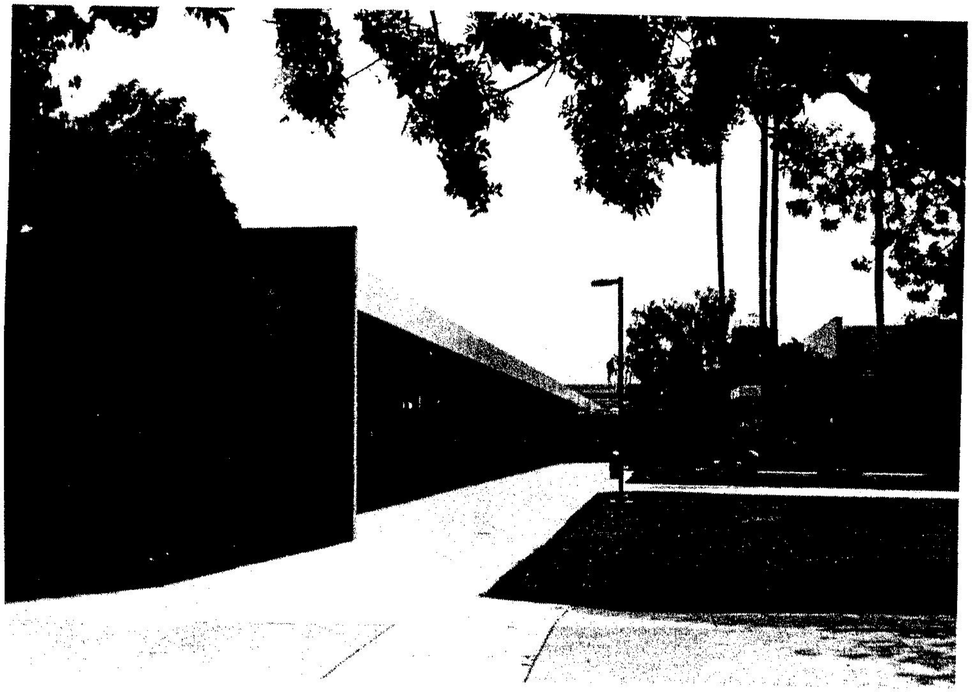
9 *South building, west end interior, looking west*

HISTORIC PHOTOGRAPHS (ALL 1953):

10. *North building, south side, looking northeast*

11. *South building, east and north sides, looking southwest*

12. *South building, south side views as described on attached captions*



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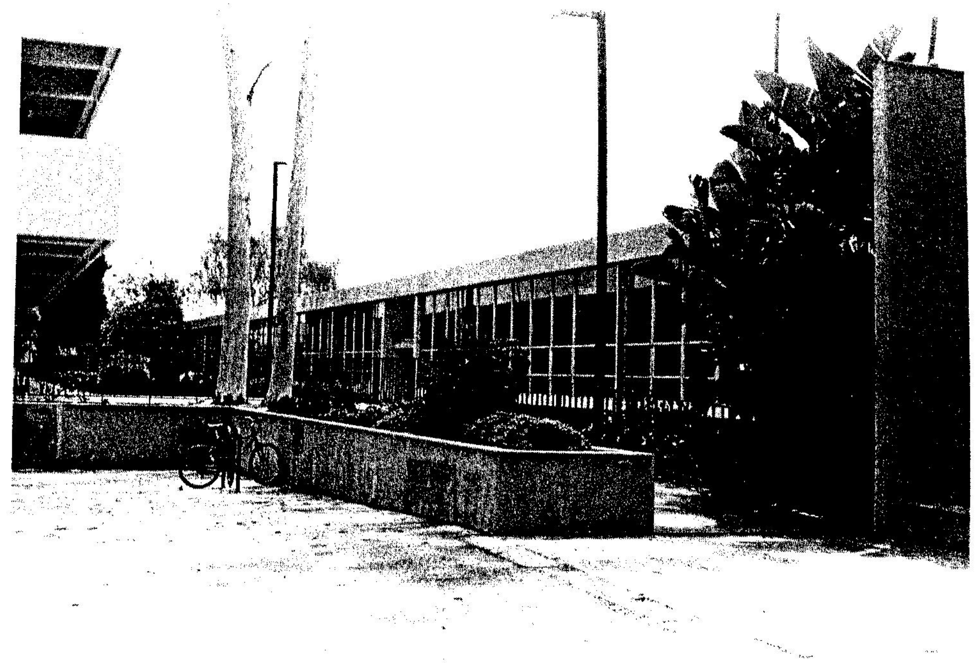

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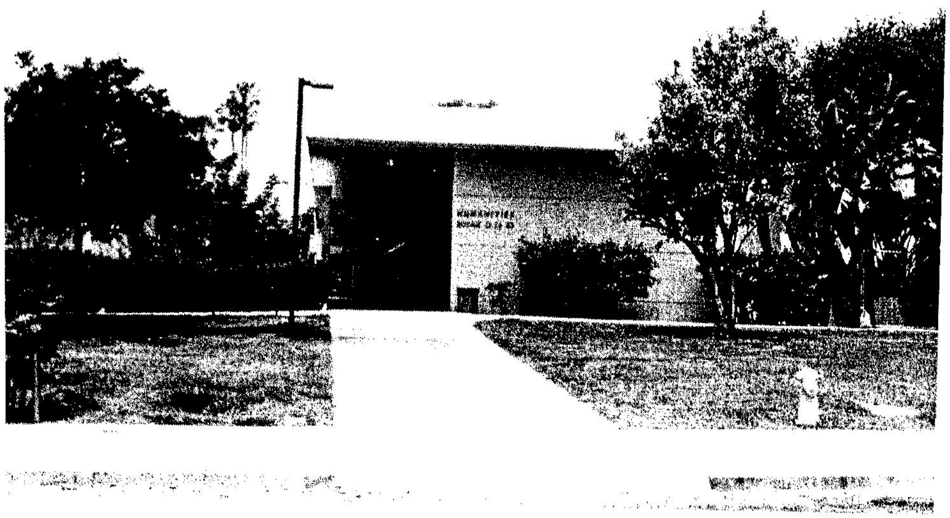

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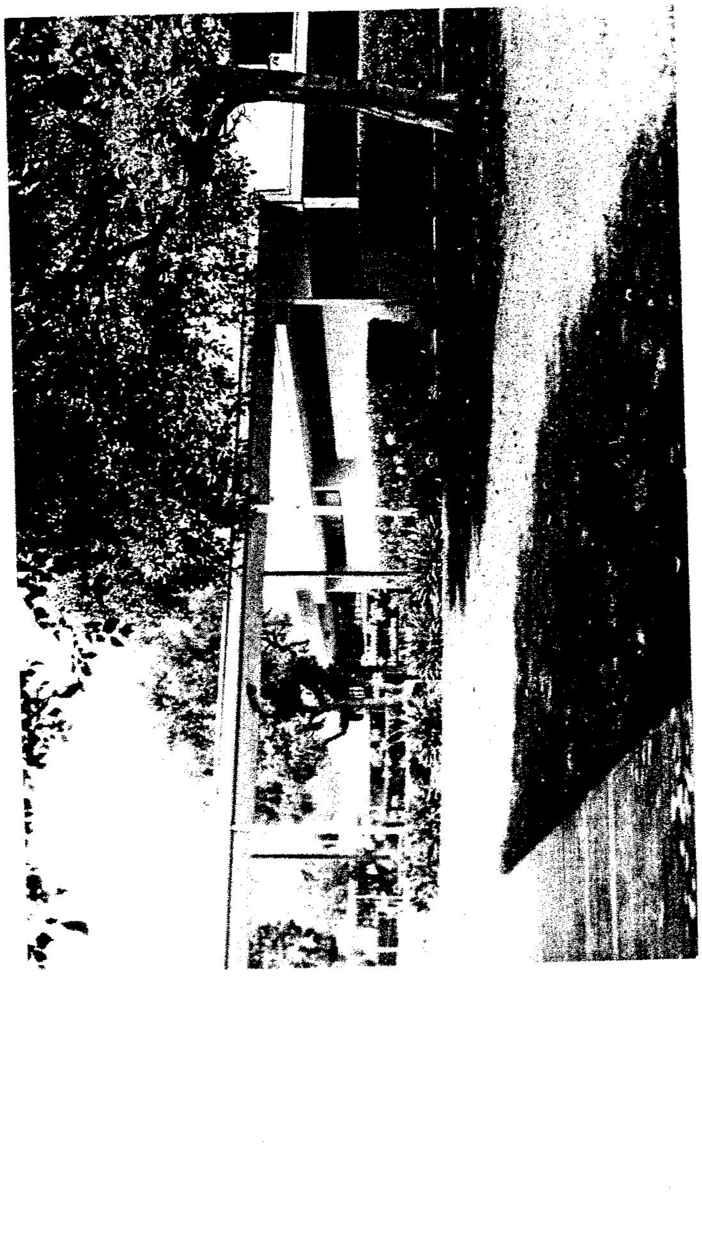

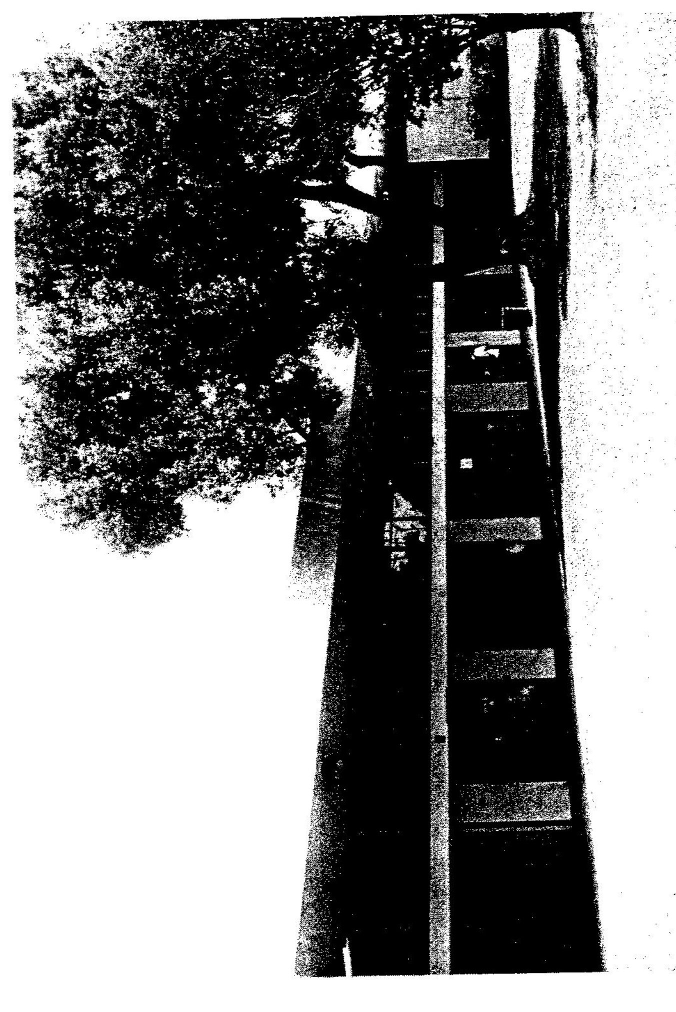

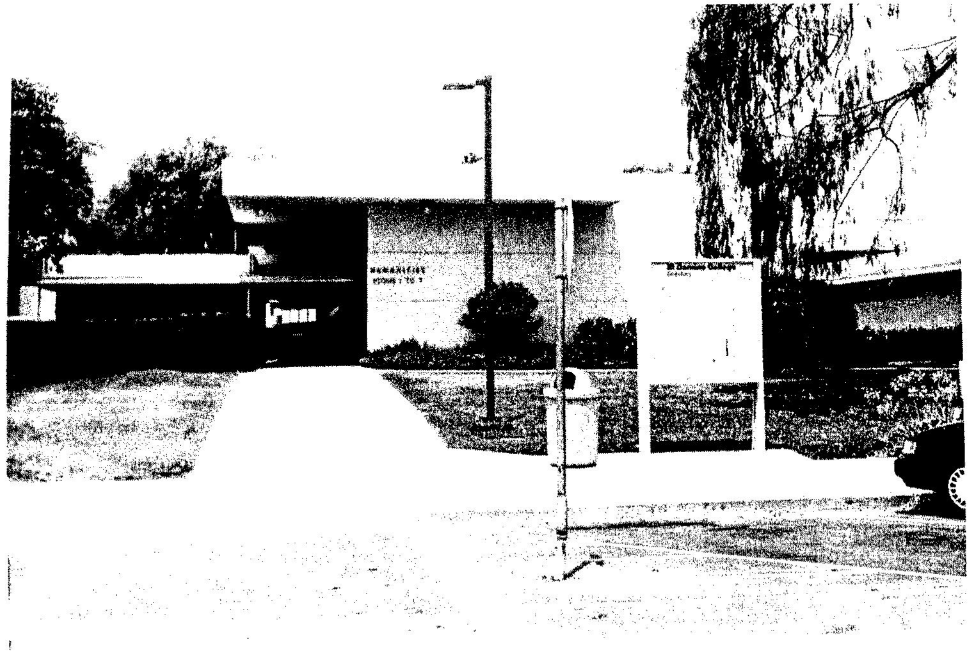

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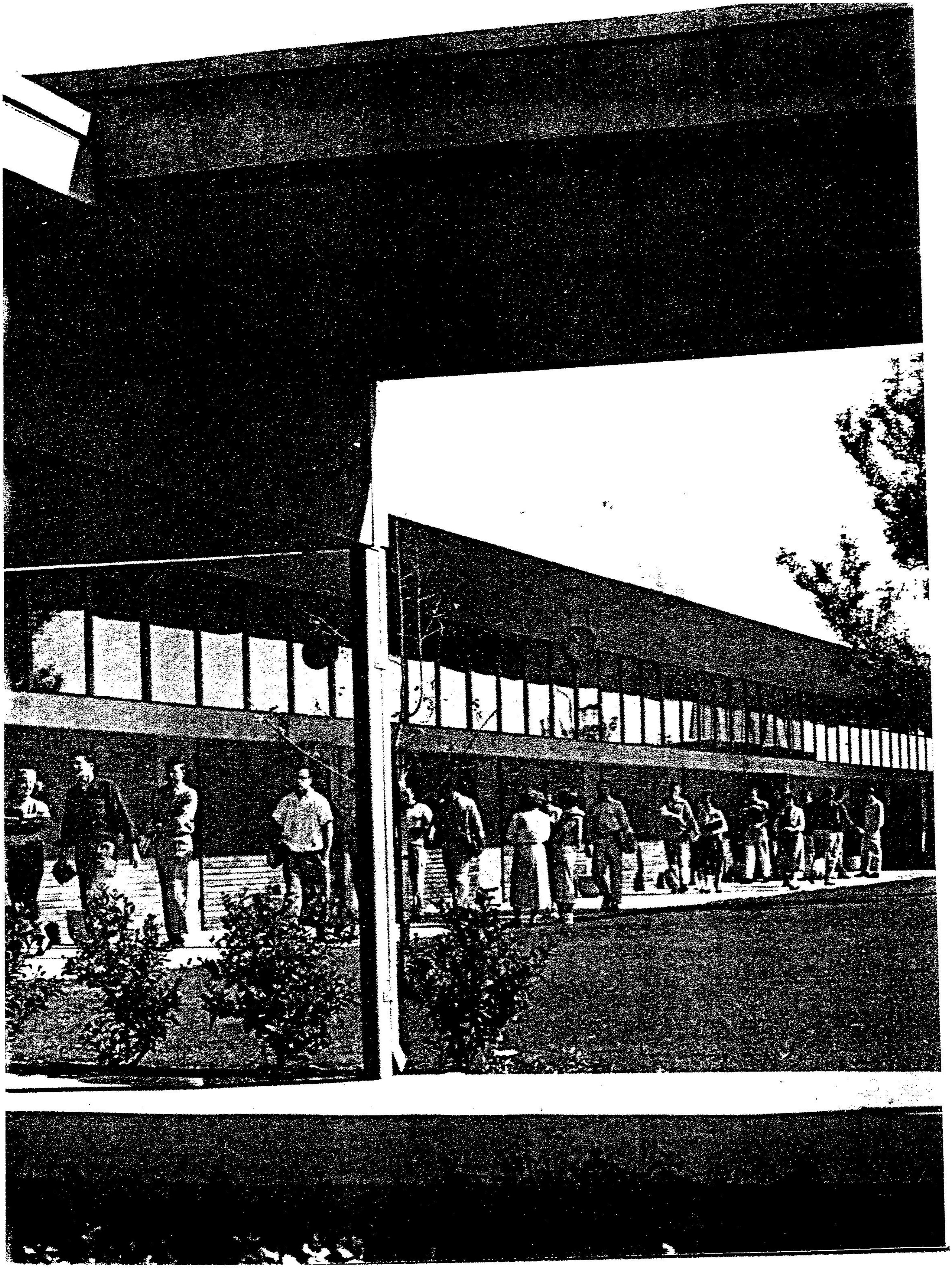
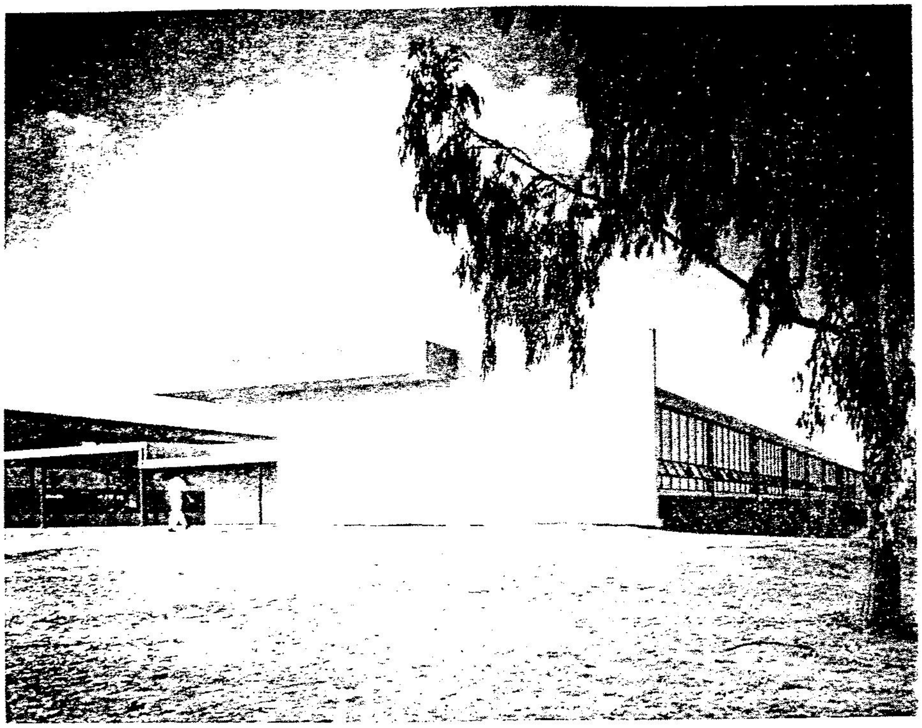
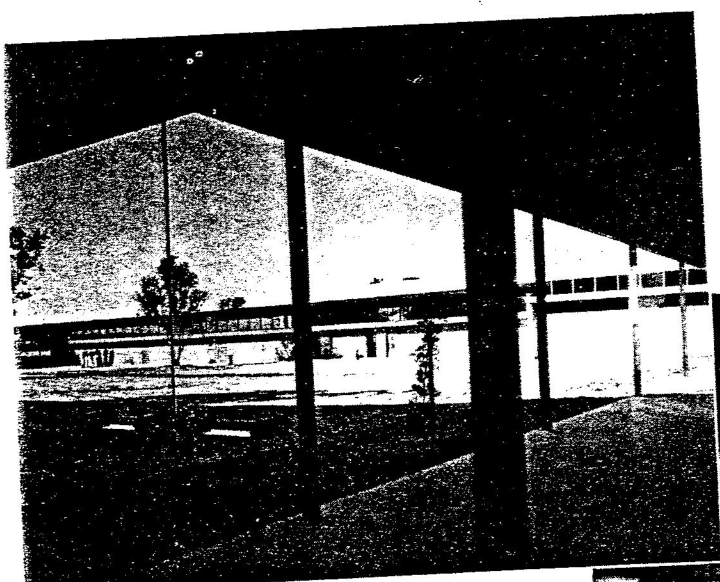
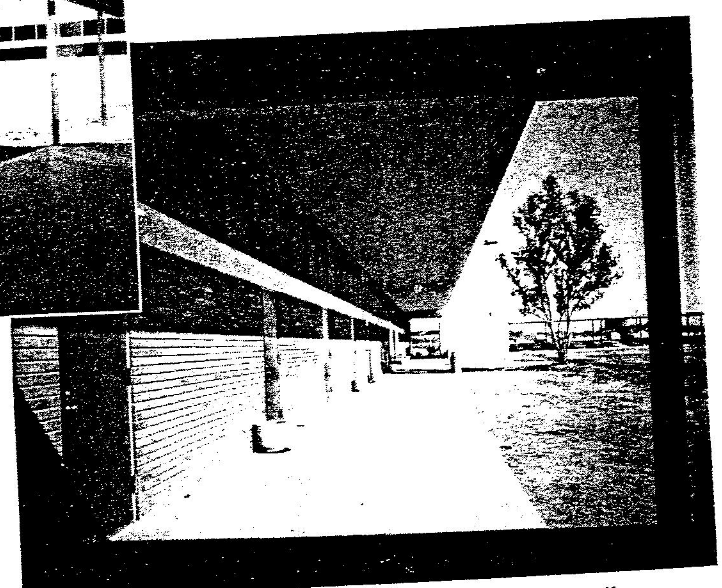




By courtesy of Architects Marsh, Smith & Powell



Left — TO THE NORTHWEST is the SS Building as seen from the northeast entrance to the Administration Building.



ight — EXTENDING EASTWARD is he long facade of the SS Building with ts entrances to nine modern, comfortable lassrooms.

By courtesy of Architects Marsh, Smith & Powell

California Historical Resource Status Codes

1	**Properties listed in the National Register (NR) or the California Register (CR)**
1D	Contributor to a district or multiple resource property listed in NR by the Keeper. Listed in the CR.
1S	Individual property listed in NR by the Keeper. Listed in the CR.
1CD	Listed in the CR as a contributor to a district or multiple resource property by the SHRC
1CS	Listed in the CR as individual property by the SHRC.
1CL	Automatically listed in the California Register – Includes State Historical Landmarks 770 and above and Points of Historical Interest nominated after December 1997 and recommended for listing by the SHRC.
2	**Properties determined eligible for listing in the National Register (NR) or the California Register (CR)**
2B	Determined eligible for NR as an individual property and as a contributor to an eligible district in a federal regulatory process. Listed in the CR.
2D	Contributor to a district determined eligible for NR by the Keeper. Listed in the CR.
2D2	Contributor to a district determined eligible for NR by consensus through Section 106 process. Listed in the CR.
2D3	Contributor to a district determined eligible for NR by Part I Tax Certification. Listed in the CR.
2D4	Contributor to a district determined eligible for NR pursuant to Section 106 without review by SHPO. Listed in the CR.
2S	Individual property determined eligible for NR by the Keeper. Listed in the CR.
2S2	Individual property determined eligible for NR by a consensus through Section 106 process. Listed in the CR.
2S3	Individual property determined eligible for NR by Part I Tax Certification. Listed in the CR.
2S4	Individual property determined eligible for NR pursuant to Section 106 without review by SHPO. Listed in the CR.
2CB	Determined eligible for CR as an individual property and as a contributor to an eligible district by the SHRC.
2CD	Contributor to a district determined eligible for listing in the CR by the SHRC.
2CS	Individual property determined eligible for listing in the CR by the SHRC.
3	**Appears eligible for National Register (NR) or California Register (CR) through Survey Evaluation**
3B	Appears eligible for NR both individually and as a contributor to a NR eligible district through survey evaluation.
3D	Appears eligible for NR as a contributor to a NR eligible district through survey evaluation.
3S	Appears eligible for NR as an individual property through survey evaluation.
3CB	Appears eligible for CR both individually and as a contributor to a CR eligible district through a survey evaluation.
3CD	Appears eligible for CR as a contributor to a CR eligible district through a survey evaluation.
3CS	Appears eligible for CR as an individual property through survey evaluation.
4	**Appears eligible for National Register (NR) or California Register (CR) through other evaluation**
4CM	Master List - State Owned Properties – PRC §5024.
5	**Properties Recognized as Historically Significant by Local Government**
5D1	Contributor to a district that is listed or designated locally.
5D2	Contributor to a district that is eligible for local listing or designation.
5D3	Appears to be a contributor to a district that appears eligible for local listing or designation through survey evaluation.
5S1	Individual property that is listed or designated locally.
5S2	Individual property that is eligible for local listing or designation.
5S3	Appears to be individually eligible for local listing or designation through survey evaluation.
5B	Locally significant both individually (listed, eligible, or appears eligible) and as a contributor to a district that is locally listed, designated, determined eligible or appears eligible through survey evaluation.
6	**Not Eligible for Listing or Designation as specified**
6C	Determined ineligible for or removed from California Register by SHRC.
6J	Landmarks or Points of Interest found ineligible for designation by SHRC.
6L	Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning.
6T	Determined ineligible for NR through Part I Tax Certification process.
6U	Determined ineligible for NR pursuant to Section 106 without review by SHPO.
6W	Removed from NR by the Keeper.
6X	Determined ineligible for the NR by SHRC or Keeper.
6Y	Determined ineligible for NR by consensus through Section 106 process – Not evaluated for CR or Local Listing.
6Z	Found ineligible for NR, CR or Local designation through survey evaluation.
7	**Not Evaluated for National Register (NR) or California Register (CR) or Needs Revaluation**
7J	Received by OHP for evaluation or action but not yet evaluated.
7K	Resubmitted to OHP for action but not reevaluated.
7L	State Historical Landmarks 1-769 and Points of Historical Interest designated prior to January 1998 – Needs to be reevaluated using current standards.
7M	Submitted to OHP but not evaluated - referred to NPS.
7N	Needs to be reevaluated (Formerly NR Status Code 4)
7N1	Needs to be reevaluated (Formerly NR SC4) – may become eligible for NR w/restoration or when meets other specific conditions.
7R	Identified in Reconnaissance Level Survey: Not evaluated.
7W	Submitted to OHP for action – withdrawn.